

A SURVEY OF DRAYAGE DRIVERS SERVING THE SAN PEDRO BAY PORTS

Prepared for:

The Gateway Cities Council of Governments

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Disclaimer

This report was prepared for the Gateway Cities Council of Governments (GATEWAY CITIES COG) in cooperation with the San Pedro Bay Ports, which provided funding. The results presented are based on data and information received by the consultant from respondents who participated in surveys. The report's findings and conclusions do not necessarily represent the views of the GATEWAY CITIES COG, the Ports or their employees.

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I. EXECUTIVE SUMMARY

Two surveys were developed, conducted and the results tabulated between January 18th and February 28, 2007. The first was a random survey of Licensed Motor Carriers (LMCs) providing drayage services to the San Pedro Ports of Los Angeles and Long Beach (the Ports). The second was a survey of the Independent Owner Operator driver/truckers (the IOOs) associated with the LMCs randomly selected for the first survey.

In total, there were 54 respondents to the LMC survey and 209 to the IOO survey. The 209 IOO respondents were associated with 15 of the 54 LMCs. The 54 LMCs reported they use 1,555 IOOs and have 47 employee drivers as well. Based on the LMC's reported number of container moves, we estimate they represent approximately 10% of the total annual container moves associated with the two Ports.

While there were some methodology challenges due to a lack of data regarding the LMCs and the IOOs, we believe the results are reasonable estimates of the characteristics of the LMCs, and IOO serving the Ports. Key results of the two surveys include:

- The LMC "industry" serving the Ports is characterized by a large number of small operators who have fewer than 25 drivers.
- The vast majority of drivers engaged in Port drayage are IOOs who provide their own tractors.
- The average tractor used by the IOOs is a 1994 model purchased for \$21,500.
- The average IOO, based on all respondents, generates Gross Revenues of \$73,900. Fuel costs are an IOO's largest expense, averaging over \$25,000 for the typical IOO.
- The average IOO reported he or she had a Net Income after truck expenses of \$29,600.
- The limited federal income tax return data available for analysis indicated that IOO respondents' estimate of Gross Income was quite accurate, while their estimate of Net Income may be overstated.
- The same average IOO reported working an average of 50.7 hours per week, 48 weeks a year. This equates to an average Net Income of \$12.13 per hour based on reported average Net Income and hours worked.
- IOO Net Income per hour is not directly comparable to hourly rates for an employee due to difference in the tax treatment, employee benefits provided, the investment required to acquire a tractor and the fact that IOOs are in business for themselves and thus have different responsibilities and opportunities.
- LMCs who use employees as drivers for Port drayage work compensate them at the average rate of \$16.30 and provide limited fringe benefits.

II. INTRODUCTION

A. PURPOSE AND SCOPE OF THE SURVEY

The primary purpose of the survey was to estimate the income of independent truckers (Independent Owner Operators Drivers or IOOs) who provide port container drayage service for the San Pedro Bay Ports (the Ports). The San Pedro Bay Ports are the Port of Los Angeles and the Port of Long Beach.

A secondary goal was to help further characterize the drayage industry serving these two ports. The central entities in the drayage industry are Motor Carriers (LMCs) licensed for interstate commerce through the U.S. Department of Transportation. One measure of an LMC's size is the number of IOOs on its roster and/or the number of "employee drivers" it utilizes. LMCs are believed to range in size from a single driver to as many as 950. LMCs contract with the IOOs for drayage services provided to port users. In some cases, LMCs use their employees to provide drayage services. IOOs are not licensed to contract directly with the shippers or other end users, and must obtain their work assignments through an LMC. IOOs are independent contractors and not employees of the LMC for whom they provide these services.

The results of the survey are intended to assist the San Pedro Bay Ports in designing control measure HDV-1 of their Clean Air Action Plan (the CAAP). Both Ports adopted the CAAP in November 2006. The CAAP's Measure HDV-1 calls for the replacement or retrofitting of older, high polluting tractors used in drayage operations with newer, less polluting models.

For purpose of this survey, net income of IOOs is defined as gross income minus truck expenses, including payments associated with acquisition of tractors. Examples of other trucking expenses include fuel, tractor maintenance, repair, engine overhaul, tires, insurance, licenses, taxes other than income taxes, permits, tolls and business related travel expense.

This survey effort was constrained by an extremely tight time frame. Work on design of the survey instruments was authorized on January 18, 2007 with the express requirement that a report be available by February 28th and a final report by March 30, 2007. This requirement constrained the size of the sample of LMCs and IOOs. These and other survey limitations are further described below

B. SURVEY METHODOLOGY, STUDY LIMITATIONS, AND STAKEHOLDER INPUT

Two surveys were designed and conducted. The first was designed to identify the characteristics of the LMCs engaged in drayage operations for the Ports. The second focused on estimating the income and business characteristics of IOOs associated with the LMCs and who are engaged in Port drayage.

Both survey instruments were designed through an interactive review process with the Project Team from the Gateway Cities Council of Governments. The individuals who participated on the Project Team are listed on the inside of the report cover.

1. The LMC Survey

The LMC survey was undertaken for two reasons. The first was to identify selected characteristics of the Port drayage business the LMCs are engaged in and the second was to access the IOOs who work for the LMCs. We were unable to identify a complete listing of either the LMCs or the IOOs serving the Ports. In lieu of a complete listing of LMCs serving the Ports, we used the eModal database of LMCs and other suppliers.

eModal is an on-line system that describes itself as the “world’s largest port community system.”¹ It is owned and maintained by a company in Irvine, California and is supported by advertising and charges for various valued added services.

According to the web site, eModal was “designed to improve efficiency and decrease congestion at container terminals. It provides a single point of contact for multiple container terminals and delivers valuable tools to the entire intermodal community. eModal offers detailed container, vessel, and terminal information, a trucker status service and more.” Registration is voluntary and free. The eModal database of LMCs and other suppliers contains contact information for some 4,000 entries. Examination of the list revealed that there were numerous entries that are probably not serving the Ports. The Ports estimated that there are between 500 and 1,000 LMCs actively providing drayage services. Other estimates range as high as 1,400.

A systematic random sampling procedure was used to identify LMCs to be interviewed. Based on a desired sample of at least 50 LMCs and the nature of the eModal list, the list was broken into three equal parts and a random starting number was selected for each of the three portions of the list. Subsequent interview candidates were selected using an interval of 20.

If a selected LMC did not provide drayage to the Ports, or was not reachable, the “half hour rule” was used to select a replacement survey candidate. The search for a replacement respondent was begun by selecting the entity listed above the original selection if the interviewer was working in the top half of the hour. If that entity was not engaged in Port drayage, a subsequent replacement was selected from the list beginning immediately below the original selection. In the bottom half of the hour, the process was reversed, i.e. the first replacement sample was sought below the original selection. The selection process continued until contact was made with someone knowledgeable in a LMC that currently provides drayage services (a minimum of 10 container moves per week) and who was willing to respond to the survey questions.

In total 54 LMCs were surveyed, with responses being obtained from dispatchers, operations managers, presidents/owners or other responsible parties. The LMC survey instrument is shown in Appendix B. LMC respondents were assured of confidentiality.

¹ www.emodal.com

2. The IOO Survey

There is no definition or listing of the IOOs serving the Ports, thus a true probability sample of IOOs was not possible. Estimates of the number of active IOOs range from 12,000 to 16,000. For this and other reasons, including the need to relate IOO responses to specific information regarding the LMCs they work for, the decision was made to interview IOOs at LMC sites. The LMC survey concluded with a request that we be allowed to interview the IOOs associated with the LMC at a convenient time. Fifteen (15) LMCs, of the 54 surveyed, permitted such interviews and their IOOs were interviewed in the available facilities, i.e. yards, driver/dispatch rooms, and/or offices. Interviews were scheduled for whenever there was the greatest likelihood that a large number of IOOs would be available at the LMC yard or office.²

Some interviews took place as early as 6 AM and others were on weekends. The IOOs were selected based on their availability in the facility and their willingness to participate. Approximately 90 percent of the interviews were conducted at least partially in Spanish. We made no attempt to interview IOOs at LMCs with fewer than 10 drivers due to cost, although there was one exception. In addition, we did not schedule any IOO interviews if the only available LMC interview site was beyond 60 minutes travel time.

IOOs willing to participate were first qualified based on the number of container hauls per week they made from/to the Ports (a minimum of 4)³. An incentive of \$20 was paid for a completed survey. Generally the drivers were not notified of the survey ahead of time, although some LMCs posted notices or otherwise communicated to their IOOs about the upcoming survey. Upon completion of the survey, respondents were offered an addition \$50 incentive if they would provide their completed Schedule C from their federal tax return to us. Respondents were assured of confidentiality of all information.

² The original study specifications contemplated obtaining IRS 1099 forms for the IOOs from the LMCs. This was subsequently determined not to be feasible in the time frame of the study for several reasons. First, as 1099s contain name, address and social security number of individual IOOs, releasing this information raises various privacy issues that did not appear resolvable within the study time frame. Second, as most LMCs are small businesses, there was concern about their ability to provide 1099 data in useful form on a timely basis. Thirdly, some IOOs work for more than one LMC. Finally, this approach would require obtaining the universe of 1099 from all, or mostly all LMCs, and then arranging individual face-to-face interviews with selected IOOs. The study schedule simply did not provide time for such a process. In addition such an approach would have increased the study budget substantially. Whether or not this approach would have eliminated the question of the potential of some level of “self selection” by the respondents is questionable, as participation incentives would still have been required, and due to the need to schedule IOOs individually, would probably have needed to be greater than \$20. This approach would also have eliminated the anonymous nature of the responses. This factor alone would be expected to have an adverse impact on participation rates among IOOs.

³ The actual definition of semi-frequent drayage drivers used by the Ports is at least 3.5 moves a week. This was rounded up to 4 moves per week for the survey.

3. Summary of Completed Surveys

Table 1 -- Estimated Size of Sample Universes and Sample Sizes

<i>Type of Respondent</i>	<i>Estimate Size of Universe</i>	<i>Completed Surveys</i>
LMC	500 to 1,000	54
IOO	12,000 to 16,000	209 at 15 LMCs

The 54 LMCs reported using 1,555 IOOs and 47 employee drivers. IOO surveys were conducted at fifteen of the 54 LMCs. The IOO questionnaire is also in Appendix B.

4. Study Limitations

In addition to the very short timeframe in which these surveys had to be designed, conducted and tabulated, this study has other limitations related to survey instruments, which are discussed further below. Such limitations are not uncommon when conducting real-world surveys, especially when working with a target cohort such as independent owner operator truckers..

The LMC Survey

The original specifications for the study contemplated a sample “across various “layers” or stratifications of the San Pedro Bay Ports drayage trucking industry.”⁴ The focus was on a “cross sample of LMCs serving the Ports.”

The study’s sample of LMCs was a random sample from a limited definition of the universe of LMCs. There is no complete definition of the universe of LMCs serving the Ports, let alone information to identify any meaningful strata. Stratified sampling requires knowledge of the number of entities in each strata and such data was simply not available.

In a true random sample, every member of the population (here the LMCs) has an equal probability of being selected. As there is no known definition of the universe of LMCs, and the eModal list is not believed to be up to date or contain all of the LMCs serving the Ports, the LMC survey is not based on a true random sample, but it is as random as any approach with the information available.

This is the key question to be asked: “Is the eModal list representative of the universe of LMCs serving the Ports, or is it somehow biased”? To the extent the eModal list under or over represents certain types, or categories, of LMCs, the resulting LMC sample is similarly skewed. Given the resources generally available in various sized firms, one would assume that there is a greater likelihood that smaller LMCs, potentially with lower levels of sophistication and less time available, would tend to be underrepresented in the eModal database. Given our understanding of the industry, we were unable to identify

⁴ Gateway Cities Council of Governments, Request for Proposals No. 06-001

any factors that would cause us to believe that the eModal list used as the sampling universe is biased in any significant fashion.

The IOO Survey

The IOO survey exhibits some of the same limitations as the LMC survey. No definition of the universe of IOO drivers exists and therefore each member of the universe does not have an equal probability of being selected. The practical requirements and related cost of surveying the IOOs face-to-face necessitated interviewing them at LMC facilities. The representiveness of responses from the surveyed IOOs can also be questioned, to the degree that they may have “self selected” their participation in the survey.

The key question here is, “Are IOOs associated with the randomly selected LMCs representative of all IOOs, or are high- or low-earning IOOs somehow associated with specific LMCs? Further, did the interview approach at the LMCs and/or incentive offered result in the selection of a biased sample of IOOs (within the individual LMCs)? Data on the variation of IOO income in LMCs of similar size strongly suggests that this is not the case. The reader, however, is directed to the analysis in Section III to draw his or her own conclusions regarding this potential limitation.

Another potential limitation arises from the possibility for IOOs to provide inaccurate data, either knowingly or inadvertently. We originally theorized that many do not keep accurate or complete records and may not have complete knowledge of their income and expenses. The selection of IOO respondents at the time of their interviews required them to rely on their memory for the data to respond to the survey questions. Various studies have shown that an individual’s memory of past events is notoriously inaccurate. In addition, there are numerous reasons why respondents might be less than truthful about their incomes and expenses, not the least of which are personal ego and a fear/concern of exposure to the tax authorities.⁵ However, people tend to recall specific things that are important to them. For example, most people know the model year of the primary vehicle they drive and how much they paid for it.

To offset the potential issue of reporting error, we validated some data. To the extent practical, for example, we obtained federal income tax data to confirm the Gross Operating Income (Gross Revenues from Drayage Operations) and Net Income of IOOs (Gross Revenues from Drayage Operations less related expenses). Reasonability checks were made on other data, and clear “outliers” were eliminated from the results.

5. Input from San Pedro Bay Ports Drayage Stakeholders

One objective of the study was to get input from the California Trucking Association (CTA), which serves as the trade association for some of the LMCs that provide container drayage services to the San Pedro Bay Ports. The RFP included a goal for the selected consultant to seek input from CTA (or its representative) using the LMC survey as the mechanism. To keep the study within scope, it was noted that CTA’s

⁵ These factors were known prior to the start of the survey as they were cited in the original CGR proposal for the study.

input would be limited to the same survey and questions submitted to the LMCs. Final results of the study were to separately highlight CTA's response to the survey, assuming one was received.

CTA representatives participated in the pre-bid meeting for the RFP, providing input about the project scope and LMCs as sources of information about IOO income. Once underway, CTA was contacted but declined to participate further in the study. After surveys of LMCs and IOOs were completed and results were tabulated, CGR Management and the GATEWAY CITIES COG team met with industry stakeholders (including CTA representatives) to discuss preliminary results. CTA and other stakeholders provided input during the meeting, and CTA followed up with a letter identifying specific concerns about the survey methodology and providing recommendations for inclusion into the final report. Those concerns and recommendations are addressed in this report in the context of specific subjects and issues raised.

III.SURVEY RESULTS

A. THE LMC SURVEY

Seventy percent of the 54 LMC’s interviewed use fewer than 25 IOO drivers. Twenty-four percent use between 25 and 99 IOO drivers, and 6% use 100 or more IOO drivers.

Table 2 - Survey Responses by LMC Size

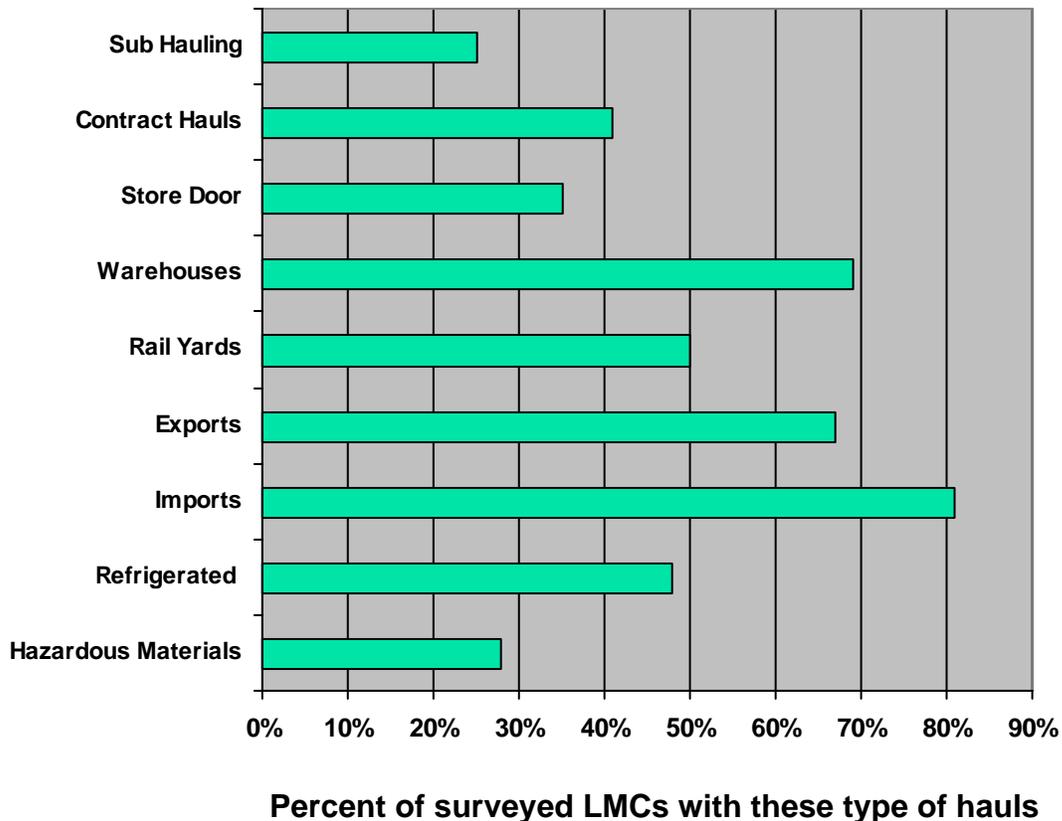
<i>LMC Size by # of IOO Drivers in Roster</i>	<i>% of Total LMC Surveys</i>
Fewer than 25 IOOs	70
25 – 99 IOOs	24
100 or more IOOs	6

Fifteen percent of the LMCs interviewed use employee drivers in their Port drayage work in addition to IOOs. Generally these drivers are paid by the hour. In total, the 54 LMCs surveyed use 1,555 drivers and 47 employee drivers. The employee drivers were used by 8 of the 54 LMCs surveyed. Most LMCs that use employee drivers had fewer than five employee drivers, with one LMC having 22.

Employee drivers were paid an average of \$16.30 per hour and all LMC respondents indicated they provided employer paid health insurance for the employee only. Only one of the eight LMCs that indicated they use employee drivers stated that they provide a full range of employee benefits beyond health insurance.

The survey showed that LMCs tend to perform multiple types of container moves, i.e. are generally not specialized by type of haul or move. Figure 1 on the following page summarizes the distribution of responses to a series of yes or no questions regarding the types and nature of the container moves by LMCs.

Figure 1- Type of Hauls by LMCs



The categories shown in the figure are not mutually exclusive. LMCs were asked a simple “yes or no” question about whether they make each type of haul, and the percentages for the total number of LMCs were tallied.

The definitions of the types of hauls are:

- Sub Hauling – Acting as a subhauler for another LMC and/or using other LMCs as subcontractors to haul
- Contract Hauls – Made under a formal contract arrangement, and may differ from spot hauls in rates or the level of service to be provided. LMCs may have contracts with a variety of parties including steamship companies, larger shippers, etc.
- Store Door – Directly to a retail location, and may involve travel in urban locations.
- Warehouse or distribution center – To container contents storage and handling facilities where the goods are subsequently transloaded, consolidated, break-bulked, or other moved by the customer or intermediary.
- Rail Yards hauls – To intermodal rail yards where the containers are subsequently loaded on rail cars for shipment elsewhere

- Exports - Loaded containers delivered to the Ports
- Imports - Loaded containers picked up from the Ports
- Hazardous Materials- or “hazmat” – Containing flammable, poisonous, toxic, and/or dangerous substances. The driver of a hazmat load is required to be licensed to haul hazardous materials.
- Refrigerated– Containers used to ship chilled or frozen goods.

While most LMCs perform a variety of haul types, some are more concentrated. For example, one LMC only does over-the-road, long haul inter-state moves to points east. Another LMC only moves empty containers. Some do not do store-door deliveries. Nearly 50% haul refrigerated containers and some 30% had drivers with Class C licenses that permit them to haul hazardous materials.

The estimated annual container moves by the 54 LMC respondents was 1,170,000. As these are a blend of container sizes, we estimate this roughly represents approximately 10% of the combined annual container moves of the Ports (15.8 million TEUs in calendar year 2006). A TEU is a twenty-foot container equivalent unit. Most containers are 40 foot to 53 foot in length, and thus represent two or more TEUs.

B. The IOO Driver Survey

Independent Owner Operator truckers, by definition, own their own tractors and operate their own business. As owners of independent businesses, their reported net income from trucking operations is not directly comparable to the salary and wages paid employees who may also drive. IOOs make investments, i.e. their tractors, pay both employer and employee portions of the social security tax and pay for their own fringe benefits such as health insurance, retirement, etc. IOOs do not receive overtime, holiday or sick pay as they are not employees. IOOs generally report their income from trucking operations on Schedule C of the federal 1040 tax return. As independent businesses, they have the option of incorporating, although we encountered no incorporated drivers in the survey. Drivers employed by LMCs are subject to the Fair Labor Standards Act (FLSA) and receive overtime pay in accordance with the FLSA.

As an offset, IOOs have the ability to choose who they will work for at any given time and the conditions and hours they work. They also have the responsibility to generate their own work and may elect to take work from more than one LMC. They have the potential to negotiate compensation for any work they accept. In some cases, the owners of small LMCs may also function as their own IOO, i.e. also drive.

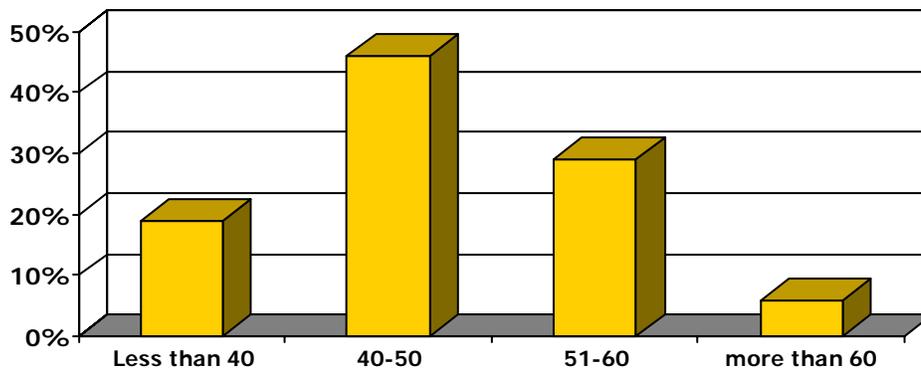
The primary focus of the survey was to estimate IOO gross and net income. Income is a function of the time worked and the rate that income is earned during the time worked. IOOs reported working an average of 50.8 hours/week (all respondents). The survey showed the IOOs drive an average of 44,027 miles/year. Partial year drivers were defined as those driving less than 35,000 miles and part time drivers as those who reported working less than 40 hours a week. The questions on hours per week were asked about a typical week, or a recent week, such as last week. The annual miles and income questions were asked for calendar year 2006, which was last year. The reported average hours per week and annual miles driven are shown below.

Table 3 – Work Hours Reported by Type of Respondent

<i>Type of Respondent</i>	<i>Average Hours/Week</i>	<i>Average Miles/Year</i>
All Respondents	50.8	44,027
Those reporting 40 or more hrs/week	51.5	44,323
Those driving 35,000 or more miles/year	51.9	59,666

The distribution of the reported hours per week worked for all respondents is shown below.

Figure 2 - Reported Work Hours Per Week



The hours per week worked shown in Figure 2 are those reported in response to Question 4 of the IOO survey. The stated question was “How many hours (per week) do you work doing port drayage work?” (See the IOO survey in Appendix B.) It should be noted that IOOs who operate more than 60 hours a week are most likely in violation of Department of Transportation regulations.

Over 99% of the IOO respondents reported they park their tractors overnight at a parking lot, usually at their LMC. This indicates that the time worked and annual miles driven do not include commute time or mileage.

The annual reported gross operating income and net income from trucking operations for the three categories of IOOs (all respondents, those driving more than 35,000 miles per year and those who reported working 40 or more hours per week) are shown in Table 4 on the next page below.

Table 4 – Average Gross Revenues and Average Net Operating Income

<i>Type of Respondent</i>	<i>Average Gross Revenue</i>	<i>Average Net Operating Income</i>
All Respondents	\$73,928	\$29,580
Those reporting 40 or more hours per week	\$74,519	\$29,645
Those driving 35,000 or more miles/year	\$80,856	\$31,412

The above data resulted in the following estimated hourly earnings based on a 48-week year:

Table 5 – Estimated Average Hourly Earnings

<i>Type of Respondent</i>	<i>Average Gross Revenue/Hour</i>	<i>Average Net Operating Income/Hour</i>
All Respondents	\$30.32	\$12.13
Those reporting 40 or more hours per week	\$30.15	\$11.99
Those driving 35,000 or more miles/year	\$32.46	\$12.61

Respondents reported the purchase of fuel as their largest single expense. Considering diesel fuel currently costs approximately \$2.87 per gallon and port drayage tractors average 4 to 6 miles per gallon, the average IOO driving 44,027 miles per year could spend approximately \$25,000 or more on diesel fuel per year. Other operating expenses are significantly less in relation to fuel expense.

The distribution of Annual Gross Operating Revenue for all respondents and respondents driving 35,000 or more miles per year is shown in Table 6 on the next page below.

Table 6 – Distribution of Annual IOO Gross Revenue

<i>Annual Gross Operating Revenue</i>	<i>All Respondents</i>		<i>Respondents Driving > 35,000 Miles per Year⁶</i>	
Income Category	Count	%	Count	%
Less than \$25,000	9	4%	1	<1%
\$25,001 - \$50,000	25	12	9	8
\$50,001 - \$75,000	73	36	38	34
\$75,001 - \$100,000	69	34	41	37
\$100,001 - \$125,000	18	9	15	14
\$125,001 - \$150,000	5	2	5	4
Over \$150,000	3	2	3	3
Average Gross	\$73,928	NA	\$82,686	NA
Median Gross	\$75,000	NA	\$80,000	NA

Included in Annual Gross Operating Revenue are payments for waiting time in addition to payment for hauls. The survey found that IOOs are typically paid for waiting time at the rate of \$23.50 per hour, but only after an initial two hours (average) of unpaid waiting time.

Net operating income from trucking was reported directly by respondents. Like all surveys, not all questions were answered by all respondents. Net income was reported by 152 respondents. The distribution of reported net income is shown in Table 7 on the next page below.

⁶ Further analysis of the group reporting over 40 hours per week was eliminated as the respondents driving over 35,000 miles per year consisted of respondents working over 40 hour per week with two exceptions.

Table 7 - IOO Reported Annual Net Income

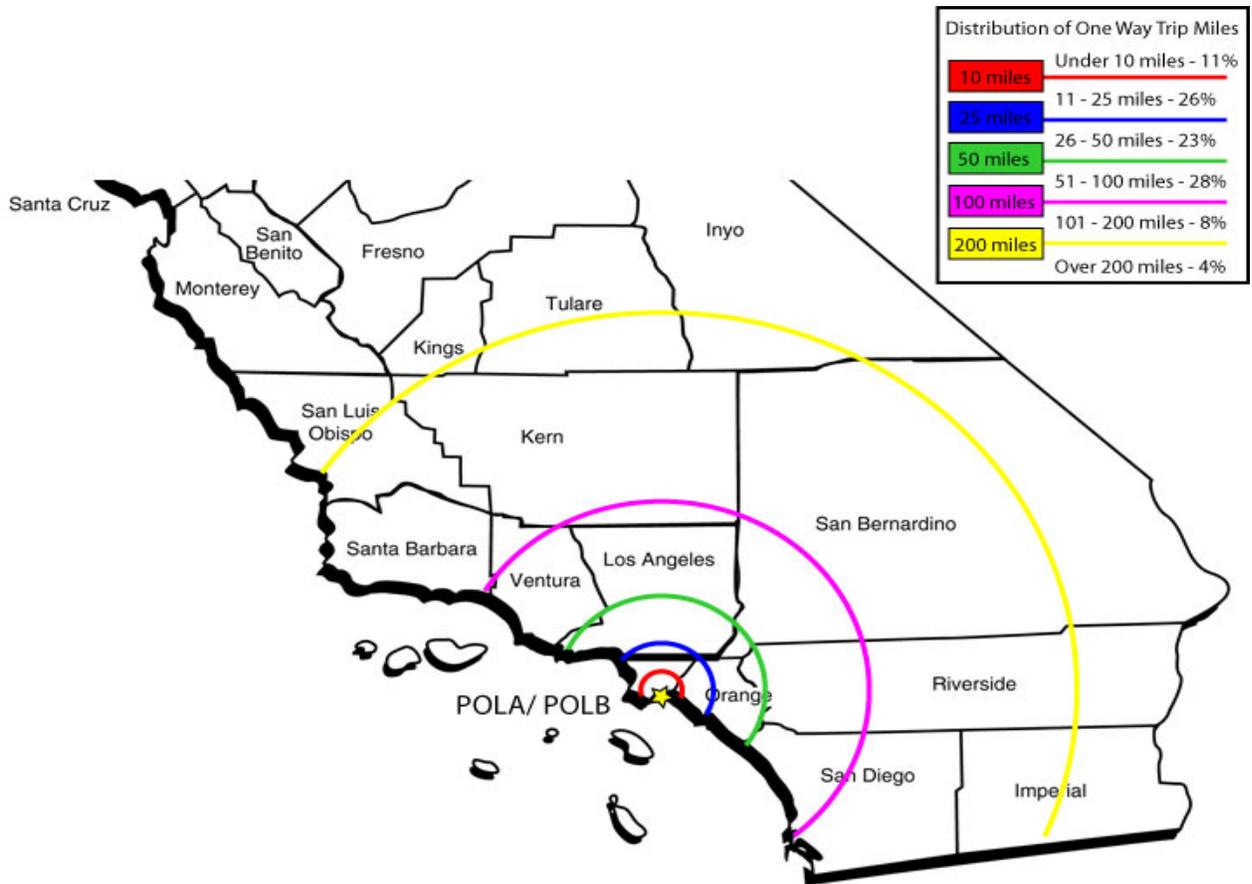
<i>Annual Net Income Reported</i>	<i>All Respondents</i>		<i>Respondents Driving More Than 35,000 Miles per Year</i>	
Income Category	Count	%	Count	%
Less than \$10,000	8	5%	0	0%
\$10,001 - 15000	14	9	6	7
\$15,001 – 20,000	20	13	9	11
\$20,001 – 30,000	47	31	31	36
\$30,001 – 35,000	20	13	13	15
\$35,001 – 40,000	26	17	14	16
\$40,001 – 50,000	11	7	7	8
Over \$50,000	7	5	5	6
Average Net Income	\$29,372	NA	\$31,743	NA
Median Net Income	\$29,000	NA	\$30,000	NA

IOOs were asked to provide information on their most frequent hauls. The information requested was:

- Trip type – Store-Door, to the Rail Yards, Warehouse or Other location
- Trip designation – By geographical location, generally city
- Trip length
- Trip time and mileage
- Weekly frequency of each trip and
- Amount paid and whether the payment includes a fuel surcharge or not.

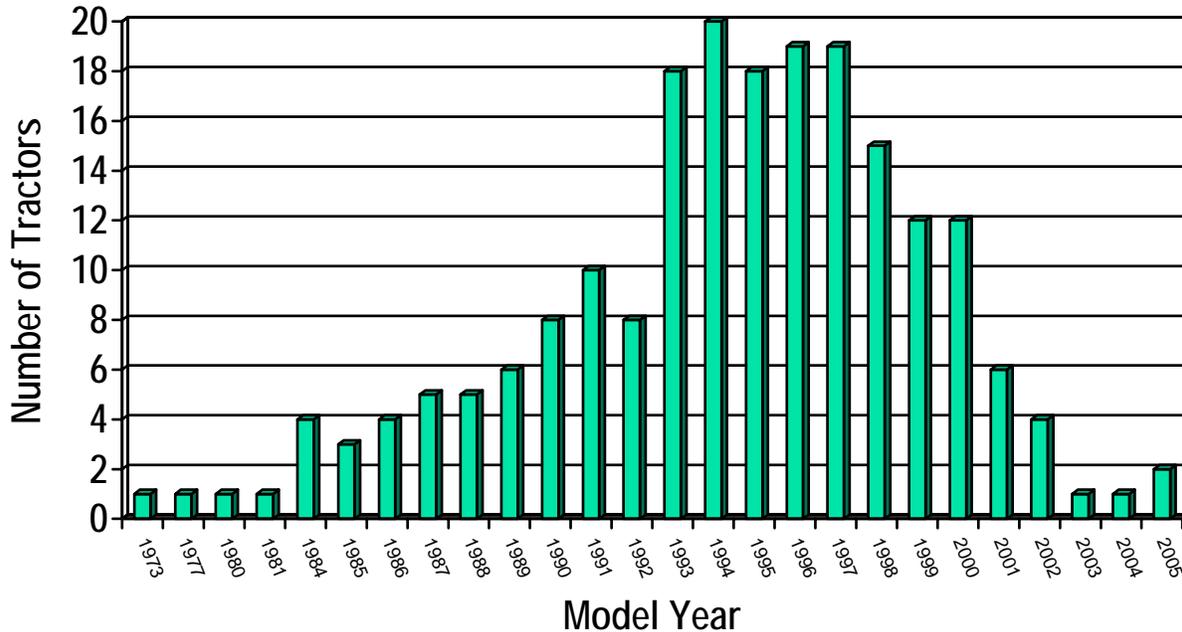
The distribution of one-way trip miles driven by IOOs is shown in the Figure below. The average number of trips per day per IOO is 3.45 for all IOO respondents. The annual average mileage of the IOOs surveyed is 44,027 with a median off 40,000 miles per year. Fifty percent of the IOOs reported driving between 25,000 and 60,000 miles per year. These rings of service areas are shown the map of southern and central California in Figure 3.

Figure 3 - One-Way Trip Mileage Profile



The average model year tractor reported in the survey is a 1994 model and the median tractor model year is 1995. The distribution of tractor model year for the IOO drivers surveyed is shown in Figure 4 below:

Figure 4 Tractors In Use By Model Year



The majority (80%) of the IOOs respondents reported owning their tractors outright. The remaining 20% (41 of 209) reported an average tractor payment of \$879 per month. The reported prices paid for tractors ranged from a low of \$2,000 to a high of \$100,000, with an average of \$21,495 and a median of \$18,000.

IOOs buy sleeper cabs (91%) in preference to day cabs (9%). Antidotally we understand sleeper cabs are valued by IOOs as a place to relax during long waits for loads at the terminals and are also used by some operators at night to avoid long daily commutes, and, of course, for overnight runs.

IV. ADDITIONAL ANALYSIS

This section contains additional analysis to better understand results as a function of certain variables. It first examines the survey data to address and then presents a brief analysis of the limited federal income tax data that was received from some of the IOOs who responded to the IOO survey.

A. Cross Tab Analysis

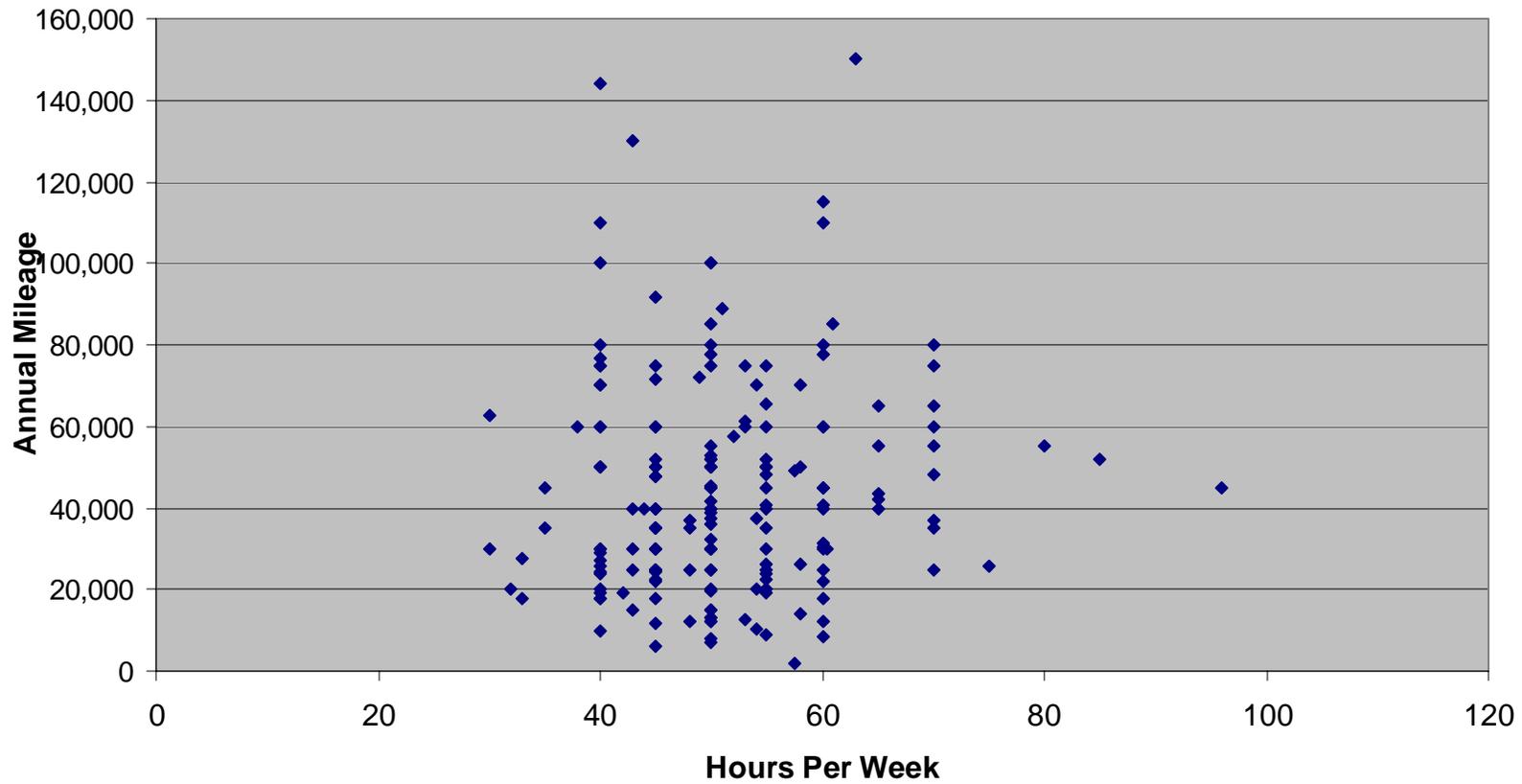
The survey data was analyzed in several additional ways. These analyses included:

- The distribution of annual mileage as it related to the reported hours per week worked
- Determining if the age of an IOO's tractor is a factor in generating his/her revenue
- The impact of annual mileage on revenue and
- Exploring the relationship between LMC size, as measured by the number of IOOs they reported, and individual IOO revenues

Mileage and Time Worked

The following figure depicts the weak relationship between the amount of time worked and annual mileage for all respondents, including those reporting less than 40 hours per week. As can be seen in Figure 5 on the next page, there is no significant correlation, suggesting that the IOO respondents are a diversified mix of long-, short- and immediate-haul operators.

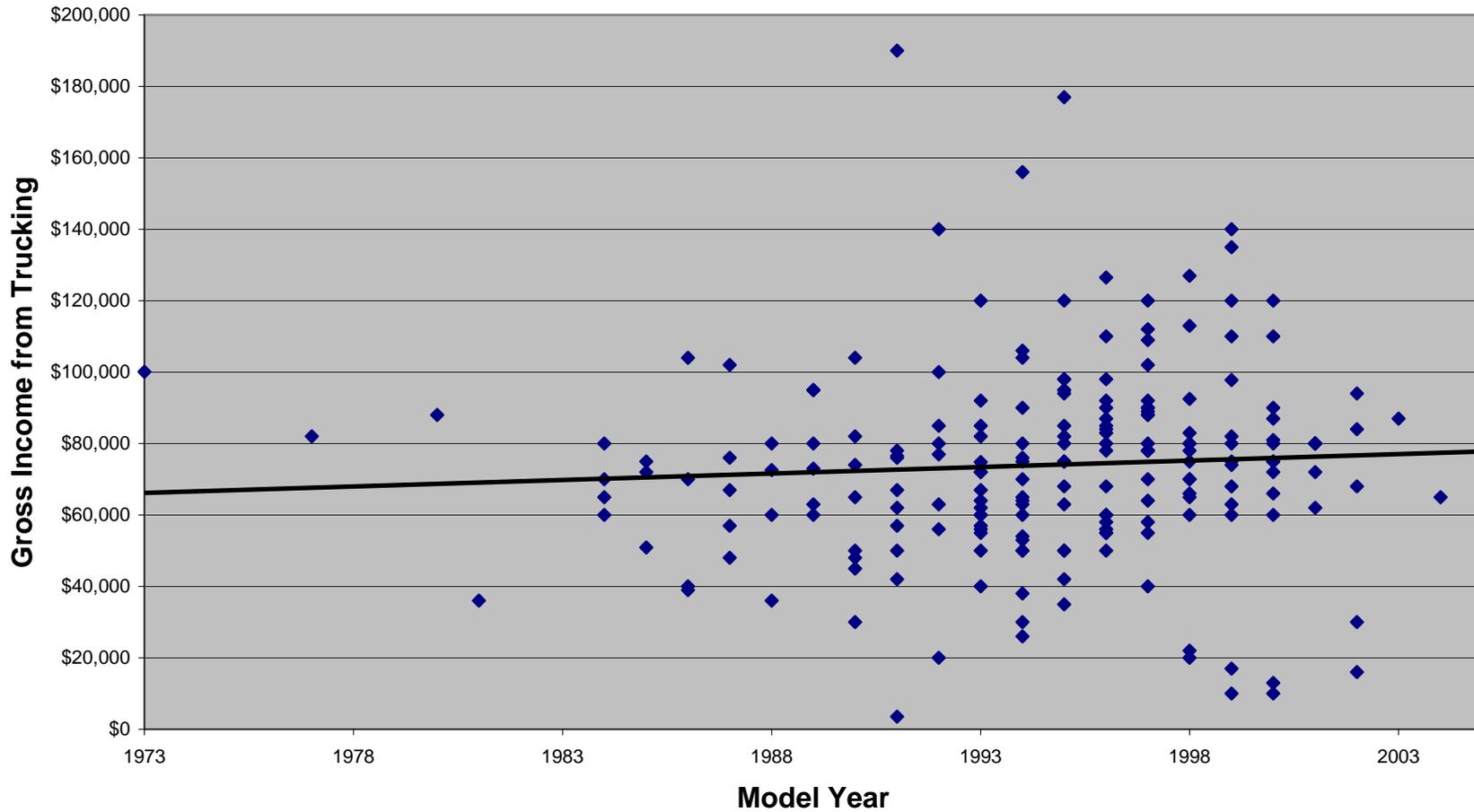
Figure 5 – Time Worked vs. Annual Miles Driven



Tractor Age and Annual Revenue

There was initial discussion among the Project Team that tractor age could be related to annual revenues, as IOOs with older tractors might be relegated to short haul trips that potentially yield lower revenues. To explore this possibility, we developed the following Figure 6, on the next page.

Figure 6 – Age of Tractor vs. Annual Revenue

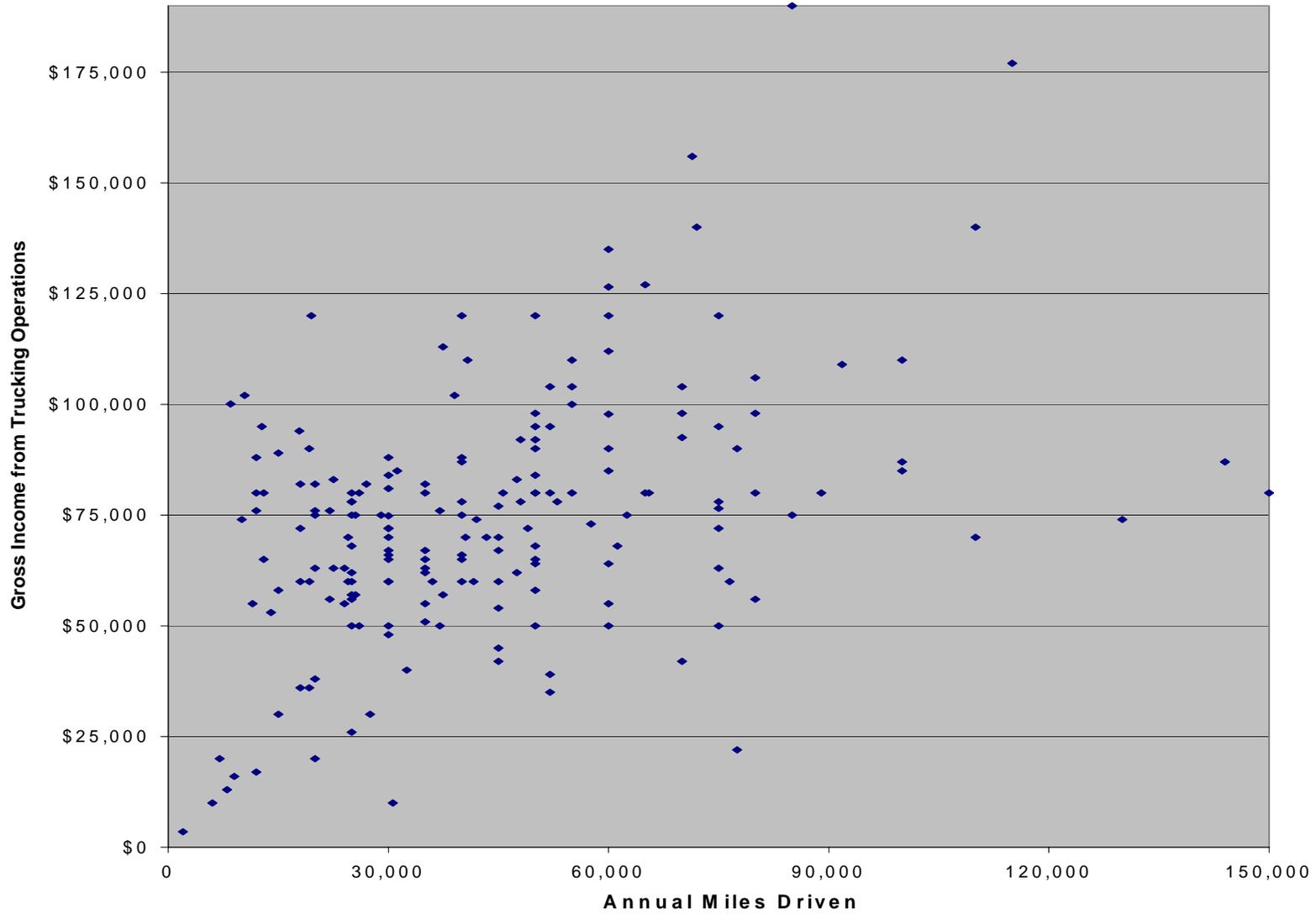


The least squares fitted line in the figure shows a very slight upward trend, implying a weak relationship between the age of an IOO's tractor and the revenues generated from trucking operations

Annual Mileage and Revenue

The relationship for all respondents between the annual miles driven and Gross Revenue generated from trucking operations (as reported) is shown in the following Figure.

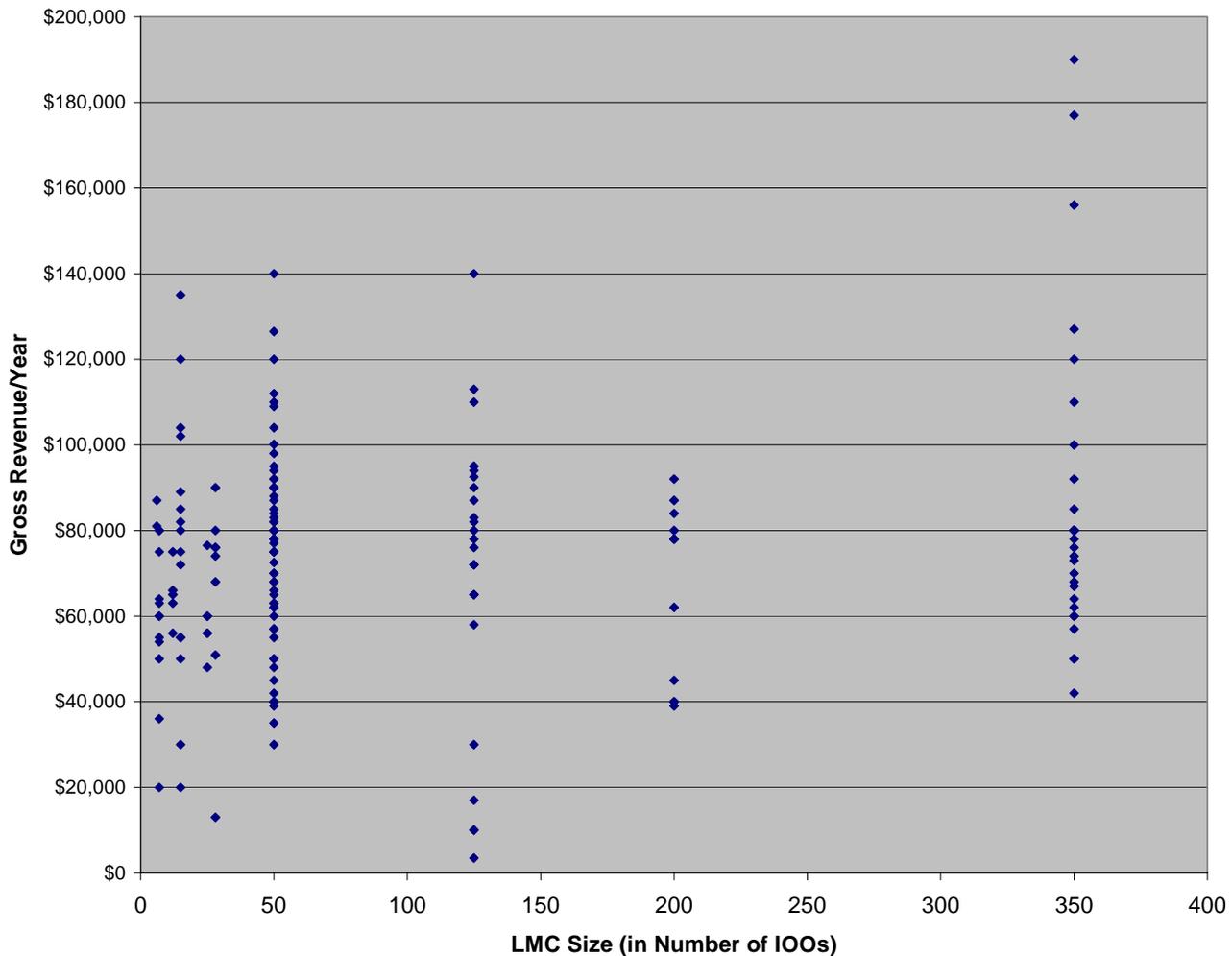
Figure 7 – Annual Miles Driven vs. Gross Revenue



LMC Size and Reported IOO Revenues

The Project Team was also interested in exploring the relationship, if any, between the size of the LMCs, as measured in the number of IOOs on their roster, and individual IOO Gross Revenue. To examine the relationship, Figure 8 was developed.

Figure 8 – LMC Size and IOO Gross Revenue



As can be seen, there is a wide range of Gross Revenue across all sizes of LMCs. This implies that IOO Revenues are not a direct function of the size of the LMC an IOO is associated with.

B. Federal Income Tax Comparison

At the completion of each IOO survey, we requested each respondent provide us with a copy of Schedule C from their latest federal income tax return.⁷ Respondents were requested to delete all personal information from any forms provided to us. The return mail envelopes provided to the respondents to return their tax information were coded to allow the data to be associated with the original survey responses. IOO respondents were offered a \$50 incentive if they returned their Schedule C. Twenty-five IOOs provided useful Schedule C information.

The Gross Revenues and Net Incomes reported during the survey by the 25 respondents were compared to their Schedule C amounts. The table below summarizes the results of the comparison.

Table 8 – Comparison of Survey Results and Federal Income Tax Data

<i>Statistic</i>	<i>Ratio</i>
Gross Operating Revenue reported in the survey divided by the Schedule C Amount (line 1)	1.04
Net Operating Income reported in the survey divided by the Schedule C Amount (line 31)	1.38

The resulting ratios imply that on average the Gross Revenues reported in the survey are highly accurate (potentially over stated by 4%), while suggesting that the survey numbers for Net Income are significantly overstated (by 38%). The reader is cautioned, however, that these results are not statistically significant due to the limited number of tax returns examined, and the possible overstatement of net income by the survey respondents compared to their tax returns, which include various amounts taken for business expense deductions. Legitimate business deductions on a Schedule C could include non-trucking business expenses such as accounting, tax preparation, office expenses, etc.

⁷ Schedule C of the 1040 federal income tax return is used to report income and expenses from self-employment activities. Incorporated entities would report the same information on form 1020.

V. COMPARISON TO THE CSULB SURVEY

A recent survey of port container drayage drivers was conducted by California State University at Long Beach (CSULB) for METTRANS.⁸ In the following tables, the results for IOO income from the CGR survey (this report) are compared with similar parameters surveyed and reported on for the CSULB survey. The CGR and CSULB surveys differed in their sampling methodology and the questions ask. The CSULB survey was self administered by the drivers at three Port terminal lunch truck locations, whereas the CGR survey was conducted at the LMC sites by Spanish speaking interviewers. Nevertheless, we believe the comparison is useful.

Table 9 - Comparison of the CGR and the CSULB Survey

<i>Survey Characteristic or Result</i>	<i>CGR</i>	<i>CSULB</i>
Sample Size – Number of Drivers	209	197
Average Gross Income	\$73,929	\$79,800
Average Net Income	\$29,432	\$36,550
Average Hours Worked per Week	50.8	57.7
Average Annual Miles	44,027	63,118
Average Trips per Day	3.45	3.14
Average Net \$/Hour (All Respondents)	\$12.13	\$12.65
Average Net/Mile	\$0.65	\$0.58
Average Net/Trip	\$42	\$47
Average Amount Paid for Tractor	\$21,495	\$24, 177
Median Gross Income	\$74,909	\$75,000
Median Net Income	\$29,000	\$36,900
Median Hours Worked per Week	50	60
Median Annual Miles	40,000	50,000
Median Net/Hour	\$11.59	\$12.30
Median Net/Mile	\$0.73	\$0.74
Median Truck payment	\$0	\$0

⁸ The principal investigator of the study was Dr. Kristen Monaco of the Department of Economics at California State University Long Beach. The Final Draft of January 2007 is entitled, Incentivizing Truck Retrofitting in Port Drayage: A Study of Drivers at the Ports of Los Angeles and Long Beach.

APPENDIX A
GLOSSARY OF TERMS

GLOSSARY OF TERMS

CAAP- Clean Air Action Plan

Container- a metallic cargo shipping enclosure, usually in 20', 40', or longer in length.

Contracts- formal contracts for dedicated business to a terminal operator, steamship, or customer.

CTA- California Trucking Association, made up of motor carrier members operating in California.

DOT- US Department of Transportation.

Drayage- port container hauling.

eModal- a web portal for multiple container terminals.

Employee Driver- driver paid on a per hour or per week basis whose annual earnings are reported for tax purpose to the IRS on IRS form W-2.

Employee (Driver) Benefits- Fringe benefits such as: employer paid portion of social security, medical insurance, paid vacation, holidays, sick leave, etc.

Exports- loaded containers delivered to the Ports.

FMCSA- Federal Motor carrier Safety Administration

Fuel surcharge- a percentage or fixed add on price to a freight charge to compensate for the increased cost of fuel.

Gateway Cities COG- a special government agency made up of 27 cities, counties, and the Ports of Los Angeles and Long Beach

Gross revenues- total revenues received for trucking operations.

Hazardous Materials- or "hazmat" loads or containers that contains flammable, poisonous, toxic, and/or dangerous substances.

Hours worked- the total on-duty time made up of driving time and non-driving time such as waiting time associated with picking up and delivering containers.

Imports- loaded containers picked up from the Ports.

IOO- Independent Owner Operator truck driver, paid by an LMC as an independent contractor, as opposed to an employee. Independent contract compensation is reported to the IRS for tax purposes on IRS form 1099.

LMC- Motor Carrier licensed by the US Department of Transportation.

Mean- or average is the total of values divided by the number of values.

Median- the middle position in an ordered set of values.

METRANS- a USDOT University Transportation Center (UTC) that is a joint partnership of USC and CSULB, involved in transportation related research, education, and outreach.

Net Income- gross revenue from trucking operations minus truck expenses including any loan or lease payments.

Net taxable income- gross income less business expenses as reported on the schedule C

Off duty- time non-driving, or time driving not on-duty, such as commuting from and to home.

Overtime- time worked after 40 hours worked a week. By Federal law overtime is paid at time and one-half times the straight time hourly rate. Applies only to employees and not Independent Owner Operators, as they are not employees.

Rail Yards- intermodal container transfer and storage yards where double container stack train rail cars are loaded, unloaded, classified, and assembled or distributed.

Random- being related to a set of elements with an equal probability of occurrence.

Refrigerated Container- a container, when the refrigeration unit is turned on, that is used to ship perishable, temperature controlled, and/or frozen items.

Schedule C- A portion of the federal income tax form 1040 used to report self-employment income and expenses.

Store Door- retail store delivery, such as to a WalMart, Target, Home Depot, etc.

Stratified sampling- a finite part of a statistical population divided into a series of graded strata, or statistical subpopulations. Generally samples within strata are proportional to the number of entities in the strata.

Sub Hauler- a carrier that works and subcontracts to another carrier.

TEU- twenty foot container equivalent unit. TEUs are the standard of measure for containers. A forty-foot container is 2.0 TEUs.

Tractor- a power unit that can pull a container chassis with or without a container, or trailer/trailers.

Trip- a “haul”, “turn”, “load”, or a two-way trip with a loaded container (pickup & delivery) and a return of the empty container.

Trucker- used to refer to either a driver or a carrier.

Warehouse- a building that is a product storage and/or handling facility.

APPENDIX B
SURVEY QUESTIONNAIRES

Licensed Motor Carriers (LMC) Survey

Interviewer: _____ Date/Time: _____

Trucking Company: _____ Phone _____

Trucking Company contact(s): _____

CGR Review: _____

1. Do you have driver employees (who are paid on a W-2 form basis) who function as port drayage drivers, i.e. transport containers from/to the ports of Los Angeles (POLA) and/or Long Beach (POLB)? ___ Yes ___ No.
2. If you do not have employee drivers, how many Independent Owner Operator (IOO) Drivers do you use? _____ Minimum _____ Maximum _____
3. If you own tractors used in port drayage, how many of them were manufactured after 1994 _____. How many before 1994 _____? Do not own any tractors _____
4. How would you characterize your port container drayage business?
 - 4a. Loaded containers from the port terminals (imports)? ___ Yes ___ No
 - 4b. Loaded containers to the port terminals (exports)? ___ Yes ___ No
 - 4c. Containers to/from Intermodal Railyards (ITCF, LATC, UPCI, etc)? ___ Yes ___ No
 - 4d. % hauls: ___ %short haul(<50mi one way); ___ %med (51-200); ___ %long(>200)
 - 4e. Do you haul loaded containers in both directions on a round trip? ___ Yes ___ No
 - 4f. Do you have contracts with customers/terminals? ___ Yes ___ No
 - 4g. Do you haul hazardous materials ("haz mat") ___ Yes ___ No
 - 4h. Do you haul refrigerated containers ("reefers") ___ Yes ___ No
 - 4i. Do you haul to retail stores (Costco, Wal Mart, Target, Ikea, etc.) ___ Yes ___ No
 - 4j. Do you haul to plants/warehouses/distribution centers ("DCs") ___ Yes ___ No
 - 4k. What is your most frequent loaded container destination location? _____
 - 4l. Do you subcontract or sub-haul to other carriers? ___ Yes ___ No ___
 - 4m. Do you have other carriers subcontract or sub-haul to you? ___ Yes ___ No
 - 4n. Any other container work not covered in 4a. to 4m. above? Please describe:

5. Estimated number of weekly loaded container moves? _____
6. Estimated number of annual loaded container moves? _____

Note to interviewer: Proceed to the note at the bottom of page 2, if all drivers are IOOs.

THIS SECTION (QUESTIONS 7-12) FOR LMC's WITH EMPLOYEE DRIVERS ONLY

7. How many employees who do port drayage (container moves from the ports) are currently on your payroll serving the Ports of LA and Long Beach? _____.
8. What is the standard base pay range for these employees for a 40-hour week (without overtime?)

Base wage rate Minimum \$_____/hr Maximum \$ ____/hr Midpoint\$ ____/hr **Note** for Trucking Companies who do not have hourly wage ranges, ask for the average actual pay and record it as the Midpoint.

9. How many hours overtime do your employee drivers typically work? _____
What is the typical range of overtime hours/week? _____to _____

10. Are there any other wage components such as pay per load or special pay for lumping? YES NO. If Yes, please describe
- _____

11. What fringe benefits do you provide your employee drivers?) Check all that are paid or partially paid by the Company)

- ___ Health insurance
- ___ Dental insurance
- ___ Vision insurance
- ___ Paid holidays
- ___ Paid vacation
- ___ Paid sick leave
- ___ Paid life insurance
- ___ Retirement plan
- ___ 401(k) plan

12. Company pays what for employee health care?

- \$_____ towards the cost of what ever plan the employee chooses.
- _____ Pays for the employee only
 - _____ Pays for the employee and spouse (or one other person)
 - _____ Pays for an entire family

Note: At the end of this LMC survey say we are also doing a survey of the independent owner-operators (IOOs) port drayage drivers and would like to include some of your IOOs. Can we interview your IOO's at your place of business?
Information and names to be anonymous and confidential. And ask if there is a lunchroom, driver's room, or dispatch room or other space we could use for a few hours to interview the drivers. Tell the LMC contact that there is a \$20 incentive for the drivers for their time to complete the survey and a \$50 bonus if they send us their tax return. Then proceed to the Independent owner operator (IOO) survey, one for each IOO port drayage driver interviewed

Port Drayage Independent Owner Operators (IOO) Drivers' Survey

Interviewer _____ Date _____ LMC Ref. # _____

Driver First Name _____ LMC Name _____

CGR Supervisor Review _____

1. Do you haul containers from the ports of LA and/or Long Beach YES ___ NO ___
(**Note:** If no, terminate the interview with no incentive payment.)
2. Do you haul/dray four(4) or more port containers per week? ___ Yes ___ No (**Note:** If "No", terminate the interview with no incentive payment)
3. How many hours do you work doing port container drayage? _____ hrs/wk _____ day/wk
4. Is your workload constant, erratic, or seasonal. Describe _____
5. Do you do other non-container trucking work? ___ Truckload vans or flats (TL)?
___ Less-than-truckload (LTL)? ___ Local delivery? ___ Over-the-road (OTR)?
6. Do you do other non-trucking work? ___ Yes ___ No _____ What kind of work?
7. How many weeks of vacation do you take per year? _____ weeks/year
8. Please describe your work. # refers to number of round trips (RTs) of loaded containers and returns; Hours include round trip (RT) driving, non-driving, and waiting time; Pay is for the round trip of one loaded container including the empty container/chassis or tractor bobtail return or pickup. FSC is the fuel surcharge, enter Y if FSC is included in pay, enter FSC amount if not in pay.

Destination Location	Store door	Ware house	Rail yard	Other Locat	# per week	#per day	Hrs/ RT	Miles 1 way	Pay/ Trip \$	Incl. FSC?
Total										

9. Please estimate how many miles you drove your tractor last year? _____ miles
10. Do you typically get paid for standby time? YES ___ NO ___. If so how much \$ _____/hr
After how many hours of waiting before you get paid for standby _____ hour(s).

11. Please describe your tractor for us.

Year _____ Make _____ cab over? _____ Sleeper? _____ or day cab? _____ Yr Acquired? _____
Where acquired? _____ Dealer _____ Friend/Relative _____ Other Driver _____ Other?:
_____ Amount paid \$ _____ Amount owed \$ _____ Pay/mo \$ _____

12. Where do you park your tractor at night (or day, if a night driver)? _____

Your Carrier's Yard? _____ Your home? _____ Other lot? _____ Pay for parking? _____
On the Street? _____ What City? _____ What area? _____

13. Do you work for more than one trucking company (LMC) on port container work?

NO ___ YES ___ How many? _____

14. How much did you get paid (total gross income in 2006) from trucking work? \$ _____

Was this all from container hauling? _____ If No, what % was container hauling _____ %

15. What was your Net Income in 2006? \$ _____

16. What was your truck related expenses in 2006? \$ _____ or ask question #17.

17. Operating Expenses for your tractor? If driver does not know, rank the expenses, 1 as highest

\$ Amount per
/time period

- \$ _____ / Tractor payment
- \$ _____ / Repairs/maintenance – including preventative maintenance, inspections
- \$ _____ / Fuel & Oil
- \$ _____ / Tires, new, used, and recaps
- \$ _____ / Insurance (accident and liability)
- \$ _____ / Licenses, permits, road taxes, tolls, parking, tickets, overnight expenses
- \$ _____ / Other Please List _____

Thank the driver for his time and pay the standard interview incentive and then tell him that there is an additional incentive of \$50 available if he provides a copy of any of the following: (1) 2005 or 2006 federal or state income tax return or (2) a current accounting statement that covers a full year. **His name and address should be blanked out or covered in black** on the return. Provide the preaddressed envelope to him and write the survey reference # from the top of this form in the lower left hand corner of the envelope. We will mail him \$50 within one week to the address he puts on the envelope as the return address. Have him write that address now and give him the envelope. Make certain there is postage and the CGR return address label on the envelope. Write name the check is to be made out to here _____

Interview stop time _____ Total interview time _____ minutes