

**Hauling Containers:  
Port Drayage Drivers in the Logistics Supply Chain**

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With the globalization of production and the increasing distance between the point of production and the point of consumption, there is growing interest in the transport phase of commodity chains and global production networks. For over half of all imported goods consumed in the U.S., the container ship is the mode of transport delivering commodities, primarily from Asia, to U.S. shores. Once the containers arrive at a U.S maritime port, they are subject to an intermodal inland supply chain involving a logistics industry and a workforce devoted to moving, storing, and distributing the merchandise. The most immediate task in the inland chain is the movement of containers from the terminal to distribution centers, railheads, and long-hauls. When carried out by truck, this “port drayage” system employs a large mass of drivers that work under a particular set of conditions.

In this paper, we look more closely at this sector of the logistics labor force. More specifically, we replicate and extend studies done on port drayage working conditions at other U.S. ports and, based on the data collected at the port in Jacksonville, Florida (herein referred to as Jaxport), make some suggestions for improving both the quality of the work and the efficiency of the logistics supply chain.

The study of transportation and logistics has not received a great deal of attention from sociologists (for a major exception see Bonacich and Wilson, 2008) considering its critical role for the global economy and the pace of capital accumulation. While sociologists have long studied the conditions of work at the point of production, and more recently the patterns of behavior at the point of

consumption, the phase of commodity circulation and distribution has received far less notice (but see Harvey, 1982 & 1989). This state of affairs may be changing as a growing segment of the U.S. labor force has shifted from goods-producing (manufacturing) to goods-moving (transportation and logistics) employment. One theoretical point of entry in thinking about logistics is provided by Neo-Marxist models that consider the circulation of commodities as part of the “turnover time” from the moment of commodity production to the eventual realization of profit by commodity consumption (see Stratton, 2000). The turnover time, in an increasingly just-in-time, pull-based, buyer-driven, supply-chain system, is heavily impacted by the speed and efficiency of the intermodal transportation system (Rodrigue, Comtois, & Slack, 2009).

In this paper we focus on the movement of goods by truck and, within this sector, the transport of ocean containers, or port drayage. As part of the intermodal commodity chain, trucking plays a crucial role. There have been several important studies on the trucking industry and the associated working conditions of drivers. Best known among these is Michael Belzer’s *Sweatshop On Wheels* (2000). The story about the demise of working conditions revolves around the transition of the trucking industry from the status of a protected and regulated, to unprotected and deregulated, industry with the passage of The Motor Carrier Act of 1980 (Belzer, 2000; Belman & Monaco, 2001; Bensman, 2009; Peoples & Talley, 2004). Prior to the 1980 Act, licensing requirements enforced by the Interstate Commerce Commission restricted the number of trucking firms and trucks. This had the effect of stabilizing prices and, with Teamster representation of drivers, providing truckers with attractive

compensation and benefits. Rising wages and operating expenses were simply passed in the form of higher shipping costs. The Motor Carrier Act radically altered the trucking landscape allowing the entry of low-cost, non-union trucking firms. The increasing number of players and the heightened competition exerted a downward pressure on trucker compensation and a steady decline in union representation.

Another major consequence of deregulation was the rise of the “owner-operator” or “independent contractor” arrangement. Under this now-dominant industry standard, trucking firms -- rather than owning trucks and hiring workers as employees -- contract with “self-employed” drivers who own or lease their own truck. These drivers work for, but are not officially employed by, the trucking companies, and they are paid by the trip or load, instead of by the hour. The implication of being an independent owner-operator, as fictional as it might be in practice (see Bensman, 2009), effectively frees trucking companies from the any financial and legal obligations that they might incur under an official employment relationship (e.g. social security, health benefits, retirement). Finally, and quite significantly, as an “independent business”, the owner operator is prohibited from joining with other owner-operators in organizing a labor union, as this would violate federal anti-trust laws.

While the deregulation of trucking has negatively impacted working conditions for many drivers, it is port truckers who face the most severe circumstances. According to Prince (2005), the trucking labor force is stratified. At the top of the pyramid are the fulltime employees of the major national trucking firms who may also be unionized. Below this relatively privileged

segment of the trucking labor force are the various owner-operators. Among owner operators there is also a hierarchy. “At the bottom of the pyramid are owner-operators hauling international containers – the fastest growing segment of intermodal traffic. After expenses, many of them make about \$6 an hour, less than what many fast-food jobs pay.” Or, as Bonacich notes, “Of all the global trade related logistics workers, port truckers are the most oppressed” (2003, p. 46).

### **Existing Literature on Port Drayage Drivers**

Three different studies in particular have provided valuable insight into the basic demographic characteristics of port truckers, levels of compensation, working conditions, and some of the common problems faced by drivers. These studies were conducted at the Ports of Los Angeles and Long Beach (LA/LB) (Monaco & Grobar, 2004), the Ports of New Jersey (NJ) (Bensman & Bromberg, 2009), and the Port of Houston (Harrison, Hutson, West, & Wilke, 2008). In this section we consider some of the general patterns discovered at these three different port locations (see also Port Jobs, 2007 and East Bay Alliance for a Sustainable Economy, 2007 for information about port truckers at Seattle and Oakland). More direct comparisons of these earlier studies will be reported below when we present the results from our Jaxport survey.

For the two surveys that asked about the racial ethnic status of respondents, the solid majority of drivers indicated Hispanic or Latino ethnic background (in LA/LB it was 92% and in NJ it was 66%). This finding is consistent with the pattern of “racialization” in which ethnic and racial minority groups occupy and are concentrated in the least advantaged employment

categories, and/or move into those occupational sectors that have experienced downward mobility in terms of compensation and working conditions (see Bonacich, Alimahomed & Wilson, 2008). Trucking generally, and port drayage in particular, is representative of this type of occupation. Further supporting evidence for the marginalized character of port drayage is provided by the percent of the drivers indicating owner-operator status. At LA/LB 86% of drivers were owner-operators, at NJ 73%, and at Houston 78%.

With respect to compensation, the average net income (after subtracting truck expenses) of drivers in LA/LB was \$29,903 (2004 dollars) and in NJ it was \$30,000 (2008 dollars). These figures include both employees and owner-operators. Consistent with the literature on the relative position of the owner-operator drayage trucker, Bensman and Bromberg report an average net income of \$35,000 for employee drivers and \$28,000 for owner-operators. To place this level of compensation into a larger context, it is important to consider the number of hours per week driver's work to achieve these levels of income. At LA/LB the average number of hours drivers worked per week was 56, in NJ 58, and in Houston 55. This figure is consistent with the "self-exploitation" that would characterize owner-operator conditions that involve no salary or hourly wage and constant pressure to maximize the number of "trips" or "turns" in order to increase income.

The increase in containerized trade has placed heavy burdens on transportation infrastructure. The terminals at LA/LB and NJ both see a heavy volume of trucks entering and exiting ports daily. Concerns about national security since 9/11 have increased security restriction on entry into ports. These

factors contribute to considerable wait times for each trip to a terminal. Drivers in LA/LB, NJ, and Houston averaged about three trips a day. These trips were local deliveries and each typically less than 75 miles. Total wait times drivers experienced were on average 2 hours per trip. If drivers were to work a 12-hour day and turn three trips, this means that roughly half the time worked was spent waiting. For the small percentage of company drivers servicing ports, this is not a severe problem economically because they are paid by the hour. For owner-operators, however, payment is by the trip and drivers are not compensated for the time they spend waiting. Thus, wait time is one of the most significant factors impacting compensation and also contributing to the extra hours of employment noted above.

Another aspect of the working conditions of port drayage drivers pertains to the equipment used to haul containers. The trailers that carry the containers – the chassis -- are typically owned by the ocean carriers. Prior to a driver obtaining a ship container, they must first stop at the chassis yard within the terminal where they are assigned a chassis. A significant issue facing drayage drivers is the condition of the chassis they receive. While the terminal and/or ocean carrier is responsible for the quality and roadworthiness of the chassis, most states hold the driver responsible for driving with an unsafe chassis (California has passed legislation making the owners of the chassis' responsible if found not roadworthy, but it has yet to become industry wide standard). If the driver is assigned a defective chassis, they must wait either to receive one that is acceptable or for the defective chassis to be repaired. This contributes to additional wait time. Employee drivers once again have the advantage over owner-operators as they

are paid by the hour, while owner-operators are paid by the trip. Monaco and Grobar, and Bensman and Bromberg, both addressed the chassis issue in their studies. For LA/LB, Monaco and Grobar report that 46% of drivers had been given a chassis that was not roadworthy in the 30 days prior to be surveyed. For NJ, Bensman and Bromberg report that 77% of drivers indicated receiving a bad chassis over the past 12 months, with 35% indicating they had received a bad chassis more than ten times. In both the LA/LB and NJ studies, the drivers were asked how they handled the bad chassis. In a majority of cases, the drivers either waited for the chassis to be repaired or waited for a new chassis. A smaller but still significant percent (between 11% and 22%) of drivers reported taking bad chassis onto the road. In short, defective chassis' take a toll not just on driver income but on highway safety (Bensman, 2009).

Given the less than ideal working conditions reported by the drivers, one might expect this labor force to be ripe for union organization if such an option were available. Only Bensman and Bromberg (2009) included a question on the willingness of the drivers to join a union. Two-thirds of the NJ drivers indicated they would be "very likely" to join a union "if they could".

The studies by Monaco and Grobar, Bensman and Bromberg, and Harrison et al., point to some of the significant issues and challenges facing port drayage drivers. Our study is designed to examine these issues further for port drivers at Jaxport. There are several reasons why we may expect to find some different patterns for the drivers in Jacksonville, Florida. First, the Jacksonville Port Authority is much smaller than LA/LB, NJ, or Houston. This may impact some of the working conditions that are related to the size of the operation – such as wait



times and availability of chassis. Second, while Jacksonville is in the state of Florida, it lies in the northeast corner of the state and is quite distinct from other urban areas in the state such as Miami and Tampa. Jacksonville is much more of a traditional southern city and it lacks the ethnic diversity (in particular the sizable Hispanic populations) of urban areas to the south. We therefore might expect some significant differences in the ethnic composition. Third, and closely related to the second, the political culture in Jacksonville tends to be more conservative than these other Florida metropolitan areas and this may impact views related to unionization.

## **METHODS**

Since our study is an effort to replicate, compare, and extend the work of others (Monaco & Grobar, 2004; Bensman & Bromberg, 2009; Harrison, Hutson, West, & Wilke, 2008) who have examined the characteristics and working conditions of port truckers, we use a survey instrument that includes items based on surveys (with permission) employed by Monaco and Grobar (2004) and Bensman and Bromberg (2009) (See Appendix A). In addition to the various survey items drawn from these earlier studies, we also allowed drivers to add any written comments with the following invitation: ***Please add any other comments below that you think might be useful to our research project on port-related trucking and the working conditions and challenges facing drivers.***

One of the challenges facing researchers who are interested in surveying port drivers is to find a location where this population can be accessed and where a survey can be completed. Unlike many larger ports, the Jaxport terminals have

not yet reached a point where trucks line up for an extended period of time at the terminal gate, waiting to enter the terminal and thus allowing researchers to distribute and collect surveys. Thus, our initial strategy was to locate drivers at truck stops and gas stations in proximity to the container terminals, and request their participation. In most cases, given the time pressure associated with the work, while almost all were willing to participate, they also wanted to take the survey with them, fill it out when they had time, and return it by mail. Our first batch of surveys was distributed in this fashion with the hope that the drivers would mail back the surveys in a timely fashion (we provided a self-addressed stamped envelope). Shortly after the start of the data collection process, we discovered a location where the drivers had to line up to enter one of the terminals because the gate was closed for lunch from 12 noon to 1 p.m. This one-hour lunch break taken by workers inside the terminal has some additional significance for this study (discussed below) but the immediate point is that it allowed us, with the permission of Jaxport officials, an opportunity to have drivers fill out and return the survey while they waited to enter the terminal. This assured us of a certain number of surveys completed and returned during a finite period of time. We, therefore, used two methods of survey distribution, and we report two different response rates. First, for the surveys that were asked to be returned by mail, the response rate was 8%. Second, for the surveys that were distributed while the drivers were waiting, we had a participation rate, among those asked, of 93%.

While Jaxport is expected to expand its container operation dramatically with the opening and full utilization of two new container terminals, the level of

container traffic is significantly less than the three ports for which similar analysis has been conducted. In addition, our data collection took place in Summer of 2009 when the global recession was impacting the volume of port traffic internationally. For all of these reasons, and those related to the administration of the survey, it was more difficult to establish a large “sample” size. Repeated visits to the Talleyrand terminal yielded a total of 78 surveys. While we make no claims that our respondents represent the larger population of drivers, the similarities of our results with those of previous studies is reassuring.

## **FINDINGS**

### **Quantitative Data**

We can begin our analysis of the Jaxport drayage drivers by looking at the composition of the respondents in terms of the type of driver; that is, whether they are employee, owner-operator, or sub-hauler (works for a driver who own his own fleet). Consistent with the earlier studies, the solid majority of port truckers are owner-operators (67.9%), with 19.2% percent working as employees, and 10.3% reporting as sub-haulers. Since our primary interest is in the owner-operator labor force, we will focus on that group. However, it will also be instructive, on occasion, to compare the working conditions of the owner-operators with the employees to see whether we find the kind of relative deprivation for owner-operators reported by other researchers.

In contrast to the racial ethnic composition of owner-operators at LA/LB and NJ, where Hispanic and Latino workers made up the majority, Whites make up the plurality of drivers in Jacksonville at 41.5%; African-Americans account for 37.7% and Hispanics 17.0 percent. Thus, when combined, the two minority

populations account for the majority (54.7%) of drivers, and they are disproportionately overrepresented in this sector in relationship to their proportion of the population in Jacksonville. In that sense, the findings are consistent with the literature on the “racialization” of this occupational category. It is worth noting, in this respect, that among employee drivers, hypothesized to be relatively privileged in comparison to owner-operators, the two minority groups only combine for 28.5%, with whites accounting for 63.4%.

Given the findings on the racial-ethnic composition of owner-operators, and how it compares with the employee drivers, we should now consider the economic and working conditions of the two groups of drivers. The average income of the owner-operator in 2008 (after deducting truck expenses) was \$36,150, with a median of \$35,000. For employee drivers, the average income was \$38,000 with a median of \$40,000. This is consistent with the expectation, and finding reported by Bensman & Bromberg (2009) that employees fare better than the owner-operators. The owner-operators report working a slightly longer “typical” day than the employees (10.53 versus 10.27 hours).

More significant than the income disparity is the difference between employees and owner-operators on employment benefits. Given the legal designation of owner operators as “independent contractors”, one would not necessarily expect the trucking firms to provide such employee benefits to this population. On the other hand, as others have noted (see Bensman, 2009), the vast majority of owner-operators are “dependent contractors” tied to a single trucking firm. Such is also the case for 98.1% of the owner-operators in Jacksonville who indicate they are “not allowed to work for other firms”. Despite

the level of dependence on a single employer, 71.7% of owner-operators report no health insurance as compared to 40.0% of employees. Both groups of drivers are even less likely to have a pension – 92.5 % of owner-operators, and 66.7% of employees, have no retirement system.

One of the defining features distinguishing employees from owner-operators, as we have noted, is the method of compensation. Employees are likely to be paid by the hour whereas owner-operators are paid by the trip or load. While results for the owner-operators confirm this pattern with 95.8% reporting payment by the “trip”, 30.8% of the employees also report this form of compensation. What we would conclude from this comparative analysis is port drivers generally are not well-compensated considering the nature of the work and the number of hours invested and, further, there is no guarantee under either employment arrangement that they will receive health benefits or a pension.

A major source of inefficiency in the intermodal inland supply chain pertains to bottlenecks and delays in moving cargo from one point to the next. For port drivers, this is manifested in the amount of time spent waiting to get into the port terminal or receiving/unloading the container or securing a chassis. For all drivers the average wait time reported for their last trip was 1.98 hours. Interestingly, the wait time was longer for owner-operators (2.15 hours) than for employees (.96). The source of this significant difference is not clear but it is important to emphasize that for the owner-operators, this is uncompensated time. 50% of owner-operators also indicate that over the last month they have been issued a defective chassis and 82.4% report that, in the case of the last defective chassis they were issued, they had to wait for either a new chassis or for

the defective chassis to be repaired. Thus, chassis issues contribute to further delays and uncompensated time as well as unsafe road conditions.

As reported by Bensman (2009) for the NJ ports, Jacksonville port drivers are also driving older model trucks. 85% of the trucks are pre-2004 and 60% are at least ten years old. Diesel-emissions from these earlier model trucks can pose serious public health risks to both the drivers and the communities in which they travel.

Given the less than ideal working conditions, and the fact that rather than being truly and fully independent contractors they are highly dependent piece-rate workers, one might expect that the owner-operators would be interested in organizing to improve their situation. Asked if they would join a union, 46.9% of owner-operators responded in the affirmative (versus only 7.1% of employees) but this is far below the 66% reported by Bensman in his survey of drivers in NJ. As already noted, the political economic climate in Jacksonville Florida is much more conservative than the northeast or the west coast, Florida is a right-to-work state, and there is little union activity or agitation in this region of the country. Therefore, this result is not terribly surprising.

### **Qualitative Data**

We can now turn to the qualitative data we collected. There are two sources for qualitative data on the port drayage drivers at Jaxport. First are the comments and conversations made by the drivers as we introduced ourselves and worked through an informed consent script. We made a habit of writing down all the substantive comments shared with us during these interactions. Second are the written comments that drivers were invited to include on the last page of the

survey in response to the following prompt: ***Please add any other comments below that you think might be useful to our research project on port-related trucking and the working conditions and challenges facing drivers.*** 38.5% of the respondents included comments in this section of the survey.

With regard to the informal conversation while we were distributing the surveys, no fewer than five drivers, in response to a statement about our desire to learn more about working conditions, responded along the lines of: “I can answer that in two words: It sucks.” While this may be dismissed as nothing more than the hyperbole of the oppressed, the consistency of the sentiment reflects the larger sense of frustration and disgust. We should also note that very few drivers refused the survey or exhibited disinterest; in fact, many expressed appreciation for the attention we were giving their work situation and also communicated the hope that something positive might result from our efforts.

From the written comments, several specific themes emerged. They are personal treatment, terminal operation, chassis issues, and economic conditions/relations with employers.

The most frequent comment, or complaint, registered by the drivers involves the poor treatment they receive from the terminal employees. This ranges from a lack of respect for the drivers to an indifferent attitude toward the drivers’ need to get in and out of the terminal in a timely fashion. Some representative expressions are as follows:

*The ILA clerks are in no hurry to do anything as they are paid on an hourly basis and are SLOW, SLOW, and SLOW!*

*Redundant holdups, dealing with people who could care less that a driver has a time schedule to keep. Arrogant disregard with any problem a driver has. They label us as stupid truck drivers!*

*At the port, they are very nasty to drivers. They discriminate at the port. They treat drivers like dirt when we are the ones responsible for their salary. They treat the minorities very badly.*

*The way that they treat drivers at the port is humiliating*

Bonacich and Wilson's research on the west coast ports reports similar tensions and animosities between drivers and terminal workers. "Port truckers complain that the ILWU [International Longshore and Warehouse Union] clerks treat them discourteously or take breaks, leaving drivers to wait in long lines. Drivers feel that they face some racism from ILWU members. And the truth is that some ILWU members blame the immigrants for the downfall of the union in the ports" (2008, pp. 223-224). The study of port truckers in Seattle (Port Jobs, 2007, p. 39) also highlights this issue:

Conflict between longshore workers and truck drivers at the marine terminals is a problem that is acknowledged by all stakeholders in the system. Miscommunication and disagreements in this high-stress environment can lead to physical altercations. This affects working conditions for everyone at the terminals, and can reduce the efficiency of terminal operations. Drivers report that they are often treated disrespectfully; while longshore workers report that they are often frustrated by inexperienced drivers.

In Jacksonville the clerks and checkers are represented by the International Longshoremen's Association (ILA). It is worth noting that the ILA has an established and accepted (on both sides) history of "biracial unionism" (Nelson, 2001; Arnesen, 1998). This is manifested in a racial division of labor with African-Americans dominating the cargo handling and stevedoring functions while white workers are heavily overrepresented among the clerks and checkers.



In fact, in Jacksonville, as in some other East and Gulf coast ports, there are two separate ILA locals – one for the stevedores and one for the clerks and checkers. In this context, the racial dimension becomes somewhat more significant given that African-American drivers are disproportionately overrepresented while the clerks and checkers are largely white.

A second issue raised by many drivers had less to do with personal treatment than the standards of operation at the terminals. In particular they noted the hours and staffing at the gates and the requirements for various forms of identification (e.g. the Transportation Worker Identification Credential aka TWIC) for security clearance. As mentioned above, the closing of the gate for the lunch hour allowed us the opportunity to distribute, and the drivers to complete, the surveys. But for the majority of the drivers it was simply an uncompensated hour during which they were unable to move a container and complete a “turn”.

Some representative comments:

*Our main objective is to get in and out of the port as our compensation is based on what we pick up and deliver... They will close all but one gate at the busiest part of the day... The closing of the port between the hours of noon and one for the entire port is an abomination. No other port does this. They should stagger their break schedules to keep gate traffic moving. How can the JPA still continue to charge for port badges after the TWIC badge has been issued to an individual?*

*Waiting time is the biggest problem, especially during the lunch hour, or waiting to be checked in or out...Closing down at lunch is just unnecessary though. Port badge should not be a necessity, since a driver cannot enter the port without a TWIC badge. More fees, same access, longer wait*

*It would help a lot if JAXport would stay open from 7am to 7pm instead of 8am to 430pm. They also close for an hour at lunch, which is an aggravation...The only problem I have is the hours that the port works. We need a 12-hour workday.*

*Port should be opened for longer hours and when break is going, somebody should be there so they don't have to shut down the port for one hour. One hour is a lot of time for a truck driver. Let's get the wheels turning!!!*

As these comments clearly suggest, and as the literature on drayage drivers has emphasized, when one is compensated by the load or the trip, rather than by the hour, a premium is placed on the rapid completion of compensated tasks. In this case, the limited hours generally, and the closing of the gate for the lunch hour in particular, exacts significant costs for the drivers. Under owner-operator drayage working conditions, self-exploitation is the means by which income is derived and this is frustrated when formal obstacles such as hours of operation and security checks disrupt the rhythm of work.

The third major issue that emerged in the written comments pertains to the availability and condition of chassis. As our survey results documented, the issuing of non-roadworthy chassis is quite common. The written comments highlight some of the specific chassis-related concerns:

*When coming into port to get chassis getting something fixed is like getting teeth pulled. Union workers work the ports so most of the time it's pushed on us, the drivers, to get things fixed on the chassis ranging from flat tires and inspections updated to the brakes adjusted. Most of our time is spent in ports getting the correct chassis for containers and work that is needed so they can be road worthy. Recaps (tires) on these chassis are time consuming as well. We need to have virgin tires, not recaps)*

*The port needs to do a better job maintaining the chassis. Too many are on the road without brake and tire inspections*

*If you have a flat tire on the chassis on the road, they want you to pay for it. These loads don't pay enough to cover that, and make a profit. The port's not that bad, but it could be better equipment wise. Someone could be checking the chassis out while it's sitting there, instead of us waiting to get them fixed, which wastes a lot of time.*

*Chassis maintenance, tires are a big issue. They charge drivers for their bad tires when they go flat during service, which is very unfair, and no fault of the driver*

*Dry rotten tires on some of the chassis*

These comments point to several problems related to the chassis used by drivers – the safety of the tires and brakes, the responsibility for ensuring the roadworthiness of the chassis, and the costs incurred by the drivers as a result of faulty tires and waiting for chassis repairs.

A final theme that emerges from the written remarks pertains to the economic conditions and hardship that the drivers experience as part of the drayage industry and at the hands of the trucking companies for whom they work.

*In the game of trucking you make a living, but not the best if you own your truck. Everything is determined of the work you do, and how much it pays. Containers used to be one of the best ways to work, but now it is the worst.*

*It is getting harder to make a living doing this type of work. There are weeks that you may only get one run, and even if you do get more than one, the steamship lines are dropping the line haul rates for. The price of fuel and maintenance is not going down...I am speaking as a truck owner. It is getting tough.*

*Some companies are cheating drivers. We need a way to fight that. It's not fair that we're working so hard. Most of us have truck payments, mortgage, daycare, or child support. Everybody is hurting, but the drivers is the only one getting F\*CKED.*

*Shipping companies have quit paying fuel surcharges even though fuel is going up.*

*Pay has gone down. There are now lower rates, longer runs, and less time to run them. Pay needs to go up.*

*I went from making \$80,000 a year to \$35,000 a year in the last 3 years. You have to keep charging. Sometimes you'll be sitting for weeks. -We need a union for all independent drivers.*

*We need legislation for more strict regulatory measures on contracting companies, such as rate per mile, fuel surcharge, actual miles paid, and mandatory detention re-imbusement. The contractors should not be allowed to make more than ten percent off a load being delivered, or picked up.*

These remarks reflect the deteriorating economic conditions for truckers that have been documented elsewhere and the particularly vulnerable position of the drayage drivers in the logistics supply chain as “independent contractors” working in a highly competitive and fragmented industry.

## **DISCUSSION**

Overall the results from the survey of drayage drivers in Jacksonville Florida confirm what has been reported from comparable surveys conducted at other U.S. ports. The drivers responsible for moving containers from the port to distribution centers, warehouses, and railheads -- containers filled with the goods that line the shelves of almost all retail enterprises in the United States -- face less than ideal working conditions as a result of the poor treatment they receive at the gate and inside the port terminal, the piece rate method of compensation, the costs absorbed during delays and holdups, and the often defective condition of the equipment they are issued at the port. In this section of the paper we would like to draw out several larger implications of our findings for future theory and research on organizations and labor in the logistics sector.

One of the consistent observations made by those who study the port drayage system pertains to the issue of who bears the costs and who would have the greatest economic incentive to institute alternative arrangements (Bensman, 2009; Monaco & Grobar, 2004). If the ports paid an economic price for the

delays and bottlenecks reported by drivers, there would be an incentive to streamline the system or negotiate different terms with the unionized port workers responsible for operating the gates and directing the truckers through the terminal. If the drivers were organized and/or paid by the hour, the trucking firms would have an incentive to develop a more rational system that would minimize time delays. As it currently stands, the negative external effects of congestion, delays, or indifferent terminal workers are borne and absorbed by the drivers. There are few places in the economy where such a blatant disregard for the time and interests of another party can be found. On the other hand, these delays impact all parties in the sequentially interdependent inter-organizational supply chain. Therefore, there should be a common interest working to ensure a more timely movement of containers from the terminal to the subsequent mode of transport or distribution. More generally, this issue points to the need to internalize costs that are currently externalized, and the way in which the employment relationship is designed to enforce this arrangement by minimizing the costs to employers and maximize the costs incurred by workers.

A second implication of the results of our research concerns the relationship between different, but interacting, segments of the logistics labor force – namely, terminal workers and drayage drivers. One way to think about the contrasting conditions for these two workforces is through the characteristics of the industrial sector in which they are situated. As conceptualized by Rodrigue et al. (2009), the ocean container carriers are now characterized by gigantism in their size and capacity with a single post-Panamax vessel able to transport 12,000 containers. “The containerization process is thus confronted with a growing

tension between a massification as sea and an atomization on land...". While the shipping container, as a technological development, has sharply curtailed the quantitative labor requirements on the waterfront it has also produced scale economies that, at such a critical point in the supply chain, benefit from a predictable and well-trained labor force. The longshore unions on both coasts have been able to exploit these conditions to the advantage of their workers. However, once the containers leave the terminal, the juxtaposition that Rodrigue et al. (2009) identify in industrial organization is replicated at the level of working conditions in the two industries. The port drayage sector is highly fragmented, atomized, and competitive, coupled with a workforce hamstrung by their legal status as "owner operators" that prohibits "collusion" for the purpose of collective bargaining. The interface between the union-represented longshore workers and the port drayage drivers could scarcely pose a starker economic contrast. Some have described such an arrangement as "economic apartheid". In contrast to the drivers, the longshore workers are very well-compensated and also receive health care and pension benefits. As we have already noted, in terms of working conditions and compensation, drayage trucking lies at the bottom of the trucking and logistics economic ladder. Our study has pointed to the way these economic differences can generate significant resentment among the drivers toward the terminal workers as revealed by the qualitative data. Such potentially antagonistic relations are likely to weaken prospects for worker solidarity across the supply chain and may also contribute to the divided opinions among drivers regarding labor unions.

## **CONCLUSION AND POLICY IMPLICATIONS**

We conclude with some of the practical policy implications of our research that we intend to communicate to port officials, the media, and the drivers. In our commitment to a “public” and applied sociology, we believe the results of this research should be used to raise awareness about the working condition of port drivers in Jacksonville Florida and the role they play in the logistics sector, as well as inform policy making in the local port economy. Some of our suggested areas for potential intervention are consistent with those raised in studies of other U.S. ports (e.g. see Bensman, 2009; Harrison, et al., 2008) and thus they also have fairly wide applicability to all U.S. ports that rely on drayage for the movement of shipping containers.

1. Port authorities should organize several meetings that bring together the union-organized terminal workers and the owner-operators to discuss the issues of concern and to establish mutual respect and understanding of the challenges facing both groups of workers in carrying out their jobs.
2. As long as a large proportion of the drayage labor force is compensated by the trip rather than the hour, the gates at the port terminals should remain open for longer hours and utilize flexible staffing strategies to eliminate closings during the middle of the day. This should also contribute to the efficiency of the inland supply chain.
3. Federal and state agencies should reduce the number of identification cards required for security clearance to the single TWIC I.D. to enter the port and also reduce or waive the cost associated with obtaining any additional required forms of identification.

4. In anticipation of a significant increase in the number of diesel-burning trucks entering and leaving the container terminals, port authorities should explore policies, such as concession agreements, that would establish environmentally-sound standards for trucking companies and their drivers.

5. Owner-operators are unable to work as truly independent contractors because they are prohibited from working for more than one trucking company. For that reason, there should be a formal employment relationship between the owner-operators and the trucking companies that would include a living hourly wage, health care benefits, and a pension. Higher wages and annual incomes would create a better quality of life for a critically important segment of the logistics workforce, contribute to the primary objective of the City of Jacksonville's Blueprint for Prosperity by increasing per capita income in Duval County, generate a larger multiplier effect for the local economy, and prevent an anticipated labor shortage by attracting more highly skilled drivers to the industry. The hourly wage would also create an incentive for all parties to develop better methods and processes for reducing time delays, thus enhancing the efficiency of the inland supply chain.

6. Port authorities can contribute to the safety of the drayage sector by establishing at the terminals a system for brake and tire inspections of chassis as well as their timely repair. Drivers should be reimbursed for the cost they incur in repairing defective or non-roadworthy chassis.

7. Port authorities, in collaboration with shippers and carriers, should carefully study the research and best practices of other ports pertaining to the most efficient ways to organize and facilitate container drayage and chassis allocation



and distribution. These might include investment in additional yard cranes, implementing a truck appointment system (Huynh & Walton, 2008), the virtual container yard (International Asset Systems, n.d.), trucking pools (Payne, 2008), and chassis pools (U.S. Environmental Protection Agency).

In some of these areas, the Jacksonville Port Authority has already made an effort to improve conditions and efficiencies (e.g. the allocation and maintenance of chassis). In other areas, progress and improvement will require additional actions by the port authority as well as other parties such as state government, the shipping lines, terminal operators, or the trucking companies. Ideally, there will be collaboration and a collective desire to establish better working conditions for drivers and a more efficient drayage system among the range of stakeholders.

A final point concerns the question of responsibility and accountability in a port economy, which often becomes muddled under particular port governance arrangements (Brooks, 2003). Jaxport operates as a landlord port leasing its property to various “tenants”. They include shipping lines, terminal operators, and logistics companies. As port competition intensifies, there is a global trend toward the landlord port model because it allows the tenants exclusive control and dedicated facilities and is thus consonant with a favorable business climate (Slack & Fremont, 2005). For this same reason, the landlord port is reluctant to impose prescriptive and restrictive guidelines and will typically view actions by tenants, assuming they don’t violate federal or state laws and regulations, as managerial prerogatives. This can make it more difficult to align the port economy with the interests of the larger community or the range of stakeholders

(Notteboom & Winkelmanns, 2003) or for the port authority to mitigate negative externalities. The response of port authority officials to some of the recommendations stemming from this research reflects this abdication of responsibility.

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