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# The Elusive Sweatshop

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*Driver perceptions of their working conditions and compensation levels and other indicators of the driver supply were investigated primarily through a survey of over 1,600 long-distance drivers of refrigerated trucks. The large majority of drivers expressed satisfaction with driving and the payments they receive, and intend to remain in the profession at least over the next five years. Data regarding tenure with current employer indicate that turnover rates are higher than those for the economy as a whole. However, the turnover rates are consistent with several other occupations, which also tend to be lower skilled and have few advancement opportunities.*

by **Richard Beilock**

**W**ith regard to freight rates and the availability of service options, few question the success of motor carrier deregulation. But concerns persist regarding the effects of deregulation on labor. Particularly given the role of variable costs under regulation in rate setting, it was widely believed that labor captured part of the economic rents resulting from regulation (Cherry 1977) and would share in the loss of those rents if and when the industry was deregulated. Following the Motor Carrier Act of 1980, several studies broadly indicate that this has been the case (Rose 1987; Hirsch 1988; Winston, Corsi, Grimm, and Evans 1990). Eliminating economic rents, i.e., premiums above the value of those resources used elsewhere, is a beneficial correction for an economy, however painful to the owners of those resources. But this can go too far. Subnormal payments (negative rents) to resources in a rapidly growing industry, such as trucking, is exploitive and, arguably, unsustainable as it encourages shortfalls in the quantity and/or quality offered of those resources. Some industry groups and academics have asserted that is the case with regard to truck drivers, particularly those outside the still highly unionized

LTL segment (Belman, Monaco, and Brooks 1998). Perhaps the most forceful and influential statement of this view is *Sweatshops on Wheels: Winners and Losers in Trucking Deregulation*, by Michael Belzer. The book's central assertion and theme is that over the past 20 years, presumably due to deregulation, truck driving in the US has been reduced to sweatshop-like conditions. Belzer (2000, pp.6-7) defined a sweatshop as having three characteristics:

1. Below subsistence level wages—in particular, wages below those with comparable skill levels (negative rents) and insufficient to maintain a family at standards typically enjoyed by those with comparable skill levels;
2. Overwork (long work days and work weeks); and
3. Unpleasant and unhealthy working conditions.

Belzer (2000, p. 192) also asserted that these conditions contribute to a growing labor shortage in the industry. These problems are almost entirely restricted to the nonunionized, truckload (TL) segments of the industry:

*"When asked about human resource quality, unionized LTL carriers indicated they had no complaints with their workers, indeed suggesting they were exemplary. Nonunion TL carriers, on the other hand, reported great difficulties finding and retraining workers skilled enough to keep their operations fully staffed.... Union TL carriers experienced a 24% turnover rate while non-union carriers experienced a turnover rate averaging 82%" (Belzer 2000, p. 153).*

According to Belzer (2000, p. 9), owner-operators are among those who are particularly exposed to abuses since deregulation:

*"...the broad expansion of the use of owner operators in the trucking industry (like subcontracting in other industries) has opened a Pandora's box that contributes to the broad expansion of sweatshop conditions."*

Not surprisingly, the reporting of severely eroded working conditions in trucking and calls for redress, including regulatory relief, contained in *Sweatshops on Wheels* have been well-received by groups associated with trucking labor and owner-operators. Accentuating problems related to driver supply has also struck a responsive cord among some motor carriers. However, some have found these arguments and supporting evidence unconvincing and the use of value-laden language, such as "sweatshops," unfortunate (Beilock 2001; Corsi 2001). For example, Belzer asserted that the deteriorating job conditions since deregulation (particularly with regard to pay) "attracts fewer high-quality employees than it used to, and puts the least desirable workers behind the wheel" (p. 153). Least desirable in what sense? Elsewhere he acknowledged that in the post-deregulation era service quality has improved (p. 182) and accidents per million miles driven have remained stable or declined (p. 189). It seems warranted, there-

fore, to re-examine if and to what extent there are indications that working conditions for drivers are poor and the supply of drivers, relative to demand, is eroding.

## STUDY OBJECTIVES

The study reported here focuses on a segment of the trucking industry, which should exhibit the worst of the ills described by Belzer, long-distance haulage of refrigerated commodities. This sector is almost entirely TL, has historically included a high percentage of owner-operators (Beilock, MacDonald, and Powers 1988), and only 3% of the company drivers or 2% of all drivers in the study reported that they belonged to a union. The primary goals of the study were to investigate if and the extent to which drivers perceive that they are disadvantaged, tenure with their current employer, and commitment to driving.<sup>1</sup> Indications of changes since deregulation were obtained by comparing responses of drivers who entered the profession prior to 1980 with those entering in 1990 or later. The results will show that, as with any labor market, problems exist and some drivers are dissatisfied. But overall, there are high levels of satisfaction with and commitment to driving, including perceptions that compensation levels are satisfactory. If truckers toil in sweatshops, most of them are unaware of it.

## DATA AND METHODOLOGY

Primary data for the study are from interviews with 1,642 drivers of semis with refrigerated trailers. The survey sites were the Florida Agricultural Inspection Stations along US I-10, I-75, and I-95. All trucks are required to stop at these stations, which are always open and cover all exits from the Florida Peninsula. There were four interview periods between November 2001 and June 2002. All drivers of semis with refrigerated trailers were invited to participate.<sup>2</sup> They

were told that the survey was voluntary, anonymous, and given by students of the University of Florida. In all cases interviews were conducted out of hearing of the Inspection Officers. While it proved impossible to calculate exact refusal rates, at all stations and during all interview periods, refusal rates were well under 10% and there were no indications of nonresponse bias.

The analyses consisted of examining means and medians and contingency table analysis.

### GENERALIZABILITY OF THE STUDY

While the survey sites were all in Florida, the study has relevance for long-distance haulage throughout North America. The sample contained drivers from all 48 contiguous US states and eight Canadian provinces. These drivers were en route to destinations in 46 states, the District of Columbia, and seven Canadian provinces. Trip distances ranged from 100 to 3,347 miles, averaging 1,222 miles. The average respondent was then on a trip which would keep him/her away from home for 13 days. Nine percent of the respondents had co-drivers and 43% were owner-operators.

The study focused on drivers of refrigerated trucks because this segment of the industry has characteristics associated, by Belzer and others, with the worst conditions and compensation levels for drivers (TL, low unionization, and high percentages of owner-operators). While there exist no authoritative estimates, refrigerated trucks are usually assumed to account for approximately 10% of the North American commercial truck fleet. The extent to which these results are applicable to drivers for TL firms with unrefrigerated trucks is not known.<sup>3</sup>

### Comment on Self-Selection

While there is a high degree of confidence that the sample approximates a random

sampling of the drivers of refrigerated trucks along these highways, there is an element of self-selection (or, alternatively stated, of a censored sample) in that the population sampled did not include those who had already quit driving. Regardless of the overall impacts of deregulation, or any other changes, those less able to adapt to these impacts and those with more alternative opportunities (if the impacts were negative), *ceteris paribus*, would have been more likely to quit. There may be differences between the demographics and opinions of quitters and nonquitters. Depending upon the mix among the nonquitters of those able to mitigate or exploit changes as opposed to those seeing themselves as trapped, nonquitters may be more or less positive about the industry than the quitters.

This is not a problem with regard to the primary focus of this study, assessing the characteristics and opinions of truckers about their profession today. That is, regardless of the extent or characteristics of those who may have left driving as a result of deregulation, how do today's drivers feel about their profession? In some cases, however, comparisons are made between (1) drivers who drove both before and after deregulation; and (2) those that entered the profession after deregulation. The reader should bear in mind that the former group includes only those who elected to stay in trucking.

## RESULTS

### Age Structure

If working conditions and pay have been deteriorating in trucking over the past 20 years, it might be expected that drivers would tend to be older, on average, than the labor force as a whole. This follows because younger individuals would have greater incentive than their older counterparts to make the investments and take the risks necessary to switch to better occupations as they

have more future work years over which to spread these costs. Moreover, as conditions in trucking deteriorated, relative to available alternatives, fewer new entrants into the labor force would choose driving as an occupation.

The average age of drivers in the sample was 44.4. The Bureau of Labor Statistics (BLS) data (Fullerton 1999) includes workers as young as 16. To be comparable with the labor force for trucking, it was necessary to remove those under 21, who would be too young to acquire a commercial drivers license.<sup>4</sup> With this modification, the average age of US labor force participants in 1998 (the most recent year reported) was 40.5.<sup>5</sup> One further modification seemed in order. While the oldest driver in the sample indicated that he was 78 years of age, there were very few drivers older than 74. Given the requirements of this occupation it seems likely that most individuals would be physically unable to continue driving into their late 70s. For that reason, the BLS data was further modified to eliminate their oldest category, "75 and older." The impact of this modification was minimal, resulting in an average age of 40.2.<sup>6</sup>

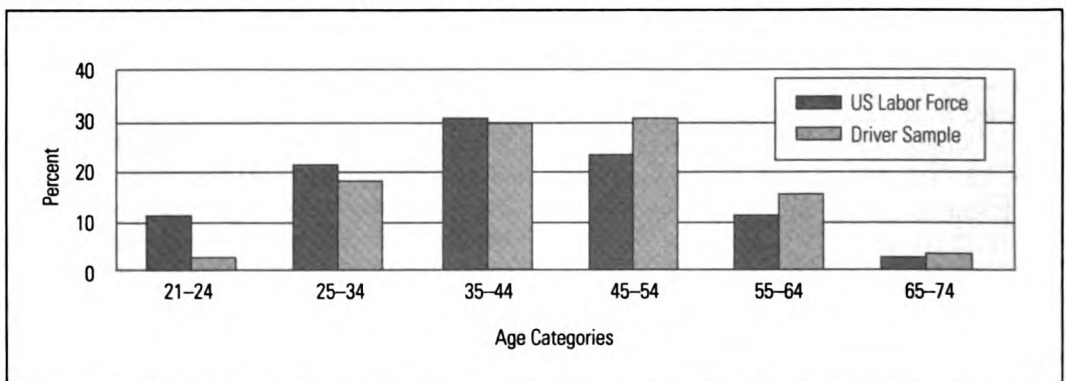
The 4.2 year difference between the average ages of those in the truck driver sample and the US labor force (44.4 - 40.2), while

not necessarily alarming, is sizable enough to question if some, who in past years would have become drivers, are beginning to avoid the profession. In Figure 1, the age distributions of those in the driver sample and the US labor force are presented. The main difference in the distributions, which also is the principle cause of the difference in average age, is the much smaller percentage of drivers who are 21-to-24 compared with the labor force as a whole, 2.4 versus 11.2%, respectively. This could be due to one or more of the following:

1. Eroding working conditions in trucking, relative to other professions, is discouraging selection of driving by those entering the labor force.
2. Due to CDL age restrictions, new drivers are entering later than previously.
3. Entrants into driving have always tended to be older than for the population as a whole.

Certainly, because of the CDL age requirement, it would be expected that a smaller percentage of drivers would be 21-to-24 than for the US labor force as a whole, but the extent of the difference suggests other reasons, i.e., eroding conditions and/or traditionally late entry. To gain some insight into

**Figure 1: Age Distributions of Driver Sample and US Labor Force**



Source for US Labor Force: Fullerton (1999); modified to eliminate those under 21 and over 74

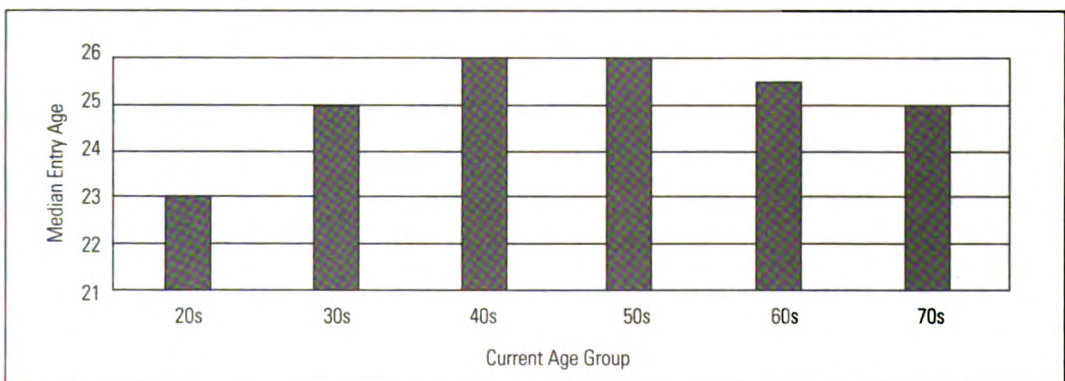
trends in the ages of entrants into driving, median entrant ages into driving<sup>7</sup> were calculated by current driver age groups, (see Figure 2). The results suggest that late entry into driving is not a recent phenomenon. For drivers in the sample currently aged in their 30s and above, the median age of entry ranges between 25 and 26. So, regardless of current age, half the drivers first entered the profession when they were in their mid-20s or older. This result may, in part, be an artifact of the rapid growth of the profession since deregulation.<sup>8</sup> If unusually large numbers of older workers entered in recent years, median ages would have been elevated. However, it seems unlikely that this, alone, would have generated the essentially flat median ages (23 to 26) across all current driver age groups. Even if median entry ages are high because of the recent entry of older workers, this could portend a good, even improving, labor supply situation. After all, the entire labor force is aging (Fullerton 1999). The extent to which a significant amount of the rapid growth (effectively doubling) in driver numbers since deregulation has been through attracting older individuals, demonstrates the profession's ability to draw from the most rapidly growing part of the labor force.

## ENJOYMENT OF DRIVING

Certainly long-distance driving, with its lengthy periods away from home and frequently irregular work hours, is not for everyone. But while some would view such conditions as burdensome, others would see it as offering freedom, adventure, and variety. As with any profession, individuals tend to self-select according to job characteristics they prefer. Nevertheless, if working conditions were comparable to sweatshops, overall enjoyment levels would be expected to be low. However, when asked if they enjoyed being truck drivers, 85% of the drivers responded affirmatively.

If working conditions have eroded since deregulation, those who drove during the relatively good pre-deregulation era might be less likely, than more recent entrants, to enjoy driving. There is some evidence that this is the case, though enjoyment levels are high across all cohort groups. Drivers were divided into those who entered the profession before 1980 and those who entered after 1989. Entrants during the 1980s were omitted as that decade, arguably, was a transition period.<sup>9</sup> Across the entire sample, 81% of those who entered the profession prior to 1980 reported that they enjoy driving, com-

Figure 2: Median Age of Entry into Driving by Current Driver Ages



Source: Driver sample

pared to 88% of those who entered after 1990 (Figure 3). This difference is largest among owner-operators (78 and 89%, respectively, for pre- and post-deregulation entrants). Among company drivers the difference is slight (83 and 88%, respectively). It should be noted that differences in driving enjoyment might, in part, be due to age. The average age of drivers who entered the profession before 1980 was 55, while the average age of those who entered after 1989 was 38.

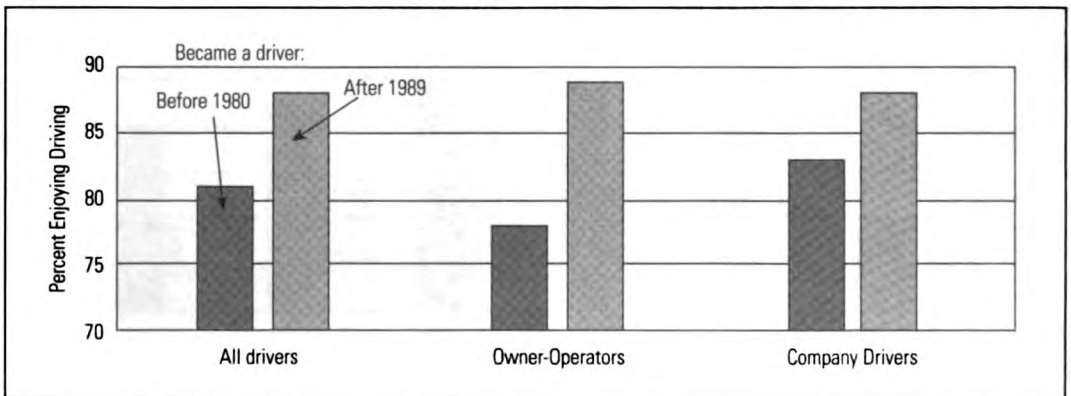
**PERCEPTIONS REGARDING EARNINGS**

Drivers were asked if they considered their earnings to be poor, average, or good. Asking drivers makes sense for at least three reasons. First, company drivers may be paid according to fairly complex formulae, for example, so much per mile loaded, a different amount if empty, additional payments per pickup/drop, perhaps another rate for nondriving, on-duty time, etc. There may be periods of time when drivers can work as much as they want and other times when they are underemployed. When operating under lease, owner-operators face similar payment systems and, if operating inde-

pendently, their net earnings depend upon a host of factors influencing their input costs, (including brokerage fees) and ability to maintain high equipment utilization rates. Even if these formulae were known, it would be difficult, if not impossible, for a researcher to determine how they translate into effective earnings. But the drivers, of course, would know. Second, assuming drivers are rational economic agents, they would have reasonably good information about alternative earning opportunities. That is, they would know the opportunity cost of their own labor. Third, drivers would know the living standard they enjoyed in the past and would be able to compare that with their current situation.<sup>10</sup> Belzer (2000) describes driver wages as having dropped nearly 30% since deregulation (pp. 121-122), now being “below the effective reservation wage of the skilled employees one would think the industry desires and that certainly lie below the poverty level” (p. 145). If Belzer is correct, driver perceptions regarding their pay should be markedly negative.

Only 19% of all drivers characterized their pay as being poor, while nearly twice that amount said that earnings were good (see the first set of bars in Figure 4). Owner-operators were more likely than company

**Figure 3: Percent that Enjoy Driving by Experience Before and After Deregulation**



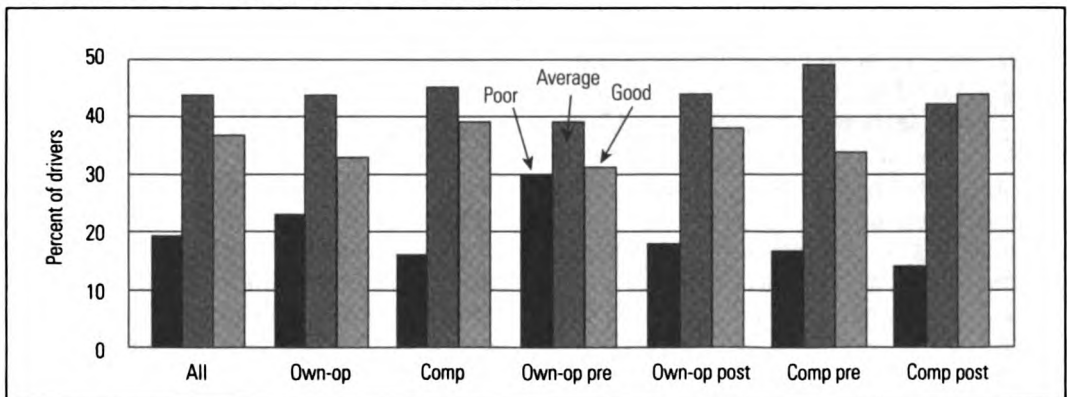
Source: Driver sample

drivers to report poor earnings (23 and 16%, respectively), see the second and third sets of bars in Figure 4. But for both groups, those perceiving earnings as good outnumbered those believing the opposite, and the overwhelming majorities indicated that compensation was average or good. Regardless of changes between the pre- and post-deregulation eras, these results strongly suggest that compensation levels are perceived as far better than would be associated with sweatshops.

But are drivers somehow mistaken in this belief? Surprisingly, even Belzer's own data suggest that they are not. He reported that, according to a University of Michigan study, in 1996 median earnings for union drivers was \$44,000 and for nonunion, \$35,000 (Belzer 2000, p. 128). He asserted that these levels were unreasonably low for the skills required in this occupation, particularly considering that drivers averaged between 100,000 and 115,000 miles per year. But a closer examination does not support this view. First, what is an appropriate earnings level for comparison? That is, what might truck drivers expect to make in other areas of the economy? About 80% of truck drivers have no more than a high school educa-

tion (Beilock 1990). Truck driving may be best described as a semiskilled occupation.<sup>11</sup> Therefore, the average earnings of full time workers who are high school graduates should be a reasonable, if not somewhat high, standard for comparison. For 1997-1999, this average was \$28,630, expressed in 1996 dollars (Day and Newburger 2002).<sup>12</sup> Truck driver earnings, using Belzer's data, were between 22 and 54% higher. But what about lengthy work hours? For 1977 data, when the 55 mph national speed limit was still in force, Belzer used 40 mph as a "conservative" (biased downward) estimate of the average speeds drivers could actually maintain (Belzer 2000, p. 147). By the same reasoning, when most major and many secondary roadways had speed limits of 65 mph or more, an estimated overall average speed of 50 mph would be conservative. Assuming two weeks vacation, the University of Michigan's annual mileage estimates could be attained driving between 40 and 46 hours per week.<sup>13</sup> Using an average ratio of nondriving to driving work hours of .26 (Beilock 1995), truck drivers averaged between 50.4 and 58 total work hours per week.<sup>14</sup> Over the course of a year, most full time workers have some work weeks over

Figure 4: Driver Perceptions of Their Earnings



Source: Driver survey

Note: Own-op = owner-operator; Comp = company driver; pre = entered driving before 1980; post = entered driving after 1989



40 hours and many regularly work more than 40 hours. But even using 40 hours as the average for all nontrucking full time occupations, truck drivers worked between 26 and 45% more hours to earn between 22 and 54% more than the national average for high school graduates. Not opulent earnings, but hardly reminiscent of sweatshops.

If driver earnings were impacted negatively by or coincident with deregulation, it would be expected that drivers who enjoyed pre-deregulation era earnings would tend to be less satisfied than their counterparts who entered the profession after deregulation. To examine this, drivers were again divided into two groupings, those who entered the profession before 1980 and those entering after 1989. As earnings trends might be different for owner-operators and company drivers, this distinction was also made. Consistent with a negative earnings trend between the pre- and post-deregulation eras, only 18% of the owner-operators who never experienced pre-deregulation conditions categorized current earnings as poor versus 30% of those who entered trucking prior to 1980 (see the fourth and fifth sets of bars in Figure 4). While there may have been deterioration<sup>15</sup> in earnings since deregulation, the overall assessment of earnings was still positive. Even among the owner-operators who entered trucking prior to 1980, those who categorized earnings as good slightly outnumbered those categorizing earnings as poor, and nearly 40% indicated that they were average. Among owner-operators who entered after 1989, more than twice as many viewed their earnings as good than the reverse. Among company drivers, differences were less pronounced regarding earnings assessments between those who entered before or after deregulation (see the sixth and seventh sets of bars in Figure 4). Almost identical percentages of those who began driving before and after deregulation described their earnings as poor (17 versus 14%, respectively).

The primary difference was that more of those who entered after deregulation felt their earnings were good, relative to those who entered before deregulation (44 versus 34%, respectively).

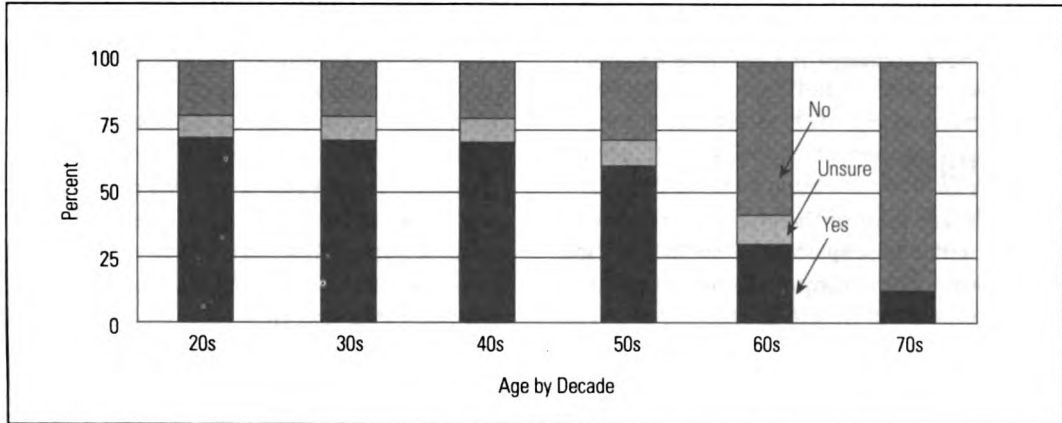
## COMMITMENT TO DRIVING

To gauge commitment to their profession, respondents were asked if they believed they still would be driving in five years. Across the entire sample, 63% of the drivers responded positively, 10% were unsure, and 27% said no. Because of retirement plans and biological limitations, older drivers would be expected to be less likely to anticipate driving in five years. This is, indeed, the case. Through their 40s, approximately 70% of drivers believe they still will be driving in five years and another 10% are unsure (Figure 5). Sixty-one percent of drivers in their 50s believe they will still be driving in five years, with another 10% uncertain. Not surprisingly, much smaller percentages of drivers age 60 and older anticipate driving in five years. There are no significant differences, in these regards, between owner-operators and company drivers, nor between those who entered the profession before or after deregulation.<sup>16</sup> As with perceptions regarding pay and enjoyment of driving, driver intentions about continuing in the profession suggest neither sweatshop-like conditions nor erosion in the supply of drivers.

## TENURE WITH CURRENT EMPLOYER

Turnover rates in trucking are believed to be high (Machalaba 1993) and this, in turn, is sometimes seen as symptomatic of both labor shortages and difficult working conditions (see the first page of this article). Comparison of year's tenure with current employer does, indeed, support the contention that turnover rates in trucking are considerably higher than for the labor force

Figure 5: Driver Belief About Still Being in the Profession in Five Years by Age



Source: Driver survey

as a whole. The Bureau of Labor Statistic's Current Population Survey, 2002, estimate of median years with the current employer across all workers age 16 and older was 3.5 for February 2000.<sup>17</sup> They reported the same median for "motor vehicle operators;" however, this category is not strictly comparable, as it includes local truck drivers and operators of other types of motor vehicles. In the refrigerated driver sample, the median years with current employer was 2.0. In addition to being low, unlike the overall labor force for men (to correspond with the large majority of male individuals in the driver sample), median years with current employer is not strongly related to age (Figure 6). In other words, unlike the labor force as a whole, drivers tend to move from employer to employer throughout their careers.

There are several reasons for questioning if these characteristics necessarily indicate problems in the labor market. While the median years tenure with current employer is low for drivers relative to the labor force as a whole, it is comparable with or even higher than those for several occupations. For example, for February 2000, BLS reported<sup>18</sup> the following median years with current employer:

Occupation	Median years with current employer
Sales workers, retail and personal services	1.4
Food service	1.5
Personal service	2.3
Handlers, equipment cleaners, helpers, and laborers (except construction)	1.9
Construction laborers	2.6

These occupations share two characteristics with driving: relatively low skill levels and, in many cases, few opportunities for advancement. From the standpoint of employers the cost of losing and having to replace a lower skilled employee is almost always less than for higher skilled employees. This is particularly true as higher skilled employees are more likely to have managerial responsibilities and/or detailed knowledge specific to the operation of that firm. So it is rational for employers to devote fewer resources to retaining lower than higher skilled employees. From the standpoint of employees, if there are few opportunities for advancement,

there is little reason for loyalty to current employers and, indeed, switching jobs may be the best strategy for income enhancement.<sup>19</sup>

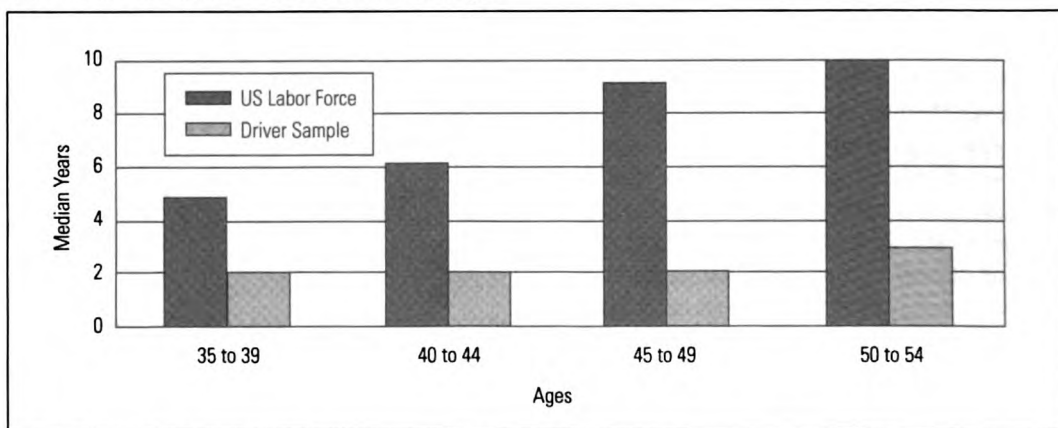
### CONCLUSION

The primary goal of the study was to investigate driver perceptions of their working conditions and compensation levels and other indicators of the driver supply. The impetus for the study was concern by some that deregulation has resulted in erosion in driver compensation levels and working conditions to the point where they are inconsistent with those attainable by similarly skilled workers elsewhere in the economy, i.e., drivers are receiving negative rents. If true, particularly as trucking is a growing industry, it would suggest exploitation of current drivers and erosion in the supply of drivers. A survey was conducted of long-distance drivers in a segment of the industry (refrigerated haulers) known to be primarily TL, has low unionization rates, and high percentages of owner-operators. Among those believing drivers have become severely disadvantaged,

these driver characteristics are associated with the worst erosions in working conditions and compensation (Belzer 2000). Also analyzed were secondary data, primarily from the US Bureau of Labor Statistics, 2002.

The results suggest that driver compensation levels are consistent with those for the economy as a whole. The large majority of drivers expressed satisfaction with driving and the payments they receive, and intend to remain in the profession at least over the next five years. This does not necessarily mean, however, that absolute levels of compensation and/or working conditions have not deteriorated, though it seems unlikely that there could have been severe deterioration given the generally positive perceptions. What it does strongly indicate, however, is that among current drivers in this segment, the large majority believe that working conditions and compensation levels are at least as good as could be obtained elsewhere in the economy. That is, drivers perceive they earn at least the opportunity costs of their labor. If true and if deregulation did reduce real driver earnings, it was labor's share of

**Figure 6: Median Years with Current Employer by Age:  
US Labor Force (Males) and Driver Sample**



Source for U.S. Labor Force data: BLS, 2002

Note: Data for males were used as the very large majority of drivers in the sample were men

regulation-induced rents, which were eliminated. While painful to those who had collected those rents, their elimination (if this occurred) was an anticipated and hoped for correction of regulation-induced exploitation of the rest of the economy. If the pendulum had swung to the extent that now drivers were being compensated less than the opportunity cost of their labor, the exploiters and exploited would have reversed roles and new problems would have been created, namely equity questions regarding drivers (the “sweatshop” issue) and reductions in the

quality and quantity supplied of drivers. But this does not appear to be the case.

Data regarding tenure with current employer indicate that turnover rates are higher than those for the economy as a whole. But higher turnover rates would be expected in occupations, such as driving, which are low- or semi-skilled and there are few opportunities for advancement. Indeed, tenure with current employer is as short or even shorter in several other occupations, which also tend to be lower skilled and have few advancement opportunities.

## Endnotes

1. It should be stressed that this does not equate with investigating if there have been absolute changes in conditions or pay. Rather, the focus is if driving is attractive relative to available alternatives.
2. Unless there was no available parking space.
3. It is the author’s belief that there would be a close correspondence. Other than some additional monitoring and costs associated with climate control of cargo, there are few differences between hauling refrigerated and unrefrigerated loads. Moreover, refrigerated trailers are frequently used for unrefrigerated cargo. For example, 31% of the drivers in the sample were hauling unrefrigerated cargo when they entered Florida.
4. BLS uses age categories 16 through 19 and 20 through 24. The former was entirely removed and 20 year olds were assumed to equal 20% of the latter category.
5. Fullerton reported the number of labor force participants by eight age categories. Average age was calculated by: (1) dropping the youngest category (16 through 19); (2) using age category midpoints as the age of all those in an age category; and (3) assuming age 75 for those in the “75 and older” age category.
6. Indeed, even eliminating those age 65 and older only lowers the average age to 39.5.
7. Entrant age into driving was calculated as a driver’s current age minus the number of years he/she reported to have been in the profession.
8. Between 1965 and 1980, the number of production workers in trucking increased at an average annual rate of 2.1%, compared with 3.7% between 1980 and 1995. Between 1980 and 1995 the number of production workers in trucking nearly doubled (Belzer 2000, p. 92).
9. Including entrants during the 1980s in the post-deregulation group does not alter the direction of the results, though the resulting pre- and post-deregulation differences become smaller.
10. In particular, it is asserted that drivers are sufficiently astute to judge real earnings and not be subject to money illusion.
11. For definitions of unskilled, semi-skilled, and skilled occupations, see Code of Federal Regulations, Title 20, Volume 2, Parts 400 to 499. These can be accessed via [http://www.vocrehab.com/Title\\_20.htm](http://www.vocrehab.com/Title_20.htm).

12. Day and Newburger (2002) reported earnings in 1999 dollars. The Consumer Price Index was used to convert their findings to 1996 dollars. It should also be noted that average real wage levels were higher in 1997-99 than in 1996. As no adjustment was made for this, the \$28,630 estimate of alternative earnings is likely to be biased upward.
13. Assuming 50 mph average speed and 50 weeks driving per years: 100,000 annual miles/ 50 mph/ 50 weeks = 40 hours driving per week, and 115,000 annual miles/50 mph/50 weeks = 46 hours driving per week.
14. Nondriving work time certainly should be included in these calculations. But it should be recognized that much, probably the large majority, of this time for most drivers requires minimal effort and attention, for example such duties as waiting for their truck to be off-/on-loaded and simply being on call.
15. A key rationale for deregulation was the belief that the regulatory structure allowed trucking firms to reap monopoly profits. If true and if deregulation has worked as intended, it would be expected that owners of many trucking firms, including owner-operators, would have seen reductions in earnings.
16. Except, of course, that higher percentages of pre-deregulation entrants are older drivers and, as such, less likely to anticipate driving in five years.
17. Their data may be accessed via <http://www.bls.gov/cps/>.
18. Ibid.
19. A reality uncomfortably familiar to many academics.

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