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A Study of Electronic Logging Devices and Mandatory Entry Level Training in
Ontario and Their Effects on the Shortage of Truck Drivers in Windsor-Essex

by
Corey Shenken

An Internship Paper
Submitted to the Faculty of Graduate Studies
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University of Windsor

Windsor, Ontario, Canada

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A Study of Electronic Logging Devices and Mandatory Entry Level Training in Ontario and
Their Effects on the Shortage of Truck Driver in Windsor-Essex

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December 11, 2017

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ABSTRACT

North America, and more specifically, Windsor-Essex are currently in the midst of a truck driver shortage. This is happening in a time when more drivers are needed for today's increased capacity and necessity of trucks on the road. Both the federal government of Canada and the provincial government of Ontario have introduced recent legislation that will have negative effects on the current shortage of truck drivers.

The federal government of Canada is introducing a mandatory Electronic Logging Device mandate to take place in December 2019, that will require all commercial transport truck drivers to install an electronic log that will keep track of their hours of service. The Ontario government introduced legislation for a mandatory entry level training program consisting of 103.5 in-class hours of training for all class-A licence applicants in Ontario. The legislation was put into place in order to improve safety standards on Canada and Ontario's roads regarding trucking incidents. Although the legislation will improve safety on Canada's roads, the legislation largely ignores the fact that it creates more barriers for current truck drivers and for prospective truck drivers wishing to enter the field. This will negatively affect the current shortage of truck drivers in North America and more specifically, Windsor-Essex.

The purpose of this paper is to predict how the legislation will negatively affect the current shortage of truck drivers. The question being investigated is: how will new legislation (Electronic Logging Devices and Mandatory Entry Level Training for Class-A licence applicants in Ontario) effect the current truck driver shortage that is being experienced in Windsor-Essex? The paper will then provide possible policy recommendations to minimize these effects and it is hoped this research will inform policymakers and others of the effects of this legislation.

DEDICATION

This paper is primarily dedicated to the workforce of Windsor-Essex and all the community stakeholders who passionately work towards creating a more prosperous environment for all. I would also like to thank my Mom, Dad, family, and friends for all of their support throughout my life. I would not be where I am today if it was not for the support of these people.

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1 - Introduction:

The Canadian and North American truck driving profession is in the midst of a crisis. The shortage of qualified truck drivers in Canada is expected to reach tens of thousands by the start of next decade, according to the Conference Board of Canada.¹ As consumers, we depend on the trucking industry to deliver our daily goods, such as groceries, electronics, and automobiles. The lack of manpower to drive the trucks threatens the economy of both Canada and the United States becomes threatened as a result of a potential decrease in trade.

Truck driving is crucial to the success of both domestic and international trade in Canada and the USA. Most trade between the Canadian and American border is done with transport trucks.² Transport trucks also account for 73% of the US-Canada trade share in the province of Ontario.³ With the number of trucks on the road expected to increase exponentially in the next decade, and with the unique characteristic of being a border city, truck driving has become one of the in-demand occupations in the Windsor-Essex region. However, recent legislation, ostensibly introduced to improve safety standards of the trucking industry, threatens to negatively affect an already existing shortage of truck drivers. This paper argues that the Canadian Electronic Logging Device (ELD) Mandate and new mandatory in-class training for prospective truck drivers will have negative effects on the current truck driver shortage in the Windsor-Essex region. The Canadian ELD Mandate will come into effect in December 2019, and will closely align with an American ELD mandate set to come into effect in December 2017.

¹ Ledlow, Adam. "New report quantifies Canada's driver shortage," *Truck News*, April 1, 2013, <https://www.trucknews.com/features/new-report-quantifies-canadas-driver-shortage/>

² Brown, Mark W., and Anderson, William P. "How thick is the border: The relative cost of Canadian domestic and cross-border truck-borne trade": 10.

³ Maoh, Hanna F., Khan, Shakil A., and Anderson, William P. "Truck movement across the Canada-US border: The effects of 9/11 and other factors": 12.

ELD devices will become mandatory in all federally-regulated motor vehicles over 10,000 pounds and will electronically monitor the driver's number of hours driven and distance driven.⁴ This will be felt at both the national and regional level and will only increase the shortages experienced in the Windsor-Essex region.

2 - North America's Truck Driver Shortage:

There is a shortage of truck drivers in North America, and more specifically, the Windsor-Essex region. There have been accounts of this shortage in the truck driving industry for decades. For instance, Min and Lambert state, "For the last two decades, the trucking industry has been hit hard by a shortage of truck drivers".⁵ Research prior to the work of Min and Lambert also shows past shortages in the truck driving industry, such as the inability for chief executive officers of bulk carriers having limited growth potential for their firms because they are unable to find qualified drivers.⁶ The literature shows that a shortage of truck drivers has been an issue for decades. However, the newer research from 2014 portrays just how significant this shortage has become, especially with an expected increase in trade in the future and the expectation of more trucks on the road.

Windsor-Essex represents a unique community for studying truck driving mainly because of its geographic location. It is located on the Canada-US border. It is also home to the busiest border crossing for trucks between the USA and Canada, the Ambassador Bridge. The strong history of an auto industry relationship between Windsor and Northern Michigan highlights the importance of trucking at this border crossing, as well.

⁴ Kilcarr, Sean. "Canadian truckers await their own ELD mandate," *FleetOwner*: August 17, 2017, <http://www.fleetowner.com/driver-logs/canadian-truckers-await-their-own-eld-mandate>

⁵ Hokey, Min, and Lambert, Thomas. "Truck driver shortage revisited": 5.

⁶ Lemay, Stephen A., and Taylor, Stephen G., "Truck driver recruitment: Some workable strategies": 15.

The current shortage of truck drivers is very evident in Windsor-Essex. Truck drivers are in high-demand in the region. As a part of my internship at Workforce Windsor-Essex, I was responsible for creating a list of the top 76 in-demand jobs in the Windsor-Essex region. After hearing back from community stakeholders through research methods such as workshops and consultations, commercial and transport truck drivers made the list.⁷ Demand for transport truck drivers in Windsor continues to rise as the number of employed transport truck drivers in the region continues to fall.⁸ This demand for truck drivers is multiplied because of the current shortage of drivers in Windsor-Essex and North America.

The shortage of drivers is being negatively affected by a combination of factors, which include: the average age of current truck drivers; work culture in the industry; younger generations not turning towards truck driving as a career; the inability to attract women to the profession; and a large skills gap in the “talent” that applies to truck driving positions.

2.1 – Average Age

One of the main reasons behind the shortage of truck drivers is the average age of current drivers on the road. In 2016, the average age of truck drivers on the road in Canada was over 47, which was up from an average of 45 two years prior. Nearly one third (30%) of the force is also made up of drivers over the age of 55. These statistics make truck driving one of Canada’s oldest work forces.⁹ The statistics in the USA are no more appealing than Canada’s. For example, the

⁷ “List outlines top 75 jobs most in demand in Windsor’s booming economy,” *CBC News: Windsor*, August 1, 2017, <http://www.cbc.ca/news/canada/windsor/list-outlines-top-75-jobs-most-in-demand-in-windsor-s-booming-economy-1.4229865>

⁸ Previl, Sean. “Truck drivers in hot demand in Windsor and Essex county,” *CBC News: Windsor*, May 24, 2016, <http://www.cbc.ca/news/canada/windsor/truck-drivers-in-hot-demand-in-windsor-and-essex-county-1.3598389>

⁹ Lowrie, Morgan. “Trucking industry faces labour shortage as it struggles to attract young drivers,” *Toronto Star*, May 16, 2016, <https://www.thestar.com/business/2016/05/16/trucking-industry-faces-labour-shortage-as-it-struggles-to-attract-young-drivers.html>

average age of truck drivers on the road in the USA is 49.¹⁰ A considerable number of North American truck drivers will be retiring soon, and at a time when the number trucks on the road are predicted to be at their highest. Also, as a result of the younger generation not wanting to join the trucking industry, the age of current truck drivers in Canada means that many of them are due to retire in the near future.¹¹

2.2 –Turnover Rate

The truck driving shortage in North America and Windsor-Essex is also affected by a high turnover rate. Although the shortage of drivers and the turnover rate of drivers are calculated differently, a high turnover rate makes retention of drivers very difficult for some firms and companies. This majority of this turnover is voluntary, and many in the trucking industry believe it is accelerated by competition for skilled labour from other industries, such as construction.¹² Other sectors often have the upper hand when competing for this skilled labour, as many of the jobs have more appealing work schedules and working conditions. However, there are more reasons than voluntary turnover to other sectors or industries that affect the retention rate among truck drivers in North America. For example, work culture in the trucking industry is often a big factor as to why individuals leave their jobs. It is believed that the empowerment of the driver force is a key determining factor in retaining driver talent. For example, it is understood that offering a better work culture, taking time to assess a perfect employment fit, accommodating scheduling needs, offering opportunities for growth, and

¹⁰ Costello, Bob, and Suarez, Rod. “Truck driver shortage analysis 2015,” *American Trucking Associations*: 2.

¹¹ Gill, Vijay, and Macdonald, Alicia. “Understanding the truck driver supply and demand gap and its implications for the Canadian economy,”

¹² Schulz, Steven A., Luthans, Kyle W., and Messersmith, Jake G. “Psychological capital: A new tool for driver retention,” *International Journal of Physical Distribution & Logistics Management*: 622.

providing employees with direct feedback, are all factors trucking firms and companies can take into account when researching strategies on how to retain truck driving talent.¹³ Offering better salaries and benefits are also closely related to driver turnover and retention rate.¹⁴ Obviously, some of these strategies are often difficult for trucking firms and companies to execute. Goods have to be delivered to specific locations within certain timeframes, and therefore strategies like accommodating scheduling needs may not be offered to prospective employees.

2.3 – *Not a Desired Career Option*

It is stated that the number one well-paying job in Canada to attain without a university degree is a transport truck driver.¹⁵ Although this statistic may not be based on a standard 40-hour work week, it raises the question of why individuals in Canada are not choosing to become transport truck drivers as a career option more frequently. There is a simple answer to this question that is younger generations do not desire becoming a truck driver because of the unappealing lifestyle. Long hours on the road, working extended periods of time, and loosely planned scheduling are all major factors as to why more individuals are not gravitating towards becoming truck drivers.¹⁶ As a result of the younger generation not wanting to join the trucking industry, the age of current truck drivers in Canada means that many of them are due to retire in the near future.¹⁷

¹³ Sersland, Daniel, and Nataraajan, Rajan. “Driver turnover research: Exploring the missing angle with a global perspective”: 658.

¹⁴ Schulz, “Psychological capital: A new tool for driver retention”: 622

¹⁵ Abedi, Maham. “10 well-paying jobs in Canada you can score without a university degree,” *Global News*, August 29, 2017, <https://globalnews.ca/news/3704532/top-paying-jobs-without-university-canada-indeed/>

¹⁶ Lowrie, “Trucking industry faces labour shortage as it struggles to attract young drivers,” May 16, 2016

¹⁷ Gill, Vijay, and Macdonald, Alicia. “Understanding the truck driver supply and demand gap and its implications for the Canadian economy,”

2.4 – Women in Trucking

Women are another demographic that does not join the trucking industry in great numbers in North America. It is estimated that only three per cent of truck drivers in Canada are women.¹⁸ Stereotypes exist in the trucking industry that are believed to create barriers for women to enter the profession. For example, there is a common belief that the job is very physically demanding, involving a lot of lifting, and that the actual steering/driving is very difficult. However, members of the trucking industry in Canada have mentioned that these stereotypes are mainly untrue, and that trucking firms and companies are typically looking for a candidate with a “good head on their shoulders” and that truck driving is mainly about problem-solving on the road.¹⁹ This percentage is not much better in the USA, as females only comprise 6% of current truck drivers and have only represented 4.5-6% of the truck driver workforce since 2000.²⁰ It is difficult to identify an exact reason why women do not enter the truck driving labour force. Some research suggests that more women would enter the profession if trucks were more ergonomically designed towards women, with features such as seat adjustability; adjustable steering wheels; adjustable foot pedals; increased cab lighting and comfort; and easy access engine compartments.²¹ No matter what the underlying factor is, the fact that women have not had a great representation in the truck driving workforce in North America does not bode well for the current and future shortages of truck drivers.

¹⁸ Luymes, Glenda. “Changing gears: Program aims to increase women in B.C. trucking industry,” *Vancouver Sun*, April 30, 2017, <http://vancouver.sun.com/news/local-news/changing-gears-program-aims-to-increase-women-in-b-c-trucking-industry>

¹⁹ Doria-Brown, Jessica. “P.E.I. trucking industry wants more women behind the wheel,” *CBC News: Prince Edward Island*, July 15, 2016, <http://www.cbc.ca/news/canada/prince-edward-island/p-e-i-trucking-industry-wants-more-women-behind-the-wheel-1.3679484>

²⁰ Costello. ““Truck driver shortage analysis 2015””: 8.

²¹ Black, Jeanette, Voie, Ellen, Maurer, Matt, Palakeel, Jane, and Chacon, William. “Truck cab design: Perceptions of women truck drivers”: 51.

2.5 – Skills Gap

Compounding on the fact that individuals do not seem to want to become truck drivers is the issue of a skills gap when looking for qualified candidates for the trucking industry. Research shows that truck drivers should have a specific set of skills or experience to become effective at their jobs, and many of the prospective candidates going into the industry do not possess these skills.²² Skills and experiences such as clean driving records, years of experience driving trucks, experience handling hazardous materials, and knowledge of road laws and safety standards. One reason for this skills gap could be attributed to the increased use of technology and computers. This increased use of computers and integrations with more technology means that jobs in every sector, including truck drivers, are susceptible to new forms of training and/or being replaced completely.²³ The option of classifying the mandatory entry level training in Ontario into the current truck driving apprenticeship would be a potential solution to this issue. This idea will be discussed later in this paper.

2.6 – Hiring Practices

Stricter hiring and recruiting practices in the trucking industry also negatively affect the shortage of truck drivers. Many companies and firms that employ truck drivers today are unable to find the talent they need due to strict safety, driving experience, and professionalism standards that they have created themselves. Even in the midst of a driver shortage, companies and firms that employ truck drivers are still following these strict hiring guidelines and therefore have a

²² Dubey, Rameshwar, and Gunasekaran, Angappa. “The role of truck driver on sustainable transportation and logistics”: 132.

²³ “Caroline and Ian Burgess: To address the gender gap in tech, teach all kids to code,” *National Post*, August 21, 2017, <http://nationalpost.com/opinion/caroline-and-ian-burgess-to-address-the-gender-gap-in-tech-teach-all-kids-code>

less of a “talent pool” to select from.²⁴ These stricter hiring and recruiting practices are due to the numerous safety precautions trucking companies and firms must take. For example, many trucking firms and companies have hiring policies in place which require a minimum time for driving experience, background check(s), and other specific vetting procedures.²⁵ Safety is a huge concern when hiring and recruiting prospective transport truck drivers in Windsor-Essex and North America. There are many risks that transport trucks pose on highways and roads, and therefore companies must be careful when hiring in order to make sure they are hiring competent and well-trained drivers who will pose minimal risk in regard to causing an accident on the road.

3 – The Safety Risks of Truck Driving:

It is no mystery that this new ELD legislation is being enacted to improve safety standards regarding truck driving in Ontario and North America. This section will cover some of the main safety concerns related to truck driving in Ontario and North America. Truck driving safety concerns are not an exaggerated issue in North America. They do exist in disproportionate numbers compared to other types of vehicles on the road, and the research backs this up. In Ontario, transport trucks are involved in one in five road crashes.²⁶ Fatalities often happen in these accidents, due to the size and weight of transport trucks and their load(s). Data shows that among 1,342 fatal motor vehicle collisions on Ontario Provincial Police (OPP) patrolled roads between 2012 and 2016, 266 involved transport trucks.²⁷ This is an alarming statistic because

²⁴ Costello. “Truck driver shortage analysis 2015”: 2.

²⁵ Tucker, Joanne. “Best practices in driver hiring,” *BusinessFleet*, March 2013, <http://www.businessfleet.com/channel/safety-accident-management/article/story/2013/03/best-practices-in-driver-hiring.aspx>

²⁶ “Transport trucks involved in 1 of 5 crashes on Ontario roads,” *CTV: Windsor*, June 16, 2017, <http://windsor.ctvnews.ca/transport-trucks-involved-in-1-in-5-crashes-on-ontario-roads-1.3462207>

²⁷ *Ibid.*

transport trucks only make up 3% of all registered vehicles in the USA, but they account for 7% of miles driven but are involved in 11% of all road fatalities.²⁸ While posing a risk to other drivers on the road, trucks are also more susceptible to catastrophic single vehicle accidents, once again due to their size and weight and often due to the contents carried in their load(s). For example, a truck driver was recently killed on highway 401 in Toronto when he was involved in an accident and his truck burst into flames. Police believe the truck was carrying a flammable liquid.²⁹ Safety is obviously a very real concern for trucking firms and companies.

3.1 – Fatigue

Research has identified multiple factors as to why transport trucks are involved in such a disproportionate percentage of traffic accidents. Some of these reasons include: truck driver fatigue; driver health and wellness; distracted driving; and inadequate or improper training. Perhaps the most prominent of these safety risks is truck driver fatigue. Fatigue is a state of exhaustion that many truck drivers experience due to their long hours on the road. It is understood that truck drivers have been more historically prone to this issue because they have been noted to obtain less sleep than necessary in order to maintain longer hours on the road.³⁰ Although recent research has shown that most truck drivers get the suggested six hours of sleep per day, 27% are still reported to receive an average of six hours or less of sleep every 24-hour

²⁸ Mooren, Lori, Grzebieta, Raphael, Williamson, Ann, Olivier, Jake, and Friswell, Rena. “Safety management for heavy vehicle transport: A review of the literature”: 79-80.

²⁹ Dunham, Jackie. “Truck driver charged following chemical spill on highway 400,” *CTV News: Barrie*, July 21, 2017, <http://barrie.ctvnews.ca/truck-driver-charged-following-chemical-spill-on-highway-400-1.3514018>

³⁰ Boyce, Wesley S. “Does truck driver health and wellness deserve more attention?” *Journal of Transport & Health* 3: 127.

period.³¹ This is a problem that many trucking firms and companies are identifying, as work hour restrictions are often implemented in order to combat driver fatigue. However, it is quite easy for drivers to circumvent these rules and be able to operate longer than allowed.³² For example, a truck driver in the Yukon was recently fined \$1,962 by failing to rest and causing an accident. Upon further investigation, it was found that his logbooks did not match his truck's mileage and he was falsely reporting his hours of sleep and operation.³³ Even drivers who operate by the rules are still at risk. A study by Jovanis et al revealed that drivers are at much greater risk of crashing near the ends of the shifts than at the start.³⁴ Windsor-Essex provides a unique setting for the dangers of fatigue to affect truck drivers more often because of its location on the Canada-US border. This happens specifically because of wait times at the border. This problem negatively affects truck drivers who are not remunerated for wait times on their trip and are instead paid on a trip-based payment.³⁵ These drivers are not "paid for waiting times" and therefore they are more adversely affected by waiting times on their routes and spend less time sleeping in order to make sure they meet certain deadlines and delivery windows.

3.2 – Health and Wellness

Another major issue affecting truck driver safety on the roads is a driver's health and wellness. Truck drivers have a job that involves long periods of stationary sitting in the driver

³¹ Sieber, Karl W., Robinson, Cynthia F., Birdsey, Jan, Guang, Chen X., Hitchcock, Edward M., Lincoln, Jennifer E., Nakata, Akinori, and Sweeney, Marie H. "Obesity and other risk factors: The national survey of U.S. long-haul truck driver health and injury": 620.

³² Boyce. "Does truck driver health and wellness deserve more attention?": 126.

³³ Morin, Philippe. "Yukon truck driver charged with failure to sleep," *CBC News: North*, October 31, 2017, <http://www.cbc.ca/news/canada/north/yukon-truck-driver-sleep-fail-1.4379546>

³⁴ Jovanis, Paul P., Park, Sang-Woo, Chen, Ko-Yu, and Gross, Frank. "On the relationship of crash risk and driver hours of service.": 1.

³⁵ Williamson, Ann, and Friswell, Rena. "The effect of external non-driving factors, payment type and waiting and queuing on fatigue in long distance trucking": 27.

seat of a vehicle and drivers often adopt bad diets due to the speed and convenience of unhealthy foods.³⁶ Data from Sieber et al (2014) also shows that among long haul truck drivers studied in the US, 51% were current cigarette smokers and over two-thirds of respondents were obese while 17% were morbidly obese. These health factors combined mean that truck drivers are at more risk of medical emergencies, chronic diseases, or death. Some of these drivers are at risk of losing their commercial driver's license because their medical conditions pose a risk to their ability to safely control and operate a transport truck.³⁷ With truck drivers having a more increased risk of being susceptible to health issues, there is also the increased likelihood that they will turn to medication and drug use for relief. Reguly states, "A recent large scale study on large truck crash causation found that prescription drug use and over the counter drug use was among the top ten factors associated with crashes."³⁸ It is believed that truck drivers turn to prescription drugs and over the counter drugs because they experience more work-related exposures such as vibration and ergonomic factors that may increase the risk for injuries and chronic conditions.³⁹ The physical demands of the job (for example, sitting stationary for hours at a time) combined with the unhealthy lifestyle many truck drivers lead means that more opiates will be used as a treatment. Another concern that relates directly to another safety issue is that many of these opiates are the cause behind truck driver fatigue (Reguly, 2013, 155).⁴⁰

³⁶ Boyce. "Does truck driver health and wellness deserve more attention?": 125.

³⁷ Sieber. "Obesity and other risk factors: The national survey of U.S. long-haul truck driver health and injury": 622.

³⁸ Reguly, Paula, Dubois, Sacha, and Bedard, Michel. "Examining the impact of opioid analgesics on crash responsibility in truck drivers involved in fatal crashes": 154.

³⁹ Reguly. "Examining the impact of opioid analgesics on crash responsibility in truck drivers involved in fatal crashes": 154.

⁴⁰ Ibid., 155.

3.3 Distracted Driving

A third factor affecting truck driver safety on the roads is distracted driving. There are currently laws in place to prevent drivers from using their cellular devices while driving, but as technology inside of trucks improves, the likelihood of distracted driving becomes greater. For example, computer use while driving a truck is not uncommon anymore and is classified as a more visually demanding task than operating a cellular device while driving.⁴¹ These technologies are becoming much more common inside the cockpits of transport trucks as communication between dispatchers and drivers is necessary. Stavrinou et al state, “[O]nboard communication devices have provided a practical, but visually and manually demanding, solution for keeping drivers and dispatchers connected.”⁴² Over the summer of 2017, it was reported that transport truck driver inattention was to blame for the death of 10 people in crashes on highway 401.⁴³ Driving distractions have always been a cause for concern for all types of motor vehicles on the road. However, the danger rises exponentially when a distracted driver is at the wheel of a transport truck weighing approximately 40 tons.

3.4 – Improper and/or Inadequate Training

Another reason why truck drivers pose safety threats on the road is due to improper or inadequate training. This could be improper or inadequate training on a range of areas, from actual driving techniques to making sure the tractor trailer is secured properly before travelling.

⁴¹ Stavrinou, Despina, Heaton, Karen, Welburn, Sharon C., McManus, Benjamin, Griffin, Russell, and Fine, Philip R. “Commercial truck driver health and safety: Exploring distracted driving performance and self-reported driving skill”: 374.

⁴² Ibid., 374.

⁴³ McLaughlin, Amara. “Transport truck ‘driver inattention’ to blame for death of 10 people in crashes on Hwy. 401, OPP say,” *CBC News: Toronto*, October 26, 2017, <http://www.cbc.ca/news/canada/toronto/opp-lay-charges-in-fatal-hwy-401-crashes-1.4372730>

Improper or inadequate training of new truck drivers is a concern shared by many in the trucking industry. For example, Michael John Davidson, a truck driving instructor in the Greater Toronto Area (GTA), said that education was the biggest failure in the Ontario trucking industry.⁴⁴ He believes that a new provincial mandate, introduced on July 1, 2017, requiring more in-class hours of technical training for truck drivers, is a step in the right direction. This mandate will be discussed in greater detail later in this paper. However, Davidson still believes there should be more training on driver fatigue and personal health.⁴⁵ Another concern related to improper or inadequate training is related to the checking of trucks before travelling on roads. In July of this year, a driver of a transport truck was charged with improperly securing a load, which led to a dangerous leak of highly flammable chemical liquid on highway 400 after being involved in an accident.⁴⁶

Clearly, safety issues are very prominent in the trucking industry. Efforts are currently being made in the trucking industry to introduce new rules that will increase the safety of trucks on the road and decrease the likeliness of accidents happening. The next section of this paper examines two new rules that apply to truck drivers. The first is a mandate in Canada that would require transport trucks to be fitted with an Electronic Logging Device (ELD), which would electronically track and record the number of hours of service performed by a truck driver. This mandate would be put into effect in Canada in December 2019. The second rule has already been introduced in Ontario. This ruling introduced new mandatory entry-level training for skills needed to safely operate a transport truck on Ontario's roads. While this new legislation has been

⁴⁴ McGillivray, Kate. "Fatal 400 crash triggers call for coroner's inquest into safety of Ontario highways," *CBC News: Toronto*, November 1, 2017, <http://www.cbc.ca/news/canada/toronto/highway-400-crash-1.4382808>

⁴⁵ Ibid.

⁴⁶ Dunham. "Truck driver charged following chemical spill on highway 400"

introduced to increase safety on the roads, I believe that the policymakers overlooked how the legislation may affect the current shortage of truck drivers in North America by focusing solely on safety issues and ignoring how these new mandates will further compound on to the shortage of truck drivers in North America. The next section of this paper outlines the details of each piece of legislation and addresses the potential and expected effects to the current shortage of truck drivers in North America.

4 – ELD Mandate:

4.1 – What is the ELD Mandate?

The Canadian ELD Mandate is federal legislation that is scheduled to come into effect in December 2019. The US has already instituted an ELD mandate that will come into full effect in December 2017. The respective mandates differ slightly, but are for the most part very similar.⁴⁷ The mandates will reflect each other for the most part, as trade across the US-Canada border is crucial to both country's economies and drivers will have to comply with changing regulations on both sides. Marowits states, "If implemented, commercial truck and bus drivers would be required to record their hours behind the wheel with devices that automatically record driving time by monitoring engine hours, vehicle movement, kilometers driven, and location information."⁴⁸ ELDs will be installed in the cabs of transport trucks and will serve to record the hours of service of a transport truck driver. This mandate does not change the current required hours of service for a truck driver, but will make them more enforceable, as it will be much harder for a truck driver to cheat an electronic log rather than a manual logbook.

⁴⁷ Marowits, Ross. "Canada to require bus and truck drivers to log hours automatically," *CTV News*, February 15, 2016, <http://www.ctvnews.ca/business/canada-to-require-bus-and-truck-drivers-to-log-hours-electronically-1.2777948>

⁴⁸ *Ibid.*

The ELD mandate is primarily to support a safer trucking industry. The mandate should allow for a decrease in fatigue-related traffic incidents involving tractor trailers. Improving road safety, preventing errors and log tampering, eliminating harassment, and driver coercion are other goals of the mandatory adoption of ELDs.⁴⁹ There are predictions that the ELD mandate will save 26 lives and prevent 562 injuries per year.⁵⁰

As stated earlier, the Canadian ELD mandate will not come into full effect until December 2019. The delivery of the mandate is currently divided into four separate phases. The first of these phases is the public comment period which allows different stakeholders in Canada to suggest adding or changing the mandate in respect to their personal concerns. This phase was scheduled for the second quarter of the year 2017. The second phase is called the tentative publish target, which is when the government hopes to have the language of the mandate released to the public, and will be scheduled for the fourth quarter of 2017. The third phase is the compliance phase. All eligible trucks are expected to be installed with a form of an ELD by December 2017. The fourth and final stage will arrive a full two years after the compliance phase. This phase is a grandfather clause.⁵¹ This grandfather clause is put into place to allow a two-year period trucks that currently have ELDs installed, but do not meet the new ELD guidelines, to install a newer ELD that meets the mandate's guidelines.⁵²

⁴⁹ "Get the Facts: The Canadian ELD Mandate," *ELD Facts.com*, <https://eldfacts.com/get-the-facts-the-canadian-eld-mandate/>; "The ELD Mandate Overview," *ELD Mandate Fact*, <https://eldmandatefacts.com/resources/eld-mandate-overview/>

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Jaillet, James. "FMCSA clarifies ELD mandate's 'grandfather' clause and potential issues with non-compliant ELDs," *Commercial Carrier Journal*, February 22, 2017, <http://www.ccjdigital.com/fmcsa-clarifies-eld-mandates-grandfather-clause-and-potential-issues-with-non-compliant-elds/>

4.2 – Potential Effects of ELD Mandate on Truck Driver Shortage and More

The main idea behind the Canadian ELD mandate is to increase safety on the roads by cutting down the number of hours spent at the wheel and lowering fatigue rates. It is expected to save lives and reduce the amount of injuries suffered in accidents with tractor trailers. One of the ways it will do this is by protecting workers from being forced by companies facing driver shortages to work longer hours.⁵³ However, what this mandate has failed to recognize is how it will negatively affect the current shortage of truck drivers in Canada and in North America.

It is necessary to look to the US for some examples, as they are much closer to the official date of implementing mandatory ELD installation than Canada. It has been stated in previous research about hours of service regulations that they do not account for the unpredictable conditions of truck driving labour.⁵⁴ McLean explains how hours of service regulations, “individualize responsibility for adherence in ways that are problematically decontextualized from industry power dynamics and truckers’ lived experiences of labour mobility ... [i]nasmuch as they fail to address the classed, gendered, and racialized dynamics of trucking mobilities.”⁵⁵

Many drivers choose to drive for longer periods than what is technically allowed to meet deadlines or hit delivery window targets. If they are getting paid on a per-trip basis, many of these drivers will no longer be able to meet deadlines if they are now facing penalties for driving longer than they should. McLean states, “[D]rivers are under huge economic pressure to speed

⁵³ Marowits. “Canada to require bus and truck drivers to log hours automatically”

⁵⁴ McLean, Amie. “Battling blind spots: Hours of service regulations and contentious mobilities in the BC-based long haul trucking industry”: 294.

⁵⁵ *Ibid.*, 278.

and drive excessive hours”.⁵⁶ I am by no means promoting the idea that drivers should be speeding and driving for extremely long periods of time without rest, but more thought needs to go into the mandate to make sure it covers the previously mentioned unpredictability of the truck driving profession. An example of this is shown in an article by Angelica Robinson which describes how John Allen, a truck driver who has come from generations of truck drivers, is worried at how the new mandate will affect truck driver labour. Allen claims that he always used to record his hours by hand and now that the new mandate is upon him, and hours of service will be enforced more strictly, he is worried that he and other truckers will not be able to get to their destinations on time, or lose money trying.⁵⁷ Allen also claims the mandate can hurt consumers, by driving up the cost of transporting goods.⁵⁸

Another example of a group that is having issues with the ELD mandate in the US is livestock haulers. Research shows that according to cattle industry experts in Canada, spending more time in a trailer causes the cattle to shrink, losing up to 7.5% of their body fluid within 10-20 hours.⁵⁹ Livestock haulers now argue that the main problem for them will be deciding to leave their livestock in the trailers for more extended periods of time and incurring body fluid losses, or unloading the livestock during their mandated break time, and reloading them afterwards, which causes the risk of contamination and more opportunities for incidents to occur.⁶⁰

⁵⁶ Ibid., 280.

⁵⁷ Robinson, Angelica. “ELD mandate causing controversy among truck drivers,” *WANE*, November 17, 2017, <http://wane.com/2017/11/17/eld-mandate-causing-controversy-among-truck-drivers/>

⁵⁸ Ibid.

⁵⁹ Thrower, Ben. “Livestock haulers claim ELD mandate will disrupt cattle shipping,” *FreightWave*, November 14, 2017, <https://www.freightwaves.com/news/2017/11/14/livestock-haulers-claim-eld-mandate-will-disrupt-cattle-shipping>

⁶⁰ Ibid.

Therefore, the main way in which the ELD mandate will negatively affect the shortage of truck drivers in North America will be to severely restrict the “looseness” of schedules they are able to somewhat enjoy before ELDs become mandatory. As mentioned earlier, the ELD mandate has not taken into account how it will affect different types of truck drivers in different ways. If current drivers are no longer able to earn as much money from making trips because they are not able to easily customize their schedules, they may switch professions for something more reliable. It was mentioned earlier that construction is a popular alternative to trucking, and many other sectors may become appealing for truck drivers if there is a risk of them losing earnings. McLean states, “The assumption that truckers ‘choose’ to violate [hours of service] regulations due to profit motivation obscures the complex ways that carriers, shippers, receivers, governments, and consumers rely on the exploitation and over-work of drivers.”⁶¹ In other words, many truck drivers are not disobeying their hours of service regulations because they feel like it, but because they must to ensure their specific job gets done in a specific timeframe. If drivers are no longer presented with this option, many will leave the industry, and it will be harder to attract new employees into the field. Braden states, “Concerns over the supply of truck drivers and the resulting increases in trucking rates will probably grow in the coming months as the ELD mandate threatens to pinch capacity.”⁶²

This issue of driver’s not being able to “customize” their own hours of service points to a bigger problem in the truck driving industry. There are already hours of service agreements in place, and these are already being overlooked by some companies, for example, the previously

⁶¹ McLean. “Battling blind spots: Hours of service regulations and contentious mobilities in the BC-based long haul trucking industry”: 294.

⁶² Braden, Dustin. “US driver shortage becomes top trucking concern,” *JOC*, October 23, 2017, https://www.joc.com/trucking-logistics/labor/survey-driver-shortage-top-problem-facing-trucking_20171023.html

mentioned livestock trucking industry. If these companies are already ignoring hours of service in order to complete deliveries, the same issue will most likely continue into the mandating of ELDs. Only now, these companies will be penalized more harshly for infractions they were already forced to make under older laws. The trucking industry should perhaps look at a solution that designates specific hours of service guidelines to truck drivers depending on what type of trucking they are involved in.

It is believed that when the US ELD mandate is completely implemented, the trucking industry will be hit hard and need to hire up to 60,000 additional drivers.⁶³ Some may believe that without the option to make drivers operate for longer hours to meet deadlines, more of the younger generation and other prospective truck drivers will want to join the industry. Their scheduling will now be much more planned, and they will not be persuaded to be on the road as much as in the past. However, this may not be the case in Ontario, as another new legislation came into effect on July 1, 2017. This legislation is a new mandatory training session for prospective truck drivers. The next part of this paper discusses this legislation in greater detail and analyze how it will also negatively affect the current shortage of truck drivers in Ontario.

5 – Mandatory Entry Level Training for Class A Driver’s Licence Applicants in Ontario:

5.1 – What is Mandatory Entry Level Training for Class A Driver’s Licence Applicants?

This new mandatory training program for all those applying for a class A licence (needed to drive a transport truck in Canada), will consist of at least 103.5 hours of instruction. It will cover the entry-level knowledge and skills needed to safely operate a large truck on Ontario’s

⁶³ Menzies, James. “How will the ELD mandate impact pricing?” *Truck News*, August 15, 2017, <https://www.trucknews.com/business-management/will-eld-mandate-impact-pricing/1003080283/>

roads.⁶⁴ Anyone who takes a class A licence road test after July 1, 2017 must take the training first, but is grandfathered for anyone who obtained a class A licence before this date.⁶⁵ The training is offered at private career colleges registered under the Private Career Colleges Act of 2005 or through an organization under the Ministry of Transportation's Driver Certification Program, which includes approved Ontario Colleges of Applied Arts and Technology.⁶⁶

The curriculum of the mandatory training will be set by the training providers, as long as it complies with the Ministry of Transportation's Commercial Truck Driver Training Standard.⁶⁷ The class will cover skills such as driving techniques and off-road manoeuvres and is expected to take about four to six weeks to complete.⁶⁸ An important aspect to this training is that all knowledge tests involved in the training for entry level drivers will come from the Official MTO Handbook.⁶⁹ This entry level training is valid for life upon completion.

Much like the ELD mandate, the new legislation for mandatory training before obtaining a class A licence has been introduced primarily as a safety buffer. Niagara Falls MPP Wayne Gates recently stated, "That is why we introduced this July mandatory entry level training ... which recently came into effect, and is helping to ensure our roads remain among the safest in North America".⁷⁰ The idea is that if prospective drivers are trained more before they take their

⁶⁴ Ministry of Transportation, Government of Ontario, *New Mandatory Training for Class A Driver's Licence Applicants*, 2017, <https://www.ontario.ca/page/new-mandatory-training-class-drivers-licence-applicants>

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ "Mandatory training for commercial Class A licence applicants starts July 1," *Ontario Trucking Association*, June 23, 2017, <http://ontruck.org/mandatory-training-for-commercial-class-a-licence-applicants-starts-july-1/>

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ "Critic calls for hard look at trucking rules following highway 400 tragedy," *North Bay Nugget*, November 3, 2017, <http://www.nugget.ca/2017/11/03/critic-calls-for-hard-look-at-trucking-rules-following-highway-400-tragedy>

road tests, incidents like the previously mentioned spill on highway 400 of highly flammable liquid will be better avoided.

This mandatory training program was also introduced after an investigative piece by the Toronto Star uncovered how easy it was to obtain a class A licence at some trucking schools throughout Ontario. The article states, “The Star found two dozen unregulated schools in the GTA that offer to teach students just enough to earn their AZ licence”.⁷¹ The article goes on to explain how these schools would offer courses at just under the regulated provincial cost of \$1000 and teach the bare minimum of skills required to obtain a class A licence in Ontario.⁷² The investigative article revealed the dangers that unregulated trucking schools pose to the safety of Ontario’s roads and was a major catalyst in the new mandatory training being implemented across all of Ontario.

5.2 – Potential Effects of Mandatory Entry Level Training in Ontario

Designed to increase the safety of Ontario’s roads by increasing the skills of would-be truck drivers, some still believe the training will not be enough at the currently mandated 103.5 hours. For example, John Beaudry, owner of Transport Training Centres of Canada states, “[I]t was absurd that Del Duca [Ontario’s Transportation Minister] settled on 103.5 hours of mandatory entry-level education when the current standard offered by private career colleges like Beaudry’s is 200 hours”.⁷³ If the hours designated for mandatory training were increased, driver

⁷¹ Wallace, Kenyon, and Ormsby, Mary. “Big truck ‘licensing mills’ put public at risk,” *Toronto Star*, October 14, 2014, https://www.thestar.com/news/gta/2014/10/14/bigtruck_licensing_mills_put_public_at_risk.html

⁷² Ibid.

⁷³ Wallace, Kenyon, and Ormsby, Mary. “New Ontario truck drivers to receive mandatory training,” *Toronto Star*, June 28, 2016, <https://www.thestar.com/news/canada/2016/06/28/new-ontario-truck-drivers-to-receive-mandatory-training.html>

safety would most likely improve, but the effects on the truck driver shortage in North America would be more devastating.

This mandatory training legislation is primarily concerned with increasing the safety of Ontario's roads and highways. However, its effect on the shortage of truck drivers has been somewhat overlooked. The first issue is the cost of the program. The cost of the mandatory training is expensive. With a quick search of private career colleges offering the course in Ontario, I was able to find many private career college costs for this new training program. Among training schools in Windsor which offer the program, the cost is listed as \$4,900, \$5,955, and \$7,500.⁷⁴ The average cost for the actual A class licensing program at these institutions is \$7,663.⁷⁵ This means that the cost is almost doubled to obtain a class A licence in Ontario. There are options available for financial support, but remain very limited and this cost is not something many may be able to afford. It is also not guaranteed that one will pass the mandatory training, and therefore would have to pay this fee again for another chance.

The second issue is the length of the program. As mentioned previously, this training program is intended to last for four to six weeks, which is a long time for people who are unemployed and/or searching for work. There is no mention of a condensed program that will administer the training in a shorter time period for prospective drivers who cannot make a four to six-week commitment to this training program. Once again, with a quick search of private career colleges in Ontario, it is shown that this new training almost doubles the previous length of schooling before being able to challenge a road test and obtain a class A licence. For example, at

⁷⁴ ServiceOntario, Government of Ontario, *Private Career College Search Service*, 2017, https://www.riccpcc.serviceontario.ca/pcc/CommandServlet?command=publicreport&config=pcProgram4Html.xml&parm_type_1=STRING&parm_value_1=EN&parm_type_2=STRING&parm_value_2=52&parm_type_3=STRING&parm_value_3=

⁷⁵ Ibid.

Academy Truck Driving School, the AZ truck training program takes seven weeks to complete. This program would now take 13 weeks to complete, as the mandatory training is scheduled for six weeks.⁷⁶

Extra money and extra time are not necessarily at the disposal of those are looking to become a prospective truck driver. A good example is shown in a *Toronto Star* article about a man named Ahmad Al Rasoul arriving in Ontario as a Syrian immigrant. Rasoul is an experienced driver who drove transport and dump trucks in his native Syria, but when he moved to Ontario, he was unable to attain a licence due to mandatory wait times for newcomers.⁷⁷ Although Rasoul was not applying for his class A licence at the time, but instead for a G licence, the immediacy of his situation is a good comparison to the introduction of the new mandatory training for entry level truck drivers. Rasoul states, “My family is grateful to Canada... [w]e just want to start working and support our family as soon as possible”.⁷⁸ Rasoul’s situation could apply to newcomers to Windsor-Essex as well, and the extra cost and time added on to obtaining a class A licence would make it unattainable for many newcomers. The language is also from the MTO handbook, which may be confusing to many newcomers, even if they have background knowledge of truck driving from their land of origin. Also, what is to stop someone from obtaining their class A licence in another province and then using their licence to get a job in Ontario? There is currently a 60-day licence exchange program in Ontario that allows licensed

⁷⁶ Ibid.

⁷⁷ Keung, Nicholas. “Syrian truck driver challenges MTO over licensing wait,” *Toronto Star*, May 29, 2017, <https://www.thestar.com/news/immigration/2017/05/29/syrian-refugee-truck-driver-challenges-mto-over-licensing-wait.html>

⁷⁸ Ibid.

transport truck drivers to exchange their previous province's licence for a valid Ontario licence with no re-training required.⁷⁹

It is obvious why this legislation was enacted; to improve safety on Canada's roads and North America in general. However, more work needs to be done to ensure that the legislation has a minimal or non-existent negative effect on the shortage of truck drivers. The next section of this paper makes policy recommendation(s) in order to make this legislation more efficient in terms of both safety and solving the problem of truck driver shortage(s).

6 – Policy Recommendations

6.1 – Recommendation for Subsidy/Award Program for ELD Mandate

As mentioned earlier, the ELD mandate in both Canada and the US will force truck drivers to install a compatible electronic logging device that will monitor their hours of service electronically, thus making it harder for truck drivers to spend extra time on the road if deemed necessary. I believe the mandate would be much better served if it was voluntary rather than mandatory. The government could also offer incentives, such as funding for trucking firms and companies, if they volunteer to adopt the ELD system and manage it efficiently. As mentioned earlier, some truck drivers are very concerned over the fact that they will not be able to decide the details of timing on their trips. The rationale for this decision will allow trucking companies with more consistent and definite travel times to adopt the ELDs, while companies with more complicated logistics, such as livestock farmers, would be able to opt out without being penalized.

⁷⁹ Government of Ontario – DriveTest. "Licence Exchanges – Commercial Vehicles," 2017, <https://drivetest.ca/licences/licence-exchanges/licence-exchanges-commercial-vehicles.html>

6.2 – Recommendation for Mandatory Entry Level Training for Class A Licence Applicants

The biggest problem with this legislation is the new mandatory cost and time that will be added on to earning a Class A licence. As mentioned earlier, this will make it harder for people such as newcomers, who do not typically have a solid financial base and are looking for quick work so they can begin to provide for their families. My suggestion to remedy this is to make the entry level training apprenticeable, or to include the training in the current truck driving apprenticeship requirements. Currently, the apprenticeship requirements for becoming a tractor-trailer commercial driver are 2000 hours of on-the-job work experience and 0 hours of in-school training.⁸⁰ This means that the current apprenticeship applies to when the apprentice is either driving the truck or working on the truck. Prospective truck drivers must already have their valid A license to become apprenticeable. The new mandatory entry level training adds an in-class element to the licensing procedure, but does not affect the current apprenticeship model for truck drivers. My policy recommendation would allow prospective truck drivers to become apprentices before they have received their valid A license, and allow them to complete the mandatory entry level training as part of the apprenticeship. The road test and licensing procedures would now also be integrated into the apprenticeship process.

As of now, the options for financial support are extremely limited, and include: Second Career funding; Workplace Safety Insurance Board; Ontario Works; and Aboriginal Band.⁸¹ A newcomer would have extreme difficulty qualifying for any of these methods of assistance.

They would not be able to apply for a second career as they have not been laid off from a

⁸⁰ Ontario College of Trades, *Tractor-Trailer Commercial Driver*, December 2015, http://www.collegeoftrades.ca/wp-content/uploads/TFS_TTCD_Dec2015.pdf

⁸¹ Ministry of Transportation, Government of Ontario, *New Mandatory Training for Class A Driver's Licence Applicants*

previous job in Ontario. The Workplace Safety Board Insurance is designed for injured workers. The Ontario Works program only offers financial assistance for the cost of basic needs, like food, clothing, and shelter.⁸² They would also not be eligible for the Aboriginal grant. If the mandatory entry level training was integrated into Ontario's current truck driving apprenticeship program, more grants would be available both for the employer and prospective employee. For example, a \$1000 taxable cash grant for employers when the apprentice has completed all required classroom and on-the-job training.⁸³ As for the apprentice, there are many options for funding from the government, as well. For example, a grant given for the purchasing of tools, and a grant offered for Employment Insurance if the apprentice is studying full time.⁸⁴ This would also give the prospective truck driver an option of which route they wanted to take to becoming a truck driver. They could still choose to attend a private career college mandatory entry level training course, or could locate an employer who is willing to sponsor them throughout their apprenticeship.

While I believe both of these recommendations would alleviate the negative effects of this legislation on the shortage of truck drivers because they offer more choice, there is an interesting trend becoming more realistic every day in the trucking industry that could be a "solution" to the shortage. In November, 2017, Tesla introduced a self-driving truck that will be able to operate on roads and in traffic without a human operator.⁸⁵ Tesla are not alone, as other

⁸² Ministry of Community and Social Services, Government of Ontario, *Ontario Works*, 2017, <http://www.mcscs.gov.on.ca/en/mcscs/programs/social/ow/index.aspx>

⁸³ Government of Ontario, *Hire an Apprentice*, 2017, <https://www.ontario.ca/page/hire-apprentice>

⁸⁴ Government of Ontario, *Start an Apprenticeship*, 2017, <https://www.ontario.ca/page/start-apprenticeship>

⁸⁵ Pittis, Don. "Driverless trucks are coming to Canada and the impact will be profound," *CBC News: Business*, November 20, 2017, <http://www.cbc.ca/news/business/autonomous-trucks-economy-1.4403057>

companies have been unveiling similar technologies that will allow for driverless trucks.⁸⁶ These driverless trucks will theoretically be able to fill some of the shortage of truck drivers, even if it is not with humans. They also may be arguably safer than human driven trucks, as the autonomous vehicles will pull over in treacherous weather and continue when the conditions become fair enough to drive.⁸⁷ There are predictions that these autonomous vehicles could be introduced to the roads as early as next year (2018).⁸⁸

7 – Conclusion

It is evident that the federal government and provincial governments of Ontario have introduced legislation to increase safety on the roads. However, the legislation largely fails to recognize the current shortage of truck drivers in North America. As such, it risks accelerating the shortage of truck drivers and harming the trucking industry as a whole. This would be extremely detrimental to trade between the United States and Canada. Throughout this paper, I have identified ways in which I believe this legislation will affect the shortage of truck drivers. The biggest limitation of my research is that the ELD mandate is not set to happen until 2019, and the mandatory entry level training has only been in place for a few months, leaving much to be seen about its outcome(s). More research about this legislation needs to be done. In a few years' time, this legislation should have been in place long enough that meaningful research has been conducted into their effects on the shortage of truck drivers in North America. In the meantime, the focus will likely be on whether or not this legislation will work in regard to improving safety standards in the trucking industry.

⁸⁶ Ibid.

⁸⁷ Ibid.

⁸⁸ Ibid.

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