Diversity on Wheels: Retaining Canada's Immigrant, Young, and Women Truck Drivers

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Abstract

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Zongyuan Zhai

Transporting goods across Canada's vast landmass on a daily basis, trucks can be seen as carriers of the country's prosperity. In the meantime, like many countries across the globe, Canada is currently suffering from a concerning truck driver shortage. Given Canada's reliance on trucks, addressing this shortage is crucial. My qualitative study explores factors that affect the retention of immigrant, young, and women drivers, who are currently underrepresented as truck drivers, yet who will likely become the backbone of Canada's trucking industry in light of its changing demographics. Based on the Job Demands-Resources Model, my study investigates the job demands that deter these drivers from staying in the industry and the job resources that encourage them to stay. Key findings highlight job demands including driving related working conditions, perceived discrimination, and exploitation that are critical to address, along with important job resources of financial and non-financial nature that need to be further encouraged to help reduce Canada's truck driver shortage. My study provides practical recommendations to three levels of stakeholders – government agencies, industrial leaders, and the general public.

Key Words: Truck Driver Shortage, Job Demand, Job Resource, Immigrant, Young People, Women

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Introduction

Every day, millions of Canadians interact with truck drivers with or without even realising it. For example, when they purchase their breakfast sandwich that was shipped to a Tim Hortons' franchise by a truck or receive their Amazon parcel that was delivered on a truck, they inadvertently rely on truck drivers for making these deliveries happen. However, even fewer Canadians consider the possibility that the country does not have enough drivers to meet the current demand. According to recent data, Canada is facing a truck driver shortage of roughly 20,000 truck drivers, with the likelihood of this shortage growing further in the foreseeable future (Trucking HR Canada, 2023; Fan & Heminthavong, 2022). This shortage poses a major threat to the industry, which is worth CAD 595 billion as of 2022, represents an overwhelming majority of trade between Canada and the United States, and most importantly, is responsible for 90% of all consumer products and foods that are shipped on a truck at some point (Statistics Canada, 2023a; Fan & Heminthavong, 2022; Canadian Trucking Alliance, n.d.).

To address Canada's truck driver shortage, however, there is a surprisingly limited literature to draw from. Most of the current insights, including the ones that are recent, are based on large scale, quantitative studies that assess Canadian truck drivers as a whole (Schiefke, 2023; Staats et al., 2017). In the meantime, as the industry's demographics change due to the retirements of current drivers, particularly old Caucasian males (Ontario Trucking Association, 2022; Staats et al., 2017; Trucking HR Canada 2019a), it is important to also understand this issue from the perspective of drivers who are currently underrepresented as they will likely become the backbone of the Canadian trucking industry. In particular, young millennials and women constitute an astonishingly small percentage of truck drivers, respectively 18% and 3%, (Trucking HR Canada 2019a; Trucking HR Canada, 2019b). In addition, despite being increasingly more important,

immigrant drivers are culturally underrepresented, too (Innes, 2022). Therefore, to develop richer insights into what attracts and deters truck drivers from staying in the industry, my qualitative study focuses on the experiences and perspectives of immigrant, young, and women drivers. This leads to my research question: what are the factors that affect the retention of truck drivers in post-pandemic Canada, including immigrant, young, and women drivers?

Using the Job Demands-Resources model (the JD-R model) proposed by Bakker and Demerouti (2007) as the theoretical foundation, my study is based on the assumption that a balance between job demands – anything that is related to the work that requires mental or physical effort – and job resources – anything that mitigates the job demands – leads to employee well-being, motivation, and lower turnover intentions (Bakker & Demerouti, 2007; Voydanoff, 2005). Guided by this assumption, I conducted 14 interviewees with drivers of the three groups from across Canada with the purpose to collect qualitative data on the job demands and resources these drivers encounter on a daily basis. The interview data was then analysed using thematic analysis (TA, El Said, 2017; Galvin et al., 2015), with the aim to develop insights into the underrepresented drivers' job demands and job resources of concern. Some job demands that emerged in the interviews – mainly driving related working conditions like road conditions/traffic – align with the current literature, while others – namely perceived discrimination and exploitation – have received less, if any, attention, and appear to impact certain groups of drivers more than others. Likewise, although certain resources mentioned by the interviewees, like salary/compensation and a sense of community, were discussed in past studies, my study sheds light on additional financial and non-financial resources that have yet to be noticed in academia, including time-off/leisure time, flexibility/perception of freedom, on-the-job training, and support for business ownership. Based on these findings, I assert that the Canadian truck drivers my study focuses on experience

numerous job demands while receiving inadequate job resources; my subsequent recommendations aim to address the balance through adding job resources and alleviating job demands.

From a theoretical perspective, my study contributes to the selection of qualitative studies founded on the JD-R model while enhancing the academic community's insight into Canadian truck drivers in post-pandemic Canada, respectively a group and a context that has not yet received much attention. From a practical point of view, my study also proposes viable solutions for a variety of stakeholders to address the truck driver shortage from the perspective of immigrant, young, and women drivers in post-pandemic Canada. For other researchers, my study can be used as a basis for further studies that seek to address the problem in other provinces in Canada and, perhaps, other countries across the globe.

Trucking Industry: An Industry that Keeps Canada Running

With a territory of 9,985 million square kilometres stretching from Middle Island on Lake Erie to Cape Columbia by the Arctic Ocean, Canada is the second-largest country in the world behind Russia by landmass. Given such landmass, as well as the country's extensive road network, trucks are the major mode when it comes to the transportation of goods. According to a report from the Library of the Canadian Parliament, trucking was responsible for a whopping 77.7% of domestic transportation by volume in the year of 2018; in contrast, railway was only responsible for 22.2% and air was responsible for less than 0.1% in the same year (Fan & Heminthavong, 2022). In fact, 90% of all consumer products and foodstuffs are shipped on a truck at some point (Canadian Trucking Alliance, n.d.). It is, therefore, safe to argue that Canadians might not be able to have access to many of the consumer products they are used to, from the iconic Tim Hortons

donuts and coffee to brand new cars at the dealerships, without a properly functioning trucking industry.

The importance of Canada's trucking industry can also be seen from its market size, which can be termed as annual revenue. Generating 63.7 million annual shipments and employing 312,000 drivers as of 2018 (Placek, 2022a), the industry's operating income was CAD 67 billion in 2019 according to data from Statistics Canada (Fan & Heminthavong, 2022). The market size of the industry was estimated to be CAD 67.8 billion for the year of 2019 in an industry revenue report published by Ontario Trucking Association in 2021 (Ontario Trucking Association, 2021). Given such statistics, trucking is a fairly sizable industry in Canada.

In addition to its sheer market size and value, the trucking industry is also of significance due to the role it plays in Canada's trade, especially the one with the United States. Importing Canadian goods worth CAD 595 billion in 2022, the United States is responsible for more than 75% of Canada's total exports. In the meantime, Canada imported American goods worth CAD 471 million in the same year, accounting for more than 60% of its total imports (Statistics Canada, 2023a). In other words, the United States is Canada's biggest trading partner by both import and export, and such a strong commercial tie between the two biggest economies of Western Hemisphere is unlikely to change anytime soon. The main supporter of this longstanding US-Canada trade is the trucking industry: in 2020, 54.2% of Canadian exports to the United States and 71.5% of Canadian imports from the latter were transported by trucks (Fan & Heminthavong, 2022). On a year-to-year basis, more than 10 million trucks cross the US-Canada border (Canadian Trucking Alliance, n.d.), which means, on average, a truck crosses the border every 3 seconds. Given the industry's sheer size and its role in Canada's trade, the trucking industry is of substantial significance from a macroeconomic perspective as well.

In summary, the trucking industry is utterly important to Canada and Canadians. With this in mind, it is important to recognise the threats that can weaken this industry and, as a result, harm Canada's economy and the Canadians' quality of life. Unfortunately, a threat of such detrimental nature is plaguing the industry now: the driver shortage. In the next section, I will review the literature demonstrating how this global issue affects Canada.

Truck Driver Shortage: A Global Problem that Canada Shares

Truck driver shortage is currently a global problem (Wilson et al., 2018). For instance, American Trucking Associations (ATA), in a report from 2017, believed that the United States' truck driver shortage would reach 50,000 by the end of the year and the shortage was probable to grow to 174,000 by the end of 2026 (American Trucking Association, 2017). Across the Atlantic Ocean, the European Union – where 75% of goods by volume are transported by trucks – is facing a similar if not more worth concerning problem: the total shortage may reach two million by the end of 2026 (Word Road Transport Organisation, 2022). Likewise, Asia-Pacific's three most developed economies – namely Japan, Australia, and New Zealand – are plagued by truck driver shortage, too (Ishizaki, 2023; Fitzgerald, 2022; Nightingale, 2022). Truck driver shortage has become such a global concern that it affects not only the developed economies but also the developing ones like Brazil and South Africa (Feltrin, 2021; Yadav, 2022).

Canada is, unfortunately, not an exception to this global shortage. Trucking HR Canada, for example, indicated that Canada's trucking industry had 25,600 unfilled positions at the end of 2022, with the sheer gap between demand and supply being estimated to 15,190 (Trucking HR Canada, 2023). The shortage may further grow to 25,000 by 2025 (Fan & Heminthavong, 2022),

which considering the importance of the trucking industry described above, is concerning. This issue has garnered attention not only from the industry but also from academia, as scholars realise the importance of studying Canadian truck drivers to address the shortage.

For the purpose of better understanding and addressing the truck shortage that Canada is going through, it is crucial to develop insight into the demographic of current Canadian truck drivers. The most prominent characteristic of Canadian truck drivers today is the high age of the group compared to the rest of the country's labour force: since more than 20% of Canada's general labour force are between the age of 55 and 64, there is no denial that the country has an ageing labour force, but the percentage is as high as 32% among truck drivers (Canadian Trucking Alliance, 2022). More than 6% of Canadian truck drivers are at least 65 years old (Canadian Trucking Alliance, 2022). With that being said, at least 2 out of 5 (i.e., 40%) currently active Canadian truck drivers are at least 55 years old and, consequently, are probable to retire in the foreseeable future. In the meantime, however, less than 18% of Canadian truck drivers are from the millennial generation (Trucking HR Canada 2019a).

The second characteristic of Canada's truck drivers is the lack of gender balance: according to a report on diversity and inclusion of the Canadian trucking and logistics industry published in 2019, women comprise only 3% of all truck drivers on Canadian road compared to 48% of Canada's general labour force (Trucking HR Canada, 2019b). Finally, and as a third characteristic, truck drivers are usually depicted as Caucasian males (Javaid, 2022). However, visible minorities, particularly those of South Asian origin, are becoming an increasingly more vital part of Canada's trucking industry. As of 2022, almost one in every four active Canadian truck drivers is South Asian (Dawson, 2022). In major cities like Vancouver and Toronto, South Asian immigrants comprise more than 50% of truck drivers (Ontario Trucking Association, 2018). At the same time,

despite the immigrant drivers' increasing contributions to not only the trucking industry but also to Canada as a country, the media coverage does not seem to reflect such a reality (Innes, 2022).

In summary, Canada is facing a major shortage of truck drivers. The country's current truck drivers are generally older Caucasian men, with women and young Canadians being underrepresented groups. Immigrant drivers are not properly represented either, but, unlike women and younger generations, their underrepresentation is less tangible. Moving forward, it is important to understand what motivates and deters truck drivers from joining and staying in the industry, from the perspective of current and potential future drivers. Such knowledge can be used to address the ongoing truck driver shortage. The theoretical framework for my study is introduced in the next section.

Theoretical Framework: The JD-R Model

To evaluate the current truck driver shortage in a systematic manner, the Job Demands-Resources model, also known as the JD-R model (Bakker & Demerouti, 2007), is used as a theoretical framework.

First introduced in the early 2000s, the JD-R model assumes that it is a balance between job demands and job resources that lead to employee well-being (e.g., strain and work engagement; Bakker & Demerouti, 2007), which in turn has implications for their performance and turnover. Job demands include anything related to the work's physical and psychological aspect that requires effort, either mental or physical, and may generate physiological or psychological costs. Examples of typical job demands are time pressure, role overload, and unfavourable work environments (Voydanoff, 2005). In contrast, job resources refer to the assets of structural or psychological nature that can be utilised to impact performance in a positive manner, mitigate the job demand,

or generate more resources (Voydanoff, 2005). Job resources can exist at the organisational, interpersonal, position specific, and task specific level, and examples of typical job resources include salaries, career opportunities, job security, supervisor and coworker support, role clarity, and skill variety (Demerouti & Bakker, 2011). Job demands generally have negative effects on employee well-being and motivation, while job resources tend to have positive effects (Bakker & Demerouti, 2007). In addition, the JD-R model suggests that job resources are particularly important when the job demands are high, as the resources might be able to counteract the negative effects of the high demands (Bakker & Demerouti, 2007; Bal et al., 2017).

Unlike two comparable theoretical frameworks, namely the Job Demands Control (JD-C) model and the Effort Reward Imbalance (ERI) model (De Croon et al., 2002; Van Vegchel., 2005), the JD-R model is characterised by the breadth of its scope and its flexibility because of the fact that it takes all job demands and job resources into account and thus can be customised to be used in a variety of contexts (Schaufeli & Taris, 2013). According to this model it is necessary to recognise specific job demands and job resources on a case-to-case basis (Daniels & De Jonge, 2010; Hu et al., 2011) as each occupation is characterised with its own specific risk factors or job demands and resources (Schaufeli & Bakker, 2004).

Importantly, the effect of demands and resources on employee well-being can impact crucial organisational outcome variables like productivity, absenteeism, and as is the focus of this research, turnover (Crawford et al., 2010). Since high voluntary turnover is one of the prominent reasons for the truck driver shortage in Western countries (Prockl et al., 2017b), examining the matter through the lens of the JD-R model can help us understand the ongoing labour shortage in Canada as the consequence of truck drivers' job demands overweighing their job resources. Without properly addressing such an imbalance, it is likely to continue to discourage existing

drivers from staying in the industry, and likely also discourage potential candidates from becoming drivers in the first place.

Truck Drivers' Job Demands

Job demand is on one side of the balance that the JD-R model focuses on, and unsurprisingly many different types of truck drivers' job demands have been studied. The truck drivers' most common job demands are time pressure, role overload, and an unfavourable work environment (Voydanoff, 2005). For example, a recent study of Brazilian truck drivers pointed out that drivers face high demands on meeting delivery deadlines, long working hours of more than 12 hours on the road per day, and poor road conditions (Oliveira & Carlotto, 2020). Other studies similarly emphasize that delivery deadlines and driving overtime are prominent job demands shared by truck drivers internationally (Hamelin, 2001; Hedberg et al., 1993; Kemp et al., 2013). Building on this, American researchers point out in another study that in addition to constant time/deadline pressure and driving hazards (weather changes, traffic, poor road conditions, etc.), truck drivers also face disrespectful treatment and even violence (Shattell et al., 2010).

The level of the job demands' severity while driving might, admittedly, vary for different truck drivers depending on the scenarios in which they are driving. For instance, a past study postulated that trip duration and age of fleet are associated with turnover, suggesting that truck drivers travelling shorter distances for each haul or operating newer vehicles are probable to suffer from lower level of stress than their counterparts travelling longer distances or operating older vehicles (LeMay et al., 1993). Likewise, compared to their German, Swedish, and American counterparts, truck drivers in Denmark and Switzerland are under the protection of stricter laws, stronger union support, and a more competitive salary, possibly making their demands less onerous

(Prockl et al, 2017a). In spite of this, at the end of the day, truck drivers across the globe share similar job expectations and requirements, i.e., demands, which suggests it is mainly the level of severity of job demands that vary while the truck drivers are on their trips.

According to the literature above, truck drivers face substantial job demands when they make efforts to meet their job expectations – delivering the loads to the destinations in a timely manner. In the meantime, the various demands faced by truck drivers, such as time pressure, long-hours of driving, unfavourable working conditions (i.e. lack of affordable healthy food options at truck stops) can have long-lasting effects on the drivers' physical and mental well-being, these impacts include but are not exclusive to: obesity, mental health problems, and drug use. That is, although they did not take place while the truck drivers were working and thus cannot be categorised as job demands, they not only result from various job demands but also impact the drivers well beyond the arrival of loads at the destinations.

Past studies suggested that there is a connection between occupational sitting – which is inevitable when truck drivers drive for a long-period of time under substantial pressure – and obesity (Mummery et al., 2005). Additionally, food available to truck drivers throughout their trips are typically deep-fried and high in sodium, fat, and carbohydrate (Lemke et al., 2016; Pritchard et al., 2022). Considering more than half of truck drivers consume such food on a weekly, if not daily basis, this makes their diet quite unhealthy in general (Oliveira & Carlotto, 2020; Pritchard et al., 2022). Additionally, truck drivers are not able to exercise safely at the truck stops, either (Birdsey et al., 2015). It can, therefore, be justified that obesity is the long-lasting result of the truck drivers' unfavourable working conditions, which, as per the JD-R model, represent job demands.

In a study done back in 2007, almost two third – 65% to be precise – of truck drivers were considered overweight (Whitfield Jacobson et al., 2007). A more recent study from South Africa indicates that a whopping 74% of the country's truck drivers are either overweight or obese (Modjadji et al., 2022). Another recent Australian study on the truck drivers' mental and physical health provided a similar statistic: almost 80% of the massive Oceanian country's truck drivers are either overweight or obese (Van Vreden et al., 2022). It also must be mentioned that truck drivers are much more likely to be considered overweight or obese not only compared to the general population (Birdsey et al., 2015) but also compared to other transportation professions like bus drivers (Rosso et al., 2015). As a consequence of high obesity and overweight rate, the truck drivers are much more prone to other chronic health problems including but not limited to: Hypertension (Jacobson et al., 2007; Modjadji et al., 2022), diabetes (Jacobson et al., 2007; Josseran et al., 2021; Modjadji et al., 2022), heart diseases (Jacobson et al., 2007; Josseran et al., 2021), and high blood pressure (Van Vreden et al., 2022). Moreover, scholars have argued for a connection between obesity and crash risk, which means the obesity/overweight problem can potentially put the truck drivers and the public in danger, too (Anderson et al., 2012).

The obesity problem is merely the tip of the iceberg in terms of the long-lasting effects of the truck drivers' job demands. Compared to the general population, truck drivers are at higher risk of depression, and the high level of psychological demand and stress associated with the job is likely the explanation (Da Silva-Júnior et al., 2008). The truck drivers also tend to have higher levels of mental overload from work-related stress even compared to bus drivers, who are more disturbed by pressure and lack of growth opportunities, resulting in a higher chance of work-related musculoskeletal disorders (Sharma et al., 2021). Therefore, it is hardly surprising that truck drivers are afflicted by anxiety, and some of them turn to drugs to cope with anxiety (Apostolopoulos et

al., 2016). That is, to keep themselves awake during long trips, some drivers use dangerous stimulants such as tobaccos (Birdsey et al., 2015), and the heavy use of tobaccos expose the drivers to a higher risk of lung cancer (Josseran et al., 2021).

In summary, past studies show that truck drivers suffer from a substantial amount of job demands that not only generate a high-level of burden for the drivers throughout their trips but also have serious consequences for them from a long-term point of view, which can help to explain their low retention rates. According to the JD-R model, when the level of job demand is high, the job resources become even more vital. Therefore, in the next section, I demonstrate the resources that the truck drivers can take advantage of to overcome some of their many job demands.

Truck Drivers' Job Resources

Salary, as a financial job resource, is the most fundamental job resource that truck drivers can lean on. The hourly wage of a truck driver in Canada can be anywhere between CAD 14.50 (the lowest hourly wage of truck drivers in Nova Scotia, which is the lowest among all provinces and territories) and CAD 38 (the highest hourly wage of truck drivers in British Columbia, which is the highest among all provinces and territories), with the national median being CAD 24 (Canada, 2023b). When comparing the median truck driver hourly wages of each province/territory against their corresponding provincial median hourly wage, the median hourly wage of truck drivers is lower than the provincial median hourly wage in every province/territory in Canada (Canada, 2023a; Canada 2023b). Considering the high level of job demands Canada's truck drivers are facing, such financial job resources hardly seem to be adequate. Given that research suggests salary plays a major role in truck drivers' retention decision (Garver et al., 2008), it is questionable whether the current level of salary can help when it comes to the retention of existing drivers.

In addition to compensation, job tools – mainly the trucks operated by the drivers – are another type of tangible resource for the drivers (Stepheson & Fox, 1996). However, given commercial heavy trucks are usually much more expensive than typical family vehicles and have a longer lifespan, there is no guarantee that drivers can always be provided with the latest trucks. As we embrace further technological advancements, more technologies that can decrease the drivers' job demands are introduced. For instance, three German researchers proposed a mood-based truck driver assistance system named "the Truck Buddy", which is context sensitive and can facilitate the drivers' well-being in different ways (Heinbach et al., 2021). Similarly, to address the dangerous road condition that Wyoming truck drivers have to face in winter, Ahmed and his colleagues introduced the Connected Vehicle (CV) program, an e-learning module that provides warnings and notifications so that the drivers can navigate through complex road conditions more easily and safely (Ahmed et al., 2019). While these new technological resources bring hope for truck drivers, there is little, if any, evidence suggesting they have been utilised on a large scale to date.

Social support of truck drivers is a crucial non-financial job resource (Voydanoff, 2005). By definition, social support indicates the perception or experience that a person is loved, cared for, valued, and esteemed as a part of a social network, and the support can come from a variety of sources, from family relatives to coworkers (Taylor & Friedman., 2007). For truck drivers, social support is a beneficial resource because of its capability of buffering the effect of stress, which is inevitable during trips (Olson et al., 2016). The support from other drivers can be a terrific example of such a beneficial resource: by talking to other truck drivers informally either in-person or through social media, truck drivers can share experiences of how to prioritise demands, the reasons behind prioritisation, and the results afterwards (Semeijn, 2019). During trips, the social

support from other truck drivers might be more accessible than those from families, friends, and employers since it is much more practical for a truck driver to find other drivers at, say, a truck stop or petrol station than going home or visiting friends in that context. The drivers' irregular schedules also make it harder for them to find time to seek support from their families and friends through phone calls.

The social support drivers receive from their employers can help alleviate the drivers' feeling of inefficacy, too (Thomas et al., 2020). A terrific example of such organisational support would be stress management courses provided to the drivers by their employers (De Croon et al. 2004). However, due to the similar reason behind the difficulty for drivers to attain social support from their families and friends, it is not always practical for the drivers to fully take advantage of such support.

From a human resource perspective, work flexibility has a positive impact on employees' job satisfaction and job performance, making it a type of job resource as per the JD-R model (Davidescu et al., 2020). According to existing literature, however, it does not seem that truck drivers benefit from such job resources. Past studies have found that truck drivers' work lacks flexibility, which can weaken truck drivers' sense of autonomy and lower the level of their well-being (Thompson & Prottas, 2006). The low task variety of driving a truck also lowers job meaningfulness and increases feelings of boredom (Shattell et al., 2010).

Overall, the literature suggests that truck drivers have some important job resources to help them cope with the many work demands they face, however, these resources tend to be limited in numbers, scope, and availability. Since the JD-R model predicts that job resources are important for truck drivers' well-being and motivation to stay in the industry, and to counteract the negative

effects of the numerous job demands that they face (Bakker & Demerouti, 2007; Bal et al., 2017), this lack of resources is likely a key factor behind the low retention rates of truck drivers.

Research Question

As a summary of the studies cited above, researchers have offered deeper insight into truck drivers' job demands than resources, and this imbalance helps explain why the driver shortage continues to exit not only in Canada, but also in many other countries (i.e. Australia, Brazil, the United States, etc.). However, few, if any, past studies regarding truck driver retention were conducted in Canada, and most, if not all, studies did not put an emphasis on underrepresented (i.e. immigrant, young, and women) drivers, either. That is, research to date has focused on traditional truck drivers (older, White men) who are increasingly exiting the industry, leaving us with question marks about what the future drivers may value and what type of imbalance of job demands and resources they face, especially in Canada. Therefore, it is crucial to examine the job demands and resources of immigrant, young, and women drivers – who, despite being tangibly or intangibly underrepresented at the moment, will increasingly play a more vital role in the industry given the ongoing demographic change in post-pandemic Canada. By examining what this unique population of drivers experience and value, we can better understand what will motivate them to remain in the industry. This leads to my research question: what are the factors that affect the retention of truck drivers in post-pandemic Canada, including immigrant, young, and women drivers?

Methodology

In this section, I justify my methodological choice to appropriately answer my research question. Since my study prioritises richness and depth of understanding of an understudied topic

in a specific context over generalisability, qualitative methods are the most appropriate methodology (Jamshed, 2014). Addressing "how" and "why" questions, qualitative research provides an opportunity to develop a profound understanding of experiences and phenomena, particularly the participants' feelings, opinions, and experiences (Cleland, 2017; Rahman, 2020), aligning with the purpose of my research. In addition, the majority of studies addressing truck driver shortage has used quantitative research methodologies, indicating the need for and value of more nuance requiring qualitative methods to further address the issue. Given the scope of my study, I focused on addressing the current truck driver shortage from the perspective of the underrepresented groups mentioned previously, namely women, young Canadians, and immigrants. Given Ontario (ON) and Quebec (QC) have the biggest values of GDP and highest amounts of truck drivers among all Canada's provinces and territories (Jeudy, 2023 for GDP; Placek, 2022b for number of drivers), the two provinces were the focus of my study geography wise. My methodological choice led to the data collection process taking place in the form of interviews, which is the most common data collection approach in qualitative research that aligns with the goal of my research to better understand the lived experiences of underrepresented truck drivers today.

In order to collect the interview data of truck drivers belonging to the three groups of this study's focus, namely immigrants, young people, and women, I visited truck stops in the Greater Montreal Area. I approached truck drivers (who appeared to fit into the relevant groups of drivers as per the focus of this research) directly in-person and asked if they would be interested in participating in an interview (as per Concordia's Ethics Board approval, they were provided with information outlining the goals of the study, the method of data collection, and a consent form to be signed), and a total of 14 drivers agreed to do so. As a token of appreciation for their time and

participation in my research, I provided all participants with a CAD 40 Tim Hortons gift card. I conducted the interviews between December 9th, 2023 and January 25th, 2024, using a semi-structured interview protocol (see Appendix I). All the interviews, except for one, took place in person, with one being held at a truck driving school and the others held at a truck stop. The only interview not taking place in-person was held over a phone call, following an in-person encounter at a truck stop. The interviews lasted 35 minutes on average.

In terms of the characteristics of my sample, 11 out of the 14 interviewees were immigrant drivers (i.e., not born in Canada but had moved to Canada at some point to live and work). In terms of place of birth, most of the immigrant drivers were born in South Asia, while the others were born in Europe, the Caribbean, and the Middle East. Six interviewees were between the ages of 20 and 29 and, as a result, were considered young drivers. In addition, four interviewees were women. Hence, I had interviewees representing the three groups of focus for my research as can be seen in a map visualisation in Appendix II. However, there certainly were some overlapping categories among the interviewees. There were, for instance, four interviewees who were young and immigrant drivers at the same time. Likewise, two of the four women drivers were also immigrants, and one was a young woman. Unfortunately, I was not able to interview any truck driver fitting all categories, but this was anticipated given the limited scope of the study, as well as the rarity of underrepresented, especially women, drivers. For the audiences' convenience, a Venn diagram, demonstrating the overlapping among different types of interviewees, can be found in Appendix III. In addition, when it comes to the province of residence, the majority of drivers resided in Quebec, followed by Ontario, Alberta, and Prince Edward Island, which aligns with my intended focus on drivers from Quebec and Ontario. The amount of time that the interviewees had been working as truck drivers ranged from a few months to 32 years. The most common reasons for

why the interviewees became truck drivers was economic return, passion for driving and travelling, and influence of family, friends, or community.

Analysis

Upon finishing all the interviews, I first transcribed the interviews through the utilisation of free transcription applications available on my personal smartphone, attentive listening of interview records, and manual adjustments of the transcripts generated by the applications. This transcription revealed that I had accumulated qualitative data comprising a substantial number of experiences and opinions, making it crucial to analyse the qualitative data of such richness and diversity in the most effective manner. Upon finishing the transcribing process, I assigned pseudonyms to interviewees to ensure confidentiality.

There are a variety of methods that could be used for data analysis, such as content analysis (Erlingsson & Brysiewicz, 2017), narrative analysis (Frost, 2009), discourse analysis (Talja, 1999), grounded theory analysis (Rich, 2012), thematic analysis (El Said, 2017; Galvin et al., 2015), and interpretative phenomenological analysis (Mavhandu-Mudzusi, 2018). I chose to use thematic analysis for my data analysis because of its flexibility due to not having an intrinsic connection to specific theoretical frameworks. This flexibility consequently allowed me to develop insight about my participants' opinions and perspectives based on the interview data (Braun & Clarke, 2006), as guided by the JD-R model (Bakker & Demerouti, 2007). Similarly, thematic analysis is characterised by an accessible and systematic procedure for coding and generating themes, allowing for a broad scope, which aligns with my study's purpose of attaining rich insight into the experiences of a unique population of truck drivers (Guest et al., 2011; Kiger & Varpio, 2020).

I followed the detailed thematic analysis procedures by Braun and Clarke (2006), which include six phases: familiarising myself with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report (Braun & Clarke, 2006). In the first phase, I reviewed the interview recordings and transcripts to further familiarise myself with the qualitative data. This approach turned out to be challenging due to the large amount of data and the inherent differences among the data. Consequently, when it came to the second phase of generating initial codes, I had a list consisting of 13 codes, ranging from salary to exploitation to on-the-job training, and they did not seem to share many connections with each other, either. When proceeding to the phase of searching for themes based on these codes, therefore, I decided to do so in a more strategic manner by revisiting the theoretical foundation of the JD-R model.

There are two approaches to identify themes, which, as defined by Kiger and Varpio (2020), are "actively constructed patterns (or meanings) derived from a data set that answer a research question, as opposed to mere summaries or categorisations of codes.": the inductive approach, which extracts themes directly from the data, and the deductive approach, which takes advantage of established theories, frameworks, etc. (Kiger & Varpio, 2020, Page 1). Given the JD-R model was selected as the theoretical framework for this study, the questions used in the semi-structured interviews were developed under the influence of this theory, making it a feasible choice for me to identify themes deductively through the JD-R model. That is, the interview questions were designed around job demands and job resources, the two aspects of JD-R model, which means regardless of how different the drivers' responses may be, it is not unlikely that job demands and job resources are still the "common denominators" they share. With that being said, I developed a total of five themes, with three of them relevant to job demands – namely Driving Related Working

Conditions, which is shared by interviewees across the three groups, Perceived Discrimination, which is applied to certain groups of truck drivers, and Exploitation, which can vary depending on the drivers' employer – and two of them relevant to job resources – namely Financial Resources and Non-Financial Resources. I not only identified the five themes but also ensured that each of the thirteen codes I mentioned previously had its corresponding theme. By rearranging the wide variety of codes from more than one hundred pages of transcripts based on their resemblance with different types of job demands and job resources after rigorous reviews of my data and literature review, my theme development process aligns with the 'data reduction' process, which is used to facilitate generation of abstraction and thus generate refined themes (Tuckett, 2005).

Results

Through examining the qualitative data to answer my research question - what are the factors that affect the retention of truck drivers in post-pandemic Canada, including women, immigrants, and young drivers - five themes representing the experiences of truck drivers were generated that collectively depict a comprehensive "panorama" of the interviewees' experiences, not only on the road on a day-to-day basis, but also in the industry over time. Please refer to Table 1 which I made following the visualisation tactic used by Daly & Reed (2022) in their study for the specific definition of each theme, their corresponding codes, and the typical examples demonstrating the codes under the themes from my data. In this section, I discuss each theme in depth, starting with the three job demands – driving related working conditions, perceived discrimination, and exploitation – followed by the two job resources, namely financial resources and non-financial resources.

Table 1	Description of Interview Themes with Immigrant, Young, and Women Truck Drivers		
Job Demand/Job Resource	**Theme**	**Codes**	**Prototypical Example**
Job Demand	Driving Related Working Conditions	Road Condition/Traffic	"Biggest challenge would be winter conditions. But if it's not winter, I'd say the people on the road" (Gordon, Immigrant).
		Police Encounter/Inspection	"It's the like if a police officer stops you know, they're always after you, your license is on the line because they can take away your points or anything, right? ...They don't understand the hassle that the truck drivers go through." (Larry, Immigrant & Young)
		Infrastructure	"Sometimes you do not have a restroom two, three hundred kilometres on the highway. Not have a safe place to stop to recover. Over there (Europe), every 25 kilometre, you have a swimming pool, you have a gym 24 hours in Germany 7 day a week…Here it's like a jungle." (Fred, Immigrant)
		Work Hour/Schedule	"We're allowed to work 16 hours per day. 14 plus two hours break. That's the shift, so you have to take two hours break during your shift, but you can extend your shift to 16 hours. I think it's too much." (Gordon, Immigrant)
Job Demand	Perceived Discrimination	Perceived Discrimination	"I can say that. On the same job, who is born here, who is the citizen here, earning almost double than me." (Richard, Immigrant & Young)
Job Demand	Exploitation	Unpaid Salary	"I suppose my last owner said to me he's gonna pay me this this this. I said okay. When I start working for him, he didn't pay me... That guy didn't pay me $25, 000. He took my $25, 000." (Richard, Immigrant & Young)
Job Resource	Financial Resources	Salary/Compensation	"Actually, I like the money. I know you're out of the house for five days, anyways you are making [a] good life" (Becky, Immigrant & Woman).
		Support for Business Ownership	"I know my friend who's a young driver... He gets kind of discouraged about it. ... Like he's looked at the hypothetical costs for starting his own trucking company, and you can't get into trucking unless you already have money... especially like as a young driver, insurance will laugh at you." (Charlotte, Young & Woman)
Job Resource	Non-Financial Resources	Flexibility/Perception of Freedom	"Flexibility is that it comes with. Yeah. Like you know, once you are on the truck, you know, even though the dispatch always is on top of you, you know, like you have to deliver the load there, but your safety comes first, so you really are your own boss when you are in the truck, right?" (Larry, Immigrant)
		On-the-job Training	"I don't know if I was lucky with the companies that I got -- but it gave me like good trainers. Solid old guy, he just gives me the advice and how to run it, how to do it. And then from there, you know, they just teach you how to do it." (Roger, Young)
		Time-off/Leisure Time	"I work four days on, I get four days off, which is the best schedule I've ever had...That means I'm off half the year..., and I'm happy about that." (Roger, Young)
		Sense of Community	"Oh yeah, they keep me company by keeping communicating; and with truck driver, any time you need help, people will be ready to help. I have found community of truck drivers to be very solid." (Selwyn, Immigrant)

Job Demands

Theme I: Driving Related Working Conditions

Road Conditions/Traffic

Road conditions and traffic have been identified in the literature as common job demands afflicting truck drivers, making them less motivated to stay in the industry (Oliveira & Carlotto, 2020; Shattell et al., 2010). Given the main responsibility of truck drivers consists of driving, it is hardly astonishing that the data from the interviews aligned with the literature on this matter. A majority (N = 12) of interviewees reported encountering challenging road conditions and/or traffic demands at work, and these experiences were shared among all three groups of truck drivers, making their daily drives not only stressful but at times potentially unsafe. When I asked about the biggest challenges on their typical trips, comments like these were shared about the road condition/traffic:

We don't have much challenges other than the traffic, the bad roads. And mainly other than that it's in the winter…in the winter, it's the icy roads. Sometimes if you leave, let's say, you go [away] for the night, [in] the morning you come back, your truck brake might be frozen, [and] your trailer brakes might be frozen. (Ted, Immigrant & Young)

Biggest challenges is the road, like the snow. The snow, the icing, you know, sometimes we [are] stuck…It's not good…[On] the long trip the [main challenging] things are like the traffic because on the 401 that goes to Ontario that has traffic accidents and everything. (Ismene, Woman)

Additionally, the drivers reported inferiority of Canada's road condition compared to other developed economies. A total of three interviewees – Larry (Immigrant & Young), Selwyn (Immigrant), and Alice (Immigrant & Woman) – specifically mentioned that Canada's road condition was inferior compared to that in the United States. Based on his own experiences working before immigrating to Canada, Jerry (Immigrant) also stated that wealthy Gulf countries (e.g. Qatar, the United Arab Emirates, and Bahrain) had highways that were maintained to a higher standard and had more satisfactory lighting. Fred (immigrant) made a similar comparison between the road condition/traffic between Canada and Europe, stating that this job demand was less of an issue in Europe, not only because of the more forgiving weather but also because the road users were friendlier toward truck drivers there. In other words, it appears that road conditions/traffic pose a higher level of job demand for truck drivers in Canada than their counterparts in the United States, Europe, and Middle East, aligning with past studies concluding that the level of severity of job demands shared by truck drivers across the globe may still vary on a country-to-country basis (Prockl et al, 2017a).

The behaviours of other road users are another contributor to the truck drivers' difficult road conditions. Even when the truck drivers would try to make the road a safer space by keeping their distance, for example, other drivers would take advantage of it to slightly save some travel time yet increase the potential likelihood of an accident due to the amount of distance that a truck with a fully loaded trailer needs to come to a stop. Please see the quotation below for the words of an interviewee frequently experiencing the stress caused by such inconsiderate behaviours of road users:

> *Like if I'm in traffic I leave a lot of space so that I have time to stop, and then the cars are like 'oh, that space is for me', it's like 10 cars ahead of me all of a sudden. That's probably the most consistent issue. (Charlotte, Young & Woman)*

In addition, other interviewees shared negative experiences with the road conditions caused by traffic, further emphasising the inconsiderate behaviours of other road users. One interviewee (Ted, Immigrant & Young), for example, said that all he hoped from the public was to be nice to truck drivers on the road and yield to trucks when the flasher is on instead of aggressively accelerating to bypass. Another interviewee (Richard, Immigrant & Young) stated that the social media should be used to by individuals with compassion for truck drivers to raise the level of awareness of the topic among the general public who, like one interviewee (Charlottee, Young & Woman) believed, made manoeuvres that caused stress for truck drivers because they simply did not know.

Police Encounter/Inspection

Another demand shared by all the three types of truck drivers in this study was police encounters/inspections (N=3). Two interviewees implied that the police targeting truck drivers for tickets was among their biggest job demands they had to deal with on a frequent basis. Another

interviewee suggested that having to estimate the weight of load in the truck is another work challenge related to the inspection of it by the police. Please see the quotes below for examples:

> *The government should speak to the police to be more gentle with the truck driver…The police have to protect the truck driver, not follow us like a wolf. And you watch them in the mirror, they wait for you to make a mistake to give you a ticket. That's not nice. (Fred, Immigrant)*

> *When loading certain bulk products, you eyeball it; if you eyeball it wrong, then, too bad, you're heavy, and [there is] nothing you can really do about it. So, then you're going by 10 scales, and hoping they are close because they might give a ticket because you eyeballed it wrong. (Charlotte, Young & Woman)*

While the job of the police is to ensure drivers follow rules for everyone's safety, these drivers seemed to have a different perception: they either believed the police do not understand their struggle or the police are targeting them intentionally for profit. Regardless of whether such perceptions reflect truth, such experiences lead to the truck drivers worrying that they could get a hefty fine or potentially lose their licences when encountering police and, therefore, contribute to a higher level of stress on the drivers' ends. Given the smaller number of interviewees bringing up police encounter/inspection, this job demand might not be commonplace like road condition/traffic and infrastructure, but it can still pose a genuine extra burden on the truck drivers' end.

Infrastructure

In past studies, transportation infrastructure is defined as a network – with a high level of complexity – that connects cities and accommodates human activities (Wang et al., 2018). Given the road condition and/or traffic have already been identified as a separate code, however, the term infrastructure here refers exclusively to the supportive facilities that can provide the truck drivers

with a certain level of comfort or convenience throughout their trips (i.e. truck stops). More than half of the interviewees (N = 8) suggested negative experiences with infrastructure, representing all three different categories of truck drivers in this study. The answers emphasise different details, but they all correspond to the general lack of a supportive infrastructure on the road, which is the truck drivers' typical workplace environment, increasing the level of discomfort and inconvenience the drivers must anticipate on a trip. Given past studies have revealed connections between workplace environments and turnover intention (Kurniawaty et al., 2019; Meirina et al., 2018; Rumman et al., 2013), the possible underlying effects of a lack of infrastructure for truck drivers on their retention should not be neglected. Please see the quotes below for examples:

> *In the US, every 50 miles you have a truck stop and a service area where people can stop and take breaks; Canada is very bad. I mean our truck stops are not as equipped as US truck stops…the problem is where to stop for the night, where to take a shower, where to take food and all these. (Selwyn, Immigrant)*

> *Infrastructure is another problem in Canada. Like in the States, they treat their drivers really good. They have like big gas stations, really good showers, and cleanliness is proper. Here in Canada that's a big challenge; you don't get as clean washrooms or showers or not as many as there are in the States, so that's a big challenge. (Larry, Immigrant & Young)*

> *Yeah, look, I come here, I don't have a bathroom for me, you know, they don't have a women's bathroom here, it's for mixed. I don't want to sit on urine, you know…A lot of truck stops are like that in Canada. (Ismene, Woman)*

While these interviewees suggested that the infrastructure along Canadian roads were inferior to their American counterparts, likewise, Fred (Immigrant), a European born immigrant driver, stated that driving was much more comfortable for him in the European Union than in Canada because there were more ample and well-equipped facilities along the highway. Given the already high level of job demands caused by road conditions/traffic mentioned above, the lack of infrastructure as an additional work demand certainly places further pressures on Canadian truck drivers throughout their trips.

Work Hour/Schedule

Past studies have found that long working hours is a common job demand among truck drivers across the globe (Oliveira & Carlotto, 2020; Hamelin, 2001; Hedberg et al., 1993; Kemp et al., 2013), and this was also a theme that emerged in my interview data. Three interviewees in particular showed their negative opinion on the matter, indicating that the long working hours – which deprive the truck drivers of time for family, friends, hobbies, and personal growth – is a discouraging job demand. In addition, another young driver implied that he believed the current work hours and schedule was the prominent reason that friends of his age would be hesitant to stay in the industry for long. Please see the quotes exemplifying such experiences below:

> *I guess when I'm driving to the U.S for 10 hours straight, a 14-hour break is not good enough. And because you want to finish your job, you get 14 hours to do the job in which you can drive for 11 hours in the US and 13 hours in Canada, you just want to finish it off. So, driving for that long, it really deteriorates your health…there is no life basically. (Alice, Immigrant & Woman)*

What I dislike would be the long-hour shift. It's never eight hours, it goes from minimum 11 hours to 16 hours…We're allowed to work 16 days per hour. Sorry, 16 hours per day. 14 plus two hours break. That's the shift... I think it's too much. (Gordon, Immigrant)

I think there's a lot of the other younger generations drivers; that's kind of what got them to stop being truck drivers because they were doing those five days, 36 hours off and then going back on the road stuff, and it's just not enough time. It's just not enough time because we're missing out on basically all our lives when we're driving and out on the road. So, when we get to go home, we have to have time. (Roger, Young)

Interestingly, only one interviewee (Fred, Immigrant) compared the work hour/schedule with other developed economies. According to the driver originally from Europe, he was discontent that European truck drivers typically work 45 hours per week in comparison to the 70 hours in Canada. Such lack of comparison may suggest that, like police encounter/inspection, the impact of work hour/schedule are occasional rather than commonplace. Another potential interpretation is that the drivers were aware of the long working hour and demanding schedule before choosing the profession, and the current Canadian regulation on the amount of hours truck drivers are allowed to drive in one shift is similar with that currently in effect in the United States, a neighbouring country with a smaller landmass (Canada, 2005 for the ongoing regulation in Canada; United States Department of Transportation, 2013 for the ongoing regulation in the United States). Like police encounter/inspection, despite not being mentioned by most interviewees like road condition/traffic and infrastructure, work hour/schedule can exacerbate the truck drivers' already high level of driving related job demand, making them less likely to remain in the industry long-term.

Synthesis

As a brief summarisation of this theme of ***Driving Related Working Conditions***, all the four codes – namely road condition/traffic, police encounter/inspection, infrastructure, and work hour/schedule – were complained by drivers from all the three groups of truck drivers, which means the job demands were universal for the three types of drivers regardless of the differences among them in terms of demographics. With the exception of police encounter/inspection, all the codes under the theme were also brought up by past studies. Driving related working conditions, therefore, is perhaps the most important theme of my study to address given its commonality regardless of demographics and its alignment with past studies.

Theme II: Perceived Discrimination

Perceived Discrimination

Unlike the demands under Theme I, which were shared by all types of drivers accounted for in this study, perceived discrimination is a job demand reported by only two types of drivers, namely immigrant drivers and women drivers. Almost half (N = 5 out of 11) of immigrant drivers revealed experiences of discrimination due to their identity as immigrant drivers. Two other immigrant drivers, albeit not reporting perceiving discrimination themselves, indicated other immigrant drivers having such experiences. Please see the quotations below for examples of discrimination perceived by immigrant drivers:

> *Yeah, they are treating me like I am not [from] here, from another land; I am only an immigrant…First of all, who's permanent (i.e. people who are born and raised in Canada), company give [them] good work, and they pay good salary…And also they provide good trucks and provide good trips. (Jerry, Immigrant).*

Of course, they treat you like an immigrant. They treat you differently…Yes, they treat me in the union differently because Canadians when they go to work, they smoke weed, they have the freedom for everything, they give them good trucks, good machines, everything good. You are second hand, always. (Fred, Immigrant)

Based on the examples above, the most common reason behind immigrant drivers' perception of discrimination, mentioned by three interviewees, is the perceived difference in treatment (e.g. immigrant drivers receiving lower compensation, being assigned to less favourable schedule, etc.), and this corresponds to a past study pointing out an unexplained wage gap in the case of non-European male immigrants (Meurs, 2018). It is important to note that most of the immigrant drivers who did not report perceiving discrimination either had been a truck driver in Canada for a substantial amount of time (i.e. more than 5 years) or immigrated to North America at a young age and grew up here. However, the immigrant drivers who did not report perceiving discrimination did not deny the possibility of other immigrant drivers being affected by the job demand, either.

Gender was also a reason for experiencing discrimination. Half of the women drivers (N = 2 out of 4) implied they perceived being treated unfairly because of their gender. Please see the quotation exemplifying women drivers' experiences below:

When I start [my career]… the people are laughing at me. The guys, the other men drivers, are laughing because I was not able to do the things like the guys, you know. But I showed to him how to do it, and I did. (Ismene, Woman)

In addition to scorning and gender stereotyping, a female interviewee was verbally harassed by a male colleague. When she made the complaint, the dispatcher decreased her driving

hours, which would lead to a decline in her income, and this was, without any doubt, tangibly unfair treatment following an incident of harassment. Fortunately, all the other three female interviewees denied a similar incident either to themselves or to the female truck drivers they were personally acquainted with. From a positive perspective, it is possible that changes are ongoing with the shift of the industry's demographics: for example, a woman driver (Ismene, Woman) who perceived discrimination disclosed all the discrimination she perceived were from older drivers, and the young drivers generally treated her with respect.

Although some interviewees expressed that, due to having stayed in the industry for a comparatively long period of time, they have become used to the discrimination, the stories of the women and immigrant drivers mentioned above indicate a substantial negative influence that this job demand has in terms of the drivers' experiences. As past studies conducted in a variety of contexts suggest a positive connection between perceived discrimination and turnover intention (Irhamni & Kristanto, 2020; Özer & Günlük, 2010; Qablan & Farmanesh, 2019; Sheng et al., 2022), it is not unlikely that perceived discrimination as a job demand, exemplified by my interview data, has a negative influence on the drivers' retention intention.

Theme III: Exploitation

Unpaid Salary

Two immigrant truck drivers reported not receiving the salaries they were entitled to from former employers and indicated that the employers took advantage of them. Another driver (Alice, Immigrant & Woman) reported routinely receiving the salary comparatively late. This type of exploitation of the drivers was a demand that caused frustration among affected truck drivers, although this evidence from the interview data does not necessarily suggest it's commonplace in the trucking industry in general. It seems this job demand usually emerges from the fact that drivers,

especially the immigrant drivers, do not have the legal knowledge and financial resources to defend their rights. Please see the quotation below as an example:

> *I suppose my last employer said to me he was going to pay me this, this, this. I said okay. When I start working for him, he didn't pay me... I'm working hard for him, and he didn't pay me... That guy didn't pay me 25 thousand dollars. He took my 25 thousand dollars…and I [want] that 25 thousand dollars, I can't even show to the government. He does the cheat with me because he did the cheat very well. (Richard, Immigrant & Young)*

It must be emphasised, however, that Alice did not believe the employer delayed her salary payment on intention, yet Richard and Fred expressed frustration, disappointment, and, to a certain extent, anger since they had little, if any, chance to recover their salary and they believed the employers' exploitations were intentional. Overall, this job demand was seen as not only a challenge for them being truck drivers, but it also left them with lingering feelings of mistreatment or unfairness. Such perception can play a potentially negative role in their consideration to stay in the industry.

Job Resources

Theme IV: Financial Resources

Salary/Compensation

According to the literature, salary is regarded as the most fundamental resource that truck drivers rely on (Garver et al., 2008). The interview data aligned with this insight, but also offered some additional nuance. First, a great majority of the interviewees (N = 9) divulged that the financial compensation – or the perception of it – was among the reasons that they chose to become a truck driver. However, the interviewees had different opinions regarding the salary they received.

Almost half (N = 6) of the interviewees had positive opinions toward the salary. The interviewees' answer to my question of "why did you become a truck driver" exemplify such positive opinions:

> *Oh, just salaries is a big thing. Like it makes me able to afford a decent living. Salaries here in Canada are actually pretty good. It could be better... But, uh, still it's pretty good, considering the cost of living that keeps raising up and all that stuff, you know, salary is decent. Could be better, but it is what it is. (Roger, Young)*

> *It was the number one choice because it's good money in trucking, and second of all, I like travelling, going to new places, so basically [the industry] gives an opportunity to explore the entire Canada and US. So, it's a good position for drivers. (Larry, Immigrant & Young)*

In contrast, a few interviewees (N = 3) reported comparatively neutral opinions toward the matter, which means that although they might not be completely satisfied with the salary, they did not express considerable discontent, either. Please see the quotes representing these interviewees below:

> *It's (the rates are decreasing) because of the competition. Like I've been hearing stories like 20 years back, 30 years back, the pay was almost double than now. And the rate keeps dropping…the pay is not as lucrative as when I started or even before me. (Ted, Immigrant & Young)*

Lastly, the rest of the truck drivers (N = 5) had a negative opinion of their salary. These drivers all seemed to believe that the salary they received did not align with the amount of work they had to do. Please see the quotations below, which demonstrates drivers' dissatisfaction with his compensation:

Yeah, over there (in Europe), you work 40 hours a week 45 [hours] maximum. Here you work 70 hours a week…for the same money, maybe over there they make more now. Because think about it: here a one [bed] room starts at least with a thousand dollars, and for that money over there you take a three-bedroom apartment…Here you work 50, 60 percent more and they squeeze you like a lemon. (Fred, Immigrant)

Oh, (Canada is going through a truck driver shortage) because of the pay, you know…Yeah. Salary, and the condition sometimes because they want [us] to drive more than we can…like, for the money, you know. We need to be paid more to do this. (Ismene, Woman)

In short, the financial compensation was the main reason for why most interviewees became truck drivers, but only some remained satisfied with their salaries after having worked for a while. This difference seemed to stem from age and experience as most of the drivers expressing clear discontent with the salary (N = 4 out of 5) were older; i.e. not in the age range of 20 to 29. This was hardly surprising as past studies pointed out that older professionals in general have higher salary expectations (Duarte et al., 2021). Personal experiences and perspectives seem to play a vital role as well: one interviewee (Ted, Immigrant & Young) reported that albeit his salary was lower than before, he was still glad to have chosen a career path in truck driving instead of pursuing a university degree because doing so not only prevented him from taking on a substantial amount of debt at a young age but also allowed him to generate income. However, another interviewee (Fred, Immigrant) was discontent with his salary due to the perception that the truck drivers' level of income in Canada is much lower than that in Europe, where he was originally from. It is therefore not surprising that because of such a difference in perspective, Ted was determined to stay in the Canadian truck industry, while Fred, in spite of having the intention to continue to be a truck driver, had made the decision to leave Canada and do so in Europe.

Support for Business Ownership

Although support for business ownership is not a traditional job resource that can be provided at the truck drivers' workplace to help them cope with their current job demands, as per the JD-R model, it was still included as a relevant resource here due to the motivation it can provide for the drivers' long-term career. According to past studies, potential of career development can be a factor of considerable importance when it comes to employee retention (Gaffney, 2005; Houssein et al., 2020; Salleh et al., 2024). For truck drivers, however, career development within the firms that employ them practically does not exist due to a clear lack of "corporate ladder" in this blue-collar profession. The opportunity to own a truck or, perhaps, a transportation related company, however, could be an appealing growth opportunity for the truck drivers. The only owner operator I interviewed was satisfied with his status quo of owning his own truck and trailer, despite challenges such as maintenance and insurance, and his answer to my question of "if you were given another chance would you still own your trailer and your truck?" is terrific evidence:

> *Yes, I would. Yeah, definitely, because of the money. So, I think it's more advantageous for you to own it… Yes, I would. Yeah, definitely, because of the money. So, I think it's more advantageous for you to own it (the truck and trail). (Gordon, Immigrant)*

There were also a number of interviewees (N = 4) from all three types of drivers who disclosed their intention to either own a truck and become an owner operator or start a business related to the trucking industry (i.e. a truck mechanic shop or a transportation company). Consequently, more than a third of the interviewees had already or hoped to start a business in the industry (N = 5), indicating the role of business ownership as a growth path for truck drivers. However, such a career path may not be accessible to all truck drivers due to its capital-intensive

nature, and, at the moment, financial support aimed to facilitate drivers' truck or business ownership do not seem to exist readily. Please see the quotes below:

> *Young people get kind of discouraged about it (the trucking industry). They might be planning to stick with it, but they get discouraged about it because there's nowhere to go from here. Like if you look at the hypothetical costs for starting a trucking company you can't get into trucking unless you already have money… Especially as a young driver, insurance will laugh at you. (Charlotte, Young & Woman)*

Theme V: Non-Financial Resources

Flexibility/Perception of Freedom

Despite not being mentioned in past studies, flexibility and perception of freedom was the main resource valued by the truck drivers in this study (N = 7), comprising all three types of drivers. The term flexibility and freedom used here indicates a lack of a conventional supervisor, as well as a general lack of necessity for interpersonal interaction, along with the underlying problems that are caused by such interactions. Please see the conversation between me and an interviewee (Ismene, Woman) below for a demonstration of flexibility and perception of freedom as an important job resource for truck drivers:

> *Interviewer: So are there any particular moments you look forward to on a typical trip?*
>
> *[…]*
>
> *Ismene: Okay, okay. The best moment [is], um, when I know my truck is okay and I get my things to drink, my things to eat, and now I'm going; it's the best moment for me. Now, when I go on the road, it's freedom. For me, it's this moment.*

Interviewer: They say you truckers are the modern cowboys, that's all for good reason. So that's your horse right there. Okay. And do you plan to stay in the industry as a driver in the foreseeable future for let's say, five years and why?

Ismene: Oh yeah, Of course, I will… I did a lot of work before… I was a barmaid, you know, it's another struggle. I worked in administration. I worked in a restaurant, I did a lot of work; you know, sometimes we need peace because when you do some work [that] I did, like always with the people, and now I'm in my truck. I could by myself, like this" [whistled to indicate peace of mind].

In addition to the examples above, Selwyn (Immigrant) brought up in the interview that compared to his previous position, which required constant interpersonal interaction due to its supervisory nature, as a truck driver he did not have to suffer from lack of respect from his Canadian colleagues on a daily basis, although he still reported perceiving discrimination.

On-the-job Training

On the job training was another resource mentioned by interviewees (N = 3), who indicated that, although this type of training is not widely adopted in the industry (judging by the low frequency of the code in the interview data), can have a positive impact on truck driver retention. More specifically, such training (e.g., opportunity to drive together with a more experienced driver) can prepare the drivers for unexpected scenarios through equipping them with knowledge that they would otherwise not learn from a typical course provided by driving schools. An interviewee, for instance, was provided with an extensive two-months training upon being hired, and he emphasised the importance of this training during the interview:

[The companies are] not willing to invest in new drivers. Yeah. And if they do, they will send a driver to a place that they shouldn't have sent them. Such as, let's say, from Quebec

or from Ontario going to Vancouver. Why? Because they're gonna have to deal with mountains. They have to deal with things they never expected before. So, at that point, you have to put them with a team driver like a person who has more experience… at least they get, they understand what to do on the road or what not to do… because if they put a new driver on the road to Vancouver, there is a big chance that trailer is going to end up in a ditch because there are a lot of things – when you're taking that hills and bouncing – that the driver should know about. But if the driver doesn't know, for starter, it's not really the driver's fault because you didn't give them the proper training, for those roads, right... If you don't do any of those, it's going to be tough for you to get the drivers. Then you are gonna say there's another shortage of drivers. (Peter, Immigrant & Young)

Relatedly, another interviewee reflected on the importance of training for her:

I think it has to be on the job training, and I think you're never going to know and never going to be well prepared to go on the road on your own, coming out of school where you went to class from nine to five, did your homework, and never went through truck stop, never had to troubleshooting issue, never had to figure out how are you going to get from point A to point B and sleep somewhere in between and also get a shower and a meal. They can't teach you everything in school. But there's some certain manners of safety that they really should teach you in school, like what do you do if your trailer truck moves, they don't teach you that in school. It's just not supposed to happen, but it does happen. (Charlotte, Young & Woman)

Another interviewee (Ted, Immigrant) provided a similar opinion on on-the-job training; he stated that he was able to learn important skills, such as maintaining the truck and trailer in its best mechanical condition in winter, that were not taught in the driving school's classroom and

had to be learnt after becoming a driver, further demonstrating the significance of on-the-job training as a resource that can potentially alleviate job demands mentioned previously, especially driving related working conditions. To date, however, there is little, if any, mandatory requirement of on-the-job training for truck drivers, and whether to provide new truck drivers with on-the-job training is completely up to the employers' discretion. In the meantime, when I inquired whether she believed there should be mandatory requirement of on-the-job training, Charlotte (Young & Woman) said that the training should not be the employers' responsibility as they will simply seek methods to circumvent it.

Time-off/Leisure Time

Numerous studies have pointed out a positive connection between creating work-life balance and employee retention (Aamir et al., 2016; Cegarra-Leiva et al., 2012; Rodríguez-Sánchez et al., 2020; Shockley et al., 2017). A key component of work-life balance is time-off, which is a resource that in turn can increase truck drivers' willingness to stay in the industry. Working in a profession known for its long shifts, some interviewees did bring up the importance of time-off or leisure time. One interviewee (Roger, Young) was highly satisfied with the amount of leisure time permitted by his current employer, but he also admitted that not every truck driver would be as fortunate as he was. In contrast, an interviewee (Ted, Immigrant & Young) reflected that he was not completely certain about continuing to be a truck driver over a long period of time due to the lack of time-off. Please see the conversation record below:

> *Interviewer: Do you plan to stay in the foreseeable future (as a truck driver) in maybe 5 years?*
>
> *Ted: I'm not too sure.*
>
> *Interviewer: And why is that?*

Ted: The downside in trucking is you don't get a lot of personal time and family time so I'm thinking about retiring it by 35, so ten more years, and that's it.

These interviews indicate that time off as a resource provided by the employers can improve truck drivers' job satisfaction. As a consequence, it is probable that they are more incentivised to stay on as drivers if they are allowed to have time for important matters outside of work such as family, friends, personal growth, and hobbies.

Sense of Community

Half of the interviewees (N = 7) across the three different groups reported having received a certain level of support from other truck drivers, suggesting the importance of feeling a sense of belonging or community among truck drivers. Social support, including the support from other drivers, has been shown to be a beneficial job resource (Voydanoff, 2005; Olson et al., 2016; Semeijn, 2019), especially as research has established a positive connection between perception of belongingness and employee retention (Bilginoğlu & Yozgat., 2023; Welling, 2016). As truck drivers do not work with a group of colleagues in a conventional office setting and thus have fewer opportunities to feel like they belong, the term sense of community may be more appropriate. Past studies have provided evidence for a positive connection between sense of community and job satisfaction (Sorn et al., 2023; Woo et al., 2022), which can also positively influence employee retention (Biason, 2020; Mrayyan, 2005), therefore, it is reasonable to argue that sense of community is another vital non-financial resource for the truck drivers' retention. For example, some interviewees clearly expressed gratitude for this type of a job resource:

If I'm stuck there (on the road), they (other truck drivers) start coming: 'oh, you need help? I could help you.' If I'm cleaning my windshield and I can't reach it, they start helping me. I think it's everybody's helping, you know. (Becky, Immigrant & Woman)

However, two interviewees had a different experience, indicating a lack of belonging or community, which seemed to negatively impact their motivation for a future career as a truck driver. Please see the quotation illustrating the opinions of truck drivers who do not perceive the sense of community below:

> *Oh, people here, [they don't] communicate. It's not like Europe. In Europe, the drivers eat together, go drinking together; it's [a] different world. Here they are not speaking; they [do] not say good morning. They are like robots… I don't understand that, that's one of the reasons that I will go back [to Europe]. (Fred, Immigrant)*

Discussion

The aim of my study was to investigate the factors that may have an impact on the truck driver retention in post-pandemic Canada, with a focus on underrepresented groups including immigrants, young people, and women. Through the lens of the Job Demands-Resources (JD-R) model, my study shows a complicated relationship between immigrant, young, and women truck drivers' job demands and job resources, which may influence these three groups of drivers' decision to remain a truck driver in Canada. Based on my analyses of 14 interviews, there were three themes directly related to job demands – namely driving related working conditions, perceived discriminations, and exploitation – compared to only two themes related to job resources – namely financial resources and non-financial resources. Moreover, many of the demands seem difficult and time-consuming to change, while the resources are either missing or simply not perceived as adequate. Therefore, it can be concluded that there seems to be an imbalance between job demands and job resources for underrepresented Canadian truck drivers, and such an imbalance characterised by considerable job demands and limited job resources, according to past

studies, does have a negative impact on retention (Marathe et al., 2019; Ribeiro et al., 2016). The drivers provided valuable opinions related to how the industry can improve, on both macro and micro scales, in the future to address this imbalance of job demands and job resources. My findings should be of interest to stakeholders, such as Canada's Federal and provincial government agencies, industry leaders, and the general public, and in this section, I address the five themes respectively, provide a synthesis, and discuss my study's contributions and limitations while recommending future studies to researchers sharing my interest in the field.

Driving Related Working Conditions

Driving related working conditions was the most prevalent among the three job demands, and the challenges and stress associated with this type of job demand seemed to impact most interviewees regardless of their demographics. This is not surprising at all: the busy traffic in major cities and the inadequacy of supportive facilities such as bathrooms at truck stops, for instance, would cause stress and inconvenience to any driver regardless of his or her age, gender, and ethnic background. This theme aligns with past studies, such as Oliveira & Carlotto, 2020, Hamelin, 2001, Hedberg et al., 1993, Kemp et al., 2013, and Shattell et al. 2010, indicating that driving related working conditions is a critical job demand that must be addressed as it negatively affects drivers' motivation, job satisfaction, and retention willingness across Canada. Since this theme held across all groups of drivers in this study, however, it goes against past studies (LeMay et al., 1993; Prockl et al, 2017a) that indicate that the drivers' place of residency and typical travel distance (local versus regional/long-haul) matter for their perceptions of this type of demand.

Perceived Discrimination

While perceived discrimination as a job demand was an important theme in my data, this has not received much attention in the literature to date. For instance, though the study of Shattell

et al., 2010 sheds light on the disrespectful treatments truck drivers face, the study did not acknowledge the struggle of specific groups of drivers. Existing literature has addressed the topic of immigrant workers in a North American context mainly from a policy-oriented and macroeconomics-oriented point of view, and thus does not provide much insight in terms of the immigrant drivers' perceptions (Trick & Peoples, 2021; Makuto et al., 2023). As six out of the seven immigrant interviewees who perceived discrimination as a job demand were visible minorities (i.e. non-Caucasian), the evidence from the interview data generally aligned with a past Canadian study postulating that visible minorities are more likely to perceive discrimination in the workplace (Banerjee, 2008). A more recent Canadian study suggested that immigrant workers often have difficulties interacting due to the integration barrier that is common in the organisational culture of Canadian employers and thus perceived more discrimination at work (Ertorer et al., 2022).

Similarly, when it comes to women truck drivers, while studies have identified their struggles of discrimination – from sexism and barrier of entry to sexual harassment – this work has been conducted on an industrywide level through the conventional quantitative analysis approach (Riddle, 2021; Salvagni, 2020; Scott & Davis-Sramek, 2021), which means that studies accounting for female truck drivers' actual experiences and opinions as individuals are rather uncommon. Like immigrant drivers, the interview data collected from women drivers also implied that discrimination was a vital job demand, causing them stress. This fits with the broader literature on gender discrimination against women in the workplace, including but not exclusive to the gender pay gap, stereotyping, and sexual harassment, which has shown to cause mental health problems (Batool, 2020). Another study also shed light on gender-based stereotypes, suggesting that this type of discrimination is common as a job demand for female workers in male-dominated

workplaces (Tiwari et al., 2018). The past studies on workplace gender inequality, therefore, generally coincide with the discrimination perceived by the female interviewees, indicating it can be a costly problem in the trucking industry.

My study adds value by shedding more light on immigrant and female drivers' experiences and concerns on a micro level. The discrimination perceived by immigrant drivers and women drivers may differ in details and forms, but they share similar impact: exacerbating the already high-level of job demand. Due to the vulnerable nature of women and immigrant drivers in this context, it is important to address this job demand not only to promote driver retention, but also for ethical reasons.

Exploitation

Despite not being a common topic in existing literature, exploitation nonetheless emerged as critical to some of the drivers' experiences in my interviews. There are five different types of exploitation: criminal infringements, economic violation of wage and hour entitlements, safety violation, denial of leave entitlements, and discrimination (Boucher, 2022). The exploitations encountered by the interviewees in this study were economic in nature, but, due to the limitation of my study's scope, we cannot safely reject the likelihood that other types of exploitations also exist. The incidents, reflecting the immorality and dishonesty of some business owners, implies the vulnerability of underrepresented, especially immigrant, drivers, which further reflects the urgency of addressing the specific job demand.

Financial Resources

Financial resources, especially compensation, was the main reason why a great majority of interviewees became truck drivers in the first place, and this aligns with past research (Garver et al., 2008). However, more than half of them seemed to be explicitly dissatisfied with the ongoing

salary they were receiving. Past studies have provided strong evidence that financial compensation (i.e. salary and benefits) has considerable impact on the retention of employees (Haider et al., 2015; Shakeel & But, 2015; Singh & MIT-WPU, 2022; Sorn et al., 2023). In the context of post-pandemic Canada characterised by high inflation and housing crisis (Chen & Tombe, 2023 for inflation; van der Merwe & Doucet, 2021 for housing crisis), the increasingly higher level of cost of living will likely make the financial compensation even more important retention wise. The reason is simple: under the shadow of recession that is more severe than other major developed economies (Heaven, 2024), which is exemplified by half of residents of Ontario – the biggest Canadian province by population and GDP – expecting financial struggles in the year of 2024, it is probable that truck drivers' dissatisfaction with their compensation will get worse, making them less likely to remain in the industry. Although compensation is what attracted many drivers into the industry, it may not be enough to keep them there in the long term in the current context. That is, given the increasingly higher cost of living, the drivers currently having satisfied or neutral opinion in regard to their salary can become dissatisfied due to the lower purchasing power of their stagnant income, and the drivers already dissatisfied with their salaries will have an even higher level of dissatisfaction resulting from exacerbation of financial struggle.

In addition to compensation, my results indicated another financial resource of interest to some of the drivers, namely financial support to own a trucking related business at some point. As a tangible, albeit non-traditional, job resource, support for business ownership was mentioned by more than a third of interviewees, yet it has not been a focus of past studies. This resource was mentioned by interviewees from all the three demographics, suggesting a certain level of interest in the resource shared among the drivers, and such commonality of interest can be explained from two perspectives: income growth and professional growth. Recent data suggest a substantial

income gap between company drivers, who do not own trucks and trailers, and owner operators, who own trucks and trailers: the median annual income for Canadian truck owner operators is CAD 87,500, in comparison to CAD 58,500 for Canadian company truck drivers (Talent.com, 2024a for company truck drivers' median income; Talent.com, 2024b for owner operators' median income). In addition, the ownership of a truck or a business represents a path of career growth, which can have a positive impact on retention (Gaffney, 2005; Houssein et al., 2020; Salleh et al., 2024). With that being said, this support is valuable for the motivation it provides. Practical examples include loans, guidance, and tax exemptions. It must be emphasised, however, that the provision of such job resources can be rather complicated. Due to the high price tag of trucks and trailers, as well as the capital-intensive nature of trucking and transportation in general, the funding required to support truck drivers wanting to become owner operators or trucking business owners can be substantial. In the meantime, four interviewees revealed in the interview that the rates are declining especially on long-haul routes at the current stage, and, with new companies joining the competition, the rates will likely see a further decline due to an increase in supply and may subsequently cause a catastrophic cut-throat competition, a situation in which the industry sees lower than normal earning over a long period of time (Reynold, 1940). As a result of the excessive competition, many firms may end up being dissolvent after operating at consistent losses and have no choice but to declare bankruptcy. It is, therefore, important to ensure that the support provided to truck drivers to start trucking businesses will not lead to a skyrocket in the supply in the industry to avoid a cut-throat competition from happening.

Non-Financial Resources

There were four different non-financial resources emerging from the data, and all of them, except for sense of community, were related to the employers.

Unlike the typical corporate North American workplace context of offices, truck drivers' main workplace are the cabins of the trucks, which means a low level of interactions with others is an intrinsic part of the profession. The lack of interpersonal interaction was seen as beneficial in certain ways since it leads to a lower level of interpersonal conflicts, supervision, and micro-management. Such a benefit was regarded as freedom and flexibility/perception of freedom by many drivers, who seemed to appreciate this type of non-financial resources: being able to enjoy working alone, to listen to music or talk to family while driving, and to choose the time to work and rest was a favourable part of the job to many interviewees, and this type of job resource can help to alleviate job demands.

On-the-job training and time-off/leisure, or the lack of them, are resources that largely depend on the employers instead of the truck drivers themselves. While most interviewees either reported they did not receive any on-the-job training or did not mention training whatsoever, there were interviewees, who benefitted from this specific job resource, reporting satisfaction as the job resource prepares them for the trips, especially unexpected situations, and consequently alleviates job demands, such as driving related working condition. Moreover, on-the-job training is crucial not only as a job resource but also as a measure that keeps the truck drivers and other road users safe. Despite such benefits, the interviews suggest that a great majority of the firms seem unwilling to pay new drivers for them to gain experience and thus are reluctant to make such investment in training.

When it comes to time-off/leisure, the situation is very similar. Most of the truck drivers were unhappy with the long working hours they have to work, as well as a general lack of time for them to have a work-life balance. However, the case can be more complicated than simply pushing the federal and provincial governments to decrease the maximum amount of hours the drivers are

allowed to drive on a daily basis. Firstly, according to numerous interviewees, the drivers are usually compensated based on either the kilometres or hours they drive, which means the measure will likely undermine the drivers' salaries, a crucial constituent of the financial resources. Secondly, as Canada is a gigantic country by landmass, and the population centres are sparsely scattered along the US-Canada border, which is the world's longest land border, the decrease in drivers' daily hour quota can slow down the delivery of goods across the country, which can be costly not only for transportation firms but also for the stakeholders directly or indirectly relying on the transportation service provided by trucks, including the general public.

The sense of community is the only non-financial resource that – to a large extent – is not directly related to the employers. The prevalence of this specific type of non-financial resource in my interviews corresponds to past studies suggesting that social support from other drivers is a valuable resource that alleviates job demands for truck drivers throughout their trips (Olson et al., 2016; Semeijn, 2019; Voydanoff, 2005). Although the profession's lack of interpersonal interactions was considered favourable by numerous interviewees, the by-product of such lack of interpersonal interactions can be the low level of perception of belongingness/sense of community for some truck drivers: when they do not even have many opportunities to interact with other drivers, it is unsurprising that they do not perceive a sense of community. Fortunately, the number of interviewees with a positive opinion toward the perception of belongingness/sense of community outnumbered those whose opinions were rather negative. It is still important to discover methods to maintain the strength of sense of community among the truck drivers so that this type of non-financial resource remains effective.

Theoretical Implications

Given the in-depth discussion of each theme above, I will now demonstrate my study's theoretical contributions. My research findings contribute to the literature on the JD-R model proposed by Bakker & Demerouti (2007) by using it as the theoretical foundation in a setting that has yet to be the centre of attention among researchers across the globe. The qualitative nature also enriches the existing selection of studies using the JD-R model as the theoretical foundation, whose methodologies are mainly quantitative. In addition, Canadian truck drivers is a group that has yet to be the focus of many studies, especially studies focusing on the post-pandemic Canadian trucking industry. Hence, my study contributes to filling this gap, illustrating the generalisability and versatility of the JD-R model across contexts and methods while providing rich insights about this understudied group's experiences and opinions.

In order to facilitate the retention of underrepresented drivers, as per the focus of the study, the imbalance between the drivers' job demand and job resources has to be improved through the introduction of actions to either reduce the job demands or provide higher levels of job resources, which, as per past studies suggest, have the ability to mitigate the job demands (Bakker & Demerouti, 2007; Bal et al., 2017). I also believe my findings have a certain level of practical value to stakeholders like truck driver associations, government agencies, and trucking companies across Canada, which I outline below.

Practical Recommendations

In this section I provide recommendations for the retention of underrepresented truck drivers on three different levels: the government, the industry, and the general public.

Driving Related Working Conditions

In terms of the driving related working conditions, from the lack of infrastructure to the long working hours and demanding schedules, a great majority of these seem to be the responsibility of the government, either on the federal or provincial level. For instance, the road condition, which was complained by numerous interviewees, can be improved through government investments in the highways. Given the trucks require yearly inspection, the government is obliged to constantly ensure that the roads are at their optimal conditions as well. Having said that, it is important to recognise that building and maintaining highways is mainly under the responsibility of provincial governments, whose interests and priorities may vary, and as such, the federal government's involvement may be needed in facilitating the interprovincial collaboration necessary to improve the road conditions nationwide. My recommendation is to provide a federal subsidy to provinces that are less developed economics wise and thus do not have sufficient tax income to invest in highways. At the end of the day, from the importance of the matter being realised to major investments on roads being made, it may take years or even decades to properly address, and the industrial leaders with connections with different levels of government and compassion for truck drivers may play a role in accelerating such a tedious process.

From the point of view of the general public, in the meantime, the road users sharing the road with the truck drivers are also responsible given the commonplace complaints of inconsiderate behaviours of road users exacerbating the job demand severity on the truck drivers' end. Although the government agencies, on the federal, provincial, and even municipal level, can certainly introduce advertisements on different channels to remind the public of the struggle and stress the truck drivers go through and the contributions they have made, they have little control over the traffic flow, as well as other road users' inconsiderate behaviours toward truck drivers.

At the end of the day, it is up to everyone who shares the road with truck drivers to truly realise their struggles and act in a considerate and accommodating manner accordingly, but more public communication and social media attention to this issue of respect and compassion could be of great help. Likewise, the landscape of truck stops across Canada is characterised by a combination of government owned truck stops, such as ONroute owned by the government of Ontario, and those owned by domestic and foreign private sector firms, such as Pilot Flying J and Petro-Pass Truck Stop. Due to the stakeholders involved in the matter, improving the truck stops, as well as other supportive infrastructure for truck drivers, across Canada to the standard of, say, the United States and European Union can be a slow process in which numerous obstacles will appear. However, in light of the critical issue to improve retention rates of truck drivers, more efforts are needed here, where the role played by industry leaders in speeding up the process can, once again, be crucial.

Perceived Discrimination

Organisational culture can influence discrimination perceived by employees (Kartolo & Kwantes, 2019). For example, research has provided evidence for the relevance of internally and externally improving organisational culture to tackle gender stereotyping (Castaño et al., 2019). Given the reports of discrimination by immigrant and women drivers, addressing organisational culture on the employer's level might be the effective solution to address such demands. This is perhaps of particular importance to women drivers: in the past few decades, sexual harassment has been an increasingly more severe challenge for women working in traditionally male-dominated occupations, such as law enforcement, firefighting, construction, and truck driving, and organisational culture was referred to be related to 80% of the harassment incidents (Riddle & Heaton, 2023).

As an organisational culture exists in a perceptual and cognitive manner, however, it can be difficult to change through mandates (Walker & Soule., 2017). Culture change is indeed difficult and takes a long time, but it is possible given appropriate processes, structures and management support (Schneider et al., 2011; Schneider et al., 2017). Also, as the North American trucking industry historically relies on older Caucasian males (Edmonson, 2018), there may be some resistance to change toward inclusion of a new and more diverse group of drivers as indicated in my data. Therefore, associations that represent drivers who might suffer from discrimination, such as Women's Trucking Federation of Canada and North American Punjabi Trucking Association, ought to actively provide women and immigrant drivers, who perceive discrimination, with social support when needed. In addition, such associations can take advantage of channels like social media, local newspapers, and industrial magazines to pressure the industry-wide cultural changes through, say, exposing cases of discrimination and highlight the benefits of more diversity among our truck drivers.

With industry-wide cultural change, the organisations, where immigrant and women drivers currently experience discrimination, will likely have to change their culture to adapt as well, which will likely alleviate perceived discrimination. In the meantime, I do believe such associations should push cultural changes in a strategic and diplomatic manner to avoid letting other groups of truck drivers have a perception of being "left out" that may lead to a lack of support and even backlash (Chekwa, 2018; Haldorai et al., 2020; Howard et al., 2020).

Exploitation

Exploitation does not appear to be a major job demand for truck drivers in the literature, and I was quite astonished when I heard the incidents of exploitation reported by the interviewees. Exploitation should, theoretically at least, be easy to address: when it takes place, the truck drivers

can simply seek to defend their rights and entitlements through court trials. However, immigrant truck drivers in particular may not have the knowledge of Canada's law system and resources to pursue justice through the court. As a result of such a limitation that makes them vulnerable, it is important for them to have access to prompt help and guidance when exploitations do take place. Associations representing drivers, especially immigrant drivers who are more likely to be taken advantage of, must take the responsibility to guide the drivers suffering from exploitation through options they have and provide help such as legal assistance when needed. Like discrimination, the associations can also use the means of media to disclose the employers who exploit drivers to the public to pressure changes in the behaviours of such employers while ensuring that new drivers can either avoid driving for these employers or to be prepared with knowledge and countermeasures while working for them.

Financial Resources

More than half of the interviewees either were dissatisfied with their salary or believed it could be higher. In the meantime, I do have to point out that introducing an immediate change in the salary of truck drivers or a higher industry wide minimum salary will not be an ideal solution: given 90% of consumer goods in Canada are transported by trucks (Canadian Trucking Alliance, n.d.), an industry wide salary increase will likely cause an increase of the trucking companies' operating cost and thus an increase in the price of consumer products, exacerbating the ongoing inflation in post-pandemic Canada. A solution I therefore propose is introducing favourable tax exemption policies for truck drivers. Doing so will have little impact on the operating cost of trucking companies, but the truck drivers can still benefit from an increase in their income. In addition, all the female truck drivers made the point that it is currently impossible for a woman truck driver to pursue her career while having a young child at home. The interview data indicates

a lack of childcare policy that would be of great importance to women truck drivers in particular. The measures that can be taken to address the unique childcare concerns of women truck drivers include stipends for childcare, flexible passenger policies, on-site facilities (e.g. after-school programs and part-time day care), and the offer of back-up roles during pregnancy (The National Transportation Institute, 2023).

Supporting truck drivers who intend to own a truck or even a trucking related business can also be helpful for the retention of truck drivers. For example, financial support, such as low interest loans, that aim to help truck drivers with the intention to become owner operators purchase their truck and trailer can be a feasible solution. Based on the data cited previously in this section, this type of support is a feasible method to potentially improve the compensation, another important financial resource, for at least some truck drivers. Secondly, with more current truck drivers becoming owner operators and leaving fewer potential company drivers on the labour market, companies that have a fleet of truck and thus need to attract drivers might either do so through scrapping the requirement of a certain amount of work experiences or providing new drivers with on-job training, which will benefit company drivers in the long-run. Given the ongoing scenario of continuously declining rates across the industry, I do not believe the support for business, especially trucking companies, ownership should be introduced at the moment, but rather at a time when the rates are unusually high throughout the industry due to an increase in demand, in which case the support for business ownership can not only be a solution for driver retention but also as a mechanism to lower the rate. As I mentioned previously, such measures will lead to numerous new firms entering the market, exacerbate the competition in the industry, and cause a further decline of rates, which will be detrimental for all transportation companies and truck drivers across Canada. While it was outside of my study's scope to conduct a comprehensive

assessment of the macroeconomic impact of providing financial support for business ownership on the industrial landscape, I urge the agencies with intention to implement the measure to conduct such an assessment before doing so.

Non-Financial Resources

Flexibility/perception of freedom emerged as a non-financial resource mainly due to the lack of interpersonal interaction, particularly a conventional supervisor. As all the interviewees who brought up this topic showed satisfaction toward the resource's status, I simply recommend employers to maintain the status quo while treating the drivers with trust as much as possible. Also, organisations with strict policies on the matter may, without compromising the safety of the drivers and other road users, grant the drivers more autonomy while driving and decrease the frequency they contact the drivers.

Since the trucking industry is under a combination of both federal and provincial regulations (Transport Canada, 2022), introducing a nationwide regulatory requirement for on-the-job training could be worthwhile, but also complicated and time-consuming because of the number of parties involved. Additionally, even if the regulatory mandate is effective across Canada, the effectiveness can be limited due to the attempts to circumvent the requirement by the companies. It would be more viable, therefore, to incorporate such training into mandatory driving courses, which are under the provinces' exclusive responsibilities and thus lowers the level of complexity stakeholder wise. This approach, however, may increase the course fees and thus create a burden on the new drivers' ends. Another recommendation is for the provincial government to provide training programs: the government of Ontario, for instance, currently provides free training to female, immigrant, and other underrepresented truck drivers (Shchedrina, 2023). Limiting the level of stakeholder complexity, the viable recommendation will not incur cost on the drivers' ends.

Lastly, the perception of belongingness/sense of community among the drivers can be strengthened in two aspects: within the firms and industry wide. Most of the interviewees perceived a low level of belongingness and sense of community either due to lack of opportunities to interact with other truck drivers or anecdotal unpleasant experiences, such as not receiving help when needed from other truck drivers, which can be unavoidable in any industry. Within the organisations, the employers can create opportunities for truck drivers, especially those with different backgrounds, to interact with each other. Past studies have provided evidence that being invited, learning to be part of a group, and being included is important when fostering employees' sense of belongingness at the workplace (McClure & Brown, 2008). Organising events that celebrate, for instance, drivers' birthday, immigrant drivers' ethnic holidays, and the births of women drivers' children while inviting all the truck drivers working for the firm can be effective measures promoting perception of belongingness and sense of community. A stronger organisational culture resulting from these measures can also benefit the employers in terms of attracting new truck drivers as organisational culture is a crucial attribute in talent attraction (Leekha Chhabra & Sharma, 2014; Sharma & Prasad, 2018). On the industrial level, associations representing certain underrepresented groups should collaborate with provincial associations to promote an industrial culture and a professional identity that accommodates all Canadian truck drivers. The current stereotype of Canadian truck drivers being old Caucasian males is becoming obsolete and thus cannot represent the common identity and culture shared by the immigrant, young, and women drivers. Instead, the culture representing all Canadian truck drivers should consist of diversity in demographics among truck drivers, qualities shared among truck drivers, such as resilience and passion for driving, and the noteworthy contributions they have been making to Canada as a country. Despite the differences in demographics among them, all my interviewees

showed strength and resilience handling stress on a daily basis while keeping Canada's economy running, and I am sure this is true for all truck drivers on Canadian soil. This similarity in quality and contribution should be emphasised and promoted by different levels of trucking associations and government agencies across the country to shape a new industrial culture characterised by a shared new identity of "Canadian truck driver" to build sense of community among all drivers who may have diversity of looks yet share common qualities, values, and contributions.

Limitations and Future Research

Despite the contributions mentioned above, my study does have some limitations that I hope future research can address. Due to the limitation in timeframe and fiscal budget, my data collection took place exclusively in Quebec, which limited my opportunities to interview truck drivers from other places in Canada and to include their perspectives and opinions in my study. Likewise, because of a lack of experiences conducting extensive qualitative studies, I did not realise the value of adding follow-up question in interviews based on previous interviews, until I was at a rather late stage of my data collection process, and that led to me losing opportunities to shed further light on additional topics such as the truck drivers' opinion on associations. Due to the qualitative nature of my study, the generalisability of my study will likely be low as well, which future studies can address in other ways.

For researchers sharing my interest in Canada's trucking industry and my compassion for Canadian truck drivers, especially underrepresented ones, future studies can be designed based on the insights provided by my study. For instance, researchers may conduct similar qualitative research in other regions in Canada so that the experiences and opinions of truck drivers outside Quebec and neighbouring Ontario can be put into account. My study is also an example that can

be used by international researchers to address the truck driver shortage in their countries, given the truck driver shortage has been a global concern.

Lastly, while I relied on the JD-R model for understanding the relevant demands and resources of underrepresented truck drivers, it is important to recognise that the relationship between job demands and job resources is not necessarily simple as they can have multiplicate impact on employee well-being (Bakker et al., 2023). Future researchers should therefore, ideally through quantitative studies, study the way in which the underrepresented drivers' job demands and job resources interact with each other, especially how certain job resources buffer corresponding job demands or how certain job demands weaken job resources accordingly.

Conclusion

This research seeks to improve the retention of immigrant, young, and women truck drivers in post-pandemic Canada by illustrating relevant job demands and job resources to address as per the JD-R Model. Based on the comprehensive analysis of interview data collected over six weeks, my results suggest the importance of increasing the monetary compensation, improving working conditions, and fostering inclusivity through promoting cultural change in the trucking industry. These recommendations will likely benefit not only the underrepresented drivers my study focuses on but also drivers of other demographics, which can help to address the current driver shortage. The ultimate goal of the study is to help make Canada's trucking industry a better place for immigrant, young, and women drivers along with all other drivers with passion for driving. While my study might not lead to immediate changes, I truly hope it provides researchers with inspiration to conduct more research featuring broader scope and higher level of generalisability to further address this issue.

Appendix I. Questions Used in the Interview

1. How long have you been a truck driver?

2. Why did you become a truck driver?

3. How does a typical day of yours on the road look like?

    a. Are your trips mainly short-haul or long-haul?

4. What are the biggest challenges you encounter on a typical trip?

    a. What is the longest trip that you have done so far? What did you like and dislike the most about?

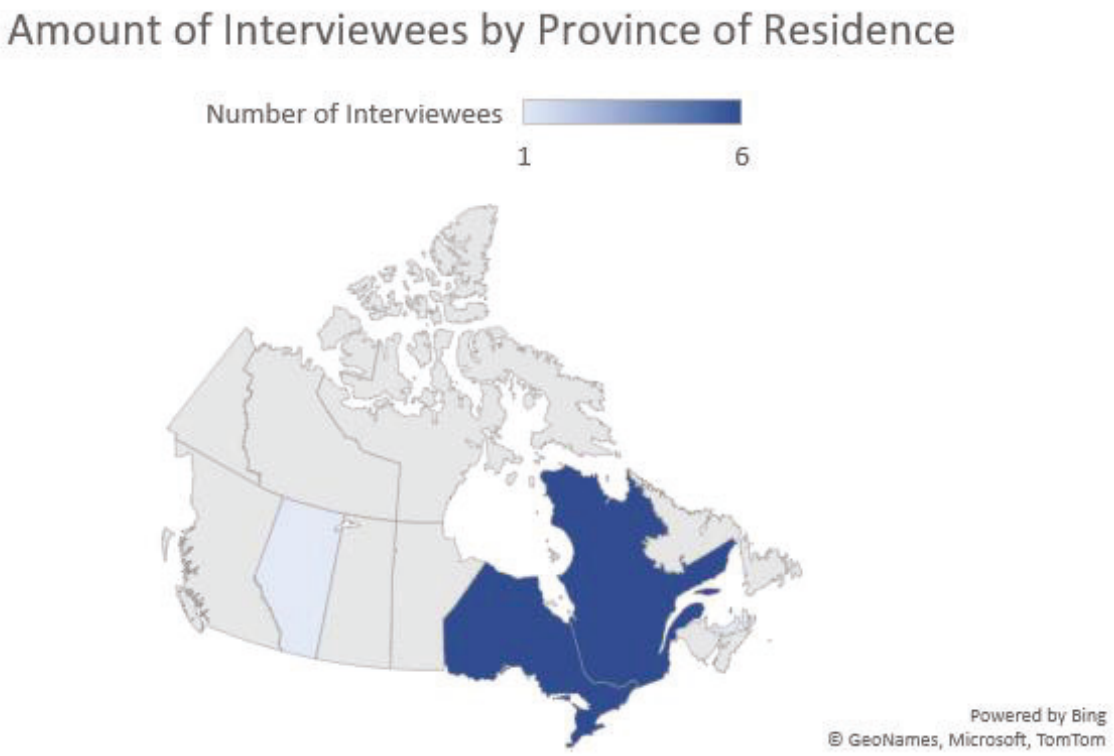
5. Please describe what supports you to go through those challenges.

6. What do you like the most about your job?

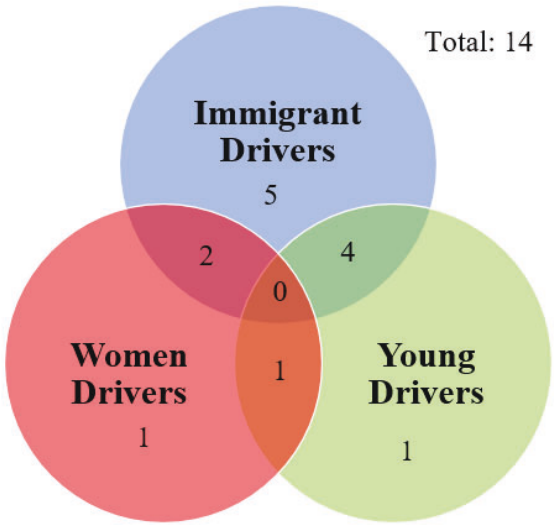
7. Do you plan to stay in the industry as a driver in the foreseeable future (i.e. 5 years)? Why?

8. Why do you think there is such a shortage of truck drivers today? What do you think we (i.e. the government, the unions, the employers, the general public, etc.) can do about it?

Appendix II. Visualisation of Interviewees by Province of Residence



Appendix III. Visualisation of Interviewees by Type



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