

Shortage of Truck Drivers: The Genesis and Way Forward

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1. Abstract

The trucking industry is facing a critical shortage of drivers, posing a significant threat to the supply chain and the overall economy. This study explores the causes of the driver shortage, looking at how changes in regulations and demographic patterns have impacted the situation. It also explores the difficulties the trucking industry experiences in recruiting and maintaining drivers, stressing the adverse effects of long hours, poor pay, and unfavourable working conditions on the drivers' quality of life. This paper delves into the genesis of this driver shortage, examining the demographic trends and regulatory changes that have contributed to this challenge. It also explores the trucking industry's challenges in attracting and retaining qualified drivers, highlighting the impact of long hours, low pay, and difficult working conditions on their quality of life.

The paper concludes by providing recommendations for policymakers and industry players to address the driver shortage. It advocates for investments in infrastructure improvements and supports initiatives to promote the trucking industry as a career path. The trucking industry can address the driver shortage and ensure long-term sustainability by implementing these recommendations.

Keywords: *Reliance, Significantly, Onboarding, Transportation, demographic, Reliance*

2. Introduction

The world's population is expected to increase from 8 billion in 2022 to 9.7 billion by 2050 and 10.4 billion by 2100, according to the United Nations Department of Economic and Social Affairs (UN DESA) projections [3]. In most of the world, there is a positive relationship between population growth and demand for goods and services. Transportation of goods and services has increased the reliance on truck drivers to transport freight, as they remain the most efficient and effective mode of transportation.

Truck drivers play a vital role in the supply chain by ensuring the timely and reliable delivery of goods between countries. This allows companies to keep production moving and meet customer demand. Consequently, economic expansion is anticipated to increase transportation demand in the upcoming years. According to Wang et al., by examining the link between tonne-kilometers and Gross Domestic Product, transport services support economic growth [4].

A study conducted by the International Road Transport Union (IRU) in 2022 concluded that there is a shortage of truck drivers in every region after surveying more

than 1,500 commercial road transport companies across 25 nations in the Americas, Asia, and Europe [5]. From the same source, truck driver shortages have surged in recent years and increased to 40% in 2022.

These shortages have been attributed to numerous factors, such as social and economic. The main contributing factors to this shortage are low pay, unfavourable working conditions, occupational choice, work hour restrictions, fierce competition among freight companies, a negative public image of the occupation, a lack of skilled workers, and long hours away from home [6]. Another contributing factor is that few females are interested in the truck driving profession [5]. Even though both developed and emerging economies share similar causes, emerging economies have a distinct and more substantial challenge than developed economies in filling the gap [6].

An investigation of the continuous lack of truck drivers in the United States of America is causing significant disruption in the US supply chain business [7]. According to the report, the trucking industry is the main component of domestic transportation that keeps supply chains connected. For example, about 71% of commodities in the United States are moved by the trucking industry, and the continuous shortage of truck drivers has reduced supermarkets' groceries.

2.1 Problem Statement

In 2021, there were over 2.6 million unfilled truck driver jobs [8]. The increase in driver shortage was experienced across all regions, as indicated in the figure below.

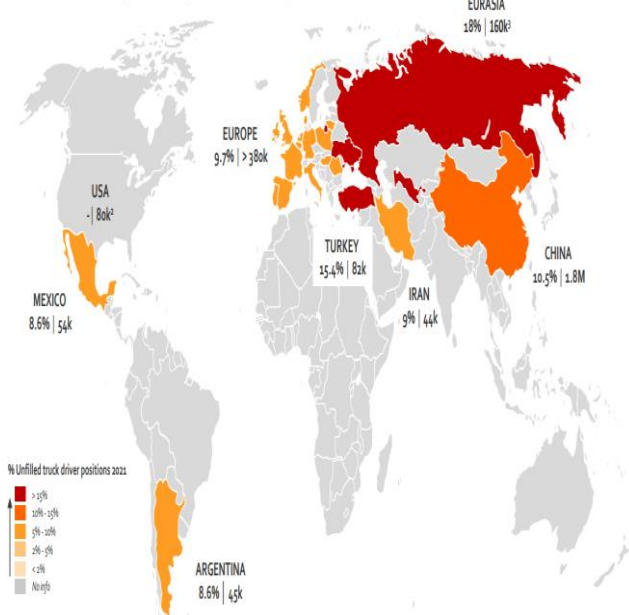


Figure 1: Truck driver shortage across all regions. Source: Global Report 2022

In Figure 1, Eurasia has 18% of unfilled truck driver positions, followed by Turkey with 15.4%. China, Europe, Iran, North and South America followed that order.

A second element is that few women are represented in this profession (Figure 2). For instance, in the United States of America, women account for only 8% of truck drivers [9]. The Figure below further explains the percentage of women among truck drivers. The United States of America has the highest number of women in truck driving, with 7.8%, followed by China, with 4.9%. Europe, Mexico, Eurasia, Turkey, Argentina and Iran have 3.2%, 2.4%, 0.9%, 0.8%, 0.5% and 0.2% respectively.

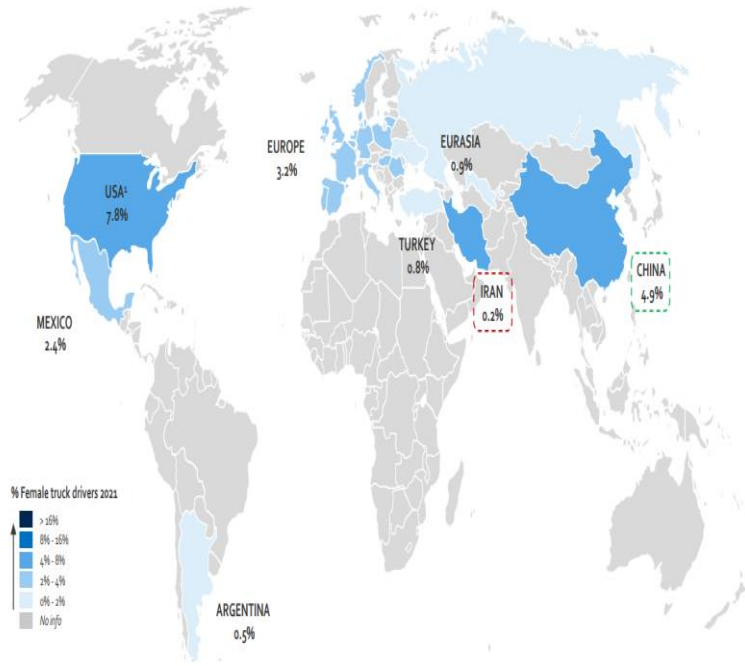


Figure 2: Female truck drivers across all regions Source: IRU Survey, 2021

Another problem is that, despite the high unemployment rate among young people globally, the youth are not attracted to joining this workforce [10]. This remains a significant challenge for truck driving. Figure 3 below shows the percentage of youth working as truck drivers. China leads with 17% of its youth as truck drivers, while Mexico follows with 19%. Argentina and Europe have 7%. The United States of America and Eurasia also have 6%, while Turkey and Iran are between 0-6%.

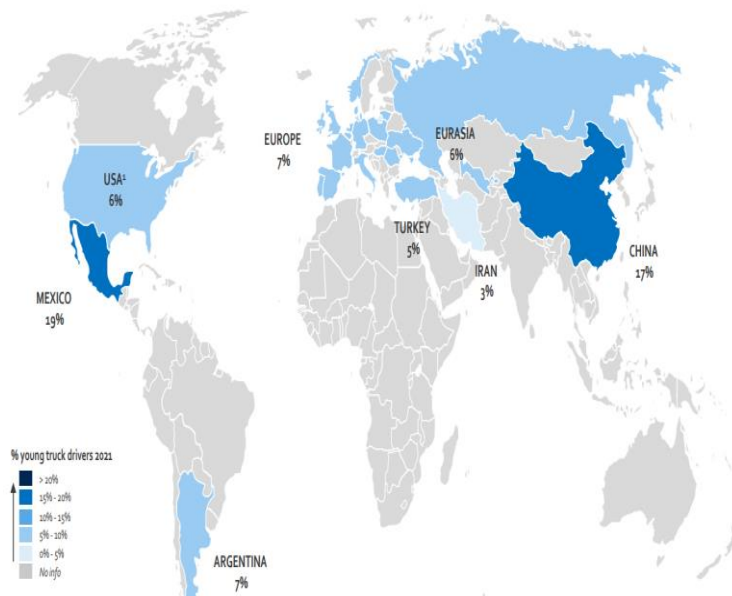


Figure 3: Percentage of youth involved truck driving across all regions Source: IRU Survey, 2021

2.2 Extended Literature Review and or theoretical framework

2.1.1. Shortage of truck drivers due to the unhealthy nature of the job

There still needs to be more qualified workers in many regions of the world and at many levels, from senior top management logistics specialists to workers like drivers at the bottom of the labour pyramid [6]. The movement of products is essential for operationalising capital and consumer goods markets in all other major industrialised nations. The aggregate tonnage of products carried by heavy goods vehicles is constantly increasing [11]. Concurrently, the commercial transportation and logistics sector is grappling with a severe scarcity of professional truck drivers, defined as individuals who transport goods using motorized vehicles to make a living [11]. Research from epidemiology indicates that truck operating is unhealthy because truck drivers with a higher need for recovery after work are likelier to miss work due to illness, suggesting that recovery after work is an essential consequence in this line of work [12]. Truck drivers' demanding working conditions significantly affect their health and happiness. Research has indicated that long-haul truck drivers frequently quit their jobs, have chronic health issues, and participate in poor lifestyle choices [2]. Long work hours, loneliness, being away from family, getting little sleep, and strict regulations are some of the factors that lead to poor mental health outcomes for truck drivers [1]. Furthermore, hospital records of diabetes and hypertension, as well as tobacco and alcohol misuse and abuse, are more common among truck drivers [20].

2.1.2. Shortage of truck drivers due to gender

The relationship between gender and occupational selections has been a longstanding area of inquiry, in which the trucking profession has traditionally been viewed as a domain for men despite the acknowledged ability of women to excel in this role. [13]. Research by Mas et al., indicated that women are more inclined to choose jobs that provide flexible work arrangements, value working remotely, and prefer avoiding unpredictable work schedules, confirming the low numbers of women in the trucking sector [21]. The scarcity of women in the trucking industry limits their opportunities to form personal connections and develop social networks comparable to their male counterparts [22]. The gender representation of trucking company owners also plays a significant role in shaping employment opportunities for women [22]. In the male-dominated trucking industry, the number of women employed by small carriers is restricted due to two primary factors: (a) the relatively low proportion of women who own small trucking companies compared to men and (b) the extensive recruiting efforts and formal partnerships with truck driving schools undertaken by large carriers, which effectively serve as gateways into

the industry. As a result of these combined demand-side factors, a few proportions of women is anticipated to hold driving positions with large carriers.

2.1.3. Shortage of truck drivers due to youth not interested.

To attract young people, the trucking business must change its remuneration and workplace expectations paradigm. According to Trucknews, truck drivers may work 14 hours daily, with some unpaid hours due to waiting time [14]. Another thing has to do with the technologies in trucks. Adaptive cruise control, driver coaching apps, pre-trip assistants, etc., need to meet the expectations of youth truck vehicles and attract young people [14]. In recent times, youth also desire and anticipate the chance to grow in their careers, and because drivers are too valuable to remove from the truck, office roles are far too frequently filled with people who have never driven a truck, and this also contributes to the small percentage of energetic people in this profession [14].

3. Objectives

The main objective of this paper is to analyze regulatory factors that have contributed to the shortage of truck drivers worldwide and to develop recommendations for creating a more attractive work-life balance for drivers.

4. Research questions

It is essential to create understandable questions to give the reader a clear research summary. Consequently, this section establishes the fundamental research questions as follows.

- 1)What are the demographic trends of truck driver shortage?
- 2)What are the contributing factors of truck driver shortages?
- 3)What policies can create a more work-life-friendly environment for truck drivers?

5. Procedure

Various sources, such as industry reports, journals and papers related to the subject, will be considered to provide a thorough and impartial viewpoint. These measures will help to ensure that the literature review provides a valid and reliable assessment of the existing knowledge on the truck driver shortage, contributing to the development of practical solutions to address this critical issue.

6. Results

From pieces of literature, shortages of truck drivers could be attributed to the unhealthy nature of the work, the low percentage of female proportion and the unwillingness of the youth to take this profession as a

career mainly because of traditional stereotypes and negative perceptions.

7. Discussions

Studies indicate that high job demands, unpredictable and extended workday schedules, and night shift employment caused truck drivers' poor sleep habits and sleep disturbances [16]. Planners for drivers must schedule a timetable for drivers in such a way that drivers balance work and a healthy lifestyle. Frequent health checkups are a highly effective preventive measure that aims to maintain and promote health, reduce risk factors, diagnose illnesses early, and prevent complications, enabling medical experts to identify possible health problems early [17]. By taking a proactive stance, drivers can address health issues before they become more severe.

Long-term stress can be harmful to one's physical and emotional well-being. Make stress-reduction and mindfulness training programs like yoga, meditation, or deep breathing techniques available to truck drivers. Encourage them to use these stress-reduction and relaxation-promoting practices daily. Truck stops and rest areas can benefit from adding exercise equipment or spaces to promote regular physical activity. Encourage proper sleep by teaching drivers about good sleep hygiene and creating cozy rest places, adequate lighting, and noise control.

To enhance the diversity of the transportation industry's workforce, it is essential to consider the factors needed to draw women and the vital ingredients required to advance and retain female employees after they join the profession [18]. Although recruiting women into the field has difficulties, resolving them will only be productive if equal attention and resources are given to keeping women in the industry. Initiatives include ensuring that women are treated with respect and feel included in all facets of the trucking industry by fostering a culture that promotes diversity and inclusion. Use leadership initiatives, training courses, and corporate policies to advance gender equality aggressively [19]. Rest places, truck stops, and other trucking facilities should be secured and welcoming for female truck drivers. Policies and procedures to stop violence, discrimination, and harassment of female drivers should not be overlooked.

Drawing young people into the trucking industry requires a comprehensive approach that addresses perceptions, career pathways, and workplace expectations. Firstly, the misconception that driving a truck is a low-skilled or unattractive job must be dealt with by highlighting the chances for professional development, financial stability, and travel experiences by becoming a truck driver. This can also be done by providing opportunities for young people to experience truck driving firsthand through career fairs, internships, or summer programs.

8. Limitations and future reference

As pointed out above, this study was limited to only a limited kind of literature, and future studies should focus on engaging industry players such as male and female truck drivers to get first-hand information about the ordeal they face while working. Younger generations should also have the opportunity to share their thoughts on why they are not showing interest in this profession while unemployment is on the rise globally. Truck owners and operators could also be contacted to share their experiences of the persistent shortages of drivers.

9. Conclusions

These results underline the necessity of initiatives to improve truck drivers' mental and physical well-being. Some of these initiatives include creating guidelines to restrict time spent away from family, integrating wellness and health into the onboarding process, and building supportive connections between dispatchers and drivers. To enhance the health and safety of truck drivers, stakeholders, including drivers, companies, authorities, regulators, and the public, must work together to resolve this menace.

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