

AtkinsRéalis



Final Report

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# UNDERSTANDING THE ROAD FREIGHT MARKET

# Notice

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# Contents

<b>Glossary</b> .....	<b>6</b>
<b>1. Introduction</b> .....	<b>15</b>
1.1 Industry Overview .....	15
1.2 Market Segmentation .....	15
1.3 Industry Challenges .....	16
1.4 Scope .....	17
<b>2. Methodology</b> .....	<b>18</b>
2.1 Summary .....	18
2.2 Data Gathering .....	18
2.3 FAME Data .....	19
2.4 IBISWorld .....	20
2.5 Literature Sources .....	21
2.6 Call for Evidence .....	22
<b>3. Findings</b> .....	<b>23</b>
3.1 Introduction .....	23
3.2 Market Dynamics and Competition .....	23
3.3 Profit Levels and Margins .....	35
3.4 Investment .....	42
3.5 Financial Indicators .....	46
3.6 Fleet Operations .....	53
3.7 Market Resilience .....	56
<b>4. Conclusions and Next Steps</b> .....	<b>67</b>
4.1 Market Dynamics and competition .....	67
4.2 Profit Levels/Margins .....	67
4.3 Investments .....	67
4.4 Financial Indicators .....	68
4.5 Fleet Operations .....	68
4.6 Market Resilience .....	68
4.7 Limitations and caveats .....	69
4.8 Next Steps .....	69

## Tables

Table 3-1 Cost Requirements for Owner-Operation .....	24
Table 3-2 - Percentage share of business by size and SIC .....	27
Table 3-3 - Road Price Index Correlation Analysis Matrix .....	41
Table 3-4 - Interest Coverage Ratio – Interpretations and Definitions .....	46
Table 3-5 – Interest Coverage Ratio – UK Road Freight sector <sup>lxxii</sup> .....	47
Table 3-6 - Challenges and incentives which shape the investment landscape .....	48
Table 3-7 - Regional Average of Credit Scores by SIC Code .....	51
Table 3-8 – Table of ways in which HGVs and LGVs were purchased in the UK .....	55
Table 3-9 - Top 5 commodity types lifted by GB-registered HGVs in 2022 <sup>vi</sup> .....	65
Table 4-1 - Gap analysis scale .....	85

## Figures

Figure 1-1 - Industry revenue broken down by services (FY 2024/25 forecast) .....	16
Figure 3-1 Sizeband of Road Freight Enterprises by Year .....	28
Figure 3-2 - Age Distribution of HGV Drivers .....	30
Figure 3-3 – Number of HGV drivers in employment .....	31
Figure 3-4 – International Road Freight Revenue % Change by Year .....	33
Figure 3-5 – International Road Freight Enterprises Change by Year .....	34
Figure 3-6 - Road Freight Business Concentration - UK <sup>v</sup> .....	34
Figure 3-7 - Road Freight Sector Profit by Year .....	36
Figure 3-8 Revenue, Fuel Prices, and Profit .....	37
Figure 3-9 – Comparative Industry Profit by Year .....	38
Figure 3-10 - TEG Road Transport Price Jan 19- Jul 23 .....	41
Figure 3-11 - Average Credit Score .....	49
Figure 3-12 Employees on Furlough February 21 - September 21 .....	57
Figure 3-13 Rail Freight Income and Expenditure (£millions) .....	60

Figure 3-14 – Business Insolvency Risk.....	62
Figure 3-15 Freight Transport by Road and Removal Services Insolvencies Per Quarter .....	63
Figure 3-16 Number of Road Freight Businesses, and % Change.....	64
Figure 3-17 - Industry Value Added (IVA) £m .....	65

# Glossary

Articulated lorry	Articulated lorries have a permanent or semi-permanent pivot joint between the cab and trailer, enabling tighter turning circles and heavier loads to be carried.
EBIT	Earnings Before Interest and Tax, a measure of profitability, calculated by subtracting expenses from revenue, while leaving out interest and tax costs.
HGV	Heavy Goods Vehicles are vehicles constructed for transporting goods with a gross weight over 3.5 tonnes.
LEZ	Low Emission Zone in London, whereby non-compliant vehicles must pay a surcharge for entering. This includes HGVs, which must be Euro 6 compliant to avoid being charged.
LGV	Light Goods Vehicles are vehicles constructed for transporting goods and must have a gross weight of 3.5 tonnes or less.
Own account operator	An operator of goods vehicles who only carries goods for their own trade or business
Public haulage operator	An operator of goods vehicles who carries goods for other companies or individuals
Rigid lorry	Rigid lorries are non-articulated and have a fixed cab and trailer. Rigid lorries have a lower maximum load weight than articulated lorries.
SIC	Standard Industrial Classification
SMEs	The UK government definition of SMEs encompasses micro businesses (less than 10 employees and an annual turnover under €2 million), small businesses (less than 50 employees and an annual turnover under €10 million) and medium-sized businesses (less than 250 employees and an annual turnover under €50 million).

# EXECUTIVE SUMMARY



# Executive Summary

The Department for Transport (DfT) commissioned the Ipsos-AtkinsRéalisis-Steer consortium to develop an evidence base to support the Department's understanding of the road freight market within the UK.

A comprehensive and data-driven approach was taken to target key areas of interest including competition, profit levels and margins, investment, financial indicators, fleet operations and market resilience. While focussing on the UK road freight market (i.e., HGVs over 3.5 tonnes), comparisons have also been made where relevant and possible with other equivalent international markets, and with other UK modes and sectors including rail, air, maritime, logistics carriers and warehousing.

To develop the evidence base, we drew on the findings of existing publicly available research and reports identified by both DfT and the research team, financial data from the FAME database, and industry insight and research from IBISWorld. Data and literature sources are listed in Appendix A.

## Barriers to Entry to the UK Road Freight Market

### Capital and Regulatory Barriers

The UK road freight industry is characterised by minimal barriers to entry, particularly when compared to other transport and logistics sectors<sup>1,2,3,4</sup>. Analysis of initial capital costs, while significant for individuals at circa £42,000, are not prohibitive and can be mitigated by leasing and hire purchase options, and contract hire vehicle provision<sup>1,2</sup>. Regulatory barriers, such as compliance with safety and environmental regulations, are also manageable and scale with the size of the operation. While entry barriers are low, barriers to retention (i.e. businesses surviving) and scalability (i.e. access to economies of scale) are an issue as a result of low profit margins and challenges accessing finance and investment (explored in more detail below).

### Economies of Scale

Although new entrants can access the market with relative ease, established larger businesses benefit from economies of scale, giving them a competitive edge. Larger operators achieve cost efficiencies through resources such as centralised distribution centres and IT systems to optimise schedules and routings which can present a challenge for new entrants to match. However, the prevalence of "one-man bands" in the industry suggests that these barriers are surmountable. Subcontracting opportunities are widespread, providing a dynamic and competitive environment persisting<sup>5</sup>.

### Regulatory Framework and Industry Support

Although comprehensive, and relatively complex, the UK road freight sector's regulatory framework is designed to balance safety and environmental standards without overburdening new market participants<sup>6</sup>. The availability of support and resources, such as guidance and seminars, from sector bodies further aids compliance and reduces potential barriers.





# Power Dynamics and Market Competition in the UK Road Freight Industry

## Market Fragmentation and Micro-Enterprise Dominance

The UK road freight market is characterised by a high degree of fragmentation, with micro-enterprises representing the majority. In 2023, 92% of road freight businesses were comprised of 0-9 employees, indicating a substantial portion of the industry is made up of small-scale operations, including single-vehicle owner-operators and drivers offering services through contracting relationships<sup>5</sup>. The IR35 tax reforms introduced in April 2021 may impact the structure of these small businesses by altering the taxation landscape for self-employed individuals<sup>7,8</sup>, which could potentially reduce the number of self-employed drivers in the market.

## HGV Driver Shortage and Stabilisation Efforts

The HGV driver shortage has been a persistent issue for freight operations, but recent initiatives such as increased wages, Skills Bootcamps, and increased efficiency within HGV testing and licencing are showing signs of stabilising the workforce<sup>9</sup>. Consequently, data from April 2021 to June 2023 shows a general trend of increasing driver numbers<sup>10</sup>. The demographic breakdown reveals a growing proportion of older drivers, which presents both an opportunity in terms of experience but also a challenge as these drivers approach retirement. There also appears to be some impact from EU-Exit, with a decrease in the number of drivers from the EU, and stable numbers of UK and non-EU drivers in demographic data.

## Competitive Dynamics

Larger players like DHL Supply Chain, despite a relatively small market share, demonstrate the importance of economies of scale in gaining a competitive advantage. Their ability to service large clients in various sectors is facilitated by significant fleet expansions and technological investments which drive efficiency. In contrast, smaller companies may find it difficult to compete on the same level, even though SMEs collectively hold a larger market share. The industry's pricing mechanisms and contractual arrangements often reflect the power imbalances between large and small operators, with larger firms generally in a stronger position to dictate terms or provide other additional services to clients, with resultant impacts on revenue<sup>11</sup>.

## Impact of Digital Platforms

Digital platforms have changed the way shippers connect with hauliers, increasing competition and potentially lowering prices. These platforms can provide shippers with greater bargaining power by offering a broader range of options and more transparent pricing. Furthermore, the data collected by these platforms has the potential to influence negotiations, sometimes giving shippers leverage to demand better service or lower rates from hauliers or the wider market. This digital shift is reshaping the industry's power dynamics, with technology access becoming critical factors in maintaining competitive pricing for large and small firms alike<sup>12</sup>.



## Investment Trends in the UK Road Freight Industry

### Vehicle Acquisition and Digital Advancements

The UK road freight industry demonstrates investment geared towards vehicle acquisition, digital integration, and workforce enhancement. Larger, international vertically integrated logistics companies are able to "pioneer" and test future investment profiles, with significant capital investments into fleet expansion and sustainable alternative fuels and zero emission vehicles, which align with current and planned environmental regulations. DHL's £90 million fleet expansion and DPD's shift to greener fuel options<sup>13</sup> are indicative of a broader industry trend towards decarbonisation. Concurrently, there's a substantial push towards digitisation, with companies leveraging technology for increased operational efficiency<sup>14</sup>.

### Investment Drivers and Political Landscape

The competitive nature of the UK road freight market, featuring over 50,000 mostly micro to medium-sized businesses, is a major catalyst for ongoing investment<sup>15</sup>. Regulatory changes such as the introduction of clean air zones, and the announcement of end of sale dates for new non-zero emission Heavy Goods Vehicles (HGVs)<sup>16</sup>, are also significant drivers for investment. To support the industry to make these changes and transition to zero emission vehicles the UK government has invested up to £200 million in 2023 as part of the Zero Emission HGV and Infrastructure Demonstrator programme. The programme is already starting to demonstrate hundreds of zero emission HGVs, alongside their respective recharging and refuelling infrastructure, over the coming years in both battery electric and hydrogen fuel cell technologies. Evidence gathered as part of the programme will be published, and used by industry to inform future investment decisions<sup>16</sup>. The Plug-in truck grant (PITrG) was launched in 2016 as an expansion of the pre-existing Plug-in Van Grant, supporting over 60,000 electric vans and HGVs across the UK. The PITrG is currently funded until at least the end of the 2024/25 financial year. All grants remain under review.

In October 2023, the government ran a Call for Evidence which sought views on the current and future supply, uptake and use of ZE HGVs and coaches across the UK, as well as their refuelling and recharging infrastructure. It closed on 14 December receiving 88 responses and will be used to inform an infrastructure strategy.

### Barriers and Industry Challenges

Despite the active investment landscape, the industry faces a number of challenges to future investment. For example, analysis of the FAME database has identified the UK road freight sector has on average a suboptimal credit profile, which could hinder access to commercial finance. The transition towards zero-emission vehicles will require wider investment, for example in charging and hydrogen fuelling stations and associated site and fleet upgrades. Small and medium-sized enterprises exhibit a cautious approach to growth, with many preferring a slower rate of expansion over taking on debt<sup>17</sup>, highlighting a resistance to high-risk investment strategies amid a future landscape of regulatory and technological change.



## Financial indicators

### Industry performance indicators

In 2023-24, UK road freight sector profit (calculated as Earnings Before Interest and Tax) is forecast at 9.2%<sup>18</sup>. This is lower than the average profit margin in the UK economy, which is around 9.7%<sup>19</sup>. It is likely however that ‘true’ business profitability is lower, especially given the large number of SMEs within the UK road freight sector, whose owners likely draw down dividends as additional income. Profit has declined since 2020, however is forecast to increase from 2024 onwards<sup>18</sup>.

Industry revenues are closely linked to fuel prices, leading to considerable fluctuation over recent years, and large increases during 2022/23<sup>18</sup>. Between 2019 and 2023, UK road freight sector turnover has grown at a faster rate than employment within the sector, suggesting growing efficiencies across the sector.

### Barriers and drivers of investments

A larger proportion of HGV drivers come from older age groups than the overall working population<sup>10</sup>, meaning that a significant part of the workforce will move into retirement over the coming years, which may lead to a reluctance to invest in and grow businesses. Larger organisations are also undergoing digital transformation programmes, and therefore seeking new skills to take advantage of automation and technological advancement.

Additionally, the UK road freight industry has, on average, a “cautionary” credit rating according to data held by the FAME database, meaning the average score falls within the lowest third. This compares unfavourably with other sectors such as the UK air freight industry, which has a “secure” credit score, meaning the average sector credit score falls within the top 40%. Credit scores are an important determinant of a business’s financial standing. A lower credit score identifies either insufficient previous credit history, previous challenges managing credit, or challenges meeting payment deadlines. The UK road freight sector’s low average credit rating could deter lenders from approving borrowing requests, or result in less favourable terms being offered in the future if it remains at the “cautionary” level.

### Reliance on investment from other sectors

The road freight sector directly benefits from funding from other sectors, in particular from the public sector. For example, the road freight sector has benefitted from £20m in government funding in 2021/22 to support the zero emission road freight trials feasibility studies, which subsequently led to DfT funding £200m Zero Emission HGV and Infrastructure Demonstrator programme which is rolling-out hundreds of zero-emission HGVs and associated charging and fuelling infrastructure. Winning bids were announced on 19 October 2023. The road freight sector also benefits from each round of Road Investment Strategy (RIS) funding in the Strategic Road Network (SRN). This disproportionately benefits the road freight sector, as HGVs use the strategic networks to cover two-thirds of all miles travelled.

## Fleet operations

### Purchase and leasing of vehicles

Data from a 2020 survey identified that 44% of HGVs in the UK were purchased outright (either new or second-hand), 33% leased long term, and 23% rented short term. Larger businesses typically lease vehicles, enabling them to upgrade vehicles once their lease ends (leases have a typical duration of 2-7 years). Smaller businesses are more likely to opt for second-hand vehicles, using them for a period between 6 and 13 years<sup>17</sup>.

### Fleet investment cycles

Larger freight operators generally acquire new vehicles using commercial leasing or finance products, enabling them to run newer and more efficient fleets. This pattern drives the trickle down of older vehicles onto the second-hand market for purchase by smaller freight operators<sup>17</sup>. Should this pattern persist, it would potentially delay the adoption of zero tailpipe emission vehicles by smaller businesses until the second-hand market has matured<sup>17</sup>. Funding is currently being offered by the public sector to expand the zero-emission road freight fleet, contributing to the eventual maturity of the second-hand market<sup>20</sup>.

## Market resilience

### Resilience to economic events

Despite the economic shock of the COVID-19 pandemic and the reshaping of trading relationships following the UK's exit from the EU, the UK road freight sector has proven to be resilient. While revenue fell from £36bn (2019) to £32bn in 2021, revenue recovered to £34bn (2022), and is forecast to stabilise and continue to grow from 2024. However, rising fuel prices and labour costs over recent years have negatively impacted profit margins for road freight transport companies<sup>18</sup>.

Between 2019 and 2020, the sector particularly struggled to overcome the effect of a shortage of drivers. However, the number of HGV drivers have steadily increased since 2021, starting from 272,000 drivers at the end of 2021 to 287,000 drivers at the end of 2022. The most recent data reports 288,000 HGV drivers as of June 2023<sup>10</sup>.

### Subcontractor practices

Small companies generally provide short-distance transport services, while larger companies serve long-distance supply chains. Larger companies have the resources and capabilities to offer a variety of services and to transport a wider variety of goods.

The importance of the hire or reward sector has increased over the last sixty years (with the exception of the period of the global recession from 2008 to 2011) as a growing proportion of road freight transport has been outsourced by manufacturers, wholesalers and retailers. Due to strong market competition, it is beneficial for businesses to have long term distribution contracts, committing them to the operator's facilities and services<sup>18</sup>.

### Opportunities for diversification

The UK road freight sector embraces diversification in terms of goods moved; according to 2022 statistics, 23% of all HGVs loads were classified as Groupage, where vehicles



simultaneously carry a mixture of different commodities<sup>21</sup>. Road freight is often part of a longer and more complex logistics chain. Businesses are likely to be more successful if they cross-sell other services. Opportunities for diversification could include warehousing, storage, repackaging, maintaining and fuelling vehicles<sup>18</sup>.

### **Current financial health of the market and Insolvencies**

While the road freight industry has proven to be resilient, the overall health of the sector is mixed. The average cautionary credit score across the industry is a product of both the financial performance of individual companies, and historic performance of the sector as a whole. Profit margins have fallen year-on-year from 2020 onwards, however this is set to reverse from 2024 onwards. Labour shortages faced by the sector are easing, with steady increases in the number of drivers working within the sector.



# STUDY FINDINGS



# 1. Introduction

## 1.1 Industry Overview

The road freight sector provides a vital service, acting as an intermediary for the transport of goods between wholesalers, retailers and construction sites, as well as other sites of purchase and consumption. Transport Statistics Great Britain (December 2023)<sup>22</sup> identify that 216 billion tonne-kilometres of domestic freight were moved in the UK in 2022, the majority of which (81%) was carried by road, with 12% by water and 7% by rail. The popularity of road freight can be attributed to its faster, more flexible and more convenient (door-to-door) offering, and shifts in the types of goods being moved over the past few decades. As a result of its popularity, analysis by IBISWorld<sup>23</sup> has identified that the UK road freight sector is forecast to generate approximately £33.5 billion in annual revenue (23/24).

As a mature industry, with a well understood regulatory environment, well-understood cost landscape, and relatively low levels of capital investment required to launch a business, there are few barriers to entering the market. Consequently, the sector has been described as being an example of near perfect competition<sup>24</sup>, this requires enterprises to be highly efficient and cost-effective to remain profitable.

The UK road freight sector employs over 290,000 workers across more than 50,000 businesses across the UK<sup>25</sup>. 83% of these businesses employ four staff or fewer. Only one business, DHL Supply Chain, has a market share of greater than 5% (at 6.1%<sup>25</sup>). Larger businesses, such as DHL Supply Chain, tend to support major organisations such as supermarkets with long-distance transportation. Larger businesses can also offer a wider variety of services (such as additional warehousing, supply chain management, consultancy, and transport services in DHL's case) in comparison to smaller businesses which generally offer fewer services.

Road freight activity is split between own account operators (those who carry goods only for their own trade or business<sup>26</sup>) and public haulage operators (those who carry goods for other companies or individuals<sup>26</sup>). In 2022, 1.64 billion tonnes of goods were lifted by GB-registered HGVs in the UK, equating to 156 million HGV journeys<sup>26</sup>.

The distribution of road freight businesses is centred around the Midlands, which is connected to the rest of the UK by 3 major motorways (M42, M1 and M6, also known as the 'golden triangle'), offering the potential for road freight to reach approximately 90% of the UK within four hours<sup>27</sup>. This road connectivity, as well as the presence of key air and rail freight hubs, has attracted major logistics and distribution centres to the area. The East of England represents the second largest concentration of road freight businesses, due to its proximity to the Port of Felixstowe, one of the UK's largest container ports, which features excellent rail freight interchange facilities.

## 1.2 Market Segmentation

The market comprises three primary product segments, which can be categorised based on the type of vehicle and associated size and use – Light Goods Vehicles (LGVs), rigid lorries, and articulated lorries (commonly referred to as Heavy Goods Vehicles (HGVs)). The remaining sector revenue can be attributed to related services such as customs brokerage.





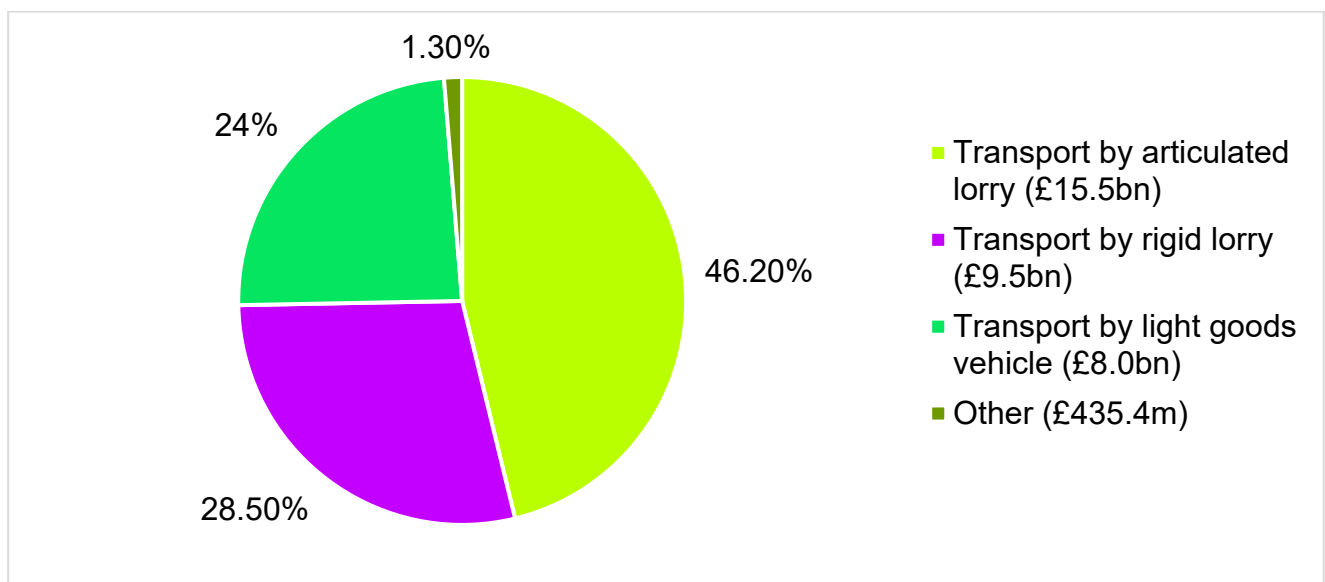
Rigid lorries lack articulation between the cab and the trailer, and therefore provide greater manoeuvrability compared to larger vehicles. Rigid lorries typically have two axles, and therefore a maximum gross weight of 18 tonnes, however vehicles can have up to four axles and therefore a maximum gross weight of 32 tonnes.

Articulated lorries are made up of two separate parts: a motorised tractor, and a non-motorised trailer. They are suited to carrying large loads with a maximum fully laden weight of 44 tonnes over six axles. They are also colloquially referred to as HGVs.

Light Goods Vehicles (LGVs or vans) are commercial carrier vehicles with a gross vehicle weight of no more than 3.5 tonnes. These vehicles are generally used for last mile deliveries to consumers and businesses, and to serve areas where the use of an HGV would be precluded due to spatial or weight constraints.

The use of articulated HGVs is most common for longer-distance journeys (including between the UK and continental Europe) and makes up over 46% of the market. Demand for this service is growing faster than demand for road freight overall, according to analysis undertaken by IBISWorld<sup>23</sup>. This is due to the ability of articulated lorries to carry greater volumes of freight over longer distances, and the flexibility of articulated vehicles which enables the trailer to be transported separately via ferry, and then collected by a different tractor upon arrival. In contrast, Light Goods Vehicles (LGVs) are most popular as a mode for transferring freight between warehouses, distribution centres and end markets, as well as distribution to households and small businesses. Although still the smallest segment of the three primary services at 24%, LGVs continue to gain an increasing share of the market.

**Figure 1-1 - Industry revenue broken down by services (FY 2024/25 forecast)**



Source: IBISWorld, *Freight Road Transport in the UK (2023)*

## 1.3 Industry Challenges

As the UK road freight sector provides a transportation service to other sectors of the economy, demand for its services is linked to domestic consumption and production levels, alongside international trade. Consequently, the UK road freight sector has faced challenges



over recent years following the COVID-19 pandemic, industry labour shortages, and the reshaping of trading relationships.

Despite a strong return of demand for road freight services following the easing of restrictions brought in during the COVID-19 pandemic, the sector has continued to face a number of challenges including driver shortages, supply chain disruption, and fuel price inflation. Collectively these challenges have resulted in a difficult operating environment and have hindered the ability of businesses to expand and grow. Consequently, annual revenues are forecast to decrease at a compound rate of 1.5% per year between financial years 2020/21 and 2023/24. Although growth is predicted to return over the next 5 years at an annual rate of 1.8%, analysis and forecasting from IBISWorld suggests that growth of road freight businesses will continue to be impacted as businesses adapt to reshaped trading relationships following the UK's exit from the European Union.

The UK government's announcement that all new road vehicles sold will be zero-emission by 2040 has led to an increasing focus on decarbonising the industry<sup>28</sup>. Funding for the development of zero-emission commercial vehicles<sup>29</sup>, the gathering of evidence to inform a road freight sector charging and fuelling strategy<sup>30</sup>, and investment into fuelling and charging infrastructure for zero emission heavy goods vehicles<sup>31</sup> will support the decarbonisation of the sector. Historically, grants have been provided to organisations to support modal shift of freight from road to rail and inland waterways due to the lower environmental impact of these modes<sup>32</sup>. However, the transition to a zero-emission road freight fleet may lessen the environmental impacts of road freight, reducing the need to encourage and support modal shift.

## 1.4 Scope

This report was commissioned by the DfT in light of the challenges and opportunities highlighted above, with the aim of building a stronger evidence base on the UK road freight sector. The project examined key financial indicators such as profit levels, competition and access to financing, investment, alongside undertaking a review of published literature, to understand the resilience of the sector, and the extent to which it can successfully respond to the challenges it is likely to face over the coming years.

While the research focusses on the domestic road freight market (i.e., HGVs operated by UK companies, moving domestic goods within the UK), comparisons have also been drawn where relevant and possible with other equivalent international markets, and with other UK modes and sectors, including LGVs, rail, air, maritime, logistics carriers, and warehousing.

## 2. Methodology

This section provides an overview of the research process and methods that guide the study. It outlines our methodology for collecting and gathering data (our inputs) and for analysing this data to create our findings. The following sections outline how data was obtained and presented for analysis, and how data was used to answer the research questions related to competition levels, profit levels, investment, financial indicators and market resilience.

### 2.1 Summary

The methodology is data-driven, comprehensive, and specifically targets key areas of interest identified by DfT.

The analysis draws upon data from commercially available databases such as FAME and IBISWorld, articles and research papers publicly available, alongside additional material provided by the DfT. The literature and data obtained have been used to systematically analyse and provide an insightful and detailed picture of the current road freight market.

The chosen approach enabled scrutiny and applied understanding of complex market dynamics, competitive environments, profit margins, investments, and the sector's resilience over the short and long term.

### 2.2 Data Gathering

A wide range of published research as well as economic data and indicators from key data sources was used to address the research questions. Appendix A provides an overview of the data sources and metrics drawn upon, and their relationship to each research question. The integration of existing research with analysis of commercial data sources aims to provide fresh insight, validation, and challenge.

Where data sources can be interrogated by SIC code, the following sectors have been considered within the scope of this study:

- 49410 – Freight transport by road
- 49200 – Freight rail transport
- 51210 – Freight air transport
- 50200 – Sea and coastal freight water transport
- 52103 – Operation of warehousing and storage facilities for land transport activities
- 53201 – Licensed carriers
- 53202 – Unlicensed carriers
- 53100 – Postal activities under universal service obligations

By utilising sources such as the Office for National Statistics, FAME, Eurostat, OECD, and Companies House, the reliability and robustness of research has been maintained. These data sets provide comprehensive information enabling a thorough understanding of market dynamics, competition and resilience, profit levels, and investment trends at every level.



## 2.3 FAME Data

### 2.3.1 Background

This section provides a summary of analysis undertaken to understand businesses in the UK Freight Market using Moody's FAME database. It describes the process for identifying firms in scope, and the limitations of the data and its source.

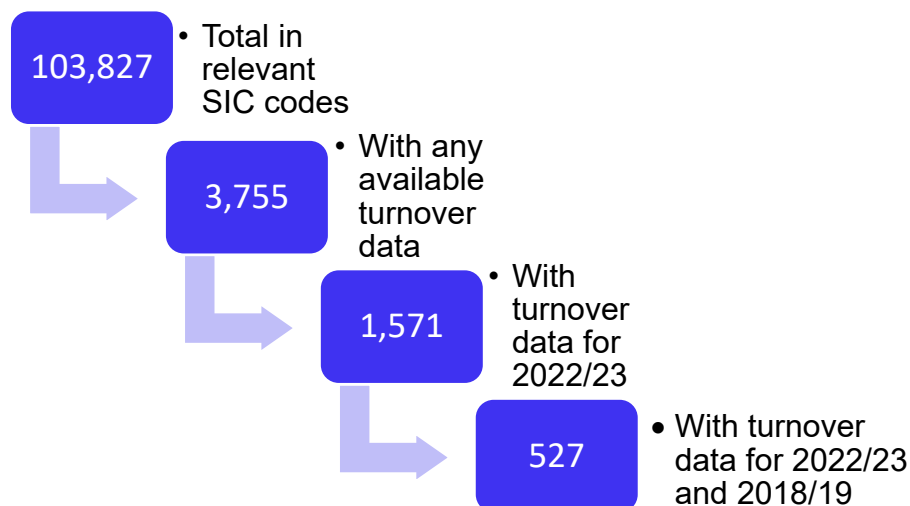
### 2.3.2 Data Sources and Selection

FAME is a database of company level information, based on data drawn from Companies House augmented with additional data such as mergers and acquisitions, press commentary, and credit scores. It provides first-party information from company's accounts on their activities and commercial performance and is therefore a commonly used source for business and sector analysis.

Whilst the database covers all UK companies registered with Companies House, not all companies are required to file detailed accounts with Companies House to enable the analysis described above to be carried out. Companies below certain thresholds (for example the VAT threshold) are not required to file substantial accounting information, which means limited detailed data is available.

### 2.3.3 Identifying companies in scope

Data on the sectors identified as in scope for the study (see section 2.2) were acquired. This data was then filtered as follows to identify companies with sufficient detailed information to undertake analysis:



To maximise the amount of data available, analysis was undertaken on the largest available cohort of data for each table, i.e., comparison of performance between 2018/19 and 2022/23 was carried out on companies for which turnover was available for both years, but broader analysis of the sector in 2023 focused on all companies with data available for that year.

The number of companies with comparative turnover data is relatively small compared to the total and therefore will be supported by year-on-year comparisons with IBIS world where required.



## 2.3.4 Data Limitations

Beyond the availability of financial information, there are other important caveats to consider:

### Headquartering

All company activity in the database such as turnover and employment is allocated to the location where the company is headquartered. Activity for multi-site companies cannot therefore be disaggregated to individual sites or regions. In this instance for example, all employment with Royal Mail would be allocated to London, despite activity being relatively evenly distributed across the country.

### Company closures

In comparing the scale of activity between 2019 and 2023, analysis has focused on companies for which data is available for both years. This is instructive about the analysis of this specific cohort of firms, but it is important to note that any firms closed or liquidated during this period would not be captured in the analysis. Therefore, caution must be used when interpreting overall changes in activity in employment in this period – particularly given the disruption caused by COVID-19.

### Company size

Given the reduced reporting requirements for smaller firms, data is more limited on smaller companies – particularly those companies with no employees or below the VAT turnover threshold (currently £85,000). As such, caution must be applied when considering differences in firm demographics.

## 2.4 IBISWorld

This report also draws upon research and insight produced by IBISWorld, a reputable commercial source of comprehensive industry analysis. IBISWorld sector reports provide insights into industry structure, competitive dynamics, market characteristics, and forecast trends, among other aspects.

### 2.4.1 Data Sources

IBISWorld draws and aggregates data from multiple sources:

#### Office for National Statistics (ONS)

ONS provides a holistic view of the UK economy, offering granular data up to the five-digit SIC code level. For instance, it provides key ratios such as wages as a share of revenue and revenue per enterprise.

ONS also run a number of surveys, such as the Business Register and Employment Survey, and the Labour Force Survey, which are drawn upon by IBISWorld to supplement official reporting and annual business returns.

#### Annual Business Survey (ABS)

ABS offers data on a range of sectors from agriculture to services, including turnover, employment costs, and more.



### **Other Sources**

Data from institutions like the Bank of England and the Office for Budget Responsibility supplements the core data sets.

### **HM Revenue and Customs (HMRC)**

Data from HMRC helps to determine an industry's size and current trends, providing insights into import and export volumes.

### **Internal Database**

IBISWorld's internal databases cover over 650 UK industries and provide economic indicators and statistics on consumer and business behaviour and is used as a point of aggregation for the temporal analysis of sector related variables.

## **2.4.2 Forecasting and Projections**

IBISWorld analysts use a number of benchmarks and considerations to forecast industry turnover, revenue, and other key metrics. These include historical performance, current operating environment, external economic changes, and fundamental industry characteristics.

## **2.4.3 Reliability and Limitations**

The strength of IBISWorld reports lies in the application of a repeatable methodology and diverse data sources. However, it should be noted that some data sources such as Annual Business Survey may lag behind current trends. Analysts mitigate this limitation by considering a range of current indicators when making projections<sup>33</sup>. The database has similar limitations as FAME in when applying Companies House data. IBISWorld forecasts are generally derived from regression analysis, and driver growth rate models.

Forecasting tools and methods are bespoke to each industry, with a holistic approach being taken to specify particular forecasting models. Forecasts are verified using mean absolute percent error for regression-based models, while driver-based growth models are verified through correlation coefficients. Further verification and justification is undertaken by comparing the results of the forecast against previous trends, the previous forecast, and deviation from the last year of in-sample data. Forecasts are only published once consensus has been reached.

## **2.5 Literature Sources**

This report also incorporates resources identified by the DfT from the Centre for Sustainable Road Freight (CSRF), Climate Change Committee, and the then Department for Business, Energy & Industrial Strategy. Together, these sources enable relevant information regarding road freight market structure, competition levels, resilience, and market drivers to be outlined. Reports from Opus Business Group Advisory, IBIS World, and TEG Road Transport Price Index are also used to answer the research questions.

An initial scoping exercise was undertaken to match these resources to the research questions as supporting evidence to analyse and better understand the road freight sector in the UK. This is presented in Appendix A.



## 2.6 Call for Evidence

A Call for Evidence was launched at the start of the research period to enable businesses to provide evidence and confidentially share unpublished data and reports with the study team. Key industry stakeholders were targeted, including trade associations and haulage companies, governmental entities, and academia and research institutions. These stakeholders were contacted via email to submit reports, datasets, and other relevant materials at their convenience.



## 3. Findings

### 3.1 Introduction

This section presents analysis of publicly available literature including past research papers, studies, news articles, business, and government reports to give an understanding of road freight in the UK. It also presents data and analysis to verify or challenge the literature review findings. In addition, the limitations of the body of literature and available data are appraised and assessed through the gap analysis framework.

### 3.2 Market Dynamics and Competition

The objective of this section is to explore available information that sheds light on these elements: barriers to entry and exit, power dynamics among market participants, and the distinctions between domestic and international freight markets.

#### 3.2.1 Barriers to entry and exit

The concept of barriers to entry<sup>34</sup> relates to the obstacles that firms must overcome to enter a market and compete effectively. These barriers can manifest in various forms, such as high initial capital requirements, stringent regulatory compliance, proprietary technologies, or access to distribution networks<sup>34</sup>. In the context of the UK road freight industry, the assessment of these barriers will focus on the degree to which they prevent new players from entering the market.

The evaluation of barriers to entry is not just a matter of identifying obstacles but also measuring the impact of these barriers on potential market entrants. This includes, at a high level, analysing the capital intensity of the industry, the impact of the regulatory landscape, and the existing competitive environment. By examining these factors, barriers to entry and their impacts can be better understood.

#### 3.2.2 Capital Costs

Capital costs can be a potential barrier to entry to the UK road freight industry, particularly for individual owner-operators who form a substantial proportion of businesses operating within the sector.

**Table 3-1 Cost Requirements for Owner-Operation**

Item	Cost (£)	Details
HGV Licence Acquisition	1,500	Training and test fees
Driver CPC	600	Cost for 35 hours of training
Operator-Licence Acquisition	658	Application and issue fee
Vehicle Lease	7,710	Three-month lease for a 44-tonne artic
Insurance	2,507	Six-month premium
Operating Overheads	2,553	Running an operating centre for eight weeks
Fuel	9,196	Cost for eight weeks of operation
Services and Repairs	992	Estimated outlay for the first eight weeks
Financial Standing (Standard Licence)	8,200	Proof of funds required per vehicle
Total Excluding Wages	33,916	Initial setup costs
Wages	8,471	HGV driver's earnings over eight weeks
Grand Total	42,387	Total cost before revenue

Source: *Commercial Motor, 2023<sup>1</sup>, RHA, 2023<sup>2</sup>*

For an individual contemplating entry into the market, the amount of money required would necessitate the use of savings for cash purchase, finance or lease. The financial outlay for vehicles, alongside associated costs such as insurance, maintenance, and certification, can be large (compared to potential annual income of approximately £40,000<sup>35</sup>) for single vehicle operators. This amount has increased in one year from £34,048 to £42,387<sup>2</sup>. The calculation is intended to provide an indication of the money an entrant may have to pay out prior to commencing operations and receiving revenue.

When viewed from a broader economic perspective, the capital required for a single HGV, is relatively modest in the context of the entire market. The capital costs of entry are especially modest in comparison to the capital demands of other related sectors (such as warehousing, or other freight modes), where entry can require investments several magnitudes higher - for example, a single Class 66 freight locomotive can cost in the region of £1.5-2 million<sup>34</sup>, not accounting for maintenance, track access rights, drivers, siding and site leasing or purchase, or any other operational or capital costs.

The road freight market offers a number of pathways for asset acquisition, access and utilisation<sup>36</sup> beyond outright purchase. Leasing and hire purchase agreements, alongside a healthy and established second hand market provide more flexible options for new entrants to secure the necessary vehicles without the same level of upfront capital. These alternatives lower the financial barriers to entry, making it easier for new businesses to commence operations. Capital investment case studies and investment profiles are covered in more detail in Section 3.4

### 3.2.3 Regulatory Compliance

Regulatory and compliance barriers present a complex landscape for any individual or entity looking to enter the UK road freight market. For individual owner-operators, these barriers, while present and compulsory, are not insurmountable and can be navigated with due diligence and adequate preparation.





The regulatory framework governing the UK road freight sector includes a range of statutory requirements, from vehicle standards and emissions regulations to driver working hours and licensing. Compliance with these regulations ensures safety, environmental protection, and fair competition. For new entrants, understanding and adhering to these regulations is essential, as non-compliance can result in penalties, legal action, or business closure.

## **Goods Vehicle Operator's Licence**

This is a licence that allows operation of vehicles over 3.5 tonnes gross weight<sup>37</sup>. The application process requires operators to provide information about their business, their vehicles, and drivers. Operators also need to demonstrate that they have the necessary financial resources to operate safely. Various levels of licencing exist depending on the specific operating models of hauliers, and the specific fleet and vehicle compositions<sup>38</sup>.

## **Changes to licence requirement for Alternatively Fuelled Vehicles**

UK law was changed in 2018 to increase the weight limit for Category B driving licence holders driving an alternatively fuelled vehicle carrying goods<sup>39</sup>. Following this change, a maximum gross weight of 4.25 tonnes applies, providing the vehicle is not driven outside of Great Britain is not towing a trailer and the driver has completed a minimum of 5 hours training. The change was introduced in response to alternatively fuelled vehicles having an increased kerb weight in comparison to conventionally fuelled vehicles.

## **Operator Compliance Risk Score**

This is an assessment carried out automatically by the DVSA over a three-year period. The Operator Compliance Risk Score assesses an operator against a number of factors, such as driver management procedures, vehicle maintenance procedures, and safety management procedures, and can change based on ongoing interactions and compliance as measured by DVSA<sup>40</sup>.

## **Driver Certificate of Professional Competence**

All drivers of goods vehicles over 3.5 tonnes gross weight must have a Driver Certificate of Professional Competence. This is a qualification that proves that they have the skills and knowledge to drive safely. The Driver Certificate of Professional Competence is renewed every five years and requires drivers to complete a number of training modules<sup>41</sup>. DfT announced reforms to DCPC, on 11 December 2023, to enable a more flexible renewal process for domestic drivers<sup>42</sup>.

## **Vehicle safety standards**

Road haulage vehicles, to operate legally, must adhere to stringent safety standards. This involves securing a valid MOT certificate and obtaining appropriate insurance coverage. Unlike regular vehicles, HGVs undergo their MOT tests at specialised Authorised Testing Facilities. These facilities are less prevalent compared to standard garages, making accessibility more limited. The testing process for HGVs is conducted exclusively by DVSA examiners and incurs a higher fee than standard MOT tests. This thorough examination ensures HGVs meet critical safety and environmental compliance. The insurance requirement ensures that the vehicle and external damage is insured in case of an accident<sup>43</sup>.

## **Environmental regulations**

Road haulage operators must comply with environmental regulations, such as emissions standards and waste disposal regulations. The emissions standards limit the number of



pollutants that vehicles can emit into the atmosphere. The waste disposal regulations ensure that waste from vehicles is disposed of properly<sup>44</sup>. The specific requirements on hauliers to achieve compliance varies but can potentially include - installing emissions control devices on vehicles, appropriately disposing of waste from vehicles, and paying for additional environmental permits (such as LEZ or other local schemes)<sup>45</sup>.

In the road freight market, regulatory compliance varies significantly between businesses that own and operate vehicle fleets, and contracted or self-employed drivers who offer their labour on the open market. For the former, adherence to a suite of regulations encompassing vehicle standards, emissions (when working in LEZ), and driver working hours is mandatory and more demanding. These businesses bear the full weight of compliance, from maintaining vehicle roadworthiness to ensuring adherence to vehicle operations licencing requirements<sup>46</sup>.

However, individual contract drivers, trading on their skills and labour, typically bear a reduced regulatory burden. While they must comply with personal licensing and professional competencies, the more extensive requirements related to vehicle operation and maintenance are usually the responsibility of the entity owning the fleet or can alternatively be facilitated through their contractual relationship. This distinction is crucial because it allows self-employed drivers (without vehicle assets) to operate with greater flexibility - contributing to overall lower barriers to entry.

The design of the regulatory framework in the UK road freight sector takes into account the scale of operations. Smaller businesses with fewer vehicles will find that the compliance requirements are proportionately less complex than those faced by larger operators with extensive fleets engaging in cross-border or high-volume activities. This scalability ensures that owner-operators and small businesses can meet regulatory demands without disproportionate expense or complexity.

Additionally, the UK's regulatory system provides ample support to facilitate compliance. Resources and guidance are readily available from both government agencies and industry bodies, such as Logistics UK and the Road Haulage Association (RHA), which actively work to simplify regulations and provide practical support to hauliers. These resources, along with a tiered compliance structure, act to lower the barriers to entry and operation within the road freight market, making it more accessible for new and small-scale entrants prepared to utilise these supports<sup>17</sup>.

### **3.2.4 Power dynamics**

The overall power dynamics within this industry can be complex and varied, and are influenced by a number of factors, including:

- The size and market share of businesses operating in the sector
- The level of competition in the market
- The availability of resources, such as vehicles and drivers
- The use and access to technology
- Pricing mechanisms, access to capital, and contractual arrangements

#### **3.2.4.1 The size and market share of the players involved.**

The composition of businesses within the UK's road freight sector is markedly dominated by micro-enterprises, reflecting a trend of small-scale operations that surpasses the average



across the wider UK economy. Data from Table 3-2 underscores that 92.1% of businesses in freight transport by road are categorised as micro-enterprises, which is slightly below the 92.3% previously reported in 2022. This indicates a sector that is largely composed of very small business entities, such as individual owner-operators or businesses with a few employees.

**Table 3-2 - Percentage share of business by size and SIC**

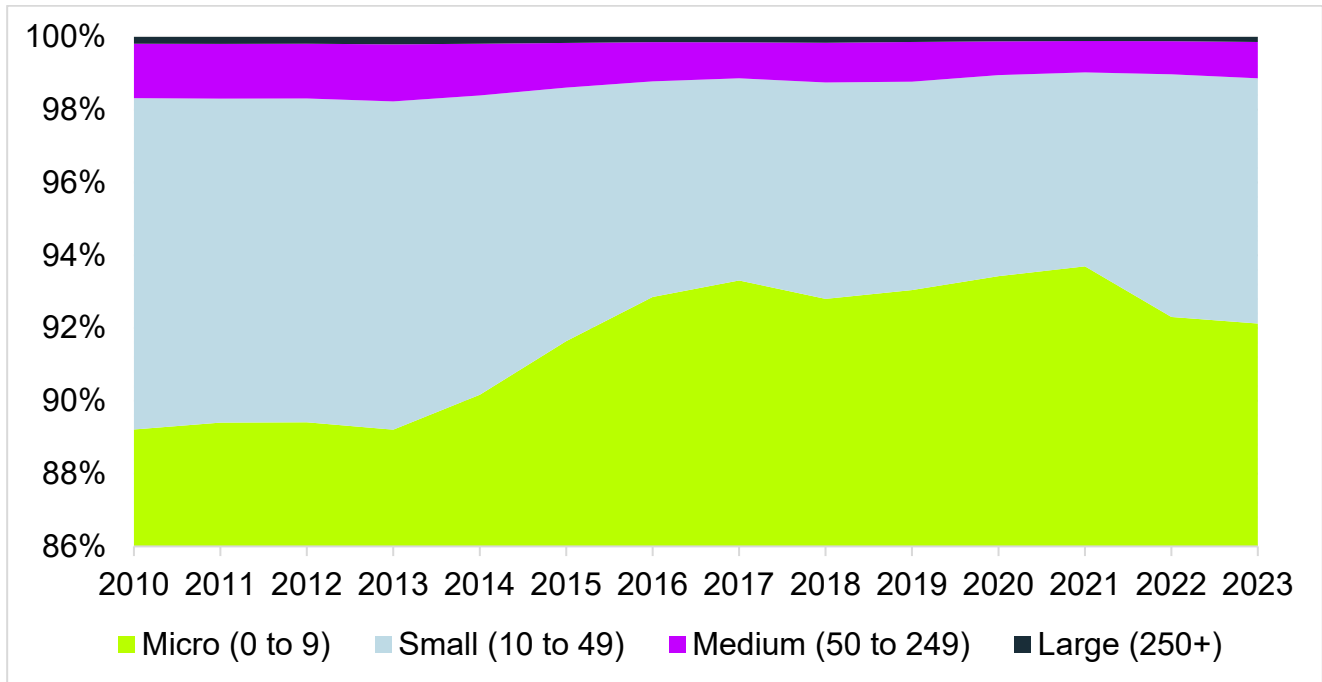
<b>Employment Size Band</b>	<b>49200 : Freight rail transport</b>	<b>49410 : Freight transport by road</b>	<b>49420 : Removal services</b>	<b>521 : Warehousing and storage</b>	<b>All Sectors</b>
Total	135	54,595	3,140	1,850	2,726,830
Micro (0 to 9)	92.6%	92.1%	88.9%	48.6%	89.1%
Small (10 to 49)	3.7%	6.7%	10.0%	36.8%	9.0%
Medium-sized (50 to 249)	0.0%	1.0%	1.1%	11.4%	1.6%
Large (250+)	3.7%	0.1%	0.0%	3.2%	0.4%

*Source: Inter Departmental Business Register, Office for National Statistics, 2023*

In contrast, the warehousing and storage sector presents a more diverse business size distribution. Only 48.6% of businesses in this sector are micro-enterprises, which is significantly lower than the road freight sector. This suggests a presence of larger operations with potentially more extensive infrastructure and employee bases, as evidenced by the 36.8% of businesses being small (10 to 49 employees), and 11.4% being medium-sized (50 to 249 employees).

Across all business sectors in the UK economy, micro-enterprises make up 89.1% of businesses, indicating that the freight rail transport, road freight, and removal services sectors have a higher concentration of micro-enterprises than the average across all sectors. Only a marginal 0.1% to 0.4% of businesses in these specific freight sectors are classified as large (250+ employees), which demonstrates the competitive nature of the industry. Figure 3-1 shows how the size of businesses operating within the UK road freight sector has changed between 2010 and 2023. During this period, the proportion of micro-enterprises has increased, while the proportion of small businesses has fallen. The proportion of medium and large businesses has largely remained static.

**Figure 3-1 Sizeband of Road Freight Enterprises by Year**



Source: Nomis, Inter Departmental Business Register, 2023<sup>5</sup>

In April 2021, the then UK government implemented tax reforms under the label of 'IR35'. These changes were aimed at individuals who regularly offer their services to medium or large enterprises, not as direct employees, but rather through their own business entities, either registered or unregistered. This form of self-employment facilitated lower National Insurance and income tax payments for both the individual and the larger company<sup>47</sup>. The new IR35 regulations require these larger companies to either formally employ these individuals, adding them to their own payroll, or report the working relationship to the Inland Revenue for appropriate taxation. Consequently, these reforms may have contributed to a reduction in the number of self-employed drivers and workers in the UK's freight sector, as HMRC is already seeking compliance information from logistics and haulage firms<sup>7,8</sup>.

### 3.2.4.2 The availability of resources, such as vehicles and drivers

#### HGV Drivers

While a shortage of HGV drivers within the UK has persisted for some time, recent data suggests that concerted recruitment and attraction efforts by both government and industry are starting to have an impact.

Previous government initiatives have included funded Skills Bootcamps, and work to eliminate a backlog in HGV driver testing<sup>9</sup>. In Q1 2022, DVSA conducted 26,388 practical HGV tests, a 43% increase compared to the same period in 2019<sup>48</sup>. The UK road freight sector has sought to attract additional workers through enhanced salaries. In Q1 2022, salaries for qualified HGV drivers had increased by an average of 25% compared to a year previous<sup>49</sup>.

These efforts have resulted in the number of HGV drivers claiming Jobseeker's Allowance falling by 70% from Q1 2019 to Q1 2022<sup>50</sup>, underscoring the scarcity of available drivers. Moreover, DfT has published data about HGV driver vacancies, which shows that



businesses reporting HGV driver vacancies fell from 43% (888 out of 2,077 businesses) in Q4 2021 to 23% (495 out of 2,186) in Q3 2023<sup>51</sup>. The industry has generally hailed some initiatives as a success<sup>52</sup>, although driver availability remains a significant concern for hauliers<sup>53</sup>.

While the shortage of HGV drivers is less acute, the industry acknowledges a continued need for recruitment and retention initiatives to sustain a stable pipeline of skilled drivers<sup>49</sup>. There is also an ongoing call for improved facilities and support for drivers across the UK's road network<sup>54,55</sup>. In November 2022, DfT launched the HGV Parking and Driver Welfare Match Funding Grant Scheme. This provides funding that supports operators to make improvements to security provisions, welfare facilities, and parking spaces for lorry drivers. Investment in driver facilities will enable improvements to working conditions and support the recruitment and retention of a more diverse workforce.

It's important to highlight that the UK is not alone in facing challenges with HGV driver shortages; many EU countries are also struggling to maintain sufficient staffing levels in this sector. This widespread issue underscores the complexity of the problem<sup>56,57</sup>.

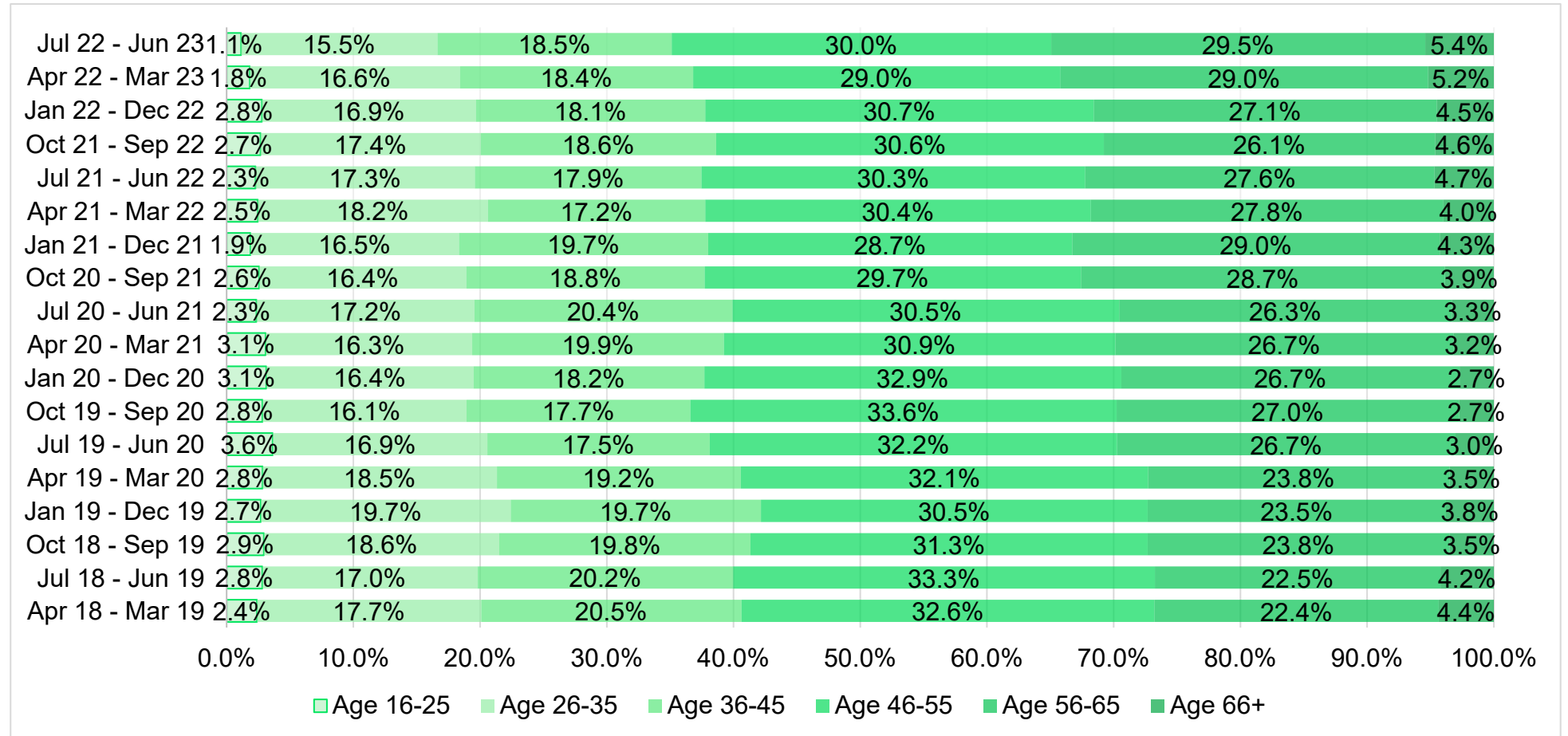
### **Driver Demographics**

Demographic data from the Annual Population Survey and Workforce Survey offers further insights into the changing landscape. The 66+ age group remained relatively stable in terms of their share of the total HGV workforce between 2021 and 2022 and has since increased between April 2022 and June 2023. There is a slight shift among the 26-35, 36-45 and 46-55 age groups, with their representation shifting over recent periods.

Additionally, there is a trend of increasing representation of drivers aged 56-65 and above, which could indicate that older drivers are staying longer in the workforce, possibly due to improved conditions and incentives, although this does represent a risk to the total when these drivers reach retirement age.

The data also provides a breakdown based on nationality. While the number of EU drivers has generally decreased, the figures for non-EU and UK drivers have remained fairly stable. This indicates that domestic efforts to boost the HGV workforce may be compensating for the reduction in drivers from the EU.

**Figure 3-2 - Age Distribution of HGV Drivers**

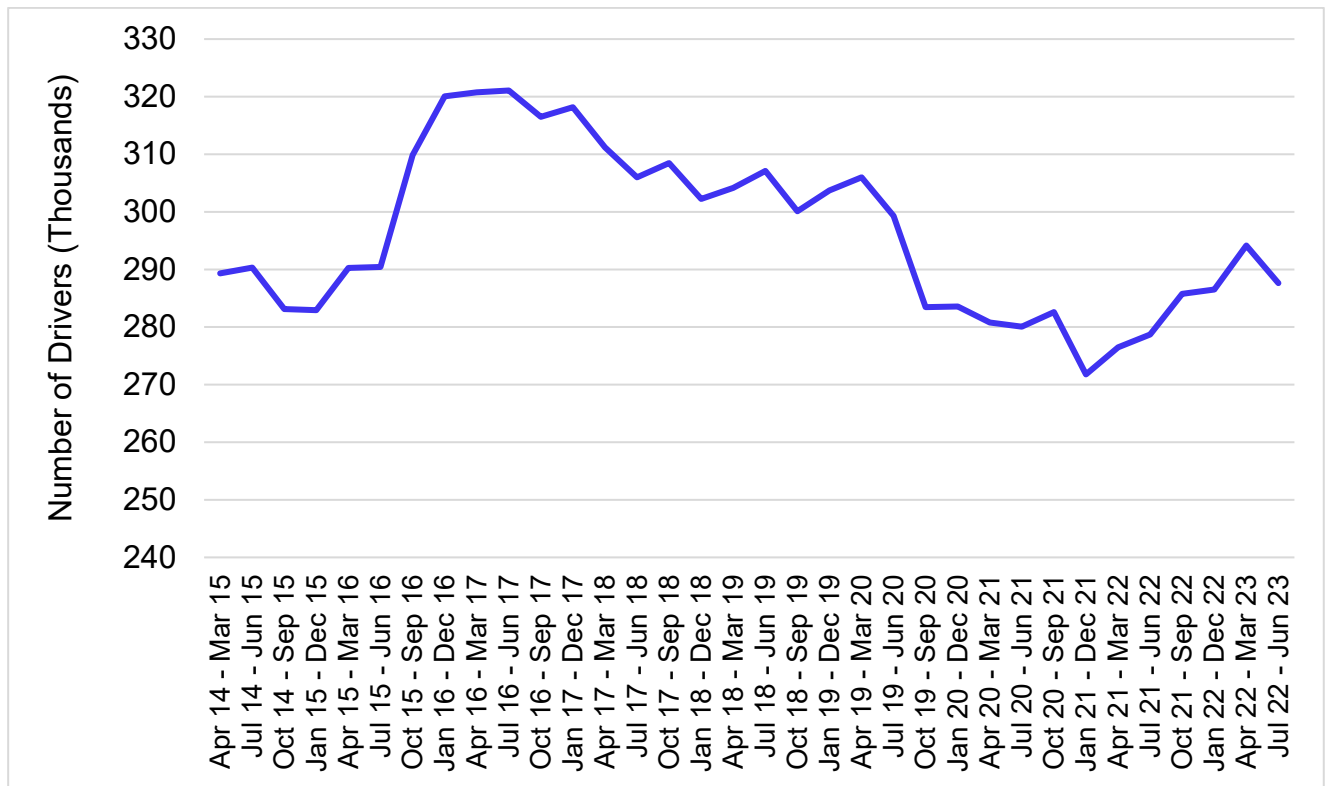


Source: Annual Population Survey (Dec 19 – Apr 22) & Workforce Survey<sup>10</sup>



HGV drivers are an essential resource for the sector, with companies having to decline work if they do not have access to sufficient resource, potentially impacting overall revenue and growth.

**Figure 3-3 – Number of HGV drivers in employment**



Source: HGV drivers by nationality and 10-year age group, Annual Population Survey, ONS 2023

### 3.2.4.3 The level of competition in the market

Power dynamics within the road haulage industry manifest in multiple ways, most prominently through pricing mechanisms and contractual arrangements.

Moreover, economies of scale appear to be a decisive factor in establishing and sustaining a competitive edge, essentially acting as a barrier for smaller firms who cannot match the operational efficiencies of larger companies. This plays out often in the size and type of customers which operators are able to manage effectively<sup>17</sup>.

### 3.2.4.4 Pricing mechanisms, access to capital, and contractual arrangements

In the road haulage industry, pricing and contract terms often reflect the balance of power between various players. While the market structure in some areas results in a few key players exerting significant influence over pricing, it's important to clarify that this influence is not absolute across the market. These larger operators often contract to smaller SMEs to supplement their own fleet operations and although they may have a strong hand in contract negotiations, their power to set prices is not unlimited<sup>58</sup>.





### 3.2.4.5 The use and access to technology

In recent years, the rise of digital platforms has also had a significant impact on the power dynamics in the road haulage industry<sup>12</sup>. These platforms allow shippers to connect with hauliers directly, bypassing traditional intermediaries and freight brokerage services. This can give shippers more bargaining power, as they can compare prices and services from a wider range of providers, therefore having the potential to drive prices down (as similar technologies have done in other markets such as courier freight)<sup>59</sup>.

Digital platforms (and the hauliers) can use aggregated data to track the performance of hauliers and identify those who are not meeting expectations and manage aggregated performance of organisations. This information can then be used to negotiate lower prices or even exclude certain hauliers from the platform<sup>12</sup>.

### 3.2.5 Domestic vs International freight markets

The distinctions between domestic and international freight markets are significant. The UK market tends to be more fragmented, comprising a large number of smaller operators serving short distance or local haulage customers, whereas the international market tends to have a higher level of consolidation<sup>60</sup>. This fragmentation often leads to intense price competition, especially for local and regional deliveries in a domestic context. Complexity thus increases with the geographical scope of the services provided. Yet, it is noticeable that existing research offers limited insights into how macroeconomic and geopolitical factors differentially influence these two markets.

In 2022 there were 9,510 firms in Great Britain holding an HGV Standard International (SI) Operator Licence, a 6% increase from 2021 and a 7% rise since 2012. This number represents a significant portion of the total, indicating that a considerable number of UK hauliers operate, or are at least licensed to operate, internationally<sup>61</sup>.

#### 3.2.5.1 Time series comparison

##### Revenue

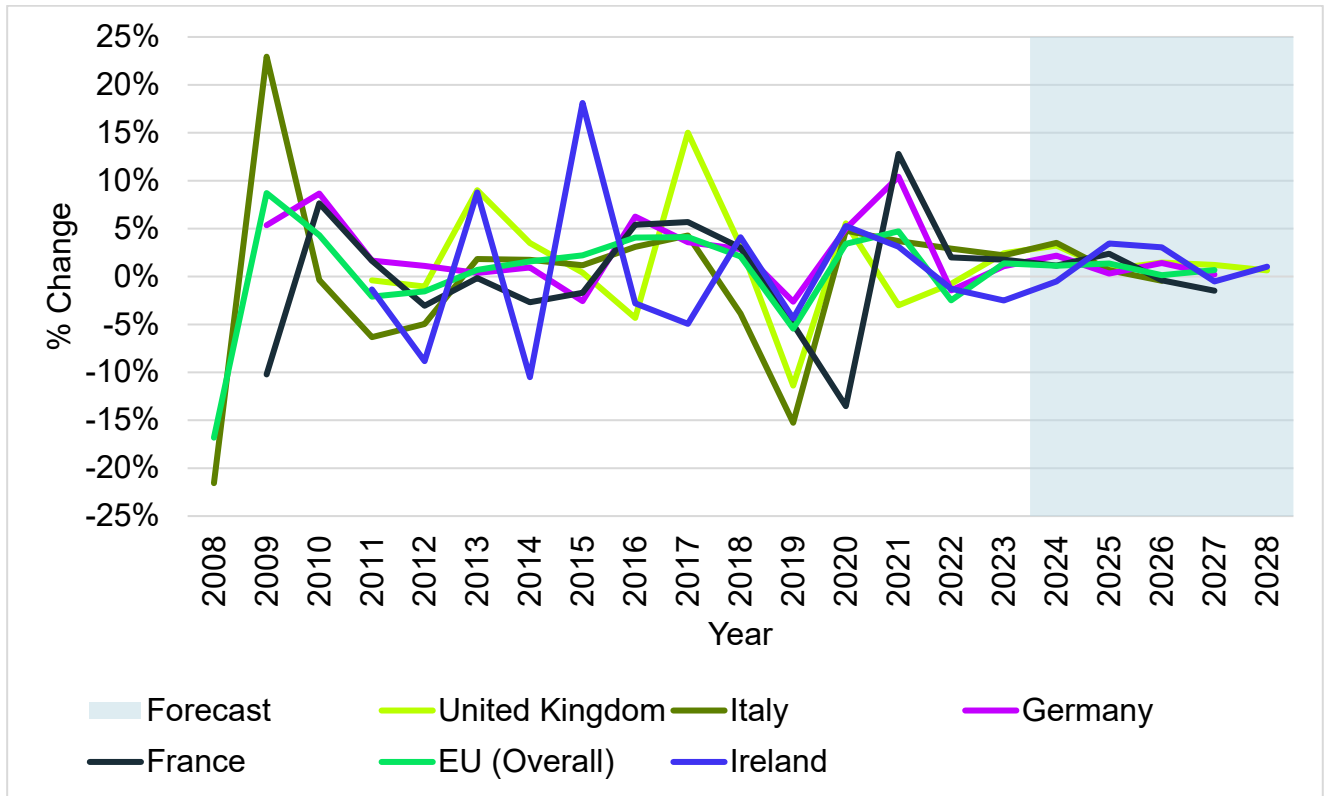
In a comparative analysis of international road freight revenue percentage changes in Figure 3-4, the United Kingdom shows a range of fluctuations. These oscillations contrast with other European countries and the EU overall in specific ways. For instance, data on the German market indicates moderate and mostly positive changes in road freight revenue, distinct from the UK's more substantial swings. Italy exhibits a different pattern; while there are fluctuations in revenue, they are generally less pronounced than those in the UK.

France shows modest changes overall but diverges significantly from the UK in 2020 with a decline of 14%, whereas the UK increased by 5.5%. This suggests varying market responses to external factors between the two nations. The EU, taken as a whole, mostly reflects small changes, either positive or negative. This is different from the UK's larger fluctuations, although both the EU and the UK experienced decline in 2019.

Ireland's data, though limited, shows greater volatility, especially in years like 2015, where there was an 18% increase. This contrasts with the UK's fluctuations, which are significant but not as extreme.



**Figure 3-4 – International Road Freight Revenue % Change by Year**



Source: IBISWorld, Freight Road Transport in the (UK, EU, DE, IT, FR, IE)

**Number of businesses**

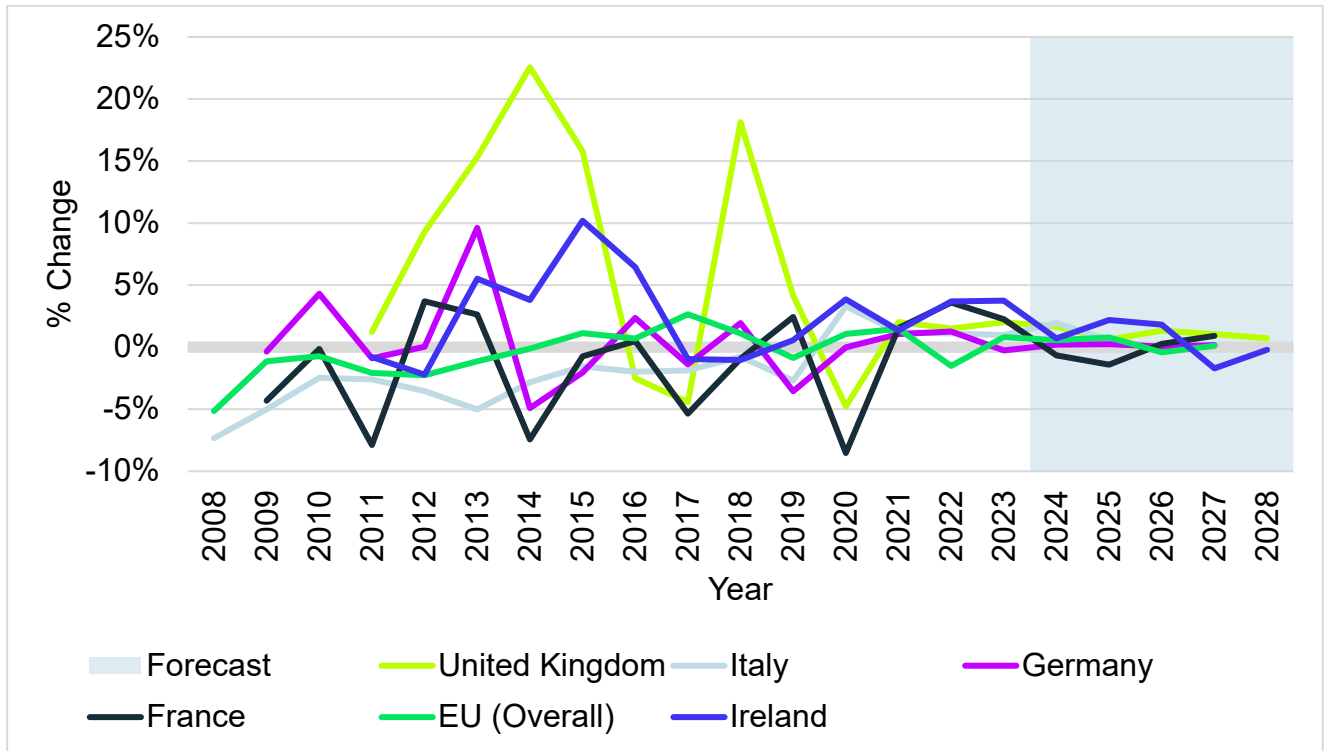
Figure 3-5 presents a comparative analysis of the total number of enterprises in the road freight sector across various European countries. The data for the United Kingdom reveals a wide range of percentage changes, from a 22.6% increase in 2014 to a 4.8% decrease in 2020. Compared to Germany, which has minimal fluctuation in the number of businesses, the UK exhibits more significant changes. In contrast, the number of international road freight enterprises in Italy generally presents a small year on-year decrease, with the majority of the years showing a decline in the number of enterprises, contrasting with the UK's more varied performance.

In France, the data points towards smaller fluctuations, with changes mainly in the single-digit percentage range. This contrasts with the UK, which has seen double-digit percentage changes in certain years. However, both countries experienced notable downturns in specific years, such as France's 9% decrease in 2020 and the UK's 4.8% decrease in the same year. The EU overall tends to hover around zero, suggesting a balanced scenario in the broader European context. However, it's worth noting that the EU did experience a few years of negative growth, albeit less dramatic than individual countries like the UK or France.

Ireland's data, indicates some volatility. For instance, it experienced a 10% increase in the number of enterprises in 2015, followed by a 1% decrease in 2017. This differs from the UK, where the changes have been more substantial, both in terms of increases and decreases.

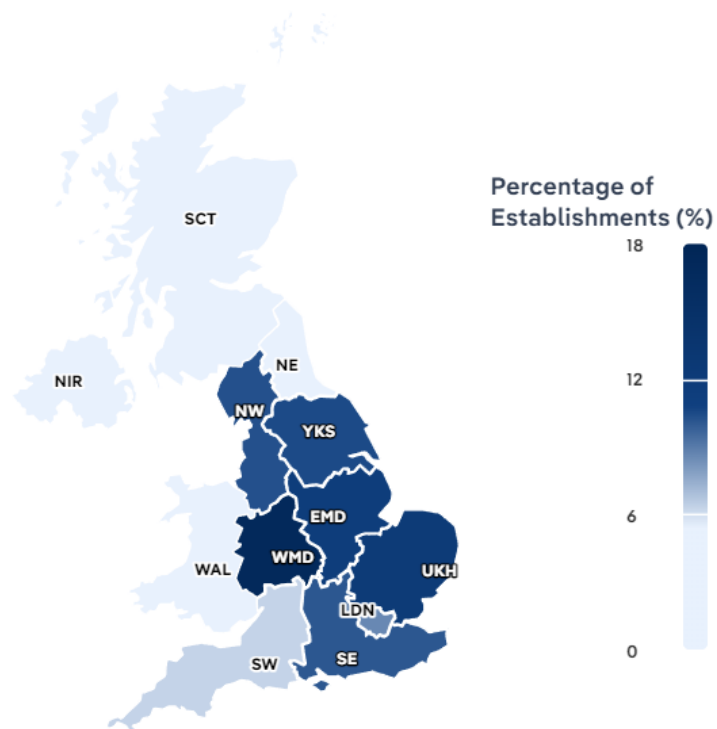


**Figure 3-5 – International Road Freight Enterprises Change by Year**



Source: IBISWorld, Freight Road Transport in the (UK, EU, DE, IT, FR, IE)

**Figure 3-6 - Road Freight Business Concentration - UK<sup>25</sup>**



## Regional Analysis

The West and East Midlands are known as the logistics and distribution golden triangle, due to their central location and proximity to major motorways, including the M42, M1, and M6. This allows drivers to reach almost 90% of the UK population within four hours<sup>62</sup>.

The region is home to several large logistics hubs, such as the Daventry International Rail Freight Terminal, Magna Park, and Eurohub. Many national distribution centres, including Tesco, Asda, Amazon, and XPO Logistics, are also based in the golden triangle.

East Midlands Airport is the UK's largest dedicated freight hub, and several major transportation companies, including DHL, UPS, TNT, and Parcelforce, are based there. The region also has rail links to some of the major UK ports.

The East of England has the second highest number of distribution establishments in the UK, largely due to the presence of Felixstowe, one of the largest container ports in the UK and one of the largest container ports in Europe. The region is also home to the port London Gateway, which has a logistics centre which hosts distribution centres for Lidl and various freight forwarding companies. Tilbury, in Essex, is home to an Amazon distribution centre and the Uniserve London Mega Terminal.

### Summary

- UK road freight market is highly fragmented, with more than 50,000 businesses operating within the sector. Only one business, DHL Supply Chain, has a market share greater than 6%.
- Entry for an owner operator into UK road freight sector costs circa £42k. This includes cost of HGV lease for three months, and associated costs such as insurance, maintenance, and certification.
- Entry costs are modest in comparison to other freight sectors e.g. rail freight, where rolling stock leases are higher, alongside training costs and track access charges.
- Regulatory barriers, such as compliance with safety and environmental regulations, are also manageable and scale with the size of the operation.
- The sector has faced a labour shortage over recent years, however, the number of HGV drivers has steadily increased since 2021. The majority of workers are aged between 46 and 65, with a slowly declining proportion aged 45 and under.

## 3.3 Profit Levels and Margins

### 3.3.1 Market Profitability

Challenging operating conditions in the industry, such as fuel prices and labour shortages, have constrained profit levels in recent years, although in general operators have leveraged opportunities to pass on additional operating costs to the customer (covered in more detail in section 3.3.1.2) – potentially insulating them from absorbing market pricing changes in totality. Forecasting by IBISWorld indicates profit is estimated to account for an estimated 9.2% of industry revenue in financial year 2023-24<sup>18</sup>. This is lower than the average profit margin in the UK economy, which is around 9.7%<sup>19</sup>.



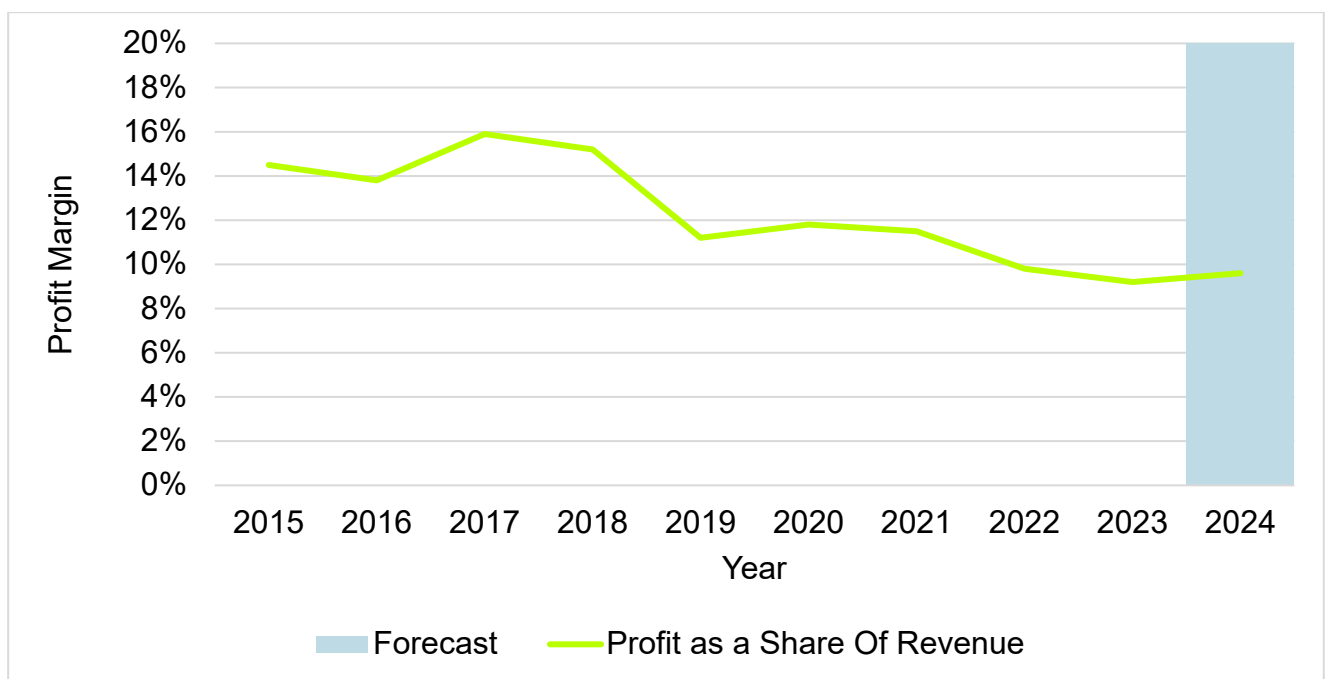
This analysis employs Earnings Before Interest and Tax (EBIT) as a measure of a company's profitability. EBIT is calculated by subtracting expenses from revenue, while leaving out interest and tax costs. However, it's important to note that the EBIT figure can potentially be skewed, particularly in the context of SMEs and owner-drivers. These groups have the opportunity to draw earnings from their companies in the form of dividends, which could distort the EBIT as an accurate representation of operational profitability.

### 3.3.1.1 Time Series Analysis

Figure 3-7 depicts recent changes in road freight company profit margins. Since 2019, there has been a consistent decline in profit as a share of revenue, decreasing from 11.5% to a low of 9.2% in 2023.

Profit margin data from the FAME database was also obtained. In FY 2022/23, FAME calculated large road freight business profit margins at 4.3%, with medium-sized companies having a profit margin of 6.0%. On paper, small companies appear to perform relatively well with a profit margin of 10.3%, however these figures should be approached with consideration to the variance in financial reporting practices between different company sizes, particularly the smaller entities which might report profitability differently.

**Figure 3-7 - Road Freight Sector Profit by Year**



Source: IBIS World, Freight Road Transport in the UK, 2023

### 3.3.1.2 Fuel Prices

Rising fuel prices and labour costs can have impacts on overall profit levels of hauliers as they try to balance rising costs with profitability.

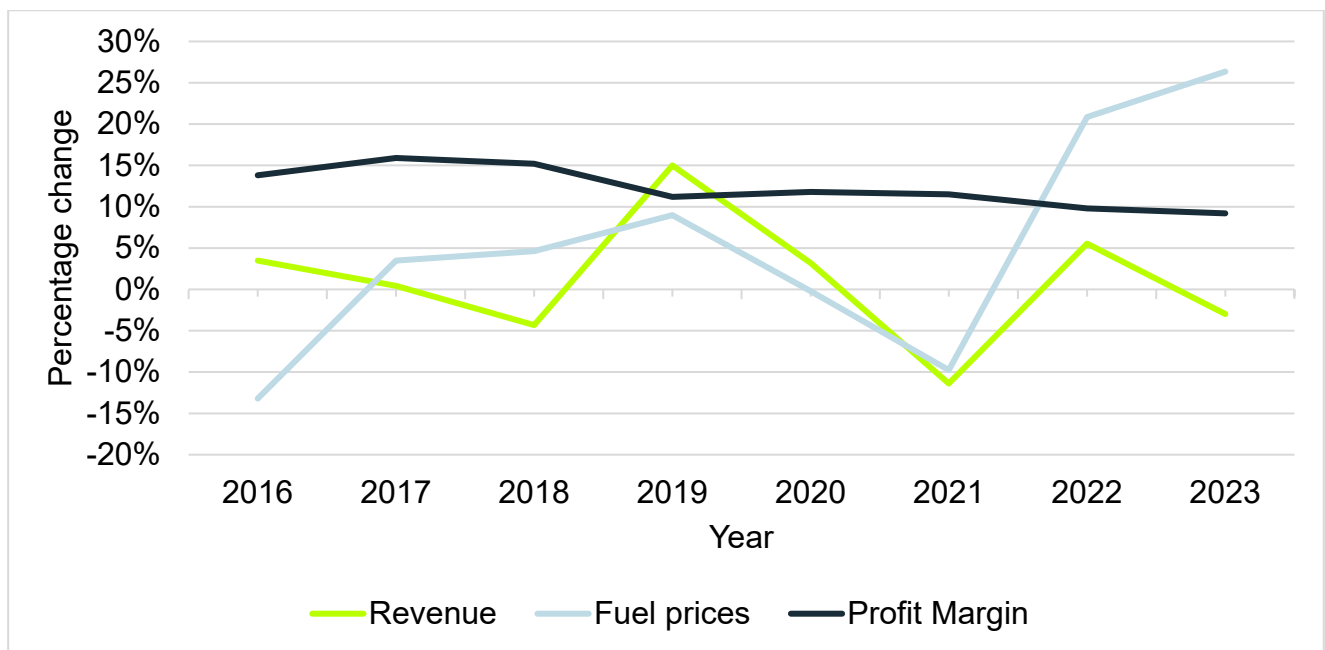
Fuel is a key operational cost for road freight transport companies, standing at around 1/3 of operating expenditure, and the rising cost of fuel is believed to be impacting company profit margins<sup>63</sup>.



To protect cost performance, there is evidence<sup>64,65</sup> that the encouraged behaviour of road freight companies is to pass on higher fuel prices to their customers, which can insulate their profit margin in times of rising prices. Some larger companies can also employ fuel-hedging strategies which mitigate impacts and are increasingly investing in fuel-efficient vehicles to mitigate the impact of the shortage – although there is no realistic way for haulage companies to avoid the impact of such changes consistently.

Fuel hedging is a risk management strategy used by companies, including hauliers, to lock in current fuel prices for future use. This is done through various financial instruments like futures contracts, options, or swaps. The practice helps stabilise operational costs by mitigating the impact of volatile fuel prices.

**Figure 3-8 Revenue, Fuel Prices, and Profit**



Source: IBIS World, Freight Road Transport in the UK, August 2023

The graph in Figure 3-8 illustrates the interplay between revenue, fuel prices, and changes in profit margins within the road freight industry between 2016-2023. It is evident that revenue and fuel prices have experienced similar fluctuations, suggesting that road freight companies are adjusting pricing models in response to changes in fuel costs.

While fuel prices show significant volatility with sharp increases and decreases over the years, the profit margin line remains relatively steady. This stability indicates that road freight companies are effectively transferring the variability in fuel costs to their customers, insulating overall profitability from changes in operating costs.

### 3.3.1.3 Reinvestment

Reinvestment, while generally a positive for long-term organisation and sector sustainability, can also contribute to lower short-term profit margins. Investment in newer, more efficient vehicles or technologies requires significant upfront capital and funding. While investments can result in lower operating costs and higher efficiency in the long run, they can put immediate pressure on profit margins<sup>17</sup>. Additionally, as companies reinvest to stay competitive or meet changing regulations, those costs may not be immediately offset by



higher prices or greater efficiency (although they do have the benefit of attracting tax relief), especially if broader market conditions are challenging.

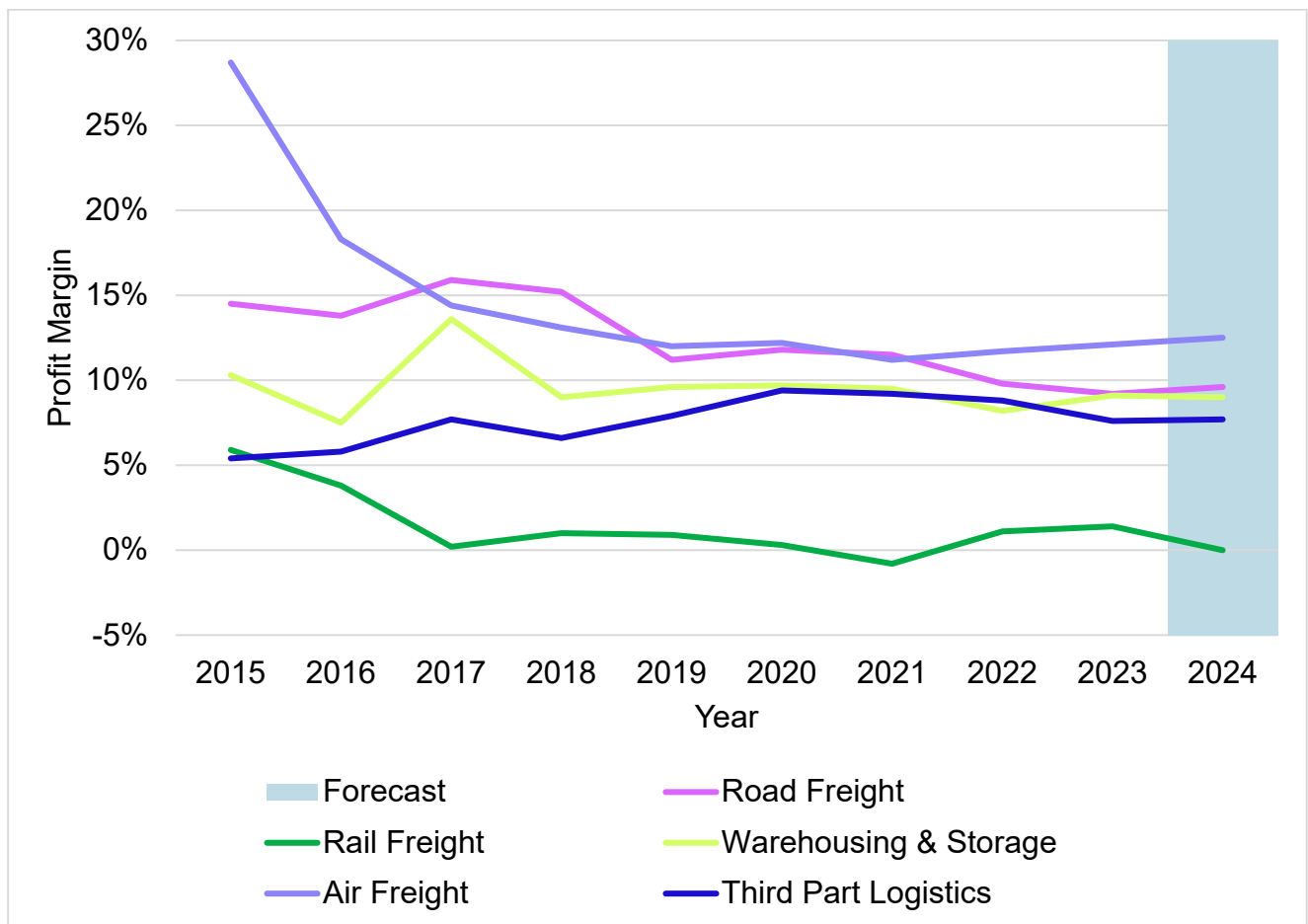
Long term planning related to net-zero obligations and alternatively fuelled vehicle fleets are only likely to increase sector investment needs, which will have an ongoing impact on profit margins within the sector<sup>66</sup>. Further information on investments and credit can be found in Section 3.4 and Section 3.5.3.

### 3.3.1.4 Comparative Analysis

The road freight sector has seen a fluctuation in profit margins over the past decade, peaking at 15.9% in 2017 and forecast to drop to a low of 9.2% in 2023. Forecasts by IBISWorld project a profit margin of 9.6% for the sector in FY 2023-24<sup>67</sup>. The warehousing and storage sector has shown less volatility but has generally declining profit margins from a peak of 13.6% in 2017, declining to 8.2% in 2022. Air freight has also seen a notable fall in profit margins, dropping from a high of 28.7% in 2015 to 12.1% in 2023.

Two sectors present a contrast to the generally declining profit margins described above. Rail freight has struggled to maintain profitability, having fallen into negative margins in 2021, but recovered to make a modest profit during 2022. Profit margins at third-party logistics businesses increased from 2015 to 2020, before falling at a modest rate.

**Figure 3-9 – Comparative Industry Profit by Year**



*Source: IBIS World, Freight Road Transport in the UK, Freight Air Transport in the UK, Freight Rail Transport in the UK, Warehousing and Storage in the UK, Third Party Logistics in the UK*

A range of factors have influenced shifting levels of profitability over recent years. The COVID-19 pandemic has undoubtedly been an influencing factor, with the impacts of the pandemic having caused major supply chain disruption. Other factors affecting profitability include rising fuel and labour costs, which have impacted road and rail freight to a disproportionate extent. The air freight sector has been negatively impacted by declining global trade volumes, whereas third-party logistics and warehousing & storage have been relatively insulated due to their broader range of services and client bases.

While the average profit margin across the UK economy as a whole is around 9.7%<sup>19</sup>, sectors of relevance to this study generally have lower profit levels. This is influenced by a range of industry-specific issues, from technological advancements and sustainability concerns to shifts in global trade and freight demands. However, despite these hurdles, data suggests the UK road freight sector maintains an acceptable level of profitability which will ensure the survival of the industry.

### 3.3.1.5 Underlying Factors

#### Contractual Arrangements

In the road freight industry, both pricing and contractual models play critical roles in determining how costs are managed and shared between hauliers and their clients. While these two elements are closely intertwined, it's important to make a clear distinction between them for the purposes of this research.

Pricing Models	Contractual Models
<p>Pricing models refer to the methods used to establish the rates charged by hauliers. These rates can be based on various factors such as distance, weight, volume, or time. The pricing model may incorporate fuel surcharges, or additional fees for special services like fragile or hazardous cargo. The core purpose of pricing models is to establish a financial structure that is agreed upon by both parties, usually to maximise profit for the haulier while providing value to the client.</p>	<p>Contractual models, on the other hand, are legal frameworks that outline the terms and conditions under which services are provided. This includes payment terms, liability clauses, and any conditions under which the originally agreed-upon pricing can be adjusted. Contracts codify the relationship between the haulier and client, setting boundaries and expectations for both parties (often incorporating elements of pricing models as part of a wider whole.)</p>

#### 3.3.1.6 Pricing

In the road freight industry, the type of pricing contract between hauliers and their clients can have significant implications for profitability and cost management. Two commonly used pricing methodologies are open-book and closed-book agreements, each with distinct advantages and limitations.





### **3.3.1.6.1 Open Book Pricing Contracts**

Open-book pricing contracts provide a transparent account of costs incurred by the haulier, often broken down into categories such as labour, fuel, maintenance, and overheads. This form of contract is collaborative in nature, allowing for real-time adjustments based on actual costs<sup>68</sup>. When fuel prices spike or unforeseen maintenance is required, hauliers can pass these costs directly to the client, subject to pre-established markup rates or agreed-upon margins.

Open-book contracts often come with a strong governance framework to ensure both parties adhere to agree upon pricing and accounting standards. This transparency can strengthen business relationships, but it can also entail additional administrative work for both the haulier and the client<sup>69</sup>. A drawback is that it usually limits the haulier's profit margin to a predetermined range, regardless of operational efficiencies they may achieve.

### **3.3.1.6.2 Closed Book Pricing Contracts**

Closed-book pricing contracts, on the other hand, are based on a pre-negotiated rate that remains fixed for the term of the agreement. These contracts are simpler and require less administrative work as there's no obligation to disclose cost structures or profit margins<sup>68</sup>. However, they pose a risk for hauliers when there are significant fluctuations in operational costs. For example, a sudden hike in fuel prices can erode profit margins, and the haulier may not have the contractual ability to pass these costs on to the end-user.

Closed-book contracts often require hauliers to be adept at cost prediction and risk management to ensure profitability<sup>70</sup>, which may not be possible in smaller operations. Sometimes these contracts might hold clauses that allow for price adjustments under specific conditions, like a sudden increase in regulatory fees, but these are generally hard to negotiate and activate, and are entirely dependent on the resourcing and experience capability of the haulier.

## **3.3.2 Supply Costs and Prices**

In the haulage industry, the two key variables that commonly command most attention are haulage supply costs and the prices charged to end-users. These costs encompass a range of operational expenditures, including fuel, labour, maintenance, and other overheads. The prices are what the end-users ultimately pay for the haulage services. While one might assume a straightforward relationship between these two variables, the actual dynamics are influenced by multiple factors, including the type of end-user.

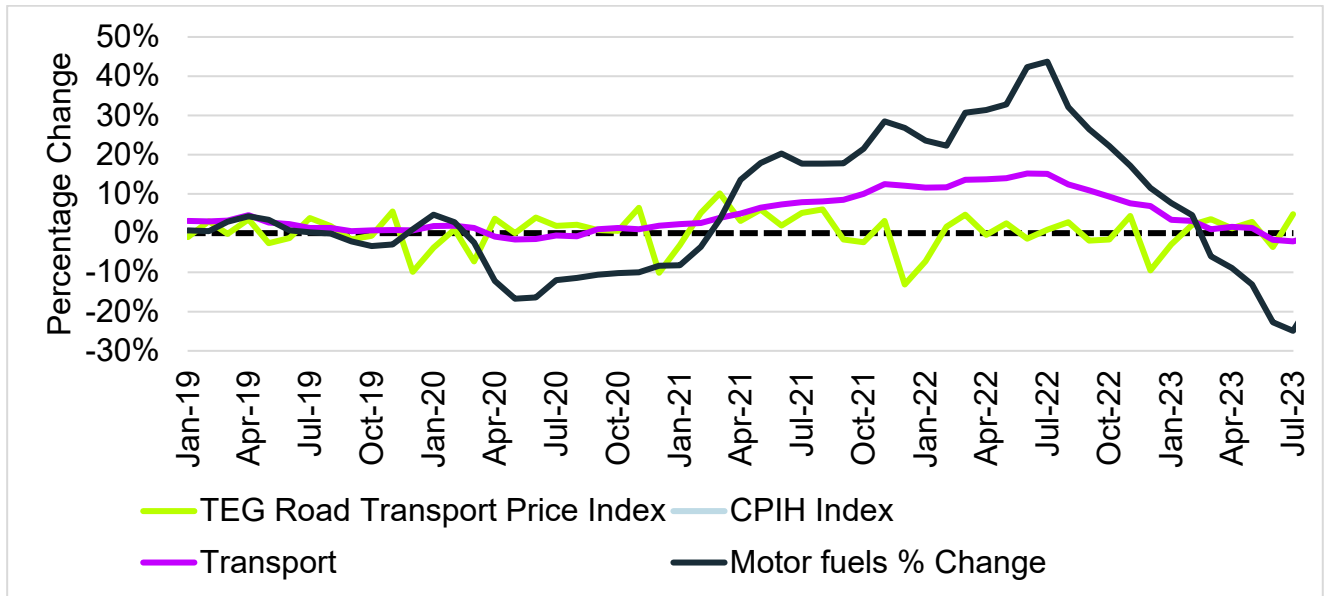
The Transport Exchange Group (TEG) Road Transport Price Index is a monthly index that charts the price-per-mile cost for UK haulage and courier vehicles. It is based on data from over four million aggregated and anonymised transactions on the TEG platform.

The index is calculated using an arithmetic weighting system, which means that each vehicle type is weighted according to its mileage mix. This ensures that the index accurately reflects the overall price-per-mile cost for the UK road transport market<sup>71</sup>.





**Figure 3-10 - TEG Road Transport Price Jan 19- Jul 23**



Source: TEG Road Transport Price, Office for National Statistics

The TEG Road Transport Price Index demonstrates that pre-COVID freight costs were relatively stable, with only minor fluctuations. However, the COVID-19 pandemic caused a significant spike in freight costs, which peaked in January 2022. Despite the end of the pandemic, other market variables, such as fuel prices, driver shortages, international pressures, and inflation, have kept freight prices elevated and volatile. This generally matches market trends, and it is generally noteworthy that the industry has managed to stabilise costs (at least for the moment) in light of significant external pressures when compared to the general CPI.

Table 3-3 displays the Pearson correlation coefficients between different variables: Consumer Price Index including Housing (CPIH), CPIH Index Transport Costs, CPIH Index Motor Fuels, and the TEG Road Transport Price Index Value. A correlation coefficient is a number between -1 and 1 that indicates the strength and direction of a relationship between variables.

**Table 3-3 - Road Price Index Correlation Analysis Matrix**

	TEG Road Transport Price Index	CPIH Index	CPIH Transport Index	CPIH Motor Fuels Index
TEG Road Transport Price Index	1.00	0.50	0.66	0.61
CPIH Index	0.50	1.00	0.76	0.76
CPIH Transport Index	0.66	0.76	1.00	0.91
CPIH Motor Fuels Index	0.61	0.76	0.91	1.00

Source: TEG Road Transport Price, Office for National Statistics



1. CPIH and Transport Costs (0.76): A strong positive correlation suggests that as general consumer prices (CPIH) rise, transport costs also tend to increase.
2. CPIH and Motor Fuels (0.76): There is a strong positive correlation between CPIH and motor fuel costs. This indicates that an increase in inflation is likely to correspond to an increase in the cost of motor fuels.
3. Transport and Motor Fuels (0.91): A very strong positive correlation exists between transport costs and motor fuel prices. This indicates that a change in one is highly likely to be accompanied by a change in the other, almost in a lockstep fashion.
4. Index Value Correlations: The TEG Road Transport Price Index shows the following correlations with the other variables:

CPIH (0.50): A positive correlation, but not overly strong. Therefore, it is not possible to conclude that a relationship between general consumer prices and the TEG Road Transport Price Index exists.

Transport Costs (0.66): A moderately strong positive correlation indicates that as transport costs increase, the TEG Road Transport Price Index is also likely to go up.

Motor Fuels (0.61): A moderately strong positive correlation suggests that an increase in motor fuel costs is likely to result in an increase in the TEG Road Transport Price Index.

This analysis indicates that the TEG Road Transport Price Index is correlated with changes in consumer prices, transport costs, and motor fuel prices, but does not provide evidence of a direct causal link.

### Summary

- Data from IBISWorld and FAME indicates UK road freight sector profits are below the UK economy average profit, but higher than profit margins indicated by industry sources.
- Higher profits are generally recorded by smaller businesses, with larger businesses recording lower profits. This is likely a product of financial reporting, where small business owners draw down profit as a dividend in lieu of higher wages. Consequently, true business profitability is likely lower.
- Industry revenues are closely linked to fuel prices, leading to considerable fluctuation over recent years, and large increases during 2022/23.
- Between 2019 and 2023, there has been a 24% increase in UK road freight sector turnover, and an accompanying 16% increase in employment, suggesting increased efficiencies throughout the sector.

## 3.4 Investment

### 3.4.1 Current investment

Current investments are directed towards vehicles, software and digitisation, alongside staff training and development. The scale and nature of these investments varies according to the size of the company and the specific operational challenges encountered. However, as



explored in more detail in section 3.4, the UK road freight industry generally has a suboptimal credit rating, which could make investment through financial instruments more challenging and costly.

This section outlines investments being made across the industry, with an emphasis on larger enterprises. This focus reflects a lack of visibility into the investment activities of smaller firms, underscoring a discrepancy in transparency. Additionally, these case studies shed light on the prevalent and anticipated investment trends across the industry.

### **3.4.1.1 Vehicles and Decarbonisation**

Investments in vehicle procurement represent a significant outlay for road freight businesses. At present, diesel HGVs require less upfront investment than zero-emission HGVs<sup>17</sup>. This subject is explored in greater depth within Section 3.6 of the report, with a particular emphasis on smaller enterprises, where the focus predominantly lies on the capital investment required for vehicle acquisition and ongoing maintenance.

Larger businesses are generally at the forefront of investments into vehicles. For example, DPD announced that they would switch their entire diesel HGV fleet to Gd+ HVO, an advanced hydrotreated vegetable oil (HVO) fuel, in partnership with integrated energy provider, Essar and Green Biofuels Ltd. This fuel will help them achieve 87% reduction in CO<sub>2</sub> emissions across 1,600 HGVs<sup>72</sup>.

### **3.4.1.2 Software and Digitisation**

Companies are also investing in software to help digitise their businesses, which is having impacts across three distinct areas. Firstly, enhanced integration software is helping logistics companies to integrate their trucking fleet into their logistics chain. This has become possible by the availability of real time data about location, shipping requirements, estimated time of arrival and other external information like weather or road conditions. Software and IT investments are also leading to better utilisation levels, reducing the proportion of time spent by vehicles running empty. Consequently, fleet productivity can be increased.

Again, larger businesses are at the forefront of investments into technology; Eddie Stobart has been investing in technology, which has improved productivity and utilisation. Research by IBIS World identifies the importance of businesses optimising operating capacity. By doing this they will be maximising capacity utilisation which is a must to raise revenue and profit. For example, DHL utilise big data and predictive analytics to monitor movements of shipments and flag issues in real time, helping them to deliver shipments on time<sup>14</sup>.

Smaller companies are also using technology to enhance their businesses. Rhino Express uses software called Mandata GO in order to book and price jobs, check vehicles, track deliveries and for navigation.<sup>73</sup> This increases their productivity and reduces operating costs, enabling continued competition.

### **3.4.1.3 Staff and Training**

Freight road transport includes many owner-drivers that reinvest heavily in their companies or draw down on their equity to supplement their wage.<sup>17</sup>

Larger organisations have faced challenges in light of driver shortages (further discussed in section 3.2.4.2). Consequently, investments have been made into staff recruitment. The Generation Logistics campaign<sup>74</sup>, launched in August 2022, aims to increase awareness of

and positive sentiment towards the logistics sector through targeted messaging. The primary audience for the campaign has been young people, with messaging and materials being delivered online and through schools and colleges to prepare the future skills pipeline and inspire the next generation of talent to consider a career in the sector. The campaign works closely with large industry partners, including ASDA, DHL, Maersk, Stobart, Tesco and Wincanton to promote the variety of roles on offer and insights into working life within the sector.

Technology is also being leveraged to enhance staff training. For example, the Conqueror Freight Network provides an online platform offering courses that help employees to understand the complexities of logistical operations, improve problem solving skills and helps companies get a competitive edge over other businesses. It can be used to help new employees learn the basics of the industry<sup>75</sup>.

## **3.4.2 Drivers for Investment**

### **3.4.2.1 Competition**

As a result of the relatively low barriers to entry to the road freight industry there are over 50,000 road freight enterprises across the UK<sup>15</sup>, with over 90% of these businesses being classed as SMEs<sup>76</sup>. Consequently, competition between businesses is high<sup>15</sup>, meaning companies must invest into their businesses to remain competitive.

The reason behind larger companies investing into digitisation is because this helps them to gain an advantage over companies not using this type of software. If companies operate below capacity, they can lose money and lower their profits.

### **3.4.2.2 Political and Regulatory Changes**

The UK government's announcement in November 2021 to end the sale of new non-zero-emission HGVs weighing 26t and under by 2035, with all new HGV sold by 2040<sup>77</sup> needing to be zero emission will be a significant driver for the uptake of zero emission vehicles over the coming years, as companies replace their current largely diesel-powered fleets with new zero emission vehicles. To further support the transition away from fossil fuels, in 2023 the UK government has announced the winners of the £200 million Zero Emission HGV and Infrastructure Demonstrator programme. The programme will demonstrate hundreds of zero emission, 40-44t HGVs on UK roads in both battery electric and hydrogen fuel cell technologies alongside their associated recharging and refuelling infrastructure<sup>20</sup>. The evidence base created by the programme will be published, and used by industry to inform future investment decisions on which zero emission technology may be best suited for specific use cases within the UK's road freight fleet. In October 2023, the government ran a Call for Evidence which sought views on the current and future supply, uptake and use of ZE HGVs and coaches across the UK, as well as their refuelling and recharging infrastructure. It closed on 14 December receiving 88 responses and will be used to inform an infrastructure strategy.<sup>78</sup>

Additionally, the Plug-in Truck Grant Scheme is funded until at least FY 2024/25. This scheme subsidises the purchase price of zero emission commercial vehicles by providing a maximum 20% discount on the purchase price, with a grant of up to £25,000 for HGVs over 12 tonnes<sup>79</sup>. All grants remain under review. Further discussion on fleet replacement can be found within section 3.6.



### 3.4.3 Barriers to Investment

#### 3.4.3.1 Access to finance

Access to external finance is a significant barrier preventing investment by businesses within the road freight sector. This is discussed in more detail in section 3.5.3 with particular reference to creditworthiness. A UK survey published by BVA BDRC, covering external finance options in 2021, identified that 78% of small to medium sized businesses within the transport, storage, and communication sectors, would prefer to “accept a slower rate of growth rather than borrowing to grow faster”<sup>17</sup>. This finding suggests a low appetite for taking on debt, potentially linked to the industry’s low profit margins and fluctuating costs.

#### 3.4.3.2 Infrastructure for decarbonisation

As the UK road freight sector increasingly adopts zero emission vehicles, supporting public and private refuelling infrastructure may also be required. Infrastructure needs will depend on the mix of vehicle technologies and journeys being undertaken. For battery powered vehicles it is likely to require public fast charging infrastructure and/or depot recharging infrastructure, and upgrades to electricity networks to facilitate supply<sup>80</sup>. Hydrogen powered vehicles may also require access to public or private hydrogen refuelling facilities, which in turn require the production and/or transportation of hydrogen<sup>80</sup>.

At present, there is much debate regarding the required quantity and power rating of battery electric vehicle chargers. Research by Transport Scotland argues that 150kW chargers will be required as a minimum due to the capacity of HGV batteries, while charging infrastructure will need to be provided at many public sites alongside private depots<sup>81</sup>. In contrast, research by Element Energy has found that out of a potential requirement of 400,000 HGV chargers, 97% can be rated at 100kW or lower, as vehicles will be able to recharge overnight. The study does however recognise that enroute and destination charging will need to have a higher rating (potentially up to 1 MW) to facilitate fast charging and reduce vehicle downtime<sup>82</sup>. In order to stop localised power failures, power demands will also have to be met<sup>83</sup>.

Work is underway to overcome this barrier, with organisations such as GRIDSERVE committing to install over 200 High Power chargers across key motorway service areas and more than 10 commercial depot charging locations across the UK<sup>84</sup>. In October 2023, the government ran a Call for Evidence which sought views on the current and future supply, uptake and use of ZE HGVs and coaches across the UK, as well as their refuelling and recharging infrastructure. It closed on 14 December receiving 88 responses and will be used to inform an infrastructure strategy. <sup>78</sup>.]

#### Summary

- Investment across the sector is currently directed towards vehicles and decarbonisation, software and digitisation, and staff and training.
- Investment is largely driven by a need to retain competitive advantage in a crowded marketplace, and to remain in line with changing regulatory and political environments.
- Poor sector creditworthiness, and reluctance to turn to external finance, could be inhibiting sector growth and investment. Many smaller and medium sized businesses would prefer to accept slower rates of growth rather than borrowing money to grow faster.

## 3.5 Financial Indicators

### 3.5.1 Interest Rates

Interest rates are an important metric, representing the percentage charged by lenders on top of the borrowed amount. Rates are an indicator of the terms and conditions under which companies can access capital, and reflect their creditworthiness, the level of risk perceived by the lender, and prevailing economic conditions. Interest rates directly influence the overall cost of investment and the financial sustainability of operations, thereby impacting strategic decisions such as fleet expansion, technology upgrades, and competition in the sector. Understanding these rates is an important part of assessing the financial health of road freight companies, their capacity to grow and compete, and the overall attractiveness of the sector to investors in the future.

#### 3.5.1.1 Interest Coverage Ratio

The Interest Coverage Ratio (ICR) is a financial metric used to determine the ability of a company to pay the interest on its outstanding debt. The ICR is calculated by dividing a company's EBIT by its interest expenses for the same period:

$$\text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest Expenses}}$$

**Table 3-4 - Interest Coverage Ratio – Interpretations and Definitions**

<b>Poor Interest Coverage Ratio</b>	<b>Average Interest Coverage Ratio</b>	<b>Good interest Coverage Ratio</b>
An ICR below 1.5 suggests that a company's earnings may not be sufficient to cover its interest payments. An ICR below 1 indicates that the company is not making enough to cover its interest expenses, which could lead to difficulties in sustaining operations without restructuring its debt or improving its earnings.	An ICR between 1.5 and 3 suggests that a company has adequate earnings to service its debt, but it may not have a significant margin of safety. Economic downturns or unexpected expenses could put pressure on these companies.	A high ICR, generally above 3, is considered good as it indicates that the company is well-capable of paying its interest obligations from its operational earnings. An ICR of 3 means that the company is making three times more in earnings than what it needs to pay in interest.



**Table 3-5 – Interest Coverage Ratio – UK Road Freight sector<sup>76</sup>**

<b>Small Businesses (Revenue &lt; £10.2m)</b>	<b>Medium Businesses (Revenue £10.2m - £36m)</b>	<b>Large Businesses (Revenue &gt; £36m):</b>
<b>ICR – 201.2</b>	<b>ICR – 43.8</b>	<b>ICR – 2.4</b>
With an interest coverage ratio of 201.2, small businesses are in an excellent position regarding their ability to pay interest expenses. This very high ratio reflects robust earnings and suggests that these businesses are less vulnerable to financial distress due to interest payments. This high ratio may also indicate that these entities carry little to no debt. This could be attributed to a preference for cash purchases or the use of leasing options for assets. It may also reflect a business model where the contracting partner supplies the necessary vehicles or equipment, thereby minimising the need for the small business to incur debt for capital expenditures.	Medium-sized businesses show an interest coverage ratio of 43.8. This is lower compared to small businesses but still indicates a strong ability to meet interest obligations from earnings, which is a healthy sign for financial stability. This suggests a balanced approach to leveraging, where debt is present but kept within sustainable levels relative to their earnings.	The ratio for large businesses is 2.4, which is significantly lower than the other categories. While a ratio above 1 means they can still cover interest expenses, it suggests that large businesses have either higher debt levels or lower earnings relative to their interest obligations. This could be due to larger capital requirements and investments which are often financed through debt. The relatively lower ratio indicates that while they can meet their interest obligations, they do so with a smaller buffer, which can be a sign of higher levels of debt.

*Source: IBIS World, 2023*

### **3.5.2 What are the barriers and drivers of medium- and long-term investments?**

The subsequent analysis deploys a framework to identify and assess the principal factors affecting investment decisions within the road freight sector. As demonstrated in the accompanying table from the European Investment Bank's "Breaking Down Investment Barriers at Ground Level," this framework identifies and categorises the predominant challenges and incentives that shape the investment landscape.

Four overarching categories emerge as focal points: regulatory factors, the breadth and depth of the market, limitations faced by public-sector entities, and the degree of financial accessibility.

**Table 3-6 - Challenges and incentives which shape the investment landscape**

Category	Costs	Risks	Barriers to Competition
Regulation	Regulatory burdens and administrative procedures; regulatory fragmentation	Regulatory uncertainty	Barriers to market entry and exit; incentives in regulated sectors (e.g., utilities)
Market size and structure	Market fragmentation	Lack of standards	Implementation of competition law and policy
Public-sector promoter constraints	Infrastructure, public sector efficiency, and capacity	Weak planning and project preparation capacity	Possible unintended consequences of public procurement procedures
Access to finance	Cost of finance	Financial instability, unavailability of instruments to allocate risk	Limiting entry into new product and geographical markets

*Source: Frontier Economics, adapted from World Bank (2005) and other literature*

In the preceding sections, regulation, market size and structure were discussed in a general context, outlining their broad impacts across the road freight industry. In this section, these variables are further explored, scrutinising specific influence on shaping investment profiles within the sector. Additionally, the overarching theme of barriers to competition is revisited, examining how these regulatory and market elements affect strategic investment decisions that drive long-term industry finance.

### 3.5.3 Barriers to Accessing Finance and Investment

The FAME database provides aggregated credit score data for UK industrial sectors, including the UK road freight sector. Credit ratings indicate a company’s creditworthiness and probability of repaying debt or becoming insolvent. Lower credit scores suggest a higher risk of insolvency, and companies with lower credit ratings may find it harder to access funding for investment or to service debt. The following bands show the scoring range within the FAME database, and the associated description:

Score	Rating
00 -20	High Risk
21 -40	Caution
41 – 60	Normal
61 - 80	Stable
81 - 99	Secure

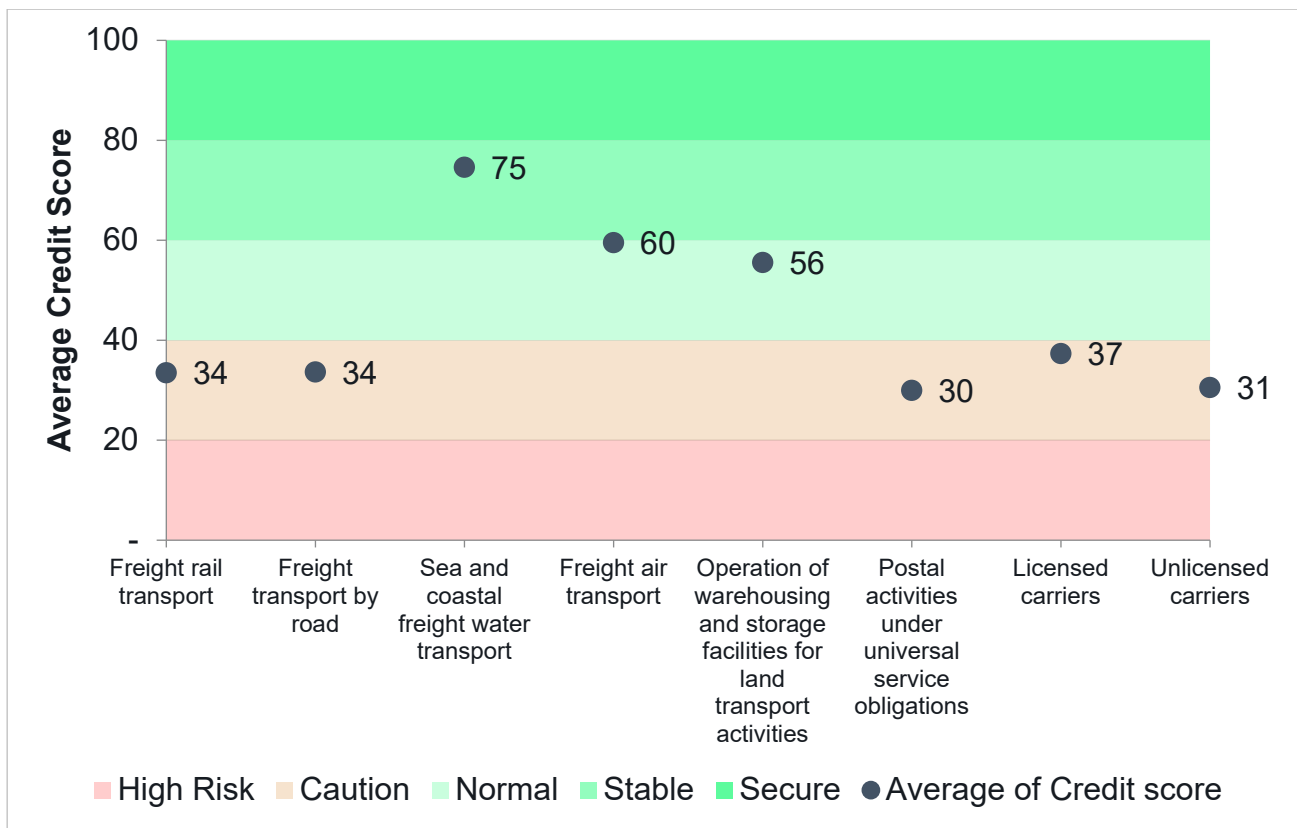


Company credit scores are based on analysis of around 100 data points relating to each company including:

- Company accounts and financial information (including turnover, profits, assets, debts and liabilities)
- Non-account factors (including late filings of accounts, number of CCJs and auditors' qualifications on accounts)
- Company activity and demographics (including company age, sector and number of employees)

Ratings are calculated on the basis of the above factors and consider the overall financial strength of the individual company and wider determinants. Wider determinants include the SIC code of the company, with financial strength metrics and insolvency probabilities varying by sector. As such, lower credit scores are a product of both the financial performance of individual companies, and historic performance of the sector as a whole.

**Figure 3-11 - Average Credit Score**



Source: FAME

Figure 3-11 - Average Credit Score provides information on average credit scores for the UK road freight sector, and other comparable UK sectors. The average UK road freight sector credit rating is in “caution”, which could deter or cause delay with borrowing from lenders and present a barrier to accessing finance in the future if it remains at the “cautionary” level. The UK rail freight, postal activities under universal service obligations, licensed and unlicensed carriers also have “cautionary” credit score ratings, meaning these sectors may face similar challenges when attempting to obtain credit.



Some comparator sectors have higher credit scores, this includes the operation of warehousing and storage facilities, which has a “normal” average credit score. The freight air transport and sea and coastal freight water transport sectors both have “stable” credit scores, representing the greater financial strength and reduced insolvency probabilities for organisations operating in these sectors.

The FAME database also holds regional average credit scores for companies across the UK. This is presented in Table 3-7. Although the UK road freight sector as a whole has a “cautionary” credit score, road freight businesses in North-East England, Northern Ireland and Scotland have higher “stable” credit scores. Businesses in the Midlands and East of England have the lowest credit ratings, despite the geographical advantages of the Midlands golden triangle area, suggesting the large number of businesses may be leading to high levels of competition.

**Table 3-7 - Regional Average of Credit Scores by SIC Code**

	East Midlands	East of England	London	North East	North West	Northern Ireland	Scotland	South East	South West	Wales	West Midlands	Yorkshire and The Humber	Sector average
Freight rail transport	18	31	55	-	23	-	99	19	-	-	20	-	34
Freight transport by road	32	28	29	68	38	65	66	33	42	39	30	36	34
Sea and coastal freight water transport	-	70	81	32	84	99	-	63	35	99	52	23	75
Freight air transport	-	34	60	-	74	-	-	53	-	-	-	-	60
Operation of warehousing and storage facilities	75	43	55	64	61	30	53	45	45	24	81	94	56
Postal activities under universal service obligations	28	20	29	22	29	-	-	50	25	17	32	-	30
Licensed carriers	42	33	45	26	37	99	36	25	22	38	38	39	37
Unlicensed carriers	31	34	31	31	23	36	56	31	26	36	25	33	31
Regional average	33	29	41	57	41	61	63	35	38	39	31	37	36

Note: “-“ denotes unavailable data due to sample sizes and/or unavailability of data for the specific region/SIC Code



### 3.5.4 Dependencies and cross-sector innovation

The reliance on external investment for innovation within the road haulage sector is significant<sup>85</sup>. This dependence is particularly evident in the adoption of green technologies and the integration of advanced logistics software systems. For instance, the shift towards zero emission vehicles in haulage is currently supported by external financial backing through technological partnerships, government funding (through Innovate UK), vehicle acquisition grants, and local authority initiatives<sup>86</sup>.

A key word analysis of Innovate UK's open investment data<sup>87</sup>, particularly focusing on keywords such as "freight," "HGVs," and "logistics," reveals a pattern in the allocation of funds. Investments are directed towards diverse consortiums comprising entities like universities, technology providers, warehousing and retail companies, and various localities. This approach highlights a strategic preference for collaborative innovation, rather than a single-entity-led investment model, especially in the context of decarbonisation pathways in the road haulage sector.

#### 3.5.4.1.1 Warehousing and logistics

Goods move across the UK using more than one mode of transport. Warehousing and its road and rail connections shows how goods frequently move through the network. As reported by Knight Frank 40 million sq. ft. of warehousing was completed in 2021, up from 20 million the previous year. This increase in warehouse space resulted from an increase in online sales, particularly with non-essential shops closed during COVID. Retailers and distribution centres had to quickly adjust by expanding storage and delivery services.

Below is a summary presented in the Understanding of the UK Freight Transport System report<sup>24</sup> by the government Office of Science which might explain how road haulage operators are reliant on logistics and warehousing. Road hauliers, particularly small and medium sized businesses move goods from one location to another depending on customer locations. These small to medium-sized businesses operate up to 1,000 vehicles and drivers and range from publicly quoted companies through to family-owned businesses and owner drivers.

Many of the smaller road hauliers struggle to generate the economies of scale available to the larger players, thus they focus on offering services in specialist sectors such as bulk chemicals and temperature-controlled foods. The degree and level of outsourcing to logistics companies can vary, but typically it involves outsourcing day-to-day operations (distribution centres, inventory management and transport operations), while shippers maintain overall control of the supply chain (the structure of the supply chain, the number and location of distribution centres and modal choice), controlling inventory levels and purchasing policies.

To ensure HGVs are always busy and given the limited opportunities available to smaller businesses, their key commercial operating strategy is to secure long-term contracted work directly from shippers and receivers, along with sub-contracted work for larger logistics providers and spot hire loads (occasional loads for shippers with irregular shipments)<sup>24</sup>. This can include offering 'groupage' services, where part vehicle loads from a number of shippers are combined to form a full vehicle load. 2022 road freight records show that the most common type of haul lifted by GB vehicles for the 12-month period ending June 2022 was groupage<sup>21</sup> (21% of goods by weight).



Palletline and Pallex<sup>i</sup> established pallet load networks to target shippers seeking to move less than full-load consignments on a next day basis. Road hauliers belonging to these networks will transport full loads from each of their home areas (comprising pallets from multiple customers) into a central hub which is normally located in the Midlands. The pallets are then cross docked onto other vehicles for onward delivery (usually by another haulier in the network from the destination region). By sharing loads in this manner, operators are able to fill vehicles in both directions, and can offer low-cost express 'next day' deliveries on a nationwide basis.

### Summary

- Larger businesses have a lower interest coverage ratio, suggesting they have higher levels of debt in relation to earnings before interest and taxes.
- Average credit scores for the UK road freight sector are cautionary, which could pose a barrier to accessing borrowing facilities.
- UK road freight sector credit scores vary by region, with the Midlands and London having the lowest scores, and businesses headquartered in the North-East, Northern Ireland, and Scotland having the highest scores.
- Sea and coastal transport, freight air transport, and warehousing businesses have higher average credit scores.

## 3.6 Fleet Operations

### 3.6.1 Purchasing and leasing of vehicles

Data identifies that 44% of HGVs in the UK are purchased outright (either new or second-hand), 33% are being purchased using an operator lease or hire purchase scheme, while the remaining 23% are rented or similar<sup>17</sup>. Micro, small and medium sized businesses have different vehicle acquisition practices in comparison to large businesses. Typically, larger businesses lease vehicles for a period between 2-7 years<sup>88</sup>, enabling them to acquire newer and more sustainable vehicles. In contrast, smaller businesses are more likely to acquire second-hand vehicles, purchasing the vehicles outright<sup>17</sup>.

### 3.6.2 Financing Models

Due to the large number of businesses within the road freight industry and the range of sizes of these businesses there are a wide range of different financing models that businesses use in order to obtain their vehicles<sup>89</sup>. These include:

#### Existing Financing Models

- Hire Purchase – A first payment is paid by the owner and the remaining value of the vehicle plus interest will be paid off through monthly payments by the owner to the financier. When

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<sup>i</sup> Pallex is a network composed of hundreds of shareholder members with countless years of palletised shipping and delivery experience between them, working in harmony to collect, consolidate and convey all manner of goods and products to destinations worldwide. No.1 for Quality Pallet Delivery & Shipping | Pall-Ex (UK) Ltd | Pall-Ex (UK) Ltd (pallex.co.uk)

the final payment is made the owner then owns the vehicle. The owner is responsible for road taxes, insurance, and maintenance.

- Operating Leases – The owner leases the vehicle and any parts of the infrastructure (for example chargers) to the operator. The ownership of the vehicle is not transferred to the operator when the payment period has finished. Leases can sometimes include taxes, maintenance, and insurance in the cost of the lease as well.
- Finance Leases – Similar to an Operating Lease, although a number of options are available after the final payment is made, including returning the asset to the owner to be sold, the operator entering a secondary lease period, or a purchase agreement.
- Term Loans – A loan taken out by an operator to purchase a vehicle. These loans are paid back in regular payments, normally over a period of one to ten years.
- Concessional Loans – A loan obtained from a financing institution (such as a government) with favourable lending conditions, such as lower interest rates, and/or longer repayment periods.
- Sale-and-leaseback (refinancing) – Typically used by an operator which owns a vehicle, which they sell to a buyer and agree to lease back, therefore freeing up capital.

### **Emerging Financing Models**

- Component Leases – The operator buys the vehicle but leases costly components such as the battery.
- Green Bonds – Bonds could be issued by Governments and financiers which could be bought by other businesses and Governments in order to support other forms of financing.
- Integrated End to End Financing (battery/trucking-as-a-service) – The operator has access to a vehicle on a managed service basis and pays for the vehicle per mile. This will normally include tax, insurance, and maintenance of the vehicle.

### **3.6.3 Vehicle ownership for HGVs and LGVs in the UK**

Table 3-8 provides an overview of the vehicle ownership split for HGVs and LGVs in the UK amongst BVRLA members<sup>17</sup>.

**Table 3-8 – Table of ways in which HGVs and LGVs were purchased in the UK**

	HGVs	LGVs
Owned outright (new or used)	44%	43%
Contract hire/operator lease with maintenance > 12 months	24%	26%
Other lease with no maintenance > 12 months	9%	3%
Flexi lease/flexi rental (6-12 months)	14%	5%
Short-term rental	-	7%
Managed by a fleet management services company	5%	-
Other	-	15%

*Total does not sum to 100 due to rounding errors.*

### **Micro, Small and Medium Businesses**

Small to medium sized businesses typically obtain older second-hand vehicles, often purchased outright. Only 30% of transport and storage SMEs with employees, and 10% of those with no employees, used leasing/hire purchase schemes in 2019, indicating their low usage for vehicle acquisition among this segment of the market<sup>17</sup>.

A reluctance amongst smaller businesses to use finance products such as overdrafts and loans is a potential factor behind this behaviour<sup>17</sup>. A BEIS (previous government Department) survey from 2021 found 70% of small to medium businesses within the storage and transport industries were “Not very likely” or “Not at all likely” to approach a provider external finance provider in the next three years<sup>17</sup>. A UK-wide survey published by BVA BDRC in 2021 supports this view as 78% of transport, storage, and communication small to medium sized businesses would prefer to “Accept a slower rate of growth rather than borrowing to grow faster” and 74% agreed that “Because the future feels uncertain, we are being very cautious with our plans for the business”<sup>17</sup>. Approximately 35% of transport and storage SMEs reported using no sources of external finance in 2019 and about 30% in 2020.

### **Large Businesses**

Larger freight operators generally acquire new vehicles using commercial leasing or finance products, enabling them to run newer and more efficient fleets<sup>17</sup>. There are a number of benefits to leasing rather than owning vehicles outright, such as breakdown response, servicing and repairs, and central fleet management including motor offences, fines and toll payments<sup>90</sup>. With the announced end of sales dates for new non-zero emission HGVs by 2040<sup>91</sup>, larger UK road freight businesses are likely to be at the forefront of the adoption of newer and cleaner technologies.

### 3.6.4 Fleet investment cycles

At present, the purchase and lease of new freight vehicles, replacing vehicles between the age of 2-7 years, drives the trickle-down of vehicles from larger to smaller businesses. Engagement with Logistics UK undertaken by the Centre for Sustainable Road Freight found that the current practices of smaller business opting for second-hand vehicles is likely to persist, potentially delaying the adoption of zero tailpipe emission vehicles by smaller businesses until the second-hand market has matured<sup>17</sup>. Even once the market has matured, Logistics UK expressed concern that vehicle purchase costs may remain a barrier<sup>17</sup>.

To support the uptake of zero-emission HGVs, the plug-in van (PIVG) and SH truck grant (PITrG) initiatives are funded until at least 2024/25. This initiative subsidises the purchase price of low emission trucks with grant rates for eligible trucks set at a maximum of 20% of the purchase price, with up to £25,000 of funding available for the largest HGVs over 12t<sup>79</sup>.

#### Summary

- Small to medium sized businesses typically obtain older second-hand vehicles, often purchased outright.
- Larger freight operators generally acquire new vehicles using commercial leasing or finance products, enabling them to run newer and more efficient fleets. The acquisition of new vehicles by larger businesses, replacing vehicles between the age of 2-7 years, drives the trickle-down of vehicles from larger to smaller businesses.
- The current practices of smaller business opting for second-hand vehicles is likely to persist, potentially delaying the adoption of zero tailpipe emission vehicles by smaller businesses until the second-hand market has matured.

## 3.7 Market Resilience

### 3.7.1 Recent Market Changes

The UK road freight sector has experienced several economic changes and disruptions over recent years. While these have also been experienced by other sectors of the UK economy, the extent and impact has varied. This section explores how the UK road freight sector has been impacted by recent economic events, and how the sector has responded.

#### COVID-19 Pandemic

The COVID-19 pandemic triggered lockdowns and other socio-economic restrictions which led to widespread disruption to the movement of goods, leading to an initial reduction in operational supply for many road freight businesses<sup>92</sup>. Restrictions halted or limited the operation of many industries, directly impacting downstream demand for freight services. Supply chain disruptions were widespread and felt internationally, as delays and uncertainties became common due to restrictions at borders and within countries. Concurrently, there was a shift in demand patterns (explored in the operational analysis directly below), primarily driven by the accelerated growth of e-commerce<sup>93</sup>.

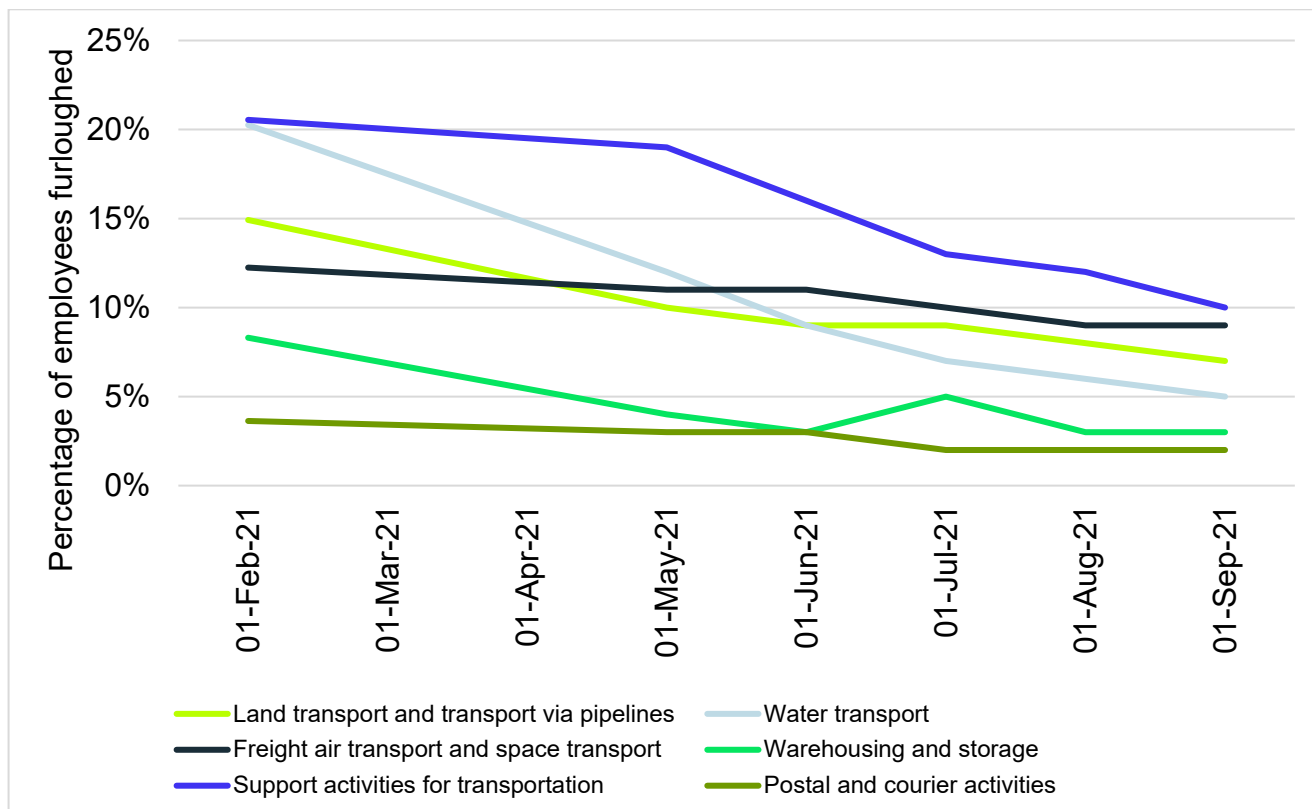
Government data from the Coronavirus Job Retention Scheme (CJRS) for 2021 (demonstrated in Figure 3-12), categorised under the Standard Industrial Classification (SIC), provides further insight into the industry's resilience. The land transport and transport via pipeline sectors





recorded a peak furlough uptake of 20% (within the 2021 period), which notably decreased over the reporting period. This uptake, which can be considered a proxy for sector resilience to Covid changes, implies that despite widespread lockdowns and the shutdown of many sectors, freight and related industries were relatively shielded from severe impacts. This data indirectly reflects the persistent operational and financial demand for services within the road freight sector, even during periods of significant macroeconomic shocks.

**Figure 3-12 Employees on Furlough February 21 - September 21**



Source: HMRC, Coronavirus Job Retention Scheme statistics Dec 21<sup>94</sup>

However, it's important to note that this data may not fully capture the financial impact of the pandemic on SMEs and smaller operators, who make up the majority of business entities. The CJRS data does not delve into the finer details of the support schemes available to these smaller entities.

A more comprehensive picture of impacts to the micro/sole traders' businesses which make up the majority of the sector can be seen from the Self-Employment Income Support Scheme (SEISS)<sup>95</sup>. Under this scheme, Land Transport and Transport via Pipelines ranked as the fourth highest claimant sector, with approximately 216,000 individuals claiming an average of £2,000<sup>ii</sup> across five claim opportunities, demonstrating the vulnerability of SMEs and sole traders to the economic conditions created the COVID-19 pandemic.

DfT Road Freight Statistics<sup>21</sup> report that between January and March 2020, the number of goods lifted was 331.8 million tonnes, decreasing by 25% to 249.6 million tonnes during April to June

<sup>ii</sup> Average value of all claims made for all grants



2020. This decrease occurred during the period when restrictions were first implemented to limit the impact and transmission of COVID-19.

Between April to September 2020, there were some signs of recovery, with the amount of goods lifted increasing closer towards usual levels, coinciding with the easing of lockdown restrictions and aligning with trends seen in road traffic levels. However, goods lifted between July and September 2020 was still 12% lower than goods lifted between July and September 2019.

Further recovery towards pre-lockdown levels was seen between October and December 2020, with the amount of goods lifted increased above the level seen between October and December 2019. The amount of goods lifted increased to 367m tonnes (13% increase), falling within the expected levels. This was during the second, 4-week lockdown and the closure of the France-UK border that stopped all accompanied freight from the UK entering France for 48 hours. This period also preceded the end of the EU exit transition period.

On the retail side, the Opus Report Road Haulage Market<sup>96</sup> reported that hauliers who service retailers found their schedules and itineraries changed at short notice. Opus cited Research from Barclaycard Payments who revealed that due to shifting consumer shopping habits, consumers have been receiving an average of two extra deliveries per month since the start of the pandemic; averaging seven parcels now compared to five before March 2020. Hauliers are having to adapt to clients switching their supply chain policy from 'Just in Time' to Just in Case<sup>iii</sup>, and holding larger inventories following the changes in market dynamics caused by Coronavirus and the EU exit.

## EU-exit

Historically, the volume of goods lifted by UK-registered HGVs has been on a downward trajectory for both imports and exports<sup>97,98</sup>, with a tendency for imports to outweigh exports in terms of volume. This trend indicates a shifting balance in trading relationships, which the sector (in particular hauliers who operate cross-border) have had to navigate.

At the end of 2020, there was a rise in transport output due to stockpiling of goods on both sides of the Channel ahead of the end of the Transition Period. The IBISWorld Freight Road Transport in the UK 2023<sup>23</sup> report suggests that uncertainty post EU referendum boosted UK freight services due to stockpiling activity enhancing demand for domestic and cross-border road haulage services.

## Fuel Prices

Section 3.3.2 explores the relationship between fuel prices and other factors, setting the stage for this assessment of the road haulage sector's resilience to economic fluctuations, especially in fuel costs. Hauliers typically employ strategies like modifying pricing contracts or referencing the

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<sup>iii</sup> Just-in-time (JIT) is a stock control method where businesses don't store any raw materials. Instead, regular deliveries are made which bring only what is needed before existing supplies of raw materials run out, so buffer stock is not needed. Just-in-case (JIC) is a stock control method that involves producing or purchasing stock with excess, or buffer stock in place. This means that there is always stock available for the business if required. JIC is very useful when there is a shortage of a certain product, or a sudden increase in demand for a particular product.

spot price for freight to insulate themselves from increased fuel costs<sup>99</sup>. However, the uniform application of these strategies across the sector is not guaranteed. While spot price changes are mostly transparent across all hauliers, the immediate reflection of intra-month price fluctuations to the end customer might vary, possibly leading to diverse pricing approaches based on the platforms and resources each haulier can access.

The capacity of hauliers to offset rising fuel expenses onto their customers is not uniform across the sector, although efforts are made across the industry by Logistics UK and RHA to maintain transparency on fuel pricing changes<sup>100, 101</sup>. Operators with “Fuel Escalation<sup>iv</sup>” instruments or cushioning through existing contracts can more effectively absorb and communicate these cost increases. In contrast, hauliers with limited ability to manage additional fuel costs may face competitive challenges, making them more susceptible to shocks. This varied capacity to respond to cost fluctuations, like fuel price increases, underlines the different levels of market resilience within the road haulage industry. The strategic use of mechanisms like transparent fuel escalation surcharges can further differentiate how companies adapt to these economic changes.

## 3.7.2 Sector Comparison

### Rail Freight

Recent challenges across the rail industry have affected both reliability and volumes, leading to a noticeable decrease in movements. This suggests a significant impact, although specific data on how rail freight disturbances influence road freight remains unavailable<sup>v</sup>.

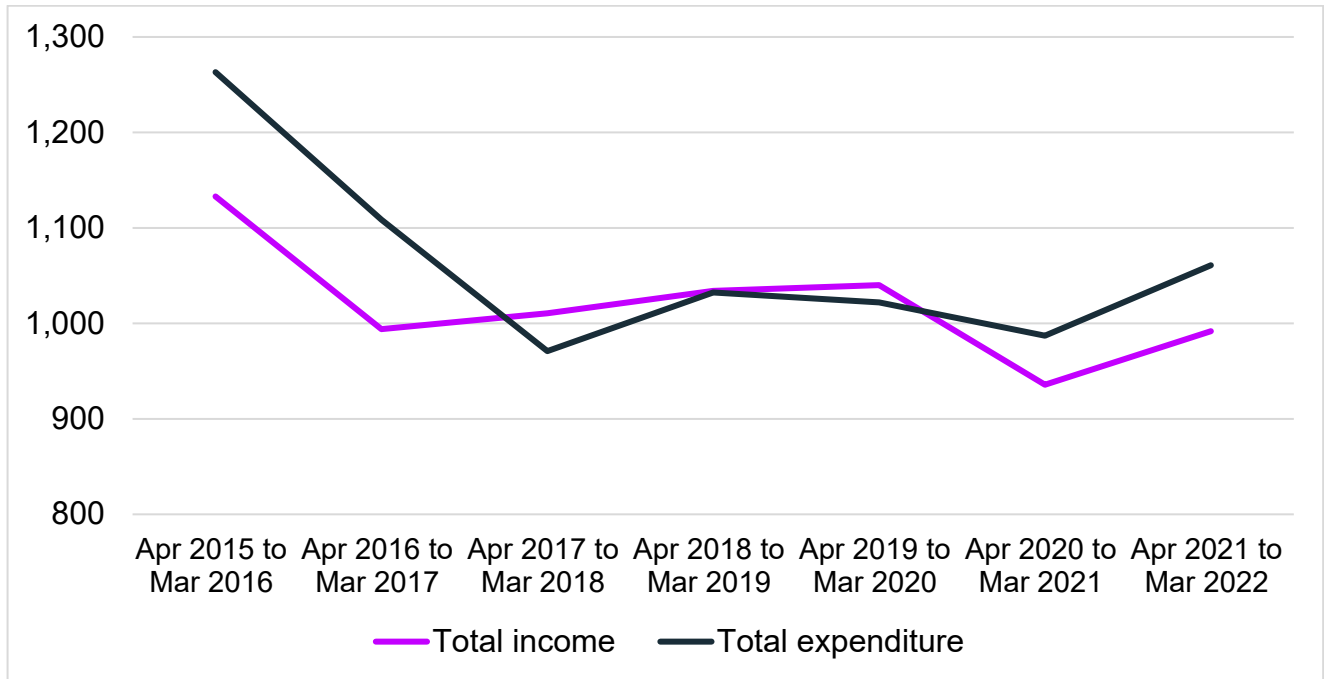
Figure 3-13 provides context to the high-level finances of the industry. Financially, the industry experienced a close balance between expenditure and income during the 2018/19 and 2019/20 financial years. However, from 2020 onwards, costs have rising above income. This trend may reflect the combined effects of COVID-19, rail strikes, fluctuating fuel prices, and other factors on the industry. It should be noted these figures closely, but not exactly, match profit levels calculated by IBISWorld presented in section 3.3.1.4. However, the general trend of fluctuating borderline profitability for the rail freight sector is present across both sources.

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<sup>iv</sup> A fuel price escalator in haulage contracts is a clause that adjusts the contract's pricing based on changes in fuel costs.

<sup>v</sup> Annual data is usually published yearly but has not been since 2020.

**Figure 3-13 Rail Freight Income and Expenditure (£millions)**



Source: ORR, *Rail industry finance (UK)*, April 2022 to March 2023<sup>102</sup>

### Van fleets

The “Understanding the UK Freight Transport System”<sup>24</sup> report indicates that there has been an increase in light goods vehicles (LGV or van) traffic. This is particularly the case in the e-commerce and urban delivery markets, where LGVs are the vehicle of choice given physical access limitations. They can also be driven using a standard car driving licence, meaning a wider labour pool is available when compared with HGVs which require specially qualified drivers.

HGV and LGV freight traffic movements, recorded by the DfT’s National Traffic Survey<sup>103</sup>, indicates that LGV traffic has increased from 32.4 billion vehicle miles in 2000 to 57.5 billion vehicle miles in 2022, representing a 77% increase. In contrast, HGV traffic has been increasing since 2012, with a decline in 2020. However, HGV traffic has still not reached the pre-2008 peak of 18.2 billion vehicle miles achieved in 2007.

Research by Professor Alan Braithwaite for the RAC Foundation<sup>104</sup> suggests that the use of LGVs is diverse and extends beyond what is typically regarded as freight transport (i.e., the carriage of goods from one location to another). Consequently, the majority of LGV movements on the road network are not associated with e-commerce deliveries. Many LGVs are used for food distribution, construction and business services (such as plumbers, electricians, fitters, etc.). Therefore, while the growth in LGV traffic on the roads is often assumed to be the result of the growth in e-commerce, it can also be related to a wider growth in service-related activity<sup>24</sup>.

DfT road traffic estimates indicate that LGV use has grown substantially over the last 25 years, increasing by 106% to 55.5bn vehicle miles in 2019. A survey commissioned by DfT<sup>105</sup> indicated that the most common primary usage of licensed vans was for ‘carrying equipment, tools and materials’ (54%), followed by ‘delivery/collection of goods’ (16%) and ‘private/domestic non-



business use' (16%). The survey results on van keepership indicated that in 2019-20 there were more business kept vans (2.1m at 58%) than those kept privately (1.5m at 42%).

### 3.7.3 Insolvency Risk

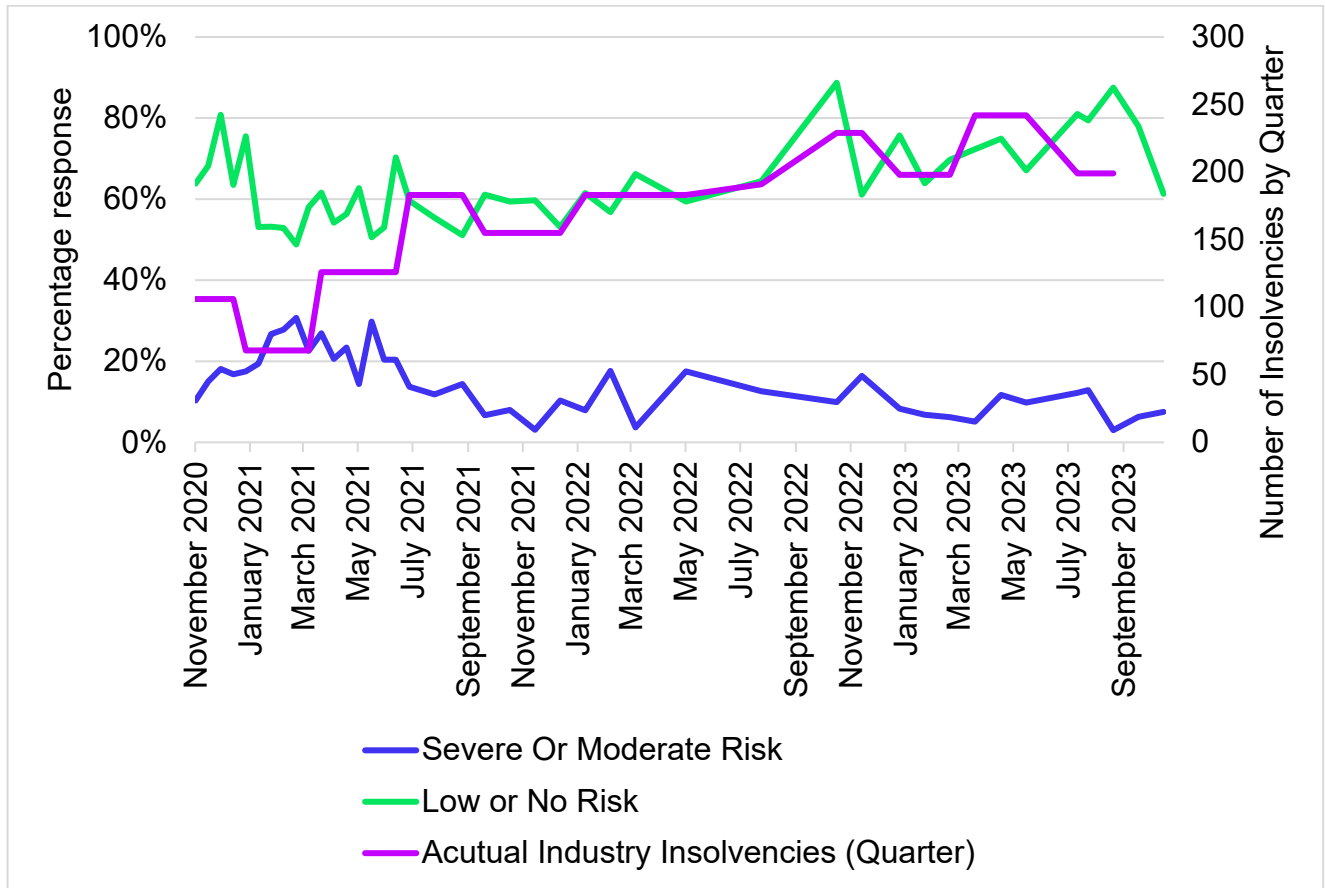
The Office for National Statistics (ONS) Business Insights and Conditions Survey (BICS), initially established as the Business Impact of COVID-19 Survey, was introduced in March 2020 as a rapid response to the unfolding pandemic. Over time, BICS has expanded its scope to encompass a broader range of policy areas, including the effects of EU exit, worker shortages, Net Zero initiatives, and notably, questions about businesses' perceived risk of insolvency. As a voluntary, fortnightly business survey, BICS gathers data on various aspects such as turnover, workforce, prices, and trade<sup>106</sup>. Figure 3-14 shows data from this survey specifically related to the Transport and Storage industry, mapped against actual insolvencies from the Insolvency Service on a Quarterly basis. The intent of this analysis was to reveal if survey respondents could accurately predict the financial position (and risk of insolvency) of their enterprise.

Analysing the disparity between the perceived risk of insolvency from survey respondents and the actual insolvency figures presents insight into the current state of business awareness and resilience in the overall industry. Historically, survey respondents have tended to underestimate their risk of insolvency, as seen in the data from 2021 and 2022, where perceived risks were often lower than the actual insolvency rates. This trend of underestimation could be due to various factors such as optimism bias, a lack of comprehensive financial insight, or the inability of survey respondents to accurately answer the question (although "Not Sure" was given as an option, this was only selected by 20% of respondents over the analysis period). Given this tendency towards underestimation, the current perceptions of risk, which appear relatively low, might not accurately reflect impending financial challenges. This suggests that there could be a likelihood of more insolvencies to follow than businesses currently anticipate.

The observed pattern, where survey respondents generally underestimate risk of insolvency, gains additional significance when contrasted with broader macroeconomic forecasts predicting a decline in insolvencies across all sectors<sup>107</sup>. This juxtaposition presents a complex picture.

- On the one hand, macro-level economic analysis suggests an improving situation with fewer businesses facing insolvency.
- On the other, the consistent underestimation of insolvency risk by individual businesses, as indicated by survey responses, suggests a potential disconnect. This could mean that while overall sector trends are positive, individual businesses may not be fully aware of or prepared for their specific risks.

**Figure 3-14 – Business Insolvency Risk**



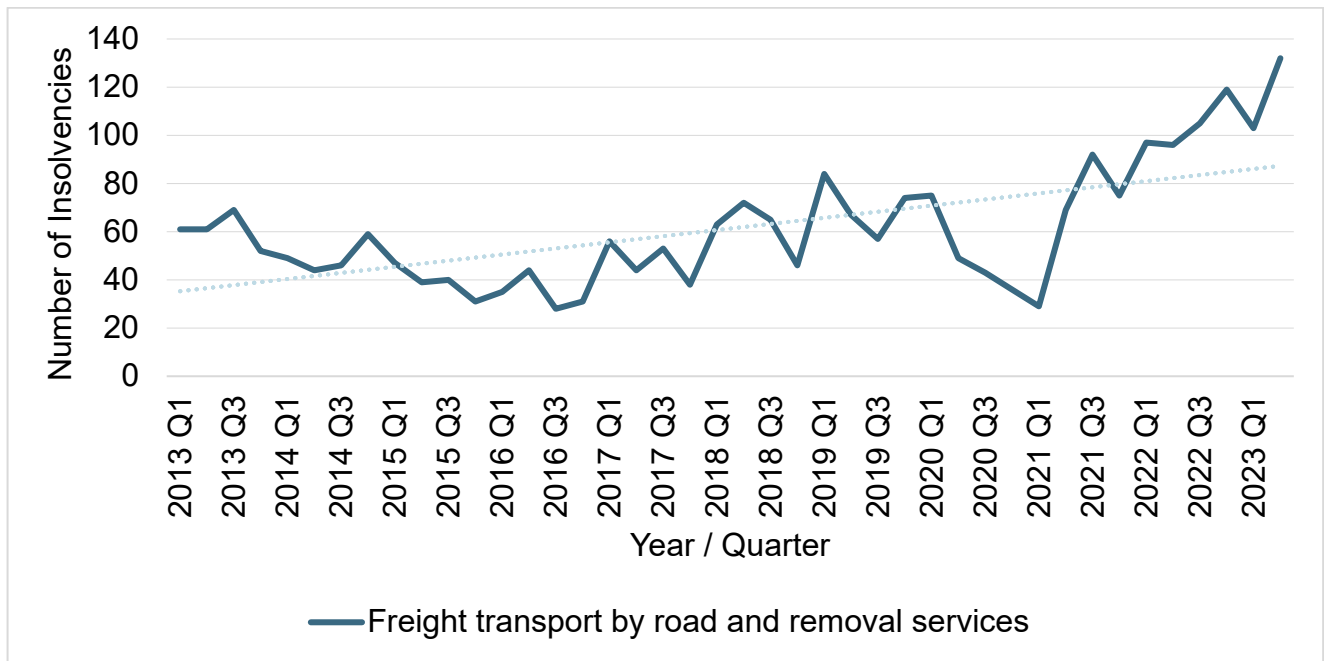
Source: *Business Insights and Conditions Survey*

Figure 3-15 looks at the number of road freight insolvencies per quarter since 2013. The graph depicts an upward trend in the number of insolvencies within the road freight and removal services sector, extending over several years. Despite seasonal adjustments, there is clear volatility with insolvency rates increasing notably in the latter quarters shown. The sharp uptick in recent quarters deviates from more stable patterns observed in earlier years.

Considering the uptrend in actual insolvencies against a backdrop of businesses reporting a low perceived risk in Figure 3-14, it's reasonable to surmise that the risk of further insolvencies in the sector is pronounced and possibly growing. This divergence suggests that the sector may continue to see an increase in insolvency rates.



**Figure 3-15 Freight Transport by Road and Removal Services Insolvencies Per Quarter**



Source: *The Insolvency Service, 2023 (England and Wales, Seasonally Adjusted)*

### Relationship with business openings

In juxtaposition to the low insolvency risk perceived by businesses in the BICS results depicted in Figure 3-15 and Figure 3-16, comparison with business establishment data reveals a more nuanced scenario. The steady influx of new enterprises up until 2022, with a minor decrease observed in 2023, coupled with an ascending trend in insolvencies, suggests the UK road freight sector is experiencing a dynamic industry environment.

The analysis of insolvency trends should be contextualised with the rate at which new businesses are entering the market. An increase in closures relative to openings could, in theory, suggest an industry undergoing a restructuring process. Such a process may be aimed at streamlining operations, which in turn could lead to reduced costs and potentially higher profit margins for the remaining entities if they weather economic conditions.

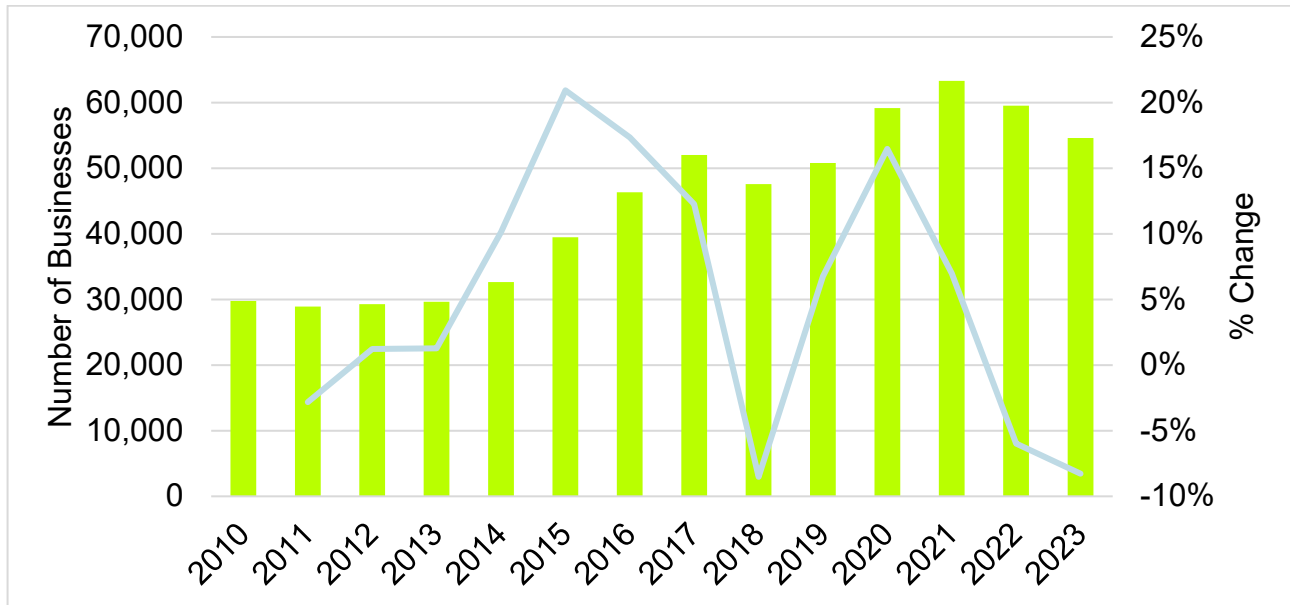
However, if the rate of new business creation is outstripping the rate of closures, this could indicate a vibrant and growing sector, despite the concurrent rise in insolvencies (which tallies with the analysis in 3.2.1 there are low barriers to entry at play). It's important to consider that insolvencies are a natural part of the economic landscape and can occur for a variety of reasons. They may reflect shifts in consumer demand, technological advancements, or changes in the macro-economic environment.

The observed increase in insolvency rates, therefore, may not necessarily signify an ailing industry but could instead indicate that the sector is undergoing a period of significant transformation. During such times, it is not uncommon for there to be a redistribution of market share as some businesses close while others emerge to fill the gap. This transition, while challenging for affected businesses, may ultimately contribute to a more resilient and efficient industry in the long term.





**Figure 3-16 Number of Road Freight Businesses, and % Change**



Source: Nomis, Office of National Statistics, 2023

### 3.7.4 Subcontractor practices

Road freight transport is an intermediate industry, providing services along the supply chain, transporting goods to consumers, construction and mining sites. Key demand drivers include business confidence, the level of industrial production, and the level of consumption. The UK road freight sector operates using a complex contracting chain; larger organisations with contracts to move goods are increasingly sub-contracting elements of large contracts to smaller companies or self-employed individuals. This is to:<sup>17</sup>

- Keep workers or vehicles off the larger businesses’ payroll or balance sheet.
- To manage peak business by having a pool of ‘flexible’ workers.

Many self-employed subcontractors have unregistered businesses, so do not appear in the UK government business database, making the true extent of these practices across the UK road freight sector difficult to quantify.

### 3.7.5 Interdependencies between operators and impact on overall resilience

Research has found the sharing of capacity and facilities is commonplace in freight transport and logistics as freight transport providers are always seeking to secure economies of scale and minimise their costs in a highly competitive market<sup>24</sup>. For example, road haulage companies collaborate to provide pallet load networks (where they transport individual pallets for individual customers and then combine them with those of other customers to fill their vehicles)<sup>23,24</sup> or shared warehousing facilities for their customers<sup>23</sup>. For other modes, such as container shipping, ferry and intermodal rail freight services, it is essential to secure a critical mass of cargo to be competitive and efficient<sup>23</sup>. The UK Road freight sector plays an important role enabling this, by often providing delivery and onward transport of individual containers.





### 3.7.6 Opportunities for diversification

A large number of individual small businesses provide road haulage services. These smaller businesses have a limited ability to diversify and offer additional services in comparison to larger businesses which can provide a broader range of services to clients. However, transportation practices across the UK road freight sector are themselves diversified through the movement of 'groupage', whereby multiple commodities are moved simultaneously on the same vehicle<sup>21</sup>.

**Table 3-9 - Top 5 commodity types lifted by GB-registered HGVs in 2022<sup>21</sup>**

Rank	Commodity	Goods lifted Rank Commodity (million tonnes)	Proportion of all goods lifted
1	Groupage	376	23%
2	Metal ore and other mining and quarrying	257	16%
3	Food products	226	14%
4	Waste related products	192	12%
5	Glass, cement, and non-metallic mineral products	121	7%

Source: Domestic Road freight statistics, United Kingdom: 2022

### 3.7.7 Current financial health of the market

IBISWorld Freight Road Transport in the UK 2023 report indicated that freight volumes experienced mixed recovery in the post-pandemic environment. There was an increase in the demand for road haulage services in line with the reopening of the economy, boosting revenue in 2021/22. The recovery in domestic freight volumes remained somewhat constrained as lingering global supply chain disruption maintained industrial activity below pre-pandemic levels<sup>23</sup>.

#### 3.7.7.1 IBISWorld Revenue

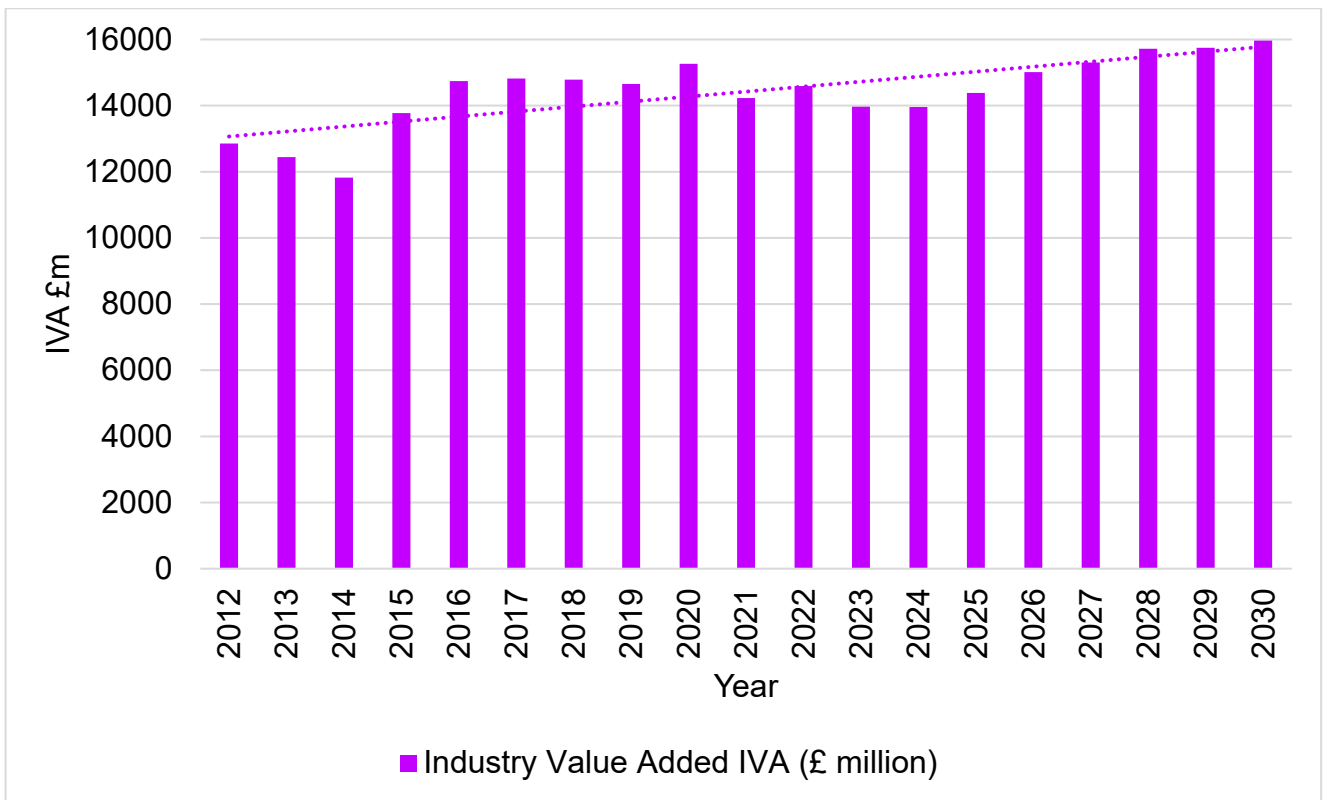
IBISWorld Freight Road Transport report<sup>108</sup> shows road freight revenue in the UK between 2012 and 2030, with forecasted data post 2022. Section 3.3 identified fluctuating revenue between 2012 until 2018, with higher revenues in 2019 and 2020. Revenue is forecasted to grow to £36.6bn<sup>108</sup> over the next five years to 2028-29, based on key external drivers such as business performance, consumer confidence, consumer spending, and demand for competing modes.

#### 3.7.7.2 Industry Value Added (IVA)

IBISWorld Freight Road Transport presents Industry Value Added (IVA) for road freight business in the UK from 2012 until 2030. IVA is the market value of goods and services produced by the industry minus the cost of goods and services used in production. IVA is also described as the industry's contribution to GDP, or profit plus wages and depreciation. Road freight contributed the most in 2020 due to high demands resulting from stockpiling in anticipation of the EU exit. Contributions are expected to continue rising from 2024 as the economy is predicted to have adjusted.

**Figure 3-17 - Industry Value Added (IVA) £m**





Source: IBISWorld Freight Road Transport in the UK, Aug 2023

### Summary

- UK transport sector recorded lower levels of furlough uptake in comparison with other sectors of the economy.
- UK transport sector claims to the Self-Employment Income Support Scheme were the fourth highest across the economy, suggesting self-employed workers were disproportionately affected by the pandemic.
- Number of Freight Transport by Road and Removal Services insolvencies has grown steadily over the past 10 years, increasing at a higher rate since 2021.



## 4. Conclusions and Next Steps

### 4.1 Market Dynamics and competition

Costs and regulatory barriers for a new entrant to the road freight sector are low in comparison to other sectors such as rail freight. An owner operator could enter the UK road freight sector for circa £42,000. Regulatory barriers, such as compliance with safety and environmental regulations, are also manageable and scale with the size of the operation. However, the regulatory landscape is shifting, for example increasingly stringent vehicle emission standards.

Moreover, while entry barriers are low, barriers to retention (i.e. businesses surviving) and scalability (i.e. access to economies of scale) are an issue as a result of low profit margins and challenges accessing finance and investment (explored in more detail below).

The UK road freight sector comprises over 54,000 businesses, with only one business, DHL Supply Chain, having a market share greater than 5%. Businesses are concentrated within the 'golden triangle' area of the midlands, which provides good access to mainland UK.

### 4.2 Profit Levels/Margins

Data obtained by this study has conservatively estimated UK road freight profit margins in the region of 9%, considerably higher than profit margins identified by industry trade bodies (however still lower than the general UK economy). It is worth noting that 'true' business profitability is likely lower, especially given the large number of SMEs within the UK road freight sector, whose owners likely draw down dividends as additional income. Evidence indicates that road freight sector profits have been in decline since 2020, a trend which can be attributed to several factors, including fuel prices, labour shortages, reinvestment of profits, and financial structures. While some of these factors, such as labour shortages, are now easing, new challenges such as inflation have emerged, leading to the continuation of a challenging operating environment.

Industry revenues are tied to fuel prices, indicating the sector is able to pass some cost increases onto customers. However, over recent years, increases in fuel prices have exceeded revenue increases, suggesting the industry has been unable to pass on all cost increases. Between 2019 and 2023, there has been a 24% increase in UK road freight sector turnover, and an accompanying 16% increase in employment, suggesting increased efficiencies throughout the sector.

### 4.3 Investments

At present, the UK road freight sector is largely investing in vehicles, software and digitisation, as well as staff and training. These investments are driven by competition and by political and regulatory changes.

Investment in vehicles is considered business as usual by the sector, which has a vehicle replenishment cycle of between 2 and 7 years. Investment in vehicles will continue over coming years, or potentially increase, as businesses purchase vehicles with zero tailpipe emissions



which, at present, have greater up-front costs than an equivalent internal combustion engine vehicle.

Software and digitisation have an important role to play for businesses looking to become more efficient in an already competitive landscape. Software packages provide the ability to more closely integrate trucking fleets and logistics chains, and plan more efficient routings, increasing vehicle utilisation and reducing empty running. The highly competitive nature of the road freight sector means investments in tools that can generate a competitive advantage are highly valuable for businesses.

The industry has responded to labour challenges by launching initiatives such as Generation Logistics, with the aim of attracting a new generation of workers to the freight and logistics sectors. Individual businesses have also offered 'golden hellos' to attract staff and incentivise new joiners.

Over the coming years, the sector will need to sustain or potentially exceed current investment levels in order to navigate ongoing market challenges and upcoming regulatory changes such as the phase out of the sale of new non-zero emission HGVs. This could include investing in new assets, such as infrastructure, but also training to familiarise workers with new technologies and vehicle types. Challenges regarding sector creditworthiness, and reluctance to use commercial finance products, may prove to be barriers to this investment, growth and change.

## 4.4 Financial Indicators

The average UK road freight sector credit rating is in "caution", which could deter or cause delay with borrowing from lenders and present a barrier to accessing finance in the future if it remains at the "cautionary" level. While some other freight and logistics sectors also have poor average credit ratings, other sectors such as freight air transport, sea and coastal freight water transport, have much stronger credit ratings. A lower credit score suggests a higher risk of insolvency and could result in difficulties accessing finance to fund investment or to service existing debts. Data indicates that smaller road freight businesses generally have lower levels of debt relative to EBIT, while larger companies have greater levels of debt relative to EBIT.

## 4.5 Fleet Operations

Typically, larger businesses acquire new vehicles using finance products, and replenish vehicles every 2-7 years. This practice sustains the second-hand market with a supply of vehicles, which are acquired by smaller businesses. Small businesses are unlikely to use finance products to procure vehicles, instead preferring to buy vehicles outright using cash.

Industry sources indicate the current practice of smaller business opting for second-hand vehicles is likely to persist, potentially delaying the adoption of zero tailpipe emission vehicles by smaller businesses until the second-hand market has matured.

## 4.6 Market Resilience

Road freight activity in the UK has fluctuated over time, with external events having all contributed to shifts in demand and market dynamics over recent years. The COVID-19



pandemic led to a 12% fall in goods lifted between July and September 2020 in comparison to the same period between 2019. However, there was a recovery between October and December 2020, with goods lifted increasing above the level seen between the same period in 2019. This increase was also linked to the UK's exit from the European Union, which led to stockpiling of goods on both sides of the Channel ahead of the end of the Transition Period.

The land transport and transport via pipeline sectors recorded a peak furlough uptake of 20%. Taking this measure as a proxy for sector resilience to the impacts of the COVID-19 pandemic suggests that despite widespread lockdowns and the shutdown of many sectors, freight and related industries were relatively shielded from severe impacts. However, furlough data does not fully capture the financial impact of the pandemic on owner-operator freight businesses, which were the fourth highest claimant sector under the Self-Employment Income Support Scheme, demonstrating the vulnerability of SMEs and sole traders to the economic conditions created by the COVID-19 pandemic.

## 4.7 Limitations and caveats

Based upon the evidence collated in the course of this study, the following limitations and caveats apply:

- Profit margins taken from FAME and IBISWorld are noticeably higher than profit margins indicated by industry sources.
- Future forecasts are derived from reputable third-party sources and have been critically assessed but should be interpreted as indicative.
- Data and sources on vehicles and operations is limited. While this study has drawn on reputable sources, the number of available sources was limited.
- Data and sources on investment practices is limited, likely due to commercial sensitivities.

## 4.8 Next Steps

The following next steps are recommended in light of the findings of this study:

- Triangulation of findings with stakeholder insights to understand the extent of alignment and challenge.
- Further research on investment to better understand the scale and perceptions of investment across business sizes.
- Further research to better understand the capabilities of the industry to respond to the net zero transition:
  - From a behavioural perspective, to develop an understanding of how the net zero transition is perceived and understood, and the industry's willingness to support the transition.
  - From an economic readiness perspective, to better understand whether the sector is able to meet the financial commitments required to adopt new technologies in light of poor average credit scores and unwillingness to utilise commercial finance products.

# APPENDICES



## Appendix A. Data Scoping

Category	Research Question	Data source	Key metrics
<b>Competition</b>	What are the barriers to entry, expansion and exit and what the reasons behind these are?	ONS Database	Capital investment (Government grants/loans, Incentives to invest, sunk costs)
	What are the dynamics between different players in the market? Who has the power to determine price; are companies price takers or price makers within the market?	FAME Database Literature including “Understanding the Freight UK system, 2019”	Top 20 haulage companies, stock prices, existing research into market share and competition
	It would be useful to understand whether there is a difference between domestic and international freight and what differences may exist within the domestic road freight market, for instance between regional and local delivery.	Eurostat database, FAME, ONS database	Regional breakdowns from ONS, data of international competitor’s P/L, turnover, company size
<b>Profit Levels/ Margins</b>	Information on profit levels and profit margins, especially time series and comparisons to other industries. In addition, information on the underlying reasons for these and the impact on the industry. We already have access to information on turnover and size so are less interested in this.	Companies House Data, FAME database Literature including “State of the UK competition” report	FAME stats- profit (before and after tax or EBITDA), turnover and size
	To understand the relationship between haulage supply costs and prices for end users and how this might vary between different types of hauliers.	Companies House Data, FAME database Literature including “State of the UK competition” report	Haulage supply costs and prices of the different hauliers e.g. FAME staff costs etc.



Category	Research Question	Data source	Key metrics
<b>Investment</b>	To understand what investment looks like for haulage firms, for instance does it focus on capital investment in HGVs?	Haulage company investment data, Data from SMMT, Investment data from other relevant sectors	Analysis of HGV and LGV fleet-over time across the sector
	To understand whether haulage firms may be able to increase capital investment in future in order to purchase zero emission HGVs and associated infrastructure.	Battery Electric Truck Trial Literature including “The Centre for Sustainable Road Freight” reports	No. of zero emission HGVs/LGVs within fleet
	To understand what the most common types of investment into the road freight industry are and how they are financed.	Haulage and warehousing company investment data	HGV and LGV fleet and supporting infrastructure. Finances e.g loans, subsidies, government grants, mergers and acquisitions
	To understand the common reasons behind investment for example, business growth/expansion, environmental regulation or tax incentives.	Literature including “The Centre for Sustainable Road Freight reports, Climate Change Committee analysis, CCP Zero Emission Road Freight reports, SME Green Freight Qualitative” Report	Compare year on year turnover, P/L to determine business growth/expansion. Investment in zero emission/hybrid vehicles environmental regulation, examples of tax break on environment and other government policies
<b>Financial Indicators</b>	What are typical interest rates, Return on Investments (ROIs) and other relevant financial metrics? This should include the use of data, sources such as Companies House (SIC 49410 – Freight transport by road) could be used.	Companies House Data, FAME database Literature including “State of the UK competition” report	Profiling of historic interest rates, Return on Investments (ROIs) and other relevant financial metrics



Category	Research Question	Data source	Key metrics
	What are the barriers and drivers of medium- and long-term investments?	Eurostat data, FAME data	Capital investment (government opportunities to grow investment)
	Do businesses face barriers to accessing finance?	Literature including Government policy documents, FAME, past research articles etc	Compare for different type of road hauliers
	To what extent are road haulage operators reliant on investment from other sectors, such as the major users of freight storage and distribution services, in order to innovate?	Trade publications such as UK Haulier, haulage journals, Companies House Data Literature including “State of the UK competition” report	Sources of investment, innovation
<b>Fleet Operations</b>	How vehicles are bought or leased by different parts of the sector and the reasons behind this decision + How firms finance the purchase or leasing of new vehicles	Data from the Society of Motor Manufacturers and Traders	FAME- paid on hire purchase and paid on leasing indicators.
	What the current cycles of investment in fleets is	Data from the Society of Motor Manufacturers and Traders	Type of freight, average age of fleets and frequency of vehicle replacements.
	How vehicles trickle down from larger to smaller operators	DVLA data	Ownership data, registration data from SMMT.
<b>Market Resilience</b>	How have businesses responded to recent economic and wider changes such as COVID-19, the EU exit, fuel price rise, HGV driver shortages and high inflation? This should include both financial and operational resilience, it would be beneficial if it could consider relationships between different variable, for instance how much did revenue change when underlying costs changed. Again, data sources such as Companies House should be considered. Has this differed between types of road hauliers?	Companies House Data, UK Enterprise analysis and ONS data/ FAME	Comparison of fuel prices, no of HGV drivers (national and international), and inflation levels before and after COVID and EU-Exit. Analysis of credit reference data from FAME.



Category	Research Question	Data source	Key metrics
	How does this compare to other relevant sectors for example, rail freight operators or van fleet operators?	Haulage company investment data, FAME	Comparison of fuel prices, no of rail freight or van fleet drivers, and inflation levels before and after COVID and EU-Exit. Analysis of credit reference data from FAME
	What are the subcontractor practices in the sector?	Literature including Government policy documents, FAME, past research articles etc	Qualitative comparisons across the sector drawn from literature and data
	How do interdependencies between operators in the sector impact overall resilience?	DfT market documentation, Government policy documents, past research articles etc	Qualitative comparisons across the sector drawn from literature
	How easily can haulage activities be diversified? For example, how can capacity shift between types of goods and different transport modes?	DfT market documentation, Government policy documents, FAME, past research articles etc	Compare for different type of road hauliers
	What is the financial health of businesses operating in the sector?	FAME Database	Indicators- company profit levels, debt levels, credit ratings, turnover
	Do many firms face going out of business in the next year and what are the factors behind business insolvencies? This should include a comparison between this industry and other relevant sectors or the UK economy as a whole. It would also be beneficial for it to include the impact of smaller operators leaving the sector?	FAME Database	Turnover and loss indicators from FAME. Taxes, costs etc

# Appendix B. Bibliography

Title	Link	Author/Publisher	Year
Freight Road Transport in the UK	<a href="#">At a Glance - H49.410 Freight Road Transport in the UK - MyIBISWorld</a>	IBISWorld	2023
Understanding the UK Freight Transport System	<a href="#">Future of Mobility: understanding the UK Freight Transport System (publishing.service.gov.uk)</a>	Foresight and Government Office for Science	2018
Domestic road freight statistics, United Kingdom: 2022	<a href="#">Domestic Road Freight Statistics, United Kingdom 2020 (publishing.service.gov.uk)</a>	Department for Transport	2023
Apply for grant funding to transport by rail and water.	<a href="#">Apply for grant funding to transport freight by rail and water - GOV.UK (www.gov.uk)</a>	Department for Transport	2023
Barrier to entry	<a href="#">BARRIER TO ENTRY   English meaning - Cambridge Dictionary</a>	Cambridge University Press & Assessment	2023
Barrier to entry	<a href="#">core.ac.uk/download/pdf/7074647.pdf</a>	Jasper Blee and Ron Kemp and Jeroen Maas and Marco Mosselman and Zoe termeer,	2003
The true cost of becoming an owner-driver	<a href="#">The true cost of becoming an owner-operator - Knowledge Hub - Commercial Motor</a>	Commercial Motor	2023
HGV Driver	<a href="#">HGV driver   Explore careers   National Careers Service</a>	National Careers Service	
GBRf spends £50m on new Class 66/7s and Class 92s	<a href="#">GBRf spends £50m on new Class 66/7s and Class 92s (railmagazine.com)</a>	Richard Clinnick	2014
GB Railfreight announce locomotive leasing deal with Akiem	<a href="#">GB Railfreight announce locomotive leasing deal with Akiem (globalrailwayreview.com)</a>	Elliot Robinson	2023
Operator costs in 2022: a year like no other	<a href="#">Operator costs in 2022: a year like no other (transportengineer.org.uk)</a>	Transport Engineer	2023



<b>Title</b>	<b>Link</b>	<b>Author/Publisher</b>	<b>Year</b>
Operator licensing in the UK	<a href="https://logistics.org.uk/operator-licensing-in-the-uk-road-freight-regulations">Operator Licensing In The UK - Road Freight Regulations (logistics.org.uk)</a>	LogisticsUK	
Being a goods vehicle operator	<a href="https://www.gov.uk/being-a-goods-vehicle-operator-overview">Being a goods vehicle operator: Overview - GOV.UK (www.gov.uk)</a>	GOV.UK	
Operator Compliance Risk Score – OCRS	<a href="https://www.transportfriends.co.uk/operator-compliance-risk-score-ocrs">Operator Compliance Risk Score - OCRS   Transport Friends</a>	Transports Friends	
Driver CPC training for qualified drivers	<a href="https://www.gov.uk/driver-cpc-training-qualified-drivers">Driver CPC training for qualified drivers: How much training you need to do - GOV.UK (www.gov.uk)</a>	GOV.UK	
Get an MOT for a heavy goods vehicle (HGV), bus or trailer	<a href="https://www.gov.uk/get-an-mot-heavy-goods-vehicle-hgv-bus-trailer-overview">Get an MOT for a heavy goods vehicle (HGV), bus or trailer: Overview - GOV.UK (www.gov.uk)</a>	GOV.UK	
Decarbonising road freight	<a href="https://assets.publishing.service.gov.uk/media/5c6fe3b040f0b647af8f35e2/decarbonising_road_freight.pdf">assets.publishing.service.gov.uk/media/5c6fe3b040f0b647af8f35e2/decarbonising_road_freight.pdf</a>	Foresight and Government Office for Science	2019
Environmental checklist for road transport businesses	<a href="https://netregs.org.uk/environmental-checklist-for-road-transport-businesses.pdf">environmental-checklist-for-road-transport-businesses.pdf (netregs.org.uk)</a>	NetRegs	
Goods vehicle operator licensing guide	<a href="https://www.gov.uk/goods-vehicle-operator-licensing-guide">Goods vehicle operator licensing guide - GOV.UK (www.gov.uk)</a>	Traffic Commissioners for Great Britain	2023
TRAIN WITH THE RHA	<a href="https://netregs.org.uk/environmental-checklist-for-road-transport-businesses.pdf">environmental-checklist-for-road-transport-businesses.pdf (netregs.org.uk)</a>	RHA	2023
IR35: MORE TAX CHANGES FOR SELF EMPLOYED DRIVERS AND HAULIERS	<a href="https://rha.uk.net/ir35-more-tax-changes-self-employed-drivers-and-hauliers">IR35: More tax changes for self employed drivers and hauliers (rha.uk.net)</a>	Paul Mummery	2022
Staying ahead of HMRC's IR35 compliance checks	<a href="https://fleetpoint.co.uk/staying-ahead-of-hmrcs-ir35-compliance-checks">Staying ahead of HMRC's IR35 compliance checks - FleetPoint</a>	Mark Salisbury	2023
IR35 REFORMS: BE PREPARED	<a href="https://driverrequire.co.uk/ir35-for-hgv-truck-and-lgv-drivers-heres-what-you-need-to-know">IR35 for HGV, Truck, and LGV Drivers: Here's What You Need to Know (driverrequire.co.uk)</a>	Driver Require	2022



<b>Title</b>	<b>Link</b>	<b>Author/Publisher</b>	<b>Year</b>
UK GOVERNMENT INITIATIVES BEGIN TO MAKE AN IMPACT ON HGV DRIVER SHORTAGES	<a href="https://www.cromwelltrucks.com">UK Government Initiatives Positive Impact HGV Driver Shortages (cromwelltrucks.com)</a>	Cromwell Truck Sales	
HGV driver shortage persists but recruitment initiatives starting to bear fruit, says Logistics UK	<a href="https://www.logisticsuk.com">HGV driver shortage persists but recruitment initiatives starting to bear fruit, says Logistics UK</a>	LogisticsUK	2022
HGV Driver Shortage Easing	<a href="https://www.transportnews.co.uk">HGV Driver Shortage Easing - Transport News</a>	Transport News	2022
How HGV bootcamps helped to ease a skills crisis	<a href="https://www.feweek.co.uk">How HGV bootcamps helped to ease a skills crisis (feweek.co.uk)</a>	FEWEEK	2023
Driver shortage top concern for UK fleets in 2023	<a href="https://www.fleetworld.co.uk">Driver shortage top concern for UK fleets in 2023 (fleetworld.co.uk)</a>	Natalie Middleton	2023
Better facilities for lorry drivers as winners of £8 million funding revealed	<a href="https://www.gov.uk">Better facilities for lorry drivers as winners of £8 million funding revealed - GOV.UK (www.gov.uk)</a>	Department for Transport and Richard Holden MP	2023
Getting it right – lorry driver facilities	<a href="https://www.transportfocus.co.uk">Getting it right – lorry driver facilities - Transport Focus</a>	Transportfocus	2023
Shortage of drivers in the EU	<a href="https://www.truckmobility-info.com">Shortage Of Drivers In The EU - Truck Mobility Info - 2023 (truckmobility-info.com)</a>	Margareta Przybyla	2023
EU DRIVER SHORTAGE SET TO TRIPLE BY 2026 IF NO ACTION IS TAKEN	<a href="https://www.rha.uk.net">EU driver shortage set to triple by 2026 if no action is taken (rha.uk.net)</a>	Paul Mummery	2022
SME Green Freight	<a href="https://publishing.service.gov.uk">SME Green Freight (publishing.service.gov.uk)</a>	Debra Crush and Matt Reynolds	2020
Digital technology in freight	<a href="https://www.parliament.uk">POST-PN-0692.pdf (parliament.uk)</a>	UK Parliament and POSTNOTE	2023

<b>Title</b>	<b>Link</b>	<b>Author/Publisher</b>	<b>Year</b>
Future of Freight: a long-term plan	<a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1085917/future-of-freight-plan.pdf">assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1085917/future-of-freight-plan.pdf</a>	Department for Transport	2022
Data-driven forwarding: a typology of digital platforms for road freight transport management	<a href="https://businesses-in-the-transportation-and-storage-sector-statistics-explained.europa.eu">Businesses in the transportation and storage sector - Statistics Explained (europa.eu)</a>	Christoph Heinbach and Jan Beinke and Friedemann	
The Logistics Report Summary 2022	<a href="https://www.ons.gov.uk/statistics/articles/the-rise-of-the-uk-warehouse-and-the-golden-logistics-triangle">The rise of the UK warehouse and the “golden logistics triangle” - Office for National Statistics (ons.gov.uk)</a>	LogisticsUK	2022
Road freight prices break records as fuel costs soar	<a href="https://www.fleetpoint.com/news/road-freight-prices-break-records-as-fuel-costs-soar">Road freight prices break records as fuel costs soar - FleetPoint</a>	Mark Salisbury	2022
UKRAINE CRISIS IMPACT ON FREIGHT AND GLOBAL SUPPLY CHAINS	<a href="https://www.tps-global.com/ukraine-crisis-impact-on-freight-and-global-supply-chains">Ukraine crisis impact on freight and global supply chains - TPS Global (tps-global.com)</a>	TPS GLOBAL LOGISTICS	2023
Energy Trends	<a href="https://assets.publishing.service.gov.uk/media/6513fe8ef6746b000da4bab5/Energy_Trends_September_2023.pdf">assets.publishing.service.gov.uk/media/6513fe8ef6746b000da4bab5/Energy_Trends_September_2023.pdf</a>	Department for Energy Security and Net Zero	2023
OPEC Oil Data Show 3 Million-Barrel Shortfall on Saudi Supply Squeeze	<a href="https://www.bloomberg.com/news/articles/2023-07-06-opec-oil-data-show-3-million-barrel-supply-shortfall-as-saudi-arabia-extends-cut">OPEC Oil Data Show 3 Million-Barrel Supply Shortfall as Saudi Arabia Extends Cut - Bloomberg</a>	Grant Smith	2023
Cost to fuel a lorry is up £20,000 a year, says haulage boss	<a href="https://www.bbc.com/news/business-64114444">Cost to fuel a lorry is up £20,000 a year, says haulage boss - BBC News</a>	Jennifer Meierhans,	2022
U.K. Truckers Warn They Must Pass on Cost of Higher Fuel Prices	<a href="https://www.bloomberg.com/news/articles/2022-07-28-uk-truckers-warn-they-must-pass-on-cost-of-higher-fuel-prices">U.K. Truckers Warn They Must Pass on Cost of Higher Fuel Prices - Bloomberg</a>	Lizzy Burden	2022
What is driving the recent surge in shipping costs?	<a href="https://businesses-in-the-transportation-and-storage-sector-statistics-explained.europa.eu/what-is-driving-the-recent-surge-in-shipping-costs">What is driving the recent surge in shipping costs? (europa.eu)</a>	Maria Grazia Attinasi and Alina Bobasu and Rinalds Gerinovics	2021

<b>Title</b>	<b>Link</b>	<b>Author/Publisher</b>	<b>Year</b>
UK government action to reduce the HGV driver shortage	<a href="https://www.gov.uk/government/news/uk-government-action-to-reduce-the-hgv-driver-shortage">UK government action to reduce the HGV driver shortage - GOV.UK (www.gov.uk)</a>	GOV.UK	
Delivering a solution to the UK's productivity puzzle	<a href="https://www.logisticsuk.com/news/2023/04/20/delivering-a-solution-to-the-uk-s-productivity-puzzle">Logistics: Delivering a solution to the UK's productivity puzzle   Logistics UK</a>	Logistics UK	
Air freight demand grows even as supply bottlenecks ease	<a href="https://www.ft.com/content/2023/04/20/air-freight-demand-grows-even-as-supply-bottlenecks-ease">Air freight demand grows even as supply bottlenecks ease (ft.com)</a>	Financial Times	
LOGISTICS CONTRACTS: OPEN BOOK VS CLOSED BOOK	<a href="https://www.daviesrobson.co.uk/news/2022/04/20/logistics-contracts-open-book-vs-closed-book">Logistics Contracts: Open Book vs Closed Book   Davies and Robson (daviesrobson.co.uk)</a>	Davies and Robson	2022
New management of GXO stops into an online forum to tell its story	<a href="https://www.freightwaves.com/news/new-management-of-gxo-stops-into-an-online-forum-to-tell-its-story">New management of GXO stops into an online forum to tell its story - FreightWaves</a>	John Kingston	2021
Wincanton refocusing on 'open book' pricing	<a href="https://www.loadstar.com/news/2023/04/20/wincanton-refocusing-on-open-book-pricing">Wincanton refocusing on 'open book' pricing - The Loadstar</a>	Charlie Bartlet	2023
Fuel prices ease as the road freight industry approaches the peak season	<a href="https://www.transportexchange.com/news/2023/04/20/road-transport-price-index-november-2023">Road Transport Price Index November 2023 - Transport Exchange Group</a>	TEG	2023
DPD to switch all diesel HGVs to renewable biofuel by end of 2023	<a href="https://www.dpd.com/news/2023/04/20/dpd-uk-to-switch-all-diesel-hgv-to-renewable-biofuel-by-end-of-2023">DPD (UK) - DPD to switch all diesel HGVs to renewable biofuel by end of 2023</a>	DPD	
Digital transformation of the road freight industry	<a href="https://www.globalialogisticsnetwork.com/news/2022/04/20/how-the-trucking-industry-is-embracing-digitization">How the trucking industry is embracing digitization (globalialogisticsnetwork.com)</a>	Gobalia	2022
HOW DIGITALIZATION HAS TRANSFORMED DHL EXPRESS' OPERATIONS	<a href="https://www.dhl.com/discover/en-global/news-and-insights/reports-and-press-releases/digitalization-has-transformed-operations">https://www.dhl.com/discover/en-global/news-and-insights/reports-and-press-releases/digitalization-has-transformed-operations</a>	DHL	2021
Transport tech: how haulage firms are embracing digitisation	<a href="https://www.smm-t.org/news/2023/04/20/transport-tech-how-haulage-firms-are-embracing-digitisation">Transport tech: how haulage firms are embracing digitisation - SMMT</a>	SMMT	2023





<b>Title</b>	<b>Link</b>	<b>Author/Publisher</b>	<b>Year</b>
Road Freight Transport SMEs: Trading, Operational and Decarbonisation Perspectives	<a href="https://api.repository.cam.ac.uk/server/api/core/bitstreams/1e7b2a30-9ddf-466d-b9af-8dbbe3a36bd9/content">https://api.repository.cam.ac.uk/server/api/core/bitstreams/1e7b2a30-9ddf-466d-b9af-8dbbe3a36bd9/content</a>	Julian Allen and Maja Piecyk and Mengqiu Cao,	2023
Generation Logistics	<a href="#">Generation Logistics</a>	Generation Logistics	
Conqueror Freight Network	<a href="https://www.conquerornetwork.com/LogisticsCourses-home.php">https://www.conquerornetwork.com/LogisticsCourses-home.php</a>	Conqueror Freight Network	
UK confirms pledge for zero-emission HGVs by 2040 and unveils new chargepoint design	<a href="https://www.gov.uk">UK confirms pledge for zero-emission HGVs by 2040 and unveils new chargepoint design - GOV.UK (www.gov.uk)</a>	Department for Transport and The Rt Hon Grant Shapps MP	2021
Key Initiatives	<a href="https://www.brc.org.uk">Key initiatives (brc.org.uk)</a>	BRC	
£200 million boost to rollout of hundreds more zero-emission HGVs	<a href="https://www.gov.uk">£200 million boost to rollout of hundreds more zero-emission HGVs - GOV.UK (www.gov.uk)</a>	Department for Transport and Trudy Harrison MP	2022
Outcome and response to the consultation on when to phase out the sale of new, non-zero emission HGVs	<a href="https://www.gov.uk">Outcome and response to the consultation on when to phase out the sale of new, non-zero emission HGVs - GOV.UK (www.gov.uk)</a>	Department for Transport	2022
The value of freight	<a href="https://www.nic.org.uk">Vivid Economics (nic.org.uk)</a>	Vivid Economics	2019
HGV Energy Infrastructure Opportunities and Challenges	<a href="https://www.transport.gov.scot/publication/meeting-hgv-energy-infrastructure-zero-emission-truck-taskforce-25-august-2022/hgv-energy-infrastructure-opportunities-and-challenges/#:~:text=HGVs%20require%20150kW%20chargers%20at%20a%20minimum%2C%20as,or%202%20hours%20if%20a%20250kW%20were%20utilised.">https://www.transport.gov.scot/publication/meeting-hgv-energy-infrastructure-zero-emission-truck-taskforce-25-august-2022/hgv-energy-infrastructure-opportunities-and-challenges/#:~:text=HGVs%20require%20150kW%20chargers%20at%20a%20minimum%2C%20as,or%202%20hours%20if%20a%20250kW%20were%20utilised.</a>	Transport Scotland	2022

<b>Title</b>	<b>Link</b>	<b>Author/Publisher</b>	<b>Year</b>
How Electric Vehicles Will Change Infrastructure	<a href="https://www.v-hr.com">How Electric Vehicles Will Change Infrastructure (v-hr.com)</a>	Alex Fuller	2019
GRIDSERVE to deliver EV charging network for battery electric Heavy Goods Vehicles	<a href="#">GRIDSERVE to deliver EV charging network for battery electric Heavy Goods Vehicles   GRIDSERVE</a>	Jon Quirk	2023
Logistics investment needed to avoid economic storm clouds, says Logistics UK	<a href="#">Logistics investment needed to avoid economic storm clouds, says Logistics UK   Logistics UK</a>	LogisticsUK	2023
Decarbonising road freight, servicing and deliveries: local authority toolkit	<a href="https://www.gov.uk">Decarbonising road freight, servicing and deliveries: local authority toolkit - GOV.UK (www.gov.uk)</a>	Department for Transport	2022
Innovate UK funded projects since 2004	<a href="#">Innovate UK funded projects since 2004 – UKRI</a>	InnovateUK	2023
Ecommerce growth driving record warehouse development in 2021	<a href="#">Ecommerce growth driving record warehouse development in 2021 - Knight Frank</a>	Knight Frank	2021
Pall-Ex (UK) Ltd	<a href="https://www.pallex.co.uk">No.1 for Quality Pallet Delivery &amp; Shipping   Pall-Ex (UK) Ltd   Pall-Ex (UK) Ltd (pallex.co.uk)</a>	Pall-ex	
Commercial Vehicle & HGV Operating Leasing	<a href="https://www.assetalliancegroup.co.uk">HGV Leasing Prices &amp; Commercial Vehicle Leasing With Asset Alliance (assetalliancegroup.co.uk)</a>	Asset Alliance Group	
HGV financing models	<a href="https://www.transport.gov.scot/media/52920/hgv-financing-models.pdf">transport.gov.scot/media/52920/hgv-financing-models.pdf</a>	Transport Scotland	
Fleet Management	<a href="#">Vehicle Fleet Management   Truck &amp; HGV Fleet Management   Asset Alliance Group</a>	Asset Alliance Group	
Decarbonising Transport	<a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf">assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf</a>	Department for Transport	



<b>Title</b>	<b>Link</b>	<b>Author/Publisher</b>	<b>Year</b>
Zero emission road freight trials funding winners	<a href="https://www.gov.uk/government/news/zero-emission-road-freight-trials-funding-winners">Zero emission road freight trials funding winners - GOV.UK (www.gov.uk)</a>	Department for Transport and Innovate UK	2021
The Catapult Network	<a href="https://www.catapult.org.uk/">Home - The Catapult Network</a>	The Catapult Network	
ZERO-EMISSION ROAD FREIGHT – WHAT’S NEXT?	<a href="https://www.catapult.org.uk/zero-emission-road-freight-what-next/">Zero-Emission Road Freight - What's next? (catapult.org.uk)</a>	Alan Nettleton	2022
Electric HGVs will soon be cheaper overall than diesels in the UK,	<a href="https://www.transportenvironment.org/en/press-releases/electric-hgv-will-soon-be-cheaper-overall-than-diesels-in-the-uk">Electric HGVs will soon be cheaper overall than diesels in the UK (transportenvironment.org)</a>	Transport and Environment	2023
THE IMAGE OF THE ROAD FREIGHT TRANSPORT AND WAREHOUSING INDUSTRY	<a href="https://www.csrf.ac.uk/eng-tr-029.pdf">ENG-TR.029.pdf (csrf.ac.uk)</a>	Julian Allen and Maja Piecyk	
Supply and demand of transport fuels during COVID-19	<a href="https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/971117/supply-and-demand-of-transport-fuels-during-covid-19.pdf">Supply and demand of transport fuels during COVID-19 (publishing.service.gov.uk)</a>	Fazeen Khamkar	
How our spending has changed since the end of coronavirus (COVID-19) restrictions	<a href="https://www.statistics.gov.uk/infoshare/2021/09/how-our-spending-has-changed-since-the-end-of-coronavirus-covid-19-restrictions">How our spending has changed since the end of coronavirus (COVID-19) restrictions - Office for National Statistics</a>	CENSUS2021	2022
Coronavirus Job Retention Scheme statistics: 16 December 2021	<a href="https://www.gov.uk/government/statistics/coronavirus-job-retention-scheme-statistics-16-december-2021">https://www.gov.uk/government/statistics/coronavirus-job-retention-scheme-statistics-16-december-2021</a>	HM Revenue & Customs	2021
Self-Employment Income Support Scheme statistics: December 2021	<a href="https://www.gov.uk/government/statistics/self-employment-income-support-scheme-statistics-december-2021">Self-Employment Income Support Scheme statistics: December 2021 - GOV.UK (www.gov.uk)</a>	HM Revenue & Customs	2021
The UK Road Haulage Market – Caught up in the supply chain reset	<a href="https://www.opusllp.com/news/the-uk-road-haulage-market-caught-up-in-the-supply-chain-reset">The UK Road Haulage Market - Caught up in the supply chain reset - Opus Business Advisory Group (opusllp.com)</a>	Opus	2021
International road freight statistics, United Kingdom: 2022	<a href="https://www.gov.uk/government/statistics/international-road-freight-statistics-united-kingdom-2022">International road freight statistics, United Kingdom: 2022 - GOV.UK (www.gov.uk)</a>	Department for Transport	2023

<b>Title</b>	<b>Link</b>	<b>Author/Publisher</b>	<b>Year</b>
The latest evidence on the impact of Brexit on UK trade	<a href="#">The latest evidence on the impact of Brexit on UK trade - Office for Budget Responsibility (obr.uk)</a>	Office for Budget Responsibility	2022
Manager's Guide to Distribution Costs	<a href="#">Logistics UK's guide monitors your transport costs using expert advice and updates</a>	LogisticsUK	
Survey on the movement of costs	<a href="#">Haulage Cost Movement 2022.pdf (rha.uk.net)</a>	RHA	2022
Rail industry finance (UK)	<a href="#">Rail industry finance (UK)   ORR Data Portal</a>	Office of Rail and Road	2023
TRA0101: Road traffic (vehicle miles) by vehicle type in Great Britain, annual from 1949	<a href="https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fgovernment%2Fuploads%2Fsystem%2Fuploads%2Fattachment_data%2Ffile%2F1169808%2Ftra0101.ods&amp;wdOrigin=BROWSE_LINK">https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fgovernment%2Fuploads%2Fsystem%2Fuploads%2Fattachment_data%2Ffile%2F1169808%2Ftra0101.ods&amp;wdOrigin=BROWSE_LINK</a>	Road Traffic Statistics, Department for Transport	2023
The Implications of Internet Shopping Growth on the Van Fleet and Traffic Activity	<a href="#">The Implications of Internet Shopping Growth on the Van Fleet and Traffic Activity Braithwaite May 17.pdf (racfoundation.org)</a>	Alan Braithwaite	2017
Understanding the impact of e-commerce on last-mile light goods vehicle activity in urban areas: The case of London	<a href="#">Understanding the impact of e-commerce on last-mile light goods vehicle activity in urban areas: The case of London - ScienceDirect</a>	J. Allen, M. Piecyk, M. Piotrowska, F. McLeod, T. Cherrett, K. Ghali, T. Nguyen, T. Bektas, O. Bates, A. Friday, S. Wise, M. Austwick	2018
Final Van Statistics April 2019 - March 2020	<a href="#">Final Van Statistics 2019-20 (publishing.service.gov.uk)</a>	Department for Transport	2021
Business Insights and Conditions Survey	<a href="#">Business Insights and Conditions Survey - ADR UK</a>	ADRUK	2020
RSM insolvency predictor model	<a href="#">RSM insolvency predictor model (rsmuk.com)</a>	RSM	2023
Strategic Rail Freight Network: The longer Term Vision	<a href="#">[ARCHIVED CONTENT] (nationalarchives.gov.uk)</a>	Department for Transport	2009

<b>Title</b>	<b>Link</b>	<b>Author/Publisher</b>	<b>Year</b>
Infrastructure for zero emission heavy goods vehicles and coaches	<a href="https://www.gov.uk/government/consultations/infrastructure-for-zero-emission-heavy-goods-vehicles-and-coaches">Infrastructure for zero emission heavy goods vehicles and coaches - GOV.UK (www.gov.uk)</a>	Department for Transport	2023
Changes to licence requirements for Alternatively Fuelled Vehicles (AFVs)	<a href="https://www.gov.uk/government/consultations/changes-to-licence-requirements-for-alternatively-fuelled-vehicles">Changes to licence requirements for alternatively fuelled vehicles - GOV.UK (www.gov.uk)</a>	Department for Transport Office for Low Emission Vehicles Driver & Vehicle Standards Agency	2019
Driver Certificate of Professional Competence (DCPC) changes	<a href="https://www.gov.uk/government/consultations/driver-certificate-of-professional-competence-dcpc-changes">Driver Certificate of Professional Competence (DCPC) changes - GOV.UK (www.gov.uk)</a>	Department for Transport	2023
HGVs on the road to net zero: How battery electric trucks can decarbonise GB road freight	<a href="https://transportenvironment.org/wp-content/uploads/2023/04/Whole-Study-Summary-HGVs-on-the-road-to-net-zero.docx">Whole Study Summary HGVs on the road to net zero.docx (transportenvironment.org)</a>	Element Energy for Transport & Environment	2023

# Appendix C. Gap Analysis

**Table 4-1 - Gap analysis scale**

## **Suitability of Available Sources**

- 1 - Not Suitable: The data source doesn't align with the research objective or provides irrelevant information.
- 2 - Barely Suitable: The data source has minor relevance to the research objective, but substantial supplemental information would be required.
- 3 - Moderately Suitable: The data source has some relevance to the research objective and could be useful with certain caveats or conditions.
- 4 - Mostly Suitable: The data source aligns well with most of the research objective but may have a few areas where it doesn't entirely fit.
- 5 - Highly Suitable: The data source aligns perfectly with the research objective, requiring no supplemental information.

## **Robustness of Available Sources**

- 1 - Not Robust: The data source has significant flaws, is outdated, or has undergone no validation.
- 2 - Somewhat Robust: The data source has several noticeable issues or might be somewhat outdated but contains some valid sections.
- 3 - Moderately Robust: The data source is generally reliable with minor issues. It may require occasional validation.
- 4 - Mostly Robust: The data source is up-to-date and has undergone validation, with only a few minor issues.
- 5 - Highly Robust: The data source is current, thoroughly validated, and free from any noticeable issues.

## Comprehensiveness of Available Sources

- 1 - Not Comprehensive: The data source covers very little of the needed information, leaving vast areas unaddressed.
- 2 - Barely Comprehensive: The data source touches on a few relevant areas but leaves significant gaps.
- 3 - Moderately Comprehensive: The data source provides a fair coverage of the needed areas, but there are still some gaps present.
- 4 - Mostly Comprehensive: The data source covers most of the required areas with only minor gaps.
- 5 - Highly Comprehensive: The data source provides a complete or nearly complete coverage of all required areas.



Research Question Code	Research Category	Research Question	Suitability of Available Sources (1-5)		Robustness of Available Sources (1-5)		Comprehensiveness of Available Sources (1-5)		Combined Score (3-15)		Mitigation Options
			Baseline	Revised	Baseline	Revised	Baseline	Revised	Baseline	Revised	
M1	Market Dynamics	What are the barriers to entry, expansion and exit and what the reasons behind these are?	2	4	3	4	2	4	7	12	Primary research/engagement likely to be most valuable and revealing
M2		What are the dynamics between different players in the market? Who has the power to determine price; are companies price takers or price makers within the market?	3	3	2	3	2	4	7	10	Market research
M3		It would be useful to understand whether there is a difference between domestic and international freight and what differences may exist within the domestic road freight market, for instance between regional and local delivery.	4	4	4	4	3	3	11	11	N/A
P1	Profit Levels/Margins	Information on profit levels and profit margins, especially time series and comparisons to other industries. In addition, information on the underlying reasons for these and the	3	3	2	3	4	4	9	10	N/A
P2		To understand the relationship between haulage supply costs and prices for end users and how this might vary between different types of hauliers.	2	3	2	3	2	3	6	9	Market research
I1	Investment	To understand what investment looks like for haulage firms, for instance does it focus on capital investment in HGVs?	3	4	3	4	3	3	9	11	Primary research/engagement likely to be most valuable and revealing
I2		To understand whether haulage firms may be able to increase capital investment in future in order to purchase zero emission HGVs and associated infrastructure.	2	2	3	3	3	3	8	8	Primary research/engagement likely to be most valuable and revealing
I3		To understand what the most common types of investment into the road freight industry are and how they are financed.	2	3	3	3	2	3	7	9	Primary research possible, however commercial sensitivities may prove challenging to overcome



Research Question Code	Research Category	Research Question	Suitability of Available Sources (1-5)		Robustness of Available Sources (1-5)		Comprehensiveness of Available Sources (1-5)		Combined Score (3-15)		Mitigation Options
			Baseline	Revised	Baseline	Revised	Baseline	Revised	Baseline	Revised	
I4		To understand the common reasons behind investment for example, business growth/expansion, environmental regulation or tax incentives.	2	3	2	3	2	3	6	9	Primary research possible, however commercial sensitivities may prove challenging to overcome
F1	Financial Indicators	What are typical interest rates, Return on Investments (ROIs) and other relevant financial metrics? This should include the use of data, sources such as Companies House (SIC 49410 – Freight transport by road) could be used.	2	3	3	4	2	4	7	11	Commercial data products other than FAME may provide further insight
F2		What are the barriers and drivers of medium- and long-term investments?	2	3	3	3	2	3	7	9	Primary research/engagement likely to be most valuable and revealing
F3		Do businesses face barriers to accessing finance?	2	4	2	4	2	4	6	12	Primary research/engagement with businesses and financial institutions
F4		To what extent are road haulage operators reliant on investment from other sectors, such as the major users of freight storage and distribution services, in order to innovate?	1	2	2	2	1	2	4	6	Addition of warehousing SIC to analysis. May need to be supplemented by further engagement to understand links
L1		How vehicles are bought or leased by different parts of the sector and the reasons behind this decision + How firms finance the purchase or leasing of new vehicles	2	4	3	4	2	4	7	12	Primary research/engagement with businesses and financial institutions
L2	Fleet Operations	What the current cycles of investment in fleets is	3	3	3	3	3	3	9	9	N/A
L3		How vehicles trickle down from larger to smaller operators	3	3	2	2	2	2	7	7	Primary research/engagement likely to be most valuable and revealing



Research Question Code	Research Category	Research Question	Suitability of Available Sources (1-5)		Robustness of Available Sources (1-5)		Comprehensiveness of Available Sources (1-5)		Combined Score (3-15)		Mitigation Options
			Baseline	Revised	Baseline	Revised	Baseline	Revised	Baseline	Revised	
A1	Market Resilience	How have businesses responded to recent economic and wider changes such as Covid-19, the EU exit, fuel price rise, HGV driver shortages and high inflation? This should include both financial and operational resilience, it would be beneficial if it could consider relationships between different variable, for instance how much did revenue change when underlying costs changed. Again, data sources such as Companies House should be considered. Has this differed between types of road hauliers?	4	4	3	4	3	4	10	12	N/A
A2		How does this compare to other relevant sectors for example, rail freight operators or van fleet operators?	3	4	4	4	3	4	10	12	N/A
A3		What are the subcontractor practices in the sector?	2	3	2	3	2	3	6	9	Primary research/engagement likely to be most valuable and revealing
A4		How do interdependencies between operators in the sector impact overall resilience?	2	4	2	4	2	4	6	12	Research into strategic alliances
A5		How easily can haulage activities be diversified? For example, how can capacity shift between types of goods and different transport modes?	2	3	3	3	2	3	7	9	Primary research/engagement likely to be most valuable and revealing
A6		What is the financial health of businesses operating in the sector?	4	4	4	4	4	4	12	12	N/A
A7		Do many firms face going out of business in the next year and what are the factors behind business insolvencies? This should include a comparison between this industry and other relevant sectors or the UK economy as a whole. It would also be beneficial for it to include the impact of smaller operators leaving the sector?	2	2	3	3	3	3	8	8	Engagement with insolvency practitioners and representative bodies likely to be of most value

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- <sup>1</sup> [The true cost of becoming an owner-operator - Knowledge Hub - Commercial Motor](#)
  - <sup>2</sup> [Cost Tables 2023.pdf \(rha.uk.net\)](#)
  - <sup>3</sup> [GBRf spends £50m on new Class 66/7s and Class 92s \(railmagazine.com\)](#)
  - <sup>4</sup> [GB Railfreight announce locomotive leasing deal with Akiem \(globalrailwayreview.com\)](#)
  - <sup>5</sup> [UK Business Counts - enterprises by industry and employment size band - Nomis - Official Census and Labour Market Statistics \(nomisweb.co.uk\)](#)
  - <sup>6</sup> [Book a Course \(rha.uk.net\)](#)
  - <sup>7</sup> [Staying ahead of HMRC's IR35 compliance checks - FleetPoint](#)
  - <sup>8</sup> [IR35 for HGV, Truck, and LGV Drivers: Here's What You Need to Know \(driverrequire.co.uk\)](#)
  - <sup>9</sup> [UK government action to reduce the HGV driver shortage - GOV.UK \(www.gov.uk\)](#)
  - <sup>10</sup> [Annual population survey \(APS\) QMI - Office for National Statistics](#)
  - <sup>11</sup> [SME Green Freight \(publishing.service.gov.uk\)](#)
  - <sup>12</sup> [POST-PN-0692.pdf \(parliament.uk\)](#)
  - <sup>13</sup> [DPD \(UK\) - DPD to switch all diesel HGVs to renewable biofuel by end of 2023](#)
  - <sup>14</sup> [https://www.dhl.com/discover/en-global/news-and-insights/reports-and-press-releases/digitalization-has-transformed-operations](#)
  - <sup>15</sup> [Competitive Forces - H49.410 Freight Road Transport in the UK - MyIBISWorld](#)
  - <sup>16</sup> [UK confirms pledge for zero-emission HGVs by 2040 and unveils new chargepoint design - GOV.UK \(www.gov.uk\)](#)
  - <sup>17</sup> [https://api.repository.cam.ac.uk/server/api/core/bitstreams/1e7b2a30-9ddf-466d-b9af-8dbbe3a36bd9/content](#)
  - <sup>18</sup> [At a Glance - H49.410 Freight Road Transport in the UK - MyIBISWorld](#)
  - <sup>19</sup> [Profitability of UK companies - Office for National Statistics \(ons.gov.uk\)](#)
  - <sup>20</sup> [£200 million boost to rollout of hundreds more zero-emission HGVs - GOV.UK \(www.gov.uk\)](#)
  - <sup>21</sup> [Road freight statistics: 2022 - GOV.UK \(www.gov.uk\)](#)
  - <sup>22</sup> [Operator costs in 2022: a year like no other \(transportengineer.org.uk\)](#)
  - <sup>23</sup> [At a Glance - H49.410 Freight Road Transport in the UK - MyIBISWorld](#)
  - <sup>24</sup> [Future of Mobility: understanding the UK Freight Transport System \(publishing.service.gov.uk\)](#)
  - <sup>25</sup> [Companies - H49.410 Freight Road Transport in the UK - MyIBISWorld](#)
  - <sup>26</sup> [Road freight statistics: 2022 - GOV.UK \(www.gov.uk\)](#)
  - <sup>27</sup> [https://my.ibisworld.com//uk/en/industry/H49.410/geographic-breakdown](#)
  - <sup>28</sup> [Apply for grant funding to transport freight by rail and water - GOV.UK \(www.gov.uk\)](#)
  - <sup>29</sup> [Freight Innovation Cluster - Connected Places Catapult](#)
  - <sup>30</sup> [Infrastructure for zero emission heavy goods vehicles and coaches - GOV.UK \(www.gov.uk\)](#)
  - <sup>31</sup> [Rapid charging fund - GOV.UK \(www.gov.uk\)](#)
  - <sup>32</sup> [Apply for grant funding to transport freight by rail and water - GOV.UK \(www.gov.uk\)](#)
  - <sup>33</sup> [UK Data Sources \(ibisworld.com\)](#)
  - <sup>34</sup> [Microsoft Word - 41589-v6-Report Barriers to Entry.DOC \(core.ac.uk\)](#)
  - <sup>35</sup> [HGV driver | Explore careers | National Careers Service](#)
  - <sup>36</sup> [Operator costs in 2022: a year like no other \(transportengineer.org.uk\)](#)
  - <sup>37</sup> [Operator Licensing In The UK - Road Freight Regulations \(logistics.org.uk\)](#)
  - <sup>38</sup> [Being a goods vehicle operator: Overview - GOV.UK \(www.gov.uk\)](#)
  - <sup>39</sup> [Changes to licence requirements for alternatively fuelled vehicles - GOV.UK \(www.gov.uk\)](#)

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- 40 [Operator Compliance Risk Score - OCRS | Transports Friend](#)
- 41 [Driver CPC training for qualified drivers: How much training you need to do - GOV.UK \(www.gov.uk\)](#)
- 42 [Driver Certificate of Professional Competence \(DCPC\) changes - GOV.UK \(www.gov.uk\)](#)
- 43 [Get an MOT for a heavy goods vehicle \(HGV\), bus or trailer: Overview - GOV.UK \(www.gov.uk\)](#)
- 44 [Future of Mobility: Decarbonising road freight \(publishing.service.gov.uk\)](#)
- 45 [environmental-checklist-for-road-transport-businesses.pdf \(netregs.org.uk\)](#)
- 46 [Goods vehicle operator licensing guide - GOV.UK \(www.gov.uk\)](#)
- 47 [IR35: More tax changes for self-employed drivers and hauliers \(rha.uk.net\)](#)
- 48 [UK Government Initiatives Positive Impact HGV Driver Shortages \(cromwelltrucks.com\)](#)
- 49 [HGV driver shortage persists but recruitment initiatives starting to bear fruit, says Logistics UK](#)
- 50 [HGV Driver Shortage Easing - Transport News](#)
- 51 [HGV driver vacancies, collected as part of the Road Freight Haulage survey – GOV.UK \(www.gov.uk\)](#)
- 52 [How HGV bootcamps helped to ease a skills crisis \(feweek.co.uk\)](#)
- 53 [Driver shortage top concern for UK fleets in 2023 \(fleetworld.co.uk\)](#)
- 54 [Better facilities for lorry drivers as winners of £8 million funding revealed - GOV.UK \(www.gov.uk\)](#)
- 55 [Getting it right – lorry driver facilities - Transport Focus](#)
- 56 [Shortage Of Drivers In The EU - Truck Mobility Info - 2023 \(truckmobility-info.com\)](#)
- 57 [EU driver shortage set to triple by 2026 if no action is taken \(rha.uk.net\)](#)
- 58 [SME Green Freight \(publishing.service.gov.uk\)](#)
- 59 [Future of Freight \(publishing.service.gov.uk\)](#)
- 60 [Businesses in the transportation and storage sector - Statistics Explained \(europa.eu\)](#)
- 61 [International road freight statistics, United Kingdom: 2022 - GOV.UK \(www.gov.uk\)](#)
- 62 [The rise of the UK warehouse and the “golden logistics triangle” - Office for National Statistics \(ons.gov.uk\)](#)
- 63 [Cost to fuel a lorry is up £20,000 a year, says haulage boss - BBC News](#)
- 64 [U.K. Truckers Warn They Must Pass on Cost of Higher Fuel Prices - Bloomberg](#)
- 65 [What is driving the recent surge in shipping costs? \(europa.eu\)](#)
- 66 [Logistics: Delivering a solution to the UK’s productivity puzzle, Logistics UK, 2023](#)
- 67 [Financial Benchmarks - H49.410 Freight Road Transport in the UK - MyIBISWorld](#)
- 68 [Logistics Contracts: Open Book vs Closed Book | Davies and Robson \(daviesrobson.co.uk\)](#)
- 69 [New management of GXO stops into an online forum to tell its story - FreightWaves](#)
- 70 [Wincanton refocusing on 'open book' pricing - The Loadstar](#)
- 71 [Road Transport Price Index August - Transport Exchange Group](#)
- 72 [DPD \(UK\) - DPD to switch all diesel HGVs to renewable biofuel by end of 2023](#)
- 73 [Transport tech: how haulage firms are embracing digitisation - SMMT](#)
- 74 [Generation Logistics](#)
- 75 <https://www.conquerornetwork.com/LogisticsCourses-home.php>
- 76 [Key Statistics - H49.410 Freight Road Transport in the UK - MyIBISWorld](#)
- 77 [UK confirms pledge for zero-emission HGVs by 2040 and unveils new chargepoint design - GOV.UK \(www.gov.uk\)](#)

- 
- <sup>78</sup> [Infrastructure for zero emission heavy goods vehicles and coaches - GOV.UK \(www.gov.uk\)](https://www.gov.uk)
- <sup>79</sup> [Outcome and response to the consultation on when to phase out the sale of new, non-zero emission HGVs - GOV.UK \(www.gov.uk\)](https://www.gov.uk)
- <sup>80</sup> [Vivid Economics \(nic.org.uk\)](https://www.nic.org.uk)
- <sup>81</sup> <https://www.transport.gov.scot/publication/meeting-hgv-energy-infrastructure-zero-emission-truck-taskforce-25-august-2022/hgv-energy-infrastructure-opportunities-and-challenges/#:~:text=HGVs%20require%20150kW%20chargers%20at%20a%20minimum%20C%20as,or%202%20hours%20if%20a%20250kW%20were%20utilised>
- <sup>82</sup> [Whole Study Summary HGVs on the road to net zero.docx \(transportenvironment.org\)](https://transportenvironment.org)
- <sup>83</sup> [How Electric Vehicles Will Change Infrastructure \(v-hr.com\)](https://v-hr.com)
- <sup>84</sup> [GRIDSERVE to deliver EV charging network for battery electric Heavy Goods Vehicles | GRIDSERVE](https://gridserve.com)
- <sup>85</sup> [Logistics investment needed to avoid economic storm clouds, says Logistics UK | Logistics UK](https://logisticsuk.com)
- <sup>86</sup> [Decarbonising road freight, servicing and deliveries: local authority toolkit - GOV.UK \(www.gov.uk\)](https://www.gov.uk)
- <sup>87</sup> [Innovate UK funded projects since 2004 – UKRI](https://ukri.org)
- <sup>88</sup> [HGV Leasing Prices & Commercial Vehicle Leasing With Asset Alliance \(assetalliancegroup.co.uk\)](https://assetalliancegroup.co.uk)
- <sup>89</sup> [Title \(transport.gov.scot\)](https://transport.gov.scot)
- <sup>90</sup> [Vehicle Fleet Management | Truck & HGV Fleet Management | Asset Alliance Group](https://assetalliancegroup.com)
- <sup>91</sup> [Decarbonising Transport – A Better, Greener Britain \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)
- <sup>92</sup> [Supply and demand of transport fuels during COVID-19.pdf \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)
- <sup>93</sup> [How our spending has changed since the end of coronavirus \(COVID-19\) restrictions - Office for National Statistics](https://www.gov.uk)
- <sup>94</sup> <https://www.gov.uk/government/statistics/coronavirus-job-retention-scheme-statistics-16-december-2021>
- <sup>95</sup> [Self-Employment Income Support Scheme statistics: December 2021 - GOV.UK \(www.gov.uk\)](https://www.gov.uk)
- <sup>96</sup> <https://opusllp.com/report/uk-road-haulage-caught-in-supply-chain-reset/>
- <sup>97</sup> [International road freight statistics, United Kingdom: 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk)
- <sup>98</sup> [The latest evidence on the impact of Brexit on UK trade - Office for Budget Responsibility \(obr.uk\)](https://obr.uk)
- <sup>99</sup> [Fuel Price Information Service | Logistics UK](https://logisticsuk.com)
- <sup>100</sup> [Logistics UK's guide monitors your transport costs using expert advice and updates](https://logisticsuk.com)
- <sup>101</sup> [Haulage Cost Movement 2022.pdf \(rha.uk.net\)](https://rha.uk.net)
- <sup>102</sup> [Rail industry finance \(UK\) | ORR Data Portal](https://orr.gov.uk)
- <sup>103</sup> [TRA0101: Road traffic \(vehicle miles\) by vehicle type in Great Britain, annual from 1949](https://tra0101.org)
- <sup>104</sup> [The Implications of Internet Shopping Growth on the Van Fleet and Traffic Activity Braithwaite May 17.pdf \(racfoundation.org\)](https://racfoundation.org)
- <sup>105</sup> [Final Van Statistics 2019-20 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)
- <sup>106</sup> [Business Insights and Conditions Survey - ADR UK](https://adr.uk)
- <sup>107</sup> [RSM insolvency predictor model \(rsmuk.com\)](https://rsmuk.com)
- <sup>108</sup> [BISWorld Freight Road Transport in the UK, Aug 2023, Executive Summary Page 13](https://bisworld.com)