

# Light goods vehicles 2022

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# Preface

There are more than 600,000 light goods vehicles (LGVs) on our roads today, twice as many as 20 years ago. Yet knowledge about how these vehicles are used has been very limited. The increasing number of LGVs is a development shared by most countries, and so is the lack of information and statistics on these vehicles. Therefore, Eurostat has a working group to develop statistics on LGVs – the Task Force on Light Utility Vehicles (LUVs) – where Transport Analysis represents Sweden.

In this report we describe the results from the first full-scale pilot survey on LGVs in Sweden. Traffic and transport information has been collected from 10,000 randomly selected LGVs. Data were collected throughout 2022, with financial assistance from Eurostat (the European Commission).<sup>1</sup> On behalf of Transport Analysis, Statisticon has conducted the survey and produced the statistics.

This descriptive report refers to statistics based on a survey published in tables and includes a detailed description of the methodology report (see [www.trafa.se/en/light-goods-vehicles/](http://www.trafa.se/en/light-goods-vehicles/)).

Stockholm, May 2023

Sofie Orrling

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## Summary

Light goods vehicles (LGVs) are becoming more numerous and more visible, especially in urban traffic. Their number has doubled in 20 years, and they are mainly used in urban areas for shorter journeys – i.e., shorter than those of heavy goods vehicles – distribution of goods and parcels, as well as in crafts and services of various kinds. Agriculture is the second largest LGV ownership sector, after construction. One sixth of light goods vehicles are privately owned and these are mainly used as a large passenger car with a larger load space.

This report describes the first full-scale Swedish survey of traffic and transport with LGVs. We have used a questionnaire addressed to 10 000 company-owned LGVs, where their owners were asked to report how the vehicle was used on a specific measurement day. The statistics represent all company-owned LGVs in circulation in Sweden, with the exception of vintage vehicles, specialised vehicles and LGVs for hire.

The LGVs do not have a lot of goods in the load measured in kilograms, but they fulfil many functions in the transport system, from parcel and goods distribution to transport for craftsmen and in agriculture. Of the company-owned light goods vehicles, 9 per cent drive distribution traffic, 6 per cent linear transport, 70 per cent drive in crafts/service and 11 per cent in agriculture.<sup>2</sup>

An LGV drives an average of 76 km per driving day (day when the vehicle is used). The longest journeys are made by vehicles in distribution traffic (124 km) and the shortest by vehicles in agriculture (60 km). On an average driving day, an LGV is loaded with 160 kg of goods, some vehicles in crafts and services drive without any goods at all, 151 kg are loaded in agricultural use and 593 kg in distribution traffic.

In total, company-owned LGVs account for 2 per cent of all road freight measured in kilos in Sweden, with heavy goods vehicles accounting for the remaining 98 per cent. In terms of tonne-kilometres, the share of LGVs is only 1 per cent.

An average LGV makes just over 8 stops per driving day, where one stop is to load or unload goods or to carry out some work. Distribution vehicles make an average of 52 stops per driving day, while LGVs in agriculture make an average of 3 stops per driving day. Of the more than 8 stops made by an LGV on an average driving day, 4.5 are at private homes, 1.1 at construction sites, 0.1 at pickup points and 2.8 at other locations (the lorry's parking space, at wholesalers, at home, etc.). Of the light goods vehicles that stop at private homes, the most common cargo is mail and parcels (mainly e-commerce), followed by paper products (letters and newspapers).

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<sup>2</sup> In addition, 4 per cent are used for other purposes, such as private driving.





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# 1 Introduction

This report will describe light goods vehicles (LGVs). We first describe all LGVs in Swedish traffic, based on information available in registers (Chapter 2). We then go on to describe the transport and services carried out by LGVs (Chapter 3). To capture transport and services, we used a questionnaire to ask LGV owners about their vehicle and what it was used for on a specific measurement day. The aim is to describe how the company-owned LGVs are used to provide transport and services. Most privately owned LGVs (17 per cent of all those in circulation) are comparable to slightly larger passenger cars and are mainly used as such.

In Sweden, road is the largest mode of freight transport. One way of measuring the importance of transport is in the form of tonnes-kilometres, which for goods is measured in tonne-kilometres. One tonne of goods transported 1 km constitutes 1 tonne-kilometre. Of all freight transport in Sweden, road traffic accounts for 50 per cent measured in tonne-kilometres; shipping accounts for 30 per cent, rail for 20 per cent, and aviation for less than 0.1 per cent (Figure 1.1). The shares of the various modes of transport are stable throughout the 2000s and change very little between years.<sup>3</sup>

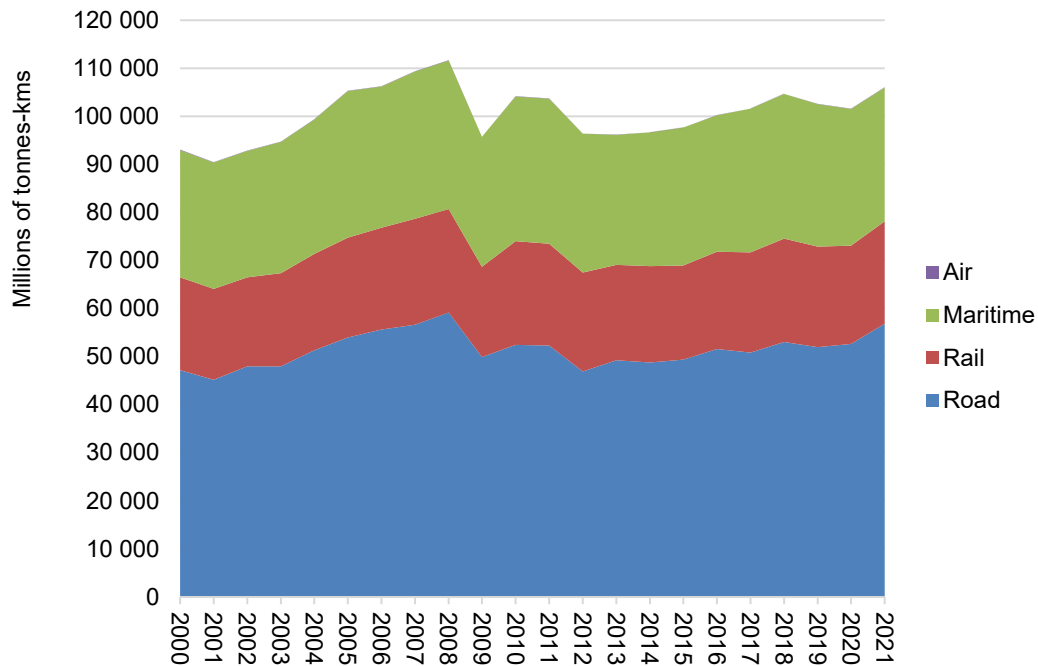
Heavy goods vehicles (HGVs) account for the absolute majority of road freight transport. We have relatively good knowledge of driving patterns and areas of use for these vehicles, both Swedish-registered and foreign-registered HGVs, operating within Sweden's borders.<sup>4</sup>

In the tonnes-kilometres Transport Analysis has been publishing for a long time (Figure 1.1), light goods vehicles are represented by a standard for how much freight they transport. Calculated in this way, LGVs provide about 1.4 per cent of the total tonne-kilometres on the road.

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<sup>3</sup> However, in 2021, the share for road was the highest in the 2000s: 54 per cent.

<sup>4</sup> [www.trafa.se/en/road-traffic/swedish-road-goods-transport/](http://www.trafa.se/en/road-traffic/swedish-road-goods-transport/) and [www.trafa.se/en/road-traffic/international-road-goods-transport/](http://www.trafa.se/en/road-traffic/international-road-goods-transport/)



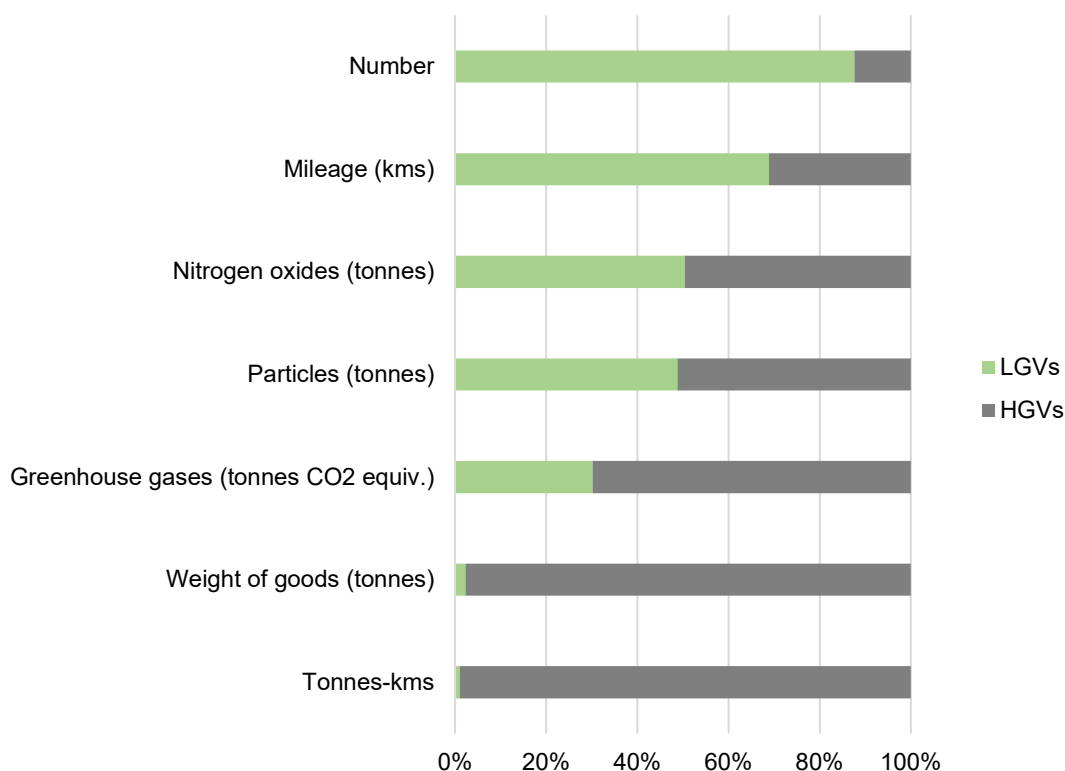
**Figure 1.1. Transport performance by mode, million tonne-kilometres, 2000–2021.**

**Source:** Transport Analysis

**Note:** 2021 is the last year for which we have a value for tonne-kilometres at the time of writing.

The prevalence of LGVs is increasing, especially in urban traffic; their number has doubled in the last 20 years. They are mainly used in urban environments for shorter journeys (i.e., shorter than those of HGVs), for distribution of goods and parcels, as well as in crafts and services of various kinds. Agriculture is the second-largest LGV ownership sector, after construction. Light goods vehicles may have a small share in transport in terms of tonnes and tonne-kilometres, but they play an important role in the smooth functioning of transport and services in the transport system and society.

We summarise the respective sizes of LGVs and HGVs in a few different ways (Figure 1.2). LGVs dominate in terms of numbers and total distances travelled, although HGVs travel on average more than three times as far as LGVs per year. Total emissions of both nitrogen oxides and particulate matter are split roughly 50/50 between light and heavy vehicles, while heavy vehicles account for the vast majority of goods transported (tonnes and tonne-kilometres).



**Figure 1.2. Shares of light and heavy goods vehicles with respect to a range of variables. Year 2021 or 2022 (latest available years).**

**Source:** Number, mileage, freight weight and tonnes-kilometres from Transport Analysis; Greenhouse gases, particles and nitrogen oxides from the Swedish Environmental Protection Agency.

The number of LGVs in circulation in Sweden has doubled in the last 20 years. The increasing number of LGVs is not a purely Swedish phenomenon; it can be observed in many countries in Europe and globally. The major expansion of e-commerce in the last decade is an important explanation.

There are almost 37 million LGVs in circulation in Europe (data are available for some 30 countries, including Norway and the UK). The main owner countries are France (4.9 million LGVs), Spain (4.7 million), the UK (4.4 million), Turkey (3.9 million), Italy (3.8 million), and Germany (3 million). In France, the largest owner-operator country, the number of light goods vehicles has increased by 10 per cent between 2013 and 2021; for Sweden during the same period, the number increased by 25 per cent. In the United Kingdom, LGV traffic has increased by more than 100 per cent between 1993 and 2021.<sup>5</sup>

While the increasing number of LGVs is a trend shared by many countries, it is also widely recognised that information and statistics on the use of these vehicles are scarce. For some years now, Eurostat has had a working group to develop statistics on light goods vehicles, the Task Force on Light Utility Vehicles (LUVs), which includes Sweden (Transport Analysis represents Sweden).

The aim of the task force is to work together to develop methods to capture traffic and transport by light goods vehicles. Current statistics available on the use of LGVs in Europe are limited to the following:<sup>6</sup>

<sup>5</sup> [Road traffic statistics - Summary statistics \(dft.gov.uk\)](https://www.dft.gov.uk/road-traffic-statistics)

<sup>6</sup> There are also collections in France and Switzerland from over 10 years ago.

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- Norway conducted a survey on LGVs in 2015 and 2018.<sup>7</sup>
  - The Netherlands conducted surveys in 2016, 2018, and 2019 as well as in 2021.<sup>8</sup>
  - The United Kingdom conducted surveys of LGVs in 2008–2009 and 2019–2020.<sup>9</sup>

Several countries have ongoing work in 2023 to collect information on their LGVs, and several are in the starting blocks for 2024. The Eurostat working group and its members have so far been entirely focused on the use of surveys to capture LGV use. Surveys are also the method used for gathering the data presented in this report. Transport Analysis and many others are hopeful that in the not-too-distant future it will be possible to collect data directly from connected vehicles, much in the same way that data are collected from mobile phones. It remains to be seen when this can become a reality and what opportunities for statistics on LGVs will then open up.

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<sup>7</sup> [www.ssb.no/en/transport-og-reiseliv/landtransport/statistikk/transport-med-varebiler](http://www.ssb.no/en/transport-og-reiseliv/landtransport/statistikk/transport-med-varebiler)

<sup>8</sup> [StatLine - Wegvervoer bestelauto's; vervoerd gewicht, ladington- en voertuigkilometers \(cbs.nl\)](https://statline.cbs.nl)

<sup>9</sup> [Van statistics: 2019 to 2020 - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

## 2 Description of Sweden's light goods vehicles

This chapter describes light goods vehicles (LGVs) based primarily on the road traffic register, which contains all Swedish-registered vehicles. In some cases, the light goods vehicles are put in relation to the heavy goods vehicles (HGVs). The same register is used by Transport Analysis to regularly publish official statistics on vehicles.<sup>10</sup> In this section, the LGVs – to some extent in relation to the HGVs - in more detail than in our regular publications.

Lorries (both LGVs and HGVs) are vehicles designed primarily for the transport of goods. An LGV has a maximum total weight of 3.5 tonnes and an HGV a total weight of more than 3.5 tonnes.<sup>11</sup> The rules that apply to the different types of goods vehicles are summarised in Table 2.1.

A goods vehicle is a vehicle designed primarily for the transport of goods. A light goods vehicle has a maximum total weight of 3.5 tonnes and a heavy goods vehicle has a total weight over 3.5 tonnes. An LGV may be driven with an ordinary B licence (licence for passenger cars), while an HGV requires a C licence (there are different levels depending on the weight of the vehicle/trailer). The LGVs have rules for inspection equal to passenger cars, except if for hire and reward, then they are inspected every year. HGVs are inspected every year. HGVs must also comply with EU regulations on driving and rest periods, which is not necessary for LGVs.

The number of LGVs has steadily increased and has doubled in the last 20 years. Today there are more than 600,000 LGVs in circulation in Sweden and, in addition, more than 200,000 discontinued LGVs. The number of HGVs has remained stable at around 70,000–80,000 vehicles in circulation over the last 20 years and has increased by 12 per cent since 2001 (Figure 2.1).



**Figure 2.1. Number of light and heavy goods vehicles in circulation, 2001–2022.**  
Source: Transport Analysis

<sup>10</sup> [www.trafa.se/en/road-traffic/vehicle-statistics/](http://www.trafa.se/en/road-traffic/vehicle-statistics/)

<sup>11</sup> [www.transportstyrelsen.se/sv/vagtrafik/fordon/fordonsregler/lastbil/](http://www.transportstyrelsen.se/sv/vagtrafik/fordon/fordonsregler/lastbil/) (in Swedish only)

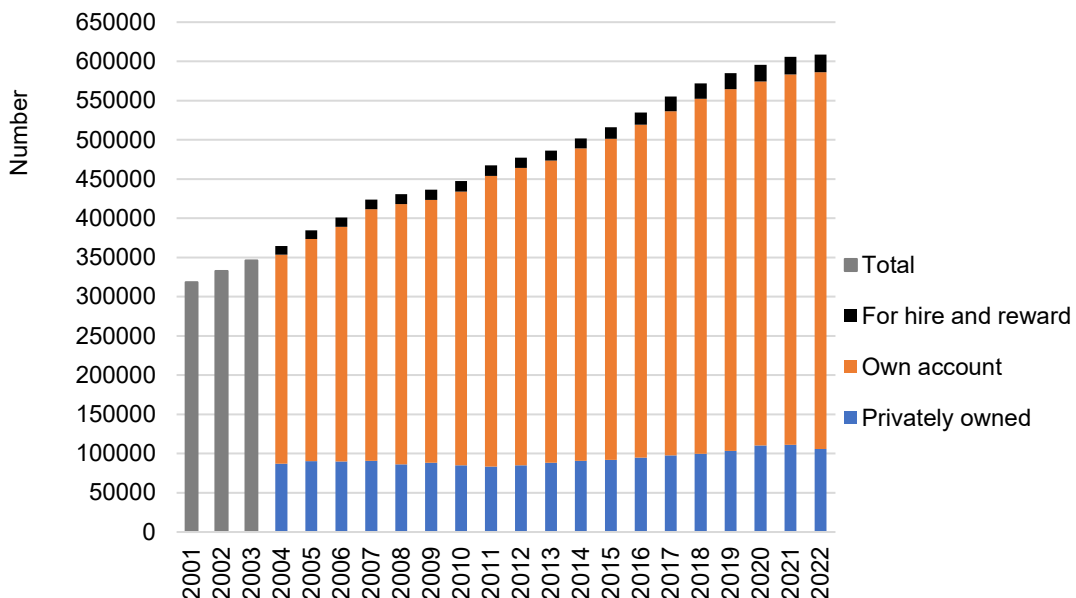
In the statistics on vehicles, owners can be divided into private individuals, legal entities, and sole traders. Legal persons who own vehicles are usually companies but can also be municipalities, county councils, or other public organisations. In the text below, for the sake of simplicity, we will sometimes use the term “company” and “company-owned” for vehicles owned by legal entities and sole traders together. In addition to company-owned vehicles, there are privately owned vehicles.

A company-owned vehicle can be driven either in commercial traffic, i.e., the vehicle has a licence to carry out transport for others against payment, or in company car traffic, i.e., it can be used in the company's own operations, such as service, construction, trade, etc.

The number of privately owned light goods vehicles has long remained stable at around 100,000 vehicles. Two thirds of the privately owned light goods vehicles are vans, with the Volkswagen brand being the most common with 20 per cent.<sup>12</sup> The privately owned LGVs are larger/heavier than passenger cars; the average total weight is 2,539 kg, compared to a passenger car with an average total weight of 2,029 kg. Note that an LGV is a vehicle that is set up mainly for the transport of goods. Other larger cars such as SUVs are classified as passenger cars.

The use of light goods vehicles in transport fore hire and reward is limited, even though the growth rate is high. The number of LGVs for hire and reward has doubled in 20 years. The vast majority of LGVs for hire and reward are in the sector of Transport and storage. This sector includes parcel distributors and courier companies, which have increased in scope, partly due to the growth of e-commerce.

In terms of size and increase in the number of vehicles, LGVs for own account dominate. Today, there are almost 500,000 LGVs for own account, i.e., they are used in the owner's own business, such as service, construction, etc. In 2022, 79 per cent of LGVs were for own account, 4 per cent for hire and reward, and 17 per cent were privately owned (Figure 2.2).



**Figure 2.2. Number of light and heavy goods vehicles in circulation, by ownership category, 2001–2022.**

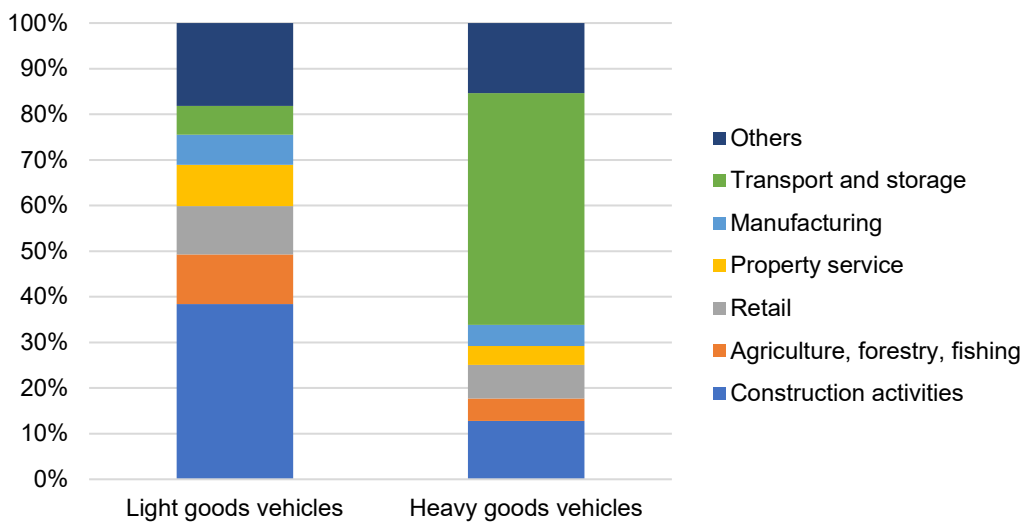
**Source: Transport Analysis**

<sup>12</sup> Volkswagen is also the largest manufacturer of company-owned LGVs with about 30 per cent of the vehicles in traffic.

When it comes to heavy goods vehicles, the vast majority are owned by companies (96 per cent), only 4 per cent are owned by private individuals.

## 2.1 Construction industry owns most light goods vehicles

Among the company-owned LGVs in circulation, Construction is the largest ownership sector (38 per cent), followed by Agriculture (11 per cent), and Trade (11 per cent). The Transport and storage sector comes only in sixth place with 6 per cent of the LGVs. For the HGVs, however, Transport and storage is the largest ownership sector, with 51 per cent of the vehicles, followed by Construction (13 per cent), and Trade (7 per cent) (Figure 2.3).



**Figure 2.3. Share of light and heavy goods vehicles in circulation by sector, 2022.**  
Source: Transport Analysis

Among LGVs, just under 4 per cent are licensed for commercial transport. Almost all of them are in the Transport and storage sector. This includes most parcel distributors and couriers. Professional traffic is a large element among the HGVs, where as many as 63 per cent are driven in professional traffic.

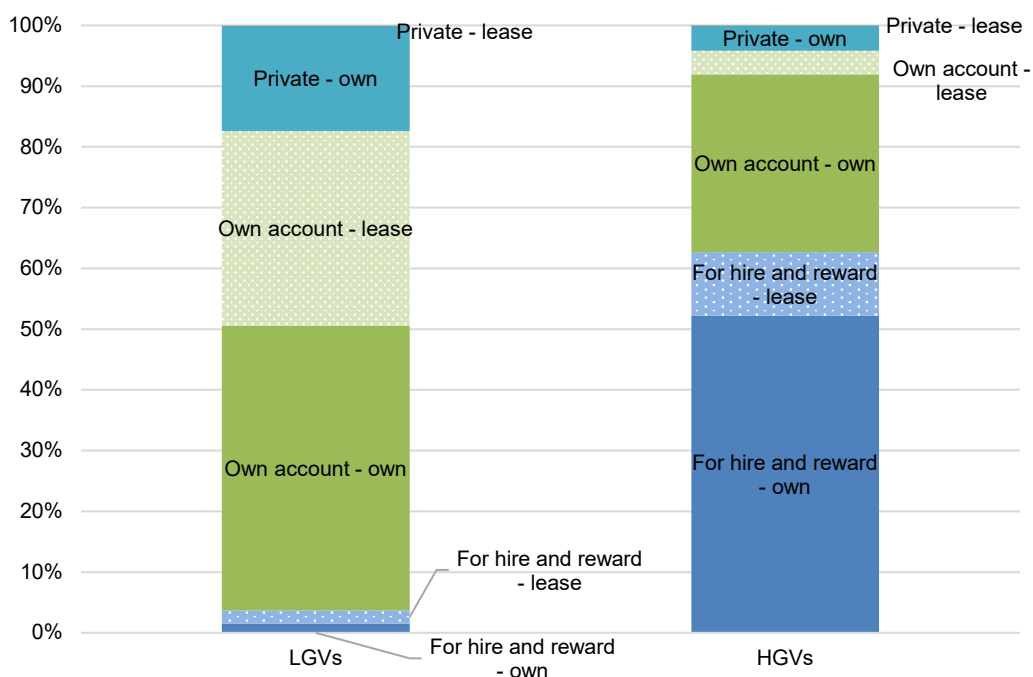
The industry that increased its use of LGVs most during the period 2010–2022 is Finance and insurance (+287 per cent), which basically consists of LGVs for leasing. Among the owner industries that use their own LGVs and have increased their holdings significantly between 2010 and 2022 we find Water supply (+84 per cent), Rental (+82 per cent), Culture (+64 per cent), Public administration (+55 per cent), and Construction (+53 per cent).

We can see that LGVs have a wide range of uses, and several sectors have increased their vehicle ownership, from leasing/rental and production to services and public administration.

## 2.2 Leasing

The leasing of LGVs is extensive. In 2000, 21 per cent of the LGVs in circulation were leased, and in 2022 the share of leasing has increased to 34 per cent. About 14 per cent of HGVs are leased and 11 per cent of passenger cars are leased.<sup>13</sup>

Who leases light lorries? 60 per cent of LGVs running for hire and reward are leased, 42 per cent running on own account are leased and <1 per cent of privately owned LGVs are leased. Since own account is very dominant among LGVs, this is where the largest number of leased LGVs are found. Among heavy goods vehicles, hire and reward dominates the fleet and this is also where most leased HGVs are found (Figure 2.4).



**Figure 2.4. Light and heavy goods vehicles, ownership category and leasing. Year 2022.**  
Source: Transport Analysis

Reasons for leasing a vehicle can be related to costs or accounting reasons but can also be a way of reducing the risk of changes such as new fuels. Among leased light goods vehicles, alternative fuels (i.e., other than petrol and diesel) have a slightly larger share than in the vehicle fleet as a whole (see also section 2.6).

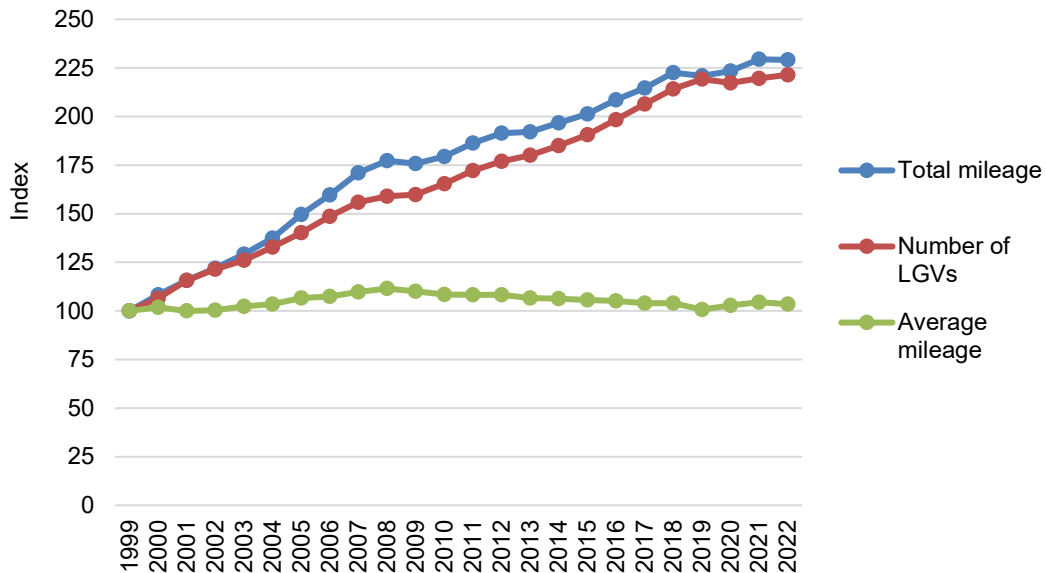
## 2.3 Vehicle mileage

On average, an LGVs drives 13,750 km per year, compared to 42,370 km for a heavy goods vehicle (in 2022), i.e., three times as far. As the number of LGVs has increased, so has the number of kilometres they travel. The total distance travelled by LGVs has increased by 129 per cent since 1999, from 4 billion km to almost 10 billion km in 2022.

<sup>13</sup> See also the Methodology Report for a more detailed discussion of leasing and its various forms.



The fact that the total mileage of LGVs has more than doubled in two decades is mainly due to an increase in their number. The average mileage per LGV has remained relatively stable over the years since 1999, with an average of 14,000 km, and has varied a few per cent up and down (Figure 2.5).



**Figure 2.5. Total and average mileage and the number of LGVs in circulation at least one day during the year. Index with 1999 = 100, 1999–2022.**

Source: Transport Analysis

The company-owned LGVs are driven on average 14,960 km per year compared to 9,060 km for the privately owned ones. In comparison, a passenger car is driven on average 11,260 km per year; in this respect, the mileage of privately owned LGVs is close to that of a passenger car.

The LGVs that are driven the longest distances in a year belong to the Transport and storage sector (19,720 km) followed by Construction (16,720 km). The shortest distances are driven in the sectors Public administration (1 089 km) and Activities of international organisations (11,220 km).

## 2.4 Average age of LGVs

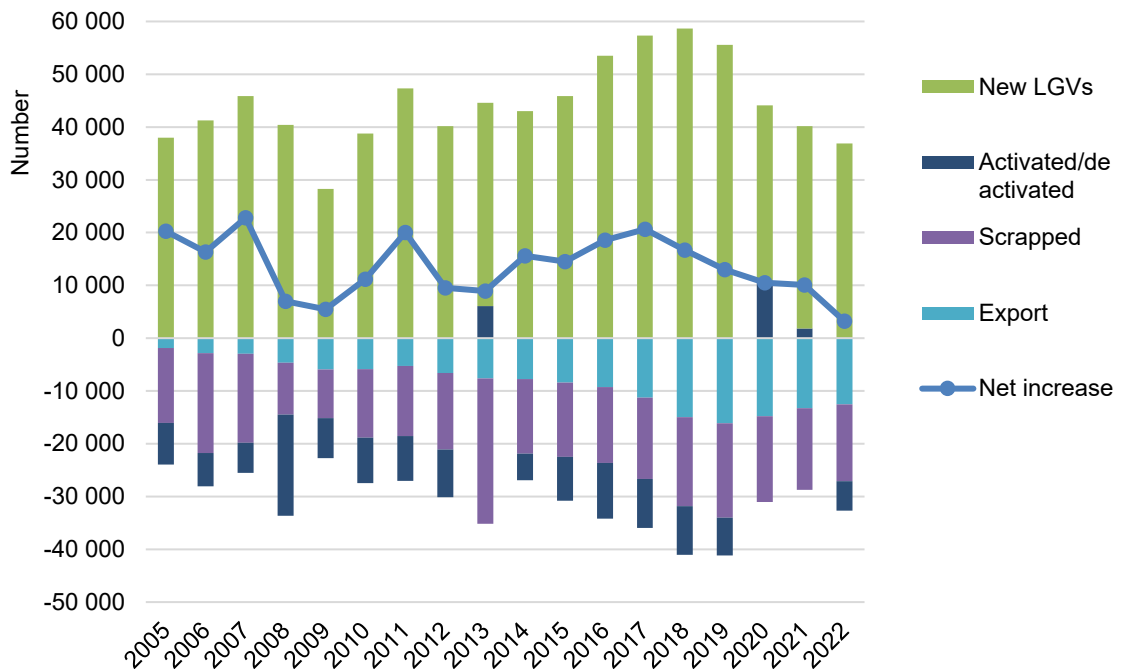
The total stock of LGVs consists of both vehicles in circulation (approximately 600,000 vehicles) and withdrawn vehicles (approximately 200,000 vehicles). The number of vehicles in circulation, i.e., the "active" vehicle fleet, increases or decreases from year to year, depending on the development of several different subcomponents. The net change in the number of vehicles in circulation from one year to another can be broken down as follows:<sup>14</sup>

<sup>14</sup> The subcomponents do not add up exactly to the net change because some scrapping and export takes place among discarded vehicles, i.e., there are transfers between the subcomponents. However, the breakdown is good enough to illustrate more precisely why the number of vehicles in traffic increases or decreases. The difference can be a few per cent of the net change and is not visible in a figure.

**Net change in the number of vehicles in circulation =**

- + new vehicles registered during the year
- vehicles scrapped during the year
- vehicles exported during the year
- +/- change in the number of deactivated vehicles

LGVs in circulation have been increasing by 10,000–20,000 vehicles per year for many years, but since 2019 the increases have slowed down to 3,000 additional vehicles in 2022. This low net increase for LGVs was last seen in 2008–2009. The main explanation for the lower net increase in the number of LGVs in circulation over the last three years is fewer new registrations. Note that the decline in the number of newly registered LGVs had already started before the coronavirus pandemic began (Figure 2.6).

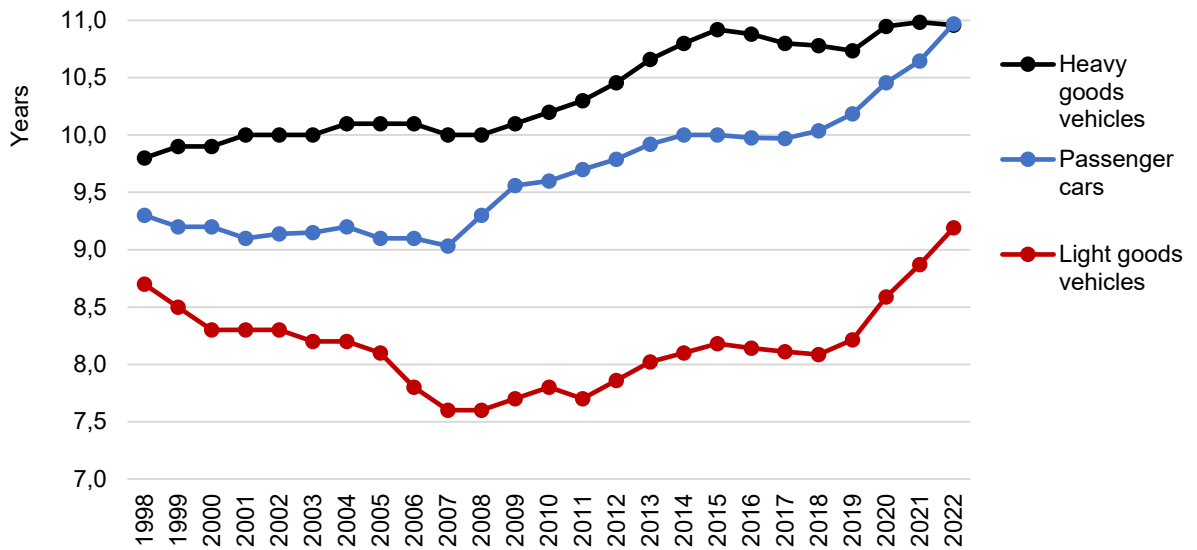


**Figure 2.6. Light goods vehicles, net change in number of vehicles in circulation and its subcomponents, 2005–2022.**

Source: Transport Analysis

Of the LGVs deregistered in 2022, about the same number were scrapped and exported. The exported LGVs were on average 14 years old, while those scrapped were 16 years old (in 2022). That is, the vehicles exported are relatively old, not bad compared to exports of passenger cars, which mainly consist of vehicles less than five years old.

Despite the high age of exports and scrapping, the low inflow of new LGVs means that the vehicle fleet in circulation is ageing over time. The average age of LGVs in circulation is currently 9 years, compared to 11 years for both HGVs and passenger cars. The average age of LGVs was almost 9 years even in 1998 but fell to 7.7 years in the mid-2000s and then increased again and is now just over 9 years (Figure 2.7).

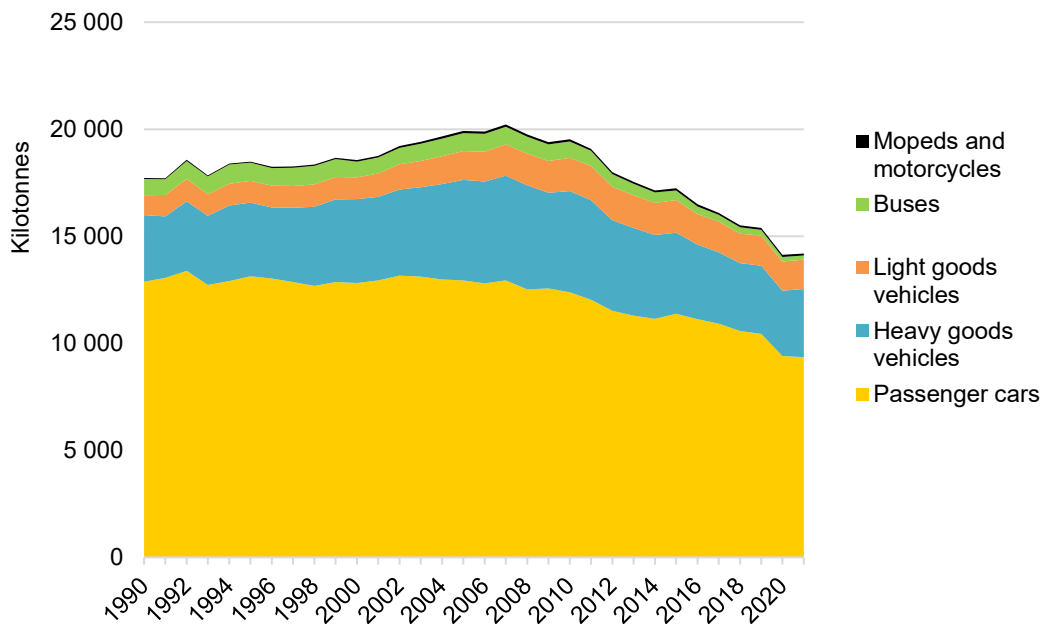


**Figure 2.7. Average age of vehicles in circulation, passenger cars and light and heavy goods vehicles, 1998–2022.**

Source: Transport Analysis

## 2.5 Greenhouse gas emissions

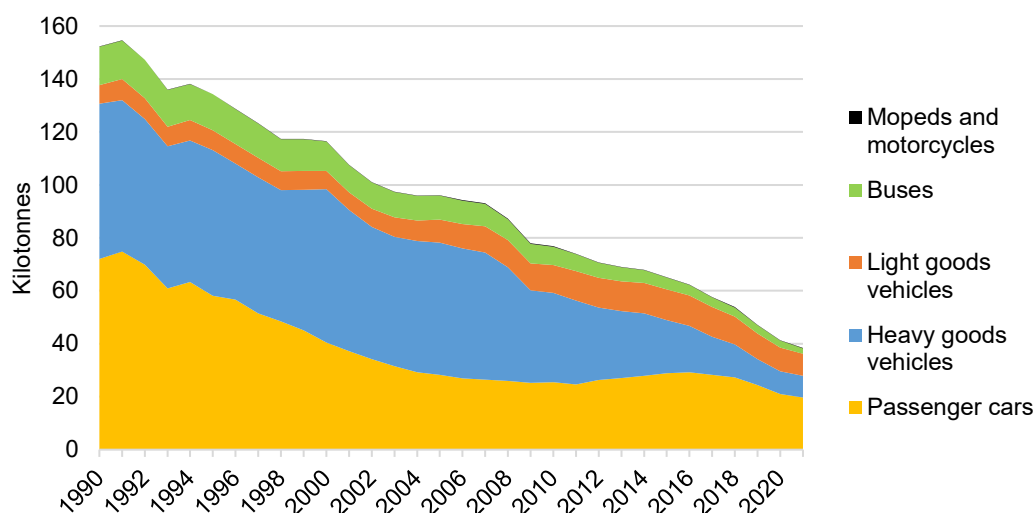
In road transport, passenger cars account for the majority of total greenhouse gas emissions, while heavy goods vehicles have by far the highest emissions per vehicle. Total greenhouse gas emissions from all road transport have decreased by 24 per cent since 2000, while they have increased for light goods vehicles. The share of LGVs in all road transport emissions has gone from 5 to 10 per cent over the period (Figure 2.8).



**Figure 2.8. Greenhouse gas emissions in road transport, by vehicle type in carbon dioxide equivalents (kilotons), 1990–2021.**

Source: The Swedish Environmental Protection Agency

Total emissions of nitrogen oxides (NOx) from road traffic have decreased by 75 per cent since 1990, with emissions from HGVs and buses decreasing the most, by 86 per cent. Emissions of nitrogen oxides from passenger cars have decreased by 73 per cent. In contrast, emissions of nitrogen oxides from LGVs have increased by 17 per cent over the same period.

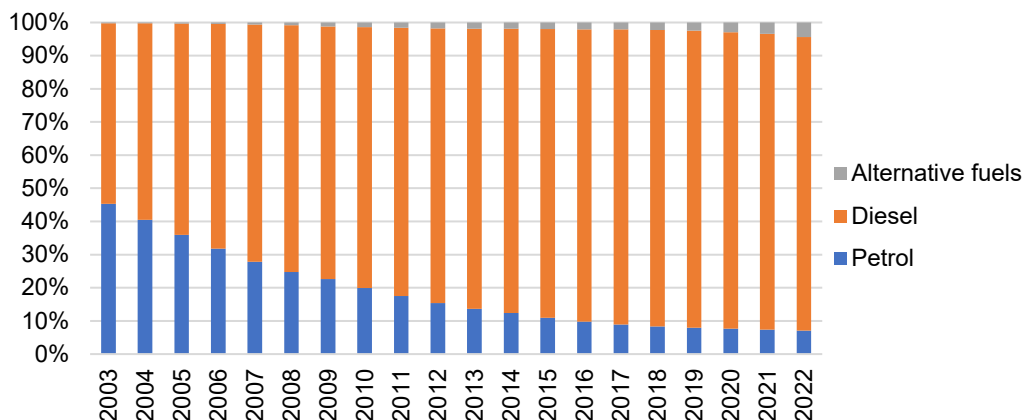


**Figure 2.9. Emissions of nitrogen oxides in road transport, by vehicle type in kilotons, 1990–2021.**  
Source: The Swedish Environmental Protection Agency

## 2.6 New fuels

The fuel used in LGVs is predominantly diesel (89 per cent), but over the past 20 years petrol has steadily declined, while alternative fuels have slowly emerged. By 2022, 4.4 per cent of LGVs in circulation were running on fuels other than diesel and petrol. The alternative fuels used in LGVs in circulation are electricity (2.2 per cent) followed by natural gas (1.4 per cent) and ethanol (0.7 per cent). Hybrids are still uncommon among LGVs. Thus, diesel still dominates light goods vehicles.

Among HGVs in circulation, the fuel mix is even more polarised. A full 96 per cent run on diesel; 1 per cent, especially very old vehicles, run on petrol, and the remaining less than 3 per cent run on alternative fuels. Among alternative fuels in HGVs, natural gas dominates by far.



**Figure 2.10. Light goods vehicles in circulation, share by fuel, 2003–2022.**  
Source: Transport Analysis

Among newly registered LGVs, the proportion running on alternative fuels is significantly higher, at 18 per cent. Among new registrations with alternative fuels, electricity dominates (14 per cent of all new registrations) followed by ethanol (3 per cent, Table 2.2).

**Table 2.1. Light goods vehicles in circulation and newly registered with fuel, 2022.**

	LGVs in circulation		Newly registered LGVs	
	Number	Share (%)	Number	Share (%)
<b>Petrol</b>	43 117	7,1	1 432	3,9
<b>Diesel</b>	539 156	88,6	28 805	78,1
<b>Electric</b>	13 217	2,2	5 024	13,6
<b>Electric hybrids</b>	62	0,0	5	0,0
<b>Plug-in hybrids</b>	421	0,1	262	0,7
<b>Ethanol</b>	4 255	0,7	1 162	3,1
<b>Natural gas</b>	8 604	1,4	196	0,5
<b>Others</b>	39	0,0	8	0,0
<b>Total</b>	<b>608 871</b>	<b>100,0</b>	<b>36 894</b>	<b>100,0</b>

**Source: Transport Analysis**

Of the nearly 27,000 alternative-fuel light goods vehicles, fewer than 10 are owned by private individuals. Light goods vehicles with the new fuels are thus something that so far seem to be almost exclusively an option for companies. The largest sectors of ownership are Construction and Real estate, followed by Health care and social services.

Buying a vehicle that runs on a new type of fuel is a risk, and leasing can be an attractive option. As we said earlier, about 34 per cent of LGVs are leased (Figure 2.4). Of the LGVs running on alternative fuels, 56 per cent were leased.

LGVs were covered by the climate bonus premium introduced in July 2019 and abolished in November 2022. The bonus was introduced to reward the use of light vehicles (i.e., passenger cars, light buses and LGVs) with low carbon dioxide emissions. During the entire period, almost 10,000 LGVs received bonuses totalling SEK 540 million (i.e., about SEK 55,000 per vehicle, or about 5,500 Euros). LGVs have thus received about 3 per cent of the total 17 billion paid out in climate bonuses, with the remaining 97 per cent going to passenger cars and light buses.<sup>15</sup>

The Swedish Transport Agency administers the climate bonus and we do not know more about which LGVs have received the bonus. However, in principle, only electric and gas-powered LGVs have met the requirements set. As we saw above, the LGVs exported are 14 years old on average, so the problem of "bonus vehicles disappearing abroad" is probably much smaller than it is for passenger cars.<sup>16</sup>

<sup>15</sup> [www.transportstyrelsen.se/sv/vagtrafik/Fordon/bonus-malus/](http://www.transportstyrelsen.se/sv/vagtrafik/Fordon/bonus-malus/) (in Swedish only)

<sup>16</sup> [www.trafa.se/vagtrafik/okad-export-av-begagnade-bilar-2022-13660/](http://www.trafa.se/vagtrafik/okad-export-av-begagnade-bilar-2022-13660/) (in Swedish only) Among passenger cars, it is common for cars that have received a climate bonus to be exported to Norway and Germany in particular. Electric cars and plug-in hybrids in particular are exported on a large scale and when they are fairly new (maximum 5 years old).



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## 3 How are light goods vehicles used?

In Chapter 2, we showed what the light goods vehicle fleet looks like and how it has changed over the last two decades. In order to gain insight into how LGVs are used in practice, we conducted a survey in 2022 targeting only LGVs owned by companies, including sole traders, i.e., about 83 percent of all LGVs (see Figure 2.2).

A brief description of the data collection can be found in Appendix 1, and the questionnaire we used is shown in Appendix 2. The survey is described in detail in a published methodology report (see “Documentation” at the website).

### 3.1 The questionnaire survey

The purpose of the survey was to try to capture how LGVs are used for goods transport and crafts/services. We have therefore defined a population that should contain most of the vehicles whose use we want to describe in the statistics. The population for the light goods vehicles statistics in 2022 is all company-owned LGVs in circulation, excluding

- vintage vehicles (older than 30 years),
- some specialised vehicles (e.g., road works vehicles and emergency vehicles), and
- vehicles owned by pure hire companies.

Thus, all privately owned LGVs are excluded from the population.

From the population of company-owned LGVs in circulation (just over 400,000 vehicles), we made a random selection of 10,000 LGVs from the Swedish Transport Agency’s road traffic register. We then sent a simple, short questionnaire with eight questions to the owners of these selected vehicles. The paper survey was four pages long, including information on the collection, instructions, and log-in details for an online survey.

The survey we sent out referred to a specific measurement day (one day) in 2022 for each vehicle. The collection covered all 365 days of the year, i.e., we asked the same number of LGV owners every day in 2022, both weekdays and weekends. Responding to the survey was voluntary and the response rate was approximately 47 per cent. The responses have since been extrapolated to the entire population of company-owned LGVs.

According to the official mileage statistics (which are based on odometer readings from inspections), company-owned LGVs travelled an average of 14,960 km in 2022. This is 18 per cent higher than the mileage in the survey-based statistics in *Light goods vehicles 2022*, which amounted to only 12,670 km during the year. To make a very simple calculation, the statistics we present here can be multiplied by 1.18. In the presentation below, no calculation has been made either in the tables with statistics or in the report’s figures or text (see more detailed description of the data collection in Appendix 1).

## 3.2 How much are light goods vehicles used?

We have collected data on traffic and transport by light goods vehicles for all 365 days of the year 2022, with each respondent answering questions about their LGV use on a specific measurement day (one day). In the whole population, there were approximately 417,000 LGVs. Therefore, in 2022 there were potentially  $365 \times 417,000 = 152$  million driving days.

Thus, if all LGVs were used 365 days a year, they would collectively drive 152 million driving days. According to the statistics, of all these potential driving days, LGVs were used 46 per cent, i.e., on just over half of the days, a typical LGV is stationary. On weekdays, 62 per cent of LGVs are driven, i.e., 38 per cent are stationary, and on weekends almost 90 per cent are stationary (Table 3.1).

**Table 3.1. Number of driving days where LGV in use and standstill, respectively.**

	Number of driving days, 1,000s			
	In use, days	Standstill, days	Total number of days	Share in use, %
Weekdays (Monday-Friday)	64 781	39 455	104 237	62,1
Weekends (Saturday-Sunday)	5 065	43 339	48 403	10,5
All days	69 846	82 794	152 640	45,8

**Note: Weekends are Saturdays and Sundays, no account has been taken of public holidays, bank holidays, etc.**

## 3.3 How far do light goods vehicles travel?

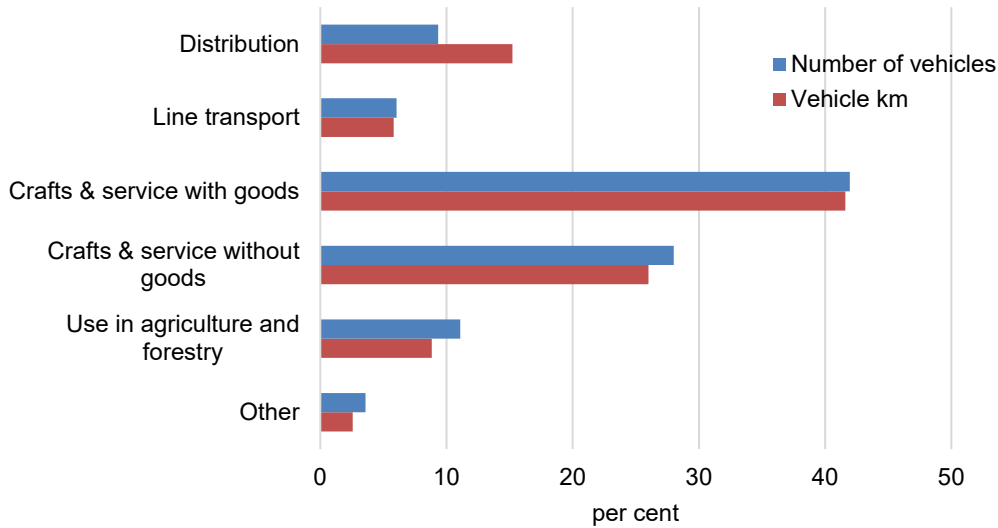
In the questionnaire, we asked about the primary use of the LGV on the day of the survey. The alternatives we captured are the following, where the longer description comes from question 3 of the questionnaire (see Appendix 1).

- **Distribution transport:** Transport of goods or commodities with several stops for loading and unloading along the way, such as distribution rounds or collection rounds.
- **Line haul:** Transport of goods or commodities, where the whole load was carried directly from one place to another; one or more such trips may be made during the measurement day
- **Crafts and services with goods:** Craft or service vehicle with goods or merchandise which would be used or installed in the work – materials, white goods, spare parts, etc.
- **Crafts and services without goods:** Craft or service vehicle without goods or merchandise – only tools or machinery.
- **Agricultural and forestry use**
- **Other** (e.g. private errands)

The majority of vehicles are used for Crafts and services, with or without goods (70 per cent), followed by Agriculture (11 per cent) and Distribution (9 per cent). Only 6 per cent of the LGVs



are used for regular transport, i.e., a longer transport with few stops for loading/unloading (Figure 3.1).

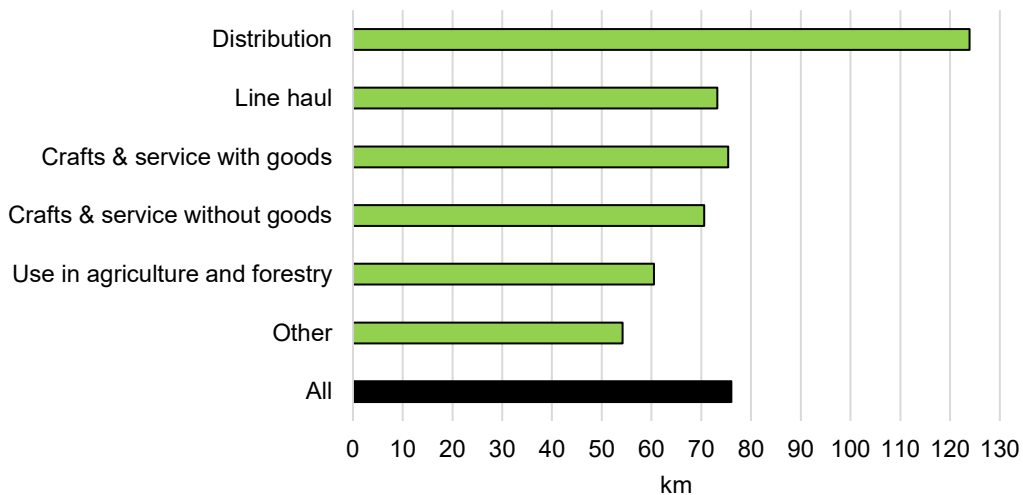


**Figure 3.1. Primary use of light goods vehicles with share (%) of number of vehicles and of vehicle kilometres.**

**Source:** *Light goods vehicles 2022*, Table 2

**Note:** LGVs that were idle on the measurement day do not contribute to the figure.

The distance travelled has a similar distribution to the number of LGVs, except that LGVs in Distribution travel a relatively longer distance than other vehicles (Figure 3.1). If we look at the days when the LGVs are used (about half of the days of the year), they drive an average of 76 km per driving day. During a driving day, vehicles in Distribution travel the longest distances (124 km). Vehicles in Crafts and services and Line haul drive about the same distance, about 70 km per driving day. Vehicles in Agriculture drive the shortest distances at 60 km per driving day.



**Figure 3.2. Distance travelled per driving day (day the vehicle is used) by primary use.**

**Source:** *Light goods vehicles 2022*, Table 4

**Note:** LGVs that were idle on the measurement day do not contribute to the figure.

If the light goods vehicles were driven the same distance every weekday, 71 per cent (5/7) of the traffic work would be carried out during weekdays (Monday to Friday) and thus 29 per cent (2/7) during weekends (Saturday and Sunday). According to the statistics, however, only 6 per

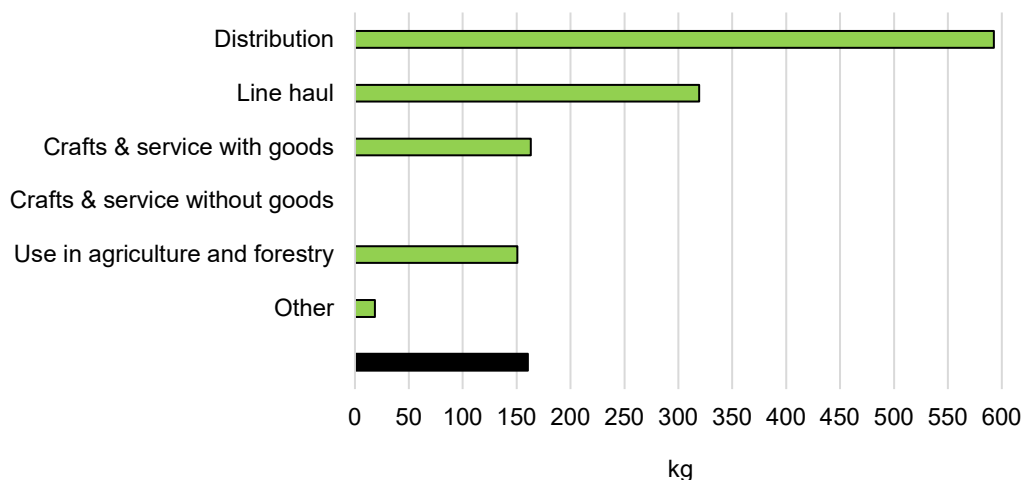
cent of the distance was driven during weekends, i.e., significantly shorter distances per day during weekends than during weekdays, which is expected.

The types of transport that drive the largest share of their kilometres at weekends are Agricultural and forestry use and Line haul and Other use, which includes private use of the truck. LGVs in craft and service and distribution vehicles drive the lowest proportion of their kilometres at weekends. As regards the main goods in the load, agricultural goods and foodstuffs are driven to a greater extent at weekends.

### 3.4 How much freight do LGVs carry?

The survey asked how many kilograms of goods were loaded on the vehicle on a given day, excluding the tools used to perform work. Throughout 2022, a total of 11.2 million tonnes were loaded on all company-owned light goods vehicles in the country. Heavy goods vehicles in domestic traffic were loaded with 487 million tonnes in 2022, which means that LGVs account for just over 2 per cent of all goods loaded on Swedish lorries.

If we look at different primary uses of LGVs, it is Distribution that carries the most goods on an average driving day (593 kg), followed by Line haul (319 kg). Crafts and services vehicles carrying goods carry, on average, 163 kg on a driving day, while vehicles in Agriculture carry an average of 151 kg. Vehicles with Other uses carry much less (18 kg, Figure 3.3).



**Figure 3.3. Quantity of goods loaded per driving day (i.e., a day when the vehicle is used) by primary use of the LGV, in kilograms.**

**Source:** *Light goods vehicles 2022*, Table 4

**Note:** LGVs that were idle on the measurement day do not contribute to the figure.

An LGV on an average driving day (i.e., a day when the vehicle is used) carries 160 kg of goods. In the different sectors, Transport and storage loads the most during a driving day (388 kg) and Construction (112 kg) and Agriculture (151 kg) loads the least. This can be put in relation to the average maximum load capacity in company-owned LGVs, which is 787 kg.

Note, however, that goods vehicles can make distribution rounds and load and unload goods several times during a driving day. In addition, the volume may be the limiting factor for rather than the maximum load capacity, for example, if it carries light but bulky items such as parcels. In addition, light lorries, especially in distribution traffic, often have to deliver to the customer at a certain time, and thus delivery precision can be superior to load factor.

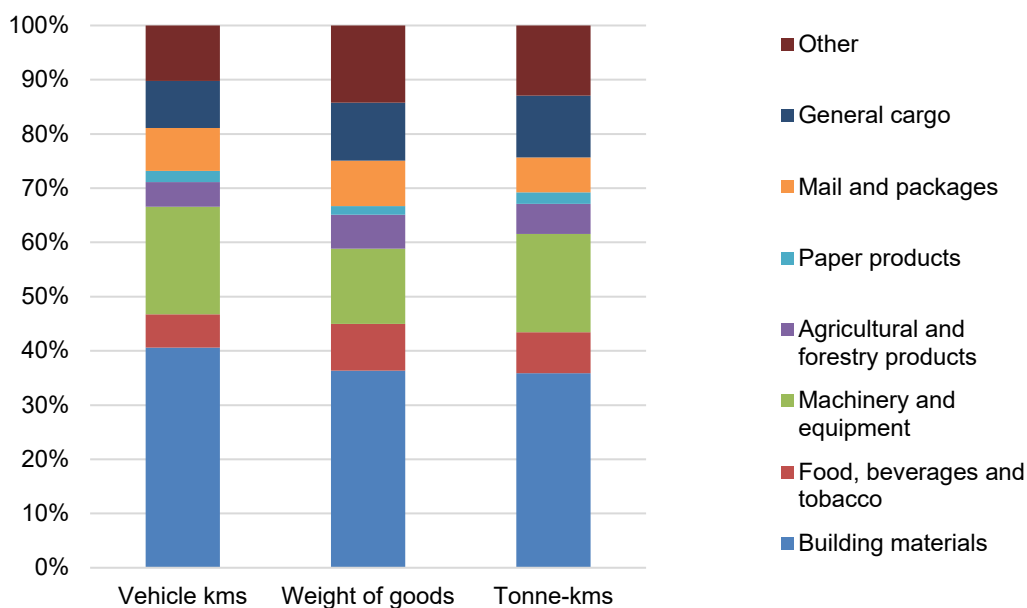
Commenting on load factor and volume utilisation in goods vehicles is extremely complicated and not something we have tried to capture with our survey.<sup>17</sup>

The amount of loaded goods during a driving day differs very little between weekdays and weekends, at 161 kg and 159 kg respectively. This is explained by the fact that the LGVs that mainly drive during weekends are distribution vehicles and they have a lot of cargo. The loaded weight per driving day is also very similar across the quarters.

### 3.5 Tonne-kilometres of the LGVs

Tonne-kilometres is a measure of the transport performance of LGVs and other vehicles. One tonne of goods transported 1 km is 1 tonne-kilometre. We only have the total number of kilograms of goods loaded during a day and no information on when different quantities were loaded and unloaded. When we estimate the tonnes-kilometres, we must therefore make an approximation, which is described in Appendix 1.

The tonnes-kilometres of LGVs were estimated at 481 million tonne-kilometres in 2022, while HGVs account for 46 billion tonne-kilometres in their domestic traffic.<sup>18</sup> This means that LGVs carry out 1 per cent of all tonnes-kilometres on road. The product groups that account for the most tonnes-kilometres by LGVs are Construction materials, followed by Machinery and equipment and General cargo.



**Figure 3.4. Distance travelled, weight of goods loaded, and tonne-kilometres, share (%) by commodity group.**

**Source:** *Light goods vehicles 2022*, Table 2

**Remark:** The commodity group refers to the main commodity loaded on the measurement day.

The largest tonne-kilometres per vehicle and driving day (i.e., day when the vehicle is used) is in the Transport and storage sector, followed by Trade and then Real estate services.

<sup>17</sup> I detta avsnitt av Logistikpodden med P-O Arnäs beskrivs komplexiteten både i att mäta och bedöma fyllnadsgrad. [logistikpodden.se/podcast/logistikpodden-magasin-8-fyllnadsgrad-schmyllnadsgrad/](https://logistikpodden.se/podcast/logistikpodden-magasin-8-fyllnadsgrad-schmyllnadsgrad/)

<sup>18</sup> Actually goods vehicles with a maximum load capacity above 3.5 tonnes, see our statistics [Swedish road goods transport www.trafa.se/en/road-traffic/swedish-road-goods-transport/](https://www.trafa.se/en/road-traffic/swedish-road-goods-transport/).

### 3.6 How many stops do light goods vehicles make?

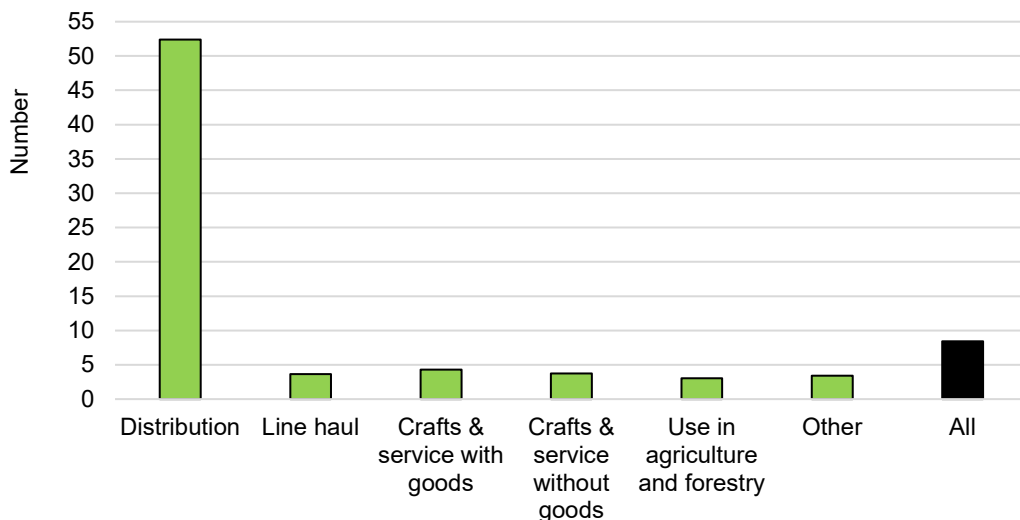
Heavy goods vehicles carry out long-distance transport, usually with few stops for loading and unloading. Light goods vehicles have completely different uses. They are used in crafts/services, agriculture, property services, and the distribution of heavy goods or lighter parcels. LGVs travel shorter distances and make more stops on average. Distribution vehicles in particular make many stops.

In the survey, we asked owners of LGVs how many stops they make during the measurement day, where a stop means that the vehicle stops to

- load goods,
- unload goods, or
- perform some kind of work.

On average, an LGV makes just over eight stops on a driving day, i.e., a day when it is in use. Similar information is available for the UK, where company-owned LGVs make nine stops per day, and those in the Netherlands make four stops. We interpret their text as meaning that this refers to an average day during the year, i.e., they also include days when the vehicle is stationary. For the whole year, Swedish LGVs make on average four stops per day, i.e., the same level as in the Netherlands.

For an average driving day (i.e., day when the vehicle is used), the number of stops average a little over eight stops, from three stops in Agriculture and forestry use to 52 stops in Distribution traffic (Figure 3.5).

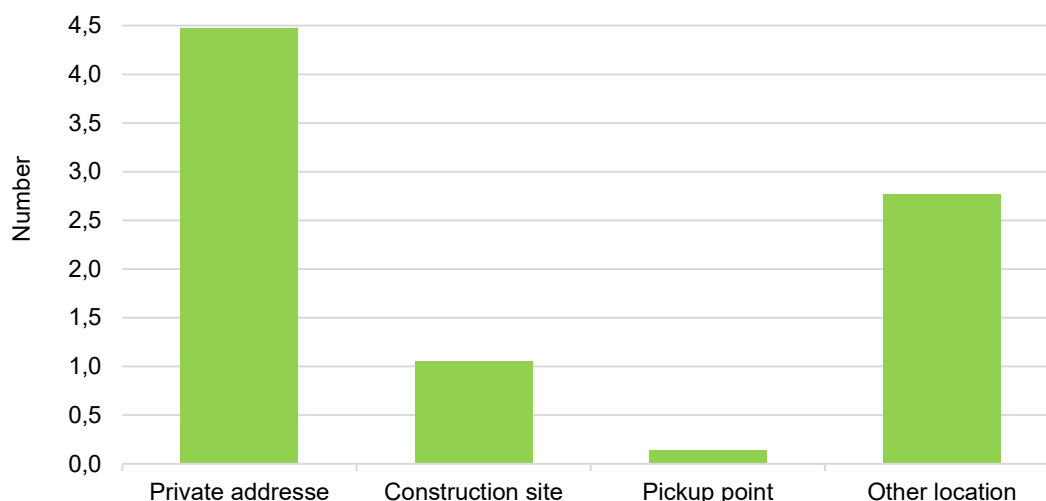


**Figure 3.5. Number of stops per primary use, per vehicle and driving day (i.e., day the vehicle is used).**

**Source:** *Light goods vehicles 2022*, Table 5.

We also asked where the stops take place, at a private address, a construction site, a pickup point, or another location (e.g., a warehouse, the own workplace). Over half of the stops (4.5 stops per car and driving day) take place at private addresses, which captures both Distribution traffic and Crafts and services. An average of 1.1 stops per vehicle and driving day are at construction sites. Stops at pickup points only concern a certain type of light goods vehicle, and these make up only a small proportion of the entire population of LGVs.

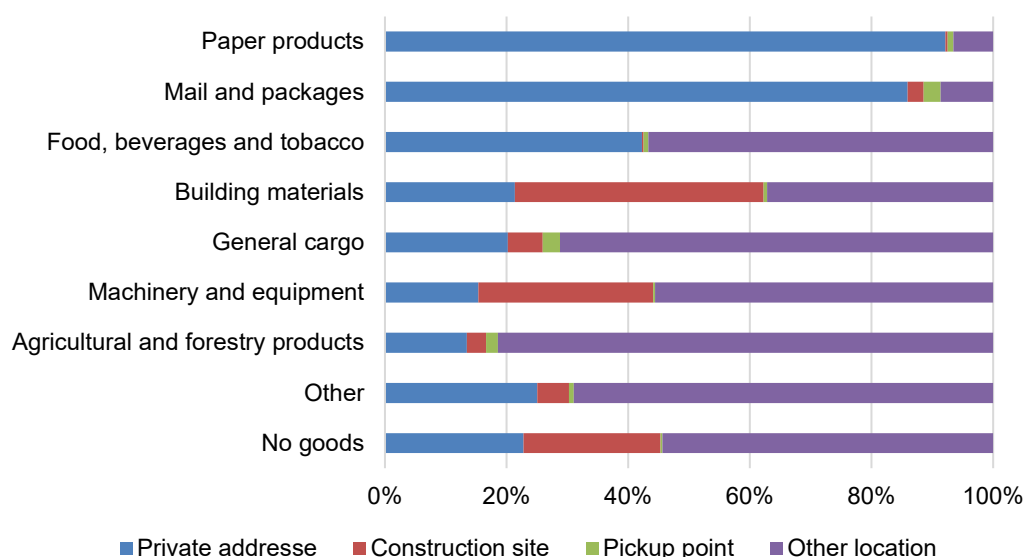
Approximately one third of the stops are made at other types of locations, such as the owners' own workplace, transshipment terminals, warehouses, wholesalers, etc.



**Figure 3.6 Number of stops per type of stop, per vehicle and driving day (i.e., day the vehicle is used).**

**Source:** *Light goods vehicles 2022, Table 5.*

Which goods are delivered to or taken from each type of stop? Paper products (mainly mail and newspapers) are delivered to private homes, as are Mail and parcels (mail and E-commerce). 45 per cent of food goes to private addresses, and 55 per cent goes to or is collected from other places (shops and warehouses etc.). Construction materials go to private homes and construction sites in roughly equal proportions. Stops at other locations for construction materials include purchase/pick-up at warehouses/wholesalers (Figure 3.7).



**Figure 3.7. Share of stops by commodity group.**

**Source:** *Light goods vehicles 2022, Table 5.*

We can also look at deliveries from the other direction, at the kinds of stops made at different types of recipients. Stops at parcel agents are 70 per cent mail and parcels and 15 per cent paper products (including newspapers). Stops at private homes are 55 per cent mail and

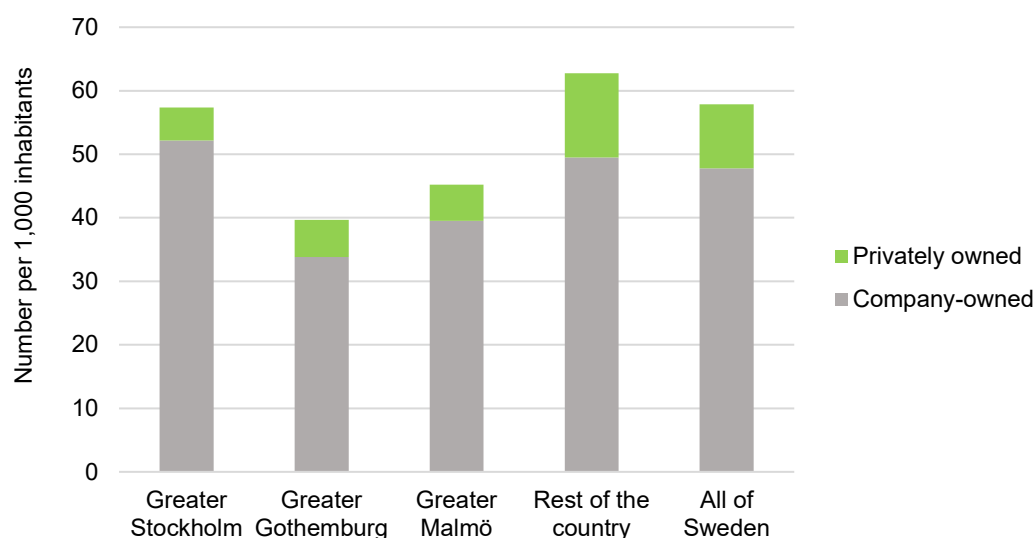
parcels and 40 per cent paper products (including newspapers). If we look at different types of primary use, it is LGVs in distribution traffic that account for most stops at private homes.

### 3.7 Geographical differences

We did not request detailed driving records with geographical positions from the LGV owners. Therefore, we only know the municipality in which the vehicle is registered and how many kilometres it was driven during the specific measurement day. However, the questionnaire included a question about whether the vehicle is usually used in any other municipality than the one in which it is registered (question 1).

For the statistics presented below by geographical area of use, the measures are broken down for Greater Stockholm, Greater Gothenburg, Greater Malmö, and the rest of the country. For those who responded that their light goods vehicle is mainly used in places other than where it is registered, the vehicle was given the specified municipality as its place of residence.

To capture something about the geographical differences in the use of LGVs, we have presented the statistics for three metropolitan areas and the rest of the country. In terms of the number of LGVs in circulation per 1,000 inhabitants, there are most in Greater Stockholm (57), followed by Greater Malmö (45), and finally Greater Gothenburg (40). In the rest of the country there are 63 LGVs in circulation per 1 000 inhabitants, i.e., more than in the metropolitan areas. Above all, it is the privately owned ones that are significantly more per inhabitant outside the metropolises.<sup>19</sup>



**Figure 3.8. Number of light goods vehicles in circulation per 1,000 inhabitants in metropolitan areas, the rest of the country and Sweden as a whole. Privately owned and company-owned light goods vehicles, in 2022.**

Source: Number of vehicles from Traffic Analysis and population from Statistics Sweden.

Note: For the definition of metropolitan areas, see the Excel appendix.

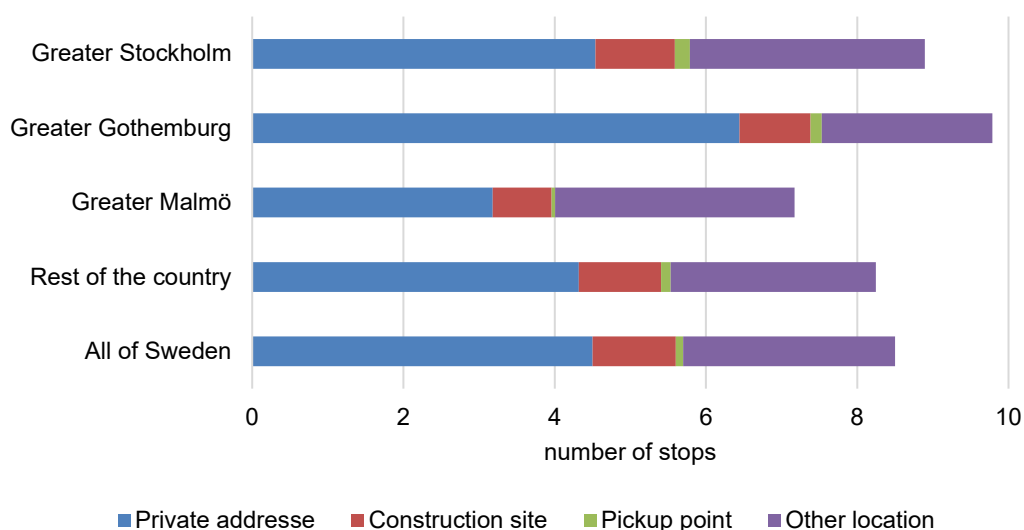
<sup>19</sup> Please note that the figure for Stockholm may be slightly "inflated" due to the fact that some leasing and vehicles registered at headquarters tend to place more vehicles in Stockholm than is actually the case.

The statistics in *Light goods vehicles 2022* are broken down into the three largest metropolitan areas and the rest of the country. LGVs in large cities travel longer distances, carry more goods, and perform more tonne-kilometres per vehicle compared to the rest of the country. Greater Gothenburg stands out with the longest distances travelled per vehicle, over 15,000 km per year compared with the average of 12,670 km (Table 3.2).

**Table 3.2. Kilometres driven, amount of goods loaded, and tonne-kilometres per geographical area of use. Average per vehicle and year.**

	Vehicle km	Loads goods, tonnes	Tonnes-km, 1,000s
Greater Stockholm	13,875	32	1,256
Greater Gothenburg	15,184	26	1,198
Greater Malmö	13,398	37	1,747
The rest of the country	12,027	25	1,067
All of Sweden	12,667	27	1,146

Light goods vehicles in Stockholm and especially Gothenburg make more stops than the national average (Table 3.2). Greater Gothenburg stands out with almost 10 stops per vehicle and driving day, compared with 8.4 stops in total in the whole country. Greater Gothenburg also stands out with the country's largest proportion of stops at private homes, which we interpret as basically e-commerce goods for home delivery. In Greater Malmö, however, fewer stops are made than the national average (Figure 3.9).



**Figure 3.8. Number of stops per driving day to various destinations in metropolitan areas and the rest of the country.**

Source: *Light goods vehicles 2022*, Table 5

Remark: For definition of metropolitan areas, see the Excel Appendix.





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## 4 Concluding remarks

The first Swedish full-scale pilot study of LGVs has been presented in this report. What conclusions do we draw from this work? What would we do differently if a future collection were to take place? What recommendations would we give to other actors who are about to carry out a first data collection of this kind?

The data collection using questionnaires to owners of LGVs was carried out according to the set plan and fulfilled the set purpose. We chose to use a simple questionnaire with a few questions that took a few minutes to answer and achieved a response rate of 47 per cent. This can be considered a high response rate in a new and for the respondents an unknown collection that is voluntary to answer. From other data collections for statistics at Transport Analysis, we know that it is becoming increasingly difficult to get both companies and private individuals to respond to surveys. Nor is it desirable to force respondents with a regulation. Our best advice is to keep the questionnaire short and make it easy to answer.

We conclude that the survey worked well overall. An adaptation made afterwards in order to also capture the use of LGVs by farmers. Agriculture and forestry is the second largest owner sector of LGVs (after Construction), but they were not fully represented in the questionnaire and we therefore had to define a new use afterwards: Agricultural and forestry use.

One activity that we did not prioritise for *Light goods vehicles 2022* was interviews with owners and drivers of these vehicles. We conclude that more general knowledge about the conditions of these vehicles in practice would help improve the questionnaire and increase the general understanding of the work of the respondents. Since we did not collect detailed information on loading, unloading and distribution rounds, we have made an estimate of tonne-kilometres. This estimate raises the question of how many rounds (at least) an LGV needed to collect and distribute the amount of goods declared for the day. The number of rounds needed depends, among other things, on the density of the goods. Hardware is heavy and many kilos can be accommodated in a single load, while parcels are often light but bulky and then the volume can be limiting and more rounds for the goods may be needed. To gain better knowledge about distribution rounds, reloading and so on, we believe that interviews can be a wise investment to build up knowledge and understanding.

A recommendation from us is to adapt the questions in the survey to LGVs without too much focus on comparability with HGVs. An obvious example is product groups. The NST2007 nomenclature is developed for heavy transport by road, rail and sea. Most goods transported in LGVs will fall into the category Other, i.e., goods on LGVs according to NST2007 will contain very little information. The use of LGVs is obviously very different from the use of HGVs. We have made our own categorisation of product groups in the questionnaire, using information from other countries' experiences and our own from other surveys.

During our data collection, we have realised that telephone contacts with respondents are worthwhile. Our overall response rate of 47 percent for the full year was higher in the first and fourth quarters (50-51 percent). The greater propensity to respond in these quarters is explained by the fact that we made more telephone calls to either prepare respondents for the incoming survey (quarter 1) or to remind and encourage those who had not responded to do so (quarter 4). These telephone contacts are labour intensive and costly, but they clearly have a positive effect. Among those who were reminded by telephone to respond, almost 50 per cent subsequently returned the questionnaire.

The total estimated mileage in *Light goods vehicles 2022* is most likely underestimated. We have compared the estimated total mileage in these statistics with our statistics on *Vehicle kilometres*, which are based on register information on odometer readings. The total mileage according to odometer readings is 18 percent longer than kilometres driven according to our survey. We have not calibrated the statistics in this pilot project, but to improve the quality, one suggestion is to consider calibration against vehicle kilometres from registers if this information is available.

Why does *Light goods vehicles 2022* underestimate kilometres travelled compared to the statistics *Vehicle kilometres*, which we believe is relatively good as a "true fact"? One explanation is possible excessive standstill that we have experience of from the statistics on HGVs, *Swedish road goods transport*. However, we believe that the problem is significantly less here, since the survey on LGVs is so easy to answer, there is less incentive to exaggerate standstill.

However, we have found that the true standstill is "over-reported" in the *Light goods vehicles 2022* survey. This is the case since the response rate is higher on weekends than on weekdays, and the true standstill is more extensive on weekends than on weekdays. As a result, the true standstill is "exaggerated". The higher response rate on weekends is probably due to the fact that there is more of true standstill then and therefore it is very easy to answer the questionnaire (basically a single tick in the questionnaire). We will continue to analyse the statistics on LGVs, which have now been produced for the first time, to find out, among other things, how well we manage to capture their real traffic and transport.

Our hope for the future is to be able to use data directly from software in connected vehicles. The data in connected vehicles is similar to data from mobile phones, a type of data we are already familiar with. Data from vehicles will never be able to tell us what goods are in the load, but they will be able to give us information that we could never get from a survey. Examples of data that can theoretically already be obtained from connected LGVs are detailed routes, exact distances travelled, geographical range of the vehicles, times of day the vehicle was used, number of stops in different types of settlements and so on. We do not yet have this possibility, but we have established contacts with market players and hope that information directly from the vehicles will be possible in the not-too-distant future.

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# Appendix 1 Description of the data collection

For a more detailed description of the data collection and statistics production, see the methodology report published on the Transport Analysis website [www.trafa.se/en/light-goods-vehicles/](http://www.trafa.se/en/light-goods-vehicles/) (see "Documentation").

## Use of registers to construct the data collection framework

The sample frame for the survey consists of company-owned light goods vehicles in circulation according to the road traffic register of the Swedish Transport Agency. This information has been supplemented with vehicle kilometres of every LGV, calculated from odometer readings from inspections, together with certain information from Statistics Sweden's company database.

## Sample frame and population

We wanted our statistics to focus on LGVs used for freight transport and/or servicing. The framework for the survey was all Swedish-registered LGVs in circulation that were owned by what we simply call "companies", i.e., legal entities or individual entrepreneurs. Excluded from the framework are

- LGVs 30 years and older, i.e., vintage vehicles,
- specialised vehicles such as fire trucks, ambulances, and mobile cranes, and
- some industries that do not use the vehicles themselves (rental and leasing companies).

The survey was distributed to respondents in the four quarters of 2022, and we defined a new frame and a new population for each quarter. It was necessary to draw the population frame 1.5 months before the start of each quarter. This was in order to have time to match data on LGVs with other registers, match on telephone numbers, send out questionnaires in good time before the measurement date, etc.

The sampling frame averaged around 457,000 LGVs over the four quarters, while the population was around 419,000 vehicles, i.e., about 8 per cent less than the sampling frame. The fact that the population is so much smaller than the frame is explained by the net of over- and undercoverage as explained in the next section.

## Undercoverage and overcoverage

In a survey, "lead times" inevitably occur, resulting in differences between the defined frame and the population. In our data collection, a minimum of 1.5 months and a maximum of 4.5 months elapsed from the date the frame was defined from records to the specific measurement date of the respondent (Table 0.1). The differences between the frame and the population are in the form of undercoverage and overcoverage, with overcoverage being greater than undercoverage. For more details on the finalised population, see the Methodology Report.

## The sample and measurement days

The owners of the 10,000 LGVs in the sample were each sent a questionnaire for a specific measurement day during the year. The measurement days were evenly distributed over the

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365 days of 2022, i.e., both weekdays and weekends. This gave 27 or 28 LGVs each day in 2022, totalling 10,000 vehicles.

## **The survey**

The questionnaire sent to respondents covered four A4 pages and was also available in digital form. All those selected in the sample received an initial questionnaire plus a stamped return envelope by post and a maximum of two reminders by post if they did not respond. The questionnaire is shown in Appendix 2.

## **Response rate**

The response rate was 47 per cent for the whole year (Table 0.2). Of those who responded to the survey and where the LGV was used on the day of measurement (i.e., not stationary), 31 per cent responded to the paper survey, 60 per cent to the online survey, and the remaining 9 per cent by telephone. Those who responded by telephone were respondents who called the support centre, where it was easiest to receive answers directly during the call.

The response rate was higher in the first and fourth quarters when more resources were devoted to telephone calls before the survey was sent out to prepare the respondents (Quarter 1) and to extended telephone reminders to those who did not respond within a certain time frame (Quarter 4). Calls made before and/or after the survey was sent out were obviously effective. Of those who received a reminder by phone, almost 50 per cent later responded to the survey.

The response rate was lowest in Quarter 3 and lowest in June (36 per cent), which is probably explained by the holiday season.

## **Stratification**

The main purpose of stratification in this survey is to have a homogenising effect on the survey variables freight weight and mileage. Since no survey on LGVs has been carried out before, there is no data on weight, but there is register-based information on distance travelled. A further purpose of the stratification is to ensure the possibility of separate reporting of results for different accounting groups. This aspect was always in mind so that the stratification proposed on the basis of the main objective would also ensure the possibility of separate reporting.

The sample was stratified on four dimensions: Goods/Services (industry), Bodywork (three groups), Annual mileage (three ranges) and Maximum load (three ranges), giving  $2 \times 3 \times 3 \times 3 = 54$  strata.

## **The statistics have been scaled up to population levels**

All measures in the tables in the Excel appendix tables have been scaled up to population levels. We have used straight expansion within each stratum. The statistics thus represent all light goods vehicles in the population, i.e., all company-owned LGVs excluding those older than 30 years, specialised vehicles, and rental vehicles.

The statistics published in an Excel table and described in Chapter 3 consist of totals and averages for different subgroups. Some imputations have been made to compensate for missing data. The most complicated variable is tonne-kilometres, which has been estimated for all LGVs. For further information, please see the methodology report.

## **Statistics have not been calibrated**

In our annual data collection for heavy goods vehicles, exaggerated standstill is a major problem. Exaggerated standstill means that respondents say more often than is true that their HGV was idle during the measurement period (one week) in order to avoid answering the questionnaire. We have found that this reported standstill is exaggerated through comparison

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with our statistics *Vehicle kilometres*. Since 2012, a simple standstill survey has been carried out by telephone to a small sample of HGV owners, where the reported standstill percentage is used to weigh the statistics in *Swedish road goods transport*.

We do not know whether downtime is exaggerated in *Light goods vehicles 2022*. We believe that the problem is considerably less than in our statistics on heavy goods vehicles, because the questionnaire on LGVs is short and so easy to answer and thus there is less incentive to exaggerate standstill.

We have not calibrated the statistics in *Light goods vehicles 2022* against the statistics on *Vehicle kilometres*, as *Light goods vehicles 2022* is a pilot survey. If statistics on LGVs are to become a recurring publication, calibration should be considered.

However, we have compared the statistics on *Vehicle kilometres*, which are based on odometer readings, with the estimated enumerated mileage based on survey data. According to *Light goods vehicles 2022*, a company-owned LGV travelled 12,670 km in 2022 (with a 95 per cent confidence interval of 11,810–13,520 km). According to our statistics on *Vehicle kilometres*, company-owned LGVs drove an average of 14,960 km in 2022, i.e., a distance 18 per cent greater than the *Light goods vehicles 2022* finding. To make a very simple calculation, the statistics we present here can be multiplied by 1.18. No calculation has been made in either the statistical tables or figures in this report.

## Definition of primary use of an LGV

In the questionnaire, we asked about the primary use of the LGV on the day of the survey, i.e., about what the vehicle was mainly used for (question 3). The alternatives we captured are as follows, where the longer description comes from the question in the questionnaire.

- **Distribution transport:** Transport of goods or commodities with several stops for loading and unloading along the way, such as distribution rounds or collection rounds
- **Line haul:** Transport of goods or commodities, where the entire load was carried directly from one place to another; one or more such trips may be made during the measurement day
- **Crafts and services with goods:** Craft or service vehicle with goods or merchandise which would be used or installed in the work – materials, white goods, spare parts, etc.
- **Crafts and services without goods:** Craft or service vehicle without goods or merchandise – only tools or machinery
- **Agricultural and forestry use**
- **Other** (e.g. private errands)

However, the option Agriculture and forestry use was not included in the questionnaire. When the questionnaires were processed, it turned out that it was difficult for respondents in agriculture and forestry to choose one of the options in question 3 of the questionnaire. We have therefore retrospectively added this type of use and we have simply assumed that companies with SNI codes 01, 02, and 03 or who in the response "Other" in the free text stated "forestry", "agriculture", "farming", or similar, have used their LGV in their operations. It seemed most fair to do so because this sector has traffic and transport that does not really fit into the other alternatives. In addition, Agriculture and forestry is the second-largest owner industry of LGVs, so it feels important to ensure that this industry is visible in the statistics.

## Appendix 2 The questionnaire

The original questionnaire (in Swedish) is attached in the end of this Appendix. Page 1 of the questionnaire includes description of the purpose of the questionnaire, short description of Transport Analysis and our mission, together with a short text on that LGVs are increasing quickly in numbers, but that the knowledge about the use of these vehicles is very limited. The first page also contains web addresses, id and password to the web questionnaire, email addresses to support service handled by the consultant and email and phone number to two employees at Transport Analysis. The questions of the questionnaire are translated to English below.

### 1. Where is the LGV usually used?

The LGV with registration number ABC123 is registered in the municipality XXX. Is the vehicle usually used in that municipality?

- Yes
- No, it is usually used in municipality \_\_\_\_\_

### 2. Was the LGV run on the measurement day YYYYMMDD?

- Yes      If yes, continue with question 3.
- No      If no, continue with question 2a.

#### 2a. Why was it not run?

- The LGV was off road registered or deregistered in the Road Traffic Register.
- The LGV was sold.
- The vehicle was rented or lent to someone else.
- Other (the LGV was being repaired, there was no driver available, vacation, no work that day, etc.).

Proceed to question 7

### 3. What was the LGV used for, mainly, during the measurement day?

Choose **one** alternative - the one that was the **longest distance** travelled during the day.

#### Freight transport or goods transport

- Transport of cargo or goods, with several stops for loading and unloading along the way, for example distribution rounds or collection rounds.
- Transport of cargo or goods, where the entire load was transported directly from one place to another. One or more such trips can be made during the measurement day.

#### As a craft vehicle or service vehicle

- Craft car or service car, with goods or freight, to be used or installed in

the work - materials, appliances, spare parts, etc.

Craft car or service car, without cargo or goods - possibly only tools or machines.

Other, namely \_\_\_\_\_

**4. How far was the vehicle driven during the measurement day, in total?**

Estimate as close as possible, if you do not know exactly. \_\_\_\_\_ km

**5. What did the LGV transport?**

5a. How many kilos of goods or freight were loaded on the LGV during the measurement day, in total?

Estimate as close as possible, if you do not know exactly. Include the weight of load carriers - pallets, boxes, cages, etc. Do not include on work tools and equipment carried in the LGV to perform the job.

\_\_\_\_\_ kilos

*Example: In the morning, 500 kg is loaded at the terminal. The goods are distributed. After lunch, new load with 600 kg. A total of 1,100 kg was loaded on the vehicle during the day.*

**5b. What type of goods or freight were transported, mainly, during the measurement day?**

Choose one alternative. Choose the one that had the greatest weight in kgs during the day.

Building materials - wood products, pipes, parts, insulation, etc.

Food, beverages and tobacco

Machinery and equipment - appliances, electrical appliances, etc. but not tools or machines used to perform the job

Agricultural or forestry products - animal feed, manure, firewood, soil, etc.

Paper products - newspapers, advertising, books, etc.

Post and packages

General cargo - mixed goods that are transported together

Other, namely \_\_\_\_\_

No goods and no freight were transported

**6. How many stops did the LGV make during the measurement day, in total?**

By stop we mean that the vehicle stops at an adress / place, for goods to be loaded or unloaded,  
, or to perform work or service.

\_\_\_\_\_ stops

**6a. Where did the LGV stop during the measurement day?**

Include stops at your own workplace. Write the number of stops per line.

A private per son's address \_

\_\_\_\_\_ stops

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Construction site \_\_\_\_\_ stops

Parcel agent or parcel cabinet \_\_\_\_\_ stops

Other – your own company, terminal, office, shop, industry, barn or similar \_\_\_\_\_ stops

*Total number of stops during the day (same amount as in question 6 above)* \_\_\_\_\_ stops

**7. How long did it take to answer the questions?**

Include on the time it took to collect the information.

\_\_\_\_\_ minutes.

**8. Other**

If we have more questions about the vehicle, who can we contact?

Company / vehicle owner

Contact person

Email

Phone

Do you have something you want to add?

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Send the questionnaire in the enclosed envelope. Postage will be paid by us.

Thank you very much for your cooperation!





TRAFIKANALYS är en statlig myndighet. Vi ansvarar för officiell statistik om transporter. Vi gör också nulägesanalyser och utvärderingar. Läsare är allt från riksdagen, regeringen, konsulter, företag och intresseorganisationer till en intresserad allmänhet, journalister och forskare. Läs mer: [www.trafa.se](http://www.trafa.se)

### ENKÄT FÖR

Regnr: ABC123

Mättdag: Onsdag 4 maj 2022

Svara gärna på webben med dator eller mobil, med inloggningsuppgifter eller QR-koden här intill.

[www.trafa.se/lastbilar](http://www.trafa.se/lastbilar)

Id: ABC123

Lösenord: XXXXXXXX

Skicka in ifylld enkät helst samma vecka som mättdagen.

Företag

Adress

Postnummer postort



## Enkät om lätta lastbilar

Vart nionde fordon i Sverige är en lätt lastbil – hjälp oss förstå hur de används



### Hej!

Vi hoppas att du vill svara på några frågor om hur din lastbil användes, en viss dag. Längst upp ser du vilken lastbil (registreringsnumret) och vilket datum (mättdag) vi har frågor om. Fyll i svaren på de följande sidorna, och skicka till oss i det bifogade kuvertet. Du kan också besvara enkäten på webben, i mobil fungerar också.

Vi som ligger bakom undersökningen är Trafikanalys, en statlig myndighet som har i uppdrag att bland annat ta fram och sprida officiell statistik på transportområdet.

Idag är vart nionde fordon i trafik i Sverige en lätt lastbil (totalvikt max 3,5 ton). De lätta lastbilarna har nästan fördubblats i antal under 2000-talet. Det är framför allt de företagsägda lätta lastbilarna som ökar i antal.

Du får denna enkät för att du är företagare och äger en lätt lastbil. Dina uppgifter kommer att kombineras med uppgifter från ägare till totalt 10 000 lätta lastbilar. Vi kommer att använda

era uppgifter för att ta fram statistik, som presenteras i tabeller och en rapport. Dina svar hanteras med sekretess<sup>1</sup>.

Vi har gett Statisticon i uppdrag att genomföra undersökningen. Om du har frågor får du gärna kontakta dem på:

telefon 010-130 80 44 eller  
[lastbilar@statisticon.se](mailto:lastbilar@statisticon.se)

Du kan även kontakta oss på Trafikanalys som jobbar med detta:

[maria.melkersson@trafa.se](mailto:maria.melkersson@trafa.se)  
telefon 010-414 42 16  
[jonas.ingman@trafa.se](mailto:jonas.ingman@trafa.se)  
telefon 010-414 42 49

Stort tack för din medverkan!

**Maria Melkersson**  
projektledare

<sup>1</sup> Om vi behandlar personuppgifter (information som direkt eller indirekt kan hänföras till en person som är i livet) gäller Europaparlamentets och rådets förordning (EU) 2016/679 av den 27 april 2016 samt lagen (2018:218) med kompletterande bestämmelser till EU:s dataskyddsförordning.



Vi vill nu att du svarar på några frågor om din lätta lastbil, för en speciell dag, i ditt fall [Matdag] (hela dygnet). Fyll gärna i blanketten i slutet av dagen så du minns hur lastbilen användes. Du kan också fylla i på webben, med dator eller mobil.

#### ENKÄT FÖR

Regnr: ABC123

Mättdag: Onsdag 4 maj 2022

[www.trafa.se/lastbilar](http://www.trafa.se/lastbilar)

Id: ABC123

Lösenord: XXXXXXXX

### 1. Var brukar lastbilen användas?

Den lätta lastbilen [Regnr] är registrerad i [Kommun].  
Används bilen oftast där?

- Ja.
- Nej, den används oftast i \_\_\_\_\_ kommun.

### 2. Kördes lastbilen under mättdagen [Matdag]?

- Ja. Om **ja**, fortsätt med fråga **3**.
- Nej. Om **nej**, fortsätt med fråga **2a**.

#### 2a. Varför kördes den inte?

- Lastbilen var avställd eller avregistrerad i vägtrafikregistret.
- Lastbilen var såld.
- Lastbilen var uthyrd eller utlånad till någon annan.
- Annat (bilen på reparation, fanns ingen förare, semester, inget arbete den dagen etc.).
- } Gå vidare till fråga **7**

### 3. Vad användes lastbilen till, i huvudsak, under mättdagen?

Välj **ett** alternativ – det som var den **längsta sträckan** som kördes under dagen.

#### För godstransport eller varutransport

- Transport av gods eller varor, med flera stopp för lastning och lossning längs vägen, till exempel distributionsrundor eller uppsamlingsrundor.
- Transport av gods eller varor, där hela lasten fraktades direkt från en plats till en annan. En eller flera sådana turer kan göras under mättdagen.

#### Som hantverksbil eller servicebil

- Hantverksbil eller servicebil, **med** gods eller varor, som skulle användas eller installeras i arbetet – material, vitvaror, reservdelar etc.
- Hantverksbil eller servicebil, **utan** gods eller varor – bara eventuella verktyg eller maskiner.
- Annat, nämligen \_\_\_\_\_

### 4. Hur långt kördes lastbilen under mättdagen, totalt?

Uppskatta så bra som möjligt, om du inte vet exakt.

km



### 7. Hur lång tid tog det att svara på frågorna?

Räkna med den tid det tog att samla in uppgifterna.

\_\_\_\_\_ minuter.

### 8. Övrigt

Om vi har fler frågor om lastbilen, vem kan vi kontakta?

Företag/lastbilsägare	Kontaktperson
E-post	Telefon

Har du något du vill tillägga?

.....

.....

.....

.....

.....

.....

**Skicka blanketten i svarskuvertet. Portot betalar vi.**

**Stort tack för din medverkan!**

Ring eller skriv om du har frågor till oss.

Transport Analysis is a Swedish agency for transportpolicy analysis. We analyse and evaluate proposed and implemented measures within the sphere of transportpolicy. We are also responsible for official statistics in the transport and communication sectors. Transport Analysis was established in 2010 with its head office in Stockholm and a branch office in Östersund.



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