

How do we improve the knowledge of goods transport involving light lorries?

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Transport Analysis

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Summary

Generating official statistics is an undertaking associated with extensive regulations, opportunities, and special requirements. Within the framework of its commission from the state, Transport Analysis has inventoried the need for statistics regarding light lorries and distribution vehicles in urban environments and the potential sources of information for generating such statistics (Transport Analysis, 2017b). Systematically collected and compiled statistics concerning urban goods transport are currently lacking. However, a limited subset of these is published as official statistics within the framework of the study of goods transport involving Swedish-registered heavy lorries through separate reporting for the urban areas¹ of Greater Stockholm, Greater Gothenburg, and Greater Malmö. In other cases, these data are included in the national total or broken down by county. No separate reporting of the available data for urban areas (e.g., population centres or municipalities) is currently being done, partly because these statistics are based on a sample study, with the result that the uncertainty of the estimates is too high at these levels of resolution, and partly for confidentiality reasons. Statistics concerning goods transport involving light lorries are currently lacking. What are being reported are statistics on vehicle numbers, characteristics, and mileages based on registry data.

A small share of heavy lorries and a larger share of light lorries are regarded as not used to transport goods, but rather as intended for service transportation (e.g., for trades-related transportation).² This mosaic of elements means that a statistical product may have many different configurations.

<i>Lorries</i>	<i>Urban areas</i>	<i>Rural areas</i>	<i>National total</i>
Light – goods	A	E	I
Light – service	B	F	J
Heavy – goods	C	G	K
Heavy – service	D	H	L

This breakdown can be used as a basis for collecting data on one or more of the following elements:

- Vehicles used for goods and service transport, national total and in urban/rural environments – these vehicles can be light or heavy, and may have different characteristics in terms of their bodies, age, fuel type, etc.

¹ The Greater Stockholm urban area is synonymous with Stockholm County. Greater Malmö consists of 12 municipalities. Greater Gothenburg consists of 13 municipalities. See Lorry Traffic 2016, Transport Analysis Statistics 2017:14 for a breakdown of the urban areas.

² This corresponds to the type of transportation referred to as “service trips” in the text of the state commission. The area of application for a lorry is not evident from the available register data, and a question regarding this must be included in any survey. The only information obtainable from the data in the vehicle register pertains to vehicle type and the principal activity of the owner (if a legal person). A light lorry may have several areas of application as well.

- Vehicle movements (mileage)
- Transported goods (tonnes)
- A combination of the three foregoing elements, i.e., goods transport involving different vehicles (tonne/kilometres)
- Effects that arise as a result of vehicle movements, such as accidents, noise, and emissions

A statistical product with a narrow perspective, for example, pertaining to goods transport involving light lorries in urban areas, will comprise only a single cell (cell A). If the product is to include all goods transport in urban areas, then the statistics for cells A and C must be generated. These statistics need to include cells A–D in order to encompass all vehicle movements involving lorries in urban areas. However, lorries do not operate exclusively in urban environments. Some transport will clearly occur entirely outside of them, while other transport will occur between urban and rural areas. A statistical product that also pertains to such transport from a holistic perspective requires the reporting of transport in rural areas as well, i.e., cells E–H. A statistical product concerning urban goods transport should consequently comprise all of the above cells, thereby encompassing transport in the rural areas as well.

There are varying conditions and assumptions surrounding the generation of statistics corresponding to one of the above individual cells, or all the cells, for each respective type (i.e., vehicle, traffic, goods, transports, and effects). For example, the conditions for generating statistics for the actual vehicles based on data from the road traffic registry are relatively favourable, but it is impossible to determine the actual areas of application for the vehicles or where they have been driven based on data from the registry. In the short term, such statistics will likely require data collection based on surveys or, in the longer term, data collection from companies' administrative systems. With respect to data collection by means of surveys, several examples can be used as a basis, from both Sweden and other countries, such as Norway and the Netherlands. However, earlier survey studies have been encumbered by an extensive reporting burden imposed on the information providers and by low reliability. Vehicle-registry-based compilations for light and heavy lorries have been performed in Sweden (SIKA, 2009), but they have their limitations in this type of statistical production. Various pilot projects have also been carried out, both a simpler survey targeting light lorries in 2012 and the 2016 Commodity Flow Survey, which demonstrated that it is possible to retrieve certain data from companies' administrative systems. However, new collecting systems need to be developed, which will take both time and money. Statistics based on flow measurements in urban environments are not currently being generated. On the other hand, relatively extensive measurements are being made at the municipal level, albeit with various methods and of variable quality. Developing guidelines for how flow data should be collected and processed will make it possible to generate new knowledge within a few years.

Transport Analysis proposes that a new statistical product be published for light lorries, and that a knowledge base/current status analyses, including ones based on the new statistics, continue to be produced regarding transport involving light lorries and other distribution vehicles (including heavy vehicles) in urban environments. The data will initially be based on readily accessible information from the vehicle registry, and from the Lorry Survey regarding transport by heavy vehicles. Data from a sample study targeting light lorries (excluding privately registered lorries) will supplement the reporting from an urban context. This will result

in all the cells in the table being covered. Over the longer term, we propose that these statistics be expanded in terms of both level of detail and scope by collecting data via surveys and/or from companies' administrative systems together with flow data from municipal measurements.

To enable the combined use of data from the Lorry Survey and keep the collecting process as simple as possible, we propose starting with a report on urban and rural transport based on the Swedish Agency for Economic and Regional Growth's classification of municipalities, i.e. based on a characterisation of population size, population density, and distances to other municipal centres.

The presented proposal is estimated to require an increase of roughly SEK 3 million in Transport Analysis's budget allocation to cover the development work and collection process in the short term. It is believed that the costs of the ensuing surveys will decrease, but an estimated SEK 2 million would be required for data collection and processing annually. The reporting burden is estimated to be roughly SEK 3 million. Over the longer term, initiatives from a number of quarters would be needed to expand our knowledge of urban goods transport and to include new data sources. This effort could entail major costs for those who are to organise and carry out the data collection process, particularly for those who must contribute by reporting their data. It is currently impossible to estimate these costs, but it will be important to strike an appropriate balance between current and future methods in terms of the identified reporting requirements. The legal aspects need to be examined more closely as well.

A knowledge base for urban transport should be built in parallel with the work of generating regular official statistics. This could be done in various ways, and some of the discussed suggestions involve conducting industry studies, meta-analyses of previously conducted surveys, and testing and analysis to determine what results would be obtained in Sweden using a modelling tool developed in another country.



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