DISTANCES COVERED IN 2001

Result and methods for calculating
the distance covered by vehicles.
Summary

SIKA Report 2003:3

Preface

Information about the distance covered by road vehicles is in great demand from many different users in the community. Examples of areas of use for this information are emission estimates, tax investigations and road safety analyses.

The Swedish Institute for Transport and Communications Analysis (SIKA) commissioned Statistics Sweden to develop a model to calculate annual distances covered on the basis of inspection data from the Swedish motor vehicle inspection company, Bilprovningen AB. This work has been carried out since 1998 and has been documented in five previous reports. These earlier reports are available on SIKA's website.

The results that have been produced within the framework of this project have been regularly reconciled in meetings with Bilprovningen, the Swedish Consumer Agency, the Swedish Environmental Protection Agency, the National Road and Transport Research Institute (VTI) and the National Road Administration. We would like to thank these organisations for the important points of view that they have provided. We are, of course, grateful for any future points of view both from these organisations and from others.

This report contains a summary description of how checks of inspection data take place and how distances covered are calculated. Furthermore, the report contains an account of a commission received by Statistics Sweden in 2002 to improve the quality of the effects of deregistration, methods for calculation of the distances covered for vehicles deregistered during the period and development of a model for calculation of the distances covered for directly-imported vehicles. The report also presents an application of the model in the form of distances covered for the year 2001 for cars, lorries and buses and coaches.

Stockholm, April 2003

Staffan Widlert
Director

Summary

The information on the distances covered by vehicles presented in this report is based on inspection data from Bilprovningen AB. The statistics from Bilprovningen relate to the registration number, date of inspection, meter reading, handling code, result code and type of vehicle. These data have subsequently been correlated with the statistical register for vehicles and the distance covered by each vehicle has then been calculated with the aid of model assumptions.

The project was initiated with a quality description of the data and methods for handling the following problems:

- Power of ten errors
- The meter ”goes all the way round”, i.e. reaches its maximum value and starts again from zero
- Registration errors

Methods were subsequently developed to estimate the distance covered for individual vehicles and aggregated information for the whole of the vehicle fleet for the vehicles for which at least two meter-reading statistics were available.

The next step in the work was to develop methods to estimate distances travelled for newly-registered vehicles that have not yet been inspected for roadworthiness. Finally, methods were developed to calculate the two remaining categories of vehicles where meter-reading pairs cannot be obtained, namely vehicles that have been directly imported and vehicles de-registered during the period in question. A special investigation was also made into the effects of deregistrations on calculations of distance travelled.

The calculation of statistics for 2001 shows that Swedish cars, lorries and buses travelled a total of 69 billion kilometres, of which cars accounted for 59 billion kilometres. The average distance travelled for cars was 13 500 kilometres, for lorries 21 220 kilometres and for buses/coaches 54 530 kilometres.

When the result is broken down for different categories of cars, it can be seen that the average distance travelled is longer for the cars owned by legal entities than for cars owned by households.

In the case of lorries, the distance travelled varies greatly between different types. Timber lorries had the longest average distance travelled of 123 760 kilometres, while trucks and open-sided lorries had an average distance travelled of 16 800 kilometres.

The average distance travelled for buses/coaches also varied greatly between different categories, where the distance travelled was longest for the largest buses/coaches.

THE SWEDISH INSTITUTE FOR TRANSPORT AND COMMUNICATIONS ANALYSIS

The Swedish Institute for Transport and Communications Analysis, SIKA, is an agency that is responsible to the Ministry of Industry, Employment and Communications. SIKA was established in 1995 and has three main areas of responsibility in the transport and communications sector:

- To carry out studies for the Government
- To develop forecasts and planning methods
- To be the responsible authority for official statistics

Swedish Institute for Transport and Communications Analysis
P.O. Box 17 213, SE-104 62 Stockholm, Sweden
Visit: Maria Skolgata 83
Phone: +46 8 506 206 00 Fax:+46 8 506 206 10
sika@sika-institute.se
www.sika-institute.se
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