

**Economic and Social Council**

Distr.: General
5 April 2022

Original: English

Economic Commission for Europe**Inland Transport Committee****Working Party on Transport Statistics****Seventy-third session**

Geneva, 15–17 June 2022

Item 4 of the provisional agenda

Travel surveys**Travel surveys: ideas for cooperation at the international level****Note by the secretariat****I. Background**

1. By collecting data on infrastructure, vehicle fleets, traffic, transport measurement and accidents, data collection on transport at the international level reasonably covers the “what”. However, for a better understanding of the transport choices of people and individuals, it is also important to understand the “why”. What factors affect a company’s decision to renew its fleet of vans? Would more people walk or cycle to school if they had a greater degree of perceived safety?

2. National transport surveys can try to answer these questions. For some countries they are conducted every year, whereas for other countries they occur on regular intervals of 2, 3 or 5 years, or sometimes more sporadically. The population coverage varies as well, either covering every permanent resident, or sometimes only considering people above a certain age. The data collection can also vary considerably, either using a travel diary, or asking participants retrospectively their travel patterns over the previous week. The prevalence of travel surveys and national characteristics are summarized in a document produced by the European Commission Joint Research Centre in 2012¹.

3. In the Annex, a few considerations specifically related to the National Travel Survey of England are shared, based on input received from the Department for Transport of the United Kingdom of Great Britain and Northern Ireland.

II. Policy relevance of survey data

4. As alluded to above, there are a number of policy questions that are helped by travel survey data. Here is a list of some of the main questions that travel surveys can help with:

¹ <https://publications.jrc.ec.europa.eu/repository/handle/JRC83304>.



(a) Gender trends: There are often very different travel experiences for men and women. This can relate to transport mode, distance travelled, as well as the complexity of the journey (with women typically doing more “trip chaining” than men).

(b) Road passenger-km: While road vehicle-km can be obtained from odometer readings and traffic counters, passenger-km for road typically need to be collected through travel surveys (and combining vehicle-km with passenger-km allows average vehicle occupancy rates to be calculated).

(c) Trip numbers and purpose: Asking survey participants how many trips they do, for what purpose and by what transport mode increases understanding of not just distances travelled, but reasons for journeys. It is often assumed that rush hour traffic is predominantly made up of commuting journeys, whereas travel surveys often reveal that they are not a majority or even a plurality of these trips. Differences between trip numbers and trip distances also may be revealing from a gender perspective. This is also an important way to gather cycling and walking data that otherwise may not be measured.

(d) Numbers of cars per household (and by income group): The number of passenger cars per 1000 inhabitants is a useful indicator of how dominant the passenger car is in a country’s modal split, but this will not reflect the spread of these cars between households. Asking households on the number of cars that they own or have access to and pairing this with other information like the household’s economic status, allows a more detailed picture to emerge.

(e) Transport attitudes. Finally, asking survey respondents how they feel about things (safety, affordability, convenience etc.) means that the reasons for transport choices may be better understood, and particular policy goals (shifting journeys to public transport or active modes, increasing public transport for commuting purposes) can be adequately planned for.

III. Possible actions at the international level

5. While travel surveys have been a regular part of many member States’ statistical systems for a long time, there has been little recent work at the international level on this. The secretariat proposes that a number of actions could take place to increase the usefulness of travel surveys. In particular:

(a) Some countries publish the results of their surveys each year separately, so time series are not available. Even if important methodology breaks exist between different years, time series data (through an API or structured format) allow trends at the national and international levels to be seen. This would enable researchers (or international organisations) to compile data internationally as well.

(b) Sharing methodology work on surveys methods, challenges, success stories and integration of additional data sources (including, for example, big data sources) may encourage a modest minimalization of methodology differences between countries in the future.

(c) While most travel surveys will typically produce at least dozens of different indicators for the country, certain indicators coming from the survey will be of the most use for policy makers. Sharing these internationally, and seeing where improvements in comparability may be made, may assist international comparisons.

Annex

National Travel Survey of England

1. The National Travel Survey (NTS) of England is currently in the process of being reviewed, re-tendered and modernised for the current world we find ourselves in. The COVID pandemic has really emphasised the survey's value, as a key source of evidence on how people make certain types of journeys (e.g. journeys made to school).
2. The NTS continues to be a face-to-face household survey (currently around 13 000 households), combined with a paper travel diary. However, recent efforts have been made to digitise the travel diary in particular, with a web-based version of the diary currently in the early stages of testing. In some respects, this digitisation has been a long time coming, and the pandemic in particular has brought massive challenges to the current methodology – everything was moved to be over the telephone – but as of April 2022 it has returned to the traditional approach. It remains to be seen how well the digital travel diary fits into the existing survey method due to its infancy, but the NTS team is aware that others have also tried similar forms of digital data collection. For example, the recent International Conference on Transport Survey Methods² in March 2022 showcased a lot of research globally around collecting data that might traditionally have been gathered by travel surveys by new methods such as smartphones, particularly for passive data collection, using third-party app data and Artificial Intelligence (AI) to reveal travel patterns.
3. However, the NTS team also thinks there may be consensus that 'traditional' methods, where information is directly asked of people, will always have an extremely important role in travel surveys, albeit perhaps without clear expectations on how traditional and more modern methods should work together. They understand that others have methods that derive journey purpose and mode of travel automatically from passive data via AI and machine learning, but these methods seem subject to high rates of error. This may however not be well known across the transport statistics community.
4. In England traditional non-passive methods of collection are still favoured as a result, but the need to make the digital diary as easy for the participant to use as possible is recognised, and development of it will proceed with that in mind. There would be clear benefits from developing the international community working on travel surveys – sharing information and experiences, even sharing code for apps and machine-learning models.
5. There would also be a clear benefit from things like guidance on what information is needed to assess digital data (such as metadata and paradata (e.g. with a smartphone app, the model of phone and operating system)). Joint work to understand the likely error arising from different approaches and how to handle this could also be undertaken.
6. There's also a fairly vague sense that 'things will never be normal', thus the NTS team want to think about how to develop an approach that suits all situations (e.g. those when face-to-face surveys are not possible), drawing upon the experiences of others. This might primarily be for contingencies, but equally could be viewed as understanding how to best balance the use of traditional and more modern methods at all times, noting the pressures on teams like in the UK and beyond.

² <https://www.isctsc2020.pt/>.