

# Task 2.9 Weekend Travel

## Aims

The purpose of the pre-analysis is to (i) develop our understanding of weekend travel patterns and (ii) verify some of the hypotheses underlying our proposed methodology.

## Data Source

Household survey.  
Traffic counts.

## Tabulations

(1) Travel characteristics by day of week. Tabulate trips by mode and purpose for weekdays, Saturday and Sunday separately:

- establish how the % of trips by purpose varies between days of the week,
- establish how mode shares for each purpose vary by days of the week.

We expect to find mainly non-work trips at the weekend (HB Shop, HB Social & NHB Other) and a high car use. Presumably there may be some differences in trip purposes between Saturday and Sunday.

Henceforth, focus on car driver and passenger trips and the main trip purposes.

(2) We need to get a clear idea of the weekend travel peaks, so need time profile data from weekend day automatic traffic counts taken on different routes in different parts of the study area.

(3) We can also get a sense of this from the household survey by tabulating car driver trips by time of day by purpose for Saturday and Sunday separately (in this case use expanded data).

(4) The above analyses will also tell us something about the time period factoring process (ie whether some purposes are concentrated in the peaks). But we need to probe this further distinguishing 'from home' from 'to home' trips (the 'direction'). So, using the peak periods already identified [Sat 12-14.00, Sun 12-14.00, modified if necessary by tasks (2) & (3)], tabulate the proportion of the trips for each purpose/direction on Saturday and Sunday which occur in their respective peaks.

(5) We need to understand whether the trip end model relationships should be broadly similar between the weekday and weekend. Roughly compute zonal trip productions and attractions by purpose for the 3 day groups (Mon-Fri, Sat, Sun). Plot the day groups against each other to establish correlations (ie Saturday vs Sunday and vs weekday, Sunday vs weekday, combined Sat+Sun vs weekday).

(6) Extend this analysis at a person level by tabulating the total trips for each person type and the numbers of persons of each type on weekdays, Saturday and Sunday (for person types see segmentation proposals, ignoring employee sub-categories).

(7) We need to understand whether the trip distribution is markedly different at the weekend. Tabulate average trip length and the trip length distribution by purpose for weekday, Saturday, Sunday and Saturday + Sunday.

(8) We have no plans to do anything special with commercial vehicles, but need classified counts to confirm that CVs are a minor part of the weekend flows and therefore can be ignored or treated as a small factor on car flows.

## Output

The questions which we seek to answer are as follows.

- Can we focus on non-work trips?
- Can we focus on car trips?
- Can we combine Saturday and Sunday?
- For a given trip purpose, are the trip end and trip distribution characteristics of the weekend similar to the weekdays?
- Is there any evidence of travel in the weekend peaks having specific characteristics compared with the rest of the weekend?

The biggest issue may be the adequacy of the weekend survey sample for synthesising reliable matrices. For this purpose, the analyses which look at the relationships with the weekday data are the most important as they will indicate whether we can do any sort of joint estimation to improve the weekend model with weekday information.