



Cycling attitudes and behavior of families in urban areas – temporal development and findings from current surveys

Project Information

Abstract

Looking at modal split values – how trips are distributed across the different transport modes – reveals that **cycling is the only mode with increasing values over the past few years**. This trend can be investigated by different studies. In this paper, we show the **temporal development of cycling** in different population groups. We further investigate the **attitudes and motives** for using bicycles in the context of **urban families**, because families typically face high mobility requirements in their daily lives. We use different methods to do so. Data from the **German Mobility Panel** are analyzed over time and reveal the increasing cycling trend in different population groups. We focus particularly on urban families, who tend to make more trips than the average population. These families rely more on cars than other city dwellers, but still show increasing bike usage. Analyzing the **qualitative family study** reveals that there are different motives such as health and sport-related reasons, flexibility or enjoyment for why cycling is becoming more and more popular in urban families.

Research questions

- Has the increasing cycling trend already reached families?
- What are the intentions and motives of young families for using bikes for their everyday mobility?

The German Mobility Panel (MOP)

- Multi-day and multi-period travel survey in Germany
- Every year since 1994
- 7-day trip diary including all trips
- 1,000-1,500 households every year
- Trip diary: All household members aged 10 and older
- Panel approach: the same persons participate in three consecutive years
- Representative for the German population

For this study: Definition of subsets

- S0 MOP data 2000-2015
- S1 People aged between 18 and 60 with no particularities
- S2 People 18-60 living in cities (>100,000 inhabitants)
- S3 Parents 18-60 living in cities
- S4 Highly-educated parents 18-60 living in cities

Qualitative Study: Interviews with families in cities

- Methods:**
- 1) trip diaries to survey cycling behavior
 - 2) guideline-based family interviews to analyze attitudes and motives with regard to cycling.

Study group:
families in cities.

Study area:
cities of Karlsruhe, Freiburg and Stuttgart (>100,000 inhabitants), high commitment to cycling.

Sample:
42 parents in 22 families with at least one child under 18 (including two single parents and one stepfamily).

Place of residence:
seven families live in Freiburg, seven in Stuttgart and eight in Karlsruhe.

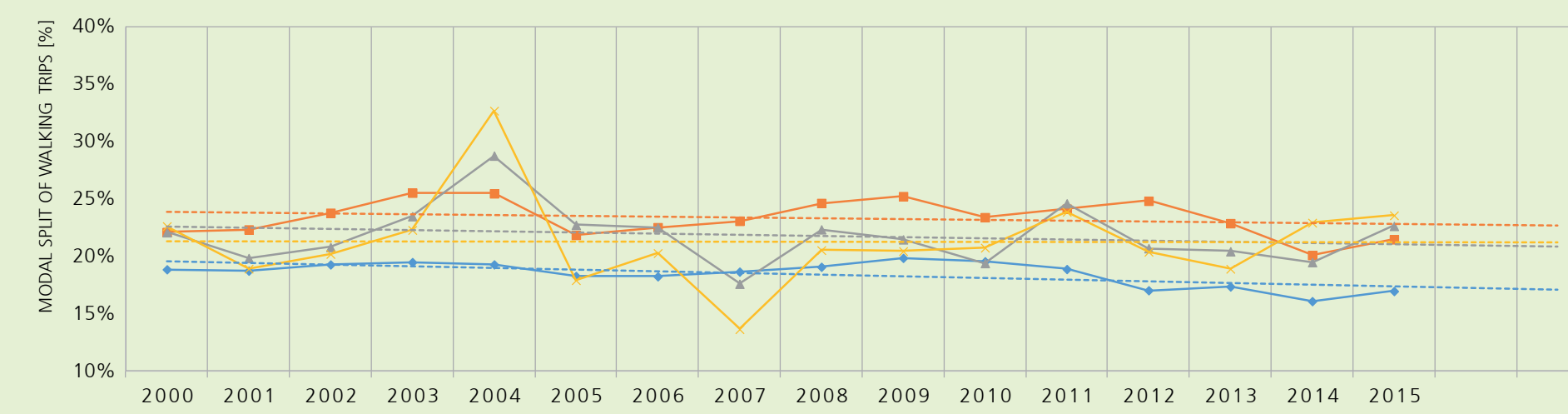
Education:
39 parents hold a university diploma or other higher-grade qualifications.

Car and bike ownership:
six families do not own a car. Every family owns several bikes.

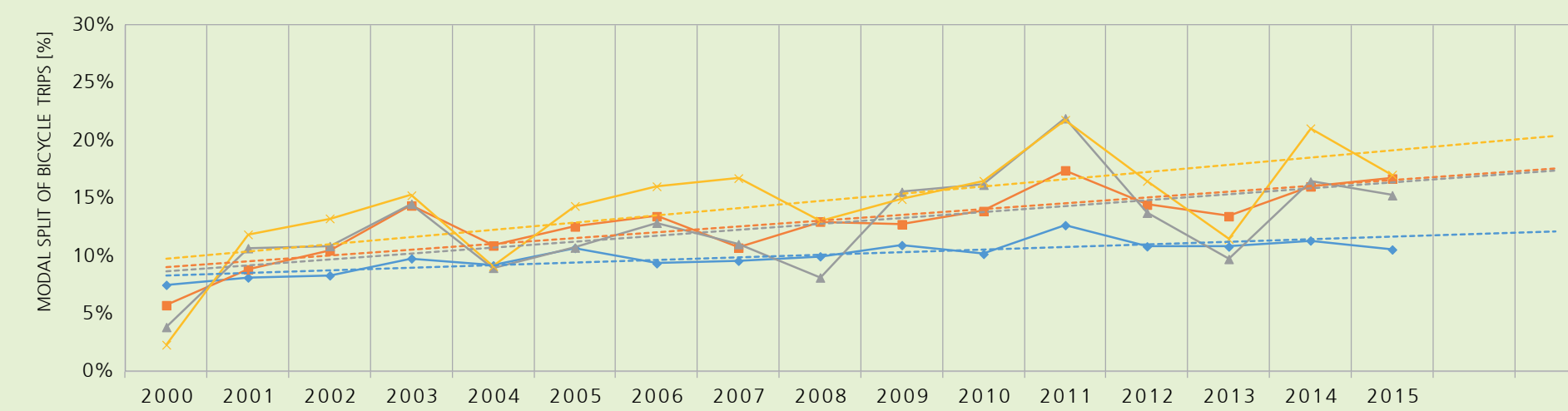
Key Findings / Results

Temporal Development / Travel behavior over the course of time

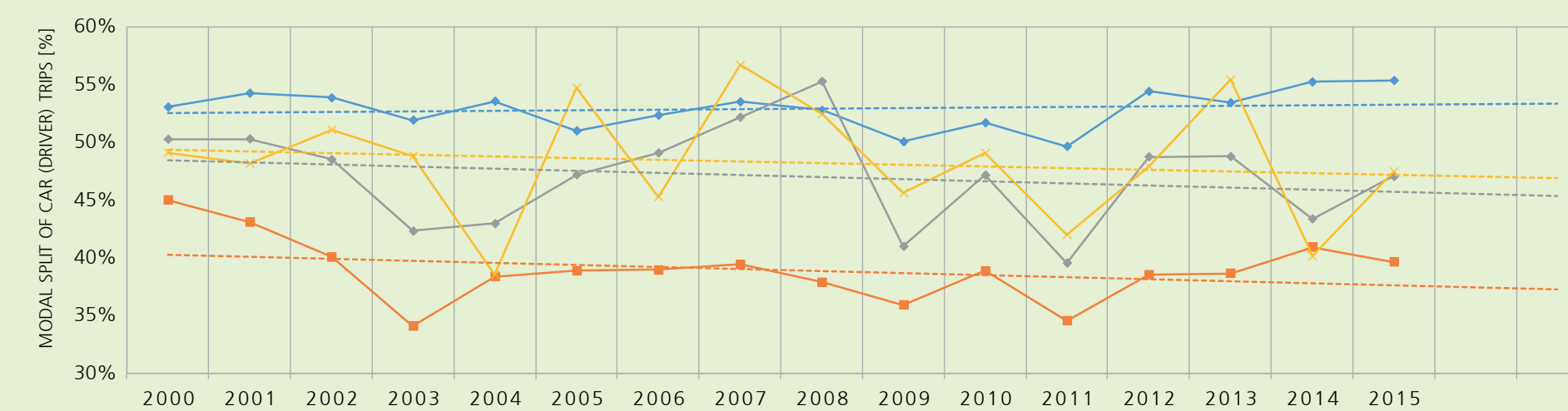
Development of walking trips



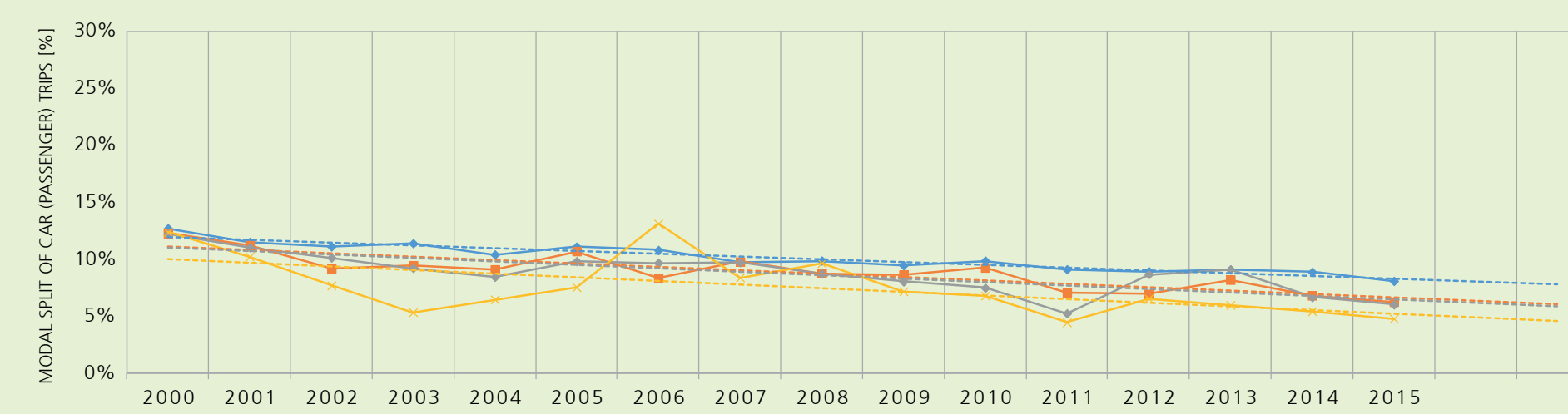
Development of bicycle trips



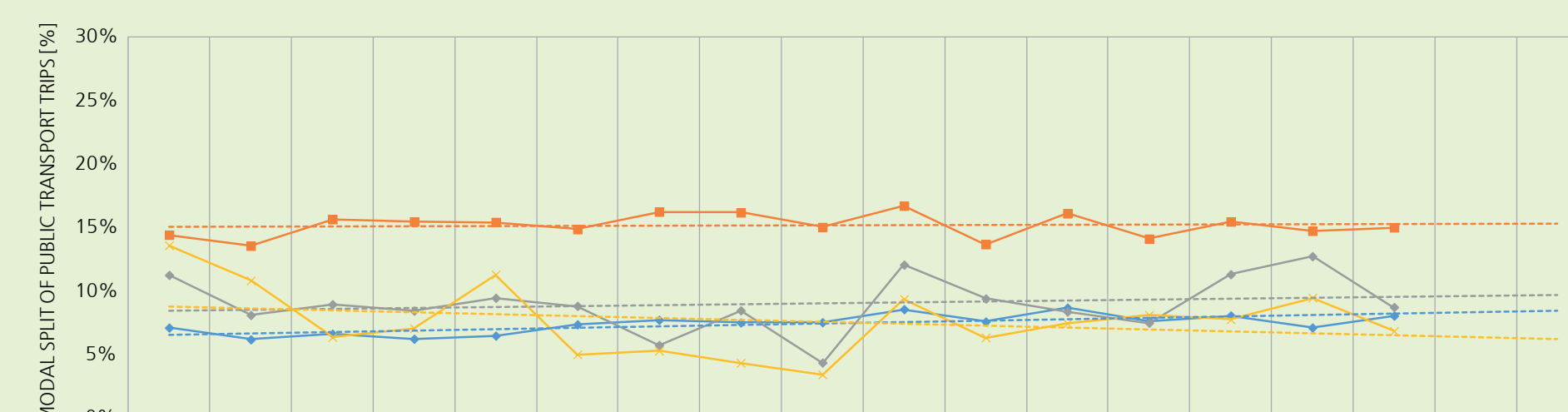
Development of car (driver) trips



Development of car (passenger) trips



Development of public transport trips



■ S1 ■ S2 ■ S3 ■ S4

Cycling today



- Round trip (walk, bike tour)
- Others
- Picking someone up / dropping someone of
- Leisure / hobby
- Shopping / running errands
- Trip to kindergarden / school / university
- Work related trip
- Trip to work

Cycling behavior and motives in families

Various positive attitudes towards cycling in the majority of families.

Physical exercise: Cycling can substitute or supplement sports activities; this is especially favorable if they have limited time for such pursuits:

"[...] and this was basically the exercise that I did each week, right?"

Flexibility: Route and where to stop can be chosen very flexibly.

"When I take my own bike, I can get exactly where I want to be and can usually [laughs] park my vehicle within about ten meters. I can't do that with my car."

Independent: Being independent of timetables.

Reliability: Not facing the risk of being stuck in a traffic jam.

"And if you have to reckon extra time for delays, then this makes cycling a topic again because you don't have to reckon extra time for cycling – you need 20 minutes, finished."

Cost-efficient

Quicker: Than public transport, the car or walking (cycling in the city).

"And you are faster than on foot. It is like this ... on my own, I would also walk to the [shopping center], but with the three of them, taking the bike is a good compromise."

Enjoyment, relaxation:

"Cycling is very important as a counterbalance to work. Not just as a commuting possibility, ... but well, really cycling."

Altogether, bike is perceived as an uncomplicated, simple means of transport and as **ideal means of transport in the city**. Some families perceive it as the **ideal means of transport for a family**. Older children can cycle themselves and younger ones can be transported on their parents' bicycles or in bicycle trailers. **A few negative aspects** associated with cycling: Exposure to the weather, dangers of cycling in the city because of some cyclists' inconsiderate behavior, take too long if the person is not very fit. Nevertheless, **positive attitudes dominated** the interviews.

Key Findings and conclusions

Trend towards more cycling has also reached urban families: Urban families and especially highly educated urban families use bikes more often in an average week than other groups. Investigated families in the qualitative study make the majority of their trips over the course of a week by bike. Bikes are used for all trip purposes but especially for shopping, leisure and ferrying children. Besides some negative aspects (e.g. cyclists are regarded as more vulnerable and exposed to the weather), the **attitudes towards cycling are mainly positive**. For the surveyed families, cycling is the optimal mode in cities and they use it as much as they can, especially for short trips.

The families in the qualitative study represent the general trend towards more cycling, can be seen as the **"early adopters"** of integrating bicycles into their daily lives and everyday travel behavior when compared to the whole group of families. Cycling is suitable for **optimized individual mobility**, i.e. bikes can match the families' desire for an individual means of transport that complies with their complex everyday habits and lifestyles in a sustainable way. However, bicycle usage has some **pre-conditions**: On the one hand, infrastructures and facilities need to be designed for cyclists' requirements and, on the other hand, there is a need for different bike types and equipment for families like trailers and cargo bikes. To foster this fledgling trend towards more cycling in general and especially for families, the government should continue and increase the funding available to create optimal cycling frameworks.