

## Bicycle Use Trends in Germany

### Comparison of bikes to other means of transport

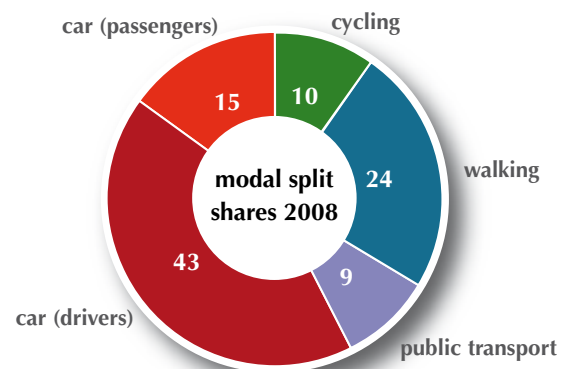
Systematic study of the use of various means of transport has been ongoing in Germany since the 1970s. Mobility figures for individual cities have been recorded even longer. It can be concluded from specific data that the modal share of cycling in Germany, as in neighbouring countries, was very large in the 1920s and 1930s; this share sank to varying degrees with the increasing use of motorized vehicles. Between around 1975 and 1980 cycling began experiencing a renaissance that has continued to an even greater extent in recent years.

In Germany, for example, 10 % of all journeys were made by bike nationwide in 2008. In 2002 cycling had a share of 9 %. The usage share for other means of transport has also remained relatively constant since 2002.

Considering the absolute number of journeys travelled by bike, the study results show a decided growth in the significance of bikes in transport in recent years: At 17 % bikes enjoyed the largest growth of any means of transport.

The number of journeys made using public transport and on foot is on the rise again as well. What is striking is that car use has stagnated after experiencing decades of growth, although car trip distances are increasing. This change can primarily be attributed to the car use of younger generations.

*Fig. 1 (Cover): Developments in utilization of specific means of transport from 2002 to 2008 in Germany (total number of journeys per day); Source: (MID 2008)*



*Fig. 2: Modal split shares (in percent) of the various transportation modes in Germany 2008*

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Ever more Germans own a bike. According to the findings of the MID 2008 study, the number of bikes per capita in Germany in 2002 was 0.8; in 2008 this figure had risen to 0.9. The share of households that owned no bicycles whatsoever decreased from 20 % to 17 % during that same period.

### Who travels by bike often and who seldom?

Bikes are used by all types of people, and are available to more or less everyone. Gradual differences become most apparent along lines of occupation and car ownership. Bikes are used by young and old alike. According to the findings of the study SrV 2008, however, the share of bike use as a means of transport has grown most significantly among employed people aged 18 to 65 who do not own a car. Yet another sector of the population who strongly tend to travel by bike is those under 18 who neither work nor own a car

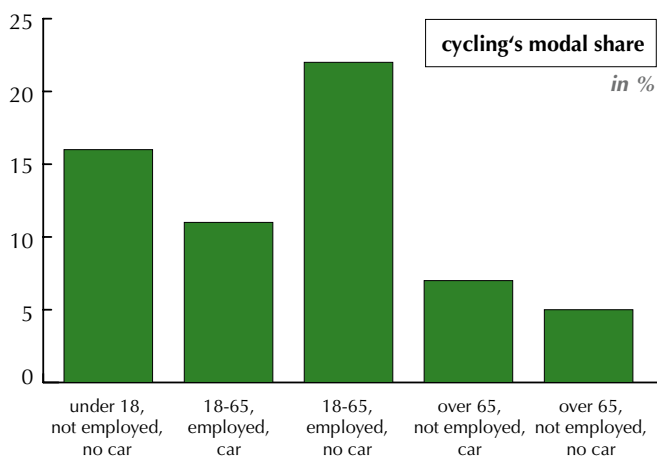


Fig. 3: Modal share of bike transport broken down according to socio-logical user groups (SrV 2008)

### What types of journeys do people take by bike? – Distances

The share of travel done by bike depends greatly upon the distance of the journey. As is clear, bikes cannot compete with motorized vehicles over long distances. Yet it is striking to note that people view bikes as an attractive alternative to cars and use them to travel routes of varying distances, from short to medium length. Distances of one to two

kilometres make up the largest share of bike trips (19%). Walking is the only means of mobility with a higher share for such distances (34 %). Bikes continue to be used at a share of 14 % for journeys of between two and five kilometres.

However, according to MID 2008, when compared with the figures from 2002, bicycle traffic had its strongest increase on distances between five and ten kilometres. Six percent of journeys which fell into this distance category were travelled by bike in 2008.

This means bike use is not restricted to solely short and mid-distance travel and has an increasing scope for use as a means of transport for somewhat longer distances. While a total of 85 million kilometres were travelled by bike (as the main means of transport) in Germany in 2002, by 2008 this figure had already climbed to 90 million kilometres.

### Where do people travel by bike – purpose of travel

Transport research differentiates between work travel, shopping- and errand-related trips, recreational travel and travel to educational institutions (childcare facilities, schools, universities, etc.). The share of use of specific transport means differs considerably depending on the reason for travel, as the findings of the SrV 2008 study on urban transport show. Here it is important to bear in mind that the cities in the SRV 2008 study were primarily larger cities, places where cycling's modal share is higher than the national average.

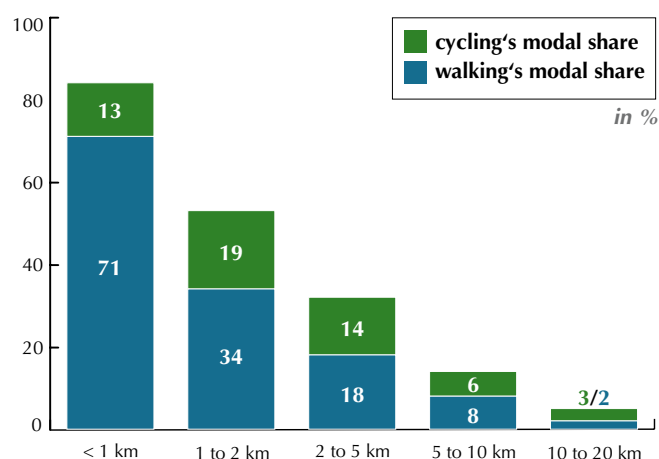


Fig. 4: Share of pedestrian and cycling traffic broken down into travel distances (MID 2008)

The share of cycling traffic in inner cities varies relatively little with regard to the purpose of travel – bikes are used as a means of transport for all manner of travel.

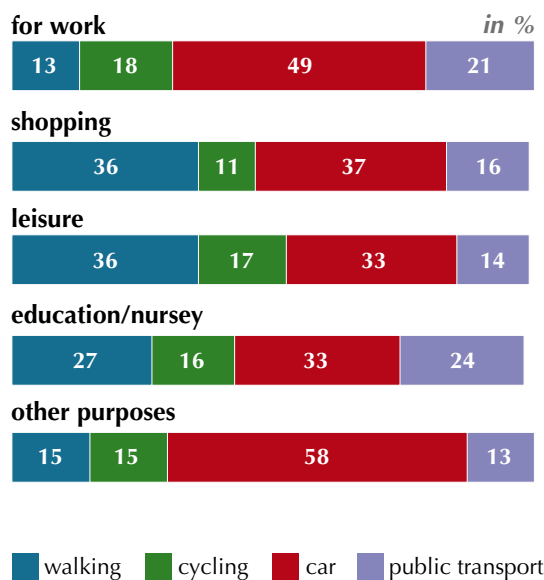


Fig. 5: Choice of means of transport in terms of the purpose of travel in inner city traffic for the cities studied (SrV 2008)

Trips to and from work account for a somewhat higher proportion of bike travel (18%) than trips for other purposes. This, however, can be clearly attributed to the very low share of people who walk to work as workplaces are often distant from people’s residencies and time pressure is a factor when commuting to work. Consequently, commuter traffic consists of a particularly large share of people who travel in private motorized vehicles. This represents a great opportunity to increase the share of bike traffic, for example through business mobility management schemes.

The lowest share of bicycle travel (11 %) was recorded for shopping trips and errands. This can be attributed to the fact that, as the MID 2008 study showed, distances travelled have become much longer due to the concentration of retailers into commercial centres increasingly located in green areas on the outskirts of cities.

An individual’s mobility patterns and the resulting share of bike travel are closely linked to individual habits and lifestyles. An individual’s conception of spatial concentration plays a role here. In a sense, those with lifestyles that con-

sist of travelling long distances more or less select their personal inner-city destinations “à la carte”. Their scattered destinations are then reached on fast roads in a car. Lifestyles with low travel intensity in the sense of the compact city are dependent upon people having a “mental map” of their local surroundings that allows them to consider destinations in the more immediate vicinity.

## In what areas are bikes used? Area types

People’s mobility requirements basically remain the same regardless the type of area they live in. There are, however, varying conditions and spatial opportunities for mobility in different areas; people who live in big cities travel different routes in their everyday lives than people in rural areas.

The theory has often been posited that cycling’s modal split share is dependent on the size of a city. The findings of studies on mobility in Germany confirm this to a very limited degree only. Even when the spatial conditions are similar, there continue to be large discrepancies when it comes to cycling’s modal split shares, as, for example, illustrated in the comparison of cities in the SrV 2008 study.

The average bike share in transport nationally is 10 %, yet the bike share in the individual municipalities studied ranges from 2 % to 28 %. Several traditionally bicycle-friendly cities (Freiburg, Münster, Dessau, Göttingen, Bremen, and lesser-known race leaders like Greifswald and Oldenburg) perfectly illustrate what role bikes can assume as a mean of transport. In the City of Münster the share of bicycles used for daily transport is higher than that of cars. The increase in the bike share in transport in major cities in recent years is particularly noteworthy (Berlin, Munich, Frankfurt am Main).

At the same time the share of bike transport varies strongly within cities. The findings of the SrV 2008 study for Berlin show that cycling’s modal split shares in various large and multifaceted districts lies between 6 % (Marzahn-Hellersdorf, on the edge of the city) and 21 % in Friedrichshain-Kreuzberg (urban inner-city district with older building stock). All over the German capital the average modal share of cycling was 12,6 %.

The fact that the bike share in transport has gone up appreciably in many city centres probably results from the prevalence of new urban lifestyles.

## Conclusion

The findings of the MID 2008 and SrV 2008 studies verify that the significance of bikes as a mean of transport has grown significantly over an extended period of time, and most particularly in recent years. They demonstrate that the intensity of bike use in a city or community depends on various factors.

It is obvious that societal trends have been the primary motive for this development; such tendencies have been supported to varying degrees by active cycling policies in cities and regions. Other determining factors include:

- settlement pattern development (distances between residential areas, workplaces, shopping centres);
- the shrinking importance of topography (is the landscape flat or hilly?) due to better bike technology;
- the quality of cycling infrastructure;
- the local attitude towards bikes, i. e. acceptance of cycling by the general public;
- local transport policy.

Thus, the possibilities for successful promotion of cycling at the local level are just as varied as the determining factors of bike use. Well-devised and committed local cycling policy can, for example, enhance both bike infrastructure and the general attitude towards cycling. Consequently, a significant variable when it comes to bike use is how effective individual cities and communities are in seizing their opportunities.

## Methodology: How was the use of different means of transport measured?

Statistically substantiated conclusions regarding bike use and the use of other means of transport in a city can be proven by using surveys of representative households. Regular traffic counts at specific nodal points within the road network are easier to organize, yet can only be used as indicators of development.

For the surveys of households, a predefined number of residents or households are questioned on their everyday travel habits; this was previously done using written questionnaires alone, today it is often done in phone interviews. The data pools gathered are then analysed by various institutions with different focuses. For example they may be used

as a basis for arriving at conclusions regarding the environmental balance of urban transport.

Transport studies dealing with such questions have a long tradition in Germany. In 1976 the study series *Kontinuierliche Erhebungen zum Verkehrsverhalten* (KONTIV) was launched in the Federal Republic of Germany under the auspices of the Federal Ministry of Transport; in the meantime it has been expanded to the study Mobility in Germany (MID). As far back as 1972 the GDR began conducting the study System repräsentativer Verkehrsumfragen (SrV); it was continued as Mobility in Cities (SrV), a nationwide study series conducted by the TU Dresden on numerous individual cities.

When viewed together, these series of studies offer an overall picture of mobility in Germany. MID provides data on the development of transport over large areas, primarily to assist in federal and Länder planning. SrV, however, offers a data set for the precise examination of local transport habits within individual cities, and therefore represents an important instrument for municipal transport planning.

## Links to the original studies

Homepage of the research project Mobilität in Städten (SrV):

[http://www.tu-dresden.de/srv/SrV\\_Web/](http://www.tu-dresden.de/srv/SrV_Web/)

Homepage of the research project Mobilität in Deutschland (MID), english version:

<http://www.mobilitaet-in-deutschland.de/engl/2008/>

BMBVS – Bundesministerium für Verkehr, Bau und Stadtentwicklung/infas – Institut für angewandte Sozialforschung/DLR – Deutsches Zentrum für Luft- und Raumfahrt e.V. (2010): MID 2008. Mobility in Germany. Project presentation at the user workshop in September 2009, March 2010 version:

[http://www.mobilitaet-in-Germany.de/pdf/MiD2008\\_Projektpraesentation\\_Nutzerworkshop\\_Sept09.pdf](http://www.mobilitaet-in-Germany.de/pdf/MiD2008_Projektpraesentation_Nutzerworkshop_Sept09.pdf)



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## Figures

Difu figures after MID/SrV publications

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