



ifmo
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'Mobility Y' – The Emerging Travel Patterns of Generation Y

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'Mobility Y' – The Emerging Travel Patterns of Generation Y

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The mobility of young adults – those up to their mid-thirties – in industrialised countries around the globe is dominated by the car, but interestingly less so now than only a decade ago. Based on evidence from Germany, France, Great Britain, Norway, Japan and the USA, this study substantiates the following findings about new mobility trends among Generation Y (generally taken to mean those born between the early 1980s and mid-1990s) since the late 1990s (see Part 1 of the report).

- While **licence-holding** among young adults has stagnated at a high level in recent years in France, Germany and Norway, it has decreased in Great Britain, the USA and Japan.
- **Car availability** – measured in terms of personal licence-holding coinciding with household car ownership – fell among young adults in all study countries except Japan.
- The **modal share of the car** among trips made by young adults has decreased in all study countries except the USA and Japan; this trend was particularly strong in Germany.
- A decrease in average annual **distance travelled by car** by young adults, in all study countries, is the result of these behavioural changes.
- Across all study countries, the trend towards lower automobility was more pronounced among men than among women.

In **Germany and Great Britain** the observed behavioural changes among young adults were especially noteworthy. For this reason the report looks at the developments since the 1990s in these countries in greater detail (in Parts 2 and 3).

In both countries, **socioeconomic developments** go a substantial part of the way to explaining the decreasing car ownership of young households. In Germany, more than half of the decrease in young households' car ownership is explained by: decreasing real incomes; a shift towards entering employment later, and a tendency to stay in education longer; an increase in the proportion of urbanites; and an older average age for starting a family. In Great Britain, real incomes of young households have gone up during the study period, and a greater role is played by changes in the housing situation (increasing urbanisation and a shift from houses to flats). Overall, socioeconomics alone seem to account for about one third of the decrease in car ownership in young British households.

As regards the **trendsetters** for the new and less automobile-orientated mobility patterns: gender, place, and income are all significant factors in both countries, but the stories have different nuances, as the following findings illustrate:

- In both countries, the trend towards reduced automobility was stronger among men – who in the past had much higher levels of car ownership and use – than among women. In Germany, however, the automobile gender gap almost disappeared for young adults, while in Great Britain young men still travelled more by car than young women, according to even the most recent data.
- In both countries, the emerging travel trends were more pronounced in cities than in rural areas. However, in Great Britain, London stands out as distinct: here the trend towards lower automobility was much stronger than elsewhere.
- In both countries, there are diverging trends for different income classes. In Germany, car ownership has fallen among low-income young men in particular. In Great Britain, licensing has decreased more among low-income young adults, but car *mileages* have fallen more among those with high incomes.

Increasing **multimodality** among young drivers was an important factor in Germany and also in Great Britain: in both countries, young adults with access to a car covered an increasing share of their mileage by public transport. In Great Britain, the slight increase in public transport usage over the study period did not make up for the decrease in car mileage, resulting in slightly decreased overall mobility. In Germany, the decrease in car mileage was fully compensated for by the shift towards alternative modes, which was stronger than seen in Britain. The increasing multimodality of young German drivers was the most important contributing factor to the overall decrease in the distance that young German adults travelled by car.

This study on changes in young adults' mobility reveals new perspectives for understanding the travel behaviour of young people, by means of an international comparison accompanied by two detailed case studies – Germany and Great Britain. Driving licence ownership and access to a vehicle explain between them a large part of travel behaviour. With the decision to go by car, the traveller has chosen a mode with significantly higher – on average – speeds of motorised individual travel, the fixed costs of which he or she usually ignores after having incurred them. The owner of a public transport season ticket makes an analogous decision, bearing a one-off sunk cost in exchange for travel options which do not incur additional costs at the time and point of use. The long-term trend has consistently been towards higher licensing rates for men and women of ever younger cohorts. In the context of its ongoing work, particularly for its scenario studies, contrary developments caught the interest of ifmo (Institute for Mobility Research). These lent themselves to in-depth analyses – the results of which are now documented in this report.

In a two-stage approach, this study firstly compares licensing, car availability and travel distances of young adults in four European countries, Japan, and the USA; then, secondly, the situations in Germany and Great Britain are presented in more detail. This approach allows for a better evaluation and understanding of the trend towards decreasing car travel among young men, which was, indeed, contrary to expectations. With this study, ifmo presents an important benchmark, which allows for better monitoring of the development of young adults' mobility – across the world, not merely in the countries analysed in the pages that follow.

The project team consisting of STRATA GmbH of Karlsruhe (Germany) and its international partners from Europe, the USA and Japan was supported intensively by ifmo staff. It is hoped that all readers will share my gratitude for these new and interesting insights.

Zürich, January 2013

Professor Kay Axhausen,
Swiss Federal Institute of Technology, Zürich, Switzerland
Chairman of the ifmo Board of Trustees

The three parts of this report are the culmination of three phases of the research project. In these three phases different teams of authors, and other researchers, have made contributions. ifmo is grateful to all the authors, and to everyone who has contributed to the study as part of the research team. We also wish to thank all those who have contributed to this study as one of the experts in a Delphi survey in 2010, and in a workshop held in Berlin in May 2011.

Irene Feige, Head, Institute for Mobility Research

Tobias Kuhnimhof, Institute for Mobility Research

What moves Generation Y?

Throughout the second half of the twentieth century the car had the status of supreme object of desire for generations of young people. Obtaining one's driving licence was a rite of passage, and owning one's first car symbolised freedom and autonomy. However, in industrialised countries things started to change around the turn of the millennium. Many parents, for whom the car had been centre stage in the social world of their own mobility, could hardly believe their eyes as they saw their offspring growing up: these kids jetted around the world, but getting a car didn't seem so important any more – and some didn't even care about getting a driving licence. At least this is the story that much of the media has fed us in recent years, concerning the mobility of Generation Y (generally taken to mean those born between the early 1980s and mid-1990s). But is it true? Are we really looking at a generation that is setting new standards for mobility?

Since the turn of the millennium there has been an ever-increasing proliferation of rumours, anecdotes and scattered empirical evidence emanating from various industrialised countries, along the lines that the role of the car in young adults' mobility was changing. Against the background of this indication of major changes in young adults' mobility trends, ifmo turned the spotlight on the mobility of Generation Y in selected countries in an international research project.

The report on hand summarises the findings from this project. The first part of this report presents the travel trends of young adults in six study countries – Germany¹, France, Great Britain, Norway, the USA and Japan². The analyses reach back as far as the 1970s and use common denominators for key travel indicators, ranging from licence-holding to mode of travel. The six study countries cover a broad range of different framework conditions for young adults' mobility, and – unsurprisingly – we see substantial differences in their travel behaviour. However, the report also reveals many unexpected similarities – particularly with regard to the reversal in young adults' travel trends after the 1990s.

In-depth analyses on a country-by-country basis are necessary for a deeper understanding of the unexpected travel trends which constitute what we have coined 'Mobility Y', and this is particularly true when it comes to pinning down possible reasons for these trends. In the context of this project, this kind of more-detailed analysis was carried out for Germany and Great Britain. These countries lend themselves to being used as case studies, because the trend reversal in young adults' mobility was very pronounced in each of them – and the preconditions for analysing them are less confused than in other countries. These German and British case studies form Parts 2 and 3 of this report respectively. Again, they show surprising similarities as regards the millennials' travel trends, for example with respect to differing trends between men and women. However, there are also differences between the developments in the two countries which give interesting insights into the background of the trend reversals observed.

This study also discusses the possible reasons underlying the observed changes in young adults' travel behaviour, with a focus on factors for which a quantified assessment of the influence on the mobility of Generation Y is – based on currently available sources – possible. This concerns, for the most part, socio-economic framework conditions – which, as this report shows, explain a great deal. While this also leaves questions open, it clarifies the situation substantially and helps to narrow the scope of future research on this subject.

¹ For Germany, the travel trends shown until 1997 refer to West Germany, and those from 1998 onwards to all of Germany.

² While for the other study countries the national travel surveys, which form the basis of the analyses of most of the travel trends presented in this report, cover the entire country, the travel surveys analysed for Japan cover only 41 selected cities. As a result, in the case of Japan all travel trends refer to urban areas except for licence-holding, for which other statistical sources have been used.

Part 1: An International Overview of Trends in Young Adults' Travel

Tobias Kuhnimhof, Jimmy Armoogum, Ralph Buehler, Joyce Dargay, Jon Martin Denstadli and Toshiyuki Yamamoto

Licence-Holding Has Decreased or Stagnated – Particularly for Men

Driving licences, being the basic prerequisites for driving, are key elements of the mobility toolbox. Hence, the proportion of licensed drivers is an important indicator of the travel options available to travellers. Between our study countries, the conditions for obtaining a licence differ significantly: various age limits apply, the costs and difficulty of driving tests differ widely, some countries have provisional licences while others don't, and so on. All of these factors help to explain the variability in levels of licence-holding among young adults observed in the study countries (see Figs. 1 to 3³).

Figure 3 shows that the proportion of licensed drivers among young adults has decreased noticeably in half of the study countries during the study period. In Great Britain and in the USA this downward trend in licence-holding has levelled off into a situation of stagnation from about 2005 onwards. Today, more than two thirds of young adults in their twenties in the study countries hold a licence. But the figures also illustrate that even in the 1990s a significant proportion of young adults had no licence (ranging from 26% in Britain to 9% in the USA). This shows that obtaining a licence was and is normal – but also that it has never been self-evident that everybody acquires one.

This recent decrease in licensing rates, however, displays significant differences between the genders (see Figs. 1 and 2): in most countries the proportion of licensed drivers has fallen much more strongly for young men than for young women. In some cases (Germany, Japan, and teenagers in Britain), licence-holding has declined only among men while remaining stable for women. In all study countries, young men were more likely to have a licence than young women at the beginning of the study period. This gender gap has narrowed significantly in France, Japan and Great Britain, and has disappeared altogether in Norway. In Germany and the USA the gender gap in this regard has actually reversed, so that at the end of the study period young women held slightly more licences than young men.

These changes in licence-holding are the first in a series of travel indicators which all show that the role of the car in young adults' mobility has changed in recent years. Later in this report we discuss general reasons for these new travel trends. However, as regards licensing, there are specific factors which should be taken into account. For example, it has been noted that in Great Britain, passing the test for a licence has probably become more difficult (Noble, 2005). There are also external developments which impact young adults' licence-holding, for example in France, where the abolition of national military service in 1997 corresponded with a decrease in licence-holding among low-income young men – a group that often obtained a licence during their time in the military (Avrillier et al., 2010). These examples show that changes in young adults' licensing do not necessarily reflect changes in their mobility mindsets, but that many factors may play a role here.

³ For Germany, France, Great Britain, and Norway, these figures are based on travel surveys; for the USA and Japan they are based on licensing registers. For Germany and Norway, such licensing registers are also available. The data sources about licensing in this study are listed in the annex. The different types of data sources may also partly explain why the shares of licensed drivers in Figs. 1 to 3 differ across countries. Within each country the presented statistics on licence-holding are consistent over time, and intracountry changes over time are reliable.

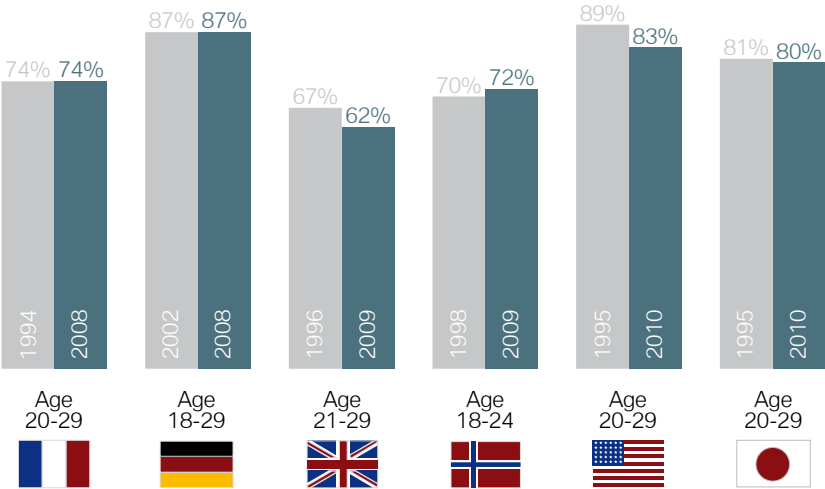


Fig. 1: The percentage of licensed drivers among young women in the 1990s (in 2002 for Germany) and after the turn of the millennium

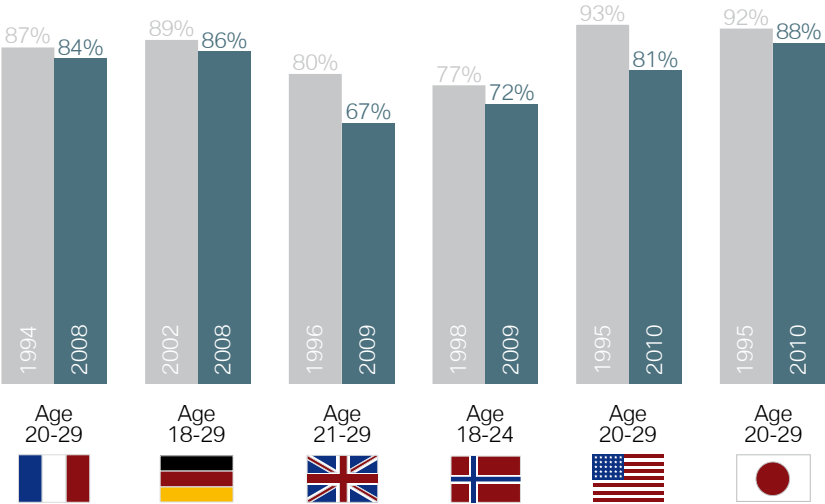


Fig. 2: The percentage of licensed drivers among young men in the 1990s (2002 for Germany) and after the turn of the millennium

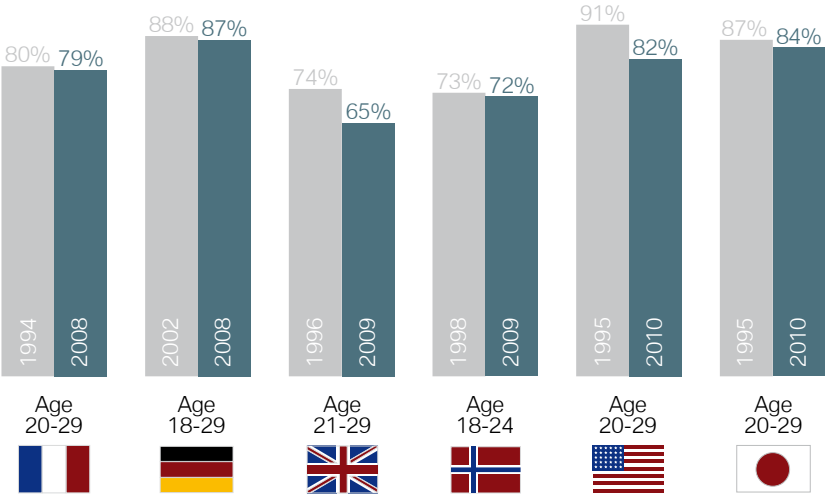


Fig. 3: The percentage of licensed drivers among all young adults in the 1990s (2002 for Germany) and after the turn of the millennium

Car Availability Has Largely Decreased – Particularly for Men

When it comes to driving, the next important element in the mobility toolbox for travellers is a car. It is access to a car – usually a personal car or a vehicle shared within the household of residence – which enables driving. Car ownership, as measured by vehicle registration statistics, is hard to compare across countries because registration regulations differ. Moreover, registration statistics for different age groups are likely to be obscured by the fact that cars can be registered in the name of somebody who is not the main driver. Against this background, we use the joint occurrence of licence-holding of the person and vehicle ownership of the household to measure car availability.

Overall, the last decades of the twentieth century were characterised by increasing car ownership in industrialised countries: in Europe and Japan the number of cars per 1,000 people more than doubled from 250 in the early 1970s to 550 at the turn of the millennium. In the USA, car ownership increased from about 500 cars per 1,000 people to about 800 (The World Bank, 2010). This overall trend is in line with the significant increases in car availability for young Germans and Britons from the 1970s to the 1990s (see Figs. 4 to 6). However, in the other countries we do not observe this strong increase – possibly owing to the fact that the observation periods start later.

After the 1990s, the trend in car availability for young adults is much more uniform across countries: with the exception of Japan, there was no country in which car availability for young adults in total was higher after 2005 than before the turn of the millennium – and this holds true for both sexes. In Norway and France a noticeable decline in car availability occurred even throughout the 1980s and 1990s. The decrease after 2000 is especially pronounced in Germany, Norway and Great Britain. Today, about three quarters of young adults have a car at their disposal, and it is no surprise that car availability for this group is higher in the USA than in other countries.

As Figs. 4 and 5 show, car availability has in most countries declined much more strongly among men than among women. Compared to women, men were much more likely to have a car available to them in the 1970s/80s. This gender gap has diminished considerably, not only because women have caught up but also because car availability for men has decreased. The increase in overall car availability among young Japanese is due to the continued rise of car availability for young women there.

In Great Britain, Norway and the USA the decrease in licensing among young adults contributed to the recent decline in car availability (for which holding a licence is one important prerequisite, as set out above). In Germany and France, where young adults' licence-holding was stable, it is mostly the decline of car ownership of households in which young adults live that has caused the decrease in car availability. Japan is an interesting case: here, licensing has decreased slightly while car availability has increased – contrary to the common expectation that the country is spearheading a move towards decreasing car orientation. The development in Japan is one indicator of the importance of sociodemographic trends which have an impact on young adults' mobility: in Japan, the proportion of young adults who still live with their parents has risen significantly (Japan Ministry of Internal Affairs and Communications, 2010), potentially giving more young Japanese the option of using their parents' car. This shows the relevance of sociodemographics in terms of the impact on young adults' mobility, a recurring theme of this study.

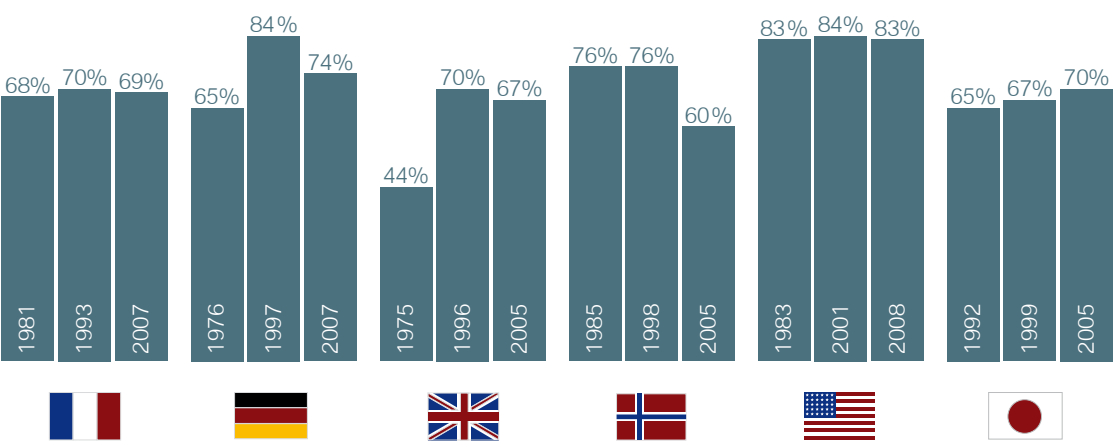


Fig. 4: Trends in car availability (driving licence plus car in the household) for young women (age 20–29)

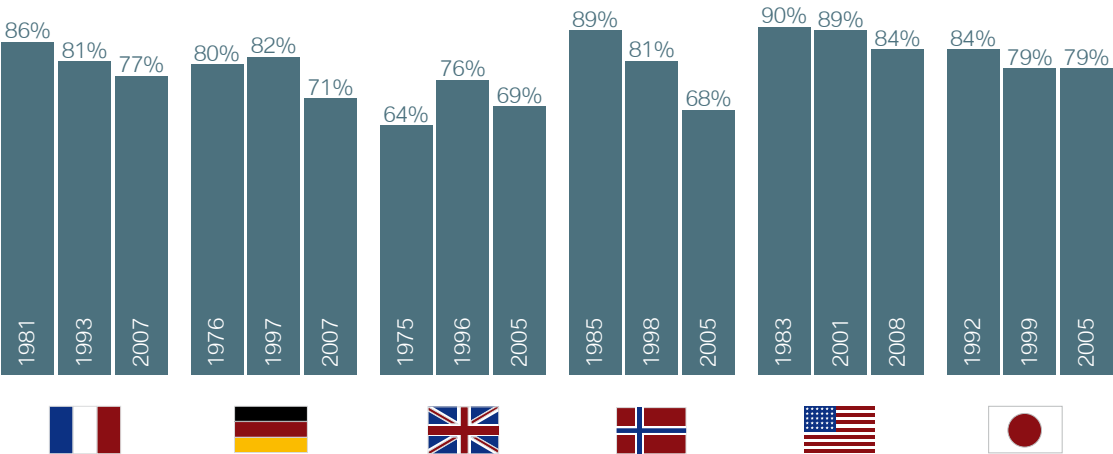


Fig. 5: Trends in car availability (driving licence plus car in the household) for young men (age 20–29)

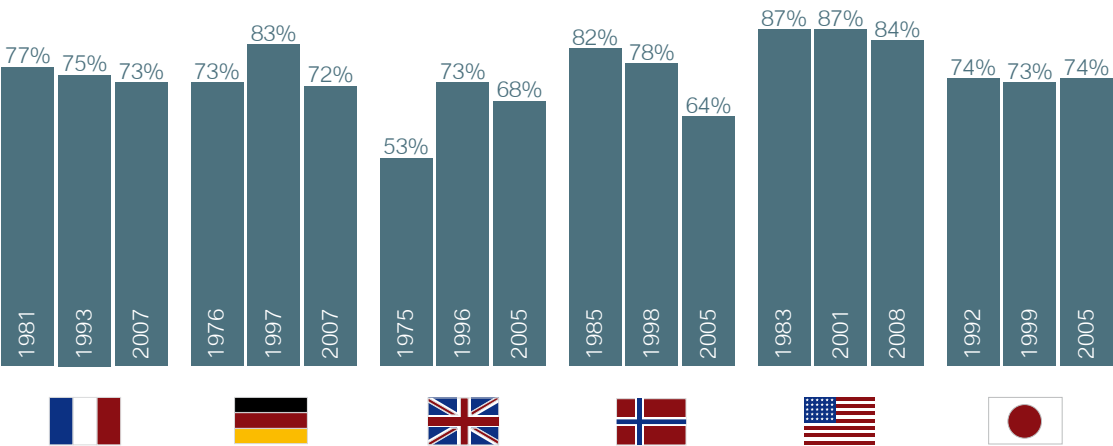


Fig. 6: Trends in car availability (driving licence plus car in the household) for all young adults (age 20–29)

Increase in Public Transport, Non-Motorised Modes and – in Some Places – Multimodality

Decades of increasing car ownership have also left their imprint on the use of the different modes of travel by young adults. This is illustrated by Fig. 7, which shows the evolution of the share of trips which young adults conducted by different modes over recent decades. Conforming to expectation, the car is far more dominant in the USA than in the other countries. Public transport is, on the contrary, almost negligible in the USA (at under 2%), while it achieves a 10% to 20% market share in the other countries. Germany, Japan and Norway are the only countries where a significant proportion of travel is undertaken by bicycle. As for motorised two-wheelers, in most countries other than Japan they are only a niche mode.

Until the 1990s the car modal share increased in all study countries except Norway. After the turn of the millennium, this trend has reversed and the car share has declined in the most recent period in all countries. Japan is the only country where the car modal share of young adults today is notably higher than in the 1980s. On the other hand, public transport has gained ground in this age group in recent years in all European study countries.

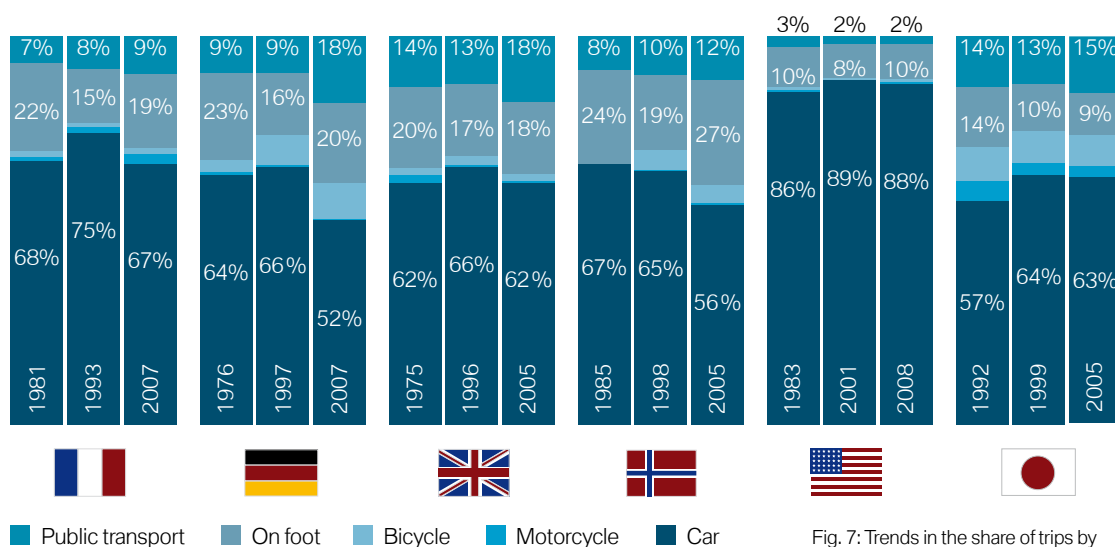


Fig. 7: Trends in the share of trips by mode for all young adults (age 20–29)

The recent shift from the car to public transport and non-motorised modes is especially pronounced in Germany. In the 1970s and 1990s, young Germans made about two thirds of their trips by car. This share fell to just over half of the trips after the turn of the millennium. On the one hand, decreasing car availability for young Germans contributed to this development. On the other hand, young Germans with access to a car increasingly use other modes as well. This is illustrated by Fig. 8, which shows the shares of the distance travelled by mode for young adults with car availability. The declining proportion of total mileage undertaken by car by this group indicates increasing use of alternative modes by drivers. The term 'multimodality' has been coined for this phenomenon.

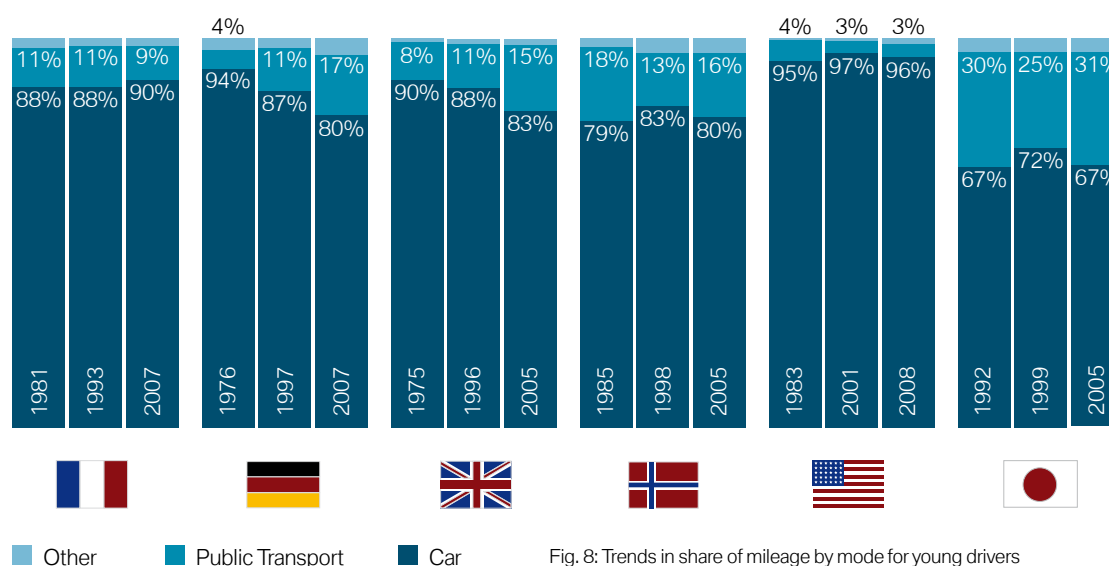


Fig. 8: Trends in share of mileage by mode for young drivers (age 20-29)

Figure 8 illustrates that young American drivers hardly use modes of travel other than the car, and shows that this has not changed in the last three decades. Young Japanese, on the other hand, exhibit the highest level of multimodality among the study countries, and it is possible that this behaviour is still becoming more common.⁴ The level of multimodality in the European countries at the end of the study period is more or less comparable. Increasing multimodality of car owners as a long-term trend is evident only in Germany and Great Britain, contributing to the decrease in car usage by young adults in these countries.

The role of the increase in multimodal behaviour – in particular by drivers – as an explanation for reduced car mileage by young travellers in some countries has important implications: it shows that there is not only an increasing proportion of travellers with few alternatives, but that there are more and more travellers with multiple options who increasingly choose alternatives to the car. This indicates that these alternatives, especially public transport, are increasingly competitive in a multi-option mobility market.

⁴ The high level of multimodality among young Japanese may also be partly explained by the focus of the Japanese surveys on urban areas, where this behaviour is likely to be higher.

Car Travel Distance Has Decreased – Particularly for Men

Total distance travelled per capita represents the result of many individual decisions, from obtaining a licence to everyday mode choices. With rising car ownership, car mileages per capita increased for young travellers in the majority of study countries between the 1970s and the 1990s (see Fig. 9). The car mileages of young adults in America have been the highest throughout the study period, while those of young Japanese are the lowest,⁵ leaving young Europeans in between the two.

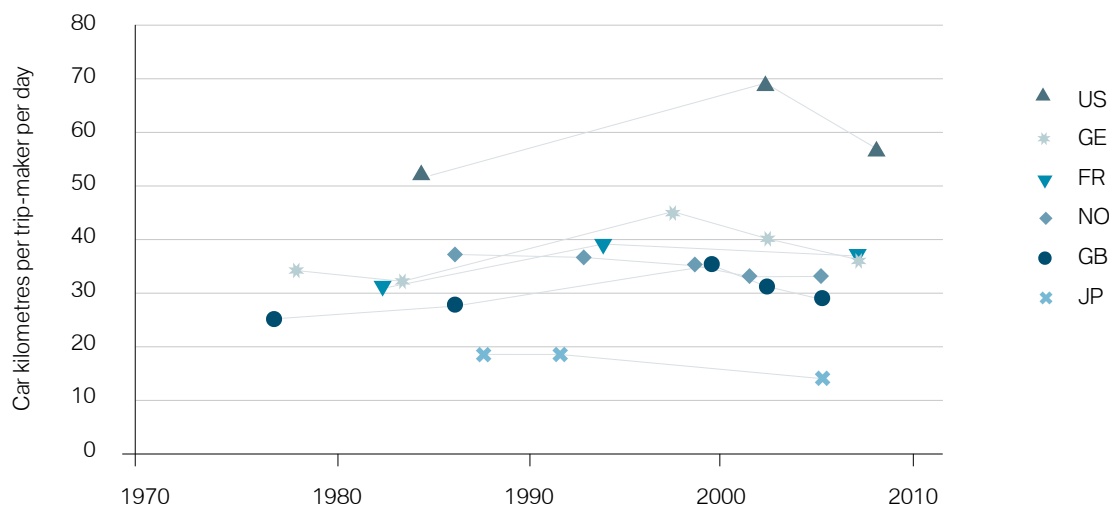


Fig. 9: Car kilometres (driver and passenger) per trip-maker per day (age 20-29)

While the car mileage of young adults in Japan and Norway has more or less stagnated, and possibly decreased slightly between 1987 and 2005, its development in Germany, Great Britain and France shows a different picture: in these countries, car mileages per capita by young travellers have peaked in the late 1990s and decreased thereafter.⁶ Also, in the USA there was a steep decrease in car mileage per capita between 2001 and 2008, implying a peak of per-capita car travel by young adults around the turn of the millennium.⁷

Conforming to expectation, car mileage per capita in the study countries was generally higher for employed young adults than for those who are economically inactive. However, the trend towards less car travel is seen in both groups. Moreover, and also in line with what one would expect, car travel per capita was lower in urban areas in all study countries, and trends towards less car travel were more pronounced in cities. However, in many countries this trend also existed in rural areas – only France and Norway show a slight increase in car mileage in rural areas.

As regards diverging car mileage trends for different groups of the young adult population, the most notable common denominator across countries was a difference in developments between men and women: in line with the findings on licence-holding and car availability, young men reduced their car mileage noticeably more strongly than women in most study countries (see Fig. 10). In France and Japan, car mileages driven by young women actually continued to grow. Norway is the only study country where the gender gap in terms of car mileage increased in recent years because male car mileage increased slightly while women reduced their driving. In the other countries, the car mileage gender gap has narrowed significantly. It disappeared altogether in Germany and the USA as a result of the young men's trend towards reducing their driving.

⁵ The relatively low car mileages of young Japanese might be due in part to the fact that the Japanese data refer to urban areas.

⁶ For France, local household travel surveys indicate that car travel has peaked around the year 2000, without appropriate measurement at the national level capturing this climax.

⁷ Developments in the USA have to be interpreted in light of the beginning of the financial and economic crisis in 2008, which is likely to have impacted significantly on mobility behaviour.

In most countries where young men reduced their car mileage, their overall mileage (i.e. the total regardless of mode) declined. Only in Germany was there a considerable shift in young men's travel to alternative modes, which is in line with the findings on multimodality described above. In conjunction with an increase in non-car travel by women, this resulted in a stagnation of total mileage in everyday travel by young German adults. In France, Great Britain, the USA and Japan, total everyday travel by young adults was lower after the turn of the millennium than before.

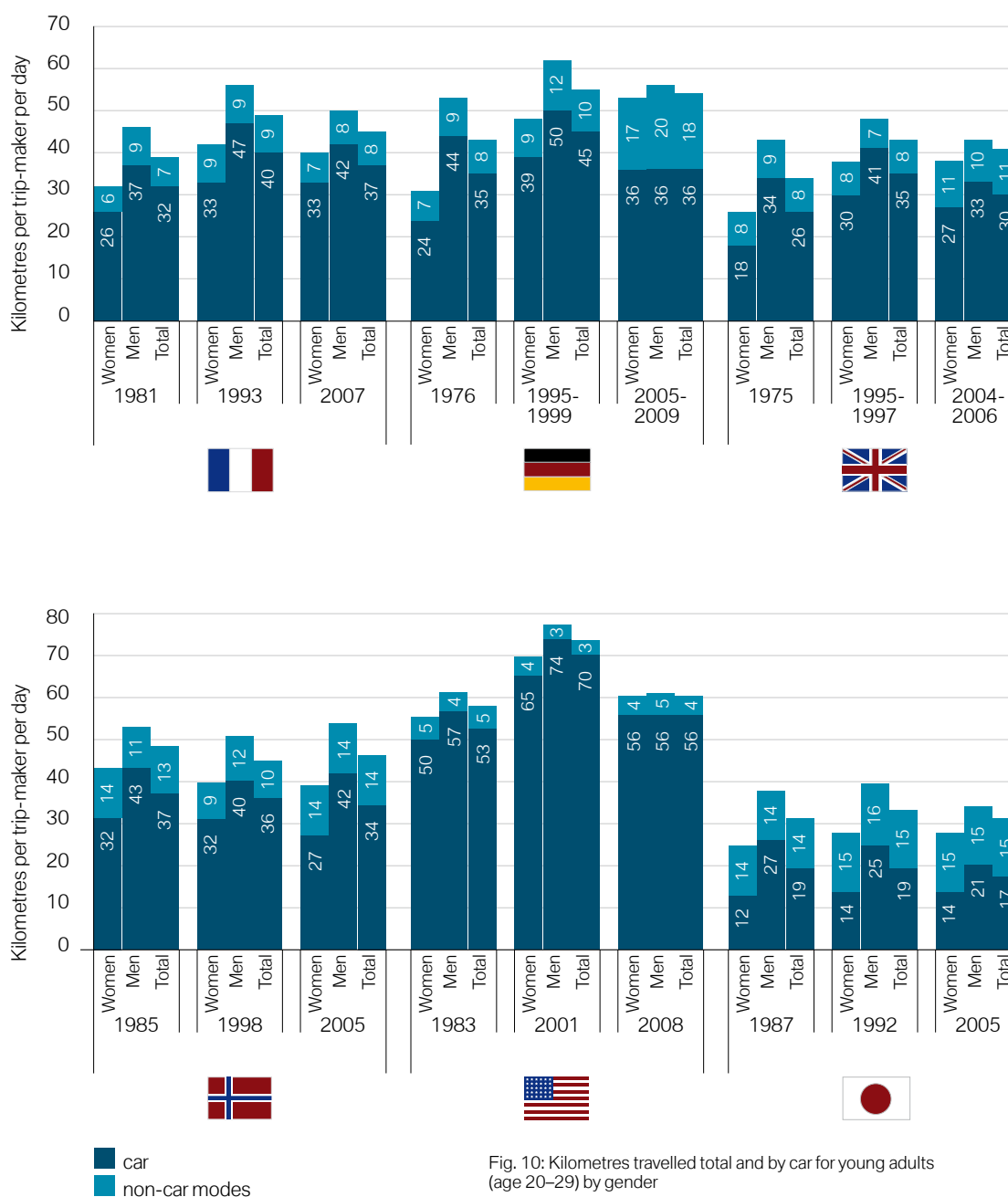


Fig. 10: Kilometres travelled total and by car for young adults (age 20-29) by gender

Rail and Air Have Profited Most from Increases in Young Adults' Long-Distance Travel

Regional and long-distance travel constitute only a small proportion of all *trips*. However, a large part of total *distance* travelled is covered on long journeys: trips over 50 km long account for only about 5 % of all trips, but for about half of all mileage. For this reason, the choice of mode for long-distance journeys is very relevant. Moreover, long-distance travel in industrialised countries is still manifesting significant growth, while everyday travel is, by and large, stagnating in many of these countries.

In those of our study countries for which data on long-distance travel were available, trends in long-distance travel for young people reveal a diverse situation, but with the constant factor being that the car is slowly losing relevance.⁸ On the other hand, air travel in particular is gaining ground.

In Norway, the number of car journeys of over 100 km per young adult (age 16 to 35) per year has increased from 9 to 11 between 1998 and 2005. However, during that period the modal share of the car in long-distance travel has decreased from 59 % to 57 %, while the modal share of air travel has increased from 21 % to 25 %. This indicates that air travel profits most from the growth in young people's long-distance travel (Norwegian Ministry of Transport et al., 2010).

In Germany, there is a similar trend among young adults (age 16 to 35): in 1997, 50 % of their holiday journeys (where a 'holiday' is understood to last more than four days) were by car. This figure decreased to 47 % in 2007, while air travel's share increased from 36 % to 45 %. This shift in modal share went along with a trend towards more distant holiday destinations: in 1997, 16 % of young Germans' holiday destinations were outside of Europe, whereas by 2007 this had risen to 21 % (FUR, 1999; FUR, 2007).

In Great Britain, this trend seems to be particularly pronounced: here, the number of car journeys over 100 km per young person (age 16 to 29) per year has decreased from 13.9 in 1996 to 10.5 in 2005 (DfT & National Centre for Social Research, 2010). As the British long-distance travel survey does not cover travel outside Great Britain, meaningful figures for modal shares and the development of air travel cannot be generated. However, the overall expansion of air travel, and specifically the highly developed British low-cost air travel market, suggests a significant shift from national car travel to international air travel by young Britons.

Even though the impact of modal shifts in long-distance travel on the overall trip-based modal share is not relevant, changes in long-distance mode choice are likely to affect total mileages by mode noticeably. Moreover, changing modal preferences in long-distance travel might feed back into car ownership decisions, with consequences for day-to-day travel.

What Are Possible Explanations for Trend Changes in Young Adults' Mobility?

There are numerous possible explanations for the observed decline in the dominance of the car in young adults' mobility during the decade since the turn of the millennium in our study countries. Influencing factors range from relevant socioeconomic developments to changes in the transport system and technology.

Increasing Prevalence of Life Situations Which Do Not Engender Car Use

Overall, the proportion of young people receiving tertiary education is still increasing (UNESCO, 2011). Corresponding with this development is decreasing workforce participation among young adults (The World Bank, 2010) and an increase in the age at which people are choosing to start a family (U.S. Census Bureau, 2010; INSEE, 2009; ONS, 2010; Destatis, 2010b). Moreover, in many countries the proportion of the population that is urban – particularly among the young – is still increasing (The World Bank, 2010; Destatis, 2010a). All of these socioeconomic developments contribute to a larger proportion of young people being in a life situation in which they are less prone to car ownership or use.

⁸ Due to heterogeneity of the data on long-distance travel in our study countries, we use different indicators from one country to another.

Changes in Transport Supply

Regarding the transport system, in many countries numerous policy measures aim at discouraging driving and fostering the use of other modes, at least in urban areas. The London Congestion Charging scheme, the pedestrianisation of Times Square in New York City, and the introduction of substantial student discounts for public transport in Germany (the 'Semesterticket' – see Peistrup & Stingel, 2007; Buehler & Pucher, 2012) are examples of this kind of change.

There have also been significant developments regarding supply and price of long-distance travel (for example the emergence of low-cost air travel and the spread of high-speed rail). Overall, these are likely to have stimulated continued growth of long-distance travel among young adults. Nevertheless, such developments may have had unexpected impacts on everyday travel: if long-distance trips by car are replaced by air travel, as observed in Germany, then this might motivate those who owned a private car primarily for long-distance journeys to make do without one.

The Rise of ICT

The impact on travel behaviour of information and communication technology (ICT), which has developed exponentially in recent years, remains an open question (Mokhtarian et al., 2006). There would perhaps be merit in revisiting this issue with a focus on those who grew up with ICT and developed their mobility habits in the presence of such technology. Specifically, and more recently, the impact of the emergence of smartphones and other mobile devices on young adults' mobility has been discussed; firstly, because these devices enable online activity while travelling, which might impact on mode choice; secondly, because they might be replacing the car as the new highly visible status symbol (Tully, 2011). We believe that with regard to the trends described in this study, the impact of such devices is negligible: the presented trends have been unfolding during the last two decades. Smartphones, on the other hand, are currently only about five years old, indicating that the impact they have on travel can be only very recent.

Other Factors and Country-Specific Developments

The developments outlined above, which affect all of the study countries to a greater or lesser extent, are not likely to explain the observed mobility trends entirely: other important factors have to be considered as well. One example may be psychological factors, which may range from environmental awareness to increasing pragmatism in everyday mobility choices. Another example is the costs of mobility: all countries except Japan have seen significant fuel price increases between 1995 and 2007 (the year before the financial crisis), with real petrol prices rising by between 13% in Norway and 85% in the USA (BITRE, 2012). This factor, however, serves as an example to show that despite the similarity of the overall trend, there are significant differences in details from one country to another. Notable differences across countries also apply when it comes to many other important factors, such as young adults' unemployment and income and, of course, other sociodemographic trends listed above as applying to this age group. This can be seen, for instance, in the strong increase in the numbers of young Japanese still living with their parents – something which is unparalleled in the other study countries.

This diversity of explanatory factors across study countries suggests the profitability of a country-by-country analysis of such developments in order to gain a better understanding of the background to the observed changes in young adults' mobility. For this reason, we present two country case studies in this report: Germany and Great Britain. Both countries lend themselves to being used as case studies for two reasons: firstly, because of the prevailing data situation; and secondly, because the trend reversal in young adults' mobility is very pronounced in each of them.

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Part 2: Case Study of Germany – Socioeconomic Changes, New Trends in Travel Among Men, and Increasing Multimodality

Tobias Kuhnimhof, Matthias Wirtz, Dominika Kalinowska, Ralph Buehler and Wilko Manz

Young Adults' Mobility in the German Context

Today, young adults between the ages of 18 and 34 constitute about one fifth of the German population. This group generates about one fourth of all trips and almost 30 % of the total mileage travelled in Germany (infas, 2012). This case study presents important findings about the development of this group's mobility, and discusses the factors driving this development. It focuses on the period between the end of the 1990s and the end of the 2000s, and analyses the trends in the mobility of young adults between 18 and 34.¹

Statistic	1998 ²	2008 ²	Relative change
Persons aged 18 to 34			
Number of persons	19.0 million	16.5 million	↘ -13 %
Percentage of the German population	23 %	20 %	↘ -13 %
Young households (with no person older than 34)			
Number of young households	7.1 million	6.3 million	↘ -11 %
Percentage of young households among all households	19 %	16 %	↘ -16 %
Cars			
Cars registered to 18- to 34-year olds ³	9.7 million	5.4 million	↘ -44 %
Cars in use by young households ⁴	6.8 million	5.6 million	↘ -17 %
Young households by car ownership			
No car	20 %	28 %	↗ +39 %
One car	63 %	55 %	↘ -13 %
Two or more cars	16 %	17 %	↗ +3 %
Weekly per-capita distance travelled by 18- to 34-year olds, by mode			
Car	287 km	220 km	↘ -23 %
Public transport	52 km	100 km	↗ +92 %
Non-motorised modes	12 km	16 km	↗ +33 %

Table 1: Overview of relevant recent trends among young adults and their mobility in Germany (sources: Destatis, 2011; KBA, 2010; Analysis of the German Mobility Panel)

Table 1 shows an overview of relevant developments over the study period in the age group under scrutiny. While licence-holding (see Figs. 1 to 3 in Part 1 of this report) has largely stagnated among young adults in Germany, with some decline for men, the story for car ownership is different: Table 1 shows that the total number of cars registered to young adults has decreased much more notably than the number of young adults. However, this trend may be misleading, as cars are often not driven by the person in whose name they have been registered, for reasons such as avoiding the high insurance rates incurred by novice drivers. Therefore we additionally analysed the number of cars in use by young households, defining these as households with no members over the age of 34. This number has decreased also – however, much less drastically than the number of registrations. This indicates that, as well as decreasing car ownership within this age group, there has also been an increasing propensity for young adults to register their cars in someone else's name. Hence, the data showing the decrease in vehicle registrations for young adults

¹ In some cases, for reasons of data availability, the figures shown refer to the age group 18 to 29.

² As regards data from the German Mobility Panel (travel distance, mode use, households by car ownership), data from 1997 to 1999 have been pooled to represent the situation in 1998; likewise, data from 2007 to 2009 have been pooled to represent 2008. This holds true throughout Part 2 of the report.

³ From 2006 to 2007 there was a change of registration statistics in Germany. This change in methodology accounts for about 10 % of the decrease in vehicle registrations for young adults.

⁴ The number of cars in use by young households and the number of registered cars are, for reasons to do with definitions of the terms, not comparable with each other.

actually overstate the existing decline in car ownership among young adults. However, in contrast to what we will see in the British case study, we found no evidence of strongly increasing insurance prices for young drivers in Germany.

Moreover, the composition of the population of young households by the number of cars shows that the proportion of those without a car has increased noticeably. On the other hand, the proportion of young households with two or more cars has also increased, leading to a decrease in the proportion of households with only one car. It is thus seen that the polarisation of young households as regards car ownership has increased. The following section of this case study is dedicated to analysing why the percentage of young households without a car in Germany has grown so significantly.

Table 1 also shows that the total per-capita car mileage (including driver and passenger kilometres) for young adults has decreased by more than one fifth during the study period – even more than car ownership. On the other hand, this age group's mileage travelled by public transport has roughly doubled. Overall, the increase in use of alternative modes by young German adults has almost compensated for the decline in car travel. As a result, this group's total distance travelled has only decreased a small amount (from 351 km per person per week in 1998 to 336 km per person per week in 2008) – a situation which differs from the British case, as shown in Part 3 of the report. This case study will present how the automobility gap between young German men and women has disappeared in the course of this development. We will also show that – besides the decrease in car ownership – it is particularly the increasing multimodality of young drivers that has contributed to a decline in car mileage travelled by this age group.

Socioeconomic Trends Explain Much of the Decrease in Car Ownership

Figure 1 shows the percentage of young people who live in a household with a car, broken down into age groups. During the last two decades about 90 % of children were born into a household with a car. The percentage of those in households with a car remains at this high level throughout the childhood and teenage years. However, even in the 1990s the proportion of people in their early twenties who lived in a household with a car was significantly lower than among children and teenagers: not everybody who leaves the parental home takes a car with them, or acquires one. It is precisely in this age class that the percentage of car-free individuals has increased further. When entering into a job or career, or starting a family, the likelihood of owning a car increases, and by the time they are in their mid-thirties around 90 % of people live in a household with a car – a figure that hasn't changed much during the study period.

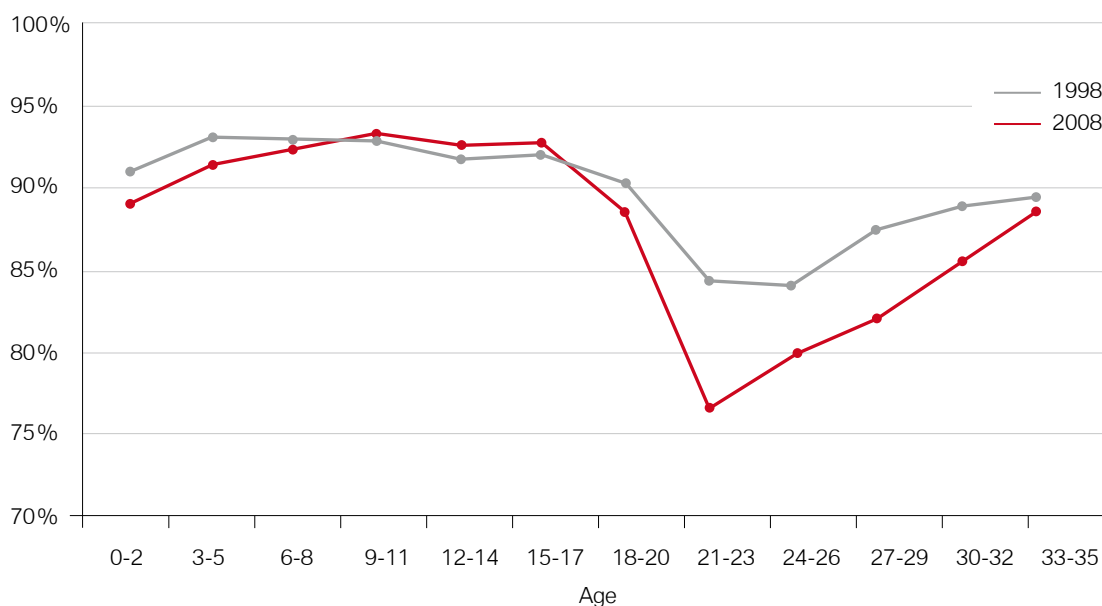


Fig. 1: Percentage of young Germans who live in a household with a car by age (1998 and 2008)

In short, since the 1990s the percentage of young adults who live without a car has increased for those who have left their parents' home and have not yet started their own family. The following trends regarding numbers of cars per adult for different types of young households (those in which there is no one older than 34) support this interpretation: while the number of cars per adult has increased for households with children (rising from 0.61 in 1998 to 0.63 in 2008), it has decreased for couples without children (0.63 in 1998; 0.61 in 2008) and particularly for single-person households (0.68 in 1998; 0.63 in 2008).

Turning now to percentages of different types of households (rather than percentages of young adults who live in them), the question presents itself: why has the percentage of young households with a car decreased so significantly between 1998 (80%) and 2008 (72%)? As we will show below, socioeconomic trends have contributed more than anything else to this development. Let us first ask this question: which factors influence household car ownership for young adults under *ceteris paribus* conditions (for details, see Kuhnimhof et al., 2012)? For both the beginning (1998) and the end (2008) of our study period, the relevant factors were as follows:

- The higher the income, the higher the likelihood of car ownership (see Fig. 2).
- If their income is equal, households that are economically active have a higher likelihood of car ownership than economically inactive households.
- If their income is equal, households of academics have a lower likelihood of car ownership than households in which nobody has a university degree.
- In 1998 (although not in 2008), the income threshold at which men opted for car ownership was lower than that for women (for illustration see Fig. 2). For this reason, households headed by men had in 1998 a higher likelihood of car ownership than those headed by women.
- Households in metropolitan areas have a lower likelihood of car ownership than those in rural areas.
- Single-person households have a lower likelihood of car ownership than multi-person households.

Table 2 shows how the structure of young German households has changed between 1998 and 2008 as regards the factors listed above. It is striking that across the board, all relevant household characteristics have developed such that the likelihood of car ownership has decreased (in the second case study we shall see that the British situation is fairly similar). In short, compared to the end of the 1990s, today fewer young households live in circumstances which are conducive to car ownership. Of these factors, the continued increase in the percentage of young people who receive higher education is probably the main one, particularly as this development leads to an increasing proportion of young urbanites, and to a delay in the age at which full-time employment is entered and the age at which a family is started.

Factor	1998	2008
Inflation-adjusted monthly income per capita (real equivalent income)	€2,290	€2,150
Percentage of households with an economically active head of the household ¹	88%	83%
Percentage of households with a head of the household ¹ with an academic education	30%	32%
Percentage of households with a man as the head of the household ¹	65%	57%
Percentage of households in metropolitan areas	50%	53%
Percentage of single-person households	31%	41%

Table 2: Relevant socioeconomic trends among young households in Germany

In order to form an estimate of the degree to which these socioeconomic changes explain the decrease in young German adults' car ownership, we have assumed the following hypothetical situation: *Young German households in 2008 featured the socioeconomic structure which prevailed in 2008 – however, they had the preferences regarding car ownership which young households had in 1998.* This leads to a hypothetical

¹ The head of the household is defined as the person that generates the largest proportion of the household income.

percentage of car owners among young German households in 2008 of 75%. This indicates that of the 8% decrease in young households' car ownership (from 80% owning at least one car in 1998 to 72% in 2008: see Table 1), about 5% (i.e. about two thirds) has been caused by the socioeconomic changes listed in Table 2. We will see that in the British case, socioeconomic shifts have had less weight in shaping developments.

Hence, only about one third of the decline in young households' car ownership is caused by young Germans' changing preferences towards car ownership under *ceteris paribus* conditions. The probability of car ownership has decreased for urbanites, for households with low incomes, and particularly for men. Figure 2 shows that in 1998 almost half of young male singles with an income of less than 1,000 euros owned a car, whereas the corresponding proportion for women was about a quarter. In 2008 the proportion of car owners in this group was less than one third, and there was no longer any difference between men and women in this regard. Hence, the reasons for decreasing car ownership rates among young adults were firstly changing socioeconomics, and secondly changes in the car ownership preferences of young men.

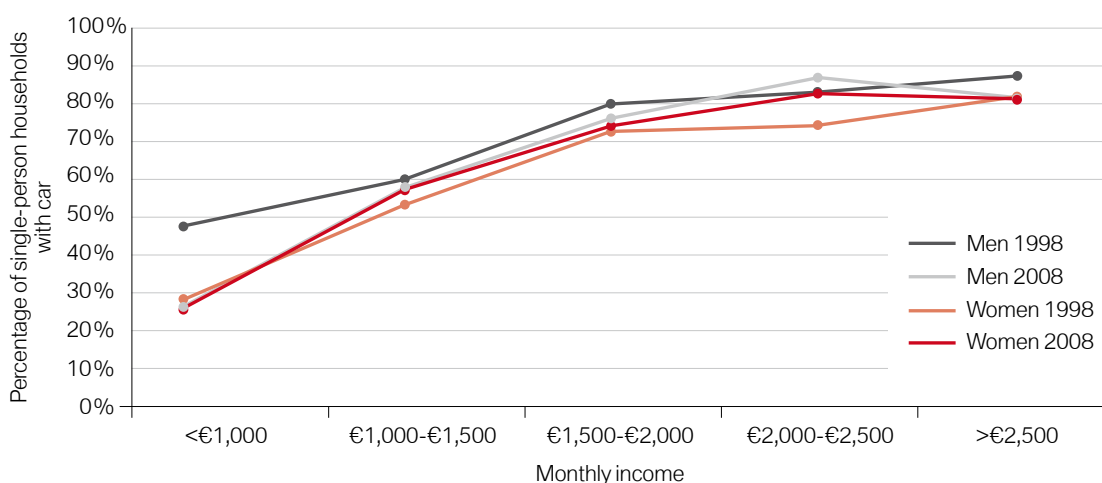


Fig. 2: Percentage of young single-person households with a car by income and gender in Germany

The Gender Gap for Total Travel and Car Use Dwindles

Decisions about individual mobility range from licence-holding to day-to-day choice of mode, and determine the total distance travelled by various modes. Table 1 showed the significant shifts in travel by young German adults from the car to other modes. Figure 3 depicts a longer time series for this development, for young men and women in their early and late twenties. Overall, per-capita travel grew significantly for both genders between the 1970s and the 1990s, stagnating thereafter. This recent stagnation, however, is characterised by decreasing car travel and simultaneously increasing travel by other modes.

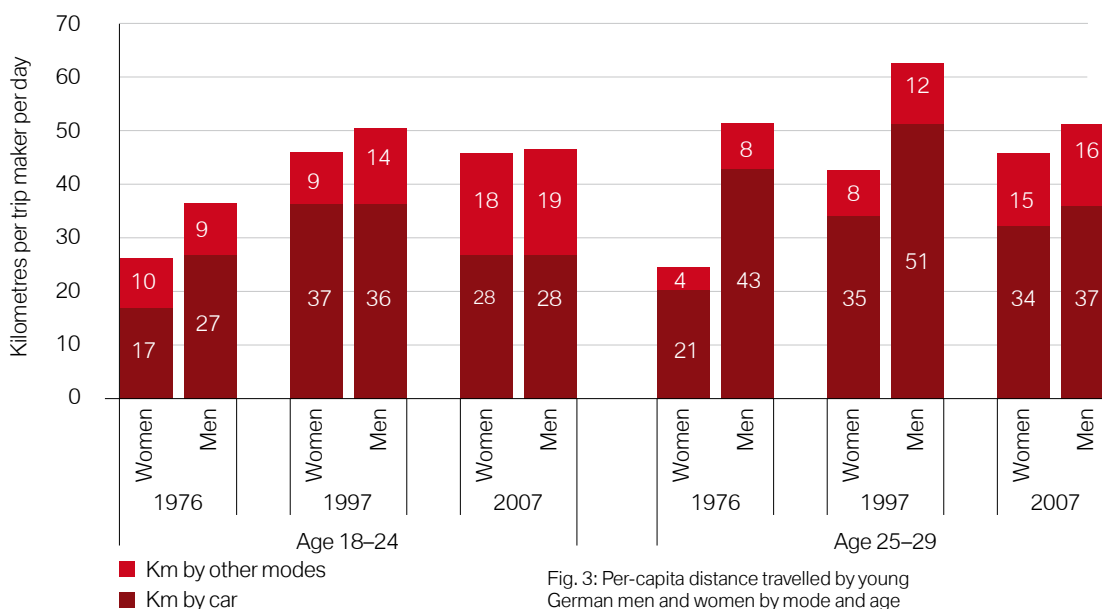


Fig. 3: Per-capita distance travelled by young German men and women by mode and age

Figure 3 also shows, for persons between 18 and 24, that the automobile travel gender gap which existed in the 1970s had closed by the end of the 1990s. Since then, the development of car travel in this age class was fairly similar for men and women. Among young Germans in their late twenties the difference between men and women was much larger in the 1970s and remained so into the 1990s. After the turn of the millennium, however, this gender gap also shrank to almost nothing, mostly because young men reduced their driving significantly. The British case study will show that developments in Great Britain have much in parallel with the trends in car travel by gender in Germany.

Hence, among young Germans, gender differences in the level of mobility using different modes have almost ceased to exist. Moreover, another facet of mobility has witnessed male and female behaviour becoming more similar: while the occupancy rate (the ratio, for any individual, of all trips made by car including those as a passenger, to the number of trips made as the driver) for young women has been stable at 1.3 since the late 1990s, the occupancy rate for young men has increased from 1.2 to 1.3. In other words, men increasingly travel as passengers; this indicates that for young adults the traditional role allocation – whereby a man is in the driver seat with a woman in the passenger seat – is a phenomenon of the past.

Young Drivers Are Becoming Increasingly Multimodal

The proportion of young German households with a car decreased by a tenth between 1998 (when it was 80%) and 2008 (72%), while over the same period the total number of cars in young households declined by 17%. However, the car mileage travelled by young adults fell by more than a fifth (see Table 1). This suggests that, besides the decrease in car ownership, additional relevant developments have contributed to the observed car mileage reduction among young adults. Indeed, the car mileage travelled by young adults would have decreased by only 6% if their car ownership alone had declined and no other behavioural changes had taken place (Kuhnimhof et al., 2012). The main reason for the decrease in car mileage travelled by young adults is that young car owners ten years after the turn of the millennium drove less than their counterparts in the 1990s. Moreover, the most important reason for young drivers' decreasing car use is that they use alternative modes more, i.e. they exhibit increasingly multimodal behaviour.

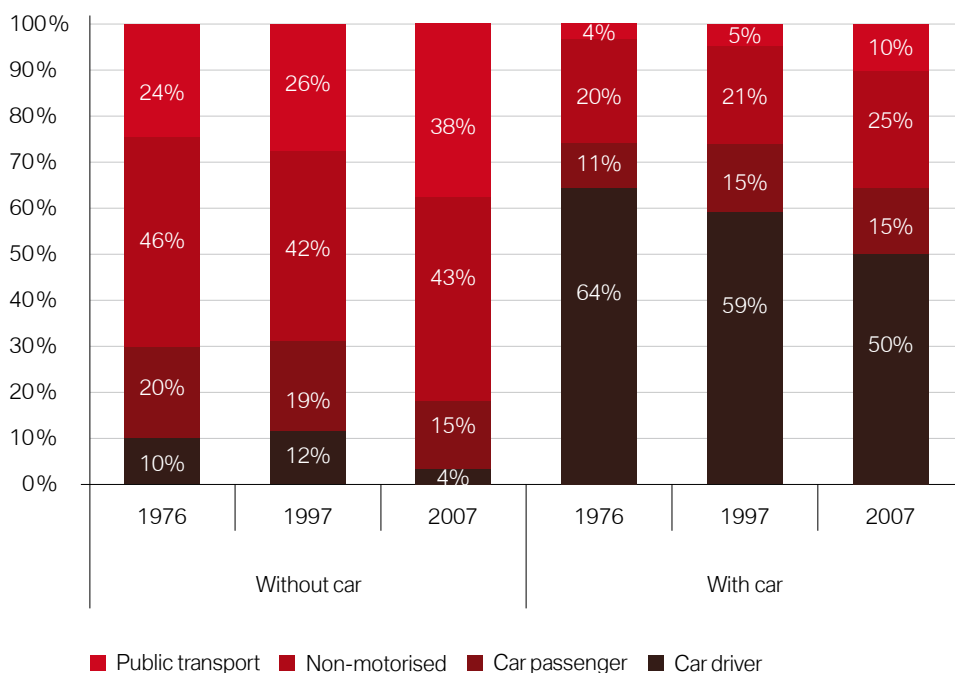


Fig. 4: Trip-based modal shares for young German adults with and without a car (age 18–29)

Figure 4 depicts the modal share for young German adults with and without a car since the 1970s and shows the trend towards more multimodality among young drivers: in the 1970s, young adults with a car covered three quarters of their trips by car (whether as driver or passenger); by the end of the first decade of the new millennium this proportion was only about two thirds. Moreover, analyses of mode choice over the course of one week show that the proportion of young drivers who use the car at least five times a week decreased from two thirds at the end of the 1990s to less than half (47 %) in 2008. Meanwhile the percentage of those who at least occasionally use public transport has increased among young drivers.

In a way that mirrors changes among the young population as a whole, the composition of the population of young German drivers has changed between 1998 and 2008: today they are more urban, and fewer of them are economically active, while more of them have an academic education. One change in journey purposes of young drivers (age 18 to 34) reflects this socioeconomic development: on the one hand, the amount of commuting to/from work fell (from 105 km per person per week in 1999 to 97 km per person per week in 2007); on the other hand, educational commuting – traditionally the domain of public transport and the bicycle – became more important (rising from 37 km per person per week in 1999 to 61 km per person per week in 2007). However, such socioeconomic changes explain only about a fifth of the decrease in car mileage travelled by young drivers (Kuhnimhof et al., 2012). Hence, the majority of the changes in the travel behaviour of young drivers were caused by young car owners exhibiting different behaviour at the end of the 2000s – even in life circumstances similar to those ten years earlier – and in particular becoming much more multimodal in their travel habits than previously.

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Part 3: Case Study of Great Britain – Socioeconomic Changes, and Variations in Driving Trends by Income and Location

Scott Le Vine, John Polak and Tobias Kuhnimhof

Young Adults' Mobility in the British Context

Great Britain's population is ageing, meaning that young adults represent an ever-shrinking proportion of all licence-age people (see Table 1). What is striking from the standpoint of travel is that this trend is much stronger on the roads than for the population in general: the 'average age' of a mile driven (i.e. the average age of drivers weighted by the mileage they drive) has increased at 2.5 times the rate at which the population as a whole has aged. A large part of this ageing of travel in Great Britain is a result of the fact that the travel trends of young adults are changing, which gives additional weight to the demographically increasing group of senior travellers. This case study highlights important facets of the travel trends of young British adults, and presents relevant developments in contextual factors that influence travel in this group. The study focuses on the period between the end of the 1990s and the end of the 2000s, and analyses the trends in the mobility of young adults between the ages of 18 and 34.

Statistic	1998 ¹	2008 ¹	Relative change
Persons aged 18 to 34			
Number of persons	13.4 million	13.3 million	↘ -1%
Percentage of the British population	24%	22%	↘ -6%
Young households (with no person older than 34)			
Number of young households	4.8 million	4.2 million	↘ -12%
Percentage of young households among all households	20%	17%	↘ -16%
Cars			
Cars 'mainly driven by' an 18- to 34-year old driver	7.6 million	6.7 million	↘ -11%
Cars in use by young households	4.8 million	3.8 million	↘ -21%
Young households by car ownership			
No car	28%	34%	↗ +21%
One car	49%	41%	↘ -17%
Two or more cars	23%	25%	↗ +10%
Weekly per-capita distance travelled by 18- to 34-year olds, by mode			
Car	222 km	171 km	↘ -23%
Public transport	39 km	47 km	↗ +22%
Non-motorised modes	8 km	9 km	↗ +6%

Table 1: Overview of relevant recent trends among young adults and their mobility in Great Britain (sources: ONS, 2012a; Analysis of British National Travel Survey)

Table 1 shows important developments in various weightings of young adults in British society, and in mobility trends for this group. In Great Britain the decline in car ownership and car use among young adults has been paralleled by a decline in licence-holding for this group (see Figs. 1 to 3 in Part 1 of this report). As in the German case study, we have concentrated our analysis of young adults' car ownership on young households, i.e. households with no one over the age of 34. This doesn't cover all young adults, since the proportion of young British adults who don't live in a young household has increased during the study period (from 38% to 46%). However, our aim was to get a good understanding of the decisions which young people make about car ownership that are not influenced by other generations, which is only possible with this focus on young households. As in the German case study, there has been increasing diversity as regards car ownership in young British households during the study period: while in 2008 there were more young households with two or more cars than in 1998, the proportion of those without car has also increased.

¹ Data from 1997–1999 have been pooled to represent the year 1998; likewise, data from 2007–2009 have been pooled to generate figures for 2008.

Table 1 also shows that there has been a sharper decline in overall travel among young Britons than among young Germans (from 269 km per person per week in 1998, to 227 km per person per week; this is a drop of 16%, compared with a 4% drop in Germany). This is because here, the increase in the use of alternative modes has not compensated for the decline in car mileage nearly as much as it has there. As shown in Fig. 8 of Part 1 of the report, the shift of travel to alternative modes, by young British drivers in particular, has not been as pronounced as in Germany. In other words, increasing multimodality has emerged as a trend among young Britons, but not as strongly as in Germany.

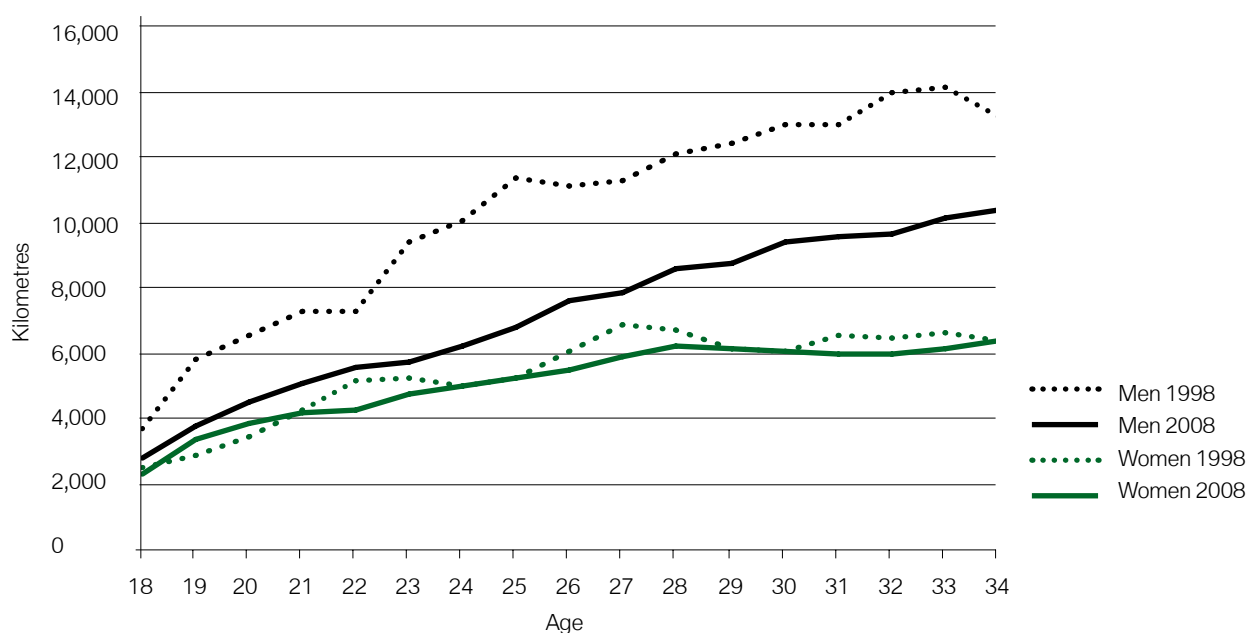


Fig. 1: Annual car driving distance per capita for young British men and women by age (1998 and 2008)

As in the other study countries (see Part 1 of this report), different trends for young men and women also characterise developments in Great Britain. Illustrating this, Fig. 1 shows the distance driven by car for young men and young women, by age, for 1998 and 2008. Up until their late twenties, women typically increase the distance that they drive annually, at which point it then stabilises at around 6,000 km – and not much has changed since 1998 in this regard. The distance driven by young men, however, has come down considerably since 1998. Now starting at a lower level at the age of 18 than it did in 1998, it doesn't increase as substantially in absolute terms for men in their twenties in 2008 as it did in this age group in 1998. Only for young men and women in their late twenties does the driving gender gap open up considerably – at an age when many start families, and the duties of childrearing begin to impact on travel behaviour. So while still of an age such that travel patterns of the two genders are not as yet characterised by specific male and female roles and differing associated duties, the driving behaviour of the sexes is similar. This indicates that the underlying patterns of young adults' mobility have become more gender-independent since the turn of the millennium.

As well as displaying diverging trends between men and women, the development of car travel by young Britons is also specifically characterised by developments that differ – in some cases unexpectedly – by location and income. We will highlight these developments in this case study, but first we discuss the impact of socioeconomic shifts on the car ownership of young British households.

Socioeconomics Explain a Substantial Part of the Fall in Car Ownership

In the German case, socioeconomic shifts explained more than half of the increase in number of non-car young households. As Part 1 of this report shows, many of the underlying developments, such as the shift towards higher education, have prevailed in most industrialised countries – and that includes Great Britain. This leads to the question: have socioeconomic shifts also shaped the trend towards a rise in the number of non-car young households in Britain? To analyse this issue we first evaluated the relevance of socioeconomic factors to young adults' car ownership at both the beginning and the end of our study period. We found very similar structures to those in Germany, as follows:

- In line with the finding that the percentages of licensed drivers and of distance travelled by car both increase with income (see Figs. 5 and 4 respectively), car ownership of young households is higher in high-income households.
- At a given level of income, households that are economically active have a higher likelihood of car ownership than those that are economically inactive.
- In 1998, households headed by men had a higher probability of owning a car than households headed by women, even if their income was equal.
- Households in metropolitan areas have a lower likelihood of car ownership than those in rural areas.
- Single-person households, and those sharing a flat with others, both have a lower likelihood of car ownership than multi-person households.
- Households residing in flats have a lower probability of owning a car than those who live in houses.

Let's now turn to the changes which occurred in young British households between 1998 and 2008 as regards these factors (see Table 2). Most factors developed in such a way as to decrease the likelihood of young households to own a car. Hence – as in Germany – by 2008 the proportion of young households in circumstances which made them very likely to have a car had declined. However, Great Britain underwent one development which had an opposite tendency: incomes in young households have risen – this partly compensated for the effect on car ownership of the other socioeconomic shifts.

Factor	1998	2008
Inflation-adjusted monthly income per capita (real equivalent income)	£1,677	£1,872
Percentage of households headed ¹ by full-time worker	74%	69%
Percentage of households with a man as the head of the household ¹	66%	61%
Percentage of households in cities with populations over 250,000	51%	56%
Percentage of single-person households (including accommodation shared with flatmates)	33%	40%
Percentage of households residing in flats	27%	36%

Table 2: Relevant socioeconomic trends among young households in Great Britain

As in the German case, we assumed a hypothetical situation in order to obtain an estimate for the weight which these socioeconomic shifts have had in explaining the decrease in young households' car ownership. The assumption was: *Young British households in 2008 featured the socioeconomic structure which prevailed in 2008 – however, they had the preferences regarding car ownership which young households had in 1998.* For young British households we obtained a hypothetical percentage of car owners in 2008 of 70%. This indicates that out of the 6% decrease in young households' car ownership (from 72% in 1998 to 66% in 2008: see Table 1) about 2% (i.e. about one third) has been caused by the socioeconomic shifts listed in Table 2.

¹ The head of the household is defined as the person that generates the largest proportion of the household income.

The conclusion is that – in contrast to the situation in Germany – the socioeconomic shifts captured through these variables only explain a minor part of the decrease in car ownership among young British households. It is young Britons' changing preferences regarding car ownership, under *ceteris paribus* conditions in terms of their life circumstances, that have been the more influential factor. For example, those living in flats – who even in the past had lower levels of car ownership than those in other kinds of dwellings – have reduced their car ownership yet further. Other factors which were analysed both for Great Britain and Germany show trends among young Britons which are rather more comparable to the German case: men have cut their car ownership more than women, and urbanites more than those living in rural areas – a trend which we illustrate in the next section. In contrast to its development in Germany, however, the gap in car ownership between high- and low-income classes has narrowed among young adults in Great Britain. This also applies to the distance which young adults travel by car, as we will illustrate and discuss in the section following the next.

It should be noted that whilst income has risen for young *households*, there have also been major shifts in the economic landscape for young *people*. Young people *not* living in young households have seen their incomes barely budge (growing only 3% over ten years). There has also been an important shift between the genders: women's average income grew by 18%, whilst that of men actually fell by 6%.

Location Matters More

With young adults, both access to cars and travel trends differ by location. Some of these differences have become more pronounced in Great Britain during our study period, as is clear from Fig. 2 and Fig. 3. In particular, the trends in London stand out from the others: the decline in licence-holding was sharper here than elsewhere, and the proportion of young adults living in households with a car decreased in London, while it remained stable in other locations. Young licence-holders in London have also reduced their car travel distance more strongly than other groups. However, the trend among young licence-holding adults to travel more by public transport is restricted to the large British cities. When it comes to young British adults' access to cars and use of them, there has been an overall increase in diversity by location over the time period in question; young Londoners have been at the forefront of this trend towards a decrease in car orientation.

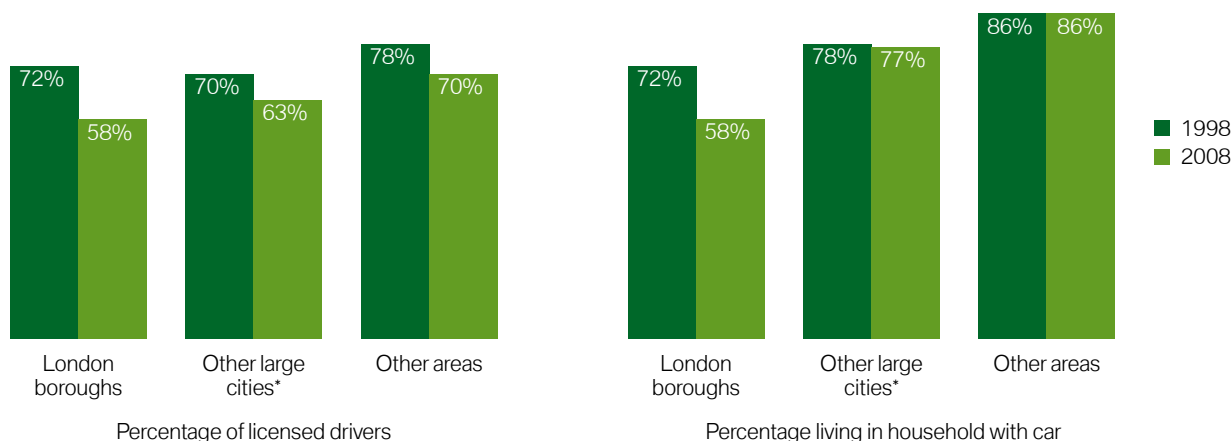


Fig. 2: Car access of young British adults (age 18–34) in 1998 and 2008, by type of location (* large cities are defined as those with a population over 250,000)

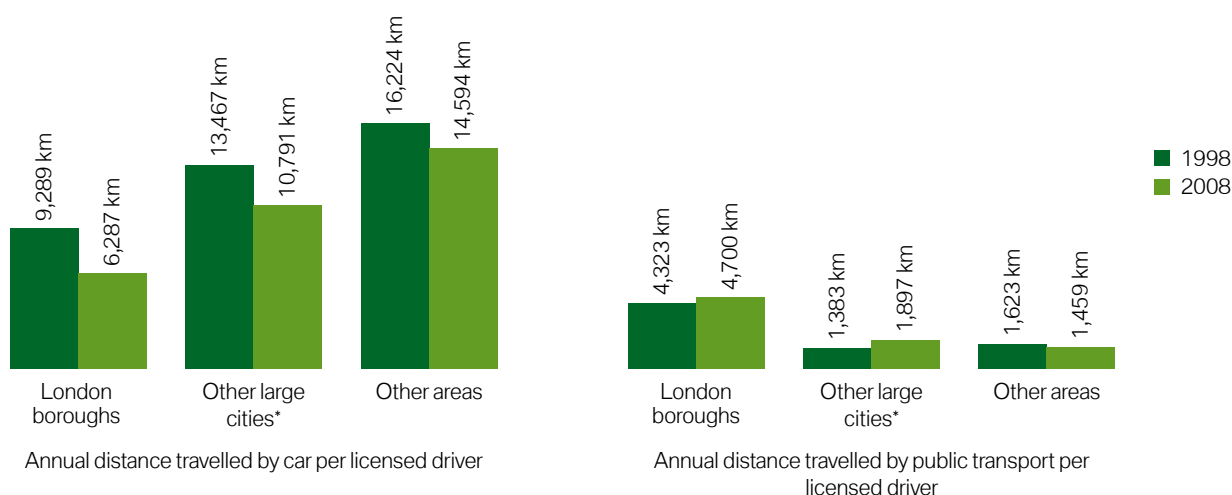


Fig. 3: Distance travelled (km) by young British licensed adults (age 18–34) in 1998 and 2008, by car and by public transport, separated out by type of location (* large cities are defined as those with a population over 250,000)

Different Trends in Different Income Classes

In contrast to young Germans, young Britons show converging trends across income classes as regards car ownership and use. This is mainly due to the fact that young high-income households have cut down their car ownership – and also their car use – more strongly than other income groups (see Fig. 4). Two underlying developments are linked to this unexpected trend among high-income classes: firstly, the urban trend towards decreased car orientation was most pronounced in London, where most high-income Britons tend to be located; secondly, high-income classes (and men) were more affected than others by a major shift towards lower ownership and usage of company cars – a trend which has been evident in Great Britain since just before the turn of the millennium (Le Vine & Jones, 2012).

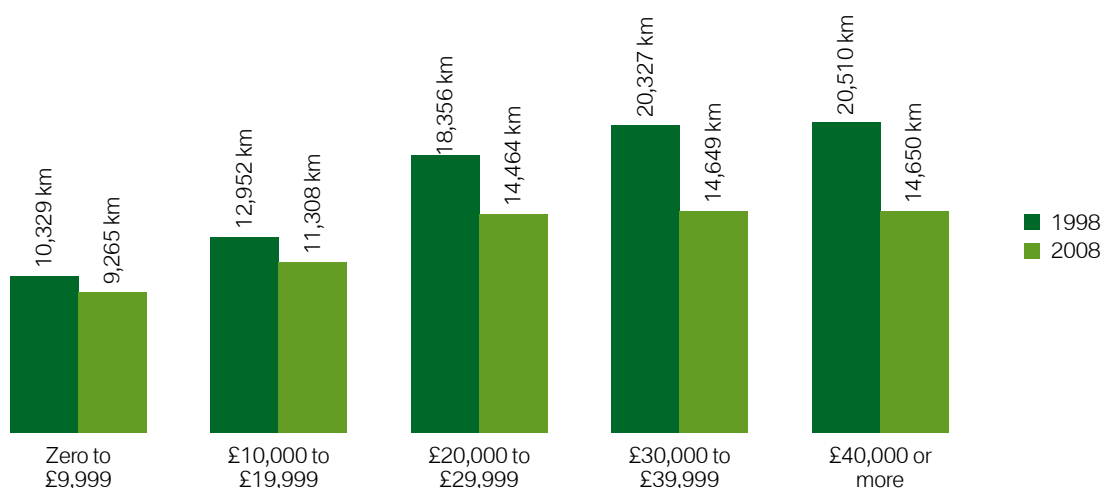


Fig. 4: Distance travelled (km) by car by young British licensed adults (age 18–34) in 1998 and 2008, by personal annual income (in real terms, at 2010 prices)

However, the development of licensing tells a different story (see Fig. 5): the decline in the proportion of licensed drivers is more pronounced among lower-income classes. This indicates an interesting divergence of trends by income: while, as we have just seen, the automobile travel income gap has narrowed, in that high-income young British adults drive less than previously, the gap as regards acquisition of an essential prerequisite to travel – the driving licence – has become wider, because it remains the case that a larger proportion of those with high incomes than those on lower incomes have continued to obtain a licence.



Fig. 5: Percentage of licensed drivers among young British adults (age 18–34) in 1998 and 2008, by personal annual income (in real terms, at 2010 prices)

At the same time, however, the relationship between licence acquisition and car ownership has followed a different trend: the overall proportion of young licence-holders who have their own car has held steady at 71%, but the rate has risen amongst those with lower (household) incomes (from 55% to 61% of those earning under £10K/year) while at the same time falling for higher-(household-)income young adults (from 79% to 74% for those on at least £40K/year). This shows that for young British adults on low incomes, there is an increasingly close link between licence acquisition and car acquisition. This could be seen as a fall in 'discretionary' licence-holding – people acquiring a licence without the need to also own a car. It is worth noting that car purchase price indices in Britain have trended downwards during this period, by 17% for new cars and 44% for second-hand cars (in real terms), which may explain the weakening effect of income on this relationship (ONS, 2012b).

Concluding Thoughts on the British Case

Since the mid-1990s, Britain has seen major changes in how young adults travel and also in their access to cars, a number of which are strikingly similar to Germany. But what has happened in Britain differs in some important respects, and to identify why this is the case one must consider the wider landscape in which mobility occurs.

The price of buying a home in Britain rose dramatically during this period, more than doubling in real terms. Not surprisingly, the proportion of young British adults living in rented accommodation correspondingly increased, from 36% to 45%. Two structural consequences of this were an increase in the prevalence of young people living in flats as opposed to houses (17% did so in 1998, and 23% in 2008) and also an increased tendency for young adults to live with their parents (the proportion rising from 54% to 62% in the same period). These two trends (one spatial and the other social) can be expected to have had structural impacts on how this cohort of young adults travels – and how they equip themselves to travel (in terms of licence-holding, car ownership, and so on).

Another background trend of note was the steeply rising cost of car insurance for young people in Britain. As with home prices, the transport insurance cost index (which is dominated by car insurance) has more than doubled in real terms since the 1990s (Le Vine & Jones, 2012) – and has risen most quickly amongst young adults (Logan, 2012). What is interesting, though, is that young unlicensed adults tend to cite the costs of learning to drive as a deterrent to driving, even more than the costs of insurance. Only about half of test-takers pass Britain's practical driving test at their first attempt, and it is known that the average newly licensed driver in Britain has had 47 hours of professional driving lessons, which commonly amounts to over a thousand pounds (Wells et al., 2008).

In summary, then, a complex set of trends have come together to affect how young British adults access and use cars. Most of these have resulted in pressure of one sort or another (chiefly economic, social or spatial) towards reducing their automobility. Where young people live – be it a city-centre flat, in the suburbs, or in the countryside – has become more important in explaining how they travel, whilst in many respects their economic circumstances exert a smaller influence today than they did in the late 1990s.

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Behind and Beyond Mobility Y

On the basis of evidence from Germany, France, Great Britain, Norway, Japan and the USA, this study has unearthed new mobility trends emerging among Generation Y: young adults' access to cars, and the mileages driven in them too, has decreased in most study countries since the turn of the millennium. While it is no surprise that the study finds that these trends are more prevalent in urban than in rural areas, another common denominator in these trends was less expected: across all study countries, the shift towards lower automobility was more pronounced in the case of men than that of women. As a consequence, the huge historical gender gap that has prevailed in automobility has narrowed substantially in most countries, even disappearing in some.

The public debate about the reasons for this decrease centres mainly on new communications technology and status symbols, which have – allegedly – replaced the car. However, this study shows that other factors must not be omitted from this discussion. The case studies on Germany and Great Britain in this report show clearly that changing socioeconomic conditions explain a large part of the observed behavioural changes: since the turn of the millennium, increasing numbers of young Germans and Britons find themselves in life circumstances which are less conducive to car ownership and use. Important driving factors for this are urbanisation, increasing education, and changes in living arrangements. Moreover, factors which affect the cost and quality of transport must also be taken on board. These range from transport planning – for example, the provision of cycling facilities in Germany – to the rising costs of motor insurance in Great Britain. This complex set of overlaying factors likely to have influenced young adults' mobility must be considered in a balanced manner, otherwise there is a danger of arriving at wrong conclusions about what lies behind these new travel trends, or – even worse – making poor policy choices on the basis of such incomplete conclusions.

As regards the wider context, a stagnation in aggregate per-capita car travel (amongst drivers of all ages) has been observed for several years now in many industrialised countries. Factors such as demography and the economy are being mooted as possible explanations for this phenomenon. However, against the backdrop of this report's findings, it seems likely that young adults have contributed more than any other age group to this trend change in aggregate automobile travel. Put simply, without the changes in how young people travel, there would be no overall stagnation in car use in many countries. Hence, understanding trends in young adults' travel is essential in gaining an understanding of this recent and unexpected wider change.

What conclusions can be drawn from this study, then, concerning the future of mobility in industrialised countries? This question arises because present-day trends in young adults' travel may allow a glimpse into future travel patterns – simply because young travellers are likely to maintain at least some of their travel habits as they age. In Germany, car ownership in young families with children has actually increased in the last decade. This seems to suggest that young adults return to a high level of car ownership once they are in a life situation that favours car use more. However, it also seems likely that those who display a more multimodal mobility style during the time when they develop their mobility habits – as we see in some study countries – retain some of this behaviour as they age. Hence, Generation Y might very well turn out to be the multimodal generation. The degree to which Generation Y retains these new mobility patterns, as opposed to returning to the more auto-orientated lifestyles of their predecessors, is as yet an open question, and one that continues to merit intensive research.

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This annex lists National Travel Surveys (NTS) which were used in the analysis of micro data in this study.

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