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LONG-DISTANCE MOBILITY

Current Trends and Future Perspectives

Roman Frick, Bente Grimm





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This document summarises the results of a baseline study on the future perspectives of long-distance mobility. This research was sponsored by the Institute for Mobility Research (ifmo) and conducted by INFRAS, Bern and NIT, Kiel.

A background report in German is available on www.ifmo.de, or upon request from ifmo or the authors of the study.

STUDY PARTNERS:

INFRAS

Mühlemattstrasse 45
CH-3007 Bern
telephone +41 31 370 19 19
mail bern@infras.ch

www.infras.ch

NIT - Institute for tourism research
in Northern Europe

Fleethörn 23
D-24103 Kiel
telephone +49 431 666 567 0
mail info@nit-kiel.de

www.nit-kiel.de

Design: Bernhard Moosbauer, www.exsample.org

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Foreword

This study fills important gaps in the existing knowledge about long-distance mobility, which is an important market segment of passenger mobility. ifmo and its study partners INFRAS and NIT are to be thanked for this initiative, and the thorough and inspiring work behind it.

The demand for travel to destinations over 100 km away has been studied frequently in the past but, in contrast to the multi-sectoral and comprehensive approach of this study, previous work has tended to be undertaken from a more specialist, focused viewpoint (such as that of transport planners, or the tourist industry). Previous studies have only managed to look at part of the totality of long-distance mobility, either because specific segments of long-distance travel were excluded from the outset, or because the study was designed such that certain segments of travel were only partially covered. By pooling the expert knowledge of the study team and using various complementary findings which have never hitherto been brought together, the present study arrives at comprehensive estimates of both the status quo of long-distance mobility and its future trends.

The extrapolation of demand for long-distance travel as presented in this study also sheds light on the extent to which previous demand extrapolations - drawing as they did on single empirical sources only - might have incorrectly estimated demand. At the same time it is evident that demand extrapolations based on a variety of sources, as exemplified by this study's methodology, can and should be improved in the future.

I hope that this study stimulates discussion about the growth of travel and the concept of peak travel, and that the findings give both direction and added depth to ongoing research about the causes underlying these phenomena.

Kay Axhausen
ETH Zürich
Chairman of the ifmo Board of Trustees

Management Summary

While in recent years mobility in the context of everyday life has almost stagnated in central Europe, long-distance mobility continues to grow substantially. Against this background, the study at hand presents the lie of the land with regard to current trends in and future perspectives of long-distance mobility in central Europe, with a particular focus on Germany. In speaking of long-distance mobility, the study refers to all trips longer than 100 km (one-way).

The demand for long-distance mobility is likely to grow further in the mid-term future. Hence, the proportion of the total passenger mileage in Germany that is long-distance will grow, and its relevance increase. However, long-distance mobility up to a range of a few hundred kilometres in particular is characterised by growth, whereas there are signs of stagnation when it comes to journeys longer than these, to very distant destinations.

The segments of long-distance mobility which are currently growing most substantially - and which are expected to continue to do so in the mid-term future - are business trips, and long-distance trips undertaken in the context of everyday life, for example long-distance commuting. Important driving factors for this development are demographic trends and the evolution of settlement patterns, both of which also promote multi-local lifestyles. As the economy continues to globalise, and jobs become more and more specialised, business travel in particular - which accounts for about one fifth of total long-distance passenger mileage today - continues to grow. In addition, personal day trips have grown in recent years, and now represent a quarter of the German population's long-distance mileage. These growing segments of long-distance mobility are conducive to surface transport. Rail and bus transport profit the most from these developments, but use of the car is also shifting from urban/local travel towards longer-distance trips.

The segment representing long-distance trips to very distant destinations is dominated by holiday travel, which accounts for a third of the long-distance passenger mileage and thus represents the largest segment of long-distance mobility by Germans. However, in the last ten years little has changed in this segment with regard to the number of trips, the average trip distance, or the choice of transport modes. Against the background of the modest demographic changes and low-level economic growth in central Europe, holiday travel demand will likely only grow a little in the coming years, if at all. Moreover, the share of holiday trips taken by air has not grown substantially in the last few years. In contrast, air traffic in Germany continues to grow; this, however, is increasingly driven by growing air travel involving passengers from other regions of the world.

Background and Methodology

Across the whole world, the last twenty to thirty years have seen a strong increase in levels of travel of all kinds, for both personal and business purposes. This increase is most clearly manifest in the high growth seen in international air traffic during that period (with the exception of the slumps prompted by the 2008-2009 financial and economic crisis). In contrast, everyday mobility¹ has been fairly stagnant in many European countries during the last five to ten years. Although there is an abundance of research and data on the developments in total travel demand and on the choice of transport mode in everyday mobility, data relating specifically to long-distance mobility are very fragmentary. Against this background, the Institute for Mobility Research (ifmo) has commissioned a study to examine the future of long-distance mobility. The study asked two main sets of questions:

1. **Structure and Development:** How is long-distance mobility structured (in terms of segmentation), how high is the demand for travel in the various segments, how is this demand distributed by mode of transport, and how do the various segments dynamically develop?
2. **Driving/Limiting Factors and Outlook:** What are the most important drivers and constraints? What developments are to be expected in the next ten to twenty years in the various segments of long-distance mobility?

In speaking of long-distance mobility, we are referring to all trips² of more than 100 km (one-way). This study focuses on passenger transport and does not consider freight transport. Geographically, it concentrates on central Europe, with a particular focus on Germany. Temporally, the study looks about ten to twenty years into the past and the same length of time ahead.

The study does not include any empirical research, but relies on existing data:

¹ In this study, the term 'mobility' refers to actual physical travel. The term 'everyday' refers to activities and travel in the context of everyday life or within one's usual environment. In contrast, we use the term 'tourism' to refer to activities and travel outside one's usual environment for both personal and business purposes. This definition deviates from the colloquial use of the word 'tourism' which implies personal purposes such as pleasure. However, our definition conforms to the definition of the UN World Tourism Organization (UNWTO, 2014).

² In line with the definition of the UN World Tourism Organization, we use the term 'trip' to refer to a round trip including outbound and return legs (UNWTO, 2014).

- ▶ Based on a comprehensive literature review and data analysis, it highlights the most important developments in long-distance mobility, as well as its drivers and constraints. Available empirical data have been collected and analysed (see Table 1).
- ▶ The findings from the literature review and data analysis were discussed during an expert workshop³ and subsequently explored in greater detail. The drivers were categorised and considered in relation to each other (with a view to creating an impact model). Subsequently, they were ranked qualitatively based on expert opinion. Subsequently, the study took a closer look at the key drivers and discussed possible future developments - without, however, generating a quantitative outlook on the future of this kind of travel.

Table 1. Key Data Sources Analysed as Part of this Study

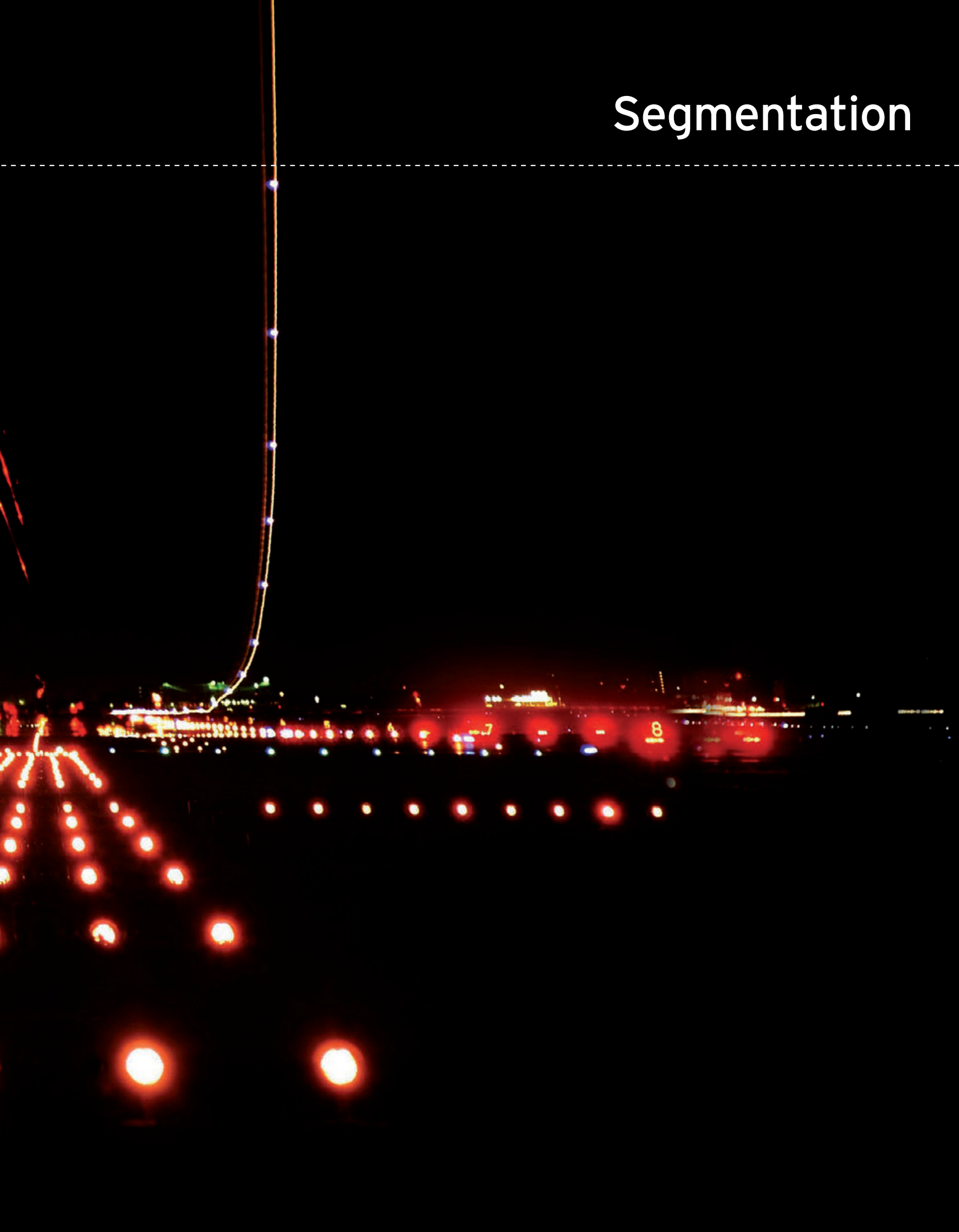
Data source	Contents	Empirical base	Region	Reference
Reiseanalyse (RA)	Holiday and short holiday trips (personal)	7,500 interviews/year	Germany	FUR (2013a, 2013b)
Flash Eurobarometer	Tourism-related travel (personal and business)	30,600 interviews	EU-27	European Commission (2012)
Eurostat	Travel destinations abroad, statistics on individual modes of transport and socioeconomic data	National statistics	EU-27	Eurostat (2012)
National Travel Surveys	Data on everyday mobility, in some cases including questionnaires on long distance travel (Switzerland, France)	Several surveys approximately 10,000 interviews each	France, Germany, Great Britain, Switzerland	BFS & ARE (2012); infas & DLR (2010)

NOTE: Additional sources have been considered as part of the literature review: see bibliography.

³ We would like to take this opportunity to thank the workshop participants for the lively and fruitful discussion that took place. A list of participants can be found in Appendix A.



Segmentation



Segmentation

No classification system has yet been established to deal with long-distance mobility in the field of transport research. Therefore the first task of this study was to develop such a system (see Figure 1). Long-distance mobility can be categorised in two ways: into personal and business mobility on the one hand, and into trips with or without an overnight stay on the other. Moreover, we can differentiate between tourism-related mobility (involving travel outside one's usual environment) and everyday mobility (within one's usual environment - see footnote 1). In all segments, long-distance mobility is defined as involving a trip of 100 km or more one-way. This is the definition most frequently used in European transport research.



Figure 1. Segmentation of Long-distance Mobility by Travel Purpose and With/Without Overnight Stay

SOURCE: Authors' representation.

Current Travel Demand

The data on the individual segments are very heterogeneous. One of the study's main tasks was to come up with an overall picture of travel demand based on these data (see Appendix B). The biggest challenge was to link the data from diary-based national travel surveys (NTSs) with specific individual surveys on tourism-related mobility (both personal and business). The difficulty arises because NTSs are characterised by an established and relatively robust methodology for surveying everyday travel, while underestimating, however, the mileage travelled outside one's usual environment; in contrast, the data on tourism-related mobility are more detailed in their segments, but are not coordinated methodologically with the NTSs.

The calculation of mileage travelled is based on the number of trips per person and on the average travel distance per trip. (This includes travel to and from one's destination, but excludes trips at that destination, e.g. during a multi-day holiday trip). Table 2 summarises the estimates of these two indicators by segment of long-distance mobility.

Table 2. Number of Trips and Average Distance Travelled per Trip in the Various Segments of Long-distance Mobility in 2011

Segment	Number of trips	Average travel distance
Holiday trips (5+ days)	1.0	1,600 km
Short holiday trips (2-4 days)	1.2	410 km
Other personal overnight trips	0.3	410 km
Personal day trips	6.0	200 km
Overnight business trips	1.2	500 km
Business day trips	1.2	150 km
Long-distance everyday personal trips, long-distance commuting and long-distance everyday business trips	5.0	150 km

SOURCE: Authors' estimate. For the background to this compilation please see Appendix B.

NOTE: For Germans aged 14+. The trips included are those of over 100 km one-way. Trip numbering counts the outbound and return journey as one trip.

The average total mileage travelled by Germans is about 21,500 km per person per year (Figure 2). In other words, long-distance mobility (which totals nearly 10,000 km) accounts for about 45% of all the mileage travelled. Owing to the considerably greater length of average travel distances, long-distance mobility makes up a substantial proportion of total mobility in distance terms, despite the relatively small number of trips involved. Trips of less than 100 km account for approximately 55% of total travel mileage, with personal everyday mobility (e.g. regular leisure travel, shopping and commuting trips) accounting for the largest part of this. Travel for longer holiday trips (those lasting at least five days) amounts to around 15% of the total mileage of Germans - about the same proportion as commuting travel. As Table 2 shows, this is typically one round trip to/from a destination an average 1,600 km away.

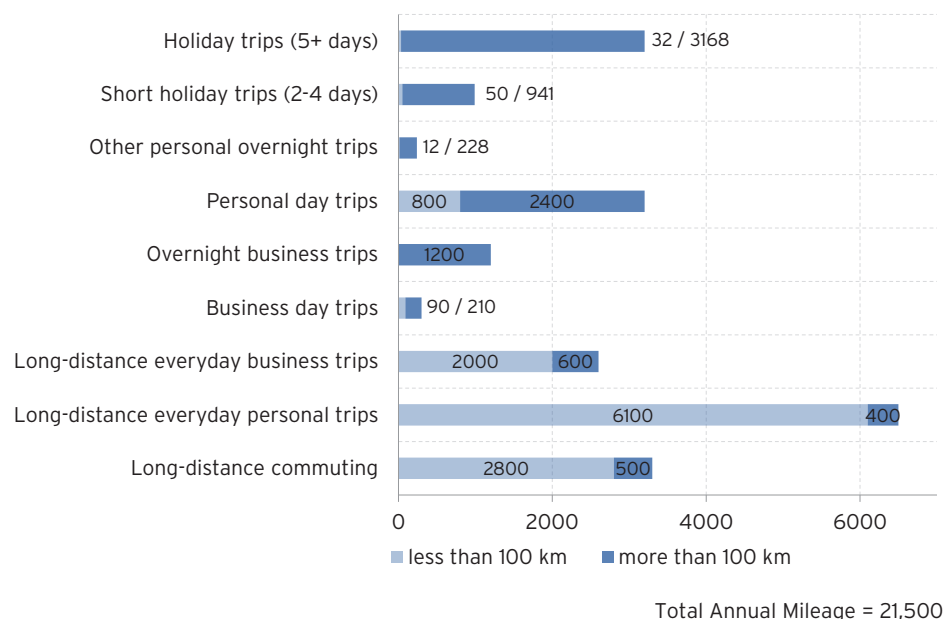


Figure 2. Two-Way Mileage in Passenger Kilometres per Person per Year in 2011, Differentiated by Short- and Long-distance Mobility and by Travel Segment

SOURCE: Authors' estimate. For the background to this compilation please see Appendix B.

NOTE: For Germans aged 14+.

Figure 3 shows the demand distribution across the various segments of long-distance mobility. Holiday trips and personal day trips are the largest individual segments, accounting for more than half of long-distance mobility between them. Business trips (including long-distance everyday business trips) have a share of around 20%. Long-distance everyday personal trips (i.e. those within one's usual environment) account for around 10%. The ratio of long-distance mobility which includes an overnight stay to that without overnight stay is about 60:40.

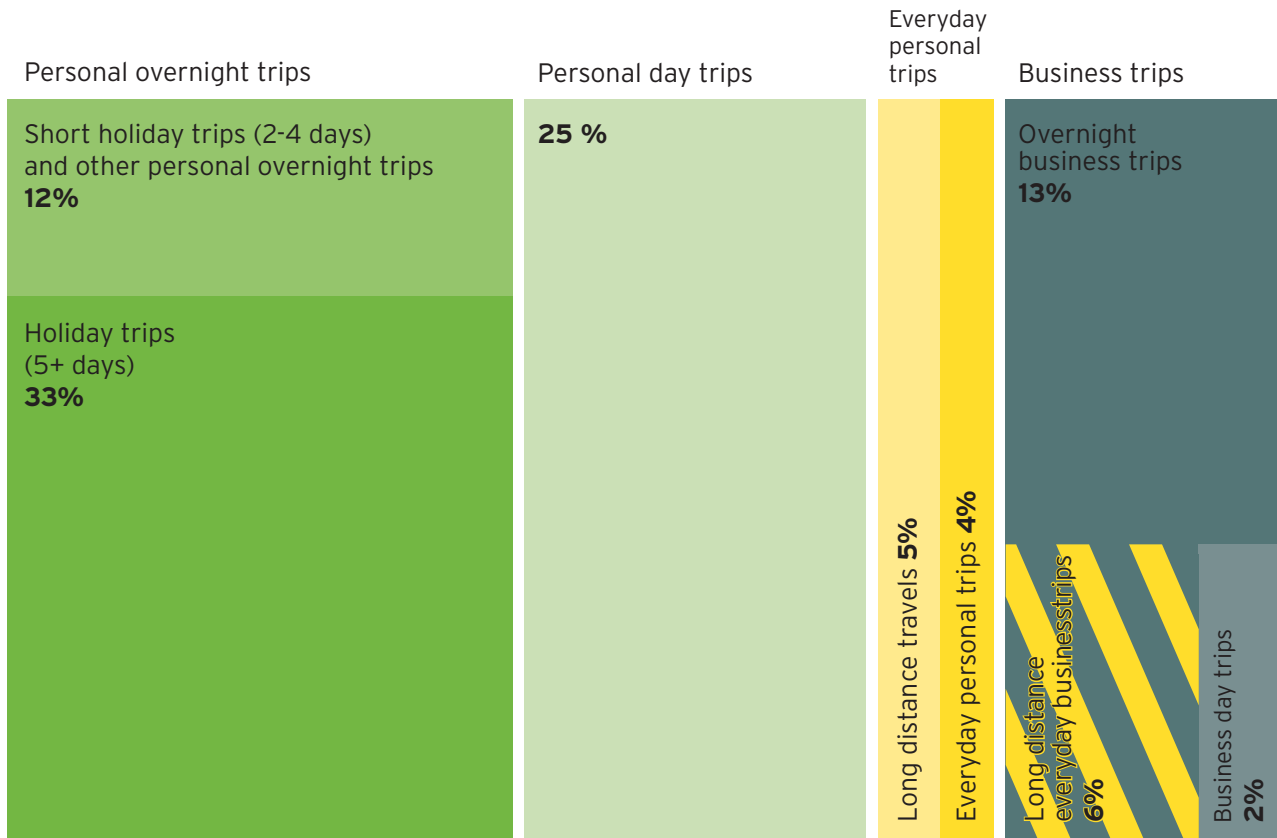


Figure 3. Distribution of Mileage (Passenger Kilometres) Across the Segments of Long-distance Mobility in 2011

SOURCE: Authors' estimate. For the background to this compilation please see Appendix B.

NOTE: Focused on the German population aged 14+.

Trends in Demand for Long-Distance Travel

Empirical data on present-day travel volumes (and the likely trends that those volumes will follow from now on), and on the modal split exist only for individual segments of long-distance mobility, but are not available for long-distance mobility considered as a whole. Table 3 provides a qualitative overview of the current percentage shares of the individual segments which make up long-distance mobility, and the recent trends (again with a focus on Germany).

Table 3. Current Situation and Trends in the Individual Segments of Long-distance Mobility

Segment	Current share (pkm)	Trend of travel volume (pkm) 2000-2010	Approx. current share of mode of transport (pkm)				
			Car	Rail	Bus	Air	Other
Holiday trips (5+ days)	33%	+	18%	2%	5%	72%	3%
Short holiday trips (2-4 days)	10%	+	57%	18%	5%	19%	1%
Other personal overnight trips	2%	o	57%	18%	5%	19%	1%
Personal day trips	25%	++	66%	17%	8%	5%	4%
Overnight business trips	13%	+	20%	20%	5%	53%	2%
Business day trips and long-distance everyday business trips	8%	++	60%	20%	8%	10%	2%
Long distance everyday personal trips and long distance commuting	9%	+++	65%	25%	5%	3%	2%

KEY: +++ rapid growth, ++ medium growth, + slow growth, o no growth. pkm = passenger kilometres.

SOURCE: Authors' estimates. For the background to this compilation please see Appendix B.

NOTE: Focused on Germany.

- › Long **holiday trips** account for the largest share of the total mileage travelled. At least in Germany, the total volume of this kind of travel (i.e. the number of trips per person) has remained more or less stable during the last ten years (FUR, 2013a). There has been an increase in mileage, due to an increase in average travel distances, especially at the beginning of the decade. Today, the average distance to one's destination for a long holiday is around 1,600 km (see Table 1). Southern European travel destinations are the most popular for the central European source market, but central and Eastern European destinations are catching up. Air is the dominant mode of transport in terms of mileage.
- › The majority (three quarters) of **short holiday trips** take place domestically (Grimm & Winkler, 2011). Compared to long holiday trip modes, rail is more dominant, while air travel is noticeably less so. Reliable time series are available only for the most recent developments, and show signs of stagnation.
- › **Other personal overnight trips** account for a relatively small share of long-distance travel. There are no reliable data on distances covered, or on the modal share.
- › **Personal day trips** make up the second-largest share of travel mileage. An overwhelming majority of these take place domestically (Maschke, 2007; Zumkeller et al., 2005). In Germany, there has been an increase in both the number of personal day trips and the average distances travelled per trip. Given meagre data, it is difficult, however, to supply information on the current trends. With a two-thirds share, the car is by far the most frequently used mode for this type of travel.
- › **Business trips**, which include business day trips in addition to overnight business trips, have a share of around 15% (or 21% when long-distance everyday business trips are included) and make up a sizeable proportion, but lag significantly behind personal long-distance mobility. If we discount the crisis-related slumps of 2008-2009 (e.g. those described in VDR, 2012), we can observe an above-average increase in business trips. In terms of mode of transport, we notice the high percentage of car travel occurring in Germany. For business day trips, rail's share is only slightly higher than for personal day trips. Air travel increases markedly only when it comes to distances of 1,000 km or more.
- › Long-distance journeys in the context of **everyday mobility** (i.e. within one's usual environment) show above-average growth. Quantitatively, however, their share of total long-distance mobility (9%, or 15% if long-distance everyday business trips are included) is small. Long-distance everyday personal and business trips, above all long-distance commuting, account for the above-average share of rail in these trips (rail being typically used for interurban transport). Here too, however, the car is dominant.

Figure 4 shows the development, over several decades, of Germans' choice of transport mode pertaining to holiday trips of five days and longer (reckoned in terms of number of trips, ignoring the length of those trips), which account for one third of total long-distance mileage, and therefore constitute the largest individual segment of long-distance mobility. In the post-war years, rail was the most important mode of transport for holidays in Germany, with bus travel also playing an important role. It was during that time, however, that the car began its relentless progress, being used for more than half of all holiday trips from the early 1970s to the mid-1990s. The 1970s, 80s and 90s saw the rise of the aeroplane as a mode of transport for holiday travel. Since the turn of the millennium, the modal profile of holiday travel has been largely stable in Germany, with only air continuing to register slight growth.

In recent years, the long holiday trips segment has been characterised by muted growth in terms of mileage, and relative stability in terms of transport modal share. At first glance, this seems to be at odds with the strong growth of air traffic travel in Germany (which has doubled during the last twenty years). The dynamics of air traffic, however, are determined less and less by changes in demand generated by Germans, as transfers at German airports and visitors to Germany arriving from abroad play an increasingly important role (Destatis, 2013).

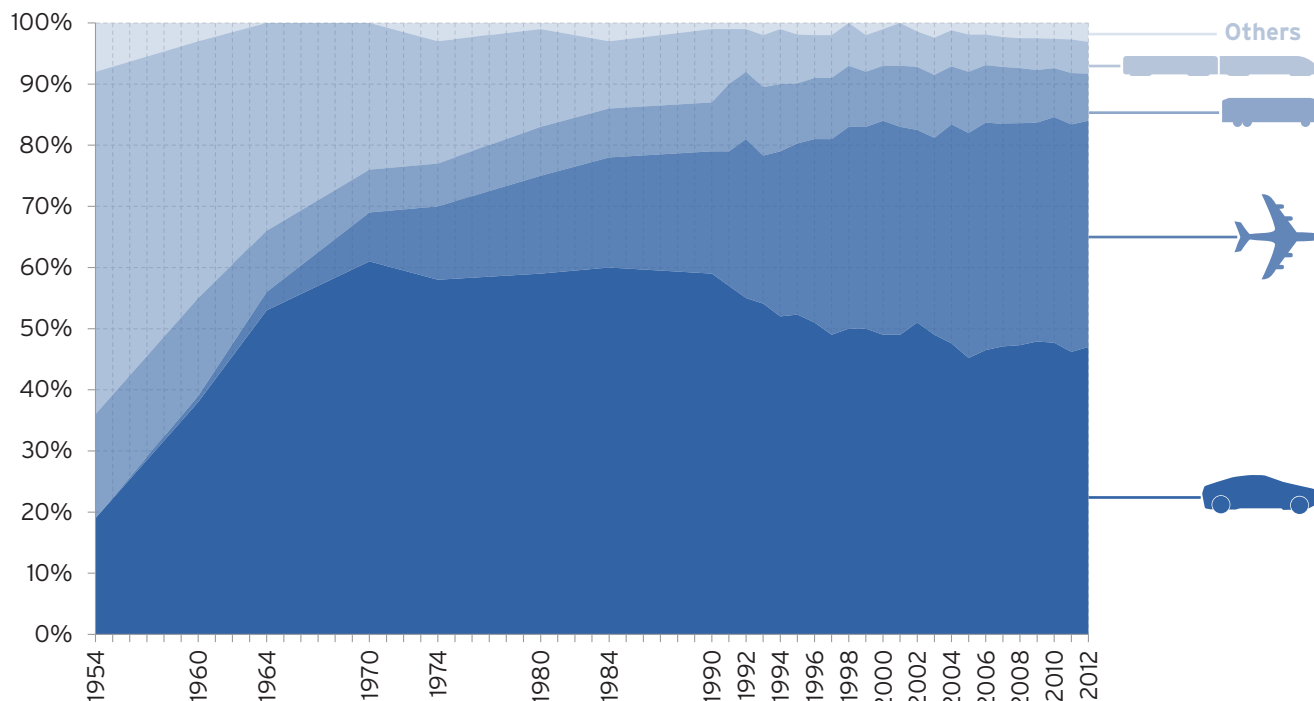


Figure 4. Trends in Transport Mode Use for Long Holiday Trips (5+ Days) in Germany 1954-2012

SOURCE: Authors' analysis of Reiseanalyse.

NOTE: For domestic and international trips.

The baseline study also takes account of selected international developments. In late 2012, UN World Tourism Organization representatives welcomed the symbolic one billionth tourist in Madrid. About half of the international tourist trips made globally originate in Europe; in 2010, Europeans made 509 million international trips (UNWTO, 2011). Making almost 70 million holiday trips of five or more days annually (at least two thirds of which are international trips), Germans constitute Europe's biggest holiday travel market. In contrast to the growing travel volume worldwide, however, German holiday travel has levelled off during the period under consideration, indicating saturation of the market (FUR, 2013a).

While the choice of transport mode for holiday trips has remained relatively constant over the years, it differs according to the EU regions under consideration (see Eurostat, 2012):

- › Northern Europeans travel by air most frequently (for about half of their holiday trips); in central, Eastern and South-Eastern Europe, the car, with a share of almost 60% in each region, is prevalent.
- › The share of rail travel is bigger in central and Eastern Europe than anywhere else, at around 10% in each region.
- › Bus is used by holiday travellers from Eastern Europe more than anyone else; but in Southern Europe, too, bus has a higher market share than rail.



Drivers and Constraints



Drivers and Constraints of Long-Distance Mobility

The participants in the expert workshop have identified the following four themes as being particularly relevant to future developments in long-distance mobility:

1. **Demographic and spatial development** - with a focus on the general demographic trends (stagnation, even some negative growth in Europe) and spatial distribution (especially urbanisation).
2. **Economy, employment and consumption** - the future influence of trends in gross domestic product and income, with particular attention to the saturation issue.
3. **The development of ICT and the networked society** - the potential of modern information and communication technologies, and resulting social developments (social media, e-commerce, mobile workplaces, and so on).
4. **Energy price trends and regulation** - the impact of global price changes, and of potential government interventions or regulations.

Within these areas, the following driving or limiting factors are considered particularly relevant to further trends in long-distance mobility:

- › Compared to other markets (most notably Asia), the most important limiting factor as regards central Europe is the structural stagnation in the region. This applies to **population trends**, but can also be seen in very modest **economic and income growth**. In general, it can be said that structural saturation has a more direct effect on everyday mobility than on long-distance mobility. However, the data also show saturating trends in tourism-related mobility, at least in the mature economies of central Europe. We do not, however, see an actual decoupling between income development and travel behaviour. Personal and business travel will therefore continue to be strongly dependent on further economic development.
- › Demographic stagnation is accompanied by spatial redistribution. The current **urbanisation trend** is likely to continue - and will tend to promote long-distance mobility. Compared to the rural population, city dwellers tend to travel shorter everyday distances, but they also engage more frequently in long-distance journeys than the rural population does - particularly between cities (both domestically and internationally).
- › In future, there will be a marked increase in the number of **older people** (a quantitative effect), and they will, moreover, be more mobile than the elderly of today (especially in the case of older women). This is due, on the one hand, to the continuation of midlife mobility behaviour, and on the other hand, to better fitness/health and higher levels of education. This ageing of Western societies thus goes hand in hand with an increase in the total volume of travel, in particular in

leisure travel (see, for example, Lohmann & Aderhold, 2009). The ageing of society is also accompanied by a stagnation in the proportion of gainfully employed people (who, on average, have higher mobility rates).

- › **Younger people**, especially those living in cities with well-developed public transport systems, increasingly exhibit multimodal behaviour. In addition, car ownership among young people is decreasing. Both the non-availability of cars and a growing openness to the use of different modes are likely to affect long-distance mobility also.
- › As a result of **continuous immigration**, Western societies are becoming ever more culturally diverse. The immigrant populations stay in touch with their country or region of origin, and also organise cultural events which attract people from all parts of their host country. Both of these aspects of immigrant behaviour encourage long-distance travel.
- › **The structural changes in the world of work**, the higher level of education of large segments of the population, and the ongoing individualisation of society all encourage an increase in work-related mobility and related multi-local lifestyles. Even more than is the case today, being 'on the move', especially across longer distances, will continue to be a key element in people's lives in the future. In the case of mid-lifers, who carry a lot of professional and family responsibilities, however, there are limitations on a highly mobile lifestyle, not least of which is the limited amount of time available for travelling.
- › Although employees are increasingly expected to be mobile, the fact that a **digitalised world** increases their flexibility in terms of both time and location actually suppresses mobility. Developments such as working at home or whilst on the move, and the use of mobile workspaces and tele- or video-conferencing, may also serve to reduce travel, in particular commuting and business trips. Employers' readiness for and employees' awareness of such modes of working have both increased, but face-to-face contact with colleagues and business contacts remain important nevertheless.
- › Only in the long term are increases in **fossil fuel prices** likely to exhibit a negative effect on demand for long-distance travel; such price movements seem likely to be rather less relevant during the coming ten to twenty years. To be specific, we anticipate continuing supply security, and price levels that will not be such as to critically restrict long-distance mobility demand (with the exception of short- to medium-term price instability arising from geopolitical events). In the long term, however, with resource scarcity becoming a reality and with technological progress no longer being able to compensate for the increase in energy prices, this assessment could look markedly different.

Other areas seen by experts as being less relevant (given the ten- to twenty-year time horizon of this study) are:

- › **Transport supply:** Firstly, it is assumed that today's systems will be around long-term, and will not be replaced by radically new systems during the study's time horizon. Secondly, it is not to be expected that there will be major or sudden increases in transport supply in the Western economies. The focus is on demand-driven, selective capacity expansion. It is only in high-speed rail travel, and to some extent in long-distance bus travel on certain routes only, that it may be possible to talk of genuinely new supply.
- › **Government regulation:** The growth in mobility, or rather policies attempting to limit mobility, is a growing subject of political debate. For economic reasons, however, it is not realistic to expect a marked increase in politically driven price rises, or restrictions aimed at reducing long-distance mobility - it is perceived to be too important to economic growth.
- › **Values and social norms:** Values can change, but experts do not anticipate any fundamental changes that would affect long-distance mobility in the whole of society, at least not in the medium term. Such changes are expected to be confined to quantitatively definable subgroups (e.g. a return to neighbourhood-orientated lifestyle and a deliberate renunciation of long-distance mobility - in essence, changes in local mobility cultures). In the foreseeable future, European society will continue to be characterised by individualism and a plurality of lifestyles, both of which will tend to drive up long-distance mobility.
- › **Political instability** and global risks: The choice of travel destination will continue to be subject to major fluctuations as a result of terrorism, political instability, war and natural disasters. Globally, however, there are no signs of any major upheavals that would lead us to expect fundamental changes in long-distance mobility.

Table 4 summarises the drivers of and constraints on long-distance mobility, as well as their impact on its individual segments.

The cause-effect relationships involved in long-distance mobility are highly complex. The driving and limiting factors have different, and sometimes contrary, impacts on the demand segments of long-distance mobility, but they also directly - or indirectly - affect the transport supply and, moreover, also influence each other. In the final analysis, the selection of one's travel destination and thus the distances covered, as well as the mode of transport used, are determined by additional cause-effect relationships between supply and demand, and also by routines and practical necessities. The background report related to this study contains a simplified impact model which accounts for these complex interactions which can only be summarised in Table 4.

Table 4. Overview of Driving and Limiting Factors Affecting Long-Distance Mobility, as well as Estimates of Their Relevance to Four (Aggregated) Segments

Trend	Impact on long-distance mobility	Relevance for the development of travel during the next ten to twenty years			
		Holiday/ Short holi- day trips	Personal day trips	Business trips	Long-dis- tance every- day mobility
Demographic and Spatial Development					
Decrease in (or even negative) population growth	> Structural decrease in travel given medium-term population stagnation and long-term population decline in central Europe	–	–	–	–
Ageing of society	> Increase in mobility in old age, especially in leisure travel	+	+		+
Urbanisation, depopulation and ageing of the population in peripheral regions	> Increase in interurban travel > Increase in long-distance commuting in a variety of forms	+	+	+	+
Migration, higher percentage of foreigners	> Increase in migration-related long-distance travel	+	+		+
Economy, Employment, Consumption					
Continuing, though less intense, economic growth	> Continuing demand for holiday trips > Saturating trends in everyday travel	+	+	+	+
Tertiarisation (development of the service sector), specialisation, globalisation	> Increase in business trips, new destinations > Increase in long-distance commuting in a variety of forms			+	+
Increased flexibility of the labour market	> Higher demand for mobility from employees and higher acceptance for home office			+/-	+/-
Digitalisation of work	> ICT-based alternatives to commuting and business trips			–	–
Multi-local lifestyles	> Job-based relocation and employment of both partners promote weekend commuting etc.				+
Information and Communication Technology, Networked Society					
Interconnectedness and digitalisation of everyday life	> Short-term ad hoc planning, multi-optionality and optimisation of mobility				+/-
Increased use of social media, the sharing community, teleworking, e-commerce	> Physical travel is partly replaced by virtual interaction: fewer short-distance trips, more long-distance ones > Expansion of destination choice sets and better knowledge of travel destinations > ICT-based alternatives to commuting and business trips	+/-		+/-	+/-

high relevance
 moderate relevance
 low relevance

+ driving force
 – limiting force

Table 4. Overview of Driving and Limiting Factors Affecting Long-Distance Mobility, as well as Estimates of Their Relevance to Four (Aggregated) Segments

Trend	Impact on long-distance mobility	Relevance for the development of travel during the next ten to twenty years			
		Holiday/ Short holiday trips	Personal day trips	Business trips	Long-distance everyday mobility
Energy Price Increases and Regulation					
Global increase in fossil fuel prices	<ul style="list-style-type: none"> > Continuing growth of air travel in the medium term, stagnation of air travel only in the long term > Greater cost awareness when choosing one's mode of transport 	-	-	-	-
Price regulation in overland transport (road and rail)	> Optimised temporal and spatial utilisation of transport infrastructure				-
Price regulation in air travel	> Continuing growth of air travel in the medium term, stagnation of air travel only in the long term	-		-	
Values, Social Norms					
Individualisation, pluralisation of lifestyles, multicultural society	> Increase in work-related mobility and multi-local lifestyles				+
Sustainable consumption: greening of society, climate debate and energy scarcity	<ul style="list-style-type: none"> > Decrease in long-distance holiday trips > Decrease in long-distance everyday travel, focus on destinations nearby 	-			-
Transport Supply					
Expansion of high-speed rail network	<ul style="list-style-type: none"> > Increase in long-distance interurban travel Increase in long-distance commuting in a variety of forms 	+	+	+	+
Selective expansion of road infrastructure, dynamic traffic management systems	> Decrease in travel at certain times and in certain locations/shift in long-distance travel owing to higher costs		+/-	+/-	+/-
Political Instability and Global Risks					
Political instability, safety of travel destinations	> Greatly reduced stability in tourism destination choice	+/-		+/-	
Natural hazards	> Greatly reduced stability in tourism destination choice	+/-			

high relevance

moderate relevance

low relevance

+ driving force - limiting force

Outlook for Long-Distance Mobility

The findings of the study on the outlook for individual segments and modes of transport to 2030 are summarised in the qualitative overview shown in Table 5.

Table 5. Future Dynamics of Total Volume of Transport Activity (pkm) in Individual Segments of Long-Distance Mobility

Segment	Current share (pkm)	Future transport-trend (pkm)	Future share by mode of transport (pkm)			
			Car	Rail	Bus	Air
Holiday trips (5+ days)	33%	+	→↘	→	→	↗→
Short holiday trips (2-4 days)	10%	+/o	→↘	↗	↗	→
Other personal overnight trips	2%	+	↘	↗	→	↗→
Personal day trips	25%	+	→↘	↗	→	→
Overnight business trips	13%	++	↘	→	→↗	↗→
Business day trips and long-distance everyday business trips	8%	++	→↘	↗	→↗	↘
Long-distance everyday personal trips and long-distance commuting	9%	++	↘	↗	→	→

KEY: +++ rapid growth, ++ medium growth, + slow growth, o no growth, ↗ increasing, → stable, ↘ decreasing development. pkm = passenger kilometres.

SOURCE: Authors' estimate. For the background to this compilation please see Appendix B.

NOTE: Focused on Germany.

For most holiday and business travellers, the **mode of transport** is a means to an end (i.e. no more than a method of reaching one's destination comfortably, quickly and inexpensively). The choice of transport mode is of secondary importance when it comes to deciding on one's holiday trip (FUR, 2013b): the destination (be that country, region or precise location/resort) has the highest relevance, followed by the time and date of travel, then by the landscape and the type of holiday, and only then - after all of these - by the actual mode of transport. There are, however, specialist holidays where the decision on transport mode is of prime importance: this applies particularly to cruises and other trips on water, and also to caravanning and motorcycle/bicycle holidays.

As for the future choice of mode in long-distance mobility, the study reaches the following conclusions:

- › **Car:** In the holiday and short holiday trips segments, we expect the car to have a stable market share in the short term, but a decreasing share in the medium term. The continued present high level of car use is attributable to the ongoing interest in travel destinations which can be easily reached by car, as well as to an older generation that is increasingly car-friendly. A variety of factors - amongst them the multimodal travel behaviour of young adults, the increasing intensity of congestion in urban areas, and the expected medium-term rise in fuel costs - will dampen car use.
- › **Air:** The aeroplane will be able to maintain its high market share, but growth rates will probably decline, and there is little room for an increase in market share in the long term. The fact that air fares are still relatively low in historical terms (e.g. by comparison with the mid-1990s), and that aircraft technology is tending to favour larger aeroplanes with lower emissions, will serve to underpin the continuing importance of air travel in tourism, as will the fact that air travel offers considerable time advantages when it comes to travelling very long distances. Moreover, business travel is on the rise, mainly because of economic ties with non-European countries (e.g. China). In the long term, however, the rise in energy prices (which are particularly relevant to air travel) and the societal response to the increasingly manifest consequences of climate change will put a damper on any medium-term growth.
- › **Rail:** In connection with the expansion of the high-speed rail network, medium-distance travel holds the most opportunities for rail. The main problem is that connectivity is focused on urban areas. Attractive intermodal offers which enable destinations away from urban centres to be reached are becoming more and more important. Rail's success in the future thus depends on its tourism image, as well as on the development of customer-friendly offers (i.e. express connections and direct connections to holiday destinations). Since the senior citizens of the future have more experience of car and air travel than of going by train, they will perhaps prove to be more reluctant to embrace this mode.
- › **Bus:** Unlike rail, bus travel has been able to maintain its market share for decades, at least in the field of holiday trips. The deregulation of long-distance bus travel will add new momentum to this mode. In addition, today's senior travellers favour bus travel to other modes more strongly than other age groups. If this behaviour continues, then the ageing of society, too, will promote bus travel. On the whole, the modal share of bus might be expected to rise slightly.
- › **Other modes of transport** are of secondary importance in the field of long-distance mobility at present, and can be expected to remain so in the future (with the possible exception of cruise holidays if they increase in popularity).

Further Need for Research

As this baseline study makes clear, obtaining a consistent representation of long-distance mobility in central Europe poses a real challenge, despite the large number of existing statistics and studies. This is primarily due to the fact that there are not many studies that look at both tourism-related mobility and everyday mobility in tandem. Where such studies do exist, we lack comparisons between European countries, and find an absence of consistent time series. Data on business travel, too, are more scanty than those on personal mobility. Finally, there has been very little research on the links between everyday mobility and long-distance mobility. Against this background, the following **questions** are of interest for future, more detailed research projects:

- › What are the interactions between tourism-related mobility and everyday mobility (for instance, do people with long-distance commutes travel less overall)?
- › How does business mobility affect personal mobility, and vice versa?
- › How is the overall picture of mobility in the context of holidays affected by the mobility choices made at the holiday destination itself?
- › How can we explain the steady increase in air traffic, given the stagnating travel intensity in mature economies such as Germany?
- › What future developments can we expect when it comes to choice of transport mode? More specifically, will the decreases in car ownership and usage which are currently observed among young adults also make their mark on the long-distance mobility segment in the future?

To answer these questions, we need new or supplementary **empirical data**. It would be desirable to extend the existing quantitative surveys on everyday mobility (e.g. national travel surveys) to selected aspects of long-distance mobility, and to make them as comparable as possible across countries. This applies in particular to the definition and delineation of the segments analysed, but also to the approach used.

Conclusions

On the whole, the findings of this study suggest that long-distance mobility will continue to develop in a more dynamic fashion than everyday mobility over the next ten to twenty years. The continuing rapid growth of the global travel market (especially in Asia) must not obscure the fact that Germany and other central European countries are exhibiting signs of saturation in the long-distance sector. This is due to decreasing population growth and very modest economic growth. We do not as yet, however, observe an actual decoupling of the growth of long-distance mobility from economic and income growth. In contrast to everyday mobility, the demand (or desire) for holiday trips as a whole remains strong, driven by an ageing, increasingly mobile society.

As social and economic activity continues to expand geographically, as the range of transport services available to travellers continues to grow, and taking into consideration the expectation that energy price increases will really begin to bite only in the long term, the distances covered - and thus the total volume of transport activity - are expected to continue to show strong growth in the next ten to twenty years. Here too, however, the rate of growth will probably be less than that observed during the last twenty years. One reason for this is that the supply of transport will no longer increase as markedly as it did in the past.

The modal split (i.e. the choice of transport mode) is likely to change very little during the next ten to twenty years. On the supply side, the ongoing expansion of high-speed rail networks will offer opportunities to increase the market share of rail travel. But since the capacity bottlenecks on the road are limited to certain times and locations - and since air travel, too, will display flexibility and continually adjust its offers - no radical changes are to be expected. For any profound changes in patterns of long-term mobility to occur in the medium term, fossil fuel prices would have to rise more steeply than is expected over the next ten to twenty years.

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⁴ A more comprehensive bibliography can be found in the background report available from www.ifmo.de.

Appendix A: Expert Workshop Participants

Dr. Jürg Artho	University of Zürich, Transport and Social Psychology
Nadja Assfalg	Lufthansa Group, Strategy
Axel Becker	Airbus Operations GmbH, Trend Research and Market Intelligence
Roman Frick	INFRAS, Transport - Spatial Planning - Environment
Bente Grimm	NIT, Tourism Research
Dr. Josef Köster	BMW Group, Market Research
Dr. Tobias Kuhnimhof	ifmo, Mobility Research
Benedikt Lippay	MAN Bus & Truck, Future Research
Prof. Martin Lohmann	NIT and University of Lüneburg, Consumer Psychology
Dr. Wilko Manz	Private Consultant, Transport Consulting
Prof. Daniel Metzler	Heilbronn University, Tourism Management
Christian Neef	Federal Ministry of Transport, Building and Urban Development, Transport Planning and Research
Dr. Peter Phleps	ifmo, Mobility Research
Alexander Quirin	Deutsche Bahn, Network Management, Long-Distance Traffic
Kim Markus Rosenthal	Siemens, Siemens Rail
Werner Sülberg	REWE Group, Strategic Corporate Development and Market Research on Tourism
Robert Sykora	Siemens, Siemens Road and City Mobility
Dr. Martin Thust	Deutsche Bahn, Demand Analysis and Transport Modelling

Appendix B: Background on the Derivation of the Mileages in Long-Distance Mobility

The derivation of the demand for long-distance mobility is based on empirical data for the individual segments of travel. The resulting total mileage (per person per year for Germany) is an extrapolation and in some cases an estimation. It aims to be as close an approximation as is possible to a summation of the mileage per single segment, without overlapping across segments. As regards holiday travel and business travel, by definition the empirical data do not overlap. For these segments, the problem was the existence of different (and differing) surveys for each segment. However, double counting existed in the empirical data for long-distance everyday trips (as surveyed with mobility diary surveys such as national travel surveys) and surveys focusing on tourism-related mobility. This is because trips within and outside one's usual environment are not clearly distinguished. To deal with this distinction, assumptions - in some cases involving considerable uncertainty - had to be made. Table B.1 shows an overview of the empirical sources and the related assumptions.

Table B.1. Empirical Sources and Authors' Assumptions for Extrapolating the Annual Long-Distance Mobility Mileage per Year per Segment

Segment	Source	Surveyed trip rates per year and distances per trip	Assumptions for extrapolation
Holiday trips (5+ days)	RA Reiseanalyse (FUR, 2013)	1.0 trips per person 1,600 km per trip (one-way distance)	Use of value as measured
Short holiday trips (2-4 days)	RA Reiseanalyse (FUR, 2013)	1.2 trips per person 410 km per trip (one-way distance)	Use of value as measured
Other personal overnight trips	RA Reiseanalyse (FUR, 2013)	0.3 trips per person	Use of number of trips as measured; estimation of the average trip distance by analogy with short holiday trips
Personal day trips	GfK-Panel (GfK, 2013); Tagesreisen der Deutschen (dwif, 2013; Maschke, 2007)	3 trips (GfK) to 9 trips (dwif) per person (>100 km)	Use of the average of both surveys for the number of trips (6 trips); estimation of the average trip distance (200 km) on the basis of histograms sourced from dwif
Overnight business trips	GfK-Panel (GfK, 2013); VDR (2012)	0.6 trips (GfK) to 1.2 trips (VDR) per person	Use of the higher value for the number of trips (1.2 trips) sourced from VDR because of its more reliable approach to survey in companies; authors' own estimate of the average trip distance (500 km), i.e. slightly higher than in the case of short holiday trips
Business day trips	GfK-Panel (GfK, 2013); VDR (2012)	0.6 trips (GfK) to 1.2 trips (VDR) per person	Use of the higher value for number of trips (1.2 trips) sourced from VDR because of its more reliable approach to survey in companies; authors' own estimate of the average trip distance (150 km) by analogy with the long-distance everyday trips
<p>Long-distance everyday mobility (>100 km):</p> <ul style="list-style-type: none"> - Long-distance commuting - Long-distance everyday business trips - Long-distance everyday personal trips 	MiD (infas & DLR, 2010); MZ Switzerland (BFS & ARE, 2012)	<p>20 one-way long-distance trips per person (based on 0.05 to 0.06 trips over 100 km per person per day)</p> <p>150 km per trip (one-way distance)</p>	<p>Based on assumptions about survey selectivity (e.g. selective capturing of return trips in diary surveys while outbound trips are not captured adequately), the 20 one-way trips translate into about 20 round trips. From these total 20 trips per person as measured in trip diary surveys, trips that fall into the other segments above have to be deducted in order to avoid overlapping. We estimate that after this deduction, 5 trips per person per year remain in the everyday mobility segment:</p> <ul style="list-style-type: none"> - 2 long-distance commuting trips (trips > 100 km with trip purpose 'commuting'; we estimate that 20% of these trips as measured in a diary are contained in the personal day trips and business day trips segments above, and thus retain 80% of the trips) - 2 long-distance everyday business trips (trips > 100 km with trip purpose 'business'; we estimate that 50% of these trips as measured in a diary are contained in the business day trips segment above and thus retain 50% of the trips) - 1 long-distance everyday personal trip (trips > 100 km with 'personal trip' purpose; we estimate that 80% of these trips as measured in a diary are contained in the personal day trips segment above and thus retain 20% of the trips) <p>Use of the distance per trip as measured</p>

NOTE: Focused on the German population aged 14+.

