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## 1 Long distance travel 'today'

Linda Christensen, [LCH@Transport.dtu.dk](mailto:LCH@Transport.dtu.dk)  
DTU Transport

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### Abstract

*This paper presents an overview of the Dane's long distance travel. It is a part of the Drivers and Limits project about long distance travel. Long distance travel is in the project defined as infrequent travel with overnight stay. Danes 15-85 years-old travel in average 5.5 long distance travel per year of which a third is for international destinations, a third is for domestic second homes and a third are other domestic trips. However, 87% of the kilometres are for international destinations and only 4% are for domestic second homes. Travel activity is very uneven distributed with only half of the population having had a journey during the last three month. At the other hand 60% have travelled internationally during the last year and only 2% have never travelled abroad. The paper presents among other things how the travel activity is distributed on travel purpose and mode and how the mode choice depends on travel distance and destination.*

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This paper focuses on long distance travel which seems to be one of the main contributors to transport growth and climate burden. Research in long distance travel is at the one hand rather scarce seen from a transport perspective, nationally as well as internationally. This is on the other hand in sharp contrast to the substantial public and private investments in infrastructure and transport modes for long distance travel by air as well as by rail. The need for more research is therefore obvious. Due to the lack of knowledge about structure and development in travel behaviour, the Drivers and Limits project on long distance travel has focused on establishing an overview of the development and a few of the drivers behind long distance travel.

In this paper a description of the Danes' travel activities in 2010-11 is provided, e.g. travel frequency, distance, purpose, mode share, and travel destinations. The section is based on the TU 3-month overnight survey which means that 'today' is in fact a year in 2010-11. The analyses of long distance travel is in details presented in (Christensen & Knudsen, 2014).

### Definition of long distance travel

Long distance travel is, almost by nature, being both more time consuming and more expensive than short distance travel. Hence, long distance trips are less frequent and for most people not part of the daily life routines, such as commuting, shopping, regular leisure activities etc. This means that the related activities are different and drivers and limits for the trips as well.

In the literature two types of definitions of long distance travel exist. One definition takes its outset in the length of the trip. This definition is used in most transport mobility literature. The other is based on the existence of an overnight stay during the trip. This definition is primarily used in the tourism literature.

In this project it is found that an arbitrary limit for long distance travel is not related to the functionality of long distance travel. As the development of the transport system has increased travel speed and therefore trip length has increased too. It is plausible to assume that the length of a trip nowadays has to be longer to be perceived as a long trip than it had earlier.

*A definition of long distance travel as infrequent journeys with an overnight stay is chosen for the project as the criterion for a long distance travel.*

With this definition 'long' will depend on the traveller and the travel mode used for the actual journey, e.g. if it is car or public transport dependent on time schedules. What is important for the definition is if the travel is infrequent and not a daily or frequent routine activity. The choice of definition is of importance for the analyses of long distance travel because the composition of travellers at shorter distances at 100-300 km is different from the longer distances over for instance 300 km.

However, some additional criterions are needed. First of all it should be added that the traveller need to sleep at the destination. Commuting for work at night and participation in parties that last until the early morning should not be included. However, there is a grey zone in which it can be a problem whether a trip with an overnight stay is infrequent and therefore should be seen as long distance. For partners living apart who travel frequently to stay with each other for the night the trip should not be considered as long distance travel. The same is the case for children with divorced parents who stay frequently by each of the two parents.

## Data

The main data source for this paper is the TU 3-Month overnight survey. It is a retrospective survey asking for information about long distance journeys with overnight stay during the last 3 month. The TU 3-month survey furthermore registers long duration journeys with more than 6 overnights stays up to a year back in time. The TU 3-month Overnight Survey was conducted from August 2010 to July 2011. In the first half year it was running together with the TU 2-week overnight survey but from February 2011 it was conducted as its own.

The survey was introduced as a web based survey for self-reporting but in case the respondent had not reacted after a week he/she was contacted for a telephone interview. It starts with asking the respondents how many domestic and international journeys with short and long duration they have had each month 3 month back in time, see Figure 1. Additionally they are asked how many long duration journeys they have had up to a year back in time. The respondents had to register the total number of travel activities in the 14 matrix cells and were subsequently asked additional questions on travel details of up to 6 journeys (from January 2011 up to 10 journeys) selected from a prioritised hierarchy of the matrix cells.

	1 month	2 months	3 months	4-12 months
Domestic 2-5 nights				
Domestic >5 nights				
International 1-5 nights				
International >5 nights				

Figure 1: Matrix from the TU 3-month overnight survey showing for which month 1, 2 etc. back in time number of journeys should be registered.

A long duration trip lasts for more than 5 nights and a short duration trip up to 5 nights. To reduce survey expenses and minimise response fatigue domestic trips with only one overnight stay were excluded from the survey. For the same reasons respondents owning or having access to a second home for leisure stay

were asked for the frequency of visiting this/these and only asked for details for the latest travel. Visits to the second homes were left out of the monthly diary.

The questionnaire about travel details includes detailed information about travel mode and purpose, length of stay, accommodation form, motivation for holiday and business trips, and the number of accompanying travellers. Furthermore, the travel destination is registered as accurately as possible, i.e. actual addresses in Denmark, mainly at Nuts 3 level in Europe, and at country level outside Europe. Based on these the mean distance and the mean travel time are calculated by using the estimated values from the Danish National Transport Model for domestic and European destinations. These are supplemented by crow fly distances to the weighted midpoints for countries outside Europe. As weights are used numbers of passengers to each airport according to Sabre data.

An uneven distribution of respondents over the year has resulted in a need to up- or down-weight trips based on the month they have taken place. This has been especially needed because the summer holiday month July is underrepresented due to a start-up of the 3-month survey in the middle of August, and December with the Christmas holiday is extremely underrepresented due to lack of a survey in January.

As mentioned, some of the travellers have more journeys than they are asked to provide detailed information about. Instead of just up-weighting the known trips to the registered frequency a combination of copying reported trips and hot-deck imputation of trips from other travellers has been used in an aftercare. In the aftercare journeys with more than 6 visits to the same address for holiday or visiting friends and relatives during the 3 month period are left out as high-frequent journeys which are not included according to the definition of long distance travel. The same is the case for respondents visiting their second home more than 15 times during the latest 3 month, or more than once a week in mean.

Visits to second homes are added to the other journeys. Results in frequencies and distances are presented as a number of journeys/kilometres per respondent per year.

All results in this paper are expected to be 10-15% lower than the true level due to recall effects.

## Journeys with overnight stay, an overview

On average the respondents have 5.5 low frequent travel activities with overnight stays per year (see Table 1). Roughly, one third of the trips are international, one third are for domestic second homes, and one third are other domestic trips. Holiday journeys and other long duration journeys only represent 20% of the trips. ¾ of these are international. A half of the trips are short duration of which only 1/3 are international.

Table 1 Number of journeys at long distance travel per year per Dane for the age group 16-84 years to international and domestic destinations

	1 (2) - 5 nights	6 or more nights	Second home	All journeys
International	0.87 (16%)	0.79 (14%)	0.12 (2%)	1.79 (32%)
Domestic	1.59 (29%)	0.28 (5%)	1.84 (33%)	3.86 (68%)
<b>All destinations</b>	<b>2.46 (45%)</b>	<b>1.07 (20%)</b>	<b>1.96 (36%)</b>	<b>5.49 (100%)</b>

Source: TU 3-month Overnight Survey

The distribution of long distance travel on travel distance shows a quite different picture (see Table 2). 87% of all kilometres (6,800 km) are for international travel. Close to 2/3 of the kilometres are for long duration journeys of which 98% are international. Only 5% of the kilometres represent trips to second homes of which 40% are for internationally located second homes.

The average travel distance (two-way) to international destinations for a short duration stay is 2,200 km whereas the average travel distance for a long duration stay is 4,800 km. For domestic travel the average

distance is around 350 km for both short and long duration stays but only 150 km for visits to domestic second homes (1,200 km for international located second homes).

**Table 2 Kilometres at long distance travel per year per Dane for the age group 16-84 years to international and domestic destinations**

	<b>1 (2) - 5 nights</b>	<b>6 or more nights</b>	<b>Second home</b>	<b>All journeys</b>
International	1,886 (24%)	4,754 (62%)	141 (2%)	6,781 (88%)
Domestic	556 (7%)	104 (1%)	283 (4%)	943 (12%)
<b>All destinations</b>	<b>2,442 (32%)</b>	<b>4,859 (63%)</b>	<b>424 (5%)</b>	<b>7,724 (100%)</b>

Source: TU 3-month Overnight Survey

## Travel purpose

70% of the trips are for holiday and other leisure activities of which half is spend in second homes. 17% of the trips are for visiting friends and relatives and only 10% are business and educational trips. For 3% of the trips the purpose is not identified. 2/3 of these are domestic short duration trips and the rest are mainly short duration international trips. Based on inspection of data it is assessed that in both cases a high share is respondents with many travel activities that have stopped giving information about their journeys, probably due to response fatigue. The domestic trips are mainly trips for visiting friends and relatives of which at least some should have been removed due to high frequent visits. The international are mainly high frequent business trips.

**Table 3 Distribution of journeys on main travel purposes. For the sum is shown trips per person per year**

	<b>Business and education</b>	<b>Holiday etc.</b>	<b>Visiting friends and relatives</b>	<b>No information</b>	<b>In all</b>
International short duration	33%	53%	9%	5%	100% (0.87)
International long duration	7%	84%	8%	1%	100% (0.79)
Domestic short duration	13%	35%	45%	7%	100% (1.59)
Domestic long duration	6%	63%	24%	7%	100% (0.29)
Second homes	0%	100%	0%	0%	100% (1.95)
<b>All types</b>	<b>10% (0.56)</b>	<b>70% (4.00)</b>	<b>17% (0.93)</b>	<b>3% (0.18)</b>	<b>100% (5.49)</b>

Source: TU 3-month Overnight Survey

The different types of travel are not distributed evenly on purpose (see Table 9). The long duration journeys are mainly holiday travel, 84% of the international journeys and 63% of the domestic. When disregarding visits to second homes 60% of the leisure trips go abroad and a little less than half are long duration journeys, i.e. a week or more. Domestic travel is not the preferred way to spend a holiday for Danes, in fact only 20% of the long duration holidays are spent in Denmark and only 23% of the domestic holidays are long duration. At the other hand domestic second homes play an important role for the Dane's holiday activity with 2.0 trips per respondent of 4.0 holiday trips in all. It should be mentioned that visits to domestic second homes include trips with only one overnight stay. If these are removed the trip frequency for second homes is reduced by 0.40 trips to 1.6 trips per year.

For the domestic travel activities, visiting friends and relatives is an important travel purpose accounting for 45% of the short duration activities and 24% of the long duration journeys. Only a little less than 10% of the travel abroad is to visit friends and relatives

Business trips are with 33% an important purpose for the short duration international trips. A smaller share of the domestic short duration trips – 13% is for business or education. Half of all business trips are short duration international trips and further 10% are long duration international trips. A little more than 1/3 are domestic short duration trips.

What is registered as holiday can be subdivided into Holiday (91%), hospital and convalescence (0.7%), participating in sport competition and training (3%), spectator and participating in festivals (2%), meetings

and folk high school (3%). To get a better understanding of the holiday and business travel the respondents are furthermore asked for a more detailed purpose of the travel activity.

Table 4 shows the detailed purposes if 'holiday' is mentioned as the primary purpose. Again there is an important difference between international and domestic journeys. For the domestic holiday activities relaxing and nothing else is the dominating purpose accounting for 50% of all holiday activities, both short and long duration holidays. For the short duration domestic holidays a city holiday is the second most common purpose while a nature holiday is the second most common for long duration holidays. A seaside holiday is number three for both short and long duration domestic holidays.

Table 4 Holiday travel distributed on supplementary purpose					
	International		Domestic		All trips
	short	long	short	long	
Visiting combined with holiday	3%	2%	5%	4%	3%
Cottage stay	1%	1%	4%	6%	2%
Relaxing and nothing else	18%	19%	50%	51%	31%
City holiday	55%	29%	20%	14%	31%
Nature holiday	10%	18%	12%	17%	14%
Seaside holiday	3%	32%	6%	10%	15%
Walking, biking, extreme sport	2%	2%	1%	2%	2%
Skiing, winter sports	6%	9%	0%	0%	5%
Festival, Match spectator	4%	0%	2%	4%	2%
Folk high school	0%	0%	0%	1%	0%
Private meeting	2%	1%	2%	1%	1%
Health or sanatorium stay	0%	0%	0%	0%	0%
Holiday, No further information	0%	0%	0%	0%	0%
<b>In all</b>	<b>104%</b>	<b>114%</b>	<b>104%</b>	<b>109%</b>	<b>108%</b>

*The respondents could mention combinations of city, nature, and seaside holidays. Source: TU 3-month Survey*

When Danes are spending money on an international holiday journey they more often travel for some kind of secondary purpose. Only 1/5 mentions 'only relaxing and nothing else'. Again the share is the same for both short and long duration holidays. For the short duration holidays a city holiday is the most dominating purpose. 10% mention a nature holiday and for further 8% the purpose can be winter sports or a more active holiday in the nature. Seaside holidays are rather seldom for short duration holidays.

For long duration international holidays, seaside holidays are on the other hand the most preferred holiday form, mentioned by a 1/3 of the respondents. City holidays are number two and almost as popular as seaside holidays. Nature holidays eventually combined with more active performing is mentioned by 20%. A winter holiday with skiing etc. is mentioned by 10% of the respondents.

In Table 5 the trips for business and educational purposes are distributed on detailed purposes. Most important are work posting and other kinds of work related with overnight stays and visiting costumers. More than a third of the international short duration journeys are visits to costumers and meetings. 87% of all business and educational journeys are short duration journeys. Commuting/work related and postings are the most common of the few long duration journeys. In the two right columns is shown the share of the business and educational travel activities that are short duration international and domestic journeys, respectively. Half of all business journeys are international short duration trips and 37% are short duration domestic trips, whereas a higher share of the educational trips is domestic.

Especially visiting costumers, journeys for support of costumers, and transport of goods are internationally oriented. Business service more often takes place domestically. 8-12% of the business journeys have no information. Unfortunately the important purpose of participating in fairs is forgotten on the list so

probably a high share of the unknown purpose is of this type. They are a little more nationally oriented than internationally.

Table 5 Business travel distributed on supplementary purpose						
	International		Domestic		Short duration trips %-share of	
	short	long	short	long	Internat.	Domestic
Education	5%	10%	14%	14%	27%	57%
In-service course	8%	8%	12%	12%	40%	48%
Folk high school	1%	1%	5%	18%	16%	61%
Work or posting	14%	34%	20%	27%	37%	41%
Visiting costumers, meetings	37%	13%	16%	2%	71%	24%
Support, teaching	7%	7%	4%	3%	61%	26%
Business service, repair	3%	8%	6%	2%	33%	49%
Conference	10%	7%	10%	9%	53%	37%
Transport of goods or passengers	8%	4%	1%	2%	81%	10%
Business, No further information	8%	8%	12%	12%	40%	48%
<b>Business and education in all</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>50%</b>	<b>37%</b>

Source: TU 3-month Overnight Survey

## Travel mode

The main mode used to the destination is of course dependent on the travel type, see Table 6 for which visits to second homes are not included. Air plane is the dominating mode for international travel whereas car is the main mode for domestic travel for which plane is only used at 3% of the travel activities.

Table 6 Distribution of trips on the main mode for main travel types					
	International		Domestic		All
	short	long	short	long	
Air plane	47%	62%	3%	1%	27%
Car	33%	27%	63%	64%	48%
Train	6%	3%	20%	20%	13%
Coach	6%	4%	1%	1%	3%
Bus and local train	2%	2%	3%	2%	3%
Walking, biking, sailboat	1%	1%	2%	4%	2%
Ferry	1%	1%	0%	1%	1%
No Information	5%	1%	7%	7%	5%
<b>All trips</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: TU 3-month Overnight Survey

Public transport, mainly train, is used at one fourth of the domestic travel activities whereas it plays a minor role for the international travel. Train and coach serve about the same share at the international travel activities whereas coach is little used for domestic travel. 4% of the domestic journeys and 1% of the international ones are made by non-motorised modes. In most cases the use of these modes might probably be the purpose of the journey itself – to make a sailboat journey, a bike journey etc.

The distribution on modes is the same for short and long duration domestic journeys. Short and long duration international journeys differ in mode choice first of all due to different destinations.

Table 7 shows the distribution on modes for the 3 main travel purposes (visits to second homes not included). For domestic journeys the distribution is aggregated for short and long duration due to the very similar mode distribution. Business has a higher share of air travel than for private purposes with respect to

both national and international journeys. For the domestic travel activities 11% of the business journeys go by air compared to 3% for all domestic journeys, and car is used for 66% compared to 48% for all domestic travel activities. Public transport is primarily used for visiting friends and relatives (38%); the same is the case with bike (6%). Car is dominating for holiday and other private purposes (81%) whereas public transport is only used for 14% of the travel activities.

**Table 7 Distribution of trips to the main purposes on mode for main travel types**

Purpose	Mode	International		Domestic	All
		Short	Long		
Business, Education	Car	24%	9%	66%	39%
	Public	10%	7%	23%	14%
	Air plane	67%	84%	11%	46%
	Other (Bike, boat)	0%	0%	0%	0%
	<b>All</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Holiday, Private	Car	39%	28%	81%	51%
	Public	20%	8%	15%	15%
	Air plane	40%	63%	1%	33%
	Other (Bike, boat)	1%	1%	3%	0%
	<b>All</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Visiting friends and relatives	Car	43%	22%	56%	52%
	Public	16%	7%	36%	33%
	Air plane	41%	71%	2%	10%
	Other (Bike, boat)	0%	0%	6%	5%
	<b>All</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: TU 3-month Overnight Survey

For international travel, air is used for 66% of short duration business trips and 84% of the long duration business trips. Holiday travel and visiting friends and relatives have a more similar distribution on modes though with a tendency to little more travel activities by car and less by air for holiday journeys than for visits. Opposite to domestic travelling public transport is seldom used for visiting friends and relatives at international destinations. Looking at international air travel 54% of the short duration journeys are private and 46% are for business purposes. Of the long duration journeys 91% of the journeys by air are for private purposes. Only 26% of the international journeys by air are for business.

In Table 1 and Table 2 it was shown that the distribution on travel distance is very different from the distribution of long distance travel on number of trips. In general air travel represents a much higher share of the kilometres than of the journeys, even for domestic travel, see Table 8. The opposite is the case for car and especially for public transport for international journeys. For domestic travel the share of trips and kilometres by public transport is close to the same. For international business travel air travel is nearly fully dominating. Nevertheless only 20% of the air travel kilometres are for business.

Table 8 shows that only 18% of the yearly kilometres at long distance travel is spend on business travel. However, business travel represents 40% of the short duration international trips. More than half of the business kilometres (56%) are for short duration travel. The short duration air travel also represents 56% of all business air travel. 10% of all business travel is made by car, 42% of these are domestic.

68% of the kilometres are spent on holidays. 76% of these are for long duration and 19% for short duration international holidays. Only 5% of the kilometres are for domestic holidays. 75% of the holiday travel is made by air and 17% by car (see Table 8.), Domestic holiday represents only 5% of the kilometres but 23% of the holiday travel by car.



Table 8 Distribution of travel kilometres on main modes for the 3 main purposes for the travel types. Kilometres per respondent per year is shown for the main purposes and travel types. Long and short duration domestic travel is shown together

Purpose	Mode	International		Domestic	All	All %
		Short	Long			
Business, Education	Car	24%	9%	66%	39%	136
	Public etc.	10%	7%	23%	14%	68
	Air plane	67%	84%	11%	46%	1,102
	<b>All</b>	<b>714 (56%)</b>	<b>479 (37%)</b>	<b>89 (7%)</b>	<b>100%</b>	<b>1,282 (18%)</b>
Holiday, Private	Car	39%	28%	81%	51%	857
	Public etc.	21%	9%	16%	16%	363
	Air plane	40%	63%	1%	33%	3,755
	<b>All</b>	<b>924 (19%)</b>	<b>3,800 (76%)</b>	<b>252 (5%)</b>	<b>100%</b>	<b>4,975 (68%)</b>
Visiting friends and relatives	Car	43%	22%	56%	52%	218
	Public etc.	16%	7%	42%	33%	121
	Air plane	41%	71%	2%	10%	534
	<b>All</b>	<b>154 (18%)</b>	<b>441 (51%)</b>	<b>277 (32%)</b>	<b>100%</b>	<b>873 (12%)</b>
No information	No information	94	33	45	173	3%
All purposes		<b>1,806 (26%)</b>	<b>4,754 (65%)</b>	<b>661 (9%)</b>	<b>7,301 (100%)</b>	<b>100%</b>

Source: TU 3-month Overnight Survey

Visiting friends and relatives is a smaller purpose representing only 12% of the kilometres. 25% is made by car and 14% by public transport (see Table 8). 32% of the travel for visits are domestic; however, 74% of the car kilometres and 87% of the public transport kilometres are domestic. 77% of the air travel for visiting friends and relatives is for long duration visits. In fact 46% of the kilometres for visits are for long duration international visits by air.

Overall 74% of all journeys by air are private and 26% are for business. Business travel, however only represents 20% of the air travel kilometres.

## Time of the year

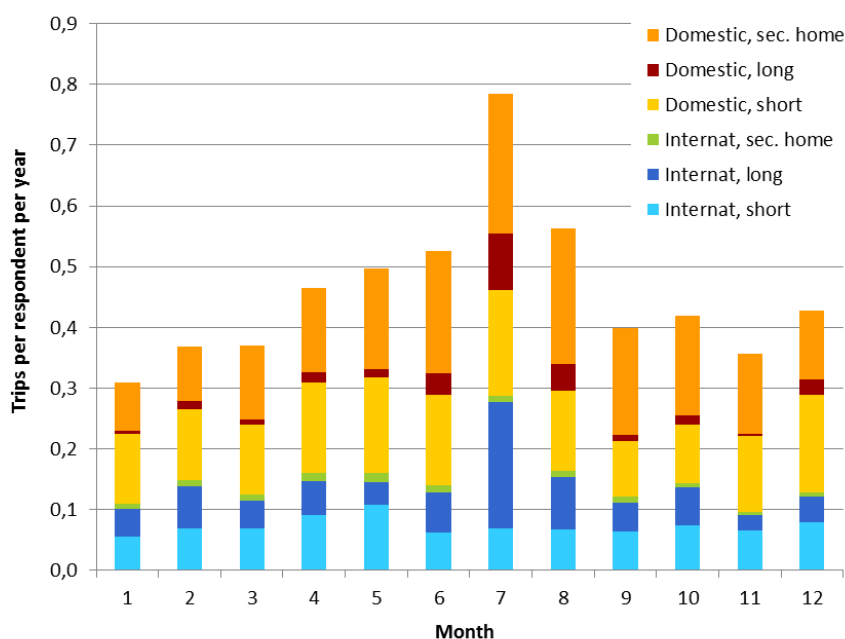


Figure 2 The distribution of the journeys over the year broken down on main travel type. Source: TU 3-month Survey



Figure 2 the distribution of travel types over the year is shown. It is very illustrative for the common knowledge about travel patterns. The long duration international journeys – mainly holidays – take place in July and to a minor degree with an overrepresentation in August and June too.

The short duration international journeys are more evenly distributed over the year with a rather low level in the summer period. This is due to the higher share of business travel which are more evenly distributed and not so common in the summer. However, the spring months with short school holidays and December with the Christmas holiday have a higher share of short holidays. Even February and October with a one week school holiday can be observed as month with a little more long as well as short duration international journeys than the ‘neighbouring’ month. The same picture as for the international journeys can be seen for the long duration domestic travel activities, though with a little higher overweight in December when young and elderly might visit families for a whole week or more. The short duration domestic journeys are very evenly distributed. Visits to second homes take place all year round but with a higher number in the summer months.

## Travel frequencies

Long distance travelling seems to be rather unevenly distributed on individuals, see Figure 3 which shows the share of the respondents who have had at no travel or no more than one, two, three etc. journeys during the last 3 months.

Only 51% of the population have had any kind of journeys the last 3 months and 25% have had more than one journey. 15% have had more than 2 journeys and 10% 4 or more journeys. The share of the population that has had many travel activities with overnight stays is decreasing rather slowly from 4 journeys and up showing that a high number of journeys are concentrated to a small part of the population. The 10% of the population who have at least 4 journeys often have 5, 6, 7 or more journeys. In all they makes half (54%) of all journeys and travel 7 times in average during the 3 months. All respondent have on average 1.3 journeys during 3 months and all travellers makes 2.6 trips in average. The 2% of the population that travels at least 10 times per 3 month accounts for 20% of all the travel activities with overnight stay. They travel in average once a week.

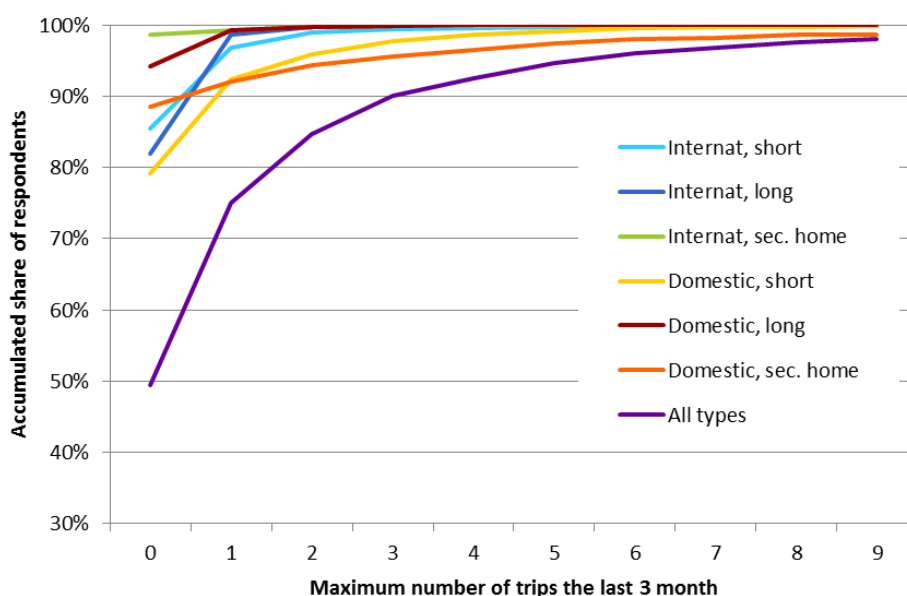


Figure 3 The accumulated distribution of the number of different kinds of journeys. Source: TU 3-month Overnight Survey

21% of the respondents have a short duration domestic journey and 8% travel more than once. Only 6% have a long duration domestic journey. 18% have a long duration international journey and 15% have a short duration international journey. In all 29% of the population travel international during 3 months.

Only 12% of the respondents visit a domestic second home but those who do visit it several times, 3.8 times each quarter on average. 8% visit it more than once, the same share as those who makes more than one short duration domestic trip. 35% of the trips to second homes are made by 1.3% of the respondents who have at least 10 trips during three months. These trips represent half of the trips made by people who travel 10 times or more for all travel types.

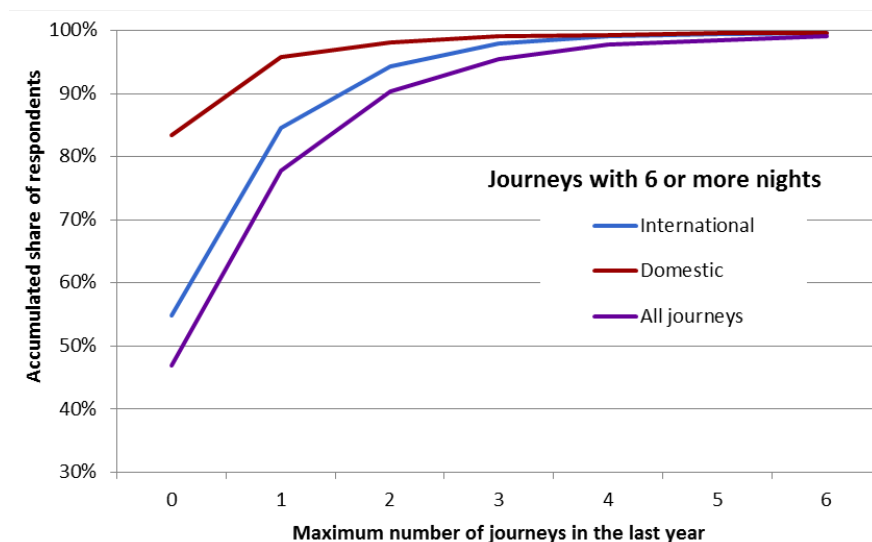


Figure 4 The accumulated distribution of number of long duration journeys on the population Source: TU 3-month Overnight Survey

Taken over a whole year 45% of the Danes aged 16-84 years have a long duration international journey – a typical holiday, and 16% have a long duration domestic journey (see Figure 4). In all, 53% of the respondents had a long duration journey during the year. The share having more than one journey during the year is seriously underrepresented due to a high degree of recall effects about travel activities more than 3 months back (the number of journeys per month during the 9 months is 50-60% of the level during the first month). The share that has been travelling is probably more correct than the total number because it is easier to remember one journey than recalling all trips in case of several.

51% of the respondents have had an international trip during the interview period either as a short duration trip in the last three month or as a long duration journey during the last year. For a short part of the survey period respondents who had no international journeys in the last year according to the interview were asked when they had been at a journey with an overnight stay outside Denmark. As can be seen from Table 9, only 2% of the Danes between 16 and 84 year have never been outside Denmark with an overnight stay. For 8% it is more than 10 years since they have been abroad.

On top of the 51% who stated they have travelled international 19% had in fact had an international journey during the last year. This was not included in the survey either because the international journey only was short duration or because they had just returned home and the trip therefore did not take place in the month before the interview month. In all 60% of the Danes between 16 and 84 year have travelled abroad during the last year. And further 18% have travelled one or two years earlier.  $\frac{3}{4}$  of all Danes have been abroad with an overnight stay during the last 3 year.

A higher share of the elderly respondents had had a journey 5-10 years back whereas most of the young respondents had been travelling internationally 1-2 years earlier. Respondents with no international travel at all are found in all age groups.

**Table 9** Share of respondents without any registered international journey distributed over time since they had an international journey with overnight stays

	Share of respondents
Has stated an international trip during the last year	51%
Had just returned back from an international journey or had had a short duration international trip more than 3 month earlier	9%
A journey the year before	12%
A journey 2 years before	6%
A journey 3 years before	6%
A journey up to 5 years before	5%
A journey up to 10 years before	8%
Never left Denmark	2%

Source: TU 3-month Overnight Survey

## Access to second homes

As can be seen, second homes play an important role in the travel pattern for long distance travel even though only 23% of the respondents have access to a second home. Figure 6 underpins this. Respondents with access to a second home travel 12 times a year to this in average if they own the place and 5 times if they rent or borrow the place. Nevertheless they travel more to other destinations – domestic as well as international - than respondents without access to a second home. Owners travel 2.3 times a year internationally and those with access travel 2.0 times whereas those without accesses to a second home only travel abroad 1.5 times in average.

Second homes are defined as a summer cottage (88%) or an 'ødegård' (3%), a holiday flat (5%), a garden with a cottage for overnight stay (3%), or a caravan or tent set up for permanent use (0.5%). A second home can be owned by the respondent and the family (42%) and in some cases together with others (8%), it can be rented permanently (1% and 1% on a timeshare basis) or it can be borrowed/rented from relatives (38%) or from friends (10%). 14% are located abroad. 11% of the respondents with access to a second home have access to two places and 3% have access to 3 or more places.

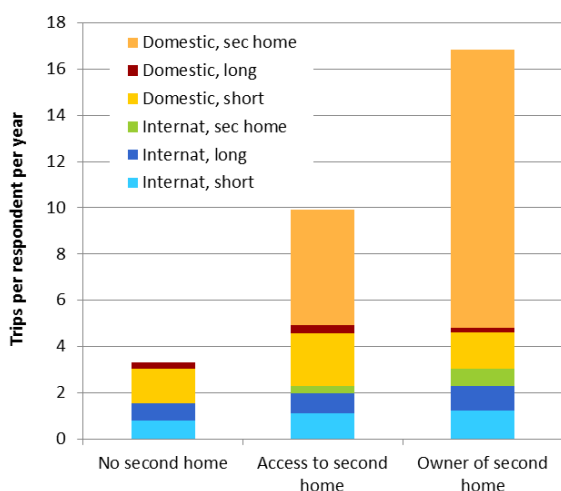


Figure 5 Number of different kinds of trips for respondents with and without access to a second home. Source: TU 3-month Overnight Survey

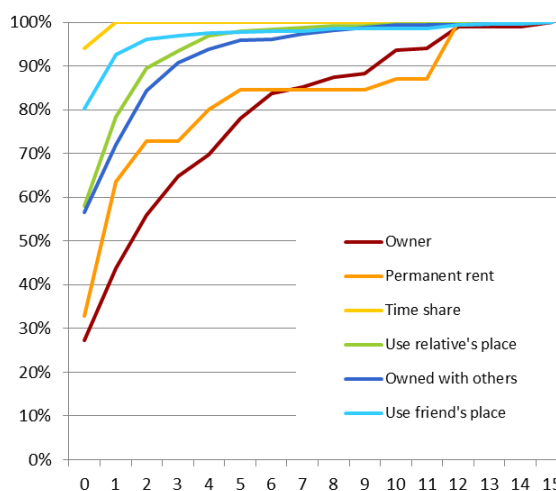


Figure 6 The accumulated distribution of number of trips to second homes dependent on ownership etc. For each number of trips the curve shows the share of respondents who make that

Figure 6 shows that owners of second homes however use the place around twice as much as respondents with a more loose relation to the place. More than 70% of the owners have stayed at the place during the last 3 months (see Figure 7) and a high share has used the place many times during the 3 month period. This is the case even though the interview has taken place all year round. The same is the case for those who rent for permanent (considering the low number of respondents the two curves are not different). Those who own the place together with others or have access to a house owned by relatives use this less. This is naturally due to the need to share the place with others. Houses borrowed or rented from friends are used much less but still a smaller part of these are used as much as the shared houses. 7% of the owners and 3% those who share with others have had a high frequent use during the last 3 months.

The type of place is not making so big difference in use except for vacation flats which are not as much in use as other types of residences. This is probably because at least some of these are located abroad.

Even though 36% of all long distance trips are bound for second homes, only 5% of the kilometres are made at these trips (see Table 1 and Table 2). 0.12 trips per year are bound for second homes abroad compared with 1.8 trips for domestically located second homes. However, 33% of the kilometres are spent on trips to internationally located second homes.

Figure 8 shows that the generation above 45 owns the second homes and the young generation has access to these. Furthermore, Figure 9 shows that access to second homes is not quite as unevenly distributed as it might be expected. Respondents with medium and long education more often have access to second homes, and most often as owners. However, both unemployed and respondents with a short school education or a short or practical education also have access to second homes but more often as users. The socio-economic differences are most clearly observed for the retired respondents.

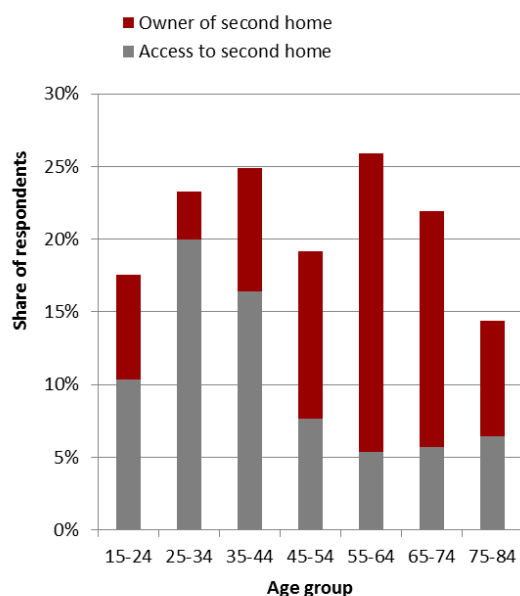


Figure 7 Share of respondents who own or have access to second homes distributed on age groups

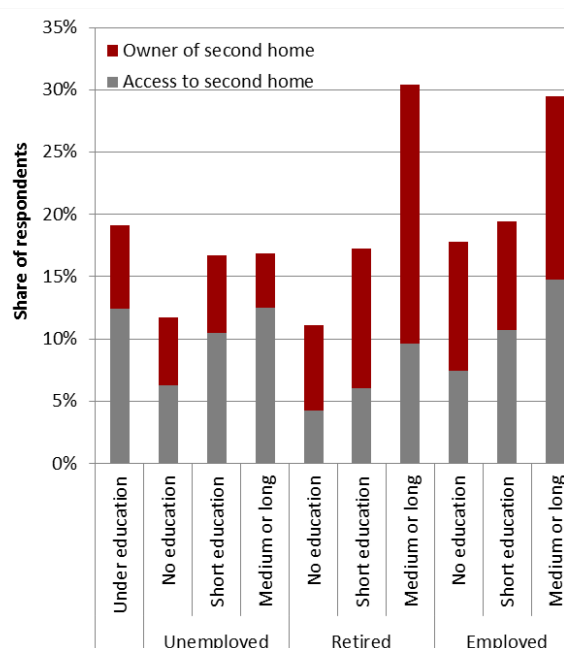


Figure 8 Share of respondents who own or have access to second homes distributed on socio-economic groups

According to (Skifter & Vacher, 2009) only 7% of the households own a summer cottage in Denmark. With 23% of the respondents having access to a summer cottage or other kinds of second homes these places are available for a much broader part of the population. They also play a more important role in the long

distance travel pattern than the number indicates. Seen from a transport energy perspective second homes offer a good opportunity for Danes to spend some of their leisure time on an activity which represents a very small burden to the climate compared to all other types of long distance travelling. Seen as an average the users of second homes are not travelling less to other destinations than those without - far from. However, considering that at good share of especially the owners belongs to the more wealthy part of the population they might still travel less than those in the same situation without access to a second home.

## Travel distance, mode choice and destinations

### Mode choice and travel distances

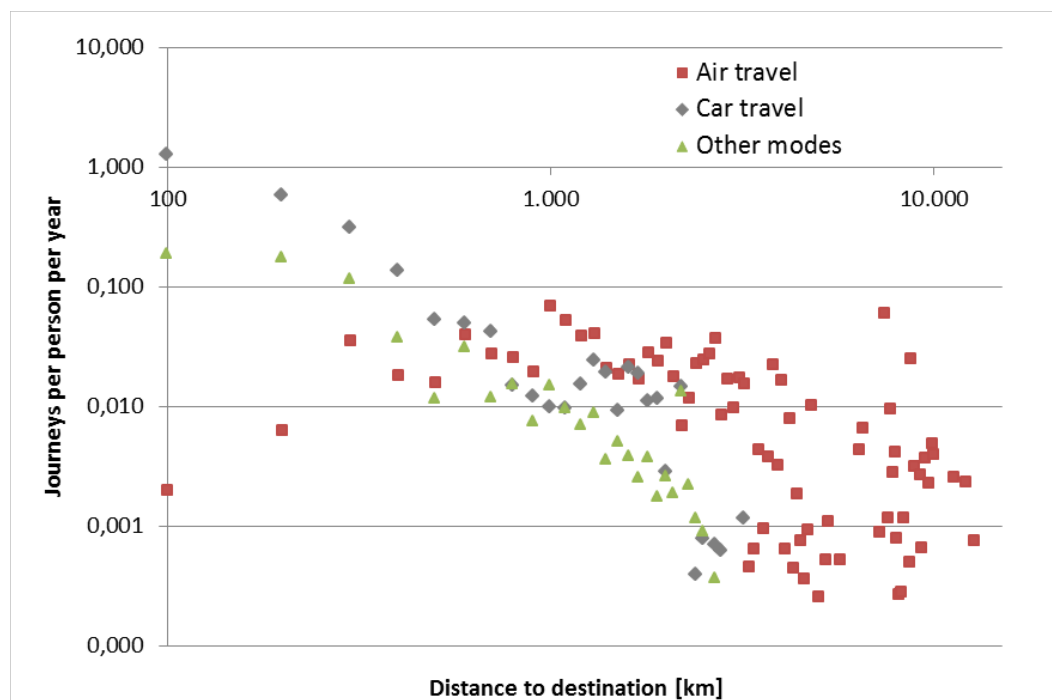


Figure 9 Travel frequency by the three main modes at long distance travel dependent on travel distance. Both distance and frequency is shown as log values. Source: TU 3-month Overnight Survey

Figure 10 shows how the travel frequency according to the TU 3-month overnight survey by car and public transport is decreasing by distance to the destinations in 100-km bands with a higher attraction to car than public transport. For air travel at the other hand there is no clear distance dependency.

Domestic travel is taking place distances less than 500 km (for air travel less than 300 km). At these distances the frequency of public transport is independent of distance whereas it is decreasing by distance for car travel. For air travel the frequency is increasing by distance illustrating the competition between air and especially car travel at the longest distances in Denmark for which air travel furthermore has an advantage due to the shorter route across Kattegat.

At international destinations the travel frequency by car is decreasing up to distances at 1,000 km. Between 1,000 and 2,000 km the frequency is not decreasing for car whereas it is still decreasing linearly for public transport. For air travel the frequency is a little higher than for car whereas it seems to be at the same level or a little lower at distances less than 1,000 km.

The mode share is furthermore shown in Figure 11 for distances up to 3,000 km. The figures show that the car is dominating for international travel at distances less than 500 km with public transport as a secondary possibility. From 500 km (Stockholm and Oslo for instance) there is a strong competition between all three

modes up to 1,000 km (Paris, London, Basel, Budapest) from where public transport is getting less and less attractive whereas air travel and car is still competing up to 2,000 km (Rome). Over 2,000 km air is more or less the only mode (2,200 km seems to be an outlier). The strength of the car at the middle distances compared to both public transport and air travel is properly the possibility to carry more passengers for the same price and the distance still being inside one to two driving days. Public transport is able to compete up to 1,000 km due to a little higher travel speed to the big cities and around the same price for 1-2 passengers. Up to 1,000 km air travel is faster but only cheaper for one passenger. From Figure 11 it can especially be observed that air has a strong position relative to car for distances at 1,000-1,200 km representing the big cities and UK in general. For the mainland Europe to the south of Paris/Basel the competition between air and car is again fierce.

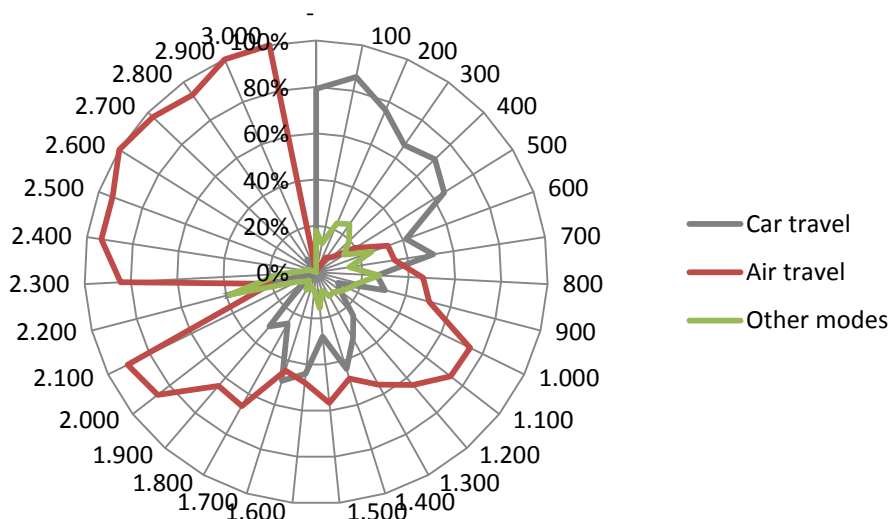


Figure 10 Mode share (shown along the radius) at distances up to 3,000 km (shown along the periphery of the circle). Source: TU 3-month Overnight Survey

## Destinations at international journeys

The findings in Figure 10 can also be observed when looking at destination countries. 96 destination countries are mentioned in the TU 3-Month Overnight Survey as destinations for international trips. 12 of these represent each more than 1% of the trips. 22 countries represent 90% of the trips all together. These 22 countries are shown at the map in Figure 13. In Figure 12 the travel frequencies are shown in decreasing order compared with the travel frequencies from the Holiday and Business Travel Survey. Both frequencies are broken down on mode shares. For most of the countries there is a good accordance between the two surveys. The differences might mainly be due to the uncertainty due to a low number of visits to each country.

The figure shows that the number of visits to the destination countries is not strictly decreasing by distance. The most visited countries are the neighbour countries Germany and Sweden representing half of all trips but Spain is number three. According to the 3-Month Overnight Survey Italy and France are 4 and 5 and according to Holiday and Business Travel Survey, UK and Norway are 4 and 5 with Italy and France as 6 and 7. Furthermore, four countries are overseas representing 6% of the trips.

There are some important differences between short and long duration travel. The long duration journeys are spread over more countries than the short duration trips. Spain is the most visited country for long duration journeys with 16% of the journeys. Italy and France receive 9% and 8% respectively. The US, Germany, and Greece receives each 6% of the travellers. Together with Sweden (5%) these are the 7 most visited countries for long duration journeys. It is especially for the long duration journeys for which most are for holidays that the distance has little influence on the destination country. For short duration trips 26% go to Germany and 22% to Sweden. UK receives as number three 8% and Norway 5%. These four

countries are the closest neighbour countries with many second homes and much business travel whereas the long duration travel destinations are first of all the south European holiday destinations. However, the next on the list are countries with attractive capital cities visited for both short and long duration trips. Interestingly, the four most visited countries for short duration trips are not between the top five for the long duration journeys. However, 5 countries are between the 7 most visited countries for both short and long duration trips. For the short duration trips the rest of the 7 countries are Italy and France with 5% each and Spain with 4% of the travellers.

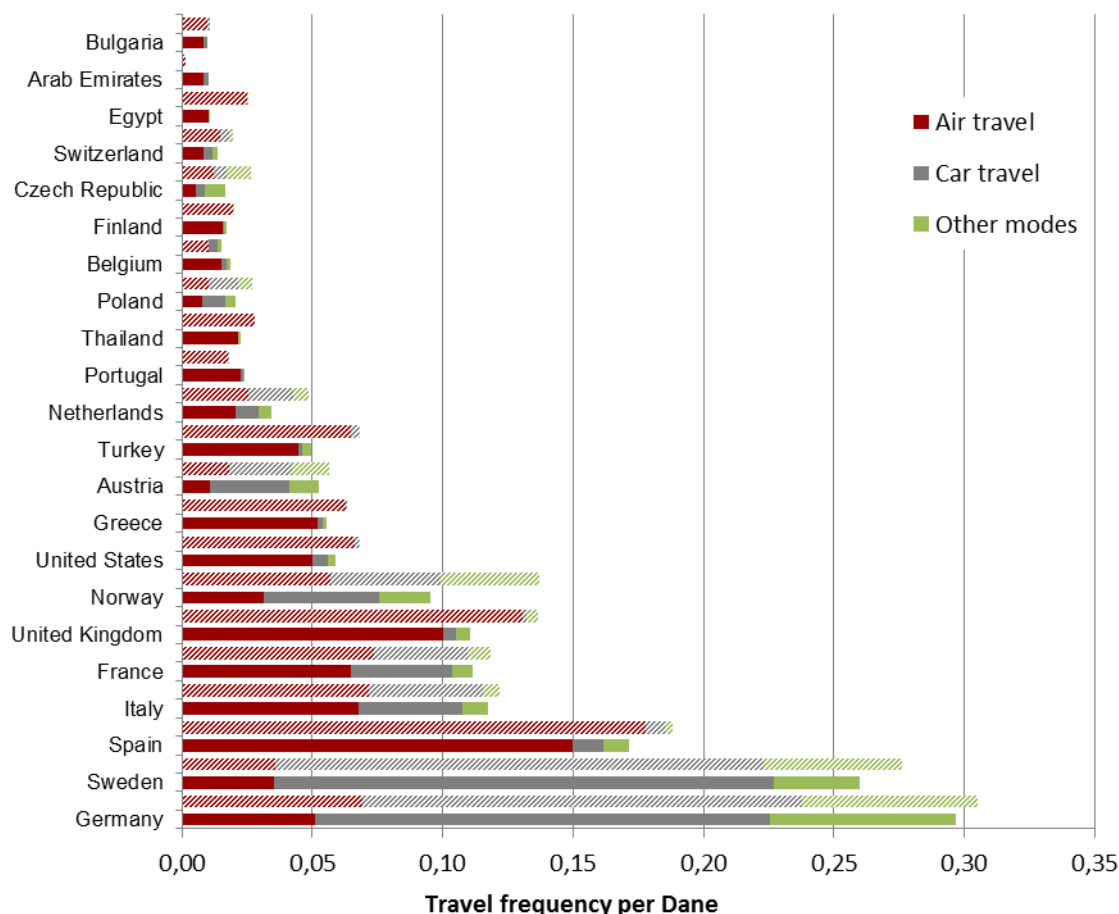


Figure 11 Yearly number of trips per Dane for the 22 most visited countries. Travel frequencies by mode is for each country shown for TU 3-Month Survey lowest and for the Holiday and Business Travel Survey above (hatched)

Sweden is the country with the highest share of car traffic, representing 74% of the trips, whereas Germany is the country with the second highest share of other modes (public transport and tour bus mainly), representing 24% of the trips. For the Czech Republic 46% of all trips are made by other modes. Except for Sweden only Germany, Austria, Norway, and Poland have a higher share of car trips than air trips, representing from 59 to 41% of the trips in falling order. For France and Italy 1/3 of the trips are made by car and 58% by air and for the Netherlands and Switzerland one fourth goes by car and 60% by air. For all the remaining countries at least 80% of all trips are made by air. The distribution adds some details to the mode share in Figure 10; Sweden has a car share higher than the other neighbour country Germany probably due to better public transport to the main destinations in Germany and many short distance destinations in southern Sweden. Furthermore United Kingdom due to its location has more air travel than other countries at the same distance.



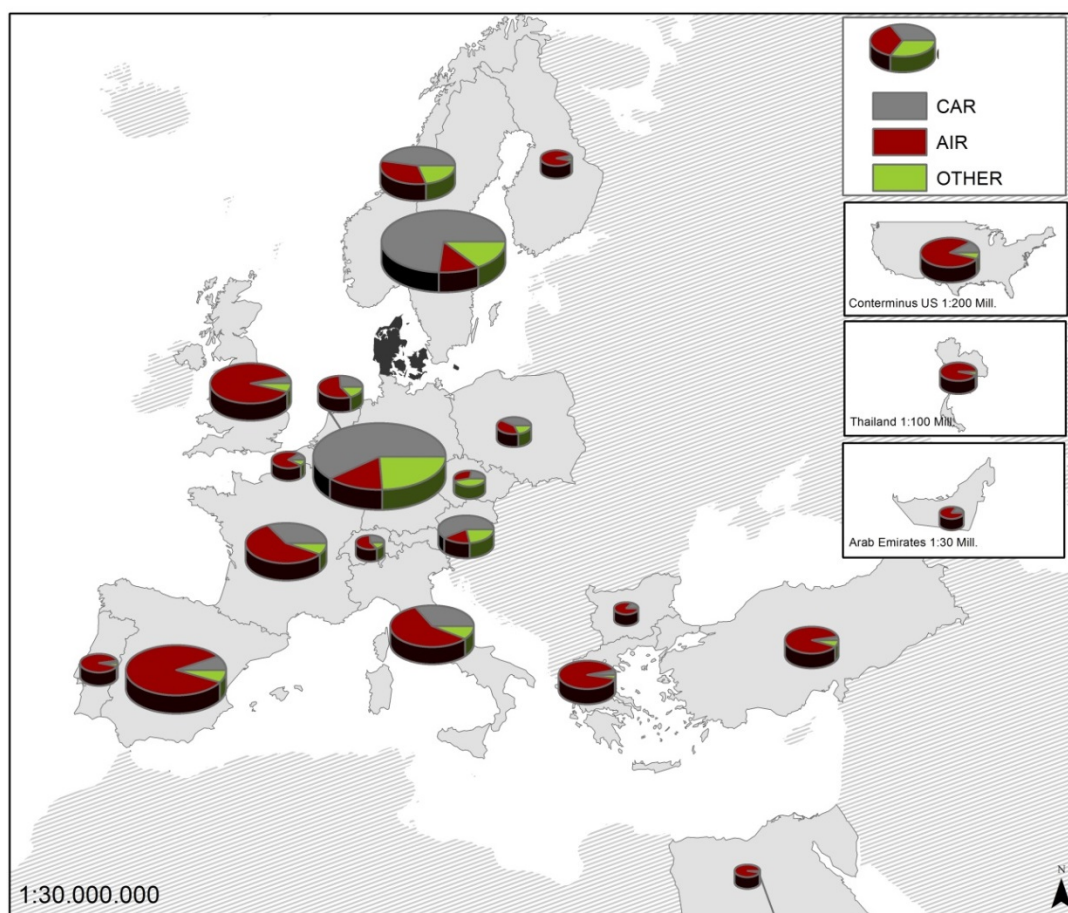


Figure 12 Modal split to the countries that accumulated receive 90% of the Danes' international journeys. The size of the pies is proportional to the number of journeys. Source: TU 3-month Overnight Survey

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