



Working Paper

## Long distance travel in Europe today experiences with a new survey

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**Publication Date:**

2009

**Permanent Link:**

<https://doi.org/10.3929/ethz-a-005864266> →

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5 **Long distance travel in Europe today: Experiences with a new survey**

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7 Submission date: 31. July 31, 2009

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49 Number of words: 5200

50 Number of tables: 4

51 Number of figures: 4

52 Total: 7200

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**54 ABSTRACT**

55 The paper discusses the problems of long distance travel surveys, with examples from recent studies, and  
56 presents results of a new long distance survey approach to overcome these problems.

57 As part of the 6<sup>th</sup> Framework funded KITE project (A Knowledge Base for Intermodal Passenger  
58 Travel in Europe), a new survey methodology based mainly on the MEST (Methods for European Surveys of  
59 Travel Behaviour) and INVERMO (Intermodale Vernetzung) surveys was developed and tested in three different  
60 European countries. The method starts with a journey roster of basic items for the long distance journeys  
61 undertaken and a stage form for details about the last three long distance journeys.

62 First, a short overview of conventional household travel surveys of long distance travel is given,  
63 followed by a description about their main problems and the survey approach which was chosen to overcome  
64 these. The second part presents the long distance journey rates from the KITE surveys and presents corrected  
65 rates from a homogenous hazard-model for Switzerland, the Czech Republic and Portugal. These figures are  
66 compared with the results of the majority of long distance dedicated surveys.  
67

**68 INTRODUCTION AND BACKGROUND**

69 Long distance travel is a growing travel market segment, but reliable data and statistics about long distance  
70 travel are rather rare. Information about long distance travel has to provide answers to many different questions.  
71 For transport policy, fares paid and costs incurred are central in the process of coordinating between different  
72 existing transport facilities and for the planning of new ones. Thus information about travel costs, prices of  
73 competitive modes and reasons for mode choice are absolutely required. In the context of transport planning,  
74 information about trip costs are equally useful as they provide insight into the cost structures, such as vehicle  
75 operating costs, user charges, taxes and tolls. Long distance travel data is especially needed for tourism, energy  
76 and environmental policies.

77 Long distance travel is only in rare cases a part of daily mobility (e.g. salesmen or ambassadors).  
78 Therefore, such movements are reported with low frequencies in surveys of daily mobility at least for distances  
79 over 400 km (1). However national travel surveys (NTS) dedicated to daily mobility are the only source for long  
80 distance travel in many European countries (e.g. in Denmark or Netherlands). The problem with these surveys is  
81 the difficulty of obtaining representative statistics of long distance travel even with relatively big samples.  
82 Therefore, in most national travel surveys, additional modules are dedicated to long distance travel with the  
83 exceptions mentioned above. In addition to surveying mobility on a given day, the most common format in these  
84 surveys is to ask respondents to report their long distance journeys for a reporting period of four or more weeks  
85 (e.g. Great Britain NTS (2002-2004) (2), French NTS (1993-1994) (3), Swiss Microcensus on Travel Behavior  
86 (2005) (4), and Swedish RES (2005/2006) (5)). Surveys exclusively dedicated to long distance travel are a less  
87 frequent data source. But past surveys show very different levels of long distance travel demand for similar  
88 countries, which make those numbers hard to trust (e.g. DATELINE (6)) (1).

89 Because of this data gap the European Commission funded KITE (A Knowledge Base for Intermodal  
90 Passenger Travel in Europe) which aims at providing information for stakeholders in the field of long distance  
91 intermodal travel (7). As mentioned above a central part of KITE was the development and test in a pilot survey  
92 of a suitable survey methodology that to close the remaining information gaps. These pilot surveys were carried  
93 out in Switzerland, the Czech Republic and Portugal to cover a range of languages and socio-economic  
94 conditions.

95 First, an overview about available and comparable long distance travel surveys is given. The survey  
96 methodology of the KITE pilot survey is described next. Finally, the long distance demand figures are analyzed  
97 and compared with other data sources.  
98

**99 AVAILABLE LONG DISTANCE TRAVEL DATA FROM HOUSEHOLD SURVEYS**

100 The survey work within KITE is a conventional household travel survey. In contrast to other survey approaches  
101 (e.g. mobile phone tracking, ticket sale figures, credit card payments on highway toll booths or cross border  
102 counts (8)), which provide only information on one particular facet of long distance travel activity, conventional  
103 household travel surveys give additional information, which is crucial for understanding and modeling individual  
104 long distance travel activities (9).  
105

106 TABLE 1 gives an overview of available household surveys with information on long distance travel,  
 107 which are later used to compare the results from the KITE pilot surveys. For a more comprehensive overview see  
 108 (1).

**TABLE 1 Analyzed household travel surveys with information on long distance travel  
 (11,12,4,6,13,14)**

Survey	Spatial Coverage	Survey Year	Everyday Travel Diary	Long Distance Travel Definition	Long Distance Travel Reporting Period
INVERMO	Germany	1999-2002	No	>100 km network	8 weeks
MiD	Germany	2002	Yes	Overnight stay	12 weeks
Micro Census	Switzerland	2005	Yes	Excursions > 3 h overnight stay	2 weeks 8 weeks
DATELINE	EU 15 + CH	2001/02	No	>100 km crow-fly	(holiday journeys) 12 months (other journeys) 3 months
MEST/TEST	France, Portugal, Sweden, UK Switzerland,	1996/97	No	>100 km crow-fly	8 weeks
KITE	Czech Republic, Portugal	2008/09	No	>100 km crow-fly	8 weeks

109 It covers two types of surveys: Mobility diary surveys (National Travel Surveys) with a focus on every  
 110 day travel, and surveys dedicated to long distance travel. In the following, a brief overview describes the  
 111 characteristic problems of long distance surveys in general and the characteristics of the surveys in TABLE 1.  
 112

### 113 **General problems of long distance travel surveys**

114 The core of the design problem of long distance travel surveys is their exclusion of journeys below a minimum  
 115 distance or duration. The movements to be reported are rare events requiring long reporting periods to increase  
 116 the chance that the respondent can report at least one journey and that the contact is not wasted in terms of  
 117 capturing information about travel. Counterbalancing this is the problem of recalling events, which might have  
 118 happened weeks ago, in some detail, which limits the reporting period to a range of four to eight (twelve) weeks,  
 119 given the relatively low salience of routine long distance travel for many above average frequency travelers (15).  
 120

### 121 *Long distance Travel Definitions*

122 In surveys of daily mobility, the study objective is clear: capture all movements of the respondents for a day,  
 123 excluding only movements within large facilities, such as shopping centers or factories. Even this basic question  
 124 is open to discussion in the case of long distance travel. Because the division between movements relevant to  
 125 long distance travel, the related decision making and the irrelevant local movements needs to be defined, as it is  
 126 impossible to ask the respondents to report all movements undertaken during a multi-day long distance journey  
 127 (See (14) for a more thorough discussion).

128 Tourism and transport planning are the two main focuses of long distance travel surveys. On the one  
 129 hand it is possible to differentiate long distance travel from daily mobility by the duration of being away from  
 130 home; on the other hand it is possible to define it by a minimum distance travelled from a certain base location.  
 131 While the duration of a stay is the main focus when looking at tourism where data is needed for supply and  
 132 marketing decisions, the duration of stay is not crucial for transport planning, where the data need is more  
 133 focused on route/mode choices which are determined in part by distance. The decision to use distance as a

134 criterion is widely accepted in transport planning long distance surveys, but the exact cut-off and type of distance  
135 (crow-fly or network distance) were never harmonized and vary from country to country and survey to survey.

136 For the analysis in this paper, long distance journeys are defined as journeys including outbound trip  
137 and return trips to destinations at crow-fly distances of at least 100 km. We adopted this definition because it is  
138 the EUROSTAT definition which was used in the DATELINE survey, and DATELINE was the only Europe  
139 wide survey so far.

140 In some surveys crow-fly distances were not available (German MiD, German INVERMO). In these  
141 cases we corrected reported distance to be network distance and recalculated crow-fly distances using observed  
142 detour factors (Germany: 1.28 (16)). In the case of travel diary surveys with focus on everyday travel, we first  
143 analyzed single trips and then calculated the number of journeys based on the assumption that one long distance  
144 journey includes two long distance trips.  
145

#### 146 *Recall problems*

147 The definitions in long distance surveys have further implications on travel data beyond the problems mentioned  
148 above. As long distance journeys are rare events, it is necessary to have a relatively long reporting period, and  
149 therefore recall problems occur.

150 The duration of the reporting period interacts as a design variable with the basic unit of the reporting  
151 chosen (i.e. stage<sup>1</sup>, trips or journey) and therefore the level of detail, as this implies a certain recall burden for the  
152 respondent. The analysts' desire for detail has to be traded off against the response burden and recall difficulty of  
153 stages or even trips undertaken some time ago. A four-week reporting period might be compatible with stages  
154 while a twelve-week reporting period only with journeys.

155 In postal questionnaires this issue is compounded by the issue of how to provide for the "standard" trip  
156 or journey: is it a simple out-and-return journey or a complex trip involving multiple stages. A paper form cannot  
157 accommodate certain levels of complexity in a self-completion context, which limits the possibility to choose the  
158 base unit and to define it. Related to this is the question of how frequent travelers or repeated trips can be  
159 supported for such repeated journeys, as those to the weekend home or to the location of a current work  
160 assignment. In the first case, one would like to reduce the response burden by either simplifying the task or by  
161 reducing the reporting period, but has to avoid offering shortcuts to everyone.  
162

#### 163 *Fatigue effects*

164 A relatively long reporting period for surveying rare events creates the further problem of fatigue effects. The  
165 response burden distribution in long distance travel surveys is highly skewed in contrast to daily mobility  
166 surveys because of the highly skewed travel frequency distribution. To avoid the tedium of repeating the  
167 description of very similar journeys for frequent travelers, one could offer shortcuts. While both things can be  
168 achieved in CATI/CAPI contexts, they are not as easily possible on paper forms without inviting other respondents  
169 to use these short-cuts. In addition, one is interested in the details of those journeys of frequent travelers, if one has  
170 doubts about the identity of those repeated journeys.

171 The same questions recur when looking at the design of the question sets for each reporting unit:  
172 number of items, complexity of the items, and complexity of the available pre-coded answers. The designer has  
173 to trade-off desired detail against respondent boredom and response burden. This issue interacts with the design  
174 of the questions on the page, where multiple units on each page save postage and reduce the footprint of the  
175 forms but give the impression of complexity through the busyness of the page.

176 This brief discussion has highlighted the special difficulties inherent in conducting surveys of long  
177 distance travel, where the complexity of the subject, the resulting response burdens and the data needs have to be  
178 balanced so that valid and useful data are obtained at reasonable cost.  
179

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<sup>1</sup> Stage (unlinked trip) is the continuous movement with one mode/means of transport (including any pure waiting times); a trip is the sequence of stages between two activities; a journey is the sequence of trips from home and back home (17).

## 180 **Characteristics of available surveys and survey elements with focus on long distance travel**

181 In order to overcome the problems of surveying long distance travel with instruments designed for capturing  
182 everyday travel, specific long distance travel surveys have been developed. The concept of long distance travel  
183 surveys generally revolves around the question: "Tell me about your long distance travel in the last x weeks".  
184 The general idea here is to focus on long distance travel but cover a longer period of time, leading to an  
185 increased number of records of long distance journeys.

186 Hence, long distance travel surveys differ with respect to the method of collecting the information from  
187 the respondent: While some surveys (German MID [CATI and postal], Swiss Micro Census [CATI]), collect the  
188 information on long distance travel exclusively by retrospective interviews, other long distance travel surveys  
189 employ sophisticated formats of surveying long distance travel activities:

- 190 • INVERMO was a long distance travel panel survey with a two stage approach. First, a screening survey  
191 (CATI) was conducted to assign respondents into three groups according to their long distance mobility.  
192 Second, the respondents (stratified by long distance travel activity level) were sent a long distance mobility  
193 diary (self administered, mail back) which they were to fill in during an eight week period. Three  
194 subsequent panel survey waves were conducted (11).
- 195 • The DATELINE survey focused exclusively on long distance travel and followed a two-phase approach. In  
196 phase one, respondents reported travel of over 100 km crow-fly distance for the purposes of "holiday" in the  
197 previous 12 months, as well as "other private" and "business" in the previous three months, and  
198 "commuting" for the previous four weeks. Thereafter, some of these journeys (up to six, including the two  
199 most recent holiday journeys) were selected at random while oversampling very long journeys. In phase  
200 two, the selected journeys were reported in detail on the trip level. The same basic survey design was  
201 implemented in all the countries. However, survey unit (household, person) and methodology (postal,  
202 telephone) varied from country to country. Response rates varied as well, also because in some countries the  
203 survey was mandatory (6).
- 204 • The MEST/TEST survey was carried out in France, Portugal, Sweden and the UK. The survey approach  
205 included two sequential questionnaires to counterbalance the burden for the interviewees, the first one  
206 contained a roster for all journeys with a destination further away than 100 km crow fly distance with basic  
207 characteristics and the second asked for trip details of up to three of the most recent journeys. The  
208 methodology used varied among countries (postal, telephone) (13).

## 210 **THE KITE SURVEY METHODOLOGY**

211 The KITE survey builds on the experiences of these previous long distance travel surveys. In addition to the  
212 normal household data and person data, a protocol of three steps was used to conduct the long distance travel  
213 survey.

214 Even though the long distance travel definition for the analysis was 100 km crow-fly, for the survey a  
215 relatively low cut-off of 75 km was chosen. The objective of this was reducing the effect of the errors in the  
216 reported journey length and interviewee bias in the perception of distances. The usual 100 km boundary was  
217 imposed afterwards when the geocodes of journey destinations were available. Shorter journeys were removed  
218 from the further analysis.

219 In addition to the 75 km threshold the survey period was with eight weeks relatively long. As discussed  
220 above, this is inconsistent with the desire to obtain detailed information on the stage level. To resolve this  
221 imbalance, a two stage survey arrangement from the MEST and the INVERMO survey was retained for the  
222 survey protocol:

223 First, a screening by CATI/Face-to-Face is implemented to screen the relevant respondents and filter out  
224 frequent long distance travelers to help the respondent with an abbreviated description of repeated journeys.

225 Second, a journey roster is employed which retrieves the basics of the journeys undertaken during the  
226 reporting period: date of departure/return, destination, main mode, main purpose and size of party. Detailed stage  
227 descriptions were only obtained for the three most recent journeys in the second part.

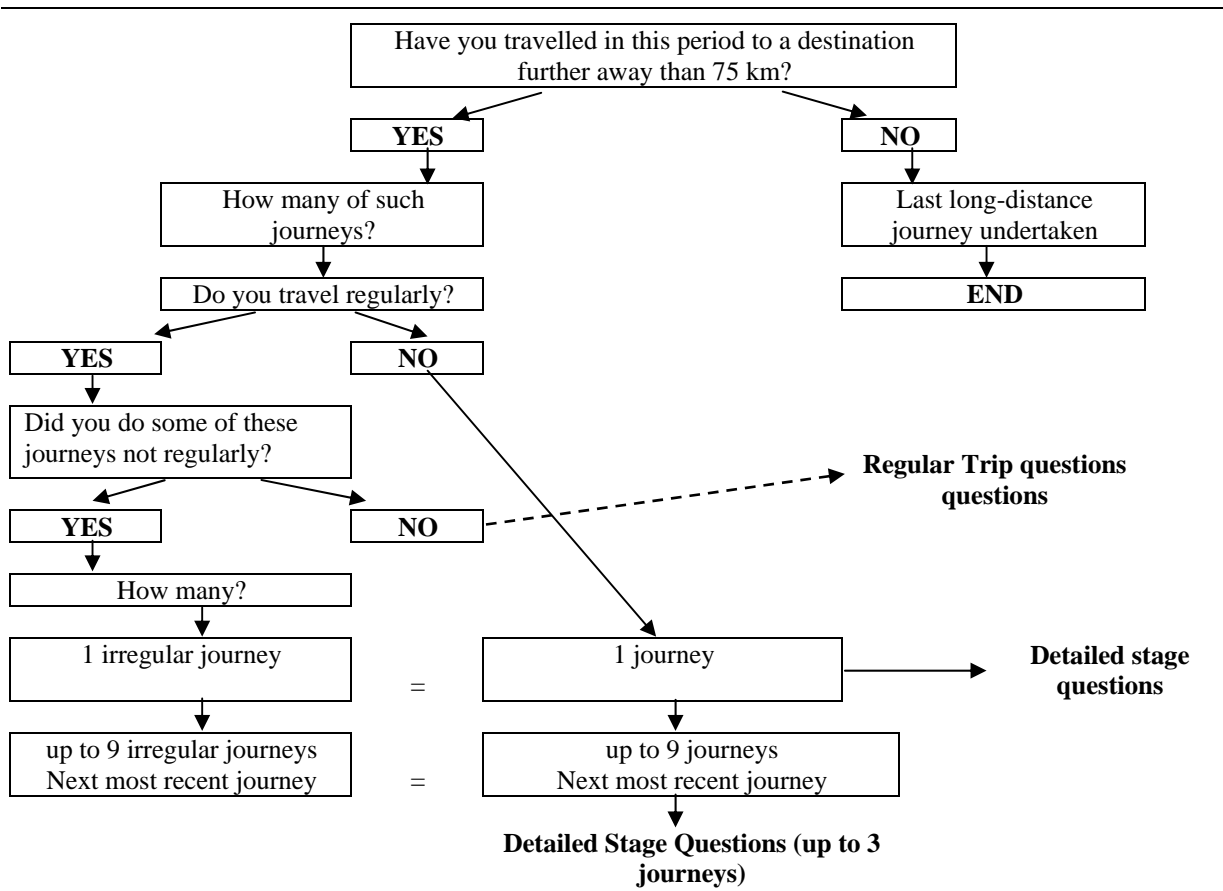
228 In addition, to avoid repeated questions for frequent long distance travelers and to lower their response  
229 burden, a special commuter/regular trip questionnaire asks only for one of these repetitive journeys. This should  
230 reduce the refusal rate of this very important traveler segment. The logic of the protocol is graphically presented  
231 in FIGURE 1.

232 In Switzerland and Portugal the surveys were carried out as a CATI and in the Czech Republic as a face-to-face  
233 interview.

234

235

**FIGURE 1** Logic of the protocol



236

237 **SURVEY PERIOD AND RESPONSE RATES**

238 The KITE survey was carried out between November 2008 and March 2009 in 4 waves, whereas the last three  
 239 waves were of equal size and the first one was smaller to allow last adjustments. The response rates of the KITE  
 240 survey vary from country to country. One influential factor here is the respective survey protocol. The response  
 241 rates are given in TABLE 2.  
 242

243

**TABLE 2** Response rates of the KITE long distance travel survey

	Switzerland		Portugal		Czech Republic	
	(Random-sample CATI) [%]	Sample	(Random sample CATI) [%]	Sample	Face-to-face with on- street recruitment [%]	Sample
Base sample	100.0	4'160	100	5'333	100.0	1'933
Non-response reasons						
Problem with the phone number	20.6	855	2.1	112		
Refusal	20.4	847	15.3	816		
Non-contact	1.3	56	50.5	2'693		
Age-problem	21.3	888	4.3	229		
Language-problem	10.9	454	0	0		
Other	1.2	50	6.2	331		
Interviews conducted	24.3	1'010	21.6	1'152	64.0	1'237
Mean interview duration (min)		16.5		16.5		37.0

244

245

246 The response rates have to be analyzed against the background of a maximum of 15 calls over several  
247 weeks. The samples are random, representative for the population, and controlled for age, gender and income.  
248 Because of the relatively small sample size, the samples are not representative for different regions within the  
249 countries.

249

250 For the Czech sample a quota sample was used. An exact non-response statistic is therefore not  
251 available for the data. The high number of non-contacts in the Portuguese sample occurs because the survey  
252 administrators stopped trying to reach a part of the sample after they reached the requested numbers of  
253 interviews. However, the persons in the base sample had at least one call attempt. The high share of problems  
254 with the phone number in the Swiss sample is caused by the change of an available official address and  
255 telephone number sample. This caused adjustments in the address-databases of the commercial survey  
256 companies, which has an effect on the sample quality and causes these phone-number problems.

256

257 The response rates are acceptable given the relatively long duration of the interviews. The share of  
258 refusers, only 20.4 % in Switzerland and 15.3% in Portugal, is low compared to other long distance surveys,  
259 such as 27 % in Norway (18).

259

260 The average interview duration for the telephone interviews is remarkably shorter than for the face-to-  
261 face interviews. This is not directly comparable, because the software used in a CATI makes the interview  
262 process much more efficient.

262

263 Based on the answers in the first part of the survey, in the second wave a customized stated preference  
264 survey was sent to self-identified respondents, which is not part of this paper, but an analysis of the data can be  
265 found in (19).

265

## 266 LONG DISTANCE TRAVEL DEMAND AND MODE USE

### 267 Numbers of long distance journeys

#### 268 *Travel demand calculated for the KITE survey*

269 The simplest way to calculate the number of long distance journeys as an indicator for long distance travel  
270 demand is to gross up the mean number of reported regular and non-regular long distance journeys per person  
271 during the reporting period (8 weeks in the KITE survey) to a whole year.

272

273 As compared to just use the reported number of journeys during the reporting period, the KITE  
274 questionnaire design allows use of additional and more precise information to calculate the numbers of long  
distance journeys, e.g. the last long distance journey undertaken, if an interviewee did not undertake such a



275 journey during the reporting period. KITE data yields information about regular and non-regular long distance  
 276 journeys during the reporting period. The frequency of regular journeys and date of non-regular journeys are  
 277 known. All of this information is combined using a survival function  $S(t)=Pr(T>t)$  to calculate the mean time  
 278 between long distance journeys, which is called the hazard rate in survival models. Information about the period  
 279 between two events or long distance journeys undertaken is available as completely observed periods or as left-  
 280 or right-censored periods, meaning that the start or end of the periods are not observed. TABLE 3 gives an  
 281 overview about the data used to calculate the mean survival time between two long distance journeys.

**TABLE 3 Journey intervals in the KITE survey**

Data source	Censoring		
	Left (Begin not observed)	Uncensored	Right (End not observed)
Last long distance journeys before the 8 week reporting period			x
Regular journeys		x	
Non-regular journeys	First one reported between Last one reported	x	x

282 There are different approaches to model the durations. In parametric models the underlying hazard rate  
 283 or transition rate, i.e., the rate at which events occur, is parameterized in terms of its probability distribution, e.g.,  
 284 Weibull, Gompertz, exponential, gamma, log-logistic and log-normal distributions (20). A semi-parametric  
 285 alternative is represented by the Cox proportional hazard model (21; 22). Here it is not necessary to make  
 286 assumptions about the particular distributional form of the durations. This makes it preferable over its parametric  
 287 alternatives (23). In the Cox model the hazard rate for the  $i^{th}$  individual is defined as follows  
 288

$$h_i(t) = h_0(t) \exp(\beta' x_i),$$

289 where  $h_0(t)$  denotes the baseline hazard function and  $\beta'_{xi}$  are the parameters and covariates, which is here a  
 290 constant. The hazard rate for the Cox model is proportional as the hazard ratio for the two individuals  $i$  and  $j$  is  
 291 written as:  
 292

$$\frac{h_i(t)}{h_j(t)} = \exp(\beta'(x_i - x_j))$$

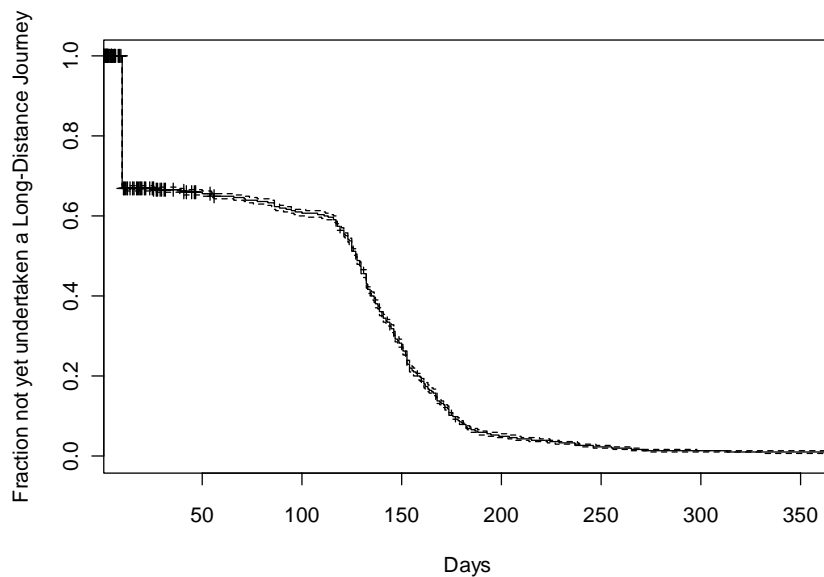
293 which demonstrates that this ratio is constant over time (23). The estimation method in the Cox model is the  
 294 maximum partial likelihood method and allows to estimate the parameters  $\beta'$  without specifying the baseline  
 295 hazard function  $h_0(t)$ . This method is based on the assumption that the intervals between successive duration  
 296 times contribute no information regarding the relationship between the hazard rate and the covariates, but rather  
 297 the ordered duration times (23).  
 298

299 If  $T$  is the time between two long distance journeys and its cumulative distribution function is  $F(t)$  on  
 300 the interval  $(0, \infty)$ . Its survival function is:

$$R(t) = P(\{T > t\}) = \int_t^\infty f(u) du = 1 - F(t).$$

301 This is the inverse of the cumulative distribution function and imputes the unknown, censored  
 302 information. FIGURE 2 shows the survival rate calculated for the period between two long distance journeys.  
 303  
 304

305

**FIGURE 2** Survival function for all reported journeys

306

307

308 The calculated mean survival time is 41.2 days, which corresponds to 8.4 journeys per person per year:  
 309 8.2 in Switzerland, 9.0 in the Czech Republic, and 8.2 in Portugal. The non corrected mean numbers of long  
 310 distance journeys are 9.6% smaller with 7.6 in total, 6.9 in Switzerland, 8.9 in the Czech Republic and 6.8 in  
 311 Portugal. The relative difference among the countries for the uncorrected numbers is larger than for the  
 312 corrected, and seems to be unreasonable, as there is no logical explanation why people in the Czech Republic  
 313 should travel more than people in Switzerland or Portugal.

313

314 The data shows that specifically the number of persons who did not report a long distance journey during  
 315 the reporting period is much lower in the Czech Republic (18.7%) than in Switzerland (48.05%) or Portugal  
 316 (49.6%). The differences among the countries for the survival model corrected data are present, but they are  
 317 smaller because the additional information about the last undertaken long distance journey outside the reporting  
 318 period is integrated in the calculation.

318

### 319 *Comparison of long distance travel demand results of the KITE survey*

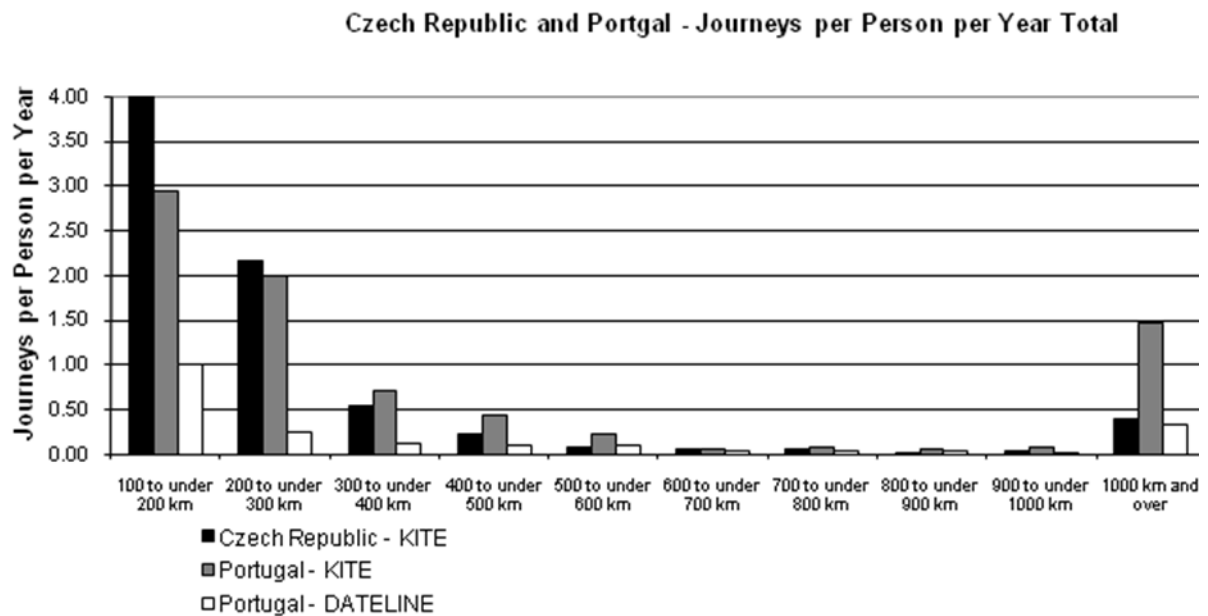
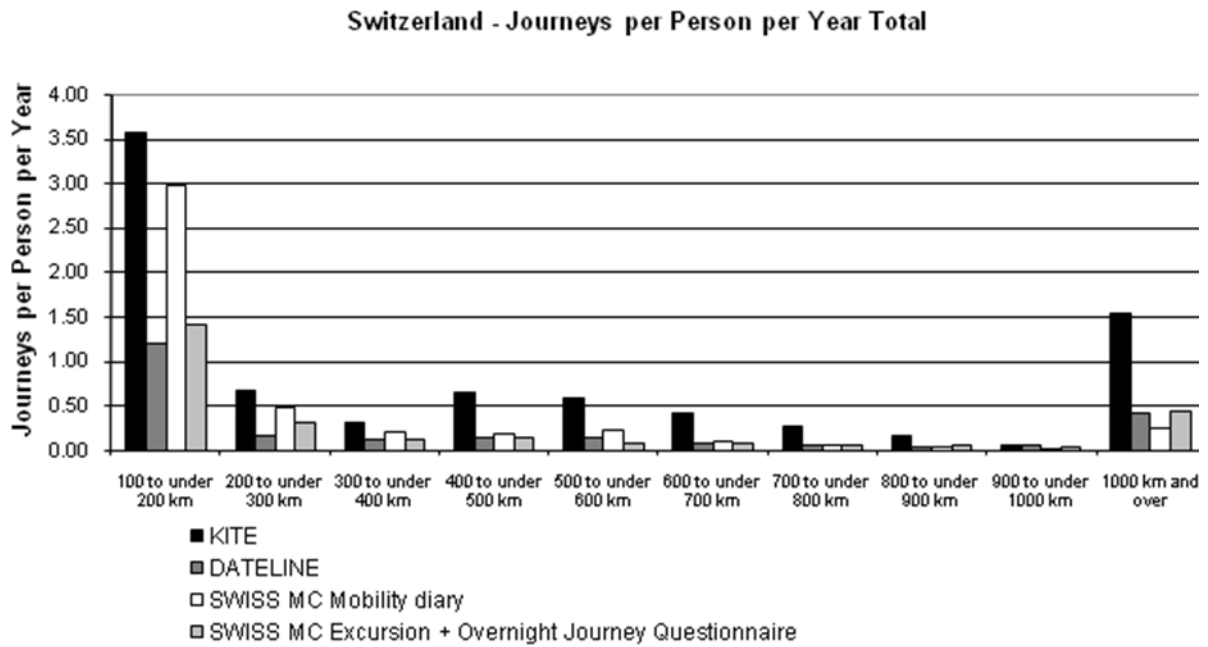
320 To compare the survey results of the KITE pilot survey with other available data, household travel data is used.  
 321 Household travel data provides the same units of analysis, even if origin and quality vary. The surveys used for  
 322 the comparison are described on page 2 ff.

323 As there is no primary data available from a long distance survey for a direct comparison of the data for  
 324 Switzerland, Portugal and the Czech Republic, post-processed harmonized figures are used which Kuhnimhof et  
 325 al. present in (1). These harmonized figures for different European countries also include figures for Switzerland  
 326 and Portugal, which are used to compare them with the results from the KITE survey. They suggest using NTS  
 327 daily mobility diary data for the 100 - 400 km range and adding the long distance travel demand from long  
 328 distance travel survey for distances above 400 km. This procedure is suggested because the travel demand results  
 329 larger figures in the lower distance band from the daily mobility diaries than in the most compared long distance  
 330 surveys. As it is very unlikely that travelers would make up journeys and that a possible selective survey  
 331 participation of mobile individuals does this discrepancies, it is more likely that these results are produced by  
 332 recall effects in long distance surveys.

333 To observe if the KITE survey comprise similar recall effects, the distribution of the journeys per  
 334 person per year in 100 km distance bands are compared in FIGURE 3 with other surveys. Switzerland is the only

335 country to compare the KITE results with the figures from a NTS diary. FIGURE 3 shows higher numbers for  
 336 the low distance band as for the higher distances. Therefore the figures for KITE are not enriched with the data  
 337 from the Swiss NTS for the following sections.

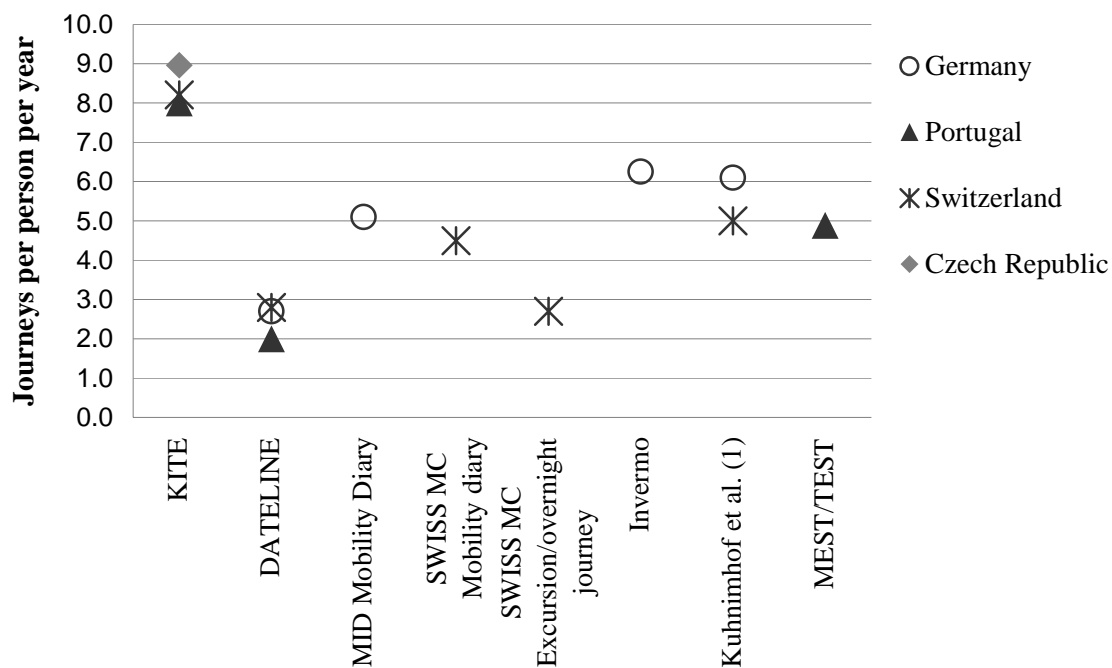
**FIGURE 3 Journey length distributions from selected surveys for Switzerland, Portugal and the Czech Republic**



339 FIGURE 4 shows the figures on long distance travel demand for four selected European countries.  
 340 Among these, the Czechs are the most active travelers. The other countries show a comparable level of long  
 341 distance travel.

342 The comparison between the different countries within KITE shows that the mean numbers in  
 343 Switzerland, the Czech Republic and Portugal are very similar. The differences in the number of long distance  
 344 travel between the countries within KITE are not huge but still seem to be systematic and have their origin in the  
 345 survey methodology: In the Czech Republic the data was collected as a face-to-face interview while Switzerland  
 346 and Portugal used a CATI interview. A possible explanation for the high travel rates in the Czech Republic  
 347 seems to be that there is a share of persons who do not provide as comprehensive information in a CATI  
 348 interview as in a face-to-face interview. The last long distance journey, if they did not undertake one during the  
 349 reporting period, has helped to correct for some of those omissions. Compared to the differences between the  
 350 different surveys and within the other surveys, the relative differences within KITE are rather small.

**FIGURE 4 Long distance travel demand (journeys > 100 km crow-fly distance) in European countries by different surveys**



351

352 *Modes in KITE and long distance travel*

353 The resulting modal split of the KITE survey is compared in TABLE 4 to the results of Kuhnimhof et al. (1) and  
 354 the Swiss MC (4). Switzerland is known for a much higher share of public transport than other European  
 355 countries. The modal split of the Czech Republic is very similar to the results of Germany for the shares of car  
 356 journeys. Coach is a less common transport mean in Switzerland and is mostly used for longer trips of foreign  
 357 born residents to visit their families in the country of their family's origin. Overall the share of air travel is higher  
 358 than in Germany and in the Swiss MC, which can be a result of the price drop in this segment over the last years.

359 The share of travelers using interurban rail is much higher in Switzerland than in the other countries, as  
 360 the main airports in Switzerland are very easy to access with the train. As the airport in Switzerland is recently  
 361 accessible with an urban public transport, this share will increase further. The high share of urban public  
 362 transport for the countries beside Switzerland is mainly because of the Busses which connects the airports in the  
 363 most cases with the cities. The overall use of public transport (without taxis) as a mean to access the airports is in

364 Switzerland (44%; 42%) is higher than for the other countries, (Germany: 34%, Portugal: 29% and Czech  
365 Republic: 32%) but the differences are smaller than for the overall mode share.  
366

367

**TABLE 4** Mode share for long distance travel by survey and country

Journeys > 100 km - Total *	Kuhnimhof et al. Germany	KITE Portugal	KITE Czech Repulic	KITE Switzerland	Swiss MC
Main modes of travel [%]					
Car	70	67	75	51	60
Bus	4	11	3	4	4
Train	12	5	10	28	22
Air	10	16	12	14	12
Ship	1	2	0	0	0
Other	3	-	-	-	3
Airport access mode [%]	Germany	Portugal	Czech Repulic	Switzerland	
Interurban Rail	12	6	7	38	40
Urban Public Transport	21	23	25	6	6
Taxi	18	13	12	3	6
Car	48	58	56	53	48
Bike	0	0	0	0	0
Other (incl. walk)	1	0	0	0	1

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369

**CONCLUSIONS**

370 This paper presented basic figure on European long distance travel demand based on the new survey approach  
 371 and protocol piloted by the KITE project. The survey resulted in credible estimates of the number of long  
 372 distance journeys, especially after a correction involving the information about the last long distance journey and  
 373 the information about regular journeys. The response rates were in the expected range for a survey of this  
 374 complexity.

375 With respect to long distance travel surveying the methodology used is very important as well as the  
 376 correction of the data with suitable methods. Use of the response of persons which have undertaken a long  
 377 distance journey during the reporting period along with inclusion of the not so frequent long distance traveler  
 378 makes a difference, even though long distance travel demand is dominated by frequent travelers.

379 Although the initial results from the analysis show plausible results, there are still artifacts from the  
 380 survey methodology, which need to be analyzed further. The first is the differences which are caused by the  
 381 face-to-face interview compared to the CATI interview methodology. For future work, it would be very  
 382 interesting to see results of a survey of the size of DATELINE, but with the methodology suggested here. It  
 383 would also be important to extend the survey period over a whole year to correct any seasonal variations.

384 As pointed out in the beginning of the paper, currently significant data gaps with respect to long  
 385 distance travel exist in Europe. There is demand for such data from transportation planners as well as from the  
 386 tourism sector. With National Travel Surveys with focus on everyday travel on the one hand as well as tourism  
 387 surveys concentrating on journeys with overnight stays on the other the two sectors have managed in the past to  
 388 cover most of their data needs. However, there is increasing need for long distance travel data by transportation  
 389 planners. Large parts of what transportation planners need are covered by tourism surveys. Vice versa, the  
 390 tourism sector increasingly calls for data covering long distance travel without overnight stays. This again is  
 391 covered in large parts in NTS surveys. It seems likely that synergies with benefits for both sides can arise if  
 392 transportation and tourism joined forces and combined their existing instruments NTS and tourism surveys.

393 However, experiences with long distance travel surveys in the past have illustrated that specifically  
 394 reliable data on travel which is not anymore quotidian but not yet typical tourism is difficult to obtain. The  
 395 survey methodology presented in this paper offers a perspective here: A Europe-wide uniform survey in the  
 396 suggested format would not help to obtain important data to support transportation policy making at all levels. In

397 addition, it would serve as an important hinge in bringing together the transportation and tourism sector by  
 398 closing existing data gaps between both.  
 399

#### 400 ACKNOWLEDGEMENTS

401 The paper presents results that have been generated in the context of the KITE project. The KITE project is  
 402 funded by the European Commission DG Energy and Transport in the Sixth Framework programme  
 403 (TREN/06/FP6TR/S07.66711/038682-KITE). This support is gratefully acknowledged, as are the comments  
 404 and contributions of our project partners.  
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