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THE CHARACTERISTICS OF EUROPEAN PASSENGER TRAVEL DEMAND

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CONTENTS

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ABSTRACT

This paper reviews available evidence to provide an account of historical trends and existing travel characteristics in the European long distance travel market of which international travel is of particular importance. A number of sources of information are used, particularly with regard to the extent of international trip making and its modal and journey purpose features, with the aim of obtaining the most appropriate figures with which to represent European international travel in general.

The purpose of the research was to provide information for other aspects of a study examining the social and economic impacts of a European High Speed Rail Network. It is evident that a distinction needs to be made between the characteristics of inter-regional and international travel and that detailed evidence concerning international short stay personal and business trips is lacking.

An accompanying paper draws upon the information provided in this paper, along with evidence regarding the determinants of changes in demand, to identify 'niches' in the European international travel market for High Speed Rail.

THE CHARACTERISTICS OF EUROPEAN PASSENGER TRAVEL DEMAND

1. INTRODUCTION AND OBJECTIVES

The research reported in this paper forms part of a larger project which examined the socio-economic impacts of a European High Speed Rail (HSR) Network. It was undertaken by a consortium of HFA, Leeds University Institute for Transport Studies and PA Cambridge Economic Consultants for DG VII of the Commission of the European Communities.

The purpose of this and an accompanying paper (Wardman, 1992) is to provide an understanding of historical trends, existing travel characteristics and the influence of exogenous and transport system factors on demand. This provides a context for other aspects of the study and will also allow the identification of the relevant markets for HSR. The scope of the paper is long distance passenger travel within Europe, denoted inter-regional travel, of which international travel is particularly important.

Section 2 describes the principal sources of information upon which this paper has drawn. Section 3 provides a detailed overview of the international and inter-regional passenger travel markets, examining the extent of trip making and its characteristics, particularly in terms of journey purpose and modal shares. Section 4 examines available evidence according to the purpose categories in further detail. The accompanying paper (Wardman, 1992) draws on this information of market characteristics, along with available evidence regarding the determinants of demand, to identify 'niches' for HSR in the international context.

It is worth noting that the generalised nature of the figures given conveys a false impression of uniformity. We have disaggregated the figures where it is useful and possible to do so, but there is clearly a practical limit to such disaggregation. Given the inevitability of presenting generalised figures, we have tried to ensure that these are the most appropriate and representative for the markets under consideration.

2. MARKET CHARACTERISTICS: DATA SOURCES

Atkins (1991) states that, "There is relatively little information on passenger movements in the EC". Our experience is that the amount of information compares favourably with that available for domestic long distance travel. The main shortcoming, although not unexpected when dealing with somewhat disparate sources of information, is the degree of conflict between some of the data. In reviewing the European travel market, we have drawn on the following main sources of data:

a) TRANSES Model (TASC)
b) OECD Study
c) KONSO Study
d) UK International Passenger Survey
e) Faits et Opinions Study
f) EUROSTAT publications
g) OECD International Travel Statistics

Some of the numerous other studies which have been reviewed also provide relevant insights, although it is sometimes unclear as to whether they provide an independent source of information and how reliable the information is.

The TRANSES (1991) model (TASC) is a traditional multi-stage aggregate model based on regional zones. We were provided with O-D matrices listing the number of inter-regional and international trips by each mode. Summary statistics were provided which allow a breakdown by purpose for inter-regional but not international trips.

The OECD survey involved 5000 household interviews in the EC in 1974 about trips exceeding 80km in the previous year. The results are contained in OECD (1977), but their usefullness to this study is limited since only 16% of the trips were international. The OECD study is potentially confusing in that it reports survey statistics relating to 1973 and also estimates for 1970 from a traditional multi-stage transport model. The information is here used in the absence of more recent relevant information and also for comparison purposes.

The KONSO (1989) report is particularly important in the context of this study since its purpose was to analyse international journeys within Europe. An international journey was defined as between at least two of 14 European countries (12 EC countries plus Austria and Switzerland) which was at least 50km from the traveller's home or included an overnight stay. The 14 countries were divided into 72 regions and two samples were drawn for each region. The first was a panel of 20 people who travel abroad four of more times a year and who were extensively questioned about all journeys made between April 1985 and March 1987. The second was a representative selection of 200 people who travelled abroad between one and three times in the year commencing April 1986. The sampling was undertaken so that simultaneously a representative spot-check sample of the non-internationally journeying population resulted.

The UK International Passenger Survey (IPS) is conducted annually and covers trips to and from the United Kingdom. It provides a detailed breakdown of trips by air and sea, for example, by purpose, origin/destination, and nights away. Whilst UK zones are coded at a regional level, regional zones for Mainland Europe are only available for July 1986 to June 1987 as a result of additional data collection funded by Eurotunnel. The IPS differs from surveys conducted in other EC countries in being more comprehensive, for example, it covers all purposes and not just trips of at least 4 days duration.

Faits et Opinions (1987) report on the holidaymaking patterns of EC residents in 1985, based on a survey of 11,840 individuals. Holidays are defined as stays away from home of four days or more, and include both domestic and international holidays. Although the latter can be separately identified, most of the interesting segmentations which are reported are with regard to holidays in general. Whilst national tourist boards conduct surveys, this study is unique in providing a community wide overview based on a consistent set of questions.

The EUROSTAT publications contain travel statistics collected independently by national governments. This gives rise to inconsistencies between the statistics for each country. Moreover, the statistics are often not comprehensive and there are doubts surrounding

their accuracy in some instances (for example, see the very large decline in recorded arrivals in Germany by road between 1980 and 1987).

OECD (1989) provides available national and international tourist statistics for the 24 OECD countries and the international statistics generally cover non-business trips of at least 4 days duration. It contrasts with EUROSTAT in that it lists international departures rather than recorded arrivals. It is stated that, as a general rule, the figures should be regarded as orders of magnitudes to show general trends, thereby partially offsetting the lack of comparability.

A notable omission from our data sources is the European Travel Monitor, organised by the European Travel Data Center, Luxembourg. This is the most up-to-date and detailed source of information on the amount and characteristics of international trip making by Europeans: at least 200,000 people are interviewed each year, providing details of at least 40,000 trips. However, the cost of acquiring data from this source was beyond the means of this study.

3. MARKET CHARACTERISTICS

3.1 The extent of and trends in european long distance travel

The TRANSES data supplied to us allows a distinction to be made between inter-regional and international European trips by each mode. The OECD (1977) report contains estimates of the number of inter-regional and international trips for 1970. These estimates are derived from traditional multi-stage transport models. Table 3.1 sets the scene by presenting the estimated number of inter-regional and international trips (the total of one-way movements) by mode in 1970 and 1987 for the 12 EC countries, Austria and Switzerland.

TABLE 3.1:INTER-REGIONAL AND INTERNATIONAL MOVEMENTS (in 000's)

	OECD 1970			TRANSES 1987		
	(i) INTER-REGIONAL	(ii) INTER-NATIONAL	% (ii)	(i) INTER-REGIONAL	(ii) INTER-NATIONAL	% (ii)
ALL	1,803,600	362,400	20%	3,503,115	573,502	16%
CAR	1,200,000	213,000	17%	2,733,859	428,511	16%
RAIL	415,200	64,800	16%	475,147	38,253	8%
AIR	108,400	61,400	57%	140,280	82,660	59%
BUS	80,000	23,200	29%	153,827	24,090	16%

Sources: OECD (1977) Table 3.17, excluding Yugoslavia and Turkey, and TASC Model

With the noticeable exception of air, international trips form, as expected, a small proportion of all inter-regional trips. The large proportion of air trips which are international reflects the attractions of air for longer distance travel. The above average proportion of international in relation to inter-regional bus trips in 1970 is presumably a combination of the success of the bus in the international holiday market and poorly developed or strictly regulated domestic long distance bus services. Although the study by Faits et Opinions (1987) includes intra-regional as well as inter-regional trips, it estimates international holiday trips within Europe to form around 23% of all holiday trips within the EC. This figure corresponds reasonably well with Table 3.1.

Table 3.2 lists the proportionate increases in travel demand by mode apparent from Table 3.1. It can be seen that, with the exception of air, inter-regional travel demand increases at a greater rate and there are plausible reasons why this should be so. Short stay personal (SSP) trips are likely to be more dominant in inter-regional than international travel, particularly since time constraints and barriers to cross-frontier travel make them less worthwhile or feasible in an international context, and they can be expected to grow at a faster rate than holiday trips as disposable income increases. This is because the amount of time available to make additional weekend and short stay trips exceeds that available for additional holidays. Moreover, day and short-stay trips are strongly influenced by income and car-ownership whilst the number of short stay attractions would seem to be growing at a faster rate than the number of holiday attractions. In addition, transport infrastructure and service improvements are more commonly tailored to domestic travel. Hence we would expect inter-regional travel to grow at a faster rate than international travel. The increasing competition from air in the international market will have contributed to the decline in international rail trips and the low increase in international bus trips.

TABLE 3.2:GROWTH IN TRAVEL 1970-1987

	INTER-REGIONAL	INTER-NATIONAL
ALL	94%	58%
CAR	127%	101%
RAIL	14%	-41%
AIR	29%	35%
BUS	92%	4%

Excluding anomalous figures for arrivals in Germany, EUROSTAT (1990a) indicates an increase between 1980 and 1987 of 26% in arrivals by all modes to France, Greece, Italy, Spain, Portugal and the United Kingdom from other EC countries. This is an average increase per annum of 3.7%, which compares favourably with a figure of 3.4% between 1970 and 1987 for international trips apparent from Table 3.2.

AIMSE (1990) state that GDP increased by 2.5% per year in Western Europe between 1970 and 1988. Using an elasticity of trips to GDP of 1.5 implies a growth in traffic between 1970 and 1987 of 78% which is consistent with the figures in Table 3.2.

CEC (1990a) state that railway passenger traffic increased by 1% a year between 1973 and 1980 and has been stable since then. This was the result of steady growth in suburban and national inter-city travel, which counterbalanced losses on traditional medium distance services. On the other hand, international rail passenger traffic decreased at a rate of 2% per year from 1980. These figures confirm the trends in Table 3.2. According to Bendixson (1989), however, the IUR believe that European international rail travel showed a 20% increase on relevant routes in 1987 following the introduction of the renamed (and presumably remarketed) 'EuroCity' services on the continent.

According to CER (1989), European international air travel increased by 56% between 1975 and 1986, which exceeds the figure in Table 3.2, whereas rail's traffic increased by 4% between 1975 and 1980 but then fell by 9% between 1980 and 1986, which is again at odds with Table 3.2. By comparison, national and international road traffic is stated to have grown by 65% between 1970 and 1986 and this figure corresponds well with Table 3.2.

Savelberg and Vogelaar (1987) state that the passenger kilometres on European air scheduled services increased at an average of 8% per year between 1984 and 1988 and non-scheduled traffic increased by 4.4% per year between 1978 and 1988. This is further evidence that the air growth rate in Table 3.2 is too low.

When compared with other evidence and expectations, Table 3.2 seems to provide a satisfactory account of past trends, with the notable exception that the change in the number of air trips is too low. Thus the OECD and TRANSES figures show a reasonable degree of consistency. However, it is not surprising that there are other conflicting estimates of the absolute amount of current international travel.

KONSO (1989) claims that there were about 200 million international single trips in 1986/87 within the EC plus Switzerland and Austria. This certainly conflicts with the figures in Table 3.1; it is less than the OECD estimate for 1970! Table 3.3 presents 1987 country to country flows derived from four sources: TRANSES, KONSO, EUROSTAT (1990a) and IPS (UK DTp, 1990).

This comparison with official statistics, and it must be remembered that the latter may themselves be inaccurate, suggests that the KONSO estimates are too low but it does not suggest that the TRANSES figures are too high. However, according to EUROSTAT (1990b) there were 20 million international (single) rail trips in 1987. Using KONSO's estimate of an 8% market share for rail (indeed the TRANSES figure for international trips is 7%) would imply a total market of around 250 million trips in comparison with KONSO's 200 million. In other words, EUROSTAT's 20 million rail trips is much less than the 38 million estimated by TRANSES but consistent with the KONSO survey estimate of 16 million.

Table 3.4 presents a further comparison of KONSO with official statistics in terms of total departures to other EC countries plus Austria and Switzerland. OECD (1989) statistics are presented for six countries which supplied estimates of departures. All the OECD

figures relate to trips of at least four days duration and most relate to non-business trips. Thus we have compared them with KONSO's estimates of holiday departures. Whilst some of what KONSO categorise as holiday trips will be for less than four days duration, their visiting friends or relatives category will contain trips in excess of four days duration.

TABLE 3.3:COMPARATIVE TRAVEL FLOWS (DEPARTURES IN 000's)

	Transes	Konso	Eurostat		Transes	Konso	IPS
D-E	5,457	5,950	6,858*	GB-I	2,057	1,750	1,532
D-GR	1,395	1,190	1,356*	GB-D	3,736	2,000	2,173
D-I	7,103	6,900	10,702*	GB-E	7,896	6,700	7,404
D-F	18,365	5,800	9,367*	GB-F	5,972	3,600	10,382
F-I	5,207	3,000	11,840	GB-NL	2,485	1,000	2,376
F-E	6,706	3,100	12,714	GB-B	1,511	3,000	2,430
F-GR	495	285	608	GB-GR	1,579	1,750	1,990
F-P	1,721	625	662	GB-P	1,270	850	1,131
I-E	1,075	1,000	1,781	GB-DK	444	450	335
I-GR	135	215	653	Σ=	26,950	21,100	29,753
I-P	225	630	378				
Σ=	47,884	28,695	56,919				

Notes: * EUROSTAT does not provide data on flows into Germany. The ratios of German arrivals and departures in KONSO are used to estimate arrivals in Germany given German departures. EUROSTAT figures for Greece and France record only tourist arrivals.

TABLE 3.4:INTERNATIONAL HOLIDAY DEPARTURES (in 000's)

	KONSO	OECD
AUSTRIA	1,740	1,100
FRANCE	4,240	6,330
GREAT BRITAIN	14,940	13,320
ITALY	1,840	2,000
NETHERLANDS	6,750	6,390
SWITZERLAND	3,300	3,800
Σ=	32,810	32,940

There is a very close correspondence between the KONSO and OECD figures. The study by Faits et Opinions (1987) estimates that 140 million Europeans took holidays in 1985, and that around 20% were to other EC Countries. This implies around 56 million single

international holiday trips which contrasts with KONSO's estimate of 140 million. TRANSES purpose shares are not available to us for international travel and using the figure of 16% for inter-regional travel (see Table 3.10) implies 92 million international holiday trips. However, using the figure of 30% holiday trips, on the basis of the OECD estimates for international travel (see Table 3.10), would imply 172 million international holiday trips. Cleverdon Steer (1990) estimate the volume of international holiday trips within Community countries plus Swizerland and Austria to be 171 million in 1988. Although there may be some discrepancy between the studies due to differences in the definition and interpretation of what is a holiday trip, consideration of these various figures suggests that the Faits et Opinions estimates are too low and that the TRANSES purpose shares for inter-regional travel are not appropriate to international travel. There is no strong evidence to suggest that KONSO have understated the amount of holiday travel.

The growth rates predicted by TRANSES are given in Table 3.5. The most striking feature of these figures is that international travel is forecast to increase by a somewhat greater amount than inter-regional trips. In particular, international rail trips are forecast to increase whereas several sources have indicated a decline in recent years. Whilst barriers to international travel could be reduced in the coming years, the forecasts are in stark contrast to Table 3.2 where plausible reasons were advanced for the greater rate of growth in inter-regional trips. Assuming negligible population growth, a GDP elasticity for all trips of 1.5 and a 2.5% annual increase in GDP, the growth in trips would be 57% by 2000 and 149% by 2015. These correspond closely with TRANSES' predicted growth rates for inter-regional travel and clearly a higher income elasticity (see section 2.2 of Wardman, 1992) has been used for international travel.

TABLE 3.5:PREDICTED 'DO NOTHING' GROWTH IN RELATION TO 1987

	INTER-REGIONAL		INTERNATIONAL	
	2000	2015	2000	2015
ALL	61%	162%	82%	228%
CAR	67%	180%	87%	244%
RAIL	30%	69%	49%	129%
AIR	66%	184%	77%	222%
BUS	40%	99%	56%	139%

Different sources of information provide conflicting evidence as to the extent of European travel. The two most comprehensive accounts of European travel are provided by TRANSES and KONSO. TRANSES estimate nearly three times as many international trips as KONSO. Bearing in mind the size of the KONSO sample and the nature of the models used by TRANSES, it is clear that there is considerable room for error in both studies. After comparison with other evidence, we believe that the KONSO figures are nearer the 'truth', but more detailed analysis, which is beyond the scope of this study, is needed to derive firm conclusions.

3.2 Modal shares

Table 3.6 presents modal share estimates from several studies. The TRANSES market share estimates show car to be dominant and that there is little difference between inter-regional and international trips. We would expect car to have a high share of inter-regional trips, on the basis of national statistics for long distance domestic travel, and the OECD survey statistics for 1973 also suggest this, although they are admittedly somewhat dated. Table 3.17 of OECD (1977) also shows relatively minor differences in the estimated modal shares between domestic long distance and international trips; being -10 percentage points for car, -6 for rail, +14 for air and +2 for bus. We might expect the car and air differences to be somewhat larger than OECD and TRANSES estimate, since air is a very attractive option for international holiday and business trips over longer distances.

TABLE 3.6:MODAL SHARE ESTIMATES

	Transes1 1987	Transes2 1987	OECD 1973	Konso 1986/7	Eurostat 1987	F&O 1 1985	F&O 2 1985
CAR	78%	75%	76%	45%		78%	52%
RAIL	14%	7%	14%	8%	5%	14%	11%
AIR	4%	14%	5%	30%	21%	1%	32%
BUS	4%	4%	2%	9%		8%	13%
ROAD					74%		

Notes: Transes 1 and 2 are inter-regional and international respectively. F&O 1 and 2 are Faits et Opinions (1987) figures for domestic and international holiday trips (which do not sum to 100% due to multiple answers). Eurostat figures are for tourist arrivals in France, Greece and Great Britain, and for all visitors to Germany, Italy, Spain and Portugal. The OECD and KONSO figures contain 3% and 8% respectively for 'other'.

The expectation that car is somewhat less dominant in the international market, and other evidence presented here, leads us to suspect that the TRANSES and OECD models cannot adequately explain variations in modal shares. Given that the models are likely to have made more use of inter-regional than international data, we suspect that the inter-regional figures are more accurate and indeed they seem highly plausible.

If we consider the TRANSES estimates of trips by each mode for distances over 500 kilometres, where international trips are likely to be much more dominant, the market shares of car, train and air are 52%, 21%, and 27% respectively. These would seem to provide a more reasonable characterisation of international travel. Further evidence of our concerns surrounding the TRANSES international market share estimates is provided in Table 3.7, which presents the forecast international market shares for the years 2000 and 2015 under the 'do nothing' scenarios, along with the 1987 figures. Such

stability in market shares between 1987 and 2015 can hardly be expected and is inconsistent with past trends.

TABLE 3.7:TRANSES FORECAST INTERNATIONAL MODAL SHARES

	1987	2000	2015
CAR	75%	77%	78%
RAIL	7%	5%	5%
AIR	14%	14%	14%
BUS	4%	4%	3%

The KONSO (1989) study provides what appear to be more reasonable market share estimates for international travel. However, it would be prudent to compare its results with other sources. The IPS is considered to be a reliable source of information on international travel, but its usefullness is limited because it relates only to trips to and from Great Britain and these are distinctly different in many respects from international European trips in general. However, its market share estimates are directly comparable with KONSO's estimates for Great Britain. The market shares, for departures and arrivals separately, are given in Table 3.8. The degree of correspondence is very satisfactory.

TABLE 3.8:MODAL SHARE ESTIMATES FOR U.K.

	DEPARTURES		ARRIVALS	
	KONSO	IPS	KONSO	IPS
AIR	68%	54%	51%	66%
CAR	10%	19%	17%	12%
COACH	9%	14%	9%	8%
FOOT		11%		11%
RAIL	2%		8%	
OTHER	11%	2%	15%	3%

Further corroboration of the KONSO results and evidence of a dichotomy between inter-regional and international trips is provided by the Faits et Opinions (1987) results in Table 3.6. The latter show that international holiday trips within the EC are somewhat less dominated by car and air takes on a much more important role. Whilst the Faits et Opinions and TRANSES shares for inter-regional travel correspond very closely, the TRANSES car share for non-holiday international trips would have to be unreasonably high to reconcile their market share estimates with those of Faits et Opinions.

The EUROSTAT (1990a) figures for 1987 are more in line with the TRANSES figures. Given the other evidence presented here and our hypotheses regarding likely market

shares in different contexts, this leads us to doubt the EUROSTAT figures. There are clearly anomalies in the EUROSTAT data and it is not comprehensive.

From the point of view of rail demand forecasting, it could be argued that the modal share differences that do exist between TRANSES and KONSO for international travel are immaterial since they give very similar rail market shares. However, it is important to accurately estimate the shares of air and car since the extent to which rail can attract travellers from these two modes is likely to be different.

It seems clear, and further strong evidence is provided in OECD (1989), that a distinction should be made between inter-regional and international trips in terms of market share characteristics. This is analagous to distinctions which are made between urban, suburban and long distance travel in a domestic context. In particular, the car share is somewhat lower and the air share somewhat higher for international travel. On balance, we prefer the KONSO figures for international trips, perhaps with a slightly higher share for car and a slightly lower share for air, whilst the TRANSES figures are quite acceptable for inter-regional trips.

Whilst the car is the dominant mode in both the inter-regional and international markets as a whole, variations in market shares can be expected between countries (and within countries between different routes). KONSO provides modal share estimates for departures from each country and these are given in Table 3.9, along with estimates contained in OECD (1989).

Disregarding the anomalous OECD figures for Spain, there is an extremely high degree of similarity between the OECD and KONSO figures. Whilst the OECD figures relate to trips of four or more nights duration, generally for purposes other than business, the KONSO sample is dominated by holiday trips.

The car is the dominant mode except in what might be termed peripheral countries which are isolated from many other EC countries either by distance or by the sea or both. The latter countries are Greece, Italy, Spain, Portugal, Great Britain and Ireland, and car here achieves lower shares whilst the relatively large proportion of air trips is noticeable. Car ownership levels may also have a bearing: although there are correlations with other factors, there is a tendency for those countries with a lower car share to be associated with fewer cars per head of population. Rail plays a less minor role in French and Italian departures where generally reasonable rail services combine with relatively low fares. The bus is the second most important means of transport for Greek and Portuguese departures. Given bus is generally cheap, this may reflect general levels of disposable income.

The notable features concerning arrivals are that car achieves over a 50% share of arrivals in Denmark, Luxembourg, Austria, Belgium, Netherlands, Switzerland, France, and Germany, whilst air is the most important for arrivals in the peripheral countries of Greece (84%), Spain (63%), Great Britain (51%), Portugal (42%) and Ireland (31%). The highest train share of arrivals is around 10% for Switzerland, Austria and Italy.

TABLE 3.9:DEPARTURE MODAL SHARES BY COUNTRY

	C-O	CAR		AIR		BUS		TRAIN	
		K	O	K	O	K	O	K	O
NL	34%	64%	65%	14%	17%	10%	10%	5%	5%
L		64%	n/a	13%	n/a	7%	n/a	14%	n/a
D	42%	59%	61%	18%	22%	9%	9%	7%	7%
B	34%	59%	58%	17%	16%	10%	11%	10%	11%
F	38%	50%	44%	22%	32%	9%	6%	14%	12%
CH		49%	52%	28%	22%	6%	7%	14%	15%
A		48%	55%	23%	22%	13%	12%	10%	9%
P	22%	48%	n/a	14%	n/a	25%	n/a	10%	n/a
DK	29%	38%	32%	40%	35%	11%	17%	7%	8%
E	24%	37%	92%	36%	6%	19%	0%	4%	2%
I	39%	36%	40%	36%	24%	8%	6%	13%	19%
IRL	20%	14%	n/a	52%	n/a	4%	n/a	7%	n/a
GR	13%	13%	*	58%	47%	18%	*	4%	6%
GB	31%	10%	11%	68%	67%	9%	12%	2%	3%

Notes: C-O is an estimate of car ownership in that country (stock of cars as a proportion of population). K denotes KONSO estimate and O denotes OECD (1989) estimate. The latter figures are for the most recent year available. * 38% for car and bus combined for Greece.

3.3 Journey purpose splits

Table 3.10 presents estimates of proportions travelling for different purposes from a variety of sources. It can be seen that there is a good deal of conflict between the studies. The most noticeable feature is the different proportions attributed to holidays and SSP by OECD, TRANSES and KONSO. Whilst the OECD figures are dated, both the TRANSES and OECD estimates suggest that SSP trips are dominant, whereas KONSO indicates that most trips are for holiday purposes. We have reasons to suspect that KONSO provides a more accurate account of the characteristics of international trip making; indeed, doubts were raised in section 3.1 as to the appropriateness of the TRANSES inter-regional purpose shares to the international travel market. However, different definitions of purpose could also be a contributory factor.

An important factor in explaining the difference in purpose splits between TRANSES/OECD and KONSO is that the studies represent different types of trips. The

TRANSES figures are based on inter-regional trips, since a purpose breakdown for international trips was not available to us. The OECD 1973 estimates, which are survey based, are similar to TRANSES and also relate to inter-regional trips. OECD1 and OECD2 are model estimates for inter-regional and international trips. They again show a dominance of SSP which we feel to be plausible for inter-regional but not international trips. KONSO is based exclusively on international trips.

TABLE 3.10: JOURNEY PURPOSE SPLITS

	OECD 1973	OECD1 1970	OECD2 1970	TRANSES 1987	KONSO 1986/87	NTS1 1978/79	NTS2 1978/79
BUS	25%	16%	11%	27%	14%	22%	15%
HOL	25%	33%	34%	16%	70%	22%	52%
SSP	50%	51%	55%	57%	10%	56%	33%

Notes: OECD 1973 is based on the survey data. OECD1 and OECD2 are model output for inter-regional and international trips. NTS1 and NTS2 are derived from the UK National Travel Survey and represent trips between 25 and 42km and over 42km respectively. The TRANSES shares are for inter-regional travel.

We would expect holiday trips to form a larger proportion of international trips than inter-regional trips given the increasing preference for holidays abroad and that international SSP trips, particularly day trips which are common for domestic travel, are somewhat less feasible than inter-regional SSP trips. According to OECD (1977), the average trip length of SSP trips was 150km, reflecting time constraints, and that of holiday trips was 500km, whilst figures for the Netherlands (EUROSTAT, 1989) show that only 16% of short holidays were abroad whereas 58% of long holidays were abroad. The OECD study identified weekend trips as forming almost all of the SSP trips. These included:

a) Journeys to second homes in the country or by the sea
b) Weekly commuting between city and provinces
c) Day excursions exceeding 80km
d) Longer weekends away

The first two of these categories were identified as leading to high trip rates. However, in an international context, only the latter two categories are likely to have any significance.

The figures given for NTS in Table 3.10 confirm our expectations; noticeably the proportion of SSP trips falls with distance whilst the proportion of holiday trips increases. Indeed, if we examine TRANSES's estimates for trips in excess of 500 kilometres, where international trips are likely to dominate, we find that the business share is 30%, the SSP share is 30% and the holiday share is 40%.

We have again compared the KONSO figures with those from the IPS. Table 3.11 provides purpose splits for KONSO and IPS for departures from Great Britain and it can be seen

that there is a high degree of correspondence between the two. Although KONSO may have overestimated the proportion travelling on holiday, which may be due to definitional problems as discussed below, this comparison suggests that the KONSO figures are more appropriate than the TRANSES/OECD figures for representing international travel.

TABLE 3.11: PURPOSE SPLITS FOR UK DEPARTURES

	KONSO	IPS
HOLIDAYS	83%	74%
BUSINESS	9%	13%
VFR	5%	9%
OTHER	3%	4%

There are definitional problems which will lead to differences between some studies. The OECD questionnaire specified the purposes of holiday, weekend and business, and presumably TRANSES has the same basis. However, both KONSO and IPS specify the purposes of visiting friends or relatives (VFR), holiday and business.

It could be that OECD understates the amount of SSP travel, since there is no category for SSP trips undertaken midweek, although this is unlikely to be a major problem. The KONSO figures may be subject to a certain arbitrariness when travellers are holidaying with friends or relatives; Faits et Opinions (1987) reveals that 11% of those travelling to other EC countries on holidays (of more than 3 days duration) were staying with friends or relatives.

The main problem with KONSO is that SSP is potentially underrepresented since there is no appropriate purpose category, although only 21% of all trips involved 3 or less nights away. Output from the European Travel Monitor which we have seen relates to trips from Eastern Europe. It gives shares of 20% for short holidays (1-3 nights), 37% for long holidays, 17% for VFR and 26% for business. However, Eastern Europe is not necessarily typical of the EC. According to the IPS, only around 10% of those making holiday trips spent less than four nights away from home. This would suggest that KONSO's underestimation of SSP is slight. On the other hand, IPS indicates only 13% of those travelling to see friends or relatives spent less than four nights away from home, and this would suggest that KONSO has overstated SSP trips! However, the length of time away for trips to and from Great Britain is not necessarily typical of international EC trips as a whole.

Two issues arise from this discussion of purpose. Firstly, it seems appropriate to distinguish between inter-regional and international trips. Secondly, journey purpose needs to be clearly defined.

International trips will contain a larger proportion of holiday trips at the expense of SSP trips, and KONSO's figures are preferable in this respect. However, there may be a moderate amount of overestimation of the holiday share, which is suggested by comparison with the IPS figures, whilst KONSO states that the proportion of day trips is

understated at least for Central Europe. The OECD/TRANSES figures seem plausible for inter-regional travel.

The reason for distinguishing between journey purposes is because they may influence travel behaviour; for example, time pressures, elasticities and mode choices differ between SSP, holiday and, in particular, business trips. The more important dimension within the leisure category would seem to be the number of nights away rather than whether anyone is being visited, although the latter may still be important. Within the holiday category it would seem to be useful to distinguish between independent and inclusive tour holidays, both from the point of view of different mode choice parameters and also possibly proxying differences in the underlying socio-economic characteristics of travellers. According to the IPS, 59% of the holiday category was inclusive tour, although the figure differed between 69% for air and 39% for sea. For international holidays throughout the EC countries as a whole, Faits et Opinions (1987) estimate that 32% could be defined as inclusive tour.

We might therefore ideally specify the following categories:

a) Business Short Stay
b) Business Long Stay
c) Inclusive Tour Holiday (Long Stay)
d) Independent Holiday (Long Stay)
e) VFR Short Stay
f) VFR Long Stay
g) SSP

In addition, independent holidays could distinguish between fixed location and touring whilst SSP could be split into organised and independent trips.

The separate categories can be identified by combining information on purpose, accomodation and nights away (and it could be done with the KONSO data although it is not reported in sufficient detail). Distinctions should only be maintained between purposes if they are warranted from the point of view of providing a better understanding of travel behaviour and if suitably disaggregate information, such as the number of trips, forecasting models, demand elasticities and values of time, is available.

Purpose can be expected to vary across countries. KONSO (1989) reveals considerable variation and this is given in Table 3.12.

Holiday trips are noticeably dominant in countries with less favourable holidaying climates, such as Great Britain, Belgium, Germany, the Netherlands and Ireland, whilst holidays form a lower proportion of international trips in countries with a large number of touristic opportunities, notably Spain, Italy and Greece.

The high proportion of VFR trips from Greece could be due to visits to migrant workers or emigrants whilst there are strong family ties between Ireland and Great Britain. Other countries with a higher than average proportion of VFR trips tend to have borders with countries which speak the same language and thus cultural or family ties could be greater.

TABLE 3.12: DEPARTURE PURPOSE SPLITS BY COUNTRY

	HOL	BUS	VFR	SIGHT	OTHER
GB	83%	9%	5%	1%	2%
B	80%	5%	9%	4%	2%
D	77%	8%	5%	7%	3%
NL	75%	12%	7%	3%	3%
IRL	71%	10%	17%	1%	1%
P	65%	11%	5%	17%	2%
L	63%	10%	19%	6%	2%
A	58%	14%	14%	8%	6%
CH	55%	23%	14%	6%	2%
F	53%	15%	14%	15%	3%
DK	50%	34%	5%	6%	5%
I	44%	28%	10%	13%	5%
E	40%	36%	7%	11%	6%
GR	21%	23%	18%	30%	8%

3.4 Purpose and modal interactions

There are clearly what might be termed interactions between journey purpose and mode split. The choice of mode is likely to be influenced by journey purpose and such information could prove useful in identifying niches for HSR; for example, a faster train service may attract more business travellers who are making day trips than those making longer trips whilst improved scheduled air services may have a lesser impact where most people are travelling on inclusive tours.

Although the KONSO and TRANSES studies are able to segment by both mode and purpose for international travel, such segmentations are unfortunately not provided. However, segmentation of the TRANSES inter-regional data by both mode and purpose does provide some useful insights. The available evidence will be presented in Section 4 under the discussions for each purpose separately.

3.5International departure rates

KONSO cites the departure rate for international travel within the EC as 21.4%. There is, however, considerable variation in the international departure rate between countries as is evident from Table 3.13.

TABLE 3.13: INTERNATIONAL DEPARTURE RATES

L	B	D	CH	DK	NL	A
48%	47%	45%	44%	37%	32%	28%
14.9	12.9	14.3		14.5	12.3	
GB	IRL	F	P	E	I	GR
24%	21%	10%	8%	7%	5%	3%
11.8	8.2	13.3	5.5	9.1	10.8	6.8

Notes: In addition to the departure rates for each country, this table also lists 1985 GDP per capita based on parity of purchasing power in ECU's (000's) taken from Faits et Opinions (1987).

The principal reasons behind the inter-country variation in international departure rates seem to be:

a)Climatic and geographical features influence a country's departure rate. Countries which have more opportunities for holidays in the sun and at the seaside and also winter sports will tend to have a lower departure rate. This will contribute to the relatively low departure rates observed in Greece, Italy, Spain, Portugal and France and, conversely, to the high Northern European departure rates.

b)Countries with higher real incomes will tend to have a higher departure rate and the link with real income, although confused with other effects, is apparent in Table 3.13. The Northern European countries and Switzerland tend to have relatively high living standards and high departure rates. Economic factors will also have a bearing on multiple trip making, which was observed to be highest in Luxembourg, Belgium, Switzerland and Great Britain.

c)Travel impedance factors will influence the departure rate. Hence the peripheral nature of Greece, Spain, Portugal, Ireland, Great Britain and Italy, associated with generally poor transport links and/or sea crossings, leads to relatively low departure rates in these countries.

d)Smaller countries will have shorter distances to the border and hence tend to have more border crossings, whilst centrally located countries have more destination opportunites, along with their relatively low proportion of coastline. These factors would seem to contribute to the high departure rates in Luxembourg, Belgium, Switzerland, Denmark and Germany.

Variations in international departure rates can be satisfactorily explained by one or a combination of these four factors. Thus the low departure rate for Greece is hardly surprising given its isolation, its relatively large number of domestic tourist opportunities and its relatively low income per capita. Conversely, Luxembourg has a very high departure rate for all the opposite reasons. However, France has a low departure rate for

its high income and close proximity to many other countries. This is largely due to the strong preference of the French for holidaying in their own country.

Table 3.14 presents statistics from a different source (Faits et Opinions, 1987) relating to the proportion of holidays which are taken abroad for all EC countries, the proportion of the population who have visited (for any purpose) at least one other EC country and the average number of countries visited, along with variations by income group. The figures closely ressemble those derived from other sources and given in Table 5.3 of an accompanying paper (HFA, 1992a)

TABLE 3.14: EXTENT OF TRAVELLING TO OTHER EC COUNTRIES

	HOLIDAYS ABROAD *	VISITED AT LEAST ONE EC COUNTRY	AVERAGE NO OF COUNTRIES VISITED
EC12	32%	69%	3.11
L	94%	99%	5.27
NL	64%	96%	4.52
B	56%	93%	3.92
D	60%	91%	3.39
DK	44%	90%	3.54
F	16%	79%	2.89
GB	35%	75%	3.50
IRL	51%	73%	2.18
P	8%	53%	1.75
I	13%	46%	2.00
E	8%	38%	1.93
GR	7%	24%	2.56
INCOME 1		79%	3.71
INCOME 2		75%	3.15
INCOME 3		66%	2.85
INCOME 4		56%	2.60

Source: Faits et Opinions (1987). * includes all countries but EC countries form the majority.

In terms of the proportion holidaying abroad, the variations are consistent with reasons already discussed for variations in trip rates across countries. These reasons can also

largely explain the proportions who have visited (for any purpose) another EC country and the average number of countries visited. The variation in whether other EC countries have been visited according to income shows that more trips abroad will be taken as income increases but that the variation in income is unlikely to be the most important factor and tends to confirm the conclusions drawn on the basis of the KONSO figures that climatic and geographical features have a stonger bearing. However, Table 3.15 below shows in the case of the low proportions who have visited Greece and Portugal that favourable tourism opportunities cannot overcome severe accessibility problems when there are other suitable tourist locations.

Table 3.15 shows the countries that have been visited, again for any purpose, by residents of other EC countries, that is, 34% have visited France, whilst Table 3.16 lists the countries that respondents stated that they would most like to visit. It can be seen that, as expected, those countries with favourable climates and a wide range of tourist opportunities have been most widely visited. The remaining countries seem to be ordered broadly in line with their accessibility, that is, the Northern mainland European countries are reasonably accessible, particularly to each other, but Great Britain, Greece, Denmark, Portugal and Ireland are much less accessible and, despite the favourable climates of Greece and Portugal, have been much less widely visited.

TABLE 3.15: COUNTRIES ALREADY VISITED (FOR ANY PURPOSE)

F	E	I	D	B	NL	L	GB	GR	DK	P	IRL	NONE
34%	30%	28%	23%	22%	20%	15%	12%	11%	9%	7%	6%	31%

Source: Faits et Opinions (1987)

Greece is the country which is considered to be most attractive. The fact that few have been to Greece is undoubtedly a strong factor here, but the extent of previous visits does not explain the strong preferences for the other traditionally popular international tourist destinations of Spain, France and Italy. Although few have been to Portugal, it is low in the list of desired destinations, which is also the case with Ireland. The highly accessible and moderately well visited countries of mainland Northern Europe are also lower down in the list of desired destinations, presumably as a result of climatic and touristic factors.

TABLE 3.16: COUNTRIES MOST LIKE TO VISIT

GR	E	F	I	GB	D	NL	DK	P	IRL	B	L	NONE
36%	30%	30%	29%	23%	18%	16%	16%	15%	11%	8%	7%	9%

Source: Faits et Opinions (1987)

The Faits et Opinions document allows a breakdown of Tables 3.15 and 3.16 by residents of each country and also identifies the relative preferences of residents of each country for visits to each other EC country.

3.6 Regional departure rates

According to KONSO, regional departure rates do not differ greatly from their respective national figures. The exception to this is departures from agglomerations and Table 3.17 presents some typical examples.

More favourable economic conditions can be expected to influence the departure rates of agglomerations. They will also tend to have a somewhat larger proportion of business trips, although this disaggregation is not given in KONSO. The influence of economic conditions is given by Bremen, a city with high rates of unemployment due to the demise of traditional industries, which has a departure rate of only 29% in relation to the national average of 45%. Transport links are also better from agglomerations given their proximity to airports, the motorway network and good rail services. The phenomenen is, however, absent in Italian and Spanish agglomerations.

TABLE 3.17: AGGLOMERATION INTERNATIONAL DEPARTURE RATES

COPENHAGEN	53% (37%)	KARLSRUHE	52% (45%)
BRUSSELS	54% (47%)	STUTTGART	52% (45%)
ANTWERP	54% (47%)	LONDON	27% (24%)
PARIS AREA	16% (10%)		

Source: KONSO. The national average is given in parentheses.

3.7 The balance of journeys

Germany is the largest source of international trips and, according to KONSO, accounts for 37 million departures or over a third of the total. This is a combination of its large population and high departure rate. Great Britain accounts for 18 million departures but no other country exceeds 10 million departures.

It would seem that climatic and geographical factors are the most important determinants of international destinations, with the economic situation and transport infrastructure playing more subordinate roles. The prinicpal destinations are Spain with 19 million arrivals, France with 17 million, Italy with 14 million, and Germany and Austria each with around 10 million.

The principal 'sender' countries are Germany and Great Britain, with balances of 27 and 14 million respectively. Other 'senders' are the Netherlands, Belgium and Denmark. The principle 'receiver' countries are Spain with a balance of 14 million, Italy with 10 million, France with 9 million and Austria with 7 million. Other 'receivers' are Portugal and

Greece. Arrivals and departures are fairly evenly balanced in Switzerland, Ireland and Luxembourg.

3.8 Other features of international journeys

KONSO provides details about a number of other features of international travel and travellers, although the results are generally presented for international travel as a whole, with no segmentations by mode or purpose and few segmentations according to any other factors.

In each of the 14 countries, the proportion of males who travel abroad is considerably higher than in the population not travelling abroad, and international travel is relatively low amongst the over 50's, although precise figures are not given in either instance. Similarly, it is stated that professionals and managers travel most often whilst trip rates are higher for those with cars.

One third of all journeys are made during July and August, which reflects the dominance of holiday trips in KONSO's sample, and almost 70% are made between May and October. The seasonal distribution is similar across countries.

35% of journeys lasted 8-14 nights, 20% of journeys lasted 4-7 nights, 15% lasted 1-3 nights, 21% lasted 3-4 weeks, 6% are made on the same day and 3% last for one month or longer. It is stated that the day trip figure is an underestimate for most countries at least in the centre of Europe. The average journey duration is 9.3 days. These figures compare favourably with the IPS figures for travel to and from Great Britain, which estimate 18% of trips to be three nights or less and 5% of trips to exceed 3 weeks.

The hotel is the most popular accomodation for all nationalities except the Irish, and exceeds 60% for trips from Denmark, Spain and Italy. Rented accomodation is most significant, at around 20%, for trips from Belgium, Holland, Luxembourg, Germany and Great Britain, whilst camping is popular with trips from Greece and Holland, registering around 30% and 25% of the totals from these countries. Staying with friends or relatives is important for the Irish and French at around 30% of trips, and generally achieves around 15-20% of trips. More detailed figures from a different source are given in Table 5.5 of HFA (1992a).

The dominance of the hotel is distinctly different from its much lower proportions reported in FAST (1981) where hotel achieved a maximum of 36% of trips, although again there seems to be a difference between inter-regional and international trips.

KONSO also includes separate sections summarising the main features of travel to and from each of the 14 countries included in the study. One of the features it identifies are the key European flows of:

Germany to Austria	6.8m	Germany to Netherlands	2.7m
Great Britain to Spain	6.3m	Belgium to France	2.5m
Germany to Italy	6.2m	Netherlands to Germany	2.4m
Germany to Spain	5.6m	Germany to Switzerland	2.2m
Germany to France	4.9m	France to Spain	2.1m
Great Britain to France	2.9m		

4. TRAVEL CHARACTERISTICS BY PURPOSE

We now look at the separate purposes of business, holiday and SSP in more detail insofar as available information will allow this. There is a relatively large amount of information on holiday travel but we have uncovered less information specifically relating to international business and SSP travel. The discussion of business and SSP trips draws heavily on FAST (1981). Whilst the absolute figures in this report are dated, the relativities can be expected to be more stable over time and hence provide useful insights, although the figures relate largely to domestic travel. We also make use of the TRANSES inter-regional figures for modal share breakdowns for each journey purpose. Whilst these are not strictly appropriate for international travel, they are likely to provide a reasonably reliable indication of how modal share varies across journey purposes.

4.1 Business trips

Business travel is largely generated by the level of economic activity. According to Tornquist (1973), business travel is defined as "journeys undertaken for the exchange, receipt or imparting of information, or related to buying or selling functions".

The TRANSES estimated modal shares for inter-regional business trips are given in Table 4.1. Inter-regional business trips involve relatively short distances with an average of 260 kilometres across all modes. Rail performs relatively well here, and captures a larger market share for longer distance journeys where the influence of company car provision can be expected to be less. However, the car is the dominant mode except for all but the longest, and presumably largely international, journeys where air has by far the largest share.

TABLE 4.1:BUSINESS MODAL SHARES

	CAR	RAIL	AIR
ALL DISTANCES	76%	16%	6%
≤ 300km	84%	15%	1%
301-500km	73%	19%	8%
501-750km	45%	24%	31%
> 750km	32%	21%	47%

Modal choice will be affected by the nature of company travel policies. FAST states that such policies appear to be less prevalent in Europe than the UK, but that large firms and public employers are more likely to have them. Freedom of action varies with occupation; for international travel, 90% of all managers/professionals have free choice of mode compared with just 15% of manual workers (of whom more than half travel 2nd class rail).

Business travel is important to both air and rail, accounting for 60% of scheduled air and 1st class rail carryings, and 30% of 2nd class rail travel.

FAST states that 93% of businessmen are classified as senior; 50% being employers/managers and professionals with 43% intermediate non-manual. 87% of business trips were simple return trips, which suggests a single purpose. Although the purpose distribution tends to vary between cities, the main characteristics are given in Table 4.2. It can be seen that international and inter-regional business trips have very similar characteristics.

TABLE 4.2:DETAILED PURPOSES OF BUSINESS TRIPS

	All Trips	International Trips	Day Return
Education,Conference,Exhibition	25%	29%	17%
Marketing	23%	25%	25%
Company Administration	14%	11%	18%
Professional Services	12%	6%	16%
Technical	11%	10%	13%
Other	15%	19%	11%

It is also stated in FAST that international boundaries do not appear to significantly lower the number of business trips of a given distance. This is an important finding, and certainly contrasts with SSP trips. It seems plausible that business travel is more robust to frontiers than SSP travel given that there is considerably less freedom regarding destination choice, that greater frequency of trip making increases familiarity, and because of trip organisational matters and possibly educational or cultural factors.

The impact of transport on locational decisions is generally regarded as being marginal. However, the impact on factors such as centralisation can affect the amount of business travel. Bendixson (1989) makes 'sun-seeking' one of four major tendencies which will determine the future of Western Europe, along with the breaking down of natural barriers, the spread of urban conurbations and the opening up of Eastern Europe. He states that companies will be seeking to locate in sunny regions and the Mediterranean coastline is seen as a growth area. Given that the main markets will remain in Northern Europe for the foreseeable future, this could give rise to substantial changes in travel patterns and indeed counter-balance the tourist flows which are predominantly north to south.

Business trips contrast with holiday and SSP travel in that they tend to be undertaken on weekdays. The trip rate seems to be related to firm size (being smaller for larger firms) and to industrial activity (being higher for tertiary than secondary sectors). Overall FAST concluded that there was a high degree of similarity in trip making between cities and that businessmen tended to react in a similar fashion when offered similar travel opportunities.

4.2 Holiday trips:

For holidays abroad, FAST cites car as having around 60%, rail around 15%, air around 20% and coach around 5%, although with considerable variation between countries. Faits et Opinions (1987) estimate that trips to EC countries are 52% car, 11% rail, 32% air and 13% bus (which do not sum to 100% because of multiple answers) and these are more consistent with KONSO's modal share estimates where holiday trips dominate. Although there is a suggestion here that the car share has been falling at the expense of air, the OECD (1989) tourism statistics do not substantiate this to any great extent. The modal

shares estimated by TRANSES (excluding bus) for inter-regional holiday trips are listed in Table 4.3.

TABLE 4.3:HOLIDAY MODAL SHARES

	CAR	RAIL	AIR
ALL DISTANCES	70%	20%	10%
≤ 300km	78%	21%	1%
301-500km	77%	20%	4%
501-750km	72%	20%	8%
> 750km	45%	13%	42%

Holiday trips, as expected, involve above average journey lengths, the average across all modes being 501 kilometres. Air achieves its highest shares in the holiday market, reflecting its popularity for long distance international holiday destinations. It is clearly less of a threat to car for journeys in the 501-750km category than for business travel. Car dominates for all but the longest holiday journeys and there are a number of plausible reasons why this is so. The car has advantages for group travel, particularly in terms of cost per person and convenience, and for conveying luggage, whilst there are attractions in having the car available at the destination. Nonetheless, it is in this market that rail achieves its highest market share, although it is likely to be susceptible to increased car ownership.

Faits et Opinions (1987) contains a wealth of information on holidays made by residents of EC countries in 1985. Unfortunately, however, few of the results allow the separate identification of the characteristics of international holiday trips to EC countries. Its results are comparable with the OECD (1977) study, summarised in FAST (1981), and Table 4.4 presents proportions of the population holidaying in 1976 from FAST (1981) and in 1985 from Faits et Opinions (1987).

TABLE 4.4:PROPORTION HOLIDAYING

	1976	1985
D	53%	60%
F	54%	58%
B	47%	41%
NL	54%	65%
GB	61%	61%

Sources: Faits et Opinions (1987) and FAST (1981). Figures relate to all holiday trips.

It can be seen that the growth in the proportion taking holidays has not been large. This would tend to strengthen our view that SSP trips are likely to increase at a greater rate than holiday trips. However, FAST notes the marked unexplained differences in trip making between cities and thus sampling error in one or both of the surveys could have a bearing here. FAST cites holiday trip rates of 1.4 for non-car owning households and 2.0 for car owning households. On this basis, and given higher future levels of car ownership, we would expect the proportion taking holidays to increase in addition to any increase due to rising income levels. The 1985 figures in Table 4.4 correspond closely with figures from other sources given in Table 5.3 of HFA (1992a).

Other figures in Faits et Opinions suggest that holiday trips would have grown. It is clear that the proportion who take holidays is an increasing function of GDP per head across the 12 EC countries, although it is also clear that income is not the sole causal factor. Table 4.5 gives the proportions who went away once or more than once according to income group. The effect is apparent to different degrees across countries. 44% of those who did not holiday cited financial reasons as the cause, and it was mentioned more often in poorer countries such as Greece, Portugal and Ireland.

TABLE 4.5:HOLIDAYING AND INCOME GROUP

	1 TRIP	2+ TRIPS	TOTAL
INCOME 1	43%	32%	75%
INCOME 2	39%	21%	60%
INCOME 3	37%	12%	49%
INCOME 4	27%	9%	36%

Source: Faits et Opinions (1987) for all holidays.

According to Faits et Opinions, the amount of holiday trips also varies with the head of household's occupation, although this obviously correlates with income. Over 80% of top managers and professionals went on holiday in 1985, 71% of clerical workers, 56% of small traders, 51% of manual workers and 49% of the retired. Farmers and fisherman have the lowest trip rates at 25%. 66% of those living in large towns went on holiday. This falls to 59% for small towns and 45% for villages. This may reflect a transport effect as well as other factors such as income. 62% of those in the 15-24 and the 25-39 age groups went on holiday whilst this falls to 53% for those 40-55 and to 47% for those over 55.

Of main holidays, 24% were from 4-9 days, 42% 10-19 days, 19% 20-29 days and 14% 30 or more days. The average length of the main holiday was 17 days, but this was less, as would be expected, at 10 days for other holidays. Of holiday trips to the EC, Faits et Opinions estimate that 56% are undertaken in July and August and 88% between May

and October. This is more peaked than the KONSO figures, which is to be expected when dealing exclusively with holiday trips.

73% of holidays had a fixed location, whilst 25% were to the countryside, 23% to the mountains, 19% to a town and 52% at the seaside. Hotels and boarding houses was the most important accomodation category at 32%, followed by 21% staying with friends or relations, 17% in a rented villa or chalet whilst 16% were camping/caravaning. Around 32% of holidays to EC countries could be regarded as being inclusive tour (a package tour or organised trip). These figures are similar to those reported in FAST (1981) which is also largely based on domestic holidays. Surprisingly, the proportion of holidays (7%) staying at a weekend home or holiday cottage was the same for main and other holidays. 5% of EC holiday trips are to weekend homes or holiday cottages, as opposed to 9% for domestic travel. This is most notable for trips from Greece, Spain, the Netherlands, Italy and Denmark. It is negligible in Belgium and Great Britain.

About a third of holiday trips were abroad and 20% were to other countries in the EC. It was estimated that approximately two-thirds of the EC population have visited another EC country. Table 4.6 gives the proportion who holidayed abroad for the mid 1970s from FAST, and for 1985 from Faits et Opinions. These figures seem to be saying that there has been only a modest increase in preference for holidays abroad. We have already discussed in section 3.5 the reasons for variations in international trip rates.

TABLE 4.6: PROPORTION OF HOLIDAY TRIPS ABROAD

	1976	1985
D	54%	60%
F	15%	16%
I	5%	13%
NL	53%	64%
B	56%	56%
DK	40%	44%

Source: FAST (1981) and Faits et Opinions (1987)

Second holidays are becoming more common with the rise in real incomes, although there is some evidence (Faits et Opinions, 1987) that they are less likely to be at the seaside or abroad than first holidays. Moreover, there will be a tendency for existing international holiday makers to venture to destinations outside Europe. Unfortunately, the categories specified when asking about factors influencing holiday choice did not include transport related factors.

4.3 Short stay personal trips

We have already argued that the SSP market will account for a somewhat smaller proportion of international than inter-regional travel. In the international market, this category is likely to be made up primarily of weekend breaks, visits to friends or relatives and also some amount of day trip travel according to feasibility. It should be noted that the development of an international HSR network could stimulate these categories of travel, but particularly day excursions which become a practical possibility.

The TRANSES estimates of modal shares for inter-regional SSP trips are given in Table 4.7. The average distance of such trips is 222 km which, as expected, is less than the other two purposes because of greater time constraints and perhaps also, as a result of the greater frequency of SSP trip making, because of greater income constraints.

TABLE 4.7:SHORT STAY MODAL SHARES

	CAR	RAIL	AIR
ALL DISTANCES	87%	12%	1%
≤ 300km	90%	10%	0%
301-500km	81%	16%	3%
501-750km	63%	27%	10%
> 750km	51%	24%	25%

Car is even more dominant in the SSP market than the business and holiday markets, which is to be expected given that car has its greatest comparative advantage over the shorter distances involved here. Moreover, car ownership will stimulate additional SSP trips to a much greater extent than holiday or business trips and this will contribute to car's dominance. It is in the SSP market that air performs worst, largely because inter-regional SSP trips are relatively short and are more likely to be to destinations which are not served by air. Overall, rail does less well than in the holiday and business markets, although it achieves its highest shares across all purposes for SSP trips in excess of 500 kilometres. The latter are, however, a very small portion of the overall travel market.

According to FAST (1981), car ownership typically trebles SSP trip rates, with a slightly larger impact for those with families. Surprisingly, income had relatively little impact on trips rates, except for its effect on car ownership. However, international trips will be more expensive, given the longer distances involved, and thus income might then have a larger impact.

It seems that data on the extent and characteristics of international SSP trip making is sadly lacking. If this is so, further research in this area would be particularly fruitful, given the potential for growth in international SSP trips due to the hypothesised significant latent demand, and we feel there is scope for HSR to have a strong impact here.

5. CONCLUSIONS

The aim of this paper has been to understand the nature and characteristics of the European international travel market in order to provide a context for other aspects of this study and to allow the identification of principal European International travel markets for HSR. The accomapnying paper (Wardman, 1992) discusses the latter, on the basis of the analysis presented in this paper and information regarding the determinants of changes in demand.

There is a good deal of conflict between the travel statistics from various sources. Whilst we have attempted in the limited time available to us to reconcile the differences, we feel this is a somewhat neglected area of research and further work is required to obtain a more reliable understanding of the nature and extent of international trip making in Europe. Having said this, it is not surprising that different studies provide conflicting

evidence whilst there are instances of very high degrees of correspondence between studies.

We believe that a distinction should be made between inter-regional and international trips, particularly in terms of their journey purpose and modal share statistics, and that transport models should be able to adequately replicate the expected differences. Ashley (1987) reviews a number of studies of European international travel and none of them conducted significant research into the particular characteristics of international travel. He comments, "Yet there are obvious peculiarities: the distances are especially long, the choice of modes atypical and the journey costs of inclusive tour holidays difficult to identify". We might add that the journey purposes and duration of visit are also somewhat different in the international market.

The absence of detailed analysis of important and growing travel markets is a cause for concern and is particularly acute in the international business and SSP markets. However, it should be noted that relevant information upon which to conduct such analysis does exist, but that the cost of acquiring data from the European Travel Monitor was beyond the means of this study.

The evidence seems to suggest that the amount of international trip making is driven more by climatic factors and tourist opportunities than by economic factors. As an example, France has a favourable location vis-a-vis many other EC countries, enjoys a high income per capita and has high car-ownership, but its departure rate is lower even than the average. This seems to be largely due to domestic holiday attractions. Similarly, Italy has a relatively high income but a very low international departure rate. However, income and location clearly do have a bearing on international departure rates.

It would seem that climatic and geographical factors are the most important determinants of international destinations, with the transport infrastructure and accessibility issues playing a less important role and the economic situation having a minor influence. Accessibility problems are more important, such as with the amount of trips to Greece and Portugal, where there are other more accessible destinations providing similar opportunities and attractions.

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