
Monograph:
Fowkes, A.S., Johnson, I. and Marks, P. (1985) Long Distance Business Travel and Mode Choice: The Results of Two Surveys of Business Travellers. Working Paper. Institute of Transport Studies, University of Leeds , Leeds, UK.

Working Paper 211

Working Paper 211

September 1985

LONG DISTANCE BUSINESS TRAVEL AND MODE CHOICE: THE RESULTS OF TWO SURVEYS OF BUSINESS TRAVELLERS

A S Fowkes, I Johnson and P Marks

ABSTRACT

A S FOWKES, I JOHNSON and P MARKS (September 1985) Long Distance Business Travel and Mode Choice: The Results of Two Surveys of Business Travellers. Working Paper 211, Institute for Transport Studies, University of Leeds.

This report contains a descriptive analysis of two UK samples of long distance business travellers. Each sample answered the same mailback quesitonnaire which asked for detailed information about a recent long distance business trip and a limited amount of socio-economic data from each respondent. In particular, questions were asked about reasons for choice of the main travel mode and the alternative modes available to the respondent. In both samples it was found that the main factors influencing mode choices were journey time and a convenient start time, with the ability to work en route being a significant factor for rail travellers. Company travel policies did not appear to have a significant influence on mode choice, although the set of permitted alternative modes was dependent on the respondents' income and occupation.

1. INTRODUCTION*

The purpose of this paper is to describe the results of two surveys of business travellers. The same questionnaire was used in each survey; however, the survey samples were drawn differently. The two samples comprise the following groups of travellers:

(1) Respondents to British Rail's East Coast Main Line Survey who were making a business trip and indicated they would be willing to take part in a follow up survey. Initial results from this survey were first reported in Johnson and Fowkes (1984). We draw heavily from that paper, which is now superseded by the present paper.

(2) Employees of organisations situated either in Greater London or North East England. These business travellers were contacted via their employer who was a respondent to our earlier survey of organisations' travel policies. Results of this survey are reported in Fowkes and Marks (1985).

For convenience, we shall refer to the sample of East Coast Main Line respondents as the ECML sample and the respondents to the organisation based survey as the ORGN sample. Results from each sample will be presented together and any similarities or differences commented on.

An important objective of the two surveys was to gain a better understanding of how mode choice decisions are made for business travel. Thus questions were asked about;

(i) who makes these mode choice decisions - the traveller, the employer or some combination of the two?

(ii) what factors influence mode choice and how these factors are traded off against each other?

In connection with the latter, respondents were asked to answer a set of questions in which they had to state their preference for travel by air, first class rail, second class rail and car. Respondents were presented with different travel time and cost attributes for each of these modes and were asked to rank modes in order of preference. Analysis of this data yields estimates of values of business travel time savings in terms of the willingness of the respondent to pay for these savings. The derivation of these values will form the content of a later paper. Here we report that data from the surveys which gives a general description of business travellers and the nature of journeys they make, and describes how mode choice decisions are made by business travellers and their employers.

* We are grateful to Dr Chris Nash for helpful comments on earlier drafts of this paper.

2. BACKGROUND TO THE SURVEYS

ITS began this research in March 1983 with funding from the Science and Engineering Research Council. The project arose partly out of our own interest in Business Travel and partly as an offshoot to the Department of Transport's Value of Time Project, in which we are also taking part. The particular interest in Business Traveller's Value of Time arises because it has conventionally been assumed to approximate the wage rate, rather than one-quarter of the wage rate as assumed for non-business travellers. If confirmed, this would lead to travel-time-saving investment schemes being favoured where, all else equal, there is a high proportion of business travellers among the beneficiaries.

The project is directed by Professor Ken Gwilliam and Dr Chris Nash, whilst Dr Ian Johnson, Dr Tony Fowkes and Ms Phillipa Marks have been employed to organise the surveys and analyse the results, respectively. Mrs Judith Ellison has done most of the organisational work concerned with the East Coast Main Line Survey, while FDS (Market Research) Ltd were contracted to carry out the company based surveys.

An earlier unpublished note Johnson and Nash (1983) set out our initial thoughts concerning our data requirements and original survey methodology. In the event we have conducted three surveys as follows:

1. A telephone survey of some 300 organisations in order to determine their travel policies, particularly as these affect mode choice decisions. (See Fowkes and Marks (1985) for the results of this survey).

2. A self-completion questionnaire distributed by agreeable organisations contacted in (1) above to staff who had undertaken business journeys of over 50 miles in the last month. This questionnaire sought to see how the individual was affected by his organisation's travel policy, as well as obtaining information concerning a recent business trip, and asking a hypothetical stated preference question which would permit inferences to be drawn about the respondent's value of business travel time.

3. A self-completion questionnaire (almost) identical to that in (2) above, sent to respondents to BR's 1983 East Coast Main Line (ECML) Survey who were then making a business trip and indicated their willingness to be further interviewed by giving their name and addresses.

3. SURVEY DESIGN

(i) East Coast Main Line Survey

In total, 820 names and addresses were abstracted from the ECML questionnaires, and we acknowledge the help of British Rail and Transmark in facilitating this. We were given to understand that Transmark had already removed a 10% sample of the completed questionnaires for coding themselves, and that further bundles were at various sections of BR which had claimed an interest in this or that train. Each train had its own bundle, with separate bundles for each of the survey days. We avoided weekend responses from services because we were only after business travellers. We concentrated on the morning and evening trains between Kings Cross and Scotland, Newcastle, Yorkshire and Humberside, in both directions. Naturally there were problems, not aided by the questionnaire storage office having no artificial light and it being January. Some journey purpose answers were ambiguous, some names and addresses were illegible, and some addresses were overseas and so outside our scope. Clearly we should be very wary of claiming that our respondents are a representative selection of ECML business travellers. The following points should be borne in mind:

1. Initial contacts will be weighted by the frequency an individual makes an ECML trip. As each trip was different (if only on account of date) many people filled in more than one ECML questionnaire. However, it is unlikely that everybody will have done this, so respondents to the ECML survey will probably be less weighted towards regular travellers than the sample originally approached.

2. Some trains were so crowded that people may have been 'missed' by the survey staff.

3. Some proportion of those approached will have refused to answer the questionnaire for various reasons which may be important for our purposes - e.g. a businessman too busy working at his seat, or taking breakfast.

4. Some proportion of those answering the questionnaire will have wrongly indicated that they were making a business trip. We compounded this by including some respondents who did not indicate they were making a business trip but where other answers gave us to understand that they were likely to make business journeys.

5. Some business travellers completing the ECML form will have been unwilling to be further surveyed.

6. Some of those willing to be further surveyed will nevertheless have been unwilling to provide the means for this to be done, namely provide name and address.

7. Some names and addresses were illegible, overseas, or just wrong.

8. About 50% of the questionnaires we sent out were returned completed. This included the effect of sending reminders to about half of the addresses. As we posted out the questionnaires in tranches over time, it is not easy to compute the effectiveness of the reminders.

The questionnaire used is given in Appendix 1. These were posted out to over 820 addresses, together with a FREEPOST envelope during February 1984. This yielded a final sample of 411 usable questionnaires of which 92% reported on business trips made in the first 4 months of 1984.

(ii) The Organisation Based Sample

The individual self completion questionnaire was answered by a second group of business travellers who were contacted at their place of employment. Their employers were respondents to our company survey who said they were willing to distribute questionnaires to employees. The method of distributing the questionnaires was left up to the employer, as we were advised that to do otherwise would be impractical. Of the questionnaires sent out to employers 442, from 110 employers, were returned adequately completed for analysis. As we do not know how many questionnaires were distributed by employers, it is not possible to comment on the response rate or say anything definitive about response bias.

Survey forms were distributed to employers in March 1984 and, as with the ECML sample, 92% of business trips described by respondents took place in the first four months of 1984.

Data describing the location size, industrial classification and travel policies of the organisations employing the respondents to the survey are given in Appendix 2. In brief, 60% of these organisations were sited in North East England, the rest being in Greater London, and most organisations (80%) belonged to the private rather than the public sector. Travel policies of the organisations varied with 50% describing the policies as informal, 40% formal and the remaining 10% said they had no travel policy.

In summary, the ECML sample is expected to be biased in favour of frequent business travellers and travellers who use rail rather than other modes. In contrast the ORGN sample should not contain any modal bias. The question of whether each sample, or both samples combined, can be said to be representative of business travel in the U.K. as a whole has not yet been examined. However, we hope to explore this issue later, using results from the Long Distance Travel Survey as our benchmark.

4. CHARACTERISTICS OF THE RESPONDENTS

Before we begin to discuss the mode choice and business trip data it is desirable that the reader have some view of the general characteristics of the population we are dealing with, namely business travellers. Since, seniority in the organisation and the individual's occupation may have a major influence on mode choice decisions, we present information about the incomes of respondents, their occupational classification, frequency of business travel and hours of work. The distribution of income for each sample is given in Table 1*. We were pleasantly surprised in that both samples less than 2% of respondents did not answer the income question, though we must accept the possibility that others may have misreported their income for various reasons. The ECML sample has a greater proportion of respondents reporting high incomes than the ORGN sample. In particular, 25% of the ECML sample compared with 15% of the ORGN sample earned over £20,000 per annum. Median incomes for the two samples are £14,375 p.a., for the ECML data and £13,125 for the ORGN data. However, the mean income for the ECML sample is £16,200 p.a. compared with a mean income of £14,800 p.a. for the ORGN sample.

As has already been mentioned we expected ECML respondents to be more frequent business travellers than ORGN respondents. This is confirmed by the data in Table 2 which gives respondents' average monthly rate of business trips. Tabulating trips per month against income shows there is a positive correlation between trip frequency and income (χ^2 statistic is significant at the 5% level.) (See Tables 3a and 3b). Thus differences in the income distributions for the two samples could be caused by differences in sampling procedures. For, as mentioned in the previous section, we expected frequent business travellers to be over-represented in the ECML sample.

Respondents were asked to categorise their occupation as one of managerial, professional, secretarial, technical, manual or other. Table 4a shows that over 80% of respondents (in both samples) classified themselves as having either managerial or professional occupations, although the ECML data include a greater proportion of professionals. James, Marshall and Waters (1979) found in their survey of rail and air business travellers making journeys between London and Newcastle, that a high proportion of professionals were university and other non-school teachers. The lower proportion of professionals in the ORGN sample may be because the establishments which agreed to answer our organisation survey did not include any educational institutions. Table 4b gives mean incomes for each occupation. Not surprisingly, managerial and professional staff have the highest incomes. Because so few respondents fall into the secretarial, clerical, manual and other occupation groups these occupations will be amalgamated into a single other category, throughout the rest of the paper.

* All tables given at the end of the paper from page 14 onwards.

Table 5 shows how respondents view their hours of work. 39% of the ECML and 52% of the ORGN sample work fixed hours implying that approximately half of all respondents work flexible hours.

5. CHARACTERISTICS OF JOURNEYS REPORTED

Respondents were asked a series of questions about their most recent long distance business trip. They were told that by long distance we meant journeys of over 50 miles. From the information provided we have evidence of the complexity of business trips, their purpose, the mode of travel and use of travel time.

As expected the main travel mode used for the reported trip differed between the two samples. ECML respondents reported a much higher proportion of trips by rail (69% versus 38% in the ORGN sample, Table 6a) and correspondingly smaller proportions of trips by car and air. In the ECML sample rail was the most commonly used travel mode, whilst car travel was most common in the ORGN sample. Only 1 ECML respondent and no ORGN respondents travelled by coach on the reported trip. However, regardless of the main travel mode used, respondents in both samples almost always used the same mode on the outward and return stages of their trip (Tables 6b and 6c).

We found a significant correlation between respondent's income and the main travel mode used on the reported journey. In both samples respondents with higher incomes are more likely to travel by air. Travel by either train or car is less clearly related to income (Table 7). Mode used also appears to be related to occupation, with managerial and professional staff being more likely to use air than other staff (Table 8). As with income, the incidence of car and train use is more equally spread across the samples.

It might be expected that respondents with their own company car would be more likely to have travelled by car on the reported business trip. Cross-tabulating main mode used against access to own company car (this includes people who either used their own company car or who would have been permitted to use their own company car) shows that ORGN respondents with their own company car were more likely to have travelled by car, whereas this is not the case for ECML respondents. (See Table 9) The latter is most probably because of the modal bias (towards rail) in the ECML sample, caused by the sampling procedure.

Table 10 shows the types of car used by car travellers. Each sample has almost the same distribution of car types, with approximately half the respondents using a company car and further quarter using their own car. Using the standard errors given in Table 10, one finds that the proportions of respondents using a particular category of car in each sample are not significantly different at the 5% level.

We asked respondents to give information about each meeting attended on their most recent business trip. Up to 3 meetings were coded for each individual and only 7% of the ECML sample and 8% of the ORGN sample attended 3 or more meetings (Table 11).

Unfortunately the purpose of meetings attended by 28% of the ORGN sample was not reported. Only 1% of the ECML respondents did not report meeting purpose. To compare the two samples we have removed the 'purpose unspecified' data and the remaining responses are given in Tables 12a and 12b. Over one third of the ECML respondents attended meetings related to internal company business (i.e. visited the head office or branch site). This proportion falls to about one tenth in the ORGN sample where meetings are more likely to involve either visiting a client or be for some other purpose. Those travellers visiting a client were more likely to travel by car, rather than by train or air. Travel to conferences, the head office and to demonstrate goods was more likely to be by train. The modal split was more even for other journey purposes.

Despite the differences we have found in the distribution of mode used and purpose of business travel for the 2 samples, their distributions of nights away were very similar. (Tables 13a and 13b). Approximately half of each sample were making day trips and air travellers, who probably travel greater distances than travellers using other modes, were more likely to be making trips lasting more than one night. Nearly 20% of respondents combined 2 or more meetings in the same trip (Table 11). This and the nature of some of the meetings, for example, conferences and the inclusion of some overseas travel, explain the considerable length of time some respondents were away from their office.

7 of the ECML and 32 of the ORGN respondents reported an overseas business trip. Comparing the data in Table 13c with that in Tables 13a and 13b shows, as expected, overseas trips involved more nights away. In addition, we note that 70% of the ECML and all the ORGN overseas trips were made by air.

Tables 14a and 14b report meals taken in the course of the business trip. ECML respondents, on all modes, were more likely to have eaten either a snack or a meal than ORGN respondents, though fewer of the former ate a main meal other than breakfast. This probably reflects the earlier starting times of the ECML respondents (see below).

The second question in our survey asked travellers to give details of each stage of their reported business trip including for each stage; the start time, arrival time, means of travel, and where they travelled to and from. This question was poorly answered, primarily because the questionnaire instructions did not make it clear that data for the whole of the business trip was required. Many people only gave details for what appeared to be the first half of their business trip. Nevertheless, data on journey start time is recoverable for most respondents. This data is tabulated in Table 15.

As we are interested in the amount of travel done outside normal working hours the data is grouped in narrower time bands outside the 'normal working hours' of 9.30 - 5.00 pm.. (Approximately 3/4 of each sample normally arrived at work between 0.800 and 09.30 and a similar proportion left work between 17.00 and 19.00). ECML respondents started their journeys slightly earlier than the ORGN respondents, though in both samples over half the respondents started the reported business trip before 08.00 (68% in ECML and 55% in ORGN); that is outside 'normal' working hours.

To gauge whether our respondents used their travel time productively or not, we asked how much of this time they spent working and whether this work could have been done quicker or slower in the office. Before reporting the answers to these questions we note Hensher's (1977) finding from a survey of air travellers that:

> 'employees did not wish to create an impression that they do not work during their travel time, and definitely not an impression that the work undertaken is not as productive as the work undertaken at the office in an equivalent amount of time'.

This suggests answers to questions about work in the course of travel may overstate the amount of time spent working and its relative efficiency. This should be borne in mind when interpreting our results.

As expected a high proportion (over 80%) of car travellers did no work in the course of travel, although those who did work spent at least half an hour working. Train travellers were most likely (in both samples) to have worked on both the outward and return trips (Tables 16a and 16b, 17a and 17b). Of those travellers who reported working, train travellers worked for longest. Travellers making day trips were more likely to have worked than those making longer trips. Also, people were less likely to work on the return than on the outward journey.

Most travellers thought the work they did en route would have taken about the same length of time in the office (Tables 18a and 18b). In the ECML sample 27% of respondents thought they worked slower on-vehicle than in the office and 12% thought they worked faster. Similarly in the ORGN sample about twice as many respondents thought they worked slower rather than faster than in the office (13% and 6%, respectively). People who said they worked faster whilst travelling would have presumably been interrupted more often when working at the office. However, we remind the reader our results may contain a bias towards overstatement of the productivity of work done in the course of travel, because of the respondent's desire to appear to be using travel time productively.

About 90% of respondents travelled to and from their meetings alone or with one colleague (Tables 19a and 19b). We thought

that the time the traveller spent working might be influenced by the number of colleagues accompanying him/her. In fact as the data in Table 20 show, time spent working varies very little according to whether the traveller is accompanied or not.

Next we consider the effects of speeding up business travel on the traveller's use of time. To do this we asked repondents what they would do if their last business trip could have been scheduled to start 30 minutes, 60 minutes and 90 minutes later than originally planned. Open-ended responses were allowed and this produced some quite complex answers which were not easy to tabulate. Also, a sizeable number of respondents missed the point of the question and responded with replies such as 'I would set out later' or 'I would catch a later train'. Tables 21a and 21b include only people who gave answers close to one of the 5 listed responses; stay in bed, have a meal, work, do domestic tasks and do nothing.

Given our earlier finding that most journey start times were before normal work start times, one would expect time savings of 30 and, possibly also, 60 minutes to be used for non-work purposes. The data confirms this, with less than one third of both samples reporting they would work if their meeting started 30 minutes later than originally scheduled. The fraction who would work increases as the delay in the start time of the meeting increases. Also, as the delay increases smaller proportions of people report doing nothing and staying in bed. The proportions of respondents reporting having a meal or doing domestic tasks is fairly insensitive to the meeting start time. We conclude from this evidence that for many travellers business travel time, at the margin, substitutes for leisure activities rather than work. Comparing the data for the two samples shows that respondents to the ORGN survey were more likely, than the ECML respondents to work if the meeting time was delayed. It is possible this reflects the earlier starting times of the ECML respondents.

Lastly in this section we report on the cost information given for the reported journey. We asked for information on travel and other costs incurred, and also for the value of reimbursement paid by the employer. No explanation was sought for any differences between costs incurred and reimbursement levels. In the discussion below we focus only on total costs.

Allowing a margin for reporting error of +/- £5, 67% of the ECML sample and 69% of the ORGN sample reported having all costs fully reimbursed by their employer. For the remaining respondents there does not appear to be any systematic bias towards either under or over claiming for expenses (Table 22).

Underclaiming for expenses may have come about because some trip costs were incurred for personal and not business reasons. However, it is also possible the data here is misleading. If the employer had not directly reimbursed the traveller for, say, ticket costs but rather had given the traveller a ticket (pre

paid); then it is possible the cost of this ticket would be recorded as a travel cost but not as part of the employer's reimbursement of costs. In this case the traveller would appear to be underclaiming for expenses.

Evidence in support of this conjecture comes from the number of respondents who report non-zero travel costs and zero levels of reimbursement. This pattern of costs and reimbursement was reported by 8% of the ECML sample and 3% of the ORGN sample. In addition 4% of the ECML sample and 2% of the ORGN sample reported non-zero other costs and zero reimbursement for these costs. It is likely some travellers have not reported all costs paid by the employer for their business trip.

'Overclaiming' of expenses could be the result of organisation reimbursement practices such as paying expenses at a fixed rate (eg. a car mileage rate, the cost of a given public transport mode) and letting the individual choose the transport mode. However, we did not find any significant correlation between mode used and 'overclaiming' of expenses in either of the 2 samples. Of course, we cannot discount the possibility that some travellers are actually overclaiming for expenses. If those people who were overcompensated for travel expenses were added to those who received full compensation we get that over 80% of each sample were at least fully compensated for their trip expenses. From this it seems safe to conclude that employers generally pay for all costs associated with business travel. Needless to say, there is likely to be a bias in our data against reporting overclaims.

A priori one would expect employers to pay for all the costs of business travel. That our data include a sizeable number of respondents either over or underclaiming on these costs throws doubt on the reliability of the reported cost data. This may limit planned used of the data for revealed preference analysis of mode choice decisions.

6. MODE CHOICE

A major objective of this study is to gain a better understanding of the ways in which mode choice decisions are made for business travel. Respondents were, therefore, asked for reasons why they chose their main mode of travel. Company policy was listed as a possible reason here so as to allow for the possibility that the individual did not have a free choice of travel mode. As the reasons given for mode choice differ by mode used we discuss the results for each mode separately.

Car travellers. Convenient start time was the most common reason (in both samples; Tables 23a and 23b) given for travel by car. The next most important reason was short journey time. 12% of the ECML and 29% of the ORGN car travellers used the car because it was company policy. Thus most car travellers chose this mode themselves. Respondents were not asked whether cost was an

important factor influencing mode choice, but rather were asked to indicate whether their mode was chosen because it was the cheapest for the trip they were making. The car was the cheapest mode for 16% and 23% of the ECML and ORGN samples, respectively.

Air travellers: These travellers flew to and from their meetings because of the short journey time and convenient start time of flights. Very few air travellers were constrained by company policy when deciding on their means of travel. This is probably because air travellers typically have high incomes and so are likely to hold important positions within their organisations.

Train travellers: Over one third of each sample reported choosing to travel by train because of the convenient start time, short journey time and being able to work on the journey. It should be recalled that train travellers report doing more work than people travelling by other modes (Tables 17a, 17b). The two samples differ in the importance of company travel policy in determining mode choice with 18% and 33% of the ECML and ORGN samples, respectively, using the train for this reason.

Taking the results for all modes together we find that convenience of start time and short journey time were the most important determinants of mode choice although, as has already been mentioned, we cannot rule out the importance of cost because this would only be mentioned if the chosen mode was the cheapest. Our results do suggest, however, that company policy does not in general dictate mode choices for business trips. This does not, of course, mean company policy has no influence on mode choice for it may limit the set of alternatives available to the business traveller. We now consider this issue further.

We asked respondents which modes they would have been permitted to use on their reported journey. The responses are tabulated against the mode used in Tables 24a and 24b. A small percentage of travellers reported not being allowed to use the mode they travelled on. A possible explanation for this may be that they were paying the extra travel expenses themselves so as to use a preferred mode. The data for both samples show:

(i) Almost all travellers would be permitted to travel by train. A smaller fraction of ORGN, as compared with ECML, respondents reported being allowed to use rail travel. This is, in part, because there are more overseas (air) travellers in the ORGN sample (see the footnote to Table 24b). We were not able to find an explanation for the difference between the 2 samples in the fraction of car travellers permitted to use rail. This was not related to differences in either the number of meetings, their location, or the ownership of a company car.

(ii) Train users are more likely to be allowed to travel by car rather than air or coach.

(iii) All travellers are least likely to be permitted to travel by coach, presumably because it is a comparatively slow means of travel.

(iv) Relatively small proportions of air travellers are allowed to use either car or rail travel for the reported trip. This may be because employers wanted these employees to minimise travel time.

In Tables 25 and 26 we have tabulated permitted modes against income and occupation, respectively. Access to air and 1st class rail travel rises noticeably with income. Managerial and professional staff have better access to air and first class rail travel than other classes of employees. For the remaining occupation groups access to car and rail (1st and 2nd class) travel is roughly the same.

In our view the most important point made by the data in Tables 25 and 26 is that access to travel modes depends on the traveller's income and occupation. Additional information about mode choice sets was gathered by asking respondents for their best alternative mode for making the reported trip (Tables 27a and 27b). 11% and 19% of the ECML and ORGN samples, respectively, reported they had no best alternative. This was most often the case for car users in the ECML sample and, car and air users in the ORGN sample. That car users were most likely to have no alternative means of getting to their destination is presumably because the limitations of the public transport network (ie. its smaller size and more rigid departure times). The lack of alternatives for air travellers in the ORGN sample is largely explained by people travelling overseas. 82% of air travellers reporting no best alternative here were travelling overseas.

Tables 28a and 28b show whether the best alternative to the mode used was in the traveller's choice set. Almost all respondents who nominated either the car or the train as their best alternative were permitted to use these modes. Those who chose air as their best alternative fared less well, with 72% and 59% in the ECML and ORGN samples respectively being allowed to travel by air.

Respondents whose best alternative was car were asked which types of car they could use. Responses for the 2 samples were very similar (Table 29) with, in both cases, 41% of respondents being able to use their own company car and nearly 50% having access to a private car. (Note these 2 categories are not mutually exclusive.) Inspection of the standard errors given in Table 29 shows that the proportions of respondents with access to a particular category of car are not significantly different (at the 5% level) in the two samples.

Focussing briefly on the choice between car and rail travel we found, for both samples, no significant difference in the number of nights car and rail travellers spent away. However, (in both

samples) train travellers were far more likely than car travellers to have meetings in London (difference significant at the 5% level) and attended significantly fewer meetings than car travellers. In the ORGN, but not the ECML, sample train travellers (Table 30), were accompanied by more colleagues than car travellers. These results suggest that in addition to the reasons for mode choice listed in Tables 23a and 23b one could add meeting(s) location, the number of meetings to be attended and possibly also the number of people travelling to these meeting(s).

7. CONCLUSION

This paper has had the limited aim of providing a detailed descriptive analysis of the two surveys in question - overall conclusions from the study will be reported separately.

The tabulated results show that we have a very special set of respondents. Our two samples of business travellers are predominantly comprised of managers and professional people with above average incomes. We wish to emphasise again that we have not yet explored whether the two samples are representative of business travellers as a whole in the United Kingdom.

The majority of business trips reported involved setting off before 8.30 and attending a single meeting with a client or for internal company business. The main factors influencing choice of mode for the trips were journey time and a convenient departure time, with the ability to work en route being a significant factor for rail travellers. Rail was more likely to be used for journeys to London, and less likely to be used when two or more meetings were involved.

Company travel policies appeared to be a significant influence on mode choice only in a minority of cases, although generally only more senior people were permitted to use air, and some car uses were not permitted the alternative of rail.

Both the early departure time and the fact that respondents reported that less than half of the time released by a postulated later departure time would be used for work suggest that a considerable proportion of business travel time is at the expense of leisure time. Moreover rail users tended to work on average around one hour on the outward journey and for half an hour on the return. Both these factors suggest that the simple 'wage rate' approach to valuing business travel time savings is inappropriate for these sorts of journeys.

On our questionnaire there are further questions, the replies of which are not reported in this paper. Analysis of these questins (in particular, questions 2, 13-16, 19) is currently underway and results will be reported in subsequent papers, where we shall also bring together this and the evidence on the factors influencing mode choice and the value of travel time for business journeys.

TABLE 1 Reported Salary (per annum)

Range	ECML Respondents	%	ORGN Respondents	%
Less than £5,000	5	1	2	1
£5,001 - £7,500	32	8	24	6
£7,501 - £10,000	44	11	67	15
£10,001 - £12,500	73	18	110	25
£12,501 - £15,000	66	16	52	12
£15,001 - £17,500	50	12	65	15
£17,501 - £20,000	36	9	52	12
£20,001 - £22,500	32	8	17	4
£22,501 - £25,000	17	4	22	5
Over £25,000	52	13	25	6
TOTAL	407	100	436	100
Not given	4		6	

TABLE 2 Average Rate of Business Trips

	ECML Respondents	%	ORGN Respondents	%
Less than one per month	67	17	127	30
One per month	50	13	44	10
Two per month	54	14	60	14
Three per month	44	11	44	10
Four per month	52	13	42	9
Five or more	131	33	113	26
TOTAL	398		430	

TABLE 3a Number of Business Trips Per Month by Income for the ECML Sample (% of respondents in each income class)

Trips per month	Income (£000/annum)									
	<5	5-7.5	7.5-10	10-12.5	12.5-15	15-17.5	17.5-20	20-22.5	22.5-25	25+
0	40	29	40	16	26	8	6	-	-	8
1	20	23	7	13	15	10	29	13	7	2
2	20	13	16	13	11	10	6	28	7	17
3		3	2	13	9	21	9	16	20	10
4	20	13	5	14	12	19	14	16	20	10
5 and more		19	30	31	26	31	37	28	47	54
Total Respondents	5	31	43	70	65	48	35	32	15	52

TABLE 3b Number of Business Trips Per Month by Income for the ORGN Sample (% of respondents in each income class)

Trips per month	Income									
	<5	5-7.5	7.5-10	10-12.5	12.5-15	15-17.5	17.5-20	20-22.5	22.5-25	25+
0	50	57	52	45	25	10	12	6	14	8
1	-	5	11	8	17	13	12	12	5	4
2	-	5	9	12	21	16	10	12	27	21
3	-	14	8	5	8	18	10	35	14	8
4	-	5	6	9	4	10	10	18	14	33
5 and more	50	14	14	21	25	33	48	18	27	25
Total Respondents	2	21	64	109	52	61	52	17	22	24

TABLE 4a Occupation Category

Category	ECML Respondents	ECML %	ORGN Respondents	ORGN %
Managerial	180	44	252	57
Professional	180	44	111	25
Secretarial	1	0	3	1
Clerical	9	2	12	3
Technical	29	7	56	13
Manual	4	1	2	1
Other	5	1	3	1
Not given	3	-	3	-
TOTAL	411		422	

TABLE 4b Mean Income for Different Occupations

Occupation	Income (£/annum)	
	ECML	ORGN
Managerial	18,600	16,200
Professional	15,100	14,700
Secretarial	11,300	12,100
Clerical	9,100	8,800
Technical	12,900	10,600
Manual	6,400	6,400
Other	7,500	8,900
T o t a l	16,200	14,800

TABLE 5 Nature of Work Hours

	ECML		ORGN	
	Respondents	%	Respondents	%
Fixed hours	149	39	225	52
Flexitime	100	26	116	27
Work as required	128	33	90	21
Other	10	3	5	2
T o t a l	387		436	

TABLE 6a Main Means of Travel for Outward Journeys
(% of respondents)

	ECML	ORGN
Car	23	48
Train	69	38
Bus-Coach	-	-
Air	7	15
Total Respondents	411	442

TABLE 6b Main Means of Travel for Outward and Return Journeys for the ECML Sample

Outward \ Return	Car	Train	Bus-Coach	Air	Total
Car	86	2	1	0	89
Train	6	251	0	4	261
Bus-Coach	0	0	1	0	1
Air	0	1	0	27	28
T o t a l	92	254	2	31	379

TABLE 6c Main Means of Travel for Outward and Return Journeys for the ORGN Sample

Outward \ Return	Car	Train	Air	Total
Car	206	4	1	211
Train	4	159	2	165
Air	1	4	59	64
Total	211	167	62	440

TABLE 7 Main Mode Used (Outward) by Income

(% of respondents in each income group)

Income (£000/annum)

(1) ECML	< 5	5–7.5	7.5–10	10–12.5	12.5–15	15–17.5	17.5–20	20–22.5	22.5–25	25+	Total
Car	20	19	21	33	11	31	12	20	47	31	24
Train	80	77	74	66	79	61	73	80	40	50	68
Air	–	4	5	2	8	8	12	–	13	19	7
Bus and Other	–	–	–	–	2	–	3	–	–	–	1
Total Respondents	5	26	42	67	62	49	33	30	15	48	377
(2) ORGN											
Car	50	62	58	45	46	39	48	65	50	32	48
Train	50	38	38	46	44	36	27	18	27	36	38
Air	–	–	5	9	10	25	25	18	23	32	15
Total Respondents	2	24	66	110	52	64	52	17	22	25	434

TABLE 8 Main Mode Used by Occupation

(% respondents for each occupation category)

(1) ECML

	Managerial	Professional	Technical	Other	Total
Car	29	20	13	4	24
Train	63	73	79	13	69
Air	8	7	4	1	7
Bus/Other	-	1	4	-	1
Total Respondents	170	167	24	18	379

(2) ORGN

Car	45	46	66	45	48
Train	38	38	29	55	38
Air	17	16	5	-	15
Total Respondents	250	111	56	20	437

TABLE 9 Main Mode Used by Access to Own Company Car*
(% of respondents with/without company car)

(a) ECML sample	No company car	Have company car
Main mode		
Car	19	29
Train	72	63
Air	7	7
Bus and Coach	1	-
Total respondents	205	175
(b) ORGN sample		
Main mode		
Car	38	62
Train	45	27
Air	17	12
Total respondents	257	183

* Access to own company car is defined to occur when the respondent either used or was permitted to use his/her own company car for the reported trip.

TABLE 10 Category of Car Used by Respondents Using Car for Outward Journey

	ECML Respondents	%	ORGN Respondents	%	s.e.(%)*
Own car	25	27	53	25	(2.5)
Car passenger	10	11	28	13	(1.9)
Company car	50	55	114	54	(2.9)
Pool car	2	2	7	3	(1.0)
Hire car	4	4	10	5	(1.2)
Total	91		212		

* In this column standard errors (s.e.) for the proportion of respondents using each category of car are given. These standard errors are computed, assuming both samples come from the same population, with the formula:

$$\text{standard error } (p) = \frac{p(1-p)}{n}$$

TABLE 11 Number of Meetings Attended on Reported Business Trips

Number of Meetings	ECML Sample Respondents	%	ORGN Sample Respondents	%
1	324	81	351	81
2	48	12	45	10
3 or more	30	7	36	8
T o t a l	402		432	

TABLE 12a Purpose of Meetings held on last Business Trip by Outward Journey Mode - ECML Sample (% of meetings by mode)

Purpose	Mode Car	Train	Air	All
Visit Head Office	2	7	6	6
Visit Branch Site	26	34	31	30
Visit Client	47	18	38	28
Attend Conference	11	18	13	15
Attend Trade Union Meeting	-	4	-	3
Demonstrate Goods	5	3	3	4
Other	8	15	9	13
Total Number of Meetings	131	296	33	465

TABLE 12b Purpose of meetings held on last business trip by outward journey main mode - ORGN sample (% of meetings by mode)

Purpose	Mode Car	Train	Air	All
Visit Head Office	-	3	2	1
Visit Branch Site	11	9	8	10
Visit Client	42	24	36	36
Attend Conference	9	29	18	17
Atend T.U.Meeting	-	-	-	-
Demonstrate Goods	1	5	-	28
Other	34	30	36	33
Total Number of Meetings	217	124	52	393

TABLE 13a Number of Nights Spent Away on Last Trip, Broken Down by Main Mode (outward) ECML Sample

(% of those responding)

Nights away	Car	Train	Air	All Modes
None	51	55	30	52
1	21	19	37	21
2	16	9	11	12
3	6	4	4	4
4	1	8	11	6
5	3	2	4	2
6-7	1	1	0	1
8-14	1	0	0	0
15 or more	0	1	4	1

TABLE 13b Number of Nights Spent Away on Last Trip, Broken Down by Main Mode (outward) ORGN Sample

(% of those responding)

Nights away	Car	Train	Air	All modes
None	57	47	34	50
1	24	31	17	25
2	8	9	19	10
3	5	4	9	5
4	1	1	8	2
5	1	4	2	3
6-7	1	-	3	1
8-14	2	3	6	3
15+	1	-	2	1

TABLE 13c Nights Away for Overseas Business Trips

	ECML Respondents	%	ORGN Respondents	%
0	-	-	2	6
1	5	71	5	16
2	1	14	6	19
3	-	-	5	16
4	-	-	4	13
5	-	-	1	3
6-7	-	-	3	9
8-14	-	-	4	13
15+	1	14	2	6
Total	7		32	

TABLE 14a Meals Taken (not mutually exclusive):
ECML Sample (% respondents for each mode)

Percentages	None	Snacks only	Breakfast	Other main meal
Car out	25	14	25	40
Car return	34	19	13	40
Train out	18	29	45	11
Train return	21	45	1	33
Air out	4	8	54	42
Air return	6	18	0	76
All modes out	18	23	42	21
All modes return	23	37	4	38

TABLE 14b Meals Taken (not mutually exclusive)
ORGN Sample (% respondents for each mode)

	None	Snacks only	Breakfast	Other main meal
Car out	46	6	15	42
Car Return	51	6	12	41
Train out	25	12	40	25
Train Return	29	19	4	52
Air Out	7	2	59	48
Air Return	8	5	30	78
All modes out	32	8	30	37
All modes return	38	11	11	49

TABLE 15 Journey Start Times
(% Respondents)

	ECML %	cummulative %*	ORGN %	cummulative %*
0000 - 0429	1	1	0	0
0430 - 0529	2	3	1	1
0530 - 0629	20	23	14	15
0630 - 0659	21	44	14	29
0700 - 0729	15	59	13	42
0730 - 0759	9	68	13	55
0800 - 0829	8	76	7	62
0830 - 0929	5	81	8	70
0930 - 1659	15	96	26	96
1700 - 1729	1	97	1	97
1730 - 1829	2	99	1	98
1830 - 2359	2	101	1	99
Total Respondents	323		440	

* % do not add to 100 because of rounding.

TABLE 16a Time Spent Working Whilst Travelling, Broken Down by Mode - ECML Sample (% respondents by mode)

(NB. excludes one motorist claiming 300 mins out and 500 mins return.)

Mode	Minutes Worked					Mean for those working (mins)	Overall Mean (mins)
	None	1-25	30-55	60-110	120+		
Car out	80	7	12	1	0	29	6
Car return	82	6	10	1	1	26	6
Train out	23	4	18	40	15	72	55
Train return	43	10	19	20	8	57	33
Air out	38	8	23	23	8	52	32
Air return	50	11	18	14	7	51	25
All modes out	38	5	17	30	10	68	42
All modes return	53	9	17	15	6	54	25

TABLE 16b Time Spent Working Whilst Travelling, Broken Down by Mode ORGN Sample (% respondents by mode)

Mode	Minutes worked					Mean for those working (mins)	Overall mean (mins)
	None	1-25	30-55	60-110	120+		
Car Out	86	6	5	1	2	54	8
Car Return	88	4	4	2	2	54	7
Train Out	34	15	19	13	19	81	53
Train Return		6	16	21	8	63	32
Air Out	42	28	17	5	8	56	33
Air Return	54	5	2	10	3	50	23
All Modes Out	60	12	12	6	10	71	28
All Modes Return	68	5	12	10	5	58	19

TABLE 17a Time Spent Working Whilst Travelling on Day Trips, Broken Down by Mode - ECML Sample (% respondents working by mode)

Mode	Minutes Worked					Mean for those working (mins)	Overall mean (mins)
	None	1-25	30-55	60-110	120+		
Car out	73	11	14	2	0	30	8
	74	10	12	2	2	42	11
Train out	20	6	18	45	11	66	53
Train return	29	13	23	22	3	48	29
Air out	25	13	25	37	0	43	32
Air return	50	0	25	13	13	63	31
All modes out	32	7	17	35	8	62	42
All modes return	48	12	20	17	3	48	25

NB. The size of the 'Air' sample was only 8 respondents.

TABLE 17b Time Spent Working Whilst Travelling on Day Trips, Broken Down by Mode - ORGN Sample (% respondents working by mode)

Mode	Minutes Worked					Mean for those working (mins)	Overall Mean (mins)
	None	1-25	30-55	60-110	120+		
Car out	89	4	4	3	1	42	4.6
Car return	88	4	5	1	2	52	6
Train out	24	4	15	40	17	76	57
Train return	39	8	21	24	8	48	35
Air out	46	14	27	9	5	40	22
Air return	62	14	19	5	0	57	13
All modes out	61	5	11	17	7	65	25
All modes return	68	7	12	9	4	35	16

TABLE 18a Difference in Time Taken to do Work on Journey and Time Taken in Office - ECML Sample

	Respondents	%
Same work takes longer in office	47	12
Same work done quicker in office	104	27
Same work done in similar time	240	61
TOTAL	391	

Time taken on journey (mins) Range	Mean	Time taken in office (mins) Mean
1-29	16.7	16.4
30-59	38.4	36.3
60-119	76.8	69.6
120+	303.3	152.6

TABLE 18b Difference Between Time Taken to do Work on Journey and Time Taken Office - ORGN Sample

	Respondents	%
Same work takes longer in office	26	6
Same work done quicker in office	54	13
Same work done in similar time	350	81
TOTAL	430	

Time taken on journey (mins) Range	Mean	Time taken in office (mins) Mean
1-29	15	13.9
30-59	34.6	33.6
60-119	79.2	76.1
120+	180.5	170.8

TABLE 19a Size of Travelling Group - ECML Sample
(% of respondents for each mode)

Mode	Number of people 1	2	3	4	5+
Car out	64	28	6	2	0
Car return	64	24	9	2	0
Train out	78	17	4	2	0
Train return	73	20	4	2	1
Air out	68	25	4	4	0
Air return	57	33	3	7	0
All modes out	74	20	4	2	0
All modes return	70	21	5	2	1

TABLE 19b Size of Travelling Group - ORGN Sample
(% of respondents for each mode)

Mode	Number of people 1	2	3	4	5+
Car out	62	30	8	-	-
Car return	64	28	7	-	-
Train out	66	18	10	5	1
Train return	64	24	8	4	1
Air out	77	16	5	2	2
Air return	74	13	10	2	2
All modes out	66	23	8	2	-
All modes return	66	24	8	2	-

TABLE 20 Minutes Worked by Number of Colleagues
(% respondents by number of colleagues)

1. ECML Sample

No Colleagues	Minutes Worked None	1-29	30-59	60-119	120+
(a) Outward					
Alone	39	13	26	18	5
1 or more	37	19	28	14	2
(b) Return					
Alone	53	22	14	8	3
1 or more	52	18	15	14	2

2. ORGN Sample

No Colleagues	Minutes Worked None	1-29	30-59	60-119	120+
(a) Outward					
Alone	61	11	11	13	4
1 or more	59	15	13	12	1
(b) Return					
Alone	68	13	10	7	2
1 or more	68	15	9	6	2

TABLE 21a Use of Time if the Business Trip Could Have Been Rescheduled to Start Later - ECML Sample

(NB These figures are percentages of those respondents who gave one of the listed responses as their main reply.)

Main response	If meeting were to start . . . 30 min later	60 min later	90 min later
	All Trips		
Stay in bed	49	46	37
Have a meal	5	4	4
Do domestic tasks	1	1	1
Work	25	36	46
Do nothing	19	13	10
	Day Trips		
Stay in bed	62	57	44
Have a meal	3	1	3
Do domestic tasks	1	2	1
Work	18	29	45
Do nothing	15	10	6

TABLE 21b Use of Time if the Business Trip Could Have Been Rescheduled to Start Later - ORGN Sample

(NB These figures aer percentages of thsoe respondents who gave one of the listed responses as their main reply)

Main response	If meeting were to start . . . 30 min later	60 min later	90 min later
	All Trips		
Stay in bed	30	23	18
Have a meal	2	3	4
Do domestic tasks	9	10	9
Work	31	48	56
Do nothing	28	17	14
	Day Trips		
Stay in bed	36	28	20
Have a meal	2	3	5
Do domestic tasks	9	9	7
Work	28	47	57
Do nothing	25	13	11

TABLE 22 Total Costs Less Reimbursment By Employer

(% respondents for each sample)

	Overclaim £				Claim = Costs £				Underclaim £		
	101+	51-100	21-50	6-20	1-5	0	1-5	6-20	21-50	50-100	101+
ECML	1	2	5	6	5	56	6	5	4	5	5
ORGN	-	1	5	11	3	62	4	5	1	6	2

TABLE 23a Reasons for Choice of Main Means of Travel for the Outward Journey* ECML Sample

(% respondents for each mode mentioning the reason indicated)

Reason \ Mode	Car	Train	Bus-Coach	Air	All Modes
Cheapest	16	15	100	4	15
Company Policy	13	18	0	0	16
Convenient Start-Time	42	43	100	46	44
Short Journey Time	32	56	0	75	50
Able to work on journey	1	45	0	11	31
Need to carry equipment	8	1	0	0	3
Other	51	35	100	29	38
No. of respondents	90	261	1	28	411

* Note the distribution of reasons for the mode chosen on the return journey is very similar to that shown here for the outward journey.

TABLE 23b Reasons for Choice of Main Means of Travel for the Outward Journey* - ORGN Sample

(% respondents for each mode mentioning the reason indicated)

Reason \ Mode	Car	Train	Air	All
Cheapest	23	19	5	19
Company Policy	29	33	5	27
Convenient Start-Time	40	35	33	37
Short Journey Time	31	44	95	43
Able to work on journey	3	34	-	14
Need to carry equipment	14	-	3	7
Other	37	24	14	29
No. of respondents	207	162	64	433

* Note the distribution of reasons for the mode chosen on the return journey is very similar to that shown here for the outward journey.

TABLE 24a Permitted Means of Travel, Broken Down by Respondent's Main Mode (outward journey)

ECML Sample

(Percentage of respondents by mode used)

Used Mode \ Permitted mode	Air	Rail (1st)	Rail (1st or 2nd)	Car	Coach
Car out	35	58	95	93	37
Train out	40	60	100	81	41
Air	96	57	79	50	18
All modes	43	58	97	81	38

TABLE 24b Permitted Means of Travel, Broken Down by Respondents' Main Mode (outward journey)

ORGN Sample

(percentage of respondents by mode used)

Mode Used \ Permitted Mode	Air	Rail (1st)	Rail (1st or 2nd)	Car	Coach
Car	26	49	81	96	28
Train	48	63	100	79	40
Air	100	52	68*	62	14
All modes	45	54	86*	85	30

* Note that when overseas travellers are removed from the sample these percentages rise from 68 and 86 to 91 and 89 respectively.

TABLE 25. Permitted Mode by Income

(% respondents for each income group)

(1) ECML

	<5	5–7.5	7.5–10	10–12.5	12.5–15	15–17.5	17.5–20	20–22.5	22.5–25	25+	Total
Car	80	59	71	77	83	88	86	94	94	81	81
Rail 1	20	16	36	41	53	68	81	81	88	87	58
Rail	80	97	98	96	99	100	100	94	100	90	97
Air	20	19	21	22	35	52	50	71	82	75	43
Coach	40	31	36	41	38	38	36	48	35	33	38
Total Respondents	5	32	44	73	66	50	36	31	17	52	406

(2) ORGN

Car	50	92	82	87	85	78	92	94	76	76	84
Rail 1	–	13	27	46	71	73	69	82	71	64	55
Rail	50	71	84	89	90	92	81	100	73	76	86
Air	–	13	24	30	46	63	63	65	71	72	45
Coach	50	42	31	40	21	28	22	41	24	20	31
Total Respondents	2	24	67	110	52	64	51	17	21	25	433

TABLE 26 Permitted Modes by Occupation
(% respondents for each occupation category)

(1) ECML

	Occupation				
	Managerial	Professional	Technical	Other	Total
Car	84	80	79	60	81
Rail 1	65	56	48	18	58
Rail	96	98	97	94	97
Air	48	41	38	12	42
Coach	35	45	17	18	37
Total Respondents	179	180	29	17	407

(2) ORGN

Car	83	83	93	90	85
Rail 1	57	63	38	30	55
Rail	86	90	73	85	85
Air	48	47	34	25	45
Coach	29	36	25	40	31
Total Respondents	250	111	56	20	437

TABLE 27a Best Alternative Modes by Mode Used - ECML Sample
(% respondents for each mode used)

Mode Used	None	Car/Van	Train	Air	Other
Car out	22	2	66	6	4
Car return	21	1	66	5	4
Train out	8	51	2	34	6
Train return	8	52	1	31	8
Air out	2	18	54	14	7
Air return	7	13	55	10	13
All modes out	11	36	20	26	6
All modes return	11	35	21	24	9

TABLE 27b Best Alternative Mode by Mode Used - ORGN Sample
(% respondents for each mode used)

	None	Car/Van	Train	Air	Other*
Car out	24	1	63	8	5
Car return	25	1	64	7	4
Train out	7	41	-	48	2
Train return	7	41	-	49	2
Air out	27	8	59	-	6
Air return	27	8	58	-	6
All modes out	18	17	39	22	4
All modes return	19	17	39	22	4

* Includes coach for car travellers and sea for air travellers

Table 28a Permitted Means of Travel, Broken Down by the Best Alternative Mode to the Mode Actually Used ECML Sample

(Percentage of replies by mode used)

Best alternative (outward) \ Permitted mode	Air	Rail (1st)	Rail (1st or 2nd)	Car	Coach
Car	27	53	99	88	41
Train	43	54	96	80	30
Air	73	68	100	78	37
Coach	20	46	95	75	70
All modes	43	58	97	81	38

TABLE 28b Permitted Means of Travel, Broken Down by the Best Alternative Mode to the Mode Actually Used ORGN Sample

(Percentage of replies by mode used)

Best alternative (outward) \ Permitted mode	Air	Rail (1st)	Rail (1st or 2nd)	Car	Coach
Car	41	62	99	96	41
Train	40	57	91	91	25
Air	63	63	97	69	34
Coach	0	29	79	100	79
Sea	100	25	25	50	0
All modes	44	55	86	85	30

TABLE 29 Category of Car Available to Respondents Whose Outward Best Alternative Mode Was Car

Category*	ECML Respondents	%	ORGN Respondents	%	s.e.(%)**
Own Company Car	60	41	28	41	(3.3)
Other's Company Car	10	7	5	7	(1.7)
Pool Car	12	8	8	12	(2.0)
Hire Car	21	14	6	9	(2.3)
Private Car	69	48	34	49	(3.4)
Other Car	13	9	3	4	(1.7)

* These categories were not mutually exclusive. The numbers responding to this question were 145 and 69 for the ECML and ORGN samples, respectively.

** In this column we give standard erros for the proportion of respondents who had access to each category of car. These standard errors are computed, assuming both samples come from the same population, with the formula

$$s.e.(p) = \frac{p\,(1 - p)}{n}$$

TABLE 30 Number of Meetings Attended on Reported Business Trip by Mode (% respondents for each mode)

	ECML		ORGN	
Meetings	Car	Train	Car	Train
1	68	86	77	88
2	16	10	10	10
3 or more	16	4	12	2
Total Respondents	89	256	205	164

REFERENCES

Fowkes, A.S. and Marks, P. (1985) 'The Results of a Survey of Business Travel Policies in Greater London and North East England'. Institute for Transport Studies, Working Paper 202.

Hensher, D.A. (1977) 'Value of Business Travel Time' Pergamon Press: Oxford.

James, V.Z., Marshall, J.N. and Waters, N.S. (1979) 'Telecommunicatons and Office Location', Centre for Urban and Regional Development Studies, University of Newcastle upon Tyne, March 1979.

Johnson, I. and Fowkes, A.S. (1984) 'Survey Results for Long Distance Business Travel from Respondents Contacted via the East Coast Main Line Survey'. Unpublished note.

Johnson, I. and Nash, C.A. (1983) 'Mode Choice and the Value of Time for Long Distance Business Travel'. Unpublished note.

University of Southampton (1971) 'VTOL: A European Study', Volume Three: Business Travel, September, 1971.

APPENDIX I THE SURVEY QUESTIONNAIRE.

ITS

INSTITUTE FOR TRANSPORT STUDIES

THE UNIVERSITY OF LEEDS
LEEDS LS2 9JT

Tel: (0532) 431751 ext 7211
Telex: 557939

Director and Professor of Transport Economics: K. M. Gwilliam
Professor of Transport Engineering: A. D. May

February/March 1984.

Dear Respondent,

Long Distance Travel in the Course of Work.

The Institute is conducting research (sponsored by the Science and Engineering Research Council) into the means of travel individuals choose for long distance journeys made in the course of work.

Your answers to the questions on the attached form would greatly assist us in our research. With this information we will be able to obtain a better understanding of the determinants of travel decisions and estimate the value of reduced travel time for business travellers.

A **FREEPOST** envelope is provided for you to return the completed questionnaire direct to the Institute. **No stamp is required.**

If you have any problems when completing the questionnaire, or would like more details of the research please feel free to contact either Dr. Ian Johnson or Dr. Tony Fowkes on Leeds (0532) 431751 ext 7211.

Yours Sincerely,

Ken Gwilliam

K.M. Gwilliam.
Director and Professor of Transport Economics

1 1 7 4 2 2 0 3 1 7

1 - 10

Long Distance Travel in the Course of Work.

Please enter a tick ☑ in the appropriate box, or write answer on the line provided.

THE TERM 'BUSINESS TRIPS' REFERS TO JOURNEYS OF OVER 50 MILES, MADE IN THE COURSE OF WORK.

FOR OFFICE USE

Q1. On average how many business trips (as defined above) do you make each month?

Less than one ☐

One or more (WRITE IN NUMBER) _____

☐ 11

Q2. Please complete the following table for your most recent long distance business trip. We would like information about each stage of the trip together with the places you visited. Describe each stage of the journey on a seperate line.

NOTES TO HELP YOU

a) It is most important that we know where you travelled from and to. For example, it would help us to understand your journey if we had a postcode or local area name for the place you started and ended your journey.
b) Please give all times using a 24 hour clock. eg. 6pm would be 1800.
c) If you travelled by car please state if you were the driver.

Here is an example of part of a trip.

Date of starting out on trip. 25TH JAN 1984

From	Start time	Means of Travel	To	Arrival time
HOME NE9 8LA	07.15	CAR DRIVER	NEWCASTLE STATION	07.30
NEWCASTLE STATION	07.40	TRAIN	KINGS CROSS	10.50
KINGS CROSS	10.50	TAXI	STRAND	11.05

d d m m ☐☐☐☐

12 - 15

Date of starting out on trip. _____

From	Start time	Means of Travel	To	Arrival time

4 1 7 4 2

1-5

11-45

Q3. How many colleagues travelled with you on the outward and return journeys?
(On complicated trips treat the return journey as starting from the furthest point visited).

	OUTWARD		RETURN
Travelled alone	☐	1	☐
1 colleague	☐	2	☐
2 colleagues	☐	3	☐
3 colleagues	☐	4	☐
4 colleagues	☐	5	☐
5 or more colleagues	☐	6	☐

O ☐ R ☐
16 17

Q4. How much time, if any, whilst travelling did you use to do work that otherwise would have been done in the office or at home?

On the outward journey _____minutes

On the return journey _____minutes

IF WORK DONE

How long would the work have taken at home or in office _____minutes

O ☐☐☐ 18 - 20
R ☐☐☐ 21 - 23
☐☐☐ 24 - 26

Q5. What meals did you take whilst travelling on your most recent long distance business trip?

	OUTWARD		RETURN
Breakfast	☐	1	☐
Lunch/Midday meal	☐	2	☐
Dinner/Evening meal	☐	3	☐

Other (WRITE IN) _____

O ☐ R ☐
27 28

Q6. How many nights were you away from home?

Number of nights _____

☐
29

Q7. Would you please complete the following table for your most recent long distance trip?

Location of business activity. eg. Strand.	Nature of business activity eg. visiting client, internal company meeting, conference.	Number Present

L L N P
☐☐☐☐ 30 - 3
☐☐☐☐ 34 - 3
☐☐☐☐ 38 - 4

Q8. For both the outward and return journeys, why did you select the MAIN MEANS of travel?

	OUTWARD	RETURN
Main means of travel used (WRITE IN)	_____	_____

TICK REASONS FOR CHOOSING THIS MEANS OF TRAVEL

Cheapest	☐	1	☐
Company policy	☐	1	☐
Convenient start time	☐	1	☐
Short journey time	☐	1	☐
To be able to work whilst travelling	☐	1	☐
Need to carry heavy equipment	☐	1	☐

Other (WRITE IN) _____

O ☐ R ☐
42 43
☐☐☐☐☐☐☐ ☐☐☐☐☐☐☐
44 - 50 51 - 57

Q9. If your main means of travel WAS CAR OR VAN. Was it :-

	OUTWARD		RETURN
a car/van driven by someone else	☐	1	☐
a company car/van allocated specifically to you	☐	2	☐
a pool car/van	☐	3	☐
a hire car/van	☐	4	☐
Other (WRITE IN) _____			

☐ 58

Q10. If your main means of travel WAS NOT CAR OR VAN, could you have used :-

TICK AS MANY AS NECESSARY	OUTWARD		RETURN
your own company car/van	☐	1	☐
someone elses company car/van	☐	1	☐
a pool car/van	☐	1	☐
a hire car/van	☐	1	☐
a private car/van	☐	1	☐
None of these	☐	1	☐

O	R
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

59 - 64 65 - 70

Q11. Which of the following would your organisation have allowed you to use as your main means of travel on your last trip. INCLUDE THE METHOD YOU ACTUALLY USED ON THE LAST TRIP.

TICK AS MANY AS NECESSARY

Air	☐	1
Rail 1st class	☐	1
Rail 2nd class	☐	1
Car or van	☐	1
Coach	☐	1
Other (WRITE IN) _____		

☐ 71 - 76

Q12. Which of the following would have been the best alternative to the main means of travel you actually used?

TICK ONE BOX FOR EACH JOURNEY

	OUTWARD		RETURN
Air	☐	1	☐
Rail	☐	2	☐
Car or van	☐	3	☐
Coach	☐	4	☐
Other (WRITE IN) _____			
None	☐	0	☐

☐ ☐ 77 78

Q13. How much quicker or slower (door to door) would each journey have been using the best alternative main means of travel?

	OUTWARD	RETURN
About the same time	☐	☐
Quicker by	_____minutes	_____minutes
Slower by	_____minutes	_____minutes

2	1	7	4	2

1 - 5

qsn

☐☐☐☐
☐☐☐☐

11 - 18

Q14. How much did your last round trip cost?

Travel cost £_____

Other cost £_____ (eg. Hotel Bills.)

Please give indication of other costs _____

_____

_____

T ☐☐☐ 19 - 21

O ☐☐☐ 22 - 24

Q15. Using your best alternative means of travel, how much more or less would the round trip have cost on your last business trip?

	TRAVEL COST	OTHER COSTS
About the same	☐ 0	☐ 0
More by	£_____	£_____
Less by	£_____	£_____

M L

T ☐☐☐☐ 25 - 2

O ☐☐☐☐ 29 - 3

Q16. We are well aware that the amounts claimed for the cost of travel may not match the actual cost of travel as stated in Q14. Some organisations, for example, pay at standard rates rather than out of pocket expenses, or pay a car mileage rate. Regardless of how your organisation calculates expenses for business travel, how much did your organisation actually pay you for your last trip?

Travel Cost £_____

Other Costs £_____ (eg. Hotel bills)

T ☐☐☐ 33 - 35

O ☐☐☐ 36 - 38

Q17. If you have made a trip before to the same location as your last trip, what other means of travel have you tried?

None	☐ 1
Air	☐ 1
Rail 1st class	☐ 1
Rail 2nd class	☐ 1
Car or van	☐ 1
Coach	☐ 1

Other (WRITE IN) _____

☐ 39 - 45

Q18. What would you have done with the time saved if your last business trip could have been scheduled to start....

30 minutes later _____

60 minutes later _____

90 minutes later _____

☐ 46

☐ 47

☐ 48

Q19. We would now like you to consider a hypothetical situation in which you have to make a round trip of approximately 600 miles.

eg. a journey between Newcastle and London.

You would travel out and back on the same day, but would have a free choice of means of travel from these options :-

Air
Rail 1st class
Rail 2nd class
Car Driver

You will receive a fixed lump sum of £100 towards travel expenses and will be free to keep any unspent money. Subsistence expenses will be reclaimed seperately later.

On the following page there are several sets of travel options describing the cost of travel, the time you would have to leave home and the time you would return home from that journey.

Please study each block of options seperately and decide which means of travel you would use. Rank your chosen means of travel 1 and then rank the remaining means of treval 2,3,4 in decending order of preference.

Repeat this process with each block of options.

Write your rank in the box provided.

This example may help.

	Cost £	Leave home	Arrive home	Rank
AIR	100	07.00	20.30	3
RAIL 1st	100	07.00	19.00	2
RAIL 2nd	40	07.00	19.00	1
CAR	40	05.30	20.30	4

3	1	7	4	2

1 - 5

11 - 34

35 - 58

	Cost £	Leave home	Arrive home	Rank
AIR	.00	07.30	19.00	
RAIL 1st	60	07.00	19.30	
RAIL 2nd	40	07.00	19.30	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	90	07.30	18.00	
RAIL 1st	30	07.30	22.00	
RAIL 2nd	20	07.30	22.00	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	75	07.00	18.30	
RAIL 1st	105	06.00	19.30	
RAIL 2nd	70	06.00	19.30	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	80	07.00	19.00	
RAIL 1st	75	06.30	19.30	
RAIL 2nd	50	06.30	19.30	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	85	07.30	18.30	
RAIL 1st	120	06.00	21.00	
RAIL 2nd	80	06.00	21.00	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	95	07.30	18.30	
RAIL 1st	75	07.00	20.00	
RAIL 2nd	50	07.00	20.00	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	80	07.00	18.30	
RAIL 1st	75	06.30	20.00	
RAIL 2nd	50	06.30	20.00	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	80	07.00	19.00	
RAIL 1st	60	07.00	20.00	
RAIL 2nd	40	07.00	20.00	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	90	07.30	19.00	
RAIL 1st	30	05.30	21.00	
RAIL 2nd	20	05.30	21.00	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	100	07.30	18.30	
RAIL 1st	135	06.30	19.30	
RAIL 2nd	90	06.30	19.30	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	85	07.00	19.00	
RAIL 1st	45	07.00	19.30	
RAIL 2nd	30	07.00	19.30	
CAR	40	05.30	20.30	

	Cost £	Leave home	Arrive home	Rank
AIR	95	07.30	18.30	
RAIL 1st	90	05.30	20.30	
RAIL 2nd	60	05.30	20.30	
CAR	40	05.30	20.30	

Q20. Which category best describes your occupation?

Managerial	☐ 1
Professional	☐ 2
Secretarial	☐ 3
Clerical	☐ 4
Technical	☐ 5
Manual	☐ 6

☐ 59

Please give your job title _____

Q21. At what time do you usually....

leave home for work Time_____

arrive at work Time_____

leave work for home Time_____

PLEASE USE 24 HOUR CLOCK

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ 60 – 71

Q22. Do you work....

Fixed hours	☐ 1
Shift work	☐ 2
Flexitime	☐ 3

Other (PLEASE GIVE DETAILS) _____

☐ 72

Q23. It is important that we have some idea of your salary level to estimate values of business travel time. Please indicate the range in which your salary falls.

less than £5000 per year	☐ 0
£5001 - 7500	☐ 1
£7501 - 10000	☐ 2
£10001 - 12500	☐ 3
£12501 - 15000	☐ 4
£15001 - 17500	☐ 5
£17501 - 20000	☐ 6
£20001 - 22500	☐ 7
£22501 - 25000	☐ 8
£25001 or more	☐ 9

☐ 73

Q24. Date of completion of questionnaire? _____

d d m m

☐☐☐☐ 74 – 77

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE.

WOULD YOU PLEASE RETURN THE COMPLETED QUESTIONNAIRE TO THE INSTITUTE IN THE FREEPOST ENVELOPE.

ALL REPLIES WILL BE TREATED IN CONFIDENCE.

Appendix 2: Characteristics of the Companies Employing Business Travellers in the ORGN Sample

1. Industry Classification

	Frequency	%
Public non-commercial	13	12
Public commercial	8	8
Professional	31	29
Light industry	23	22
Heavy industry	22	21
Other	10	9
	107	

2. Size

No. employees	Frequency	%
0 - 50	38	35
50 - 100	14	13
100 - 500	37	34
500 - 1000	10	9
1000+	8	8

3. Location

	Frequency	%
Greater London	44	41
North East	63	59
	107	

4. Who decides travel mode

	Frequency	%
Individual	54	50
Organisation	53	50
	107	

5. Nature of travel policy

	Frequency	%
Formal policy	41	38
Informal policy	52	49
No policy	12	11
Don't know	2	2
	107	