

Data Management and Analysis Group

2001 Census Key Statistics: Means of travel to work

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Introduction

This briefing has been produced to look at how comparisons with 1991 data and measures of change over the decade may be estimated for the travel to work question. It is not intended to be the main analysis of the means of travel to work data, but it is a question in the Census that has changed relatively little between 1991 and 2001 and can be used to illustrate the potential dangers of comparing numbers from the 1991 and 2001 Censuses.

The best advice on making comparisons is that, as the population bases are different, comparisons should be restricted to percentages of specific characteristics. There are times, though, when the absolute numbers matter just as much. This is particularly the case when we might quote figures such as a three or four percentage point change, from 15.2 to 18.8 per cent of residents travelling to work by underground, light rail or tram between 1991 and 2001. The increase of 3 or 4 percentage points actually means in the region of 200,000 extra people travelling on the underground each day and this is clearly important. The large growth in the number of people working at home is also very important, and the large growth may not be so obvious from quoting the change in the percentages.

Comparability of the 1991 and 2001 Census questions

The question on travel to work was very similar in 2001 to that asked in 1991 although there are some differences. The categories are;

<i>1991 Categories</i>	<i>2001 Categories</i>
British Rail train	Train
Underground, tube, metro	Underground, metro, light rail, tram
Bus, minibus or coach (public or private)	Bus, minibus or coach
Motor cycle, scooter or moped	Motor cycle, scooter or moped
Driving a car or van	Driving a car or van
Passenger in a car or van	Passenger in a car or van
	Taxi
Pedal cycle	Pedal cycle
On foot	On foot
Other - <i>please specify</i>	Other
Works mainly at home	Works mainly at or from home

Comparability of definitions

The reasons why data from the 1991 and 2001 Censuses are not directly comparable include:

The population base is different in the two censuses - students are treated as resident at their term time address in 2001 and their home address in 1991. Means of travel has only been asked of people in employment aged 16-74 in 2001 compared with people aged 16 and over in employment in 1991.

This data in 1991 is based on a 10 per cent sample multiplied by ten while the 2001 data is coded for 100 per cent of forms.

There is no 'not stated category' in 2001 as all missing answers have been imputed. This is potentially the biggest problem because users have to decide what to do with the 72,280 London residents in 1991 who did not give an answer to the means of travel to work question. The following tables present this data for London and look at these issues.

Table 1 2001 Census: Means of travel to work in Greater London

Persons aged 16-74 in employment

	Number	%
Total in employment	3,319,134	100.00
Works at home	285,935	8.61
Travels by:		
Underground, light rail, tram, metro	625,224	18.84
Train	404,414	12.18
Bus, minibus, coach	369,108	11.12
Motor cycle, scooter, moped	47,147	1.42
Driving a car or van	1,111,762	33.50
Passenger in a car or van/taxi, minicab	104,986	3.16
Bicycle	77,330	2.33
On foot	279,340	8.42
Other	13,888	0.42
Not stated	-	-

Source: 2001 Census, Key Statistics Table KS15

Table 1 shows, for April, 2001 the number of London's residents travelling to work by various means and the number who stated that they worked at home in the question on means of travel. The question on address of workplace will also provide a count of those who work at home, but this is not available yet. Similar information for all people who work in London will be available later.

Taxi/minicab is available separately but has been added into car passenger for comparison with 1991. The numbers are small.

Table 2 1991 Census Means of travel to work in Greater London

Persons aged 16+ in employment

	Number	%
Total in employment	2,826,440	100.00
Works at home	124,330	4.40
Travels by:		
Underground, light rail, tram, metro	429,610	15.20
Train	313,010	11.07
Bus, minibus, coach	321,310	11.37
Motor cycle, scooter, moped	32,390	1.15
Driving a car or van	1,085,460	38.40
Passenger in a car or van/	100,680	3.56
Taxi, minicab	-	-
Bicycle	57,830	2.05
On foot	275,230	9.74
Other	14,310	0.51
Not stated	72,280	2.56

Source: 1991 Census, LBS Table L82, 10% Sample grossed by a factor of 10

Table 2 gives, for April 1991, the number of London's residents travelling to work by various means and the number who stated that they worked at home in the question on means of travel.

There are a number of reasons why the data in Tables 1 and 2 are not directly comparable, some listed on page 3, and which should be considered before making comparisons between the 1991 and 2001 Censuses. Having said that, one of the first things many users do is to look at change between 1991 and 2001.

Table 3 1991 Census means of travel to work in Greater London excluding 'not stated' or spreading equally across the other categories

Persons aged 16+ in employment

	Exclude not stated		Spread across other categories	
	Number	%	Number	%
Total in employment	2,754,160	100	2,826,440	100
Works at home	124,330	5	127,593	5
Travels by:				
Underground, light rail, tram, metro	429,610	16	440,885	16
Train	313,010	11	321,225	11
Bus, minibus, coach	321,310	12	329,742	12
Motor cycle, scooter, moped	32,390	1	33,240	1
Driving a car or van	1,085,460	39	1,113,947	39
Passenger in a car or van/	100,680	4	103,322	4
Taxi, minicab	-	-	-	-
Bicycle	57,830	2	59,348	2
On foot	275,230	10	282,453	10
Other	14,310	1	14,686	1
Not stated				

Source: 2001 Census, Key Statistics Table KS15, 1991 Census, LBS Table L82, 10% Sample grossed by a factor of 10

One way of dealing with 'not stated' in 1991 is to exclude them from the total, which gives the first column in Table 3. A fairly sensible way of dealing with them is probably to spread them equally across all the other categories. This assumes that there is no bias in those not answering the question. These figures are also given in Table 3. This makes no difference to the percentage travelling by each means of travel compared with excluding those in the 'not stated' category but affects the absolute numbers.

Table 4 Change in means of travel/works at home 1991-2001 in Greater London
Includes not stated 1991 - spread equally across all means of travel

Persons aged 16-74 in employment

	Number	%	Percentage point change
Total in employment	492,694	17.4	-
Works at home	158,342	124.1	4
Travels by:			
Underground, light rail, tram, metro	184,339	41.8	3
Train	83,189	25.9	1
Bus, minibus, coach	39,366	11.9	-1
Motor cycle, scooter, moped	13,907	41.8	0
Driving a car or van	-2,185	-0.2	-6
Passenger in a car or van/ taxi, minicab	1,664	1.6	-1
Bicycle	17,982	30.3	0
On foot	-3,113	-1.1	-2
Other	-798	-5.4	0

Source: 2001 Census, Key Statistics Table KS15, 1991 Census, LBS Table L82, 10% Sample grossed by a factor of 10

Table 4 shows the change over the decade assuming that those not answering the question in 1991 were just like the rest of those travelling to work and used each different means of travel in similar proportions.

The main features are the fall in car travel after decades of increase and the increase in travel by underground and working at home. The number of people working at home, on this basis, has increased by over 124 per cent.

The percentage change is usually positive simply because there are more people travelling.

Table 5 Change in means of travel/works at home 1991-2001 in Greater London
Excludes not stated 1991 - 72,280 people

Persons aged 16-74 in employment

	Number	%	Percentage point change
Total in employment	564,974	20.5	-
Works at home	161,605	130.0	4
Travels by:			
Underground, light rail, tram, metro	195,614	45.5	3
Train	91,404	29.2	1
Bus, minibus, coach	47,798	14.9	-1
Motor cycle, scooter, moped	14,757	45.6	0
Driving a car or van	26,302	2.4	-6
Passenger in a car or van/ taxi, minicab	4,306	4.3	-1
Bicycle	19,500	33.7	0
On foot	4,110	1.5	-2
Other	-422	-2.9	0

Source: 2001 Census, Key Statistics Table KS15, 1991 Census, LBS Table L82, 10% Sample grossed by a factor of 10

Excluding the 'not stated' makes no difference to the percentage point change but affects the absolute change. The increase in working at home in this instance is 130 per cent.

The percentage change is usually positive simply because there are more people travelling.

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Regular briefings and data from GLA Data Management and Analysis Group

We have instituted a new series of publications, covering all aspects of DMAG work. *DMAG Briefings* will now incorporate the Census Information Notes (CIN) and Population Advice Notes (PAN). The traditional content of both these series will still appear regularly.

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