

## **ONS Longitudinal Study**

### **Quality of linkage between the 1971 and 1981 censuses**

The forward linkage rate between the 1971 and 1981 Longitudinal Study (LS) sample was 91.3 per cent. The original LS sample extracted from the 1971 Census population comprised 529,902 people enumerated as resident in England and Wales, of whom 96.8 per cent were traced initially by the National Health Service Central Register (NHSCR).

The sample of 1971 traced LS members that were expected to be found at the 1981 Census was 446,872. However, the actual sample selected was 407,863. It was known that between the censuses, 59,246 LS members had died and 6,852 had embarked from England and Wales. Of the remaining 446,872 LS members who had been present at the 1971 Census, 39,009 were not found at the 1981 Census. There was no record of death or embarkation occurring before the 1981 Census for these people.

In 1981, the selected LS sample was 534,153 people usually resident in England and Wales, of whom 527,956 (98.8 per cent) were traced. The change in the sample size at the 1981 Census was due to natural population change (births and deaths) and migration occurring between 1971 and 1981.

Backward linkage resulted in matching 92.6 per cent of LS members from the 1981 traced sample to a 1971 record. Excluding births (64,669) and immigrations (14,799) to England and Wales between the censuses, there were 448,488 traced LS members in 1981 who should have originated from the 1971 Census. Of these members only 415,327 had 1971 Census records.

### **Factors affecting non-linkage between 1971 and 1981**

The rate of linkage between the initial 1971 traced LS sample and the 1981 Census records was high (91.3 per cent). A number of factors in 1971 were associated with non-linkage to 1981 Census records:

- being young and male
- being never married, divorced, or living in a lone-parent household
- being born outside of the United Kingdom
- living in a communal establishment or privately rented accommodation
- being unemployed, a student or in the economic position 'other inactive'
- being in the armed forces

**Table L7181.1 1971-81 LS-Census samples: forward and backward linkage**

Forward linkage	Number	Backward linkage	Number
1971 Census sample: traced LS members	512,970	1981 Census sample: traced LS members	527,956
Less died before 1981 Census	59,246	Less born after 1971 Census	64,669
Less embarked before 1981 Census	6,852	Less immigrant after 1971 Census	14,799
Eligible to be in 1981 Census	446,872	Should have been in 1971 Census	448,488
Less not found in the 1981 Census	39,009	Less not found in the 1971 Census	33,161
Recorded in 1981 Census	407,863	Recorded in 1971 Census	415,327
Forward linkage rate	91.3%	Backward linkage rate	92.6%

**Notes**

<sup>1</sup> Source: Office for National Statistics Longitudinal Study (LS)

<sup>2</sup> LS members, usually resident in England and Wales

<sup>3</sup> For forward linkage 'traced' means the LS members' records were found on the National Health Service Central Register by 1976, as part of the initial LS sample

<sup>4</sup> For backward linkage 'traced' means the LS members' records were found on the National Health Service Central Register before or during the 1981 Census Link

## **Forward linkage rates between the 1971 and 1981 Censuses: traced members by sex and age**

Among the sample traced in 1971, males were less likely to be successfully linked in 1981 than females (linkage success rates were 90.8 per cent and 91.7 per cent respectively). Linkage failure was concentrated in the younger age groups: 10- to 34-years-old in 1971, 20- to 44-years-old in 1981, and among the over 70s for both males and females.

Non-linkage of older age groups may have resulted from embarkations and possibly subsequent deaths that had not yet been added to the LS database. People in younger age groups were more likely to embark between the censuses, which means that some linkage failure may have been due to unrecorded embarkation.

Among the younger groups, linkage was lowest among young males and was less than 90 per cent among those aged 10 to 24 in 1971. For example, 88.1 per cent of males aged 15 to 19 were linked whereas 90.4 per cent of females aged 15 to 19 were linked.

Linkage was most successful – 92 per cent – among 40- to 64-year-olds. After this age linkage became less likely for both males and females, for the reasons outlined above. In the age group of 75 and above, males were more likely to be linked than females. In addition, males and females aged 55 to 59 in 1971 (65 to 69 in 1981) were less likely to be successfully linked than those in the adjacent age groups.

**Table L7181.2 Forward linkage rates between the 1971 and 1981 Censuses: traced LS members by sex and age in 1971**

Age and sex in 1971	Position by 1981 Census					Linkage success rate (%)
	LS Members present and traced in 1971	Died or embarked before 1981 Census	Eligible to be enumerated in 1981 Census	Not linked at 1981 Census	Linked at 1981 Census	
<b>Males</b>						
0-4	20,943	501	20,442	1,692	18,750	91.7
5-9	21,867	365	21,502	1,786	19,716	91.7
10-14	19,826	346	19,480	2,186	17,294	88.8
15-19	17,910	554	17,356	2,074	15,282	88.1
20-24	19,139	697	18,442	1,960	16,482	89.4
25-29	16,953	654	16,299	1,548	14,751	90.5
30-34	15,645	626	15,019	1,386	13,633	90.8
35-39	15,115	669	14,446	1,154	13,292	92.0
40-44	15,712	892	14,820	1,052	13,768	92.9
45-49	16,378	1,480	14,898	1,081	13,817	92.7
50-54	15,010	2,109	12,901	952	11,949	92.6
55-59	15,676	3,556	12,120	1,401	10,719	88.4
60-64	14,084	4,776	9,308	680	8,628	92.7
65-69	11,271	5,479	5,792	494	5,298	91.5
70-74	7,224	4,510	2,714	245	2,469	91.0
75+	7,751	6,454	1,297	161	1,136	87.6
Total	250,504	33,668	216,836	19,852	196,984	90.8
<b>Females</b>						
0-4	20,145	444	19,701	1,594	18,107	91.9
5-9	20,770	275	20,495	1,558	18,937	92.4
10-14	18,713	300	18,413	1,705	16,708	90.7
15-19	16,873	428	16,445	1,578	14,867	90.4
20-24	19,009	619	18,390	1,738	16,652	90.5
25-29	16,145	469	15,676	1,292	14,384	91.8
30-34	14,504	378	14,126	1,168	12,958	91.7
35-39	14,398	395	14,003	955	13,048	93.2
40-44	15,198	577	14,621	1,006	13,615	93.1
45-49	16,793	959	15,834	1,065	14,769	93.3
50-54	15,753	1,303	14,450	1,138	13,312	92.1
55-59	16,798	2,112	14,686	1,449	13,237	90.1
60-64	15,684	2,973	12,711	960	11,751	92.4
65-69	14,245	4,178	10,067	840	9,227	91.7
70-74	11,316	5,127	6,189	575	5,614	90.7
75+	16,122	11,894	4,228	536	3,693	87.3
Total	262,466	32,430	230,036	19,157	210,879	91.7
<b>All people</b>						
0-4	41,088	945	40,143	3,286	36,857	91.8
5-9	42,637	640	41,997	3,344	38,653	92.0
10-14	38,539	646	37,893	3,891	34,002	89.7
15-19	34,783	982	33,801	3,652	30,149	89.2
20-24	38,148	1,316	36,832	3,698	33,134	90.0
25-29	33,098	1,123	31,975	2,840	29,135	91.1
30-34	30,149	1,004	29,145	2,554	26,591	91.2
35-39	29,513	1,064	28,449	2,109	26,340	92.6
40-44	30,910	1,469	29,441	2,058	27,383	93.0
45-49	33,171	2,439	30,732	2,146	28,586	93.0
50-54	30,763	3,412	27,351	2,090	25,261	92.4
55-59	32,474	5,668	26,806	2,850	23,956	89.4
60-64	29,768	7,749	22,019	1,640	20,379	92.6
65-69	25,516	9,657	15,859	1,334	14,525	91.6
70-74	18,540	9,637	8,903	820	8,083	90.8
75+	23,873	18,348	5,525	697	4,829	87.4
Total	512,970	66,098	446,872	39,009	407,863	91.3

**Notes**

<sup>1</sup> Source: Office for National Statistics Longitudinal Study (LS)

<sup>2</sup> LS members, usually resident in England and Wales

<sup>3</sup> 'Traced' means the LS members' records were found on the National Health Service Central Register by 1976, as part of the initial LS sample

### **Forward linkage rates between the 1971 and 1981 Censuses: traced members by sex and marital status**

Married Longitudinal Study (LS) members were most likely to be successfully linked in 1981 compared with people in other marital status groups. Around 92 per cent of married males and females were successfully linked compared with 88.7 per cent of divorced people (among whom linkage was lowest for both sexes), 90.3 per cent of never-married people, and 90.7 per cent of widowed people.

Females were more likely to be successfully linked than males in all marital status groups. This was most pronounced for the divorced group where 86.8 per cent of males were successfully linked compared with 89.9 per cent of females.

**Table L7181.3 Forward linkage rates between the 1971 and 1981 Censuses: traced LS members by sex and marital status in 1971**

Marital status and sex in 1971	Position by 1981 Census					Linkage success rate (%)
	LS Members present and traced in 1971	Died or embarked before 1981 Census	Eligible to be enumerated in 1981 Census	Not linked at 1981 Census	Linked at 1981 Census	
<b>Males</b>						
Never Married	108,506	5,122	103,384	10,780	92,604	89.6
Married	132,982	23,877	109,105	8,574	100,531	92.1
Widowed	7,085	4,337	2,748	287	2,461	89.6
Divorced	1,931	332	1,599	211	1,388	86.8
Total	250,504	33,668	216,836	19,852	196,984	90.8
<b>Females</b>						
Never Married	99,452	5,792	93,660	8,386	85,274	91.0
Married	131,269	13,134	118,135	9,075	109,060	92.3
Widowed	28,799	13,159	15,640	1,432	14,208	90.8
Divorced	2,946	345	2,601	264	2,337	89.9
Total	262,466	32,430	230,036	19,157	210,879	91.7
<b>All people</b>						
Never Married	207,958	10,914	197,044	19,166	177,878	90.3
Married	264,251	37,011	227,240	17,649	209,591	92.2
Widowed	35,884	17,496	18,388	1,719	16,669	90.7
Divorced	4,877	677	4,200	475	3,725	88.7
Total	512,970	66,098	446,872	39,009	407,863	91.3

**Notes**

<sup>1</sup> Source: Office for National Statistics Longitudinal Study (LS)

<sup>2</sup> LS members, usually resident in England and Wales

<sup>3</sup> 'Traced' means the LS members' records were found on the National Health Service Central Register by 1976, as part of the initial LS sample

## **Forward linkage rates between the 1971 and 1981 Censuses: traced members by sex and economic position**

The economic position in 1971 of Longitudinal Study members was associated with the likelihood of their being found in 1981, although this was dependent on the sex of LS members. For both sexes, LS members who were employed (91.6 per cent of males and 92.0 per cent of females linked) were more likely to be found than those in other economic positions.

Among males, those in the 'other inactive' group were least likely to be linked (80.5 per cent) while females in the same group were most likely to be linked (92.2 per cent). However, these groups are not comparable as most females counted as 'other inactive' in 1971 were housewives.

Linkage was also relatively low among unemployed people: among males in the 'out of employment, other' category (84.9 per cent linked) and among females out employment because they were temporarily sick (86.5 per cent linked).

Among the economically inactive, linkage rates were high for retired people (91.0 per cent of males and 90.5 per cent of females linked) while permanently sick people (87.9 per cent of males and 88.2 per cent of females) and students (85.2 per cent of males and 88.2 per cent of females) were less likely to be linked.

Among people in employment, females were typically more likely to be linked (91.7 per cent) than males (90.9 per cent). However, among people out of employment because of temporary sickness and retired people, males were more likely to be linked.

**Table L7181.4 Forward linkage rates between the 1971 and 1981 Censuses: traced LS members aged 15+ by sex and economic position in 1971**

Economic position and sex in 1971	Position by 1981 Census					Linkage success rate (%)
	LS Members present and traced in 1971	Died or embarked before 1981 Census	Eligible to be enumerated in 1981 Census	Not linked at 1981 Census	Linked at 1981 Census	
<b>Males</b>						
Economically active						
In employment	146,072	15,023	131,049	11,073	119,976	91.6
Out of employment - sick	1,836	596	1,240	145	1,095	88.3
Out of employment - other	5,962	737	5,225	788	4,437	84.9
Economically inactive						
Retired	22,258	14,394	7,864	706	7,158	91.0
Permanently sick	2,580	1,166	1,414	171	1,243	87.9
Student	8,320	391	7,929	1,170	6,759	85.2
Other inactive	840	149	691	135	556	80.5
Total	187,868	32,456	155,412	14,188	141,224	90.9
<b>Females</b>						
Economically active						
In employment	83,054	4,696	78,358	6,289	72,069	92.0
Out of employment - sick	908	144	764	103	661	86.5
Out of employment - other	2,895	191	2,704	297	2,407	89.0
Economically inactive						
Retired	29,235	13,829	15,406	1,460	13,946	90.5
Permanently sick	1,876	658	1,218	144	1,074	88.2
Student	7,395	255	7,140	841	6,299	88.2
Other inactive	77,475	11,638	65,837	5,166	60,671	92.2
Total	202,838	31,411	171,427	14,300	157,127	91.7
<b>All people</b>						
Economically active						
In employment	229,126	19,719	209,407	17,362	192,045	91.7
Out of employment - sick	2,744	740	2,004	248	1,756	87.6
Out of employment - other	8,857	928	7,929	1,085	6,844	86.3
Economically inactive						
Retired	51,493	28,223	23,270	2,166	21,104	90.7
Permanently sick	4,456	1,824	2,632	315	2,317	88.0
Student	15,715	646	15,069	2,011	13,058	86.7
Other inactive	78,315	11,787	66,528	5,301	61,227	92.0
Total	390,706	63,867	326,839	28,488	298,351	91.3

**Notes**

<sup>1</sup> Source: Office for National Statistics Longitudinal Study (LS)

<sup>2</sup> LS members, usually resident in England and Wales

<sup>3</sup> 'Traced' means the LS members' records were found on the National Health Service Central Register by 1976, as part of the initial LS sample



## **Forward linkage rates between the 1971 and 1981 Censuses: traced members by sex and social class**

Although linkage rates by social class were generally dependent on sex in 1981, LS members of both sexes who were in skilled, non-manual occupations in 1971 (92.8 per cent linked) were most likely to be found in 1981.

For men, linkage was lowest in the least skilled categories of the classification with 87.3 per cent of males in unskilled occupations in 1971 being linked in 1981. In contrast, females in unskilled occupations (92.1 per cent linked) were among the most likely to be linked.

There was also a sex difference in linkage rates among the people in professional occupations. Women in professional occupations were among the least likely to be linked among their sex (89.5 per cent linked) but professional men were more likely to be linked (91.1 per cent linked).

Linkage rates were relatively low for both men and women in partly skilled occupations (90.6 per cent of males and 91.6 per cent of females linked). Table L7181.5 also shows high linkage failure for people serving in the armed forces in 1971 (82.3 per cent of men and 89.7 per cent of women linked).

**Table L7181.5 Forward linkage rates between the 1971 and 1981 Censuses: traced LS members aged 15+ by sex and social class in 1971**

Social class and sex in 1971	Position by 1981 Census					Linkage success rate (%)
	LS Members present and traced in 1971	Died or embarked before 1981 Census	Eligible to be enumerated in 1981 Census	Not linked at 1981 Census	Linked at 1981 Census	
<b>Males</b>						
Non-manual	59,396	9,241	50,155	3,854	46,301	92.3
I Professional	8,555	1,072	7,483	663	6,820	91.1
II Managerial and Technical	30,383	4,857	25,526	1,961	23,565	92.3
IIIN Skilled non-manual	20,458	3,312	17,146	1,230	15,916	92.8
Manual	109,155	18,463	90,692	8,035	82,657	91.1
IIIM Skilled manual	64,693	9,474	55,219	4,327	50,892	92.2
IV Partly skilled	30,435	5,806	24,629	2,326	22,303	90.6
V Unskilled	14,027	3,183	10,844	1,382	9,462	87.3
Armed forces and inadequately described	8,196	3,087	5,109	902	4,207	82.3
Total	176,747	30,791	145,956	12,791	133,165	91.2
<b>Females</b>						
Non-manual	51,305	3,867	47,438	3,773	43,665	92.0
I Professional	899	86	813	85	728	89.5
II Managerial and Technical	15,797	1,668	14,129	1,340	12,789	90.5
IIIN Skilled non-manual	34,609	2,113	32,496	2,348	30,148	92.8
Manual	40,214	4,072	36,142	2,980	33,162	91.8
IIIM Skilled manual	9,333	1,008	8,325	669	7,656	92.0
IV Partly skilled	23,950	2,259	21,691	1,827	19,864	91.6
V Unskilled	6,931	805	6,126	484	5,642	92.1
Armed forces and inadequately described	25,168	10,939	14,229	1,466	12,763	89.7
Total	116,687	18,878	97,809	8,219	89,590	91.6
<b>All people</b>						
Non-manual	110,701	13,108	97,593	7,627	89,966	92.2
I Professional	9,454	1,158	8,296	748	7,548	91.0
II Managerial and Technical	46,180	6,525	39,655	3,301	36,354	91.7
IIIN Skilled non-manual	55,067	5,425	49,642	3,578	46,064	92.8
Manual	149,369	22,535	126,834	11,015	115,819	91.3
IIIM Skilled manual	74,026	10,482	63,544	4,996	58,548	92.1
IV Partly skilled	54,385	8,065	46,320	4,153	42,167	91.0
V Unskilled	20,958	3,988	16,970	1,866	15,104	89.0
Armed forces and inadequately described	33,364	14,026	19,338	2,368	16,970	87.8
Total	293,434	49,669	243,765	21,010	222,755	91.4
<b>Economically inactive</b>						
Males	11,121	1,665	9,456	1,397	8,059	85.2
Females	86,151	12,533	73,618	6,081	67,537	91.7
All	97,272	14,198	83,074	7,478	75,596	91.0

**Notes**

<sup>1</sup> Source: Office for National Statistics Longitudinal Study (LS)

<sup>2</sup> LS members, usually resident in England and Wales

<sup>3</sup> 'Traced' means the LS members' records were found on the National Health Service Central Register by 1976, as part of the initial LS sample

### **Forward linkage rates between the 1971 and 1981 Censuses: traced members by sex and country of birth**

Longitudinal Study (LS) members who were born in the UK (92.4 per cent linked) were more likely to be successfully linked in 1981 than those born elsewhere (75.3 per cent linked). Linkage was highest for people born in England and Wales, with 92.1 per cent of males and 92.8 per cent of females being linked. This aspect of linkage makes a substantial contribution to overall linkage success, given that the overwhelming majority of traced LS members were born in England and Wales (91.5 per cent).

People born in the USA (61.3 per cent linked), countries of the old Commonwealth (Australia, Canada and New Zealand) (71.0 per cent linked), Pakistan and Bangladesh (70.4 per cent linked), and 'Caribbean Commonwealth' (69.5 per cent linked) were among the least likely to be linked. Lower linkage is to be expected among people born outside the UK because these groups generally have a younger age profile (see table T71.6b of tracing rates by sex, age and country of birth) and people aged 10 to 34 in 1971 were less likely than average to be linked in 1981 (see Table L7181.2).

More than one in ten (12.6 per cent) of LS members who were recorded as being born outside the UK in 1971 were born in India. Among this group, linkage was more successful (79.4 per cent linked) than for people born elsewhere outside the UK.

**Table L7181.6 Forward linkage rates between the 1971 and 1981 Censuses: traced LS members by sex and country of birth in 1971**

Country of birth and sex at 1971	Position by 1981 Census					Linkage success rate (%)
	LS Members present and traced in 1971	Died or embarked before 1981 Census	Eligible to be enumerated in 1981 Census	Not linked at 1981 Census	Linked at 1981 Census	
<b>Males</b>						
United Kingdom	233,510	31,223	202,287	16,135	186,152	92.0
England and Wales	228,374	30,193	198,181	15,569	182,612	92.1
Scotland	3,951	818	3,133	406	2,727	87.0
Northern Ireland	1,067	189	878	149	729	83.0
Other UK	118	23	95	11	84	88.4
Outside UK	16,994	2,445	14,549	3,717	10,832	74.5
Irish Republic	3,407	631	2,776	720	2,056	74.1
Old Commonwealth	583	97	486	136	350	72.0
New Commonwealth	7,626	658	6,968	1,887	5,081	72.9
India	2,373	236	2,137	449	1,688	79.0
Pakistan and Bangladesh	1,475	114	1,361	403	958	70.4
African Commonwealth	926	73	853	252	601	70.5
Caribbean Commonwealth	1,576	119	1,457	481	976	67.0
Mediterranean	764	73	691	177	514	74.4
Remainder	512	43	469	125	344	73.3
Europe, excluding USSR	3,146	538	2,608	549	2,059	78.9
USA	320	91	229	89	140	61.1
Elsewhere and not stated	1,912	430	1,482	336	1,146	77.3
Total	250,504	33,668	216,836	19,852	196,984	90.8
<b>Females</b>						
United Kingdom	246,284	30,279	216,005	15,802	200,203	92.7
England and Wales	241,255	29,365	211,890	15,313	196,577	92.8
Scotland	3,754	730	3,024	331	2,693	89.1
Northern Ireland	1,099	163	936	136	800	85.5
Other UK	176	21	155	22	133	85.8
Outside United Kingdom	16,182	2,151	14,031	3,355	10,676	76.1
Irish Republic	3,803	556	3,247	744	2,503	77.1
Old Commonwealth	684	127	557	166	391	70.2
New Commonwealth	5,631	434	5,197	1,293	3,904	75.1
India	1,818	177	1,641	328	1,313	80.0
Pakistan and Bangladesh	453	17	436	129	307	70.4
African Commonwealth	754	35	719	185	534	74.3
Caribbean Commonwealth	1,497	124	1,373	381	992	72.3
Mediterranean	648	46	602	173	429	71.3
Remainder	461	35	426	97	329	77.2
Europe, excluding USSR	3,802	521	3,281	738	2,543	77.5
USA	318	71	247	95	152	61.5
Elsewhere and not stated	1,944	442	1,502	319	1,183	78.8
Total	262,466	32,430	230,036	19,157	210,879	91.7

**Table L7181.6 Forward linkage rates between the 1971 and 1981 Censuses: traced LS members by sex and country of birth in 1971**

Country of birth and sex at 1971	Position by 1981 Census					Linkage success rate (%)
	LS Members present and traced in 1971	Died or embarked before 1981 Census	Eligible to be enumerated in 1981 Census	Not linked at 1981 Census	Linked at 1981 Census	
<b>All people</b>						
United Kingdom	479,794	61,502	418,292	31,937	386,355	92.4
England and Wales	469,629	59,558	410,071	30,882	379,189	92.5
Scotland	7,705	1,548	6,157	737	5,420	88.0
Northern Ireland	2,166	352	1,814	285	1,529	84.3
Other UK	294	44	250	33	217	86.8
Outside United Kingdom	33,176	4,596	28,580	7,072	21,508	75.3
Irish Republic	7,210	1,187	6,023	1,464	4,559	75.7
Old Commonwealth	1,267	224	1,043	302	741	71.0
New Commonwealth	13,257	1,092	12,165	3,180	8,985	73.9
India	4,191	413	3,778	777	3,001	79.4
Pakistan and Bangladesh	1,928	131	1,797	532	1,265	70.4
African Commonwealth	1,680	108	1,572	437	1,135	72.2
Caribbean Commonwealth	3,073	243	2,830	862	1,968	69.5
Mediterranean	1,412	119	1,293	350	943	72.9
Remainder	973	78	895	222	673	75.2
Europe, excluding USSR	6,948	1,059	5,889	1,287	4,602	78.1
USA	638	162	476	184	292	61.3
Elsewhere and not stated	3,856	872	2,984	655	2,329	78.0
<b>Total</b>	<b>512,970</b>	<b>66,098</b>	<b>446,872</b>	<b>39,009</b>	<b>407,863</b>	<b>91.3</b>

**Notes**

<sup>1</sup> Source: Office for National Statistics Longitudinal Study (LS)

<sup>2</sup> LS members, usually resident in England and Wales

<sup>3</sup> 'Traced' means the LS members' records were found on the National Health Service Central Register by 1976, as part of the initial LS sample

### **Forward linkage rates between the 1971 and 1981 Censuses: traced members by housing tenure**

Linkage rates by tenure show that Longitudinal Study (LS) members living in furnished, rented accommodation were at the greatest risk of not being found at the 1981 Census (78.8 per cent of traced LS members linked). Linkage was most likely for local authority tenants (92.1 per cent linked successfully).

**Table L7181.7 Forward linkage rates between the 1971 and 1981 Censuses: traced LS members by housing tenure in 1971**

Housing tenure in 1971	Position by 1981 Census					Linkage success rate (%)
	LS Members present and traced in 1971	Died or embarked before 1981 Census	Eligible to be enumerated in 1981 Census	Not linked at 1981 Census	Linked at 1981 Census	
Owner occupied	257,931	30,244	227,687	18,126	209,561	92.0
Local authority	153,041	17,870	135,171	10,611	124,560	92.1
Rented unfurnished	72,960	12,095	60,865	5,520	55,345	90.9
Rented furnished	16,058	1,735	14,323	3,038	11,285	78.8
Not stated	341	62	279	46	233	83.5
Non-private establishments	12,639	4,092	8,547	1,668	6,879	80.5
<b>Total</b>	<b>512,970</b>	<b>66,098</b>	<b>446,872</b>	<b>39,009</b>	<b>407,863</b>	<b>91.3</b>

*Notes*

<sup>1</sup> *Source: Office for National Statistics Longitudinal Study (LS)*

<sup>2</sup> *LS members, usually resident in England and Wales*

<sup>3</sup> *'Traced' means the LS members' records were found on the National Health Service Central Register by 1976, as part of the initial LS sample*

### **Forward linkage rates between the 1971 and 1981 Censuses: traced members by household size**

There was an association between the household size of Longitudinal Study (LS) members and their likelihood of being successfully linked in 1981. People living in larger households of seven or more people (87.4 per cent linked) were less likely to be found than people living in smaller households.

Linkage was most successful in households containing between three and six people in 1971 (mainly families with children) and among two-person households (92.1 and 91.7 per cent linked respectively).



**Table L7181.8 Forward linkage rates between the 1971 and 1981 Censuses: traced LS members by household size in 1971**

Household size in 1971	Position by 1981 Census					Linkage success rate (%)
	LS Members present and traced in 1971	Died or embarked before 1981 Census	Eligible to be enumerated in 1981 Census	Not linked at 1981 Census	Linked at 1981 Census	
1	31,384	11,492	19,892	2,320	17,572	88.3
2	111,342	26,740	84,602	7,060	77,542	91.7
3-6	325,325	22,403	302,922	24,039	278,883	92.1
7+	31,529	1,278	30,251	3,823	26,428	87.4
Not in household: communal est	12,638	4,091	8,547	1,668	6,879	80.5
Not in household: absent	752	94	658	99	559	85.0
Total	512,970	66,098	446,872	39,009	407,863	91.3

*Notes*

<sup>1</sup> Source: Office for National Statistics Longitudinal Study (LS)

<sup>2</sup> LS members, usually resident in England and Wales

<sup>3</sup> 'Traced' means the LS members' records were found on the National Health Service Central Register by 1976, as part of the initial LS sample

## **Forward linkage rates between the 1971 and 1981 Censuses: traced members by sex and position in household**

The position in the household of Longitudinal Study (LS) members has been examined using 'minimal household units'. Minimal household units are the smallest unit, ie group of people, within a household that might be expected to share the same or a similar lifestyle. (For information on minimal household units see LS User Guide 20).

LS members' household circumstances affected the likelihood of their being successfully linked in 1981. Members living in communal establishments were least likely to be successfully linked (79 per cent) but they were a small proportion of the 1971 traced sample (2.5 per cent) and therefore do not impact substantially on overall linkage rates.

Adult LS members in married-couple families were most likely to be linked in 1981. Linkage was highest for married LS members with children (92.9 per cent of males and 93.0 per cent of females linked) followed by married people without dependent children (92.4 per cent of males and 92.1 per cent of females linked). Among private households, forward linkage was least likely for visitors, with 84.2 per cent successfully linked.

Linkage was less likely for LS members who were part of lone-parent families than for people in two-parent families. In addition, adults living alone (88.0 per cent and males and 90.5 per cent of females linked) were less likely to be linked than adults living with their family. This instance of non-linkage made a substantial contribution to overall linkage failure, given that over a fifth (21.2 per cent) of all traced LS members were adults living alone in 1971.

## **Reference**

Brassett-Grundy, A. (2003) *LS User Guide 20: Researching Households and Families using the ONS Longitudinal Study*, London: Office for National Statistics

**Table L7181.9 Forward linkage rates between the 1971 and 1981 Censuses: traced LS members by sex and position in household in 1971**

Position in household and sex in 1971	Position by 1981 Census					
	LS Members present and traced in 1971	Died or embarked before 1981 Census	Eligible to be enumerated in 1981 Census	Not linked at 1981 Census	Linked at 1981 Census	Linkage success rate (%)
<b>Males</b>						
Adult living alone	48,332	7,909	40,423	4,865	35,558	88.0
Married adult, no dependent children	65,783	18,574	47,209	3,571	43,638	92.4
Married adult living with spouse and dependent children	60,563	3,795	56,768	4,056	52,712	92.9
Lone parent	1,057	110	947	106	841	88.8
Dependent child living with two parents	61,045	1,221	59,824	5,287	54,537	91.2
Dependent child living with lone parent	4,999	90	4,909	653	4,256	86.7
Visitor in a household or communal establishment	5,052	874	4,178	719	3,459	82.8
Living in a communal establishment	3,673	1,095	2,578	595	1,983	76.9
Total	250,504	33,668	216,836	19,852	196,984	90.8
<b>Females</b>						
Adult living alone	60,760	15,888	44,872	4,285	40,587	90.5
Married adult, no dependent children	65,385	10,242	55,143	4,348	50,795	92.1
Married adult living with spouse and dependent children	59,527	1,949	57,578	4,059	53,519	93.0
Lone parent	4,548	229	4,319	403	3,916	90.7
Dependent child living with two parents	58,474	1,053	57,421	4,561	52,860	92.1
Dependent child living with lone parent	4,801	78	4,723	555	4,168	88.2
Visitor in a household or communal establishment	4,945	1,168	3,777	537	3,240	85.8
Living in a communal establishment	4,026	1,823	2,203	409	1,794	81.4
Total	262,466	32,430	230,036	19,157	210,879	91.7

**Table L7181.9 Forward linkage rates between the 1971 and 1981 Censuses: traced LS members by sex and position in household in 1971**

Position in household and sex in 1971	Position by 1981 Census					Linkage success rate (%)
	LS Members present and traced in 1971	Died or embarked before 1981 Census	Eligible to be enumerated in 1981 Census	Not linked at 1981 Census	Linked at 1981 Census	
<b>All</b>						
Adult living alone	109,092	23,797	85,295	9,150	76,145	89.3
Married adult, no dependent children	131,168	28,816	102,352	7,919	94,433	92.3
Married adult living with spouse and dependent children	120,090	5,744	114,346	8,115	106,231	92.9
Lone parent	5,605	339	5,266	509	4,757	90.3
Dependent child living with two parents	119,519	2,274	117,245	9,848	107,397	91.6
Dependent child living with lone parent	9,800	168	9,632	1,208	8,424	87.5
Visitor in a household or communal establishment	9,997	2,042	7,955	1,256	6,699	84.2
Living in a communal establishment	7,699	2,918	4,781	1,004	3,777	79.0
<b>Total</b>	<b>512,970</b>	<b>66,098</b>	<b>446,872</b>	<b>39,009</b>	<b>407,863</b>	<b>91.3</b>

*Notes*

<sup>1</sup> *Source: Office for National Statistics Longitudinal Study (LS)*

<sup>2</sup> *LS members, usually resident in England and Wales*

<sup>3</sup> *'Traced' means the LS members' records were found on the National Health Service Central Register by 1976, as part of the initial LS sample*

## **Inconsistencies between the 1971 and 1981 Censuses**

There were some inconsistencies in the responses given at the two censuses by the 416,638 Longitudinal Study (LS) members who were found in both the 1971 and 1981 Censuses.

The three variables which would be expected to remain constant between two censuses are date of birth, sex and country of birth. However, 14,465 LS members quoted dates of birth that were inconsistent enough to change their ages by full years, 1,357 members recorded a different sex at each census and 3,821 members had discrepancies in their country of birth.

Reasons for these discrepancies were:

- census form completion error
- punching error
- error made when, for 1981 data, the census automatic editing routines were applied to impute missing values.

**Table L7181.10 Inconsistencies in the characteristics of LS sample members between the 1971 and 1981 Censuses**

Characteristics in 1971 Census	Position in 1981		Per cent with discrepancy
	Consistent with 1971	Inconsistent with 1971	
<b>Sex</b>			
Male	199,788	572	0.3
Female	215,493	785	0.4
All	415,281	1,357	0.3
<b>Age</b>			
Under 10	74,097	2,350	3.1
10-24	96,685	2,564	2.6
25-59	185,691	6,604	3.4
60-74	41,475	2,240	5.1
75+	4,225	707	14.3
All	402,173	14,465	3.5
<b>Country of birth</b>			
United Kingdom	391,490	1,652	0.4
England and Wales	384,714	937	0.2
Scotland	5,229	439	7.7
Northern Ireland	1,352	251	15.7
Other UK	195	25	11.4
Outside United Kingdom	21,327	2,169	9.2
Irish Republic	4,604	299	6.1
Old Commonwealth	730	33	4.3
New Commonwealth			
India	3,159	208	6.2
Pakistan and Bangladesh	1,416	118	7.7
African	1,026	232	18.4
Caribbean	2,082	83	3.8
Mediterranean	1,033	47	4.4
Remainder	678	39	5.4
Europe, excluding USSR	4,677	198	4.1
USA	298	17	5.4
Elsewhere and not stated	1,624	895	35.5
All	412,817	3,821	0.9

**Notes**

<sup>1</sup> Source: Office for National Statistics Longitudinal Study (LS)

<sup>2</sup> LS members, usually resident in England and Wales

<sup>3</sup> 'Traced' means the LS members' records were found on the National Health Service Central Register by 1976, as part of the initial LS sample

<sup>4</sup> Based on sample of 416,638 traced and untraced LS members found in both the 1971 and 1981 Censuses