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1991 Census Statistical Paper No 10

ETHNIC MINORITIES IN GREAT BRITAIN: Patterns of population change, 1981-91

David Owen



December 1995



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by

David Owen

National Ethnic Minority Data Archive

Centre for Research in Ethnic Relations, University of Warwick, Coventry CV4 7AL. December 1995

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1. Introduction

The 1991 Census of Population was the first to include a question about the ethnic group of individuals. Considerable debate had taken place over the merits and morality of asking members of the population about their ethnic origin during the 1970s and early 1980s, over which period the Office of Population Censuses and Surveys tested a number of alternative designs for a question on ethnic group, on asking individuals to specify the ethnic group to which they thought they belonged¹. Strong opposition to the ethnic group question (most vocally from African Caribbean community groups) at the time of the 1979 Census Test resulted in plans to ask such a question in the 1981 Census being abandoned. The resulting lack of definitive information on the minority ethnic group population of Great Britain during the 1980s led the House of Commons Select Committee on Home Affairs and the Commission for Racial Equality to argue strongly for the inclusion of the ethnic group question in the next Census². Further tests by OPCS resulted in the development of an ethnic group question which proved quite successful in practice, and was far less controversial than ten years earlier. The 1991 Census has yielded a large amount of valuable new information on the circumstances of minority ethnic groups in Great Britain in 1991, some of which has been reported in the earlier Statistical Papers in this series.

As a consequence of the belated introduction of the ethnic group question, little information exists on trends over time in the populations and characteristics of individual ethnic groups. This is a major deficiency, since the lack of accurate information on population change makes it difficult to identify the areas of Britain in which individual ethnic groups have grown or declined, and hence seriously hampers prediction of the likely pattern of future population change by ethnic group. It is particularly important for service providers in the areas of health, education and social services (as well as private entrepreneurs) to have such information in order that local services can be planned to match the changing needs of the local population as closely as possible. The purpose of this Statistical Paper is to bring together the available information on the patterns of change in ethnic group populations during the decade 1981-91, placing this in the context of longer term trends in their evolution, in order to provide a picture of recent change in the ethnic composition of Great Britain. In addition, it presents new estimates of the components of population change by ethnic group over the decade and concludes by discussing methods for estimating population change at the local scale.

2. The growth of the minority ethnic group population since the Second World War.

Members of minority ethnic groups were present in Britain throughout the period of empire, but their total population was quite small. In the decades following the Second World War, their numbers increased substantially, due to mass immigration from the countries of the New Commonwealth following the passing of the 1948 British Nationality Act. The number of people living in Great Britain who had been born in the New Commonwealth and Pakistan was estimated to be 256 thousand in 1951, doubling to around 500 thousand in 1961. However, not all of these people were from minority ethnic groups, since the share of white people amongst those born in the New Commonwealth was still substantial at that time (and was increased by the return of Indian-born people of white British parentage after India and Pakistan were granted independence in 1947). In fact, the minority ethnic group population of England and Wales was estimated to be only 103 thousand in 1951, less than half the total born in the New Commonwealth, rising to 415 thousand in 1961³. By 1971, the minority ethnic group population of Great Britain was thought to be nearly 1.3 million. It has been argued⁴ that the 1961 and 1966 (sample) Censuses substantially underestimated the New Commonwealth-born population, and thus the growth in the minority ethnic group population during the 1950s and early 1960s may have been even faster. The Commonwealth Immigrants Act of 1962 and the Immigration Act of 1971 largely curtailed primary immigration (migration for work) to the UK, but the migration of dependants continued at a lower level, since the reunification of families was permitted⁵.

No time-series of population data disaggregated by ethnic group exists before 1981, but the Immigrant Statistics Unit of OPCS made annual estimates of the number of persons of "New

Commonwealth and Pakistan (NCWP) ethnic origin" during the 1970s and early 1980s⁶, which were published in **Population Trends.**⁷ By combining this data source with information from the Census of Population and the Labour Force Survey, the growth of the total minority ethnic group population from 1966/7 to 1989-91 can be estimated. This is illustrated in Figure 1. The figures for 1967-8 to 1980-81 are annual OPCS estimates of the NCWP population, derived from country of birth information, while those from 1981-3 onwards are the total population of all minority ethnic groups, averaged across three successive Labour Force Surveys⁸. This diagram reveals almost continuous increases in both total numbers and the percentage of the total population from minority ethnic groups. Over the fourteen years from 1966 to 1980, the minority ethnic group population more than doubled in size, rising from 886 thousand to reach 2.1 million.

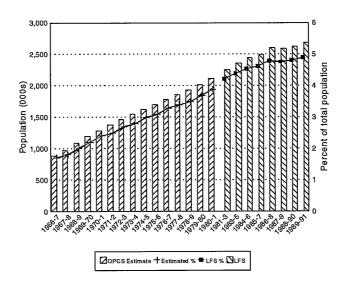


Figure 1: Minority ethnic group population of Great Britain, 1966-91

The Labour Force Survey reveals a further growth of over half a million during the 1980s, with minority ethnic groups forming nearly 5 per cent of the population by 1989-91. However, there are problems with this data source, which suggest that this may be an underestimate of the actual rate of increase. First, there are considerable annual fluctuations in the annual LFS estimates of the size of minority ethnic groups, which remain even after averaging data for three successive surveys in order to minimise the effects of sampling variability. Secondly, the Labour Force Survey appears to underestimate the minority ethnic group population at the end of the 1980s in comparison with the 1991 Census, which (before adjustment for under-enumeration) found that just over 3 million people (5.5 per cent of the population) were from minority ethnic groups9. The Census figure is broadly consistent with the OPCS projections of the growth of the New Commonwealth population from 1976 to 1991. These projections were that the minority ethnic group population of Great Britain (including people of mixed parentage) would lie between 2.75 and 3.25 million people in 1991¹⁰. Further evidence of underestimation of the minority ethnic group population by the LFS in the 1980s is provided by the Quarterly Labour Force Survey introduced from April 1992 (using an improved sampling methodology), which estimated that minority ethnic groups formed 5.9 per cent of the population in 1992.¹¹

2.1 The Demographic impact of immigration from the New Commonwealth

The growth of the minority ethnic group population of Great Britain in the period from the end of the Second World War to the mid-1970s was driven by high rates of immigration from the countries of the New Commonwealth, but its effect in changing the ethnic composition of the population was magnified by the operation of other demographic forces. The United Kingdom had experienced a net outflow of population for many decades, and a substantial

outward flow of UK-born people to the United States, the "Old Commonwealth" and other English-speaking countries continued from the end of the Second World War until the early 1980s (when restrictions on migration to countries such as Australia were introduced). These flows were generally larger than the level of New Commonwealth immigration in each year up to 1983, and thus the UK lost population due to migration in each year except those in which New Commonwealth migration was at a peak, such as 1961, 1968 and 1973. Since then, the UK has gained population due to net in-migration from all countries, varying between a minimum of 13 thousand in 1987-88 and a maximum of 94 thousand during 1984-85.

The emigration of UK-born people magnified the demographic impact of New Commonwealth immigration upon the population of the United Kingdom. In addition to replacing these emigrants, migrants from the New Commonwealth experienced higher birth rates and lower death rates than the existing population (and out-migrants). Consequently, it was estimated by OPCS that the population of England and Wales was 630 thousand higher in 1976 than it would have been in the absence of in- and out-migration over the period 1951-76. This was made up of 280 thousand due to net in-migration, 330 thousand due to the increase in the overall birth rate due to immigration, and 20 thousand as a result of other changes¹². It has been argued that in the absence of New Commonwealth immigration, the population of the UK would have been about 3 million lower, and that the population of the youngest age groups would have been about 10 per cent smaller in 1991¹³.

2.2 Trends in immigration to the UK by ethnic group

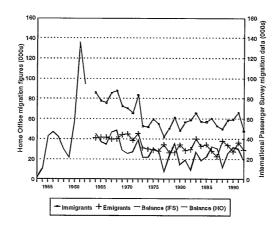


Figure 2: Net migration to the United Kingdom from the New Commonwealth

Levels of immigration to Britain from the New Commonwealth were at their highest from the late 1950s to the early 1970s (Figure 2). Since 1973, international migration has become a much less important influence on the growth of the minority ethnic group population as a whole, since net immigration from the New Commonwealth (as measured by the International Passenger Survey) has averaged around 20 thousand per annum, compared with 136.4 thousand (from Home Office figures) in the peak of migration in 1961. Since the late 1960s, most migrants from the New Commonwealth have been dependants and relatives of migrants already established in the UK.

Trends in immigration over time by ethnic group can be analysed using the dates of arrival of people from minority ethnic groups responding to the Labour Force Survey (LFS). Figure 3 presents the average number of people from minority ethnic groups resident in Great Britain between 1989 and 1991 who had arrived in the UK between 1930 and 1990. The numbers of migrants from minority ethnic groups who entered the UK more than 40 years ago is very small. The start of "mass immigration" can be identified in the late 1950s, with a dramatic increase in the number of people entering the country around 1960, no doubt prompted by the prospect of immigration controls (which were imposed in the 1962 Commonwealth Immigrants Act). Around 40 thousand of those still resident in Britain during 1989-91 had entered the UK

in each year from 1960 to 1971. The largest peak in the number of arrivals occurred in the early 1970s, coincident with the expulsion of East African Asians from Kenya and Uganda. number of arrivals thereafter declined to a minimum of about 30 thousand in the mid-1980s, but increased again to run at around 40 thousand per annum in the late 1980s.

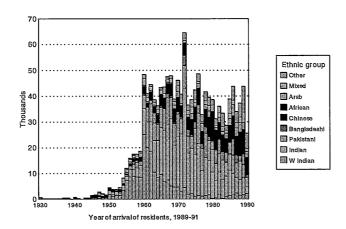
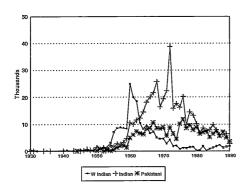
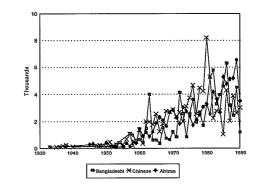


Figure 3: Dates of entry of people from minority ethnic groups to the UK





Indian and Pakistani people

Figure 4: Dates of entry of West Indian, Figure 5: Dates of entry of Bangladeshi, Chinese and African people

There are clear differences in the rates and times of arrival of individual minority ethnic groups (though these diagrams understate the amount of in-migration, since they do not include migrants who subsequently returned to their country of origin). The longest-established of the migrant groups are the West Indians, for whom the number of arrivals increased in the late 1950s, and then more than doubled at the beginning of the 1960s, following a short period of decline (Figure 4). The number of people arriving during the mid-1960s was much smaller, and the numbers arriving in each year continued to diminish until 1980, after which there was a small revival in the number of arrivals. The next major migrant groups to arrive in the UK were the Indians and Pakistanis. Mass migration from both ethnic groups (as reflected in the year of entry of those still resident during 1989-91) began in the late 1950s, but in the 1960s, the increase in the number of Indian arrivals was much greater than that of Pakistanis. The most common years of arrival for Indian people were 1969 (over 25 thousand), and 1972 (nearly 40 thousand), reflecting the acceptance of refugees from East Africa. The number of arrivals fell rapidly during the remainder of the 1970s, and more slowly during the 1980s, when the number of arrivals was well under 10 thousand per annum. The peak years of arrival for Pakistani people were around 1968 (about 10 thousand per annum), with the annual number of arrivals falling to

about half that level in the mid-1970s, recovered to the previous level in the late 1970s, afterwards declining slowly during the 1980s to reach a similar level to the number of Indian arrivals. The bulk of Indian and Pakistani migration in the 1970s and 1980s was a result of family reunification.

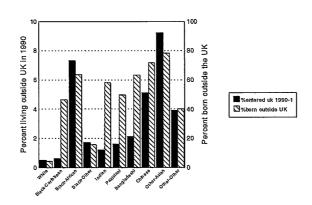


Figure 6: Percentage of minority ethnic groups living outside the UK in 1990

In contrast, there was almost continuous growth in the annual number of arrivals from smaller minority ethnic groups from the late 1950s onwards (Figure 5). With the exception of peaks in the early 1960s and 1970s, only around one thousand Bangladeshi people had arrived in each year until the mid-1970s. About 4 thousand people arrived during each year of the 1980s, but with considerable year-to-year volatility. There were around 2 thousand Chinese arrivals per annum during the 1960s, rising to over 4 thousand per annum in the late 1970s and reaching a peak of 8 thousand in 1980. The number of arrivals thereafter declined to around 4 thousand per annum during the 1980s. The number of African arrivals increased steadily from under 1000 per annum in 1960, to reach over 6 thousand in 1989.

The 1991 Census provides a 'snap-shot' of the ethnic composition of international migrants to the UK during 1990-91 (Figure 6). The percentage of the population of the earlier migrant groups (e.g. Black-Caribbean and Indian people) who lived outside the UK one year before the Census was much smaller than that for the newer migrant groups (such as Bangladeshi, Black-Africans and Chinese). The percentages of the Black-African, Other-Asian and Other-Other ethnic groups that had lived outside the UK a year before the Census were also high, reflecting the number of overseas students and the increasing number of employees of Far Eastern companies in these ethnic groups. The increasing number of overseas students and of refugees and asylum-seekers were two of the main factors underlying the increase in international migration during the 1980s.

3. Census and Labour Force Survey information on the changing ethnic composition of the population

The lack of an ethnic group question in the Census and inconsistencies in the definitions used for ethnic groups between data sources makes the estimation of change in the ethnic composition of Great Britain over time difficult, though central government was concerned to have an indicator of the growth of the minority ethnic group population. The Censuses of 1961 and 1966 (which covered a 10 per cent sample of the population) were used to analyse the characteristics of "Commonwealth immigrants", relying entirely upon the country of birth question. In the 1971 Census, respondents were asked to supply both their own country of birth and that of their parents, and those born outside the UK were asked to specify their year of entry. From these questions, OPCS developed an ethnic origin indicator which aimed to identify persons of New Commonwealth ethnic origin based on the country of birth of the individual and their parents, supplemented by an analysis of surnames for people with origins in the Indian sub-

continent or East Africa. This was combined with data on international migration and births and deaths by country of birth to produce annual estimates, first of the number of "immigrants", then of the population "of New Commonwealth and Pakistan ethnic origin" during the 1970s and early 1980s. In the 1981 Census, the question on parent's birthplace was omitted, but people living in a household whose head had been born in the New Commonwealth or Pakistan were assumed to be from minority ethnic groups. Persons were therefore classified into broadly 'national' ethnic groups, such as Indians, West Indians and Pakistanis; an approach echoed in the ethnic group questions adopted by the Labour Force Survey and General Household Survey during the 1980s.

Figure 6 depicts OPCS estimates of population change during the 1970s for the largest minority ethnic groups. In 1971, people of West Indian ethnic origin accounted for the bulk of the minority ethnic group population. The OPCS estimate series shows their numbers reaching a peak of 603.6 thousand in 1976 and thereafter declining to 533 thousand in 1981, 3 per cent fewer than in 1971. However, this apparent decline probably results from this data source overestimating the growth of the Caribbean population in the 1960s and 1970s, since the 1991 Census found there to be 558 thousand people who were from the Black-Caribbean or Black British ethnic groups in 1991 (and a further 75 thousand people of mixed ethnic origin with at least one Black parent). The numbers of Caribbean-born population had certainly begun to decline after 1966,¹⁴ but in all probability, the OPCS estimates overstated the size of the Britishborn population of West Indian origin in 1971, and underestimated its growth thereafter. In contrast, the number of people of Indian (including East African Asian), Pakistani, Bangladeshi and Other ethnic origins (including those of Mediterranean, Chinese and "mixed" ethnic origins) were estimated to have grown much more rapidly between 1971 and 1981. In the OPCS estimates, Indians had overtaken West Indians to become the largest minority ethnic group in 1981, having grown by two-thirds during the decade 1971-81¹⁵. Overall, the estimated number of South Asians more than doubled during the decade, rising from 478 thousand in 1971 to reach 993 thousand in 1981.

From 1981 onwards, the Labour Force Survey provided annual estimates of the population disaggregated by (self-assessed) ethnic group, which provide an indication of the rate of change in the minority ethnic group population in the decade 1981-91. Substantial variations exist between the ten ethnic groups identified by the LFS in rates of population change during the 1980s (Table 1). The white population grew at only half the national average rate, while the number of people from minority ethnic groups increased by more than a quarter. In essence, the trends established in the 1970s continued into the 1980s. The number of people in the West Indian and Guyanese ethnic group continued to decline (by 14 per cent), and by the end of the decade, the Pakistani ethnic group had overtaken it in size to become the second largest ethnic group. The Indian ethnic group remained the largest minority ethnic group, numbering nearly 800 thousand by 1989-91. However, the rate of growth of the Indian population was only 8 per cent between 1981 and 1991, a considerable apparent slowing in the growth rate relative to the 1970s (this may be because the Indian population was overestimated in 1981).

The two ethnic groups whose population grew at the fastest rate during the 1980s were the *Bangladeshis*, whose numbers more than doubled, and the *Pakistanis*, whose increase of 71 per cent represented 201 thousand extra people, the greatest numerical increase of any minority ethnic group. The number of *Chinese* people also increased by nearly half during this period. International migration was still a strong influence on the growth of the number of people of South Asian ethnic origin in Great Britain (despite the growth in the numbers of British-born), most of this being the entry of dependants. Over the period 1981-90, net in-migration to the UK from India, Bangladeshi and Sri Lanka totalled 105.5 thousand people, with net in-migration of a further 77.9 thousand people from Pakistan (compared to net in-migration to the UK of only 3.1 thousand from the Caribbean). Net in-migration from Africa totalled 54.3 thousand people over the same period, strongly influencing the 88 per cent growth of the *African* ethnic group between 1981 and 1991. ¹⁶

The Mixed and Other ethnic groups also grew by over 90 thousand during the 1980s, indicative of the growing numbers of people with more complex ethnic identification and of

children with parents from different ethnic groups. During the years 1989-91 only the White, West Indian, Indian and Pakistani ethnic groups were larger than the Mixed ethnic group, while the Other ethnic group more than doubled in size during the decade. The Mixed ethnic group contained many children of West Indian parentage, since about a quarter of men from this ethnic group who were married or cohabiting had a partner from another ethnic group (usually white)¹⁷, while some children with West Indian parents who did not wish to be identified by reference to their parents' country of origin may have been coded as Other (e.g. Black British). The growth of the Other ethnic group also reflects the increasing diversity of migrants to the UK during the 1980s, for example the increasing numbers of Japanese and south-east Asian people working in multinational organisations or studying at higher education establishments.

Table 1: Labour Force Survey estimates of the population of Great Britain by ethnic group, in 1981 and 1989-91

Ethnic group	1981 (000s)	Mean for 1989-91 (000s)	Change (000s)	Percent change
White	51,000	51,808	808	1
Minority ethnic groups	2,092	2,677	<i>585</i>	28
West Indian	528	455	-73	-14
African	80	150	70	88
Indian	727	792	65	9
Pakistani	284	485	201	71
Bangladeshi	52	127	75	144
Chinese	92	137	45	49
Arab	53	67	14	26
Mixed	217	309	92	42
Other	60	154	94	157
Not stated	608	495	-113	-19
Entire population	53,700	54,979	1,279	2

Source: Population Trends 67, p1. and OPCS (1992) Labour Force Survey 1990 and 1991, Series LFS no 9 (London: HMSO), Table 6.29

Another perspective on the changing ethnic composition of Great Britain can be gained by comparing 1981 and 1991 Census data, using the 1981 definition of minority ethnic groups (persons resident in a household headed by a person born in a New Commonwealth country). The pattern of change revealed is similar to that revealed by the Labour Force Survey, but there are important differences. The overall rate of increase in the minority ethnic group population was slightly slower as measured by Census data, at 19.4 per cent, but the pattern of decline in persons in Caribbean-headed households, slow growth of the population of Indian-headed households and rapid growth in the number living in Bangladeshi-headed households mirrored the pattern of change in the LFS data. The decline in the estimated Caribbean and Cypriot populations is a reflection of the UK-born children of migrants from these ethnic groups leaving the parental home to form their own households, and of reductions (of 10.4 per cent and 7.5 per cent respectively) in the number of people born in these countries. However, rates of change were lower than in the LFS estimates (notably for persons in households with Pakistan-born heads), while the Census figures yielded a much larger estimate of the number of Bangladeshis than the LFS.

Over time, the number of minority ethnic group households headed by a person born in the UK has increased, leading to the household head-based method of estimating the size of minority ethnic group populations becoming increasingly inaccurate. The effect is greatest for the Caribbean and Indian ethnic groups, since the ethnic group question indicates that these two

ethnic groups were much larger than their estimated size based on the country of birth of household head in 1991. The estimated rates of growth in the number of Bangladeshi and Pakistani people are more likely to be accurate, since the migration of these ethnic groups was more recent, and there are therefore fewer British-born children who have set up their own households.

Table 2: Great Britain: Change in the number of persons resident in households headed by persons born in New Commonwealth countries, from the 1981 and 1991 Censuses of Population.

Country of birth of household head	1981	1991	Change 1981-91	Percent change
United Kingdom	48290586	49147200	856614	1.8
Irish Republic	949371	780479	-168892	-5.6
New Commonwealth	2207245	2635431	428186	19.4
East Africa	181321	312155	130834	72.2
Other Africa	n/a	149835	<u>-</u>	-
Caribbean	545744	433641	-112103	-20.5
Bangladesh	64561	161179	96618	149.7
India	673704	692692	18988	2.8
Pakistan	295461	441869	146408	49.6
S E Asia	120123	175477	55354	46.1
Cyprus	170078	118347	-51731	-30,4
other NC	156253	150236	-6017	-3.9
Rest of world (inc.	1313129	1492583	179454	13.7
(Old Commonwealth)			272101	13.7
All origins	52760331	54055693	1295362	2.5

Source: 1981 Census Country of Birth report and 1991 Census Local Base Statistics (Crown Copyright).

In comparing Census data for 1981 and 1991, a number of limitations must be recognised. First, the 1981 Census definition implicitly assumed that all people from minority ethnic groups originated in the New Commonwealth, and since individual countries outside the New Commonwealth are aggregated together in the published data for 1981, it is not possible to estimate the number of persons from minority ethnic groups born elsewhere in the world. Secondly, the New Commonwealth countries enumerated in the Census tables differ in 1981 and 1991. Most importantly, the Rest of Africa is missing in 1981, which means that the rate of increase in the number of African people between 1981 and 1991 cannot be indicated using Census data. It is also uncertain whether the decline in the number of people living in households with a head born in the rest of the New Commonwealth is genuine, or due to the changing allocation of countries to these broad national groups. Moreover, the country classification provides no indication of the changing population of the Chinese ethnic group, since the South-East Asia category covers a number of ethnic groups.

Nevertheless, there are a number of clear conclusions which can be drawn from this analysis. The Census and Labour Force Survey both indicate that the minority ethnic group population increased by at least a fifth between 1981 and 1991, and agree in identifying the most rapidly growing ethnic groups. They also show that growth of the largest minority groups was slowing down or reversing. However, the LFS also indicates that new ethnic groups such as the African, Chinese and Other were increasing their populations rapidly while the number of people of mixed parentage continued to increase. It is clear that estimates of the population of minority ethnic groups based on the Census had become highly unreliable by 1991, while the LFS data

was subject to a degree of uncertainty as a result of the inadequacy of its sample design. In the next section, the results of an alternative approach to estimating population change are presented.

4. Demographic trends by ethnic group

Change over time in the magnitude of any section of the population consists of three components; births, deaths (which added together represent the *natural increase* of the population) and migration. In this section, population change by ethnic group is estimated by calculating these three components of population change independently for each year between 1981 and 1991. It is necessary to estimate these quantities since there is no official data on fertility, mortality and international migration by ethnic group in the UK. Here, information on the country of birth of mothers and deceased persons is combined with data on the ethnic composition of persons born in each New Commonwealth country derived from the Labour Force Survey, to yield estimates of births, deaths and migrants by ethnic group. Details of the estimation method are provided in Appendix 1. The trends in fertility and mortality rates and in international migration over time are described first, and then the combined effect of these changes on population change by ethnic group is illustrated.

4.1 Trends in Fertility rates

Data on the annual number of births by country of birth of mother provide a crude indication of the changing levels of fertility of ethnic groups present in Great Britain. Analyses of birth rates by country of birth have shown that women born in the New Commonwealth and Pakistan have much higher levels of fertility than women born in the UK. Hence, the rapid growth of minority ethnic groups has been a result not only of immigration, but also of high birth rates among mothers who have migrated to Britain, particularly those born in Pakistan and Bangladesh. However, birth rates for women born in the New Commonwealth have fallen quite rapidly over time¹⁸. Those for UK-born women from minority ethnic groups have been thought to be lower than those for immigrant women from the same ethnic groups.

Here, the data on births by country of birth of mother has been converted into a set of estimates of the number of births by ethnic group. Trends in birth rates by ethnic group were estimated over the period 1981 to 1991 for mothers born within the United Kingdom (Figure 7a and 7b) and outside the UK (Figure 8a and 8b). These rates are expressed as births per thousand women of childbearing age (assumed to be 16 to 49). Birth rates for UK-born women were estimated from those for non-UK born women from the same ethnic group, and hence the discussion here will concentrate upon fertility trends for women born outside the UK.

The birth rate for white mothers was similar for those born inside and outside the UK, and showed a slight increase in the later years of the decade. Women from most minority ethnic groups displayed higher levels of fertility than white women, but some ethnic groups experienced rates similar to, or lower than, those for white women. West Indian and Arab women were estimated to have lower birth rates than white women. Fertility rates for the former ethnic group showed some evidence of decline, but the fertility rates of Arab women displayed a sudden increase in the late 1980s.

The highest fertility rates were experienced by the *Bangladeshi* and *Pakistani* ethnic groups, for both of whom the number of births was equal to more than a fifth of women of childbearing age in 1981. Fertility rates fell steadily throughout the decade for these ethnic groups (the sudden decline and increase in Bangladeshi fertility rates in 1983-5 was a result of variability in the Labour Force Survey estimates of women of childbearing age), but were still very high in 1991, at 140.5 births per 1000 Pakistani women and nearly 185.5 births per 1000 Bangladeshi women. This compares with a birth rate of 57 per 1000 white women of childbearing age in 1991. Women from the *African* ethnic group also experienced very high fertility rates, at around 120 to 130 births per 100 women aged 16-49, which declined in the late 1980s to reach 115.6 births per 1000 women in 1991. Fertility rates for *Indian* women were

about 50 per cent higher than those of white women in 1981, but the differential continued to narrow for the rest of the decade. By the end of the decade, the fertility rates of Indian women were 23 per cent above those for white women, at 70.5 births per 1000 women of childbearing age.

Fertility rates for *Chinese* women were also well above those for white women for most of the decade, and while there was considerable variation from year-to-year, there was no clear evidence of decline in fertility from a level of around 80 births per thousand woman of childbearing age, about 25 per cent above the fertility rate for white women. Birth rates for the *Mixed* ethnic group declined from over 90 to under 80 births per 1000 women of childbearing age, probably reflecting the growing numbers of people from this ethnic group. Fertility rates for women from the *Other* ethnic group were over 100 births per 1000 women aged 16-49 in the early 1980s, but they declined considerably in the second half of the decade.

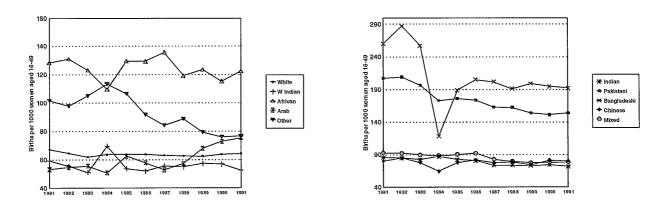
To summarise, fertility rates for most ethnic groups were thus tending to converge towards the average over the decade 1981-91. The extremely high birth rates exhibited by the Bangladeshi and Pakistani ethnic groups were declining towards the rates experienced by other minority groups over this period, but remained the highest of any ethnic group. In the larger ethnic groups, the Indian birth rate was approaching that for white women by the end of the decade, while the West Indian birth rate had fallen below the white fertility level. However, birth rates for the African ethnic group remained high throughout the decade. The estimated series of birth rates for women from each ethnic group born in the UK reflected these general trends, since they were assumed to lie halfway between the birth rate for women born outside the UK and the average for all women born in the UK.

4.2 Trends in Mortality rates

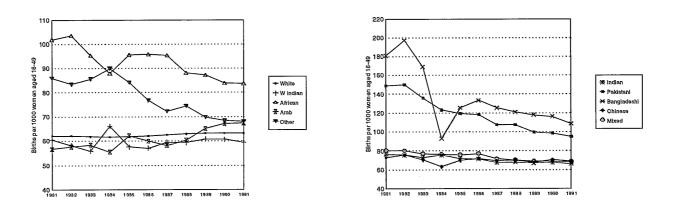
The age structure of minority ethnic group populations is still quite youthful, and with relatively few elderly people, their mortality rates are relatively low in comparison with those of white people. Figure 9a illustrates the large differential in mortality rates (deaths per 1000 population) between white people and people from minority ethnic groups; the white rate is between 4 and 6 times higher than that for most minority ethnic groups. Mortality rates for white people were declining slowly during the decade, around an annual average of 12 deaths per 1000 persons. There was some convergence in mortality rates between ethnic groups, since the overall mortality rate for minority ethnic groups increased from 2.3 per 1000 persons in 1981 to 2.6 per 1000 persons in 1991.

The Other ethnic group had the highest mortality rates of any of the minority ethnic groups at the start of the decade, increasing until the middle of the decade, then falling sharply to a level typical of most other minority ethnic groups in the second half of the decade, leaving the mortality rate for 1991 half that for 1981 (2.3 compared with 4.6). Mortality rates for the Mixed ethnic group followed a similar pattern, but at a lower level, reaching 2.0 per 1000 in 1991. The African ethnic group also experienced declining mortality rates over the decade, having the lowest death rate of any ethnic group (1.6 per thousand) by 1991. Census data for 1991 revealed that the Chinese ethnic group had a better general level of health than other ethnic groups, ¹⁹ and the mortality rate for this ethnic group also declined markedly between 1981 and 1991 (reaching 2.5 per 1000 in 1991), remaining well under a quarter of the corresponding rate for white people.

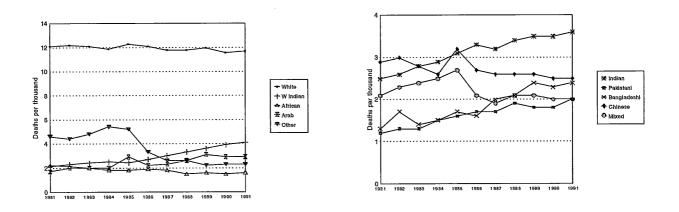
Mortality rates in other ethnic groups tended to increase over the decade, probably as a result of the ageing of their populations (Figure 9b). The most striking example of this is the West Indian ethnic group, in which mortality rates doubled from 2.1 to 4.1 per 1000 persons (a level about a third of that of white people) between 1981 and 1991. A similar pattern was exhibited by the Indian, Pakistani and Bangladeshi ethnic groups, but death rates were somewhat higher for Indian people than for the other two ethnic groups between 1981 and 1991, and the deterioration in mortality rates was more marked for the Bangladeshi ethnic group (from 1.3 to 2.4 per 1000) than for the Pakistani ethnic group (for which the mortality rate increased from 1.2 to 2 deaths per 1000).



a) b)
Figure 7: Trends in fertility rates for women born outside the UK, 1981-91



a) b) Figure 8: Trends in fertility rates for women born in the UK, 1981-91



a) b) Figure 9: Trends in mortality rates by ethnic group, 1981-91

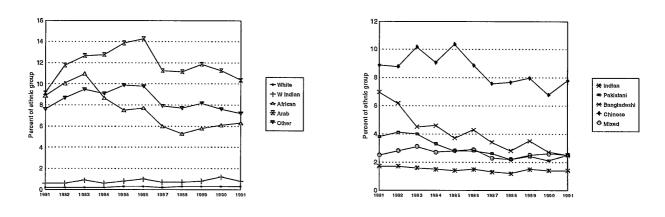
4.3 Trends in International Migration

The number of immigrants to the UK and the number of emigrants from the UK were estimated separately for each ethnic group in each year from 1981 to 1991 (see Appendix 1 for details). The trend of **immigration** to the UK by ethnic group is presented as a percentage of the population of each ethnic group in Figures 10a and 10b. Immigration represents a small but stable percentage of the *white* population, around 0.2 to 0.3 per cent per annum. Though levels of immigration were much lower than the peak levels experienced in the late 1950s and early 1960s (see section 2), immigrants still represented a relatively large (but usually declining) percentage of the populations of minority ethnic groups during the 1980s (though an increasing proportion of migrants are now students and people moving internationally to work for a few years for multinational firms located in the UK, rather than people intending to settle permanently).

The main exception to this pattern is the West Indian ethnic group, for which immigrants represented less than 1 per cent of the population during the 1980s, with little annual variation. In the Indian ethnic group, immigrants also formed less than 2 per cent of the population in most years, declining to only 1.4 per cent in 1991. The level of immigration relative to the resident population fell at a much faster rate over the period 1981-91 for Pakistanis, and at an even faster rate for Bangladeshis. Immigration remained at a relatively high rate (around a tenth of the resident population) for the Chinese and African ethnic groups, but was higher in the early and mid 1980s than towards the end of the decade. Immigration rates remained at a relatively high level for the Arab and Other ethnic groups throughout the decade, but represented fairly constant at around 2.5 per cent for the Mixed ethnic group.

Migration is not a one-way process, and some members of each ethnic group also leave the UK each year. The estimated numbers of emigrants by ethnic group in each year from 1981 to 1991 are presented in Figures 11a and 11b. Out-migration represented a very small and fairly stable percentage of the white population. The highest rates of out-migration were experienced by the Arab and Chinese ethnic groups, in both cases highest at the start of the period and afterwards stabilising (at around 10 per cent for the former and 5 per cent for the latter). The most marked decline in out-migration rates was displayed by the Other ethnic group, with the percentage of emigrants falling from 8.9 per cent in 1982 to 3.2 per cent in 1991. Rates of emigration were very low and stable for the South Asian ethnic groups, at around 0.5 per cent for Bangladeshis, 1.0 per cent for Pakistanis and 1.5 per cent for Indians. The Mixed and African ethnic groups also experienced decline in the rate of emigration over the decade, falling to around 2 per cent in 1991 in each instance. In marked contrast, the estimated rate of emigration was increasing for West Indians during the 1980s, exceeding 2 per cent of the population by 1990.

The contribution of migration to population change is the difference between immigration and emigration, or net migration. The estimated trend in net migration by ethnic group is presented for the period 1981-91 in Figures 12a and 12b. The net effect of migration on the population of the white ethnic group was negligible throughout the period, except for a small net outflow of people at the start of the 1980s (also experienced by the Arab and Other ethnic groups). The West Indian ethnic group is unique in experiencing a steady loss of population due to net out-migration from the UK throughout the period 1981-91, which had increased to a net loss of 1.2 per cent of the population by 1991 (Table 3). The largest minority ethnic group, Indian people, gained least in percentage terms from net migration during the decade 1981-91 (typically around 0.2 per cent of its population), and experienced a loss of population due to migration in 1982 and 1988. Net migration was a much more important influence on population growth for the other South Asian ethnic groups. It represented nearly 7 per cent of the Bangladeshi population in 1981, but thereafter declined to 1.9 per cent in 1991. Net migration added 3.2 per cent to the number of Pakistanis in 1981, but the decline in the contribution of migration to population growth was more gradual than for Bangladeshis, since net migration represented 1.6 per cent of all residents in 1991.



a) b) Figure 10: Estimated migration to the UK by ethnic group, 1981-91

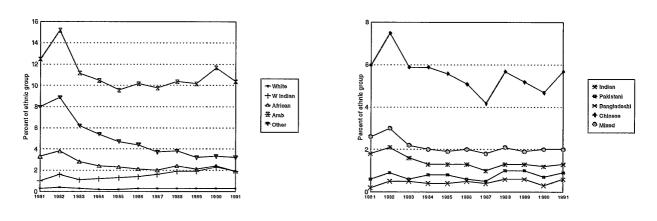
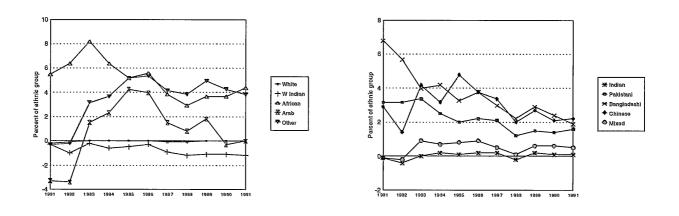


Figure 11: estimated migration from the UK by ethnic group, 1981-91



a) b)
Figure 12: Estimated net migration by ethnic group, 1981-91

Table 3: Great Britain: change in demographic measures by ethnic group, 1981-91

Ethnic group	Mortality rates		Fertility rates		Net in- migration rates	
	1981	1991	1981	1991	1981	1991
White	12.1	11.7	55.7	57.0	-0.2	0.0
Minority ethnic groups	2.3	2.6	90.3	<i>84.1</i>	0.8	1.0
West Indian	2.1	4.1	35.8	21.2	-0.3	-1.2
Indian	2.5	3.6	85.1	70.5	-0.1	0.1
Pakistani	1.2	2.0	204.0	140.5	3.2	1.6
Bangladeshi	1.3	2.4	254.9	185.5	6.8	1.9
Chinese	2.9	2.5	79.9	78.9	2.9	2.2
African	2.2	1.6	126.4	115.6	5.5	4.4
Arab	1.7	2.9	53.4	74.5	-3.3	0.0
Mixed	2.1	2.0	143.4	160.2	-0.1	0.5
Other	4.6	2.3	25.1	18.8	-0.3	3.9
All ethnic groups	11.7	11.2	57.4	58.5	-0.1	0.0

The impact of net migration on population change within the decade was greatest for the African ethnic group. From 1981 to 1986, its population increased by more than 5 per cent per annum due to international migration, the largest increase being 8 per cent in 1983. The influence of migration afterwards declined, but net migration still represented 4.4 per cent of the population in 1991. The Other ethnic group also grew rapidly in the mid and late 1980s as a consequence of net migration, accounting for 3.9 per cent of its population in 1991. Net immigration of Arab people was greatest in the 1984-7 period, when it was also at its greatest for Chinese people. Net immigration was an important influence on the growth of the Chinese ethnic group throughout the decade, adding at least 2 per cent per annum to the resident population. It accounted for a steady 1 per cent of the population of Mixed ethnic origin throughout the decade, but only 0.5 per cent in 1991.

4.4 Estimated annual rates of population change

The estimated components of change in the populations of each ethnic group were added to provide an estimate of population change (though some further adjustments were necessary, explained in Appendix 1). Estimated rates of population change from mid-year to mid-year by ethnic group are depicted in Figures 13a and 13b. The total population of Great Britain grew at a steady rate of about 0.25 per cent per annum throughout the decade. Overall, the growth in minority ethnic group populations was fastest in the mid-1980s, when it approached 4 per cent per annum (in 1986-7), varying around an average rate of growth of 2 per cent annum.

The *Indian* ethnic group was estimated to have increased in population at a fairly steady rate of 2 per cent per annum throughout the decade. This pattern was in marked contrast to the *Bangladeshi* ethnic group, which was growing at more than 10 per cent per annum at the start of the 1980s. This rate of growth declined steadily for the rest of the decade, but was still 5.5 per cent during the year 1990-91. The growth of the *Pakistani* ethnic group followed a similar trajectory, but rates of growth were lower, declining from 8.7 per cent in 1981-2 to 4.9 per cent during 1990-91. The *Chinese* population of Great Britain is estimated to have grown at more than 4 per cent per annum throughout the decade, reaching a maximum of nearly 6 per cent per annum in 1985-6 and declining thereafter. This rate of increase was exceeded by the *Other* ethnic group in 1985-6, whose rate of growth increased steadily in the first half of the decade, and then levelled off. The *African* ethnic group also displayed rapid rates of population growth.

Its population increased by more than 8 per cent per annum between 1981 and 1986 (10.4 per cent in 1982-3).

The Arab ethnic group began the decade in decline, but its rate of growth built up to a peak of 5.6 per cent in 1985-6, afterwards slowing down. In contrast, the West Indian ethnic group was gaining population slowly until the mid-1980s, after which it began to decline, at a modest rate which reached a maximum of 0.8 per cent in 1990-91. This was in part due to return migration and other forms of emigration, but also reflected the growing numbers of offspring in the Other and Mixed ethnic groups. The Mixed ethnic group grew at a fairly steady rate, nearly 4 per cent per annum, throughout the period 1981-91.

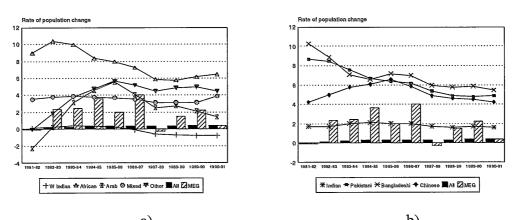


Figure 13: Estimated year-on-year population change by ethnic group, 1981-91

These patterns of population change in turn caused the ethnic composition of Great Britain to change during the decade (Figure 14). Overall, the estimated share of minority ethnic groups in the population grew from 4.2 per cent in 1981 to 5.6 per cent in 1991, but the ethnic composition of the minority population also changed substantially over this period. In 1981, West Indians made up 1.07 per cent of all residents, but this share had fallen slightly to 1.03 per cent in 1991. That of Indian people rose slowly, from 1.41 per cent in 1981 to 1.64 per cent in 1991, compared to a near doubling of the population shares of the Pakistani (0.48 to 0.88 per cent), Bangladeshi (0.16 to 0.30 per cent) and African (0.19 to 0.40 per cent) ethnic groups over the same period. The Mixed and Other ethnic groups also increased their population shares considerably.

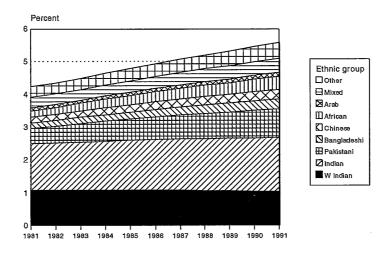


Figure 14: Estimated change in ethnic composition of Great Britain, 1981-91

4.5 Components of population change by ethnic group

Table 4 presents the components of estimated population change between 1981 and 1991 for each ethnic group. Overall, the minority ethnic group population of Great Britain is estimated to have increased by 805.4 thousand, or 34.8 per cent, over the decade. The African ethnic group is estimated to have more than trebled in size over the decade, while the Bangladeshi population was nearly 100 per cent larger in 1991 than in 1981 and the growth of the Pakistani ethnic group was almost as rapid. The numerical increase in the Pakistani population exceeded that of any other minority ethnic group, and accounted for 28.3 per cent of the total increase in the minority ethnic group population over the same period. Moreover, this value represented 39 per cent of the increase in the white ethnic group between 1981 and 1991. Though the Indian ethnic group only grew by a fifth in this set of estimates, its numerical increase was the second largest of any minority ethnic group. The African ethnic group was the third minority ethnic group to have increased in population by more than 100 thousand during the decade. In contrast, the West Indian ethnic group is estimated to have declined by more than 11 thousand (nearly 2 per cent) over the decade.

In the white ethnic group, population increase resulted from an excess of births over deaths, together with the "adjustment" component (representing elements of population change taken account of by the OPCS mid-year population estimates²⁰, but not included in the published series of data on births, deaths and migration), which accounted for more than half of the increase (55.3 per cent). The white ethnic group was still estimated to be losing population due to international migration during this decade, since emigration exceeded immigration. The West Indian and Indian ethnic groups together accounted for 60 per cent of all estimated deaths among members of minority ethnic groups between 1981 and 1991. However, births were still well in excess of deaths for both ethnic groups, though the balance was much closer for West Indians. The decline in numbers of West Indians was a consequence of the number of emigrants being nearly double the number of immigrants.

Table 4: Components of estimated population change by ethnic group, 1981-91.

Ethnic group	1981	1991	Change	Percent	Births	Deaths	Immig	Emig	Adjust -ment
	population	population		change			-rants	-rants	-ment
White	52498640	53085210	586570	1.1	6751933	6319210	1380992	1551332	324192
Minority ethnic	2315935	3121312	805377	34.8	558010	66370	860657	562868	15946
groups									
W Indian	588451	577285	-11166	-1.9	45321	14913	46582	91268	3111
Indian	770248	922787	152539	19.8	167211	24842	121876	116582	4875
Pakistani	264467	492465	227998	86.2	153827	6854	107847	29529	2707
Bangladeshi	85308	168271	82963	97.3	41621	1954	48563	5950	683
Chinese	98045	162178	64133	65.4	28486	3346	108532	70332	793
African	106225	223713	117488	110.6	39637	2002	118671	39584	765
Arab	53103	67367	14264	26.9	8885	1639	71210	64617	424
Mixed	167416	236890	69474	41.5	63118	5809	52748	42286	1703
Other	182671	270355	87684	48.0	9904	5011	184628	102720	885
Total	54814574	56206521	1391947	2.5	7309943	6385580	2241649	2114200	340138

The growth of the Indian ethnic group was largely driven by births in the UK (which exceeded the population increase), though the rate of increase was moderated by 24.8 thousand deaths over the decade. The estimated level of emigration over the period 1981 to 1991 was substantial, and hence international migration only added 5.3 thousand to the population of the ethnic group (3.4 per cent of the population increase). The Mixed ethnic group also grew mainly as a result of births in the UK, since the excess of births over deaths represented 82.5 per cent of

the population increase. In contrast, net immigration accounted for more than a third of the growth in the Pakistani ethnic group, and 51 per cent of the increase in the Bangladeshi ethnic group between 1981 and 1991. Net international migration was also the major influence upon the growth of the Chinese (60 per cent) and African (67.3 per cent) ethnic groups, but was most important for the Other ethnic group, for which it represented 93.4 per cent of the population increase between 1981 and 1991.

5. Estimating sub-national change in minority ethnic group populations

The preceding sections have illustrated the degree of uncertainty which exists in measures of population change by ethnic group, even for Great Britain as a whole. In this section, the potential for measuring population change at the local scale is discussed. The results of two alternative estimation methods are presented and evaluated.

The 1991 Census data on population by ethnic group provides the first accurate subnational information on the ethnic composition of the population. The Censuses for 1971 and 1981 only included ethnic group indicators, and no independent measures of ethnic composition are available which can be used to test their accuracy. A number of attempts have been made to improve on the Census-based data by estimating local ethnic group populations in order to calculate change in ethnic composition over time at the sub-national scale. In the 1980s, Haskey linked the 1981 Census with Labour Force Survey data to yield estimates of change in the minority ethnic group populations of metropolitan counties and standard regions. Rees and Phillips applied the ethnic breakdown of country of birth data from the 1991 Census to the corresponding data from the 1981 Census, to yield local estimates of the populations of minority ethnic groups in 1981, which were then constrained to match Labour Force Survey estimates of the average minority ethnic group population for 1979-83.

Neither approach is ideal; Haskey's estimates were affected by the inaccuracies of the LFS and the problem the regional data he used averaged the characteristics of the population living in inner city and suburban areas, while the Rees and Phillips estimates are affected both by this problem, and also (to an unknown extent) by the changing balance between the UK-born and those born outside the UK within an ethnic group over the period 1981-91. Other methods have been used in particular areas, such as using information on the ethnic composition of school children to estimate that for the population as a whole. Further research is needed in this area in order to refine the estimation techniques and data used and to produce estimates of change for smaller geographical areas.²³

5.1 Census indicators of population change

Two indicators of change in the minority ethnic group population of an area can be calculated from the 1981 and 1991 Census of Population data;

change in the numbers of people born in New Commonwealth countries;

• change in the population living in households with a head born in the New Commonwealth. These measures have a number of positive features;

both can be calculated for each of the major geographical origins of the minority ethnic group population; the Caribbean, East Africa, India, Pakistan and Bangladesh;

• both can be calculated for areas as small as electoral wards (and simplified measures can be calculated for even smaller areas), enabling the pattern of change within cities or towns to be studied.

Unfortunately, these measures also suffer from a number of serious drawbacks;

A number of white people (and household heads) were born in the New Commonwealth;

• The percentage of people from minority ethnic groups born in the UK has steadily increased over time, and thus the population born in the New Commonwealth becomes an increasingly poor indicator of population change over time;

Mass immigration ended relatively early for the West Indian and Indian ethnic groups, which
means that many people born in these countries are relatively old. They therefore experience
high rates of mortality and return migration, meaning that the number of people born in these

countries may be growing slowly or declining, at the same time as the size of the corresponding ethnic group is growing as a consequence of births in the UK;

• As the children of migrants from the New Commonwealth and Pakistan have reached maturity, an increasing number of household heads in minority ethnic groups have been born in the UK.

The problems enumerated here are severe enough to make the comparison of numbers born in the New Commonwealth too misleading to use as an indicator of minority ethnic group population change over time. However, it is worth considering whether the population resident in households with New Commonwealth-born heads in 1981 (which was considered at the time by OPCS to include about 95 per cent of people from minority ethnic groups) can usefully be compared with measures of the minority ethnic group population from the 1991 Census.

Table 5: Alternative sub-national measures of minority ethnic group population change, 1981-91.

		(change in	1	minority	
Region/country,	Overall	percent			op 1991	percent
county	Population	change	ÑCWP	change	minus	change
	change		hholds		NCWP	
				I	op 1981	
South-East	673777	4.1	250583	20.4	261587	21.3
Greater London	87237	1.3	173219	18.3	235077	24.9
Inner London	91599	3.9	33244	7.3	93185	20.4
Outer London	-4362	-0.1	139975	28.7	141892	<i>29.1</i>
Rest of South East	586540	6.0	77364	27.4	26510	9.4
East Anglia	177783	9.8	9188	32.3	3442	12.1
South West	349145	8.4	13702	21.5	-9437	-14.8
West Midlands	46433	0.9	29546	9.0	81973	25.1
West Midlands MC	-79547	-3.1	20941	7.3	76263	26.7
Rest of West Midlands	125980	5.2	8605	20.9	5710	13.9
East Midlands	164671	4.4	27151	19.3	37440	26.6
Yorkshire & Humberside	15553	0.3	31859	20.6	47541	30.8
South Yorkshire	-32593	-2.5	3389	13.8	7766	31.6
West Yorkshire	-9765	-0.5	24725	20.9	39878	33.7
Rest of Yorks & Humbs.	57911	3.9	3745	32.9	-103	-0.9
North West	-130868	-2.1	32846	19.5	56880	33.7
Greater Manchester	-80499	-3.2	20629	20.6	37810	37.8
Merseyside	-103423	-7.0	-264	-1.8	6030	40.7
Rest of North West	53054	2.4	12481	23.2	13040	24.2
North	-48382	-1.6	8369	31.9	7134	27.2
Tyne&Wear	-43297	-3.8	5129	45.1	5822	51.2
Rest of North	-5085	-0.3	3240	21.8	1312	8.8
Wales	80427	3.0	8717	35.6	9815	40.1
coastal South Wales	17594	1.5	4967	29.7	8227	49.2
Rest of Wales	62833	4.0	3750	48.5	1588	20.5
Scotland	-33177	-0.7	16225	35.1	7335	15.9
Great Britain	1295362	2.5	428186	19.4	503710	22.8

Source: 1991 Census Local Base Statistics and 1981 Census Small Area Statistics.

Table 5 presents population change between 1981 and 1991 for standard regions and metropolitan counties, calculated using the tables of population by country of birth of household head from the Census for each year. This table compares overall population change with the change in the number of persons living in households headed by a person born in the New

Commonwealth. The overall pattern of population change is familiar. The most rapid rates of growth occurred in East Anglia, the South West and the East Midlands, while regions such as the North West and North were losing population most rapidly during the decade. Rates of population decline were even faster for the Merseyside, Tyne & Wear, West Midlands and Greater Manchester metropolitan counties, but Inner London actually gained population over the decade. The population in New Commonwealth-headed households increased by about a fifth over the decade. It grew most slowly in the areas of largest minority ethnic group populations; Inner London and the West Midlands metropolitan county, while the most rapid rates of growth occurred in Wales, Scotland, the more peripheral regions of England, Inner London and in the Tyne & Wear and Greater Manchester metropolitan counties. A decline was recorded in Merseyside, but at a slower rate than for the population as a whole.

This pattern of change raises some doubts over the validity of this comparison as a measure of minority ethnic group population change. Given the youthful population structure of this section of the population, growth rates would be expected to be higher in Inner London and the West Midlands. One explanation is that this measure does not include households headed by UK-born people from minority ethnic groups, who are most numerous in the earliest centres of minority settlement. The third measure in the table attempts to address this, by calculating the difference between the population living in households headed by a person born in the New Commonwealth in 1981 and the minority ethnic group population in 1991 minus persons from minority ethnic groups living in households headed by a person born in countries beyond the UK and New Commonwealth.

This measure yields a slightly higher estimate of minority ethnic group population change over the decade. It also appears to address the objection raised to the simple comparison of the number of people living in households with a New Commonwealth-born head, since the population in Inner London is estimated to have increased by 20.4 per cent, while the minority population of the West Midlands metropolitan county is estimated to have grown by more than a quarter over the period 1981-91. Estimated population increases in the East Midlands, Greater Manchester, Tyne & Wear, coastal South Wales (Gwent, South Glamorgan and West Glamorgan) and the South and West Yorkshire metropolitan counties are also greater using this measure. Estimated rates of increase tend to be much slower in the more peripheral regions and less urban regional remainders than in the metropolitan counties and more densely populated regions. Indeed, the minority ethnic group population of the South West is estimated to have declined between 1981 and 1991.

This pattern of change suggests that the third measure better represents births to UK-born parents. It also demonstrates that in the more rural areas and regions such as the South West, white people formed a relatively large part of the population living in households with New Commonwealth-born heads in 1981. It is also clear that in areas such as Merseyside, where the minority ethnic group population is long-established, the population in households with New Commonwealth-born heads was a completely inadequate indicator of the minority ethnic group population in 1981, as most heads of minority ethnic group households had been born in the UK.

These problems severely limit the usefulness of unadjusted Census data for measuring change in the minority ethnic group population as a whole between 1981 and 1991. However, it is possible that it can provide a better indication of change in the populations of minority ethnic groups, where the migration of these groups was relatively recent. In 1981, the population resident in households with heads born in East Africa, the Caribbean, India, Pakistan and Bangladesh was presented in each *County Report* for England and Wales. In Table 6, estimates of population change are presented for the Caribbean, Indian, Pakistani and Bangladeshi ethnic groups. These represent the difference between the 1981 population living in households headed by a person born in these countries and the 1991 population of the corresponding ethnic group (Black-Caribbean and Black-Other added together in the case of Caribbean people).

The results for Caribbean people are strongly influenced by the factors identified in the estimates of change for all people from minority ethnic groups. Overall, the population was estimated to be 22.5 per cent higher in 1991 than 1981. The rate of increase was only about half

this average in Inner London and the West Midlands and West Yorkshire metropolitan counties. However, the population is estimated to have grown by nearly a third in Outer London, which may well reflect the general movement of the population of London towards the outer suburbs. Rates of increase of over 100 per cent were recorded in much of northern England, Scotland, rural Wales and East Anglia. The last named probably reflects the location of US military bases, since Black American servicemen would have chosen the Black-Other box in the Census. The other very high rates of increase occurred in areas with small populations in 1981, and may thus reflect the migration of small numbers of people, but may also reflect children of mixed parentage from the Black-Other ethnic group living with parents of higher social status in more rural environments.

Table 6: Sub-national estimates of population change by ethnic group, 1981-91.

Region/country	Carib	bean	Ind	an	Pakis	tani	Bangla	deshi
county	Change	%change	Change	%change	Change	%change	Change	%change
South-East	73332	20.8	122782	38.5	52721	59.4	65757	180.2
Greater London	60637	19.8	121337	54.2	34966	67.0	55628	192.6
Inner London	25981	13.1	11782	19.3	10642	<i>58.5</i>	47228	207.5
Outer London	34656	32.1	109555	67.4	24324	71.5	8400	137.1
Rest of South East	12695	27.4	1445	1.5	17755	48.5	10129	133.1
East Anglia	6072	110.7	-1363	-17.7	1903	49.4	864	119.5
South West	3686	24.9	-9247	-46.4	-589	-13.2	1399	159.0
West Midlands	11031	13.0	21437	15.7	36438	58.8	10192	111.0
West Midlands MC	9675	12.5	20412	16.9	33244	60.6	9799	118.8
Rest of West Midlands	1356	18.2	1025	6.3	3194	44.9	393	42.2
East Midlands	6196	21.8	36399	58.6	5421	45.5	2001	93.3
Yorkshire & Humbersie	de 4603	17.2	-2137	-5.0	34415	57.2	3781	83.2
South Yorkshire	1215	16.7	-595	-14.7	4256	47.6	535	85.2
West Yorkshire	2421	12.9	20	0.1	29860	59.1	2777	87.1
Rest of Yorks&Humbs.	967	125.1	-1562	-40.0	299	42.0	469	64.5
North West	11078	42.4	798	1.5	32006	71.4	7456	100.9
Greater Manchester	5826	28.7	-82	-0.3	23672	92.6	5998	110.4
Merseyside	3696	143.1	-824	-24.3	119	16.4	269	60.4
Rest of North West	1556	47.6	1704	8.0	8215	44.4	1189	78.6
North	1734	147.3	-1186	-13.5	2967	46.8	2518	245.7
Tyne&Wear	842	197.2	56	1.4	1581	74.2	2097	310.7
Rest of North	892	118.9	-1242	-26.6	1386	32.9	421	120.3
Wales	3220	92.9	-380	-5.7	2447	75.8	2454	181.5
coastal South Wales	2371	82.2	376	9.4	2033	74.2	2110	193.2
Rest of Wales	849	145.6	-756	-28.5	414	84.5	344	132.3
Scotland	1949	129.2	-6233	-38.6	11210	113.2	288	34.8
Great Britain	122901	22.5	160870	23.9	178939	60.6	96710	149.8

Source: 1991 Census Local Base Statistics and 1981 Census County Reports.

The Indian population was estimated to have increased by 23.9 per cent for Great Britain on this measure, broadly corresponding with the calculations presented in Table 4. However, the geographical pattern of change reveals serious problems with this estimation method. In South East England, the growth of this ethnic group is estimated to have been largely confined to Greater London, within which the population of Outer London increased by two-thirds, which might be possible, given a relatively high level of migration. However, there were marked estimated population declines in the South West, East Anglia, Merseyside, rural Wales, Scotland and the rural remainders of Yorkshire & Humberside and the North, which must reflect a relatively large percentage of white people living in households with Indian-born heads in 1981.

The high rate of change in the East Midlands presumably results from the East African origins of much of the Indian population of that region. The measure appears more accurate for the West Midlands, where the estimated rate of growth in the metropolitan county was more rapid than in the surrounding counties.

The estimates for Pakistani and Bangladeshi people suggest rapid growth in most of Britain. The only exception is the estimated decline for the South West, again probably resulting from a relatively high percentage of white people resident in households with Pakistan-born heads in 1981. The fastest rates of growth in the local Pakistani population are estimated to have occurred in Scotland, Greater Manchester, rural Wales, Tyne & Wear and Outer London. The slower rates of increase are estimated for the more rural and peripheral parts of Britain, with the exception of Merseyside. Estimated rates of increase in the West Midlands and West Yorkshire metropolitan counties were less than average, though these two counties, Greater Manchester and Outer London experienced the largest estimated increases in the number of Pakistani people. The bulk of the estimated growth in the Bangladeshi population occurred in Inner London, in which it was estimated to be three times as large as in 1981. The Bangladeshi population is estimated to have more than doubled in size during the decade over most of southern England, with the rate of increase rather slower in the midlands and northern England. Very high rates of increase are also estimated for Tyne & Wear and Wales, but involving relatively small numbers of people.

The pattern of change of Bangladeshi people is more likely to be accurate than those for other minority ethnic groups, since there is a closer correspondence between the ethnic group and the population living in households with a head born in Bangladesh. This is because of the very youthful nature of the population, and the small percentage of UK-born Bangladeshis old enough to form independent households. It is clear that as the percentage of households headed by a person born in the UK increases, the more uncertain estimates of population change become. A more sophisticated approach to estimating ethnic group population change is therefore necessary, which addresses the estimation of the population from minority ethnic groups in households with UK-born heads directly. However, it is likely that no approach will achieve complete accuracy, and the best that can be achieved is to make good estimates of local rates of change.

6. Conclusions

This Statistical Paper has presented an overview of the patterns of population change by ethnic group which occurred during the 1980s, within the context of longer-term change in the ethnic mix of the population of Great Britain. Despite the uncertainties involved in the use of data from the Censuses of Population before 1991, a number of conclusions can be drawn;

• The minority ethnic group population of Great Britain grew by over a quarter between 1981 and 1991;

• The white ethnic group grew very slowly over the same period;

• Minority ethnic groups were responsible for the bulk of the increase in the British population between 1981 and 1991;

The Census and Labour Force Survey broadly agree on which ethnic groups were growing most and least rapidly;

• The most rapid increases were experienced by the Bangladeshis, African and Chinese ethnic groups;

• The Pakistani ethnic group grew in numbers more than any other;

• The Indian ethnic group grew at a slow rate, but because of its size, this still involved

a very large number of people;

• The greatest uncertainty surrounds change in the West Indian or Black-Caribbean ethnic group. It is certain that the numbers born in the Caribbean continued their decline during the 1980s (probably due to return migration as well as deaths), but the growth of the British-born population is difficult to estimate;

The number of people with parents from different ethnic groups (the "mixed" ethnic

group) increased at a rapid rate;

• The "Other" ethnic group also increased rapidly, partly due to the emergence of new ethnic identities, but also as a result of the migration of new ethnic groups to Great Britain, such as the Japanese;

The influence of international migration on population change in Great Britain was declining from the early 1960s up to the early 1980s, but since then there has again

been a net inflow of people;

- International migration has been the major contributing factor to the growth of the Bangladeshi, Pakistani, Chinese, African and Other ethnic groups between 1981 and 1991;
- In contrast, the growth of the Indian and Mixed ethnic groups was mainly a consequence of births in the UK;
- The fertility levels of most ethnic groups were declining through the 1980s, but those of the African, Bangladeshi, Pakistani and Chinese ethnic groups fell most slowly;
- The West Indian and Indian ethnic groups experienced the lowest fertility rates of any minority ethnic groups;
- Death rates for minority ethnic groups rose steadily throughout the 1980s, as a consequence of the increasing number of older people in their populations;
- The lack of an ethnic group question before 1991 means that it is necessary to make estimates of rates of change in the populations of individual ethnic groups. Unfortunately, the greater the percentage of household heads born in the UK, the less robust these estimates become;
- The most reliable estimates presented in this paper are those for the Bangladeshi ethnic group, which highlight the substantial increase of this ethnic group in Inner London, Birmingham and Manchester;

• The greatest degree of uncertainty surrounds the local estimates of population change for the Caribbean and Indian ethnic groups, since there is little information upon which to base estimates of the UK-born components of their populations.

These conclusions emphasise the need for the ethnic group question to be retained in the 2001 Census, in order that the changing size and distribution of ethnic groups can be accurately

measured.

7. Notes and references

See Sillitoe, K. and White, P. (1992) 'Ethnic Group and the British Census: the Search for a Question', Journal of the Royal Statistical Society, series A, 158, 203-240, for an extensive discussion of the evolution of the 1991 Census ethnic group question.

House of Commons Home Affairs Committee (1983) Ethnic and Racial Questions in the

Census, House of Commons Paper HC 33 (HMSO: London).

Eversley, D. and Sukdeo, F. (1969) The Dependants of the Coloured Commonwealth

Population of England and Wales (Institute of Race Relations)

By Peach, C. (1968) West Indian Migration to Britain: A Social Geography (London: Oxford UP); Peach, C. and Winchester, S.W.C. (1974) 'Birthplace, ethnicity and the underenumeration of West Indians, Indians and Pakistanis in censuses of 1966 and 1971', New Community, 3, 386-393; and Rose, E.J.B. et. al. (1969) Colour and Citizenship: A Report on British Race Relations (London: Institute of Race Relations)

Salt, J. (1996, forthcoming) 'Immigation and ethnic groups', chapter 5 of D. Coleman and J. Salt (eds) General demographic characteristics of the ethnic minority populations (OPCS:

London).

The OPCS estimates of the New Commonwealth and Pakistan (NCWP) population were based on 1971 Census data on the country of birth of individuals and their parents. The population in 1971 was estimated by including all those born in the New Commonwealth and Pakistan, and all those with parents born in these countries, and used an analysis of surnames (of Asian countries of birth) to determine whether or not persons with one parent born in the New Commonwealth and Pakistan were of an ethnic origin indigenous to those countries. The 1971 estimate was then updated by adjusting annual data on births, deaths and international migration by country of birth through an analysis of surnames, to yield estimates of these three quantities for the NCWP population.

OPCS Immigrant Statistics Unit (1976) 'Country of birth and colour 1971-4', Population Trends, 2, 2-8; and OPCS Immigrant Statistics Unit (1977) 'New Commonwealth and

Pakistani population estimates', Population Trends, 9, 4-7.

Two for 1981-3, since no LFS was carried out in 1982.

There was a fall in the LFS estimates of the minority ethnic group population in 1984, which was attributed to the increased level of non-response in that year's survey (OPCS Population Statistics Unit, 1986). Moreover, Owen, C. (1993) 'Using the Labour Force Survey to estimate Britain's ethnic minority populations', Population Trends, 72, 18-23, notes that response rates to the LFS are lowest in Inner London and the other metropolitan areas, which contain the largest minority ethnic group populations. He argues that evidence from the experience of a range of Census Tests and surveys such as the British Social Attitudes Survey has demonstrated that minority ethnic groups are less likely than white people to be contacted, or to respond, while the General Household Survey has shown that minority ethnic groups are less likely than white people to answer a question on ethnic group. He suggested that correcting the LFS estimate of minority ethnic groups might raise their share of the British population by one percentage point (from 4.9 to 5.9 per cent). OPCS Immigrant Statistics Unit (1979) 'Population of New Commonwealth and Pakistani

ethnic origin: new projections', Population Trends, 16, 22-27.

Sly, F. (1993) 'Estimating Britain's ethnic minority populations using the Labour Force Survey', Employment Gazette, September 1993, 429-431. The quarterly LFS uses a simple random sample of the population, rather than a clustered sampling design. Households in the survey are interviewed in five successive quarters, and their (self-assessed) ethnic origin is established in the first interview, which is taken face-to-face.

Walker, C. and Gee, M. (1977) 'Migration: the impact on the population', Population

Trends, 9, 24-26.

'International Migration: Demographic and Socioeconomic (1995)Consequences in the United Kingdom and Europe', International Migration Review, 19(1), 155-206.

Peach, C. (1991) 'The Caribbean in Europe: Contrasting Patterns of Migration and Settlement in Britain, France and the Netherlands', Research Paper in Ethnic Relations no.

15, Centre for Research in Ethnic Relations, University of Warwick.

The data source used is the International Passenger Survey, reported in OPCS (1994) International Migration: Migrants entering or leaving the United Kingdom and England

and Wales, 1992, OPCS Monitor MN no. 19.

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Booth, H. (1992) The Migration Process: Two Demographic Studies of Migrant Populations in Pritain and West Germany (Aldershot: Avebury), p83

in Britain and West Germany (Aldershot: Avebury), p83.

Owen, D.W. (1994) 'Chinese people and "Other" ethnic minorities in Great Britain: Social and economic circumstances', National ethnic Minority data archive 1991 Census Statistical

Paper 8, Centre for Research in Ethnic Relations, University of Warwick, Coventry.

This would include adjustments made by OPCS to take account of migration to and from the Irish Republic, movement of service personnel, other movements not measured by the International Pasenger survey and other modifications to the components of population change. See Population and Hospital Statistics Divison, OPCS (1991) Making a population estimate in England and Wales, Occasional Paper 37 (London: HMSO).

Haskey, J. (1991) 'The ethnic minority populations resident in England and Wales - estimates by county and metropolitan district of England and Wales', *Population Trends*, 63,

22-35.

Rees, P. and Phillips, D. (1996) 'Geographical Spread: the national picture', chapter 2 of P Ratcliffe (ed). *Geographical Spread, Spatial Concentration and Internal Migration*.

There is an ESRC-sponsored research project at CRER researching into these issues.

There is a discrepancy of 100 thousand in the estimated size of the Indian ethnic group between the OPCS estimates and the Labour Force Survey in 1981, which appears to have been largely due to underestimation of the number of people of Indian ethnic origin born outside the UK, many of whom were allocated to the "Other" category in the OPCS estimates series. See OPCS Population Statistics Division (1986) 'Estimating the size of the ethnic minority populations in the 1980s', *Population Trends*, 44, 23-27.

APPENDIX 1

Estimating the components of population change by ethnic group, 1981-91

The data sources used in this exercise were the annual Labour Force Survey, and the annual OPCS Monitor data on births by country of birth of mother, deaths by country of birth and migration to and from the UK by country. Data on country of birth of mother was extracted from each LFS from 1981 to 1991, while the percentages of people born in each country from each ethnic group were calculated in 1981 and for 1989-91, and interpolated for the intervening years.

Birth rates

Birth rates by ethnic group were calculated for both UK-born women and women born outside the UK. There were a number of stages in the estimation procedure. First, the number of births to women born outside the UK by ethnic group was estimated. This was achieved by calculating for each country of birth (or group of countries) the percentage of women of childbearing age (between 16 and 49 years of age) in each of the 10 ethnic groups recognised by the LFS, and then applying this percentage to the number of births to women born in each country. By summing across countries of birth, the estimated total number of births to non-UK born mothers by ethnic group was obtained. The birth rate for non-UK born mothers from each ethnic group was then calculated by dividing the number of births by LFS estimates of the number of non-UK born women of childbearing age. The birth rate for UK-born white women was assumed to be equal to the average for all UK-born women. Birth rates for women from minority ethnic groups born in the UK were assumed to lie half way between the UK average and those for women from the same ethnic group born outside the UK. This represented the convergence in fertility behaviour between ethnic groups assumed to occur over time, and replicates the procedure used by OPCS in estimating the number of births by ethnic group.¹ The number of births by ethnic group in any year was constrained to match the number of births by country of birth.

A special procedure was adopted for the 'Mixed' and 'Other' ethnic groups. The former was assumed to be largely composed of children with West Indian mothers. Thus, a percentage of estimated births to West Indian mothers (increasing over time) was allocated to the mixed ethnic group. A similar approach was adopted with the 'Other' group, which was allocated a percentage of births to white mothers.

Death rates

Estimating the number of deaths by ethnic group involved a simpler procedure. The LFS was used to calculate the ethnic composition of people of pensionable age born in each country. These proportions were applied to the number of deaths to people born in a given country, to yield an estimate of the number of deaths from each ethnic group. Estimates of deaths by ethnic group for each national origin were then aggregated across countries of birth. This procedure therefore represented the higher death rates of white people born in countries such as India, as a result of their greater average age.

Migration

The Labour Force Survey was used to calculate the ethnic composition of migrants from each country. The percentage of persons from each ethnic group was applied to the number of immigrants from each country to produce an estimate of the number of persons from each ethnic group migrating from each country, which was summed across countries of origin to yield the total number of immigrants for each ethnic group. The ethnic composition of emigrants was estimated by first calculating the ethnic composition of all persons born in each destination country, and then applying this percentage to the number of migrants from the UK to each country. Again, summing over countries of destination yielded the estimated total of emigrants by ethnic group.

The number of Caribbean-born people declined by over 30 thousand between 1981 and 1991, but this could not be accounted for by deaths and out migration from the UK to the Caribbean. The extra Caribbean out-migrants must thus have a destination in the rest of the world (e.g. the United States), and the estimation process was therefore modified to allocate additional Caribbean out-migrants to the rest of the world.

Annual population change

The components estimated above should match the change in population from year to year. Estimates of population change obtained by summing births, deaths and migration were compared with the OPCS annual estimates of the population of Great Britain (there are no estimates of population by ethnic group) for 30th June each year. Published data on births, deaths and migrants by country of origin refer to calendar years. In order to estimate annual population change, the estimated components are first converted to a mid-year to mid-year basis.

Summing the resultant estimates for births, deaths and net migrants from mid-year to mid-year across ethnic groups did not, however produce the same estimate of population change as the mid-year estimate series. The reason for this is that the latter contains a substantial "adjustment" to represent the influence of other factors (such as the inability of the International Passenger Survey to cover all migrants, especially illegal immigrants). These adjustments were thus distributed to ethnic groups according to their share of the British population, in order that the estimated ethnic group population changes would match the mid-year population estimates when summed.

Making annual population estimates by ethnic group

The 1991 Census provides the best estimate of the ethnic composition of the British population. It was thus decided to take this as the starting point for population estimates, "working back" to 1981, by successively subtracting annual estimates of the components of population change by ethnic group. The first stage was to use Census data to create estimates of the population by Labour Force Survey ethnic group in 1991. This was achieved by creating a "best-fit" of Census ethnic categories to LFS ethnic categories, as detailed below;

LFS ethnic group	Census ethnic group	Census	Estimated	Percent
		Population	Population	
White	White	51873794	52911270	94.4
West Indian	Black-Caribbean	499964	575393	1.0
	Black-Other; British	58106		
Indian	Indian	840255	919763	1.6
	Indian sub-continent (nes)	45338		
Pakistani	Pakistani	476555	490852	0.9
Bangladeshi	Bangladeshi	162835	167720	0.3
Chinese	Chinese	156938	161646	0.3
African	Black-African	212362	222980	0.4
Arab	N. African/Iranian/Arab	65191	67147	0.1
Mixed	Black-Other; Mixed Black/White	24687	236113	0.4
	Black-Other; Other mixed	50668		
	Other-Other; Black/White	29882		
	Other-Other: Asian/White	61874		
	Other-Other: Other Mixed	61393		
Other	Other-Asian; (remainder)	152196	269470	0.5
	Black-Other; Other answers	44940		
	Other-Other; (remainder)	57895		

The percentage shares of the population by ethnic group were then applied to the 1991 mid-year population estimate, to produce the starting points for the back-estimation of the population.

¹ OPCS (1986) Population Trends.

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