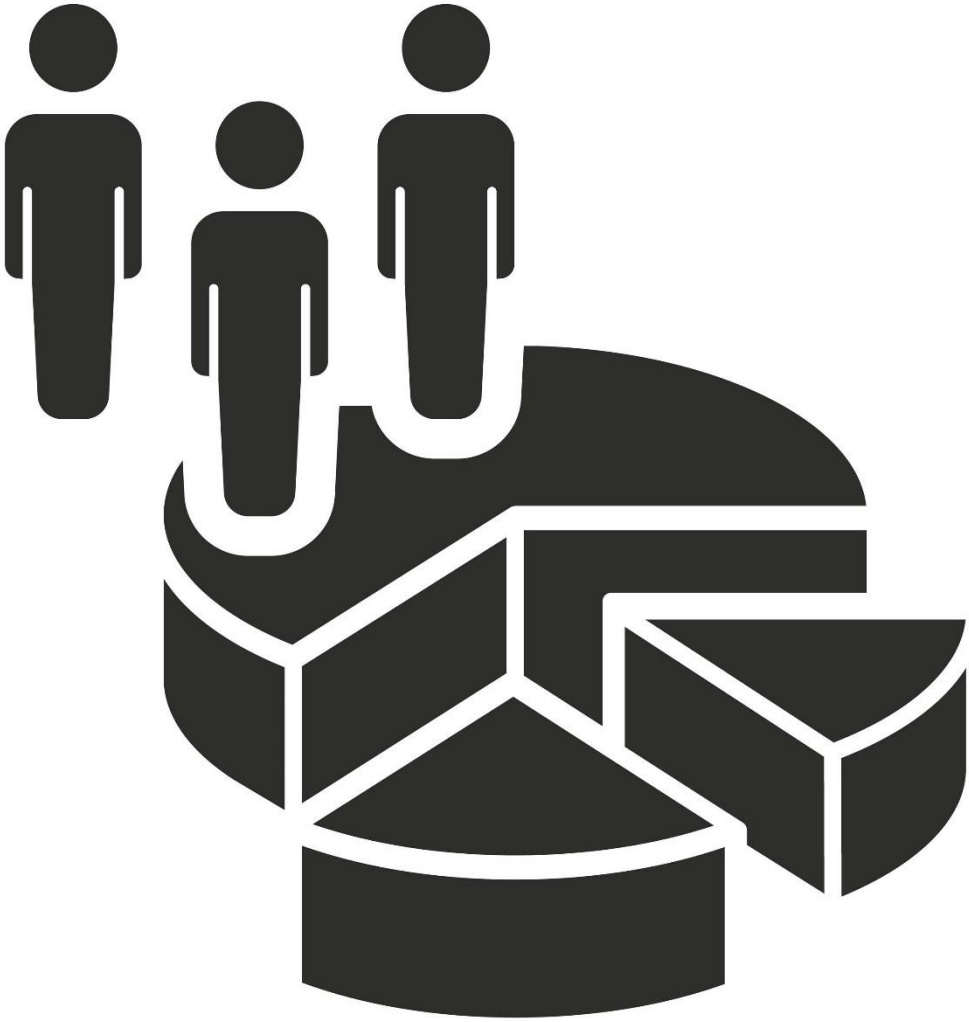
CITY INTELLIGENCE

London's population of young children – current and future

July 2024



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Greater London Authority
July 2024

Published by
Greater London Authority
City Hall
Kamal Chunchie Way
London E16 1ZE

www.london.gov.uk
Tel 020 7983 4000

Minicom 020 7983 4000

Cover photograph

For more information about this publication, please contact:

City Intelligence

Tel 020 7983 4000

Email intelligence@london.gov.uk

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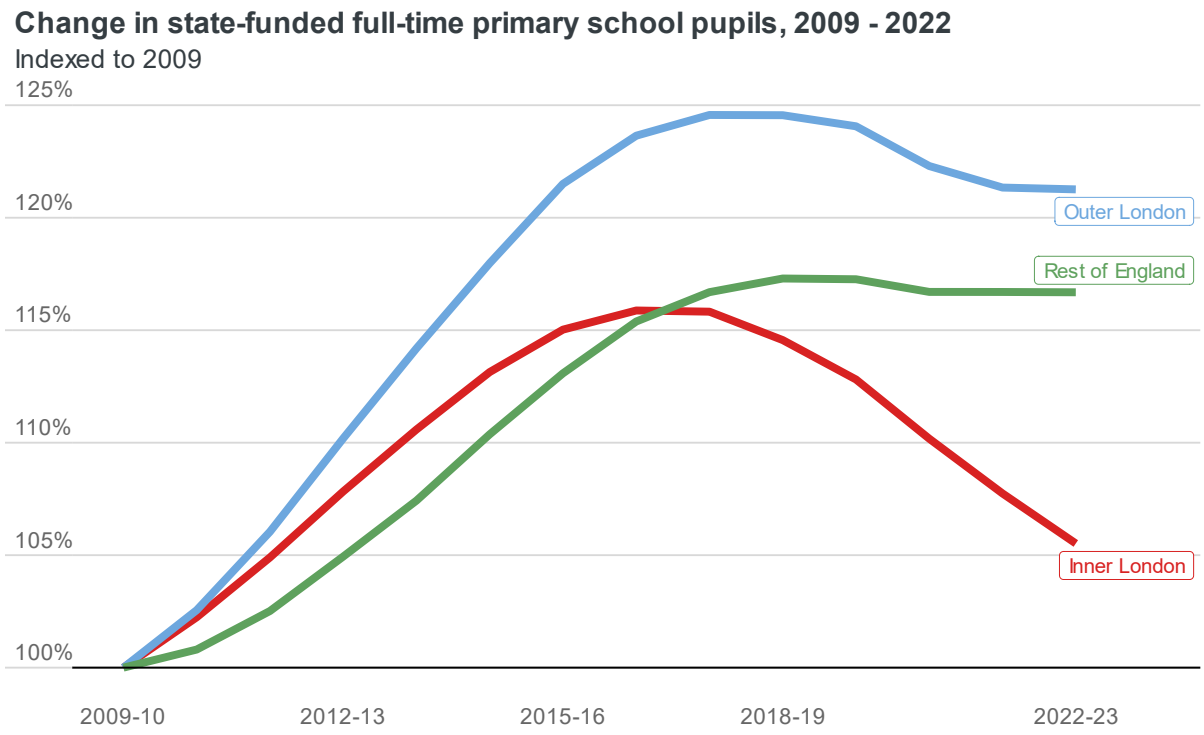
Executive summary

This briefing presents findings from analysis of available data around the current and future size of London's young child population (aged 0-10). The project was prompted by the current need for schools in some Inner London boroughs to merge or close due to insufficient pupils, and consequent concerns that other boroughs will be similarly impacted.

Context

The total number of children in London's primary schools has been falling since around 2016. For Inner London, the trend is still downwards; while for Outer London and the rest of England the numbers have stabilised (see chart below).



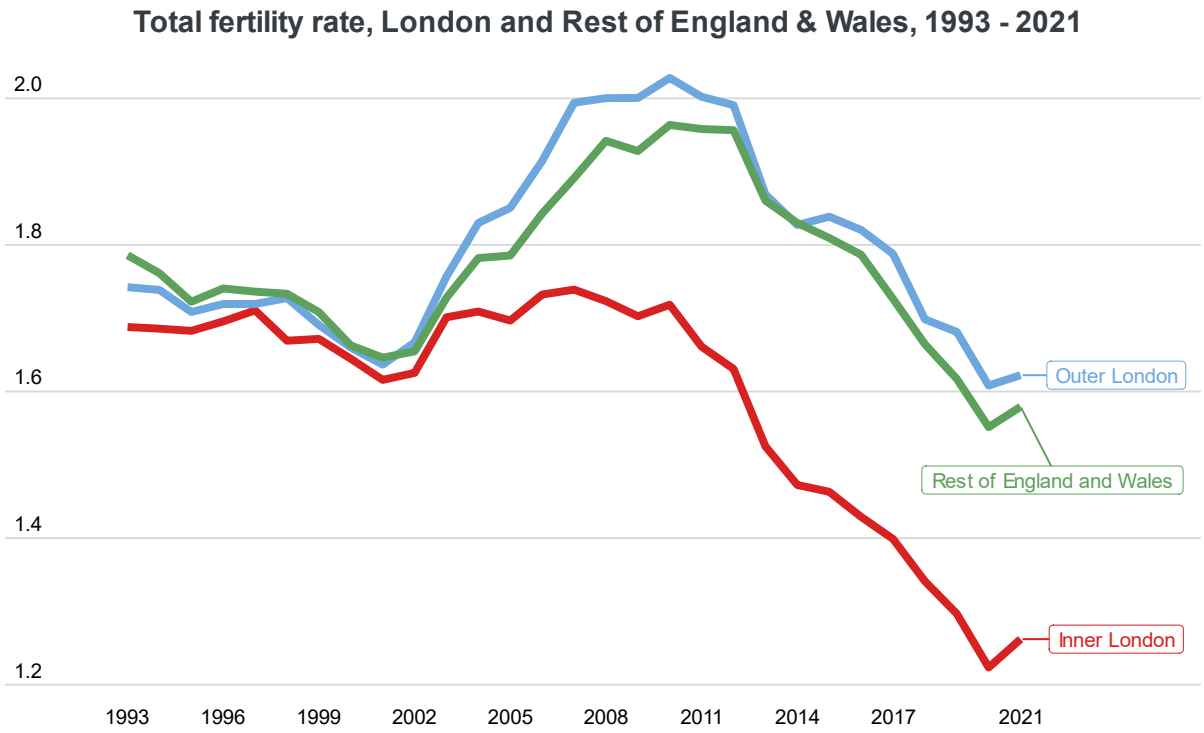
Objective and methods

We examine patterns in London's population, with greatest focus on the population of children aged 0-10, in order to outline prospects for trends and broad distribution of primary-school-age children in London. We use national, regional and borough-level data, from official sources including Census 2011 and Census 2021, to examine patterns in components of population change – births and migration (domestic and international) – and population characteristics including housing tenure.

Findings

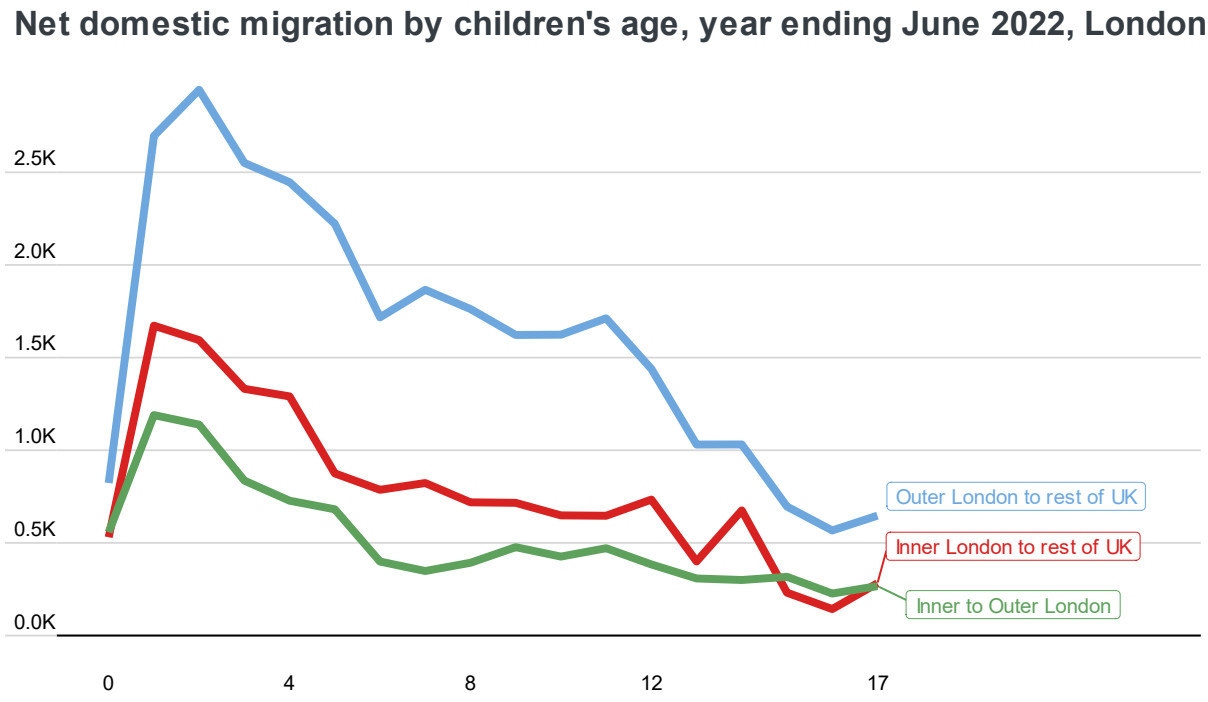
Births

The number of births in London peaked around 2012, and has since continued to fall, despite there being more women of reproductive age. We found that over the last decade, women across England and Wales had progressively fewer children, and at increasingly older ages, with these changes being greatest in Inner London (the chart below shows the average number of children per woman). The fertility rate for women below 35 continues to decline. We identify economic conditions including the cost of housing as a significant contributory cause for the decline in births.



Domestic migration

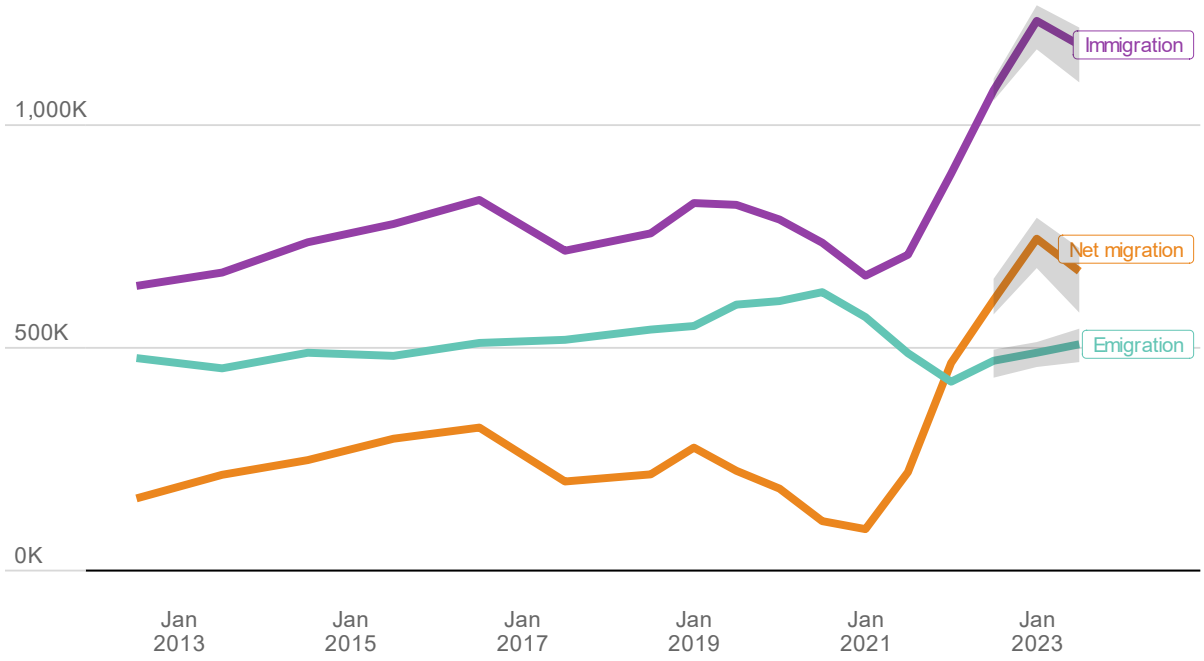
Among children aged 0-10, there is a large and stable net outflow from Inner London to the rest of the UK. The peak ages for this outflow are 0-5 (see chart below). Net outflow for adults aged 25-44 – those most likely to be parents of young children – has consistently increased since the 2008 financial crisis, with a peak in 2021 due to the COVID-19 pandemic. Since the high cost of living, especially of housing, are key push factors for young people and families leaving London, significant net outflow of current and potential families from Inner London is likely to persist.



International migration

Migration patterns have changed mainly due to the Brexit referendum in 2016 and changes to immigration rules in January 2021. There has been a recent uptick in net migration (as shown in the chart below, although there is considerable uncertainty in data from the period affected by the COVID-19 pandemic), and the geographical distribution of new migrants is uneven across London. The recent net outflow of EU nationals may lead to a fall in demand for school places, but increased net inflow of non-EU nationals could partially offset this. Thus, the effect of international migration on numbers of primary school children is uncertain.

International migration, UK, 2012 - 2023 (provisional)



Household characteristics

Between 2011 and 2021, in Inner London, the proportion of households with at least one dependent child has fallen. Meanwhile, proportions of households in private rented accommodation, and in the wealthiest groups, have increased. One inference is that poorer and younger families may need to move out of Inner London (where it is most expensive), or do not settle there if moving from elsewhere in the UK or abroad.

Discussion

Declines in fertility can be attributed to social, educational and economic factors that affect potential parents' decisions to have children; and to environmental and lifestyle factors that affect their capacity to have children. There is some evidence that economic factors have had a significant effect on the number of births in London. This is partly through their influence on decisions by potential and current parents of young children about where to live.

The lack of affordable housing, particularly in Inner London, has combined with limited and expensive childcare; and, more recently, high interest rates and inflation that affect the cost of basic necessities. These factors create an unfavourable environment for low-income families with children. This is leading to a net movement of lower-skilled, lower-income workers from Inner London to Outer London and beyond, which affects the distribution of primary-school-age children.

Conclusion

It is difficult to ascertain demographic trends amidst uncertain local, national and international contexts. The most likely scenario is for the size of the primary-school-age population to continue to decrease over the next decade in London. This fall will likely affect an increasing number of Inner London boroughs, and some Outer London boroughs. In contrast, a small number of Outer London boroughs are likely to experience an increase in primary-school-age children.

Our analysis to date has been high level. To complement this briefing, we intend to provide an online tool where users can access current data and trends at borough level. We will also soon publish our updated population projections, including for small geographies in London, by single year of age and by sex. We will continue to release estimates of recent births modelled from monthly patient count data. Later in 2024, we intend to publish pupil projections for London at sub-regional level.

1 Introduction

This briefing presents findings from analysis of available data concerning the current and future sizes of London's young-child population. The project was prompted by the reported need for some primary schools in Inner London to merge or close due to insufficient pupils,[1] and the pressures on other parts of London to which young families are moving.[2]

The drop in the child population is creating challenges for schools. Many schools are already in financial deficit; and because schools are funded on a per-pupil basis, they face further budgetary reductions with fewer pupils on their rolls. Most school budgets are allocated to staff, so there are few options for cutting costs before needing to reduce their workforce. Primary schools with just one form per year are particularly at risk.[3]

This briefing is mainly aimed at those working in central, regional or local government, or in civil society, who need the findings for planning.

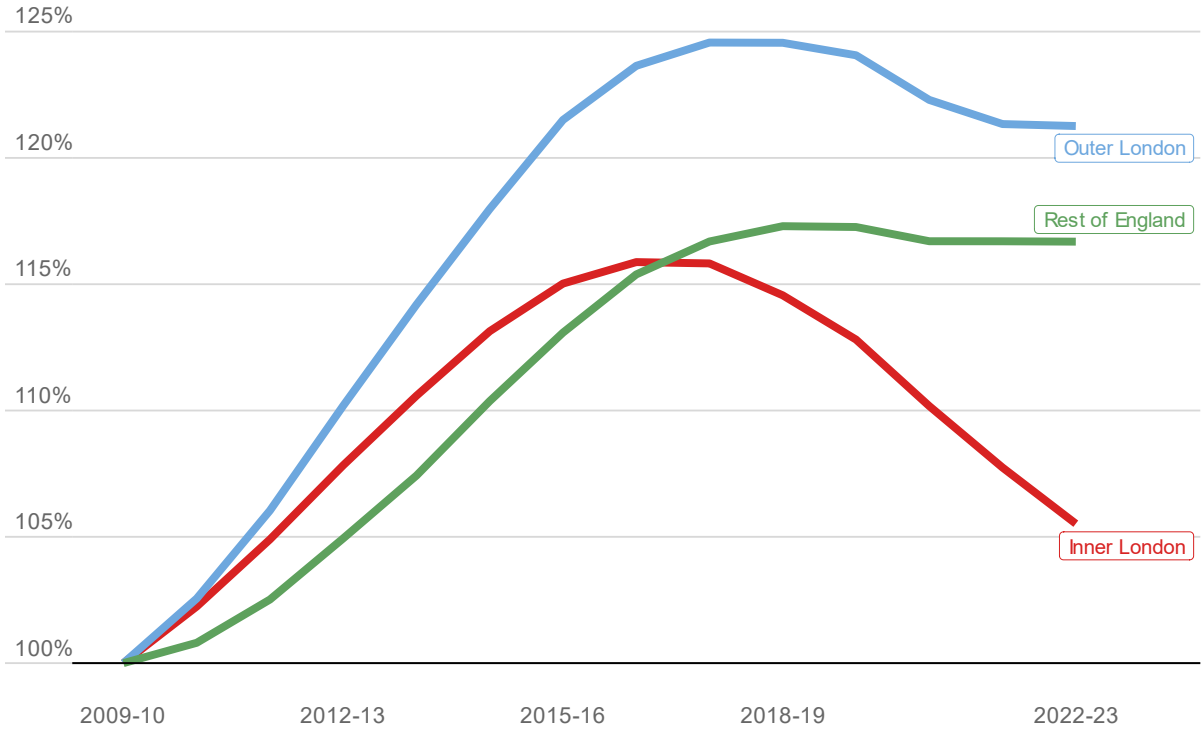
1.1 The context relating to primary schools

It is not long ago that concerns were expressed about insufficient school places in the UK, with London being one of the cities with greatest demand.[4] The situation has reversed in less than a decade. The total number of pupils registered in primary schools in London has been falling since around 2016. Figure 1.1A shows Inner London has experienced a significant fall in numbers, and the trend remains downwards. In Outer London the decrease was less steep, and numbers have stabilised. This contrasts with the rest of England, where numbers have been quite stable since the late 2010s.

[1] See, for example, *The Guardian*, Primary schools in England close, merge and shrink as pupil numbers fall, 16 December 2023
[2] See, for example, BBC, Leaving London: Pressure on outer boroughs as families move in, 2 January 2024
[3] London Councils, Managing falling school rolls in London, January 2024
[4] See, for example, Full Fact, School places: are we running out?, 3 April 2015

Figure 1.1A: Indexed headcount of state-funded full-time primary-school pupils by location, between academic years 2009-10 and 2022-23

Indexed: Academic year 2009-10 = 100%

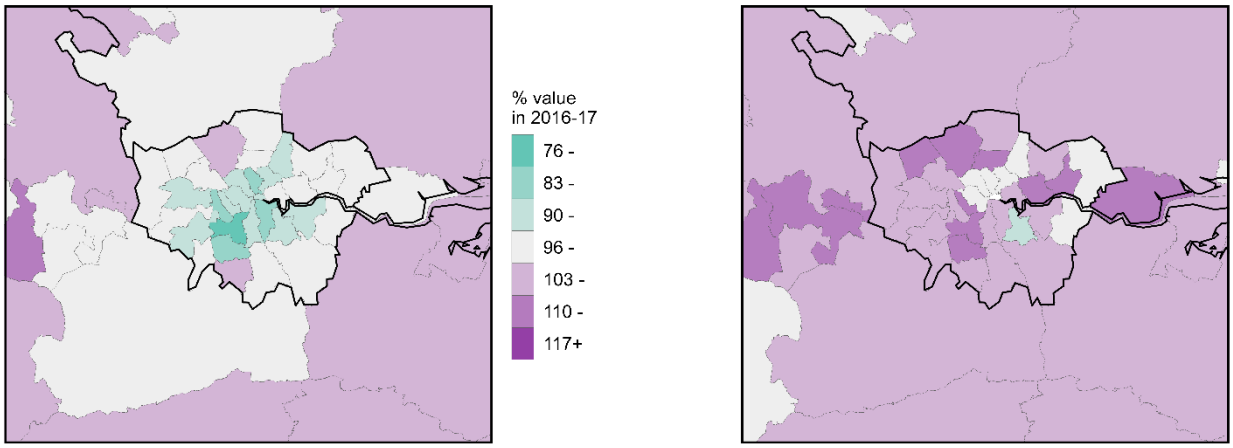


Source: Department for Education (DfE)

Figure 1.1B: Indexed headcount of state-funded schools' pupils, London, between academic years 2016-17 and 2022-23

Primary schools

Secondary schools



Source: DfE

Figure 1.1B uses the academic year 2016-17 (when the trend for numbers to increase in Inner London reversed) as reference for examining the distribution of changes. In the left-hand map, the pattern of decline (since academic year 2016-17) in the number of state-funded primary-school pupils in central London contrasts with the increase in most local education authority areas around London. This decline also

contrasts with the increases, in most London boroughs, of secondary-school pupils. This is shown in the right-hand map.

The decline in number of state-funded primary school students cannot be explained by an increase in pupils attending independent schools, since this number has been stable in London since 2015-16.[5] By contrast, there is evidence for an increased proportion of children in elective home education since 2019, and especially since the COVID-19 pandemic (estimated at around 1 per cent in England).[6] This proportion is still low, so the changes cannot account for the trends in Figure 1.1A.

1.2 Objective, methods and causal model

This briefing aims to examine patterns in London's population, with greatest attention paid to children aged 0-10 (i.e., the cohort of pre-primary and primary-school-age children). The goal is to outline prospects for future trends; and the broad distribution of primary-school-age children in London.

We use national, regional and borough-level data from official sources (including the 2011 and 2021 censuses) to examine patterns in components of population change (births and migration (domestic and international)) and characteristics, including housing tenure. We also commissioned data from the Office for National Statistics (ONS) relating to numbers of live births in England and Wales between mid-1992 and mid-2021. Fertility rates have been calculated using methodologies adopted from ONS publications; formulae are provided in the Annex.

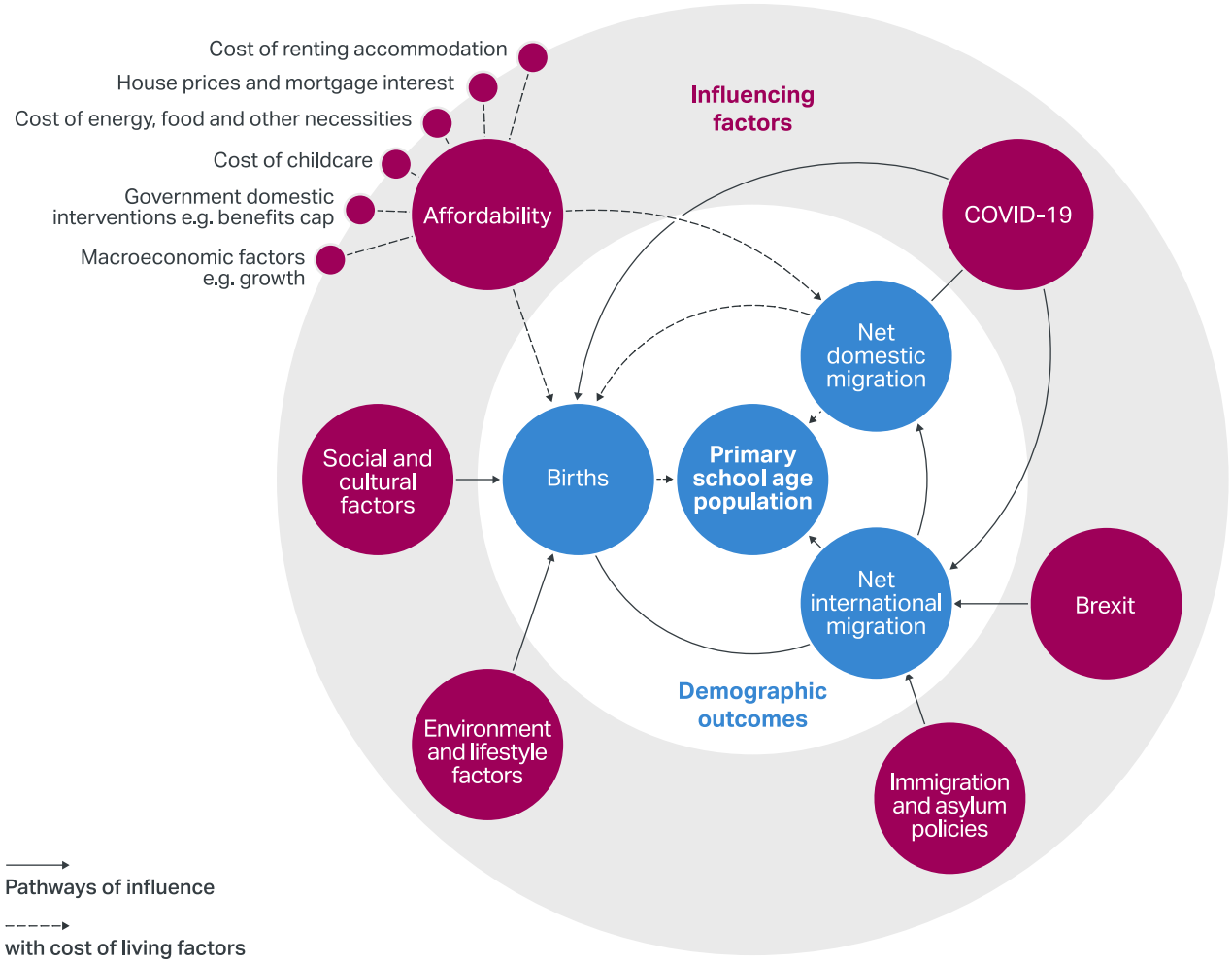
The components of population change are births, deaths and migration. In this briefing we do not consider deaths. This is because, compared to fertility and migration, mortality has a relatively minor influence on changing numbers of children in the UK.

For migration, we separate domestic migration from and international migration. For each, we define "net migration" as the difference between the number of people moving into an area and the number of people moving out.

We constructed a causal model, shown in Figure 1.2B, to clarify interactions between the three components of population change being considered, and the factors influencing them. The model is based on a rapid review of academic and other online literature – including reports by local and national governmental departments and agencies, and non-governmental organisations. We used this causal model to organise our findings.

[5] In London there were 143,500 pupils at independent schools in 2015-16; and 143,410 in 2019-20 (DfE).
[6] Long, R and Danechi, S., Home Education in England, House of Commons Library, 1 December 2023

Figure 1.2B: Causal model of main influences on number of primary-school-age children in London



The inner circle of Figure 1.2B shows how the three components of population change considered in this report are interrelated. The size of the population of interest is directly driven by the number of births and net migration. Migration also affects the population indirectly via the number of births to migrant parents. We examine data relating to the components of population change in Section 2; and describe the consequent population patterns in Section 3.

In Section 4 we discuss factors outlined in the outer circle of Figure 1.2B, considered to be the main influences on the demographic outcomes. We also review our findings in order to extract their implications for the future size of London's primary-school-age population.

In Section 5 we outline prospects for future trends; and related current and future work.

2 Components of change

In this section we consider in turn patterns in births, domestic migration and international migration – the core demographic factors that affect the change in our population of interest.

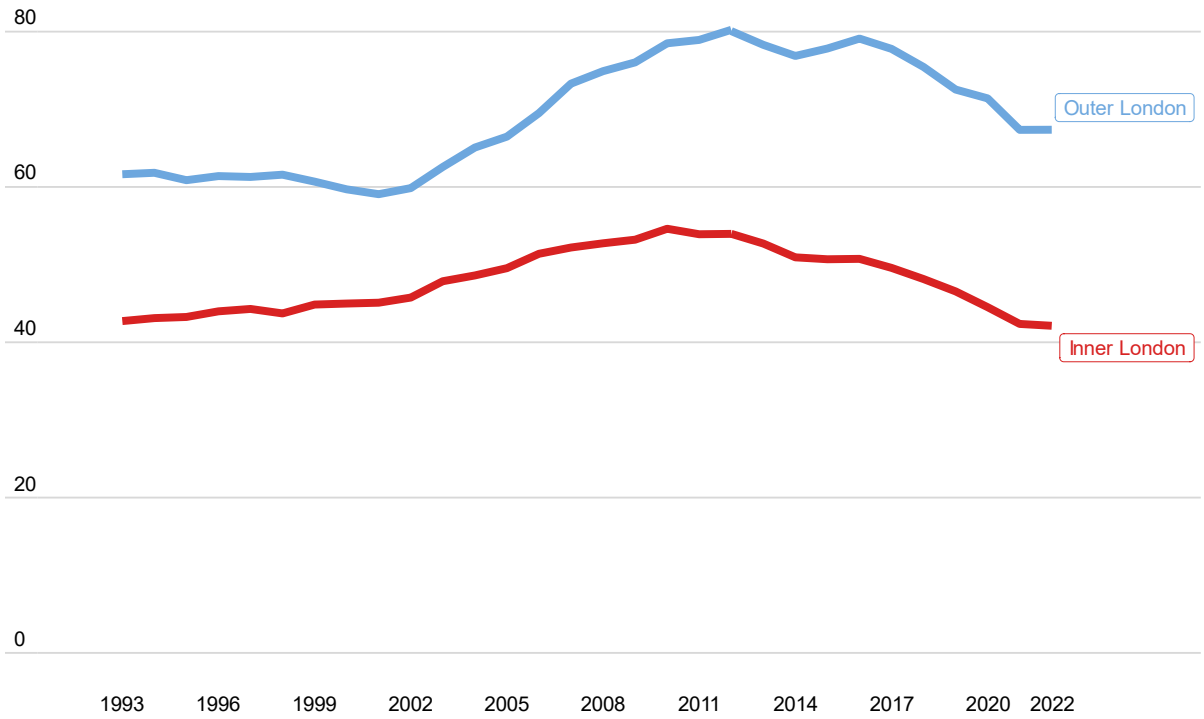
2.1 Births

Key findings about births:

- The number of births has been falling in London since a peak in 2012, despite an increase in the number of women aged 15-44 (Figure 2.1B).
- Over the last decade, the fertility rate has fallen in Inner and Outer London, and in the rest of the country (Figure 2.1C).
- In Inner London, women are having fewer children on average compared to Outer London, and the rest of England and Wales (Figures 2.1D and 2.1E).
- At a borough level, decreases in fertility over the last 30 years occurred concurrently with increases in the mean age of mothers at the birth of their children (Figure 2.1J). The latter is not sufficient to account for the fertility decreases observed.
- For mothers born outside the UK, the fertility rate in 2000 was much higher, and started falling much earlier, than for UK-born mothers (Figure 2.1N).
- Since 2000, fertility rates fell in London for women from all countries/regions of birth studied. Women from Africa and the UK accounted for the greatest part of the decrease since 2012 in number of births.

Number of births

Figure 2.1A: Births in London, 1993-2021
Annual births in thousands

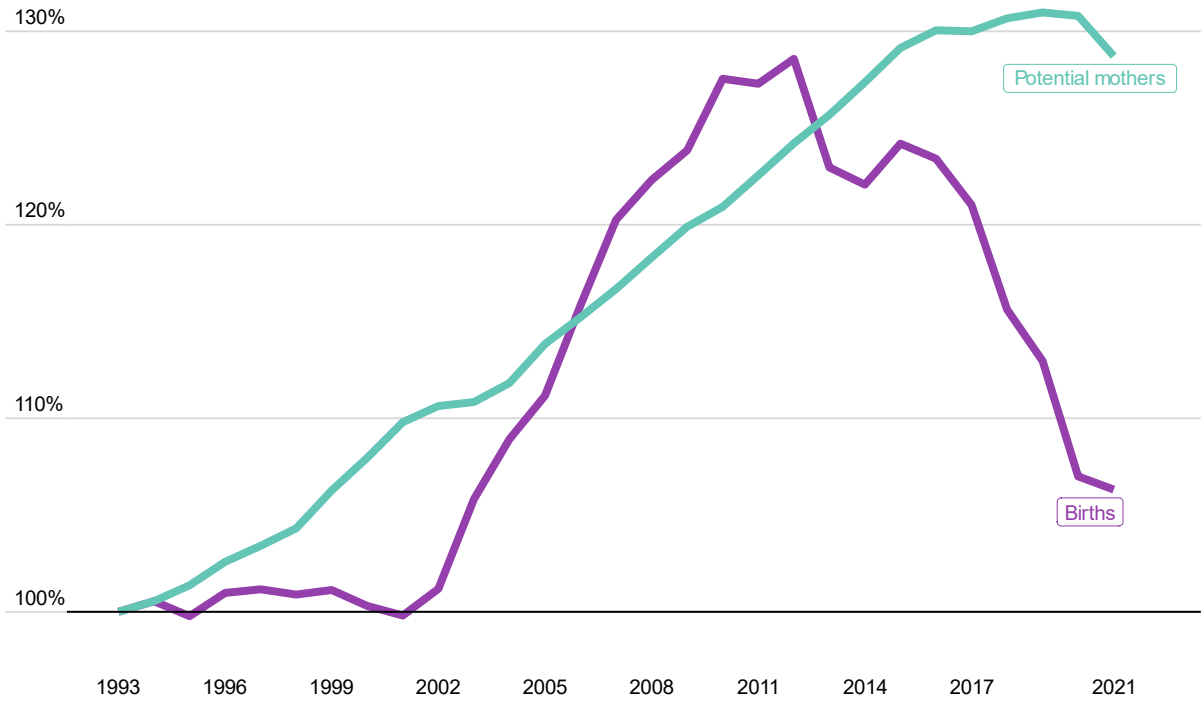


Sources: ONS, Numbers of live births by local authority and MSOA, England and Wales: mid-year 1992 to mid-year 2021 and Estimates of the population for England and Wales

Figure 2.1A shows that annual births in both Inner and Outer London increased in the 2000s, before reaching a peak of nearly 135,000 in 2012. Bar an uptick in 2016, and a brief rebound following the COVID-19 pandemic, the numbers have been falling since. The effect of the pandemic is not evident in Figure 2.1A, but is perceptible in statistics modelled using monthly data from GP patient registers. It is consistent with the notion that the pandemic caused many people to temporarily delay plans to have children. This led to an initial period of fewer births than would otherwise have occurred; followed by a period with more births as postponed plans were finally realised.[7] The peaks of Inner and Outer London's birth curves occurred approximately four years before the peaks of the corresponding primary school roll counts (Figure 1.1A). This demonstrates that, as would be expected, births are a key factor influencing the number of young children in London.

[7] GLA, State of London report – June 2023 update, June 2023

Figure 2.1B: Indexed births and population of women aged 15-44, London, 1993 to 2021
Indexed: 1993 = 100%



Numbers of live births by local authority and MSOA, England and Wales: mid-year 1992 to mid-year 2021 and *Estimates of the population for England and Wales*

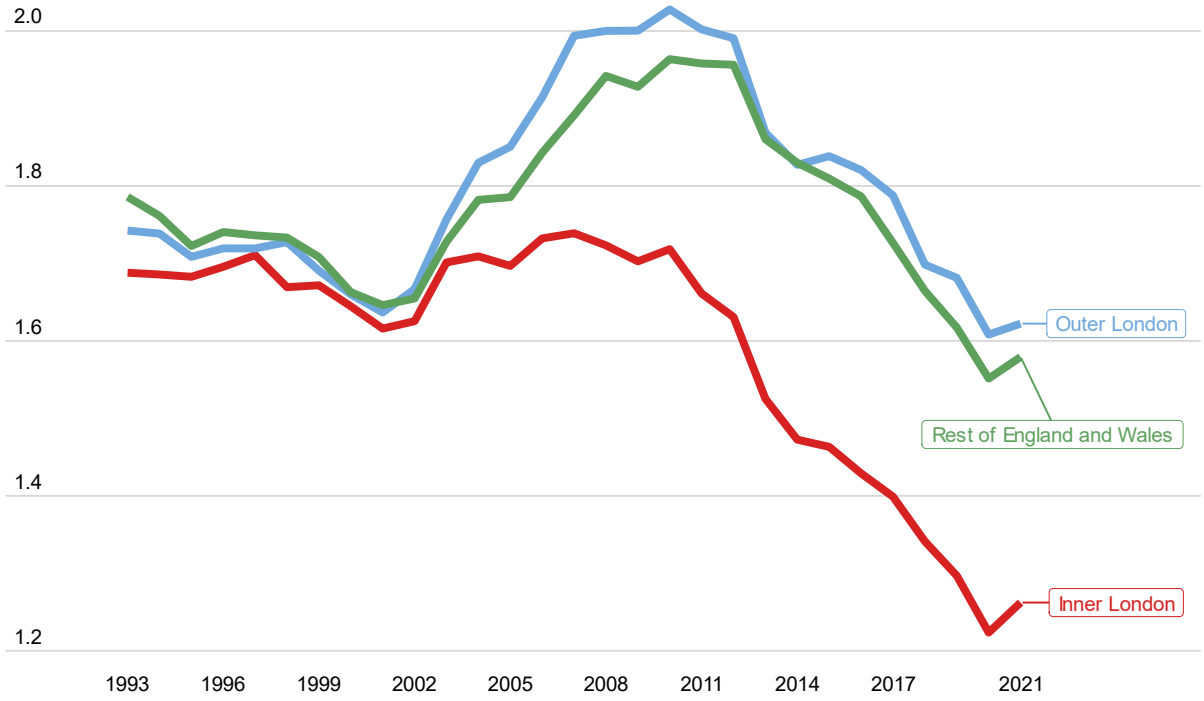
Two factors affect the number of births: fertility rates (the number of children each potential mother has) and the number of potential mothers. Figure 2.1B shows that the number of women of reproductive age[8] in London consistently increased from the late 1990s until around 2014 when it stabilised (the decrease in 2021 reflects the temporary reduction in London's population during the COVID-19 pandemic). Thus, the decrease in the number of births in London, since 2012, is due to women having fewer children on average.[9]

Total fertility rate

For comparing fertility rates in different places and over time, we will use the total fertility rate (TFR) measure. This represents the average number of children that would be born to a hypothetical group of women, if they were to live through their child-bearing years experiencing the prevailing fertility rates at a given point in time.[10]

[8] Defined in this briefing as women between 15 and 44.
[9] Our modelling reveals that, had the number of reproductive-age women stayed constant since 2013, the number of births would have been 3 per cent lower than was recorded. Conversely, if ASFRs had stayed constant since 2013, the number of births would have been 8 per cent higher than the number recorded.
[10] See Annex for method of calculation.

Figure 2.1C: TFR in Inner and Outer London, and the rest of England and Wales, 1993-2021
Average number of children per woman

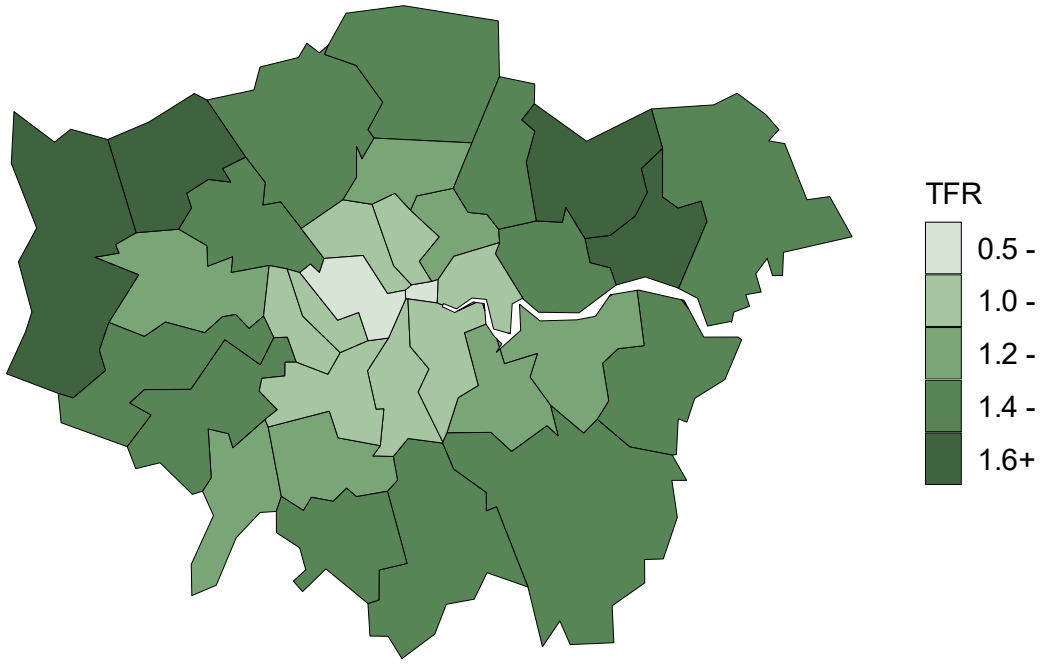


Source: GLA analysis of commissioned data (ONS)

Figure 2.1C shows that, during the 2000s, the TFR trend in Outer London was very similar to that of the rest of England and Wales, in that both increased. Conversely, the Inner London TFR stayed relatively constant until 2011. In all three regions, the TFR has greatly declined since 2011 (except for an uptick in 2021 associated with the temporary reduction in London's population during the COVID-19 pandemic). At all times, and in all three areas, the TFR was below the replacement level of 2.1 children per woman.[11]

[11] Our analysis revealed that over the last two decades, the TFR values for Outer London have consistently been higher than the values for the whole of England and Wales (this is not obvious from Figure 2.1C, as the green curve plots values for England and Wales excluding London).

Figure 2.1D: TFR by London borough, 2021
Average number of children per woman



Source: GLA analysis of commissioned data (ONS)

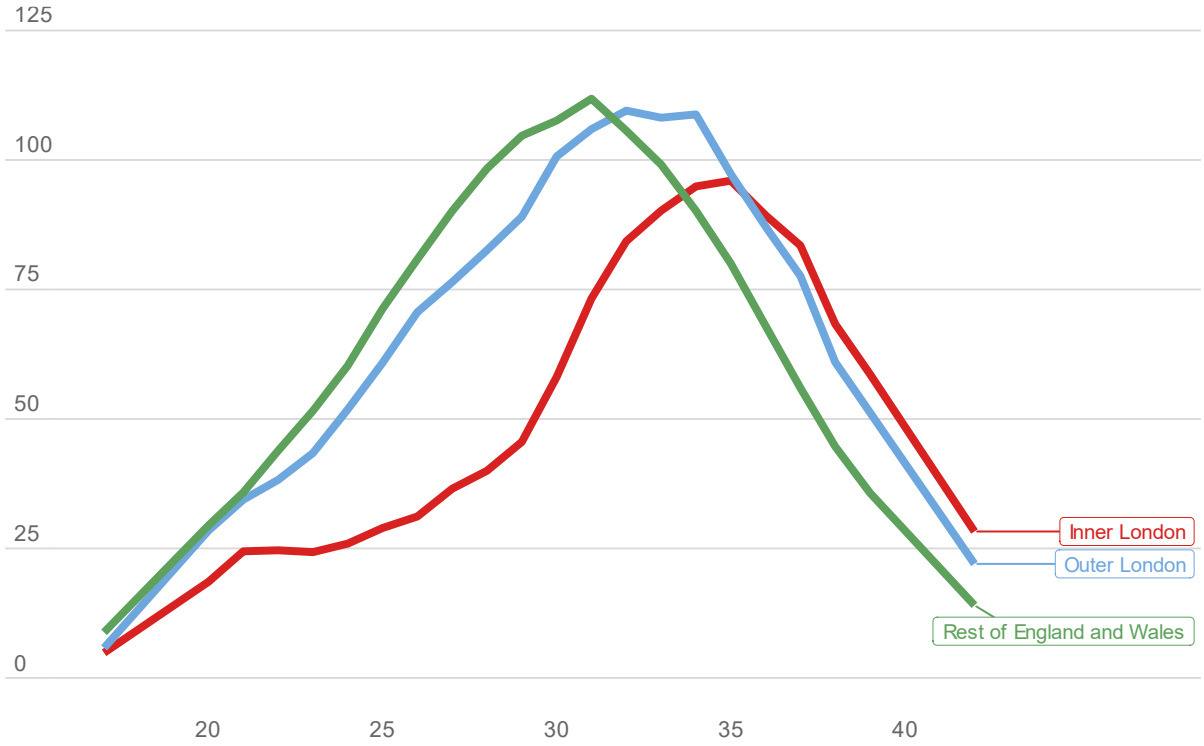
Figure 2.1D shows the gradient of TFR in 2021 between Inner and Outer London. Westminster and City of London have TFR values below 1; Harrow and Hillingdon have values above 1.6; and Redbridge and Tower Hamlets have values above 1.7. (In this and other charts based on grouped data, the dashes in the legend signify that the class extends up to, but does not include, the lower limit of the next class.)

Age-specific fertility rates

To understand the geographical and temporal variation in TFR in London, it is helpful to examine variation in fertility rates associated with the age of mothers, using the age-specific fertility rate (ASFR) measure. This represents the relative frequency of births among women in a given age group.[12]

[12] ASFR is calculated by dividing the number of live births to mothers of each age group by the number of females in the population of that age; then expressed per 1,000 women in the age group. See Annex.

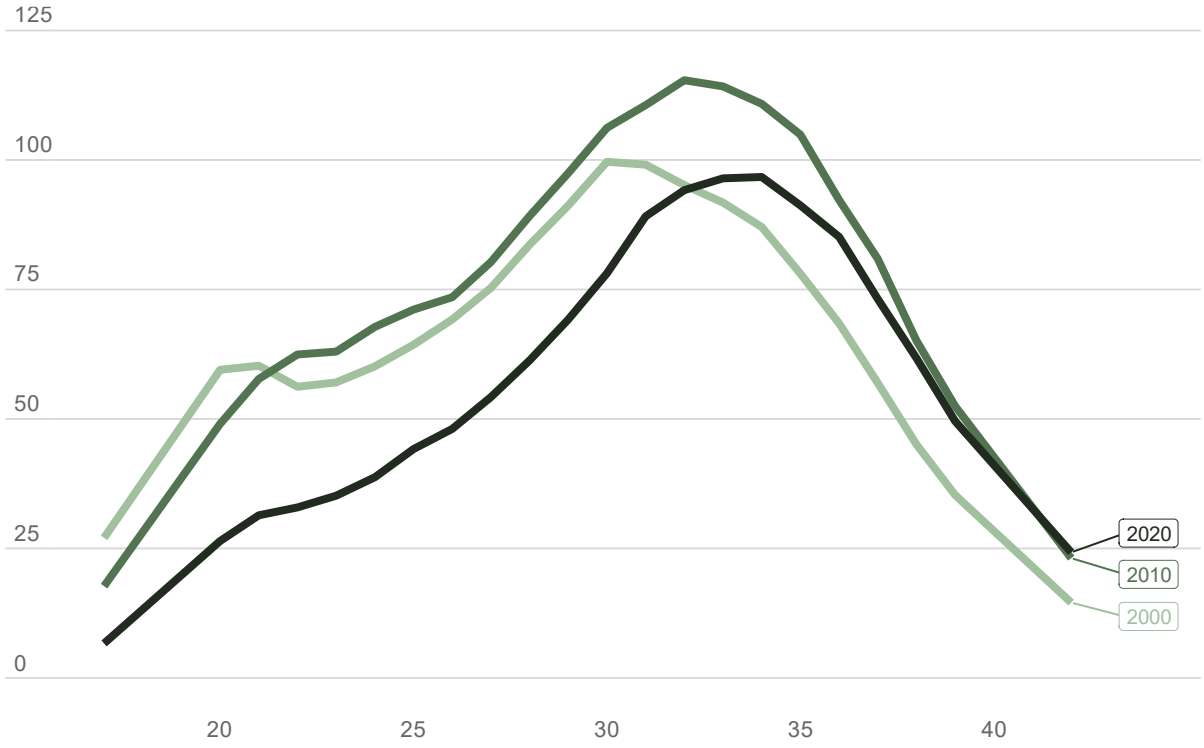
Figure 2.1E: ASFRs in Inner and Outer London, and the rest of England and Wales, 2021
Annual births per 1,000 women



Source: GLA analysis of commissioned data (ONS)

Figure 2.1E shows how the ASFR curves, in both zones of London, lie to the right of the curve for the rest of England and Wales. This shows that women in London have lower fertility rates before their mid-30s, and higher fertility rates during their late 30s and their 40s, compared to elsewhere. The ASFR curve for Inner London shows much lower fertility rates on average for women below 35, compared to those in Outer London. Possible factors accounting for these differences are discussed in Section 4, where we suggest affordability as a key influence on reproductive decision-making.

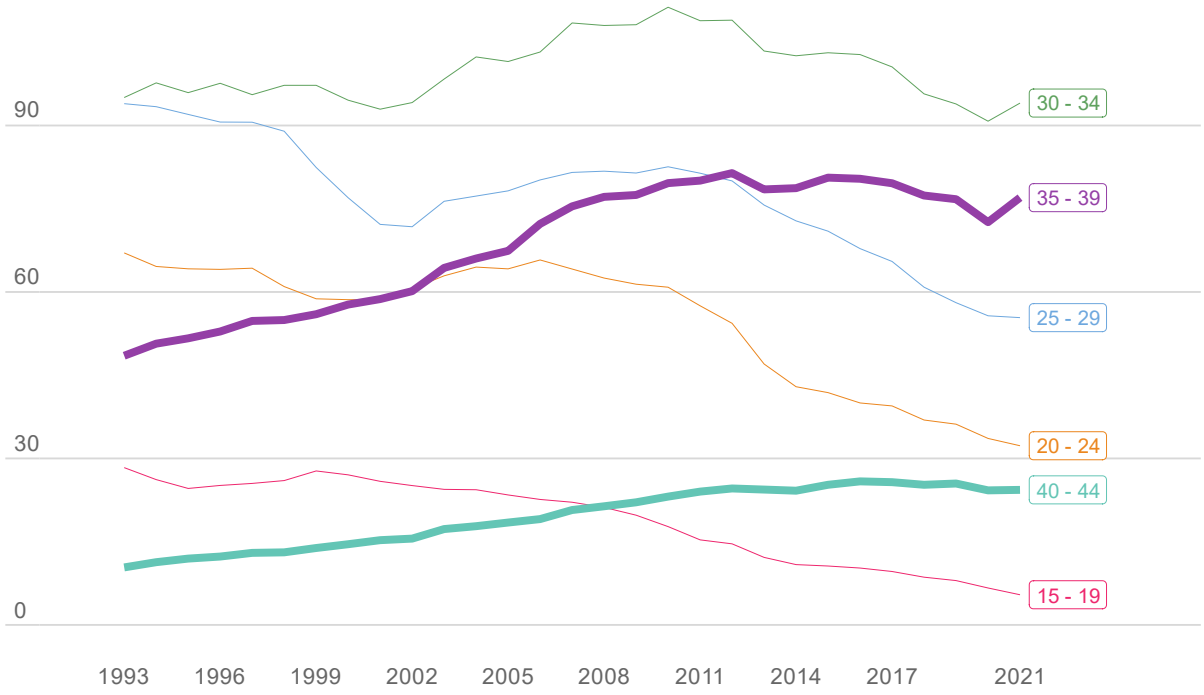
Figure 2.1F: ASFRs by the mother's age, in London, in 2000, 2010 and 2020
Annual births per 1,000 women



Source: GLA analysis of commissioned data (ONS)

Figure 2.1F shows how ASFR has changed in London this century, in that the ASFR curve has shifted to the right since 2000. The peak value of ASFR occurred at around age 32 in 2010. This would affirm the notion that Londoners have been delaying starting a family, and giving birth to children, over the course of the current century.

Figure 2.1G: ASFRs in London by age group, 1993-2021
Annual births per 1,000 women



Source: GLA analysis of commissioned data (ONS)

Figure 2.1G shows that the rightward shift of the London ASFR curve since 2000, shown in Figure 2.1F, is due to the increase in fertility rates for the age groups 35-39 and 40-44; while fertility rates in the age groups 15-19, 20-24, 25-29 and 30-34 decreased. It seems that since around 2012, the rates for the older women stabilised, while those for the younger women fell. There is no sign of the trends levelling out or reversing.

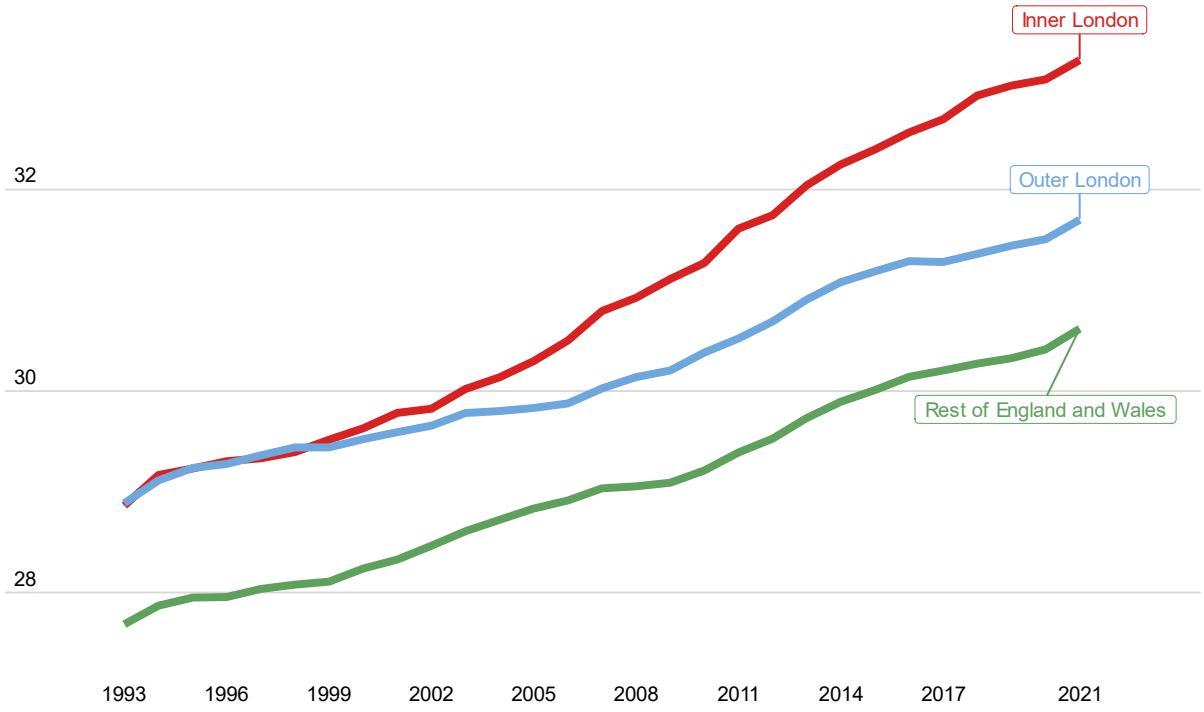
Standardised mean age at birth

We have seen that in this century in London, ASFR has increased for older women, and decreased for younger women. To further explore these trends, we will use the measure of standardised mean age (SMA)[13] at birth. This provides a summary measure of the distribution of fertility rates by age. It thereby allows us to compare trends over time and between regions.

[13] Like TFR and ASFR, SMA statistically eliminates the impact of differences in age distribution of populations. See Annex.

Figure 2.1H: SMA of mothers in Inner and Outer London, and the rest of England and Wales, 1993-2021

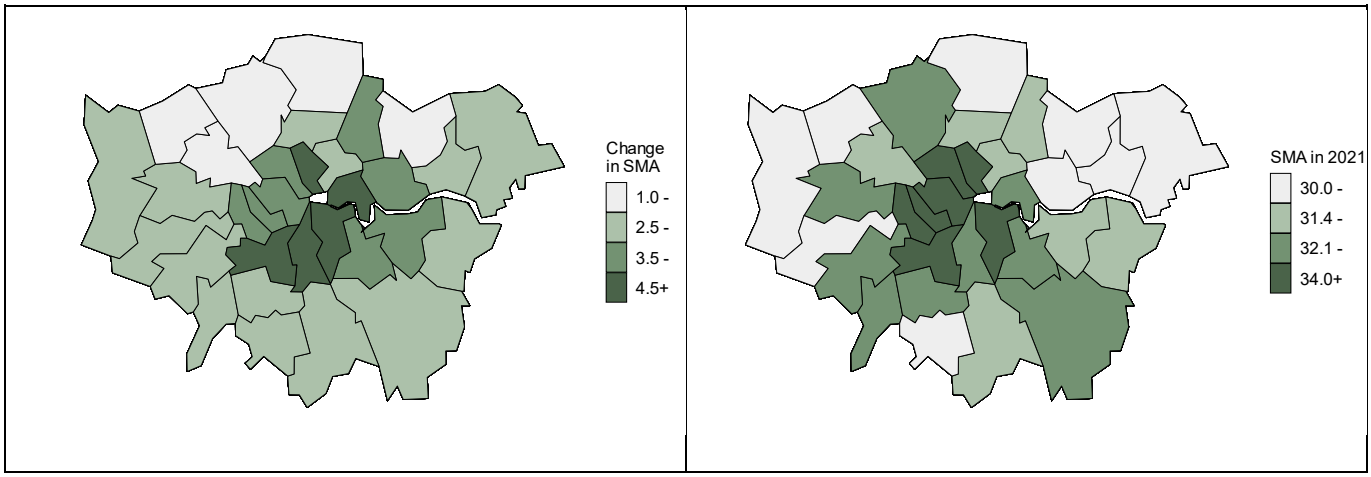
Average age of mothers at the birth of their children



Source: GLA analysis of commissioned data (ONS)

Figure 2.1H shows that on average, SMA at birth has increased in both Inner and Outer London over the last two decades. Inner London has seen a higher rate of increase than Outer London. It also shows that the SMA is higher in London than the rest of England and Wales.

Figure 2.1I: Change in SMA of mothers in London, 1993-2021 (left); and SMA in 2021 (right)



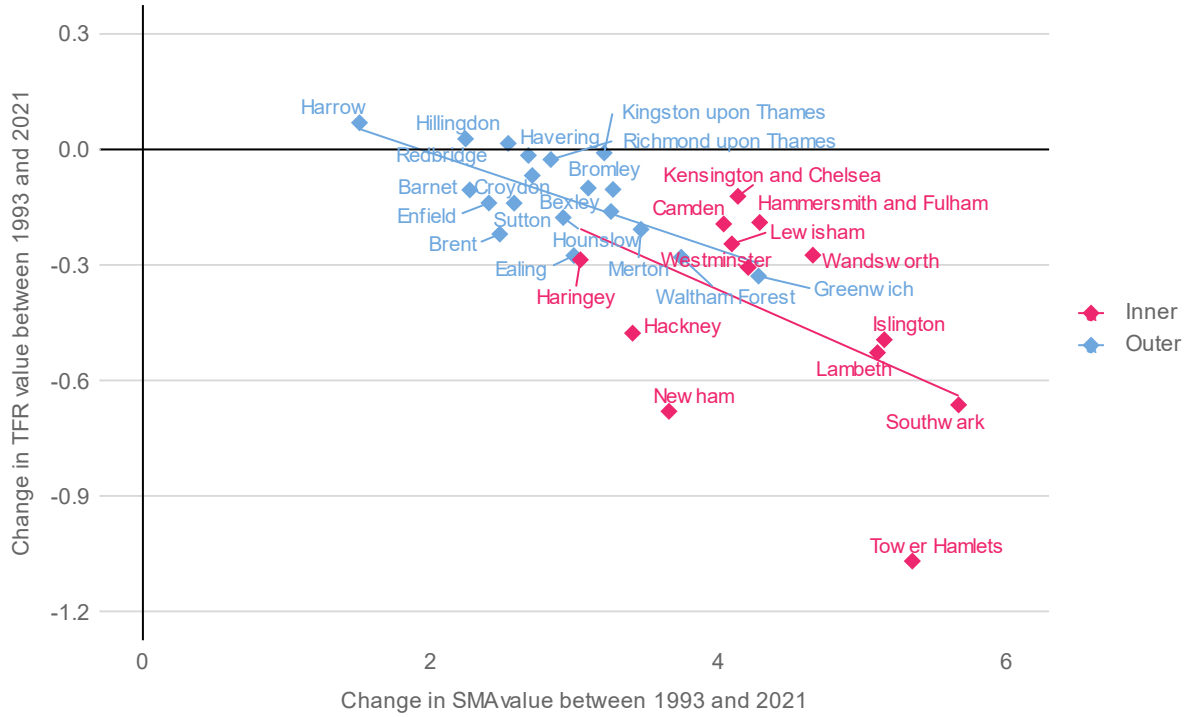
Source: GLA analysis of commissioned data (ONS)

Figure 2.1I shows that that increases in SMA at birth since 1993 have been greatest in Islington, Tower Hamlets, Southwark, Lambeth and Wandsworth. In these boroughs, SMA has increased by at least 4.5 years

in this period. The right-hand map demonstrates the situation in 2021: the boroughs with highest SMA (greater than 34 years) were all in Inner London.

Association between SMA at birth and TFR

Figure 2.1J: Scatterplot of changes (1993-2021) in TFR versus SMA for London boroughs



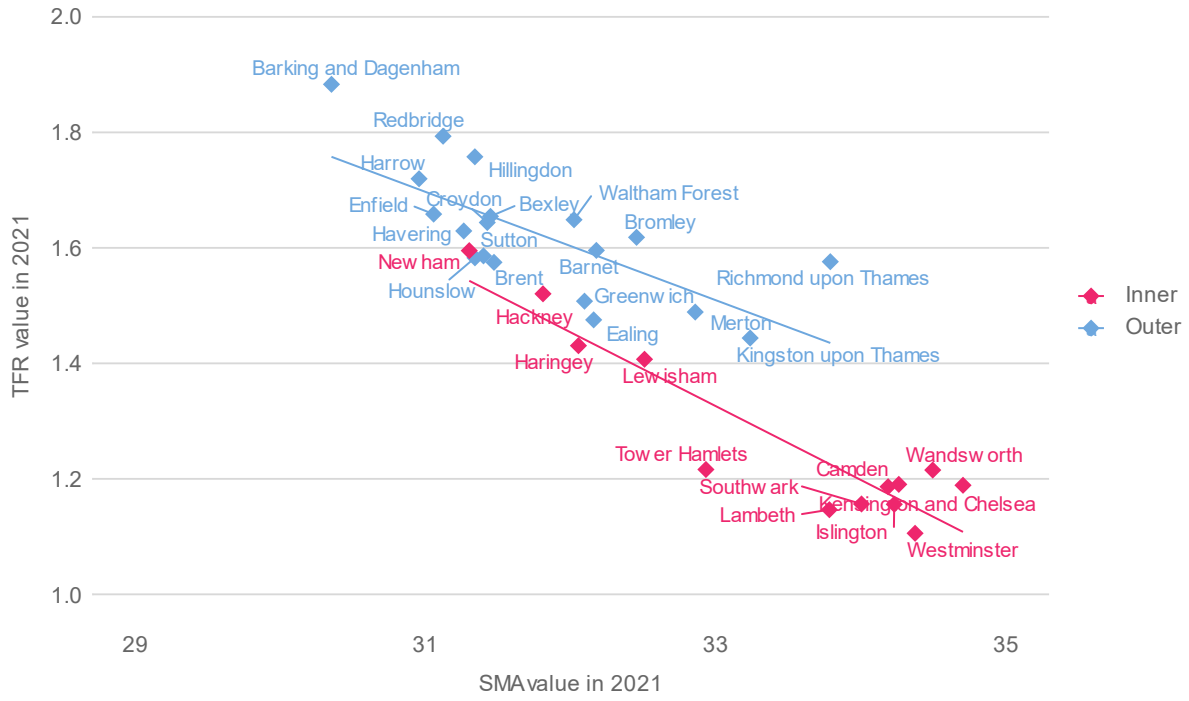
Source: GLA analysis of commissioned data (ONS)

When we examine the relationship between TFR and SMA changes over the last three decades (Figure 2.1J), we can see that there is a negative association; and that the four boroughs with the greatest SMA increase (Islington, Lambeth, Southwark and Tower Hamlets) also had large TFR decreases.[14]

Figure 2.1K[15] shows how these changes resulted in the 2021 situation whereby most Inner London boroughs had high SMA and low TFR (except for Newham, Hackney, Haringey and Lewisham).

[14] Trendlines are included to highlight the direction of association (negative), and the variation around the trend. The latter indicates there are factors additional to change in SMA that account for TFR changes.
[15] Again, the trendline highlights that there are factors additional to SMA that account for variation in TFR.

Figure 2.1K: Scatterplot of TFR versus SMA for London boroughs, 2021



Source: GLA analysis of commissioned data (ONS)

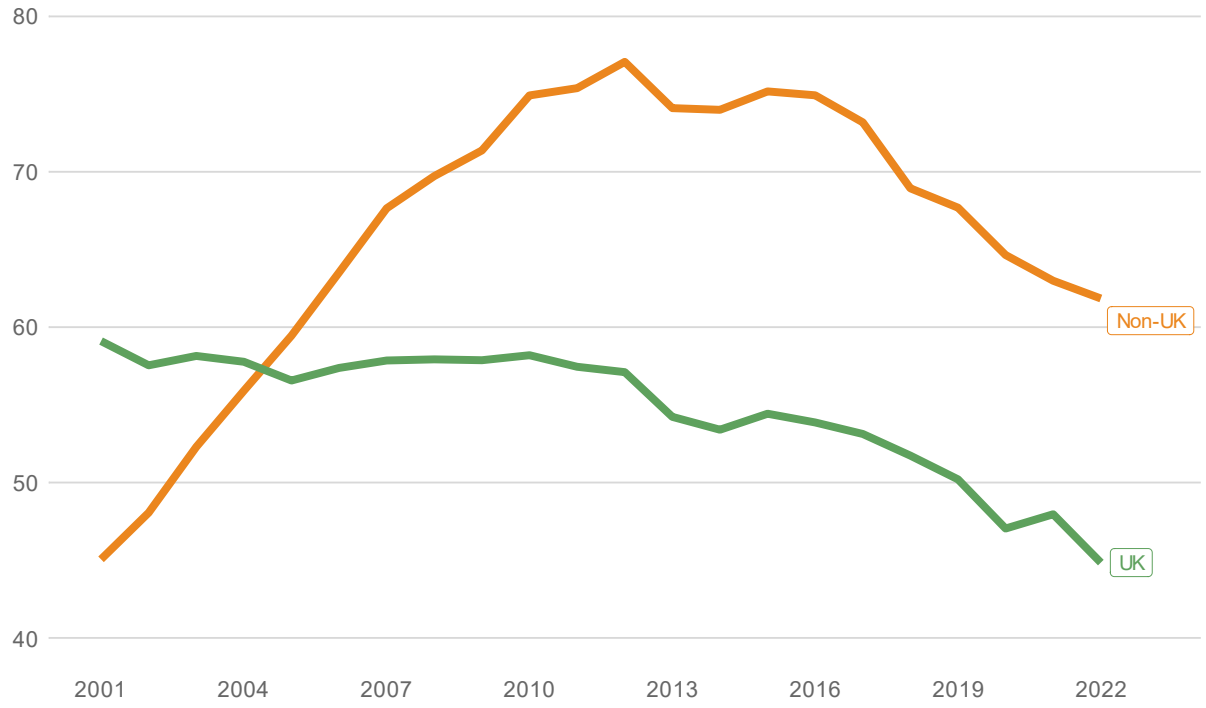
In summary, the data reveals that the mean age of London mothers, at the birth of their children, is increasing. This is associated with decreasing TFR. These changes are most acute in Inner London, where housing and other costs of living are highest (see Section 4).

We will now consider the final topic with respect to births: the location of the mother's birth.

Location of mother's birth – number of births

The proportion of births to non-UK-born mothers has changed from 43 per cent in 2001 to 58 per cent in 2022 (the most recent year for which data is available).

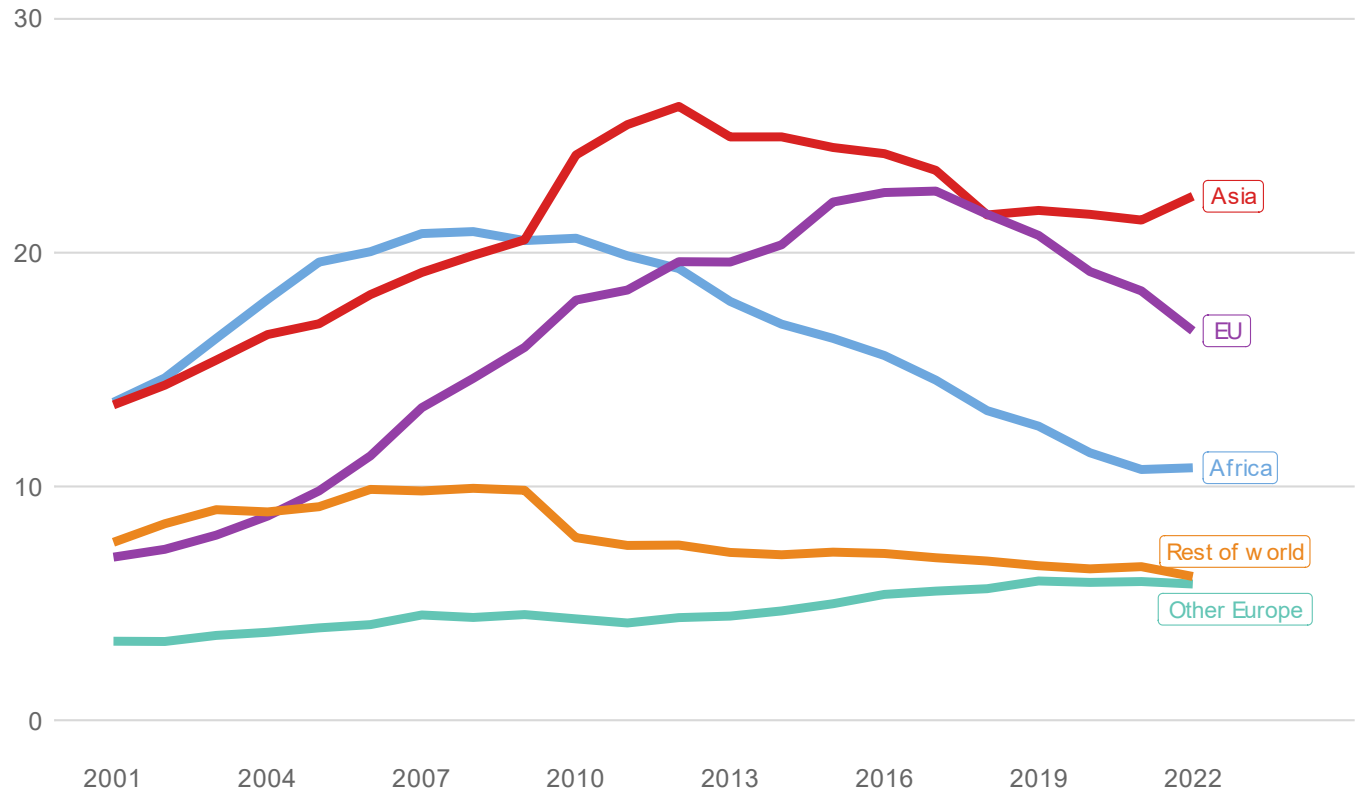
Figure 2.1L: Births by UK-born and non-UK-born mothers, London, 2001-22
Annual births in thousands



Source: ONS

Figure 2.1L shows that births by UK-born mothers were stable in the 2000s, and then declined across the 2010s. This indicates that the birth increase in London, up to the peak in 2012, was solely due to birth increases among non-UK-born mothers. Since 2012, births by both UK-born and non-UK-born mothers have decreased.

Figure 2.1M: London births by mother's region of birth (excluding UK), 2001-22
Annual births in thousands



Source: ONS

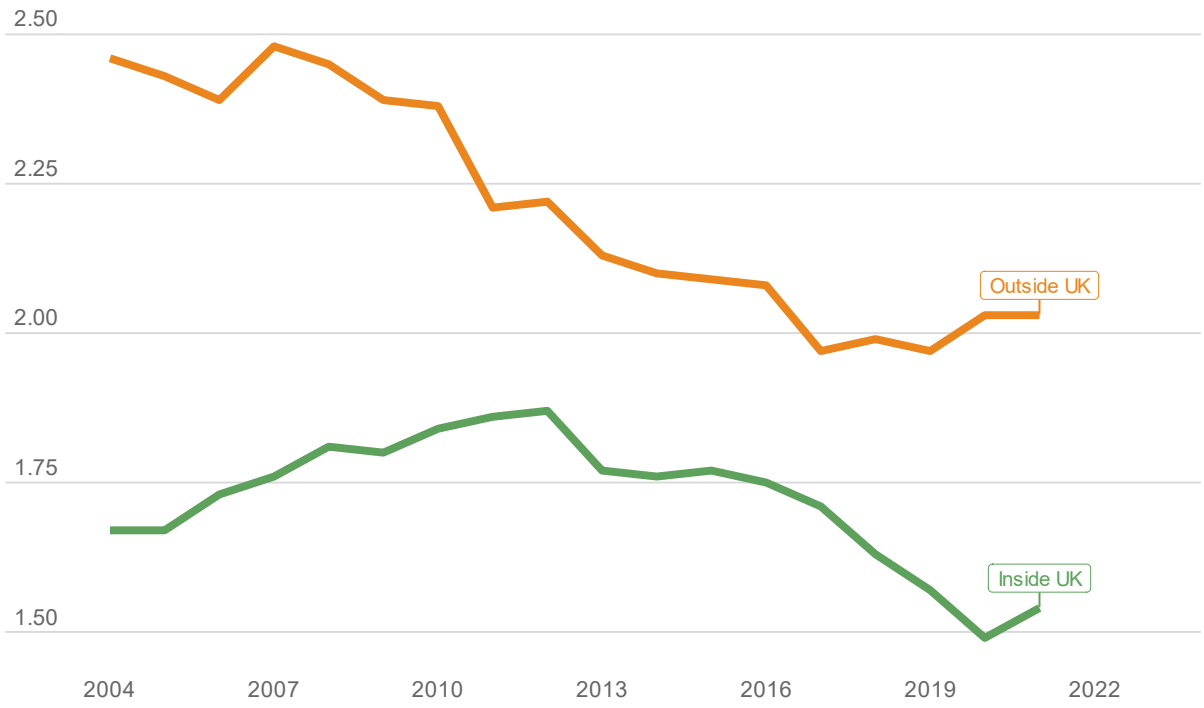
Figure 2.1M shows that, among non-UK-born mothers, there are significant differences in trends depending on the mother's birthplace. This chart suggests the growth in London births between 2002 and 2012 was due to large increases in the number of children born to mothers from Africa, Asia and the EU. Since then, the number of London births by Africa-born mothers has almost halved: from 19,000 in 2012 to just under 11,000 in 2022. Over the same period, births by Asia-born mothers have fallen by a smaller proportion: from 26,000 to 22,000. This group accounts for London's biggest fraction of births by non-UK-born mothers since 2009. There appears to be an uptick births by Asia-born mothers since 2021, concurrent with the post-Brexit introduction of a new immigration scheme.

Annual births by EU-born mothers rose steadily until 2016, when there were nearly 23,000. This upward trend reversed following the Brexit referendum; since then, there has been a steady reduction in net migration from the EU (see Figure 2.3B) so that 2022 births by EU-born mothers (17,000) were back in line with those from more than a decade earlier.

Location of mother's birth – TFR

As discussed above, the number of births is affected by two factors: fertility rates and the number of potential mothers. For comparing fertility rates, it is helpful to use the TFR measure.

Figure 2.1N: TFR by location of mother's birth, UK, 2004-21
Average number of children per woman



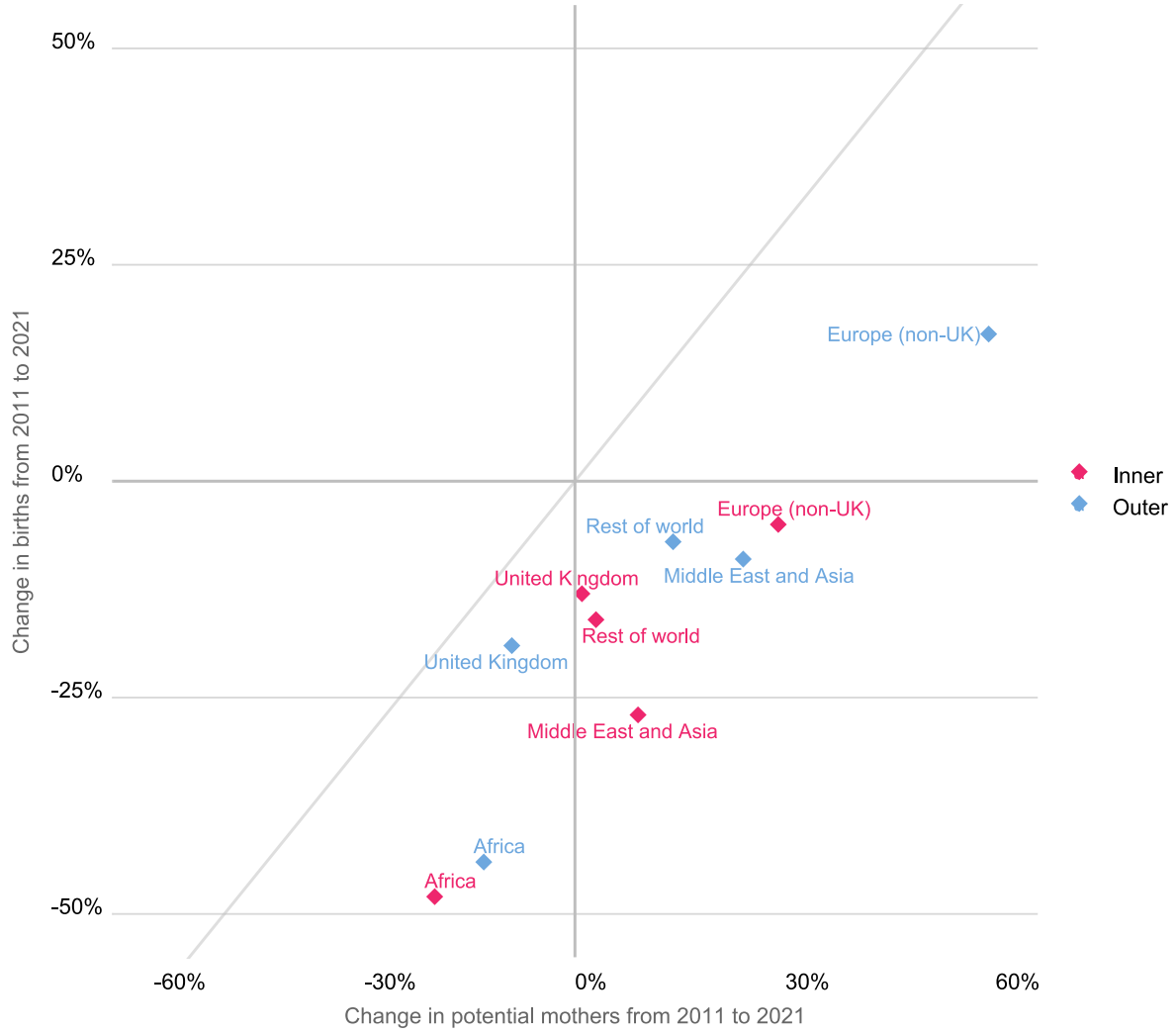
Source: ONS

Figure 2.1N shows estimated TFRs in England and Wales for UK-born and non-UK-born women. For mothers born outside the UK, the TFR fell from 2.48 in 2007 to under 2.0 in 2017. For UK-born mothers, TFR increased from 1.67 in 2004 to a high of 1.87 in 2012, before falling below 1.5 in 2020. TFRs for both groups are currently below the replacement value of 2.1.[16]

Although we cannot calculate specific TFRs in countries or regions outside the UK, we can infer fertility rates by analysing associations between data on births and on the number of potential mothers. For example, if a country sees an increase in births and a decrease in potential mothers, this would indicate an increasing fertility rate for that country. The ONS releases annual data on all births broken down by the mother's country of birth[17] and with census data, we can analyse the birthplace for women aged 16-49. Figure 2.1N examines the association between percentage changes in both variables between the census years 2011 and 2021, for Inner and Outer London.

[16] Replacement fertility is the level of fertility required for the population to replace itself in size, in the long term. The UK value is estimated to be 2.1 (ONS).
[17] ONS, Parents' country of birth, 17 August 2022

Figure 2.10: Scatterplot of percentage change (2011-21) in the number of births, and of potential mothers, in Inner and Outer London



Sources: Census 2021, Census 2011, ONS

The key points revealed by Figure 2.10 are as follows:

- Births (on the y-axis) declined across the period for all countries/ regions of birth in both Inner and Outer London, aside from those born to non-UK European mothers in Outer London. In contrast, the number of potential mothers declined over the period only for a few countries/regions of birth, while most increased.

- Most countries/regions across Inner and Outer London fall within the bottom right-hand quadrant of the figure, revealing increasing numbers of potential mothers but decreasing births, thus clearly indicating declining fertility rates.

- Four points do not fall within this quadrant. Only Europe (non-UK) for Outer London shows both increased potential mothers and increased births. United Kingdom for Outer London and Africa across Inner and Outer London show both declining potential mothers and births. The points are below the diagonal, meaning births declined proportionally more than potential mothers, and so still suggest declining fertility rates.

When the data from Inner and Outer London are combined, the countries/regions with the largest fall in births in London were the UK and Africa, at 9,500 (16 per cent) and 9,000 (46 per cent) respectively. These are also the only two countries/regions with a fall in the number of potential London mothers, at 62,000 (5 per cent) and 35,000 respectively (16 per cent).

In summary, between 2011 and 2021 fertility fell in London for women from all countries/regions of birth studied, with Africa and the UK as the source countries/regions accounting for the greatest part of the decrease in number of births.

2.2 Domestic migration

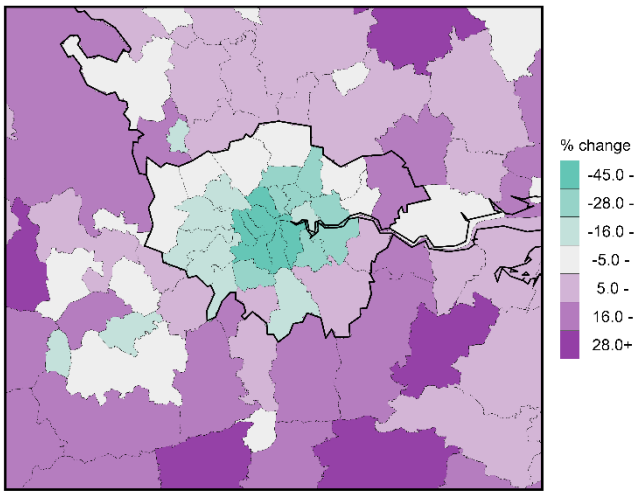
Key findings about domestic migration:

- After the 2008 financial crisis, annual net outflow from London to the rest of the UK increased. By 2020, the net outflow had stabilised; it then increased temporarily due to the COVID-19 pandemic (Figure 2.2B).
- Over the past two decades, there has been a consistent positive net inflow to London for those aged 18-24 (Figure 2.2C).
- The net flow from London for those aged 25-44 (the group most likely to be parents of young children) has been consistently negative since 2000. After a temporary reduction following the 2008 financial crash, this outflow has consistently increased, with an apparent peak in 2021 (coinciding with the aftermath of the COVID-19 pandemic) (Figure 2.2C).
- The net flow of children aged 0-10 from Outer London to the rest of the UK has more than doubled since 2010 (Figure 2.2D).
- Regarding age of child migration, the peak values of net outflow from London occur at 0-5 (Figure 2.2E).

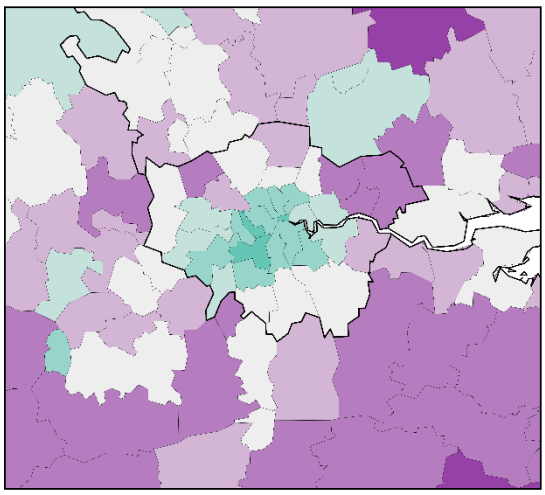
We can explore the impact of migration (both international and domestic) on the population of young children by comparing census data: the number of births in one census, and the number of 10-year-olds in the next census. This assumes that change in the cohort size is mainly due to population movement and not deaths.

Figure 2.2A: Cohort change in London, based on children aged zero in one census and children aged 10 in the next census

Change 2011-21



Change 2001-11



Source: ONS

Figure 2.2A shows two maps. The left-hand map shows changes, by local authority, in the cohort of children born in the year up to the 2011 census, and those aged 10 in the 2021 census.

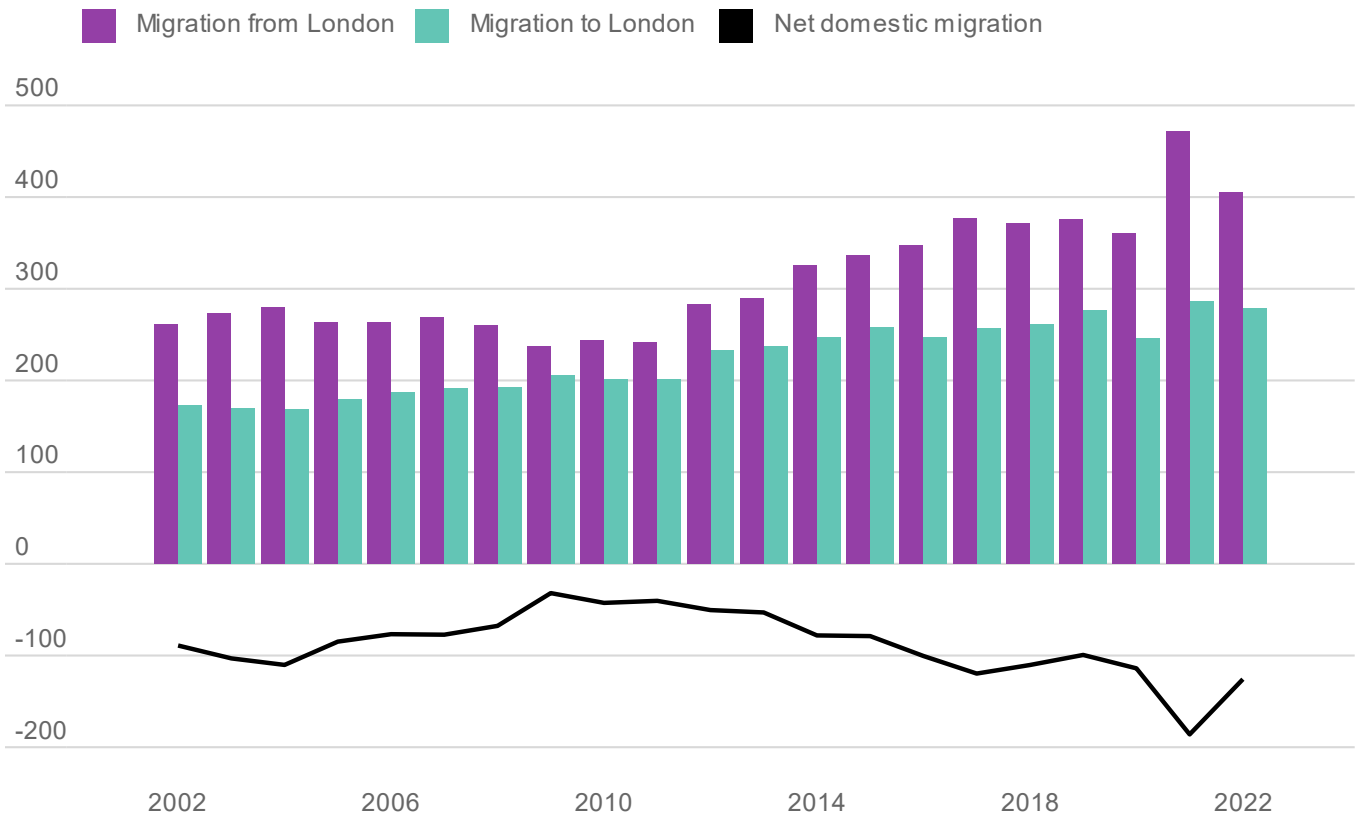
The right-hand map shows changes, by local authority, in the cohort of children born in the year up to the 2001 census, and those aged 10 in the 2011 census. Negative values – a reduction between these census figures – indicate an overall net outflow of children from the area.

Both maps show a contrast between Inner London and the surrounding areas. However, the left map (covering 2011-21) shows a starker contrast than the right (2001-11). Both maps show large decreases in Inner London, compared to the increases in some Outer London boroughs and nearly all the surrounding local authorities. This demonstrates the importance of migration in explaining the decline in primary-school-age children in Inner London.

Historically, there has been a pattern for young adults to move to London for education and work; and, later, to move outward from central London to start families, or with young children. For this reason, London has been dubbed a "demographic conveyor belt".[18] We will try to infer, from available data, whether or how this behaviour has recently changed. This may help explain the decline in numbers of primary-school-age children.

[18] Financial Times, London's parasitical housing market is driving away young families, 21 April 2023

Figure 2.2B: Domestic inflows, outflows and net migration, London, 2002-22
Thousands of migrants per year



Source: ONS

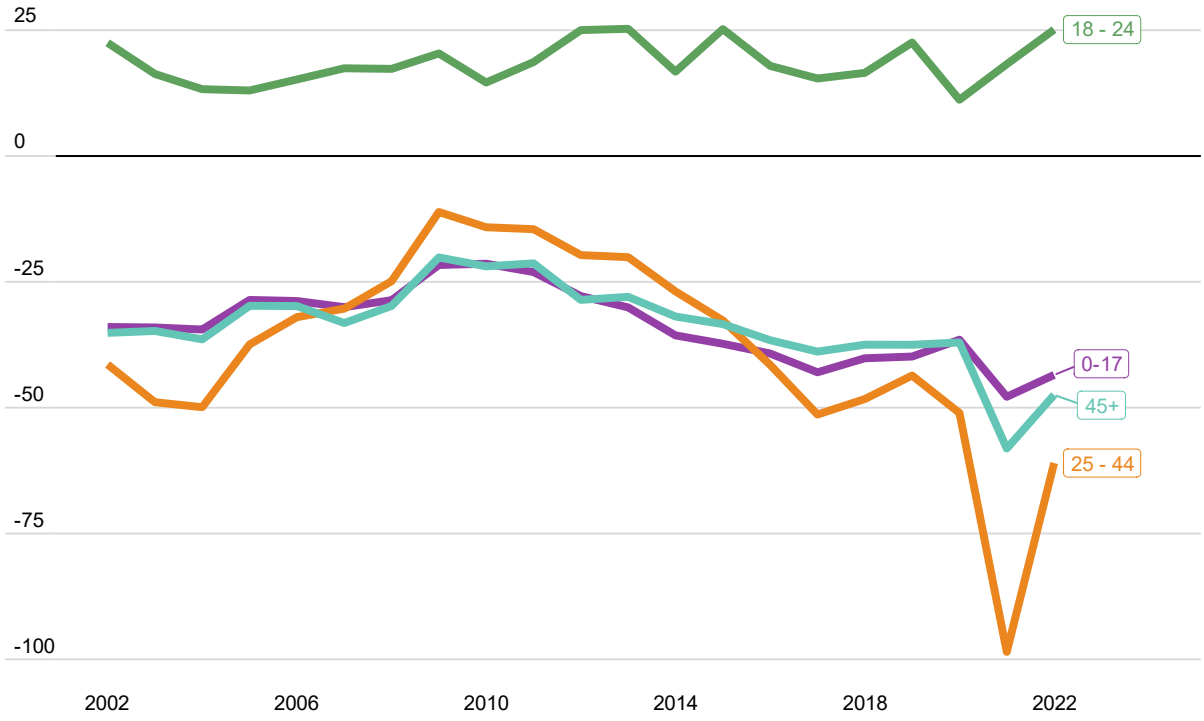
Figure 2.2B shows the inflows to London (turquoise); outflows (purple); and the resultant net outflow from London (black line) from 2002 to 2022. The net negative outflow declined in the years leading up to the financial crisis.[19] The net outflow rose in around 2009, mainly due to increased outward flow from London. The chart shows that the COVID-19 pandemic temporarily decreased both inflow and outflow. Outflow increased considerably in 2021, leading to a sudden increase in net outflow (to 186,000). By 2022 the value had returned to around 126,000.[20]

We can examine net flows by age group to see if the net flow of young adults has changed over the last two decades.

[19] This finding is based on data recorded as domestic moves, and is not attributable to international migration.
[20] Net outflows between 2016 and 2019 were between 100,000 and 120,000.

Figure 2.2C: London's net domestic migration flows by age group, from year ending June 2002 to year ending June 2022

Annual flow in thousands



Source: ONS

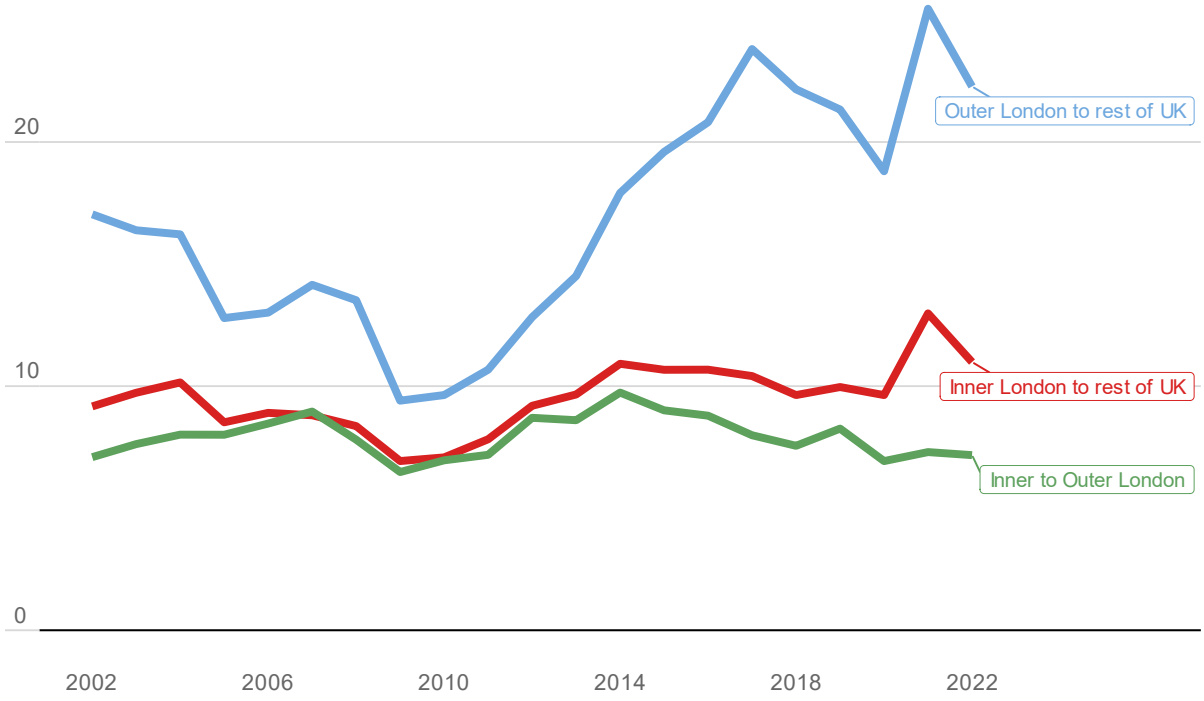
Figure 2.2C shows the domestic migration flows of four age groups: 0-17; 18-24; 25-44; and 45 and over. The 18-24 group differs from the others, with its positive net flow of population into London. This likely relates to education and finding work.

Those aged 25-44 show the greatest variability in net flow; the most important push factors for this group are likely to be the high cost of housing in London, and limited availability of larger housing for families. One pull factor may be the desire for a greener environment outside London[21]; see Section 4.2 for discussion of influencing factors. Net outflow for this group increased after the 2008 financial crash. There was a sudden temporary increase of net outflow in 2021, due to the COVID-19 pandemic, while for the year to mid-2022 outflow returned to a more moderate value consistent with the pre-pandemic trend for a steady increase in net outflow for this age group. The curves for net flow among children, and adults over 45, are similar; but the range of variation is less.

We can explore patterns of domestic migration in more detail by distinguishing the two zones of London, and analysing flows between them.

[21] See, for example: BBC, Renters leave London at highest rate in decade, research shows, 13 February 2023; and GLA, Half of Londoners wanting to move home want out of London, 21 August 2020. Respondents to a GLA survey during the COVID-19 pandemic most often cited access to private outside space, and proximity to public green space, as factors that had become more important in thinking about where to live.

Figure 2.2D: London's net domestic migration flows by flow path, among children aged 0-10, from year ending June 2002 to year ending June 2022
Annual flow in thousands



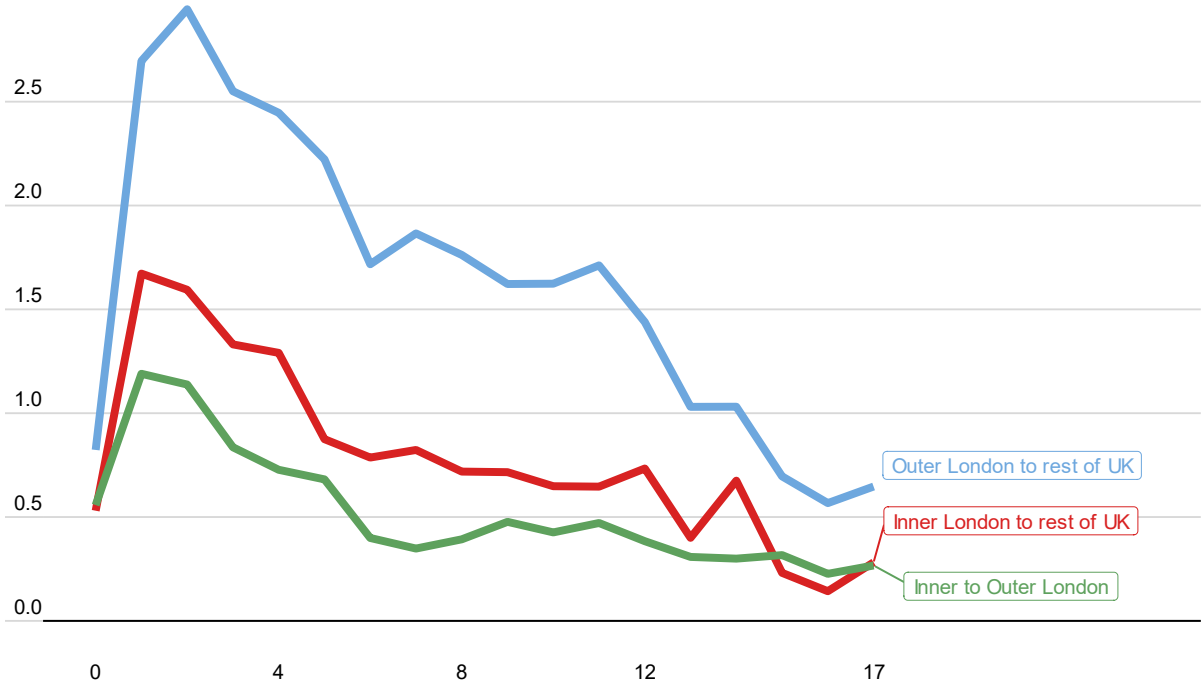
Source: ONS

Figure 2.2D shows that the net flow of children aged 0-10 from Inner London to the rest of the UK has remained stable over the past two decades (at around 10,000 per year), as did net flow from Inner to Outer London (at around 7,000 per year). In contrast, the net flow from Outer London to the rest of the UK increased from about 10,000 in the year 2010 to more than 20,000 in 2016, and has since fluctuated around this higher level. Destinations are mainly other large cities in the UK, or close to London in the commuter belt.[22] Some of this apparent movement could be partly accounted for by "expansion" of London's built-up area beyond the Outer London borough boundaries.

[22] See: GLA, Domestic Migration, 2023; and The Guardian, Tired of London: thousands flee capital for a quieter life, 29 June 2019).

Figure 2.2E: London's net domestic migration flows by age of children, in the year ending June 2022

Annual flow in thousands



Source: ONS

Figure 2.2E illustrates how net migration of under-18s varied with their age during the year ending June 2022. The chart reveals the maximum flows for all three flow paths occurred at ages 0-5.

In summary, our analysis reveals that domestic migration is key in understanding change patterns in the population of primary-school-age children. Some Inner London boroughs have lost up to 45 per cent of their children, between birth and age 10, over a decade. Since the 2008 financial crisis, annual net migration away from London rose, due to increased outflows of children and adults over 25. For children, peak outflows occur at ages 0-5. The drop in flows from age five reflects a reduced tendency for families to relocate once children start attending primary school. A further drop in flows from age 12 aligns with children starting at a secondary school.

2.3 International migration

Key findings about international migration:

- Patterns of international migration to and from the UK have changed since 2016, and especially since 2021, mainly related to the UK's exit from the EU.
- Recent data indicates a major increase in net migration to London in the year ending mid-2022 (Figure 2.3A).
- Net positive migration of EU nationals has greatly decreased since 2016 (Figure 2.3B).
- The within-London distribution of the recent large net inflow is very uneven (Figure 2.3C).
- In Inner London, the number of children aged 0-15 decreased between 2011 and 2021 for all non-UK country-of-birth groups – except those born in Europe.[23] The decrease in the Africa-born group was even greater than the decrease in the UK-born group (Figure 2.3D).
- In Outer London, the only group of children that decreased in size between 2011 and 2021 was the Africa-born group (Figure 2.3D).

International immigration plays a role in the size of London's child population. It does so both directly (via young children arriving with their parents) and indirectly (via births to immigrants), as shown in our causal model in Figure 1.2B. International migration also drives domestic migration: young adults from overseas typically move to London and then, as they age and have families move outwards. (This is described in the previous section.) Below we describe aggregated migration statistics, and assume that trends identified apply to children.

ONS long-term migration estimates, and mid-year estimates

Figure 2.3A plots estimates of UK international migration, released in November 2023. These estimates indicate a reduction in net positive migration since 2016; then a sudden increase in 2021. (Note that the COVID-19 pandemic disrupted the collection of migration statistics, so there is considerable uncertainty in the data from this time.)[24] Changes in international migration patterns can be attributed to: the UK's exit from the EU (the new immigration system means loss of freedom of movement for EU nationals, and relaxation of rules for non-EU citizens); and easing of travel restrictions following the COVID-19 pandemic and humanitarian schemes for Ukrainians and Hong Kong British nationals overseas (BNOs). The main contributors to the recent increase in net migration are international students; social care workers and their immediate family members (dependants); humanitarian visa schemes; and people claiming asylum.[25]

The year ending June 2022 saw the highest recorded number of issued residence visas. Most were for study, followed by work. Most of the substantial increase in work visas came from an 80 per cent rise in visas

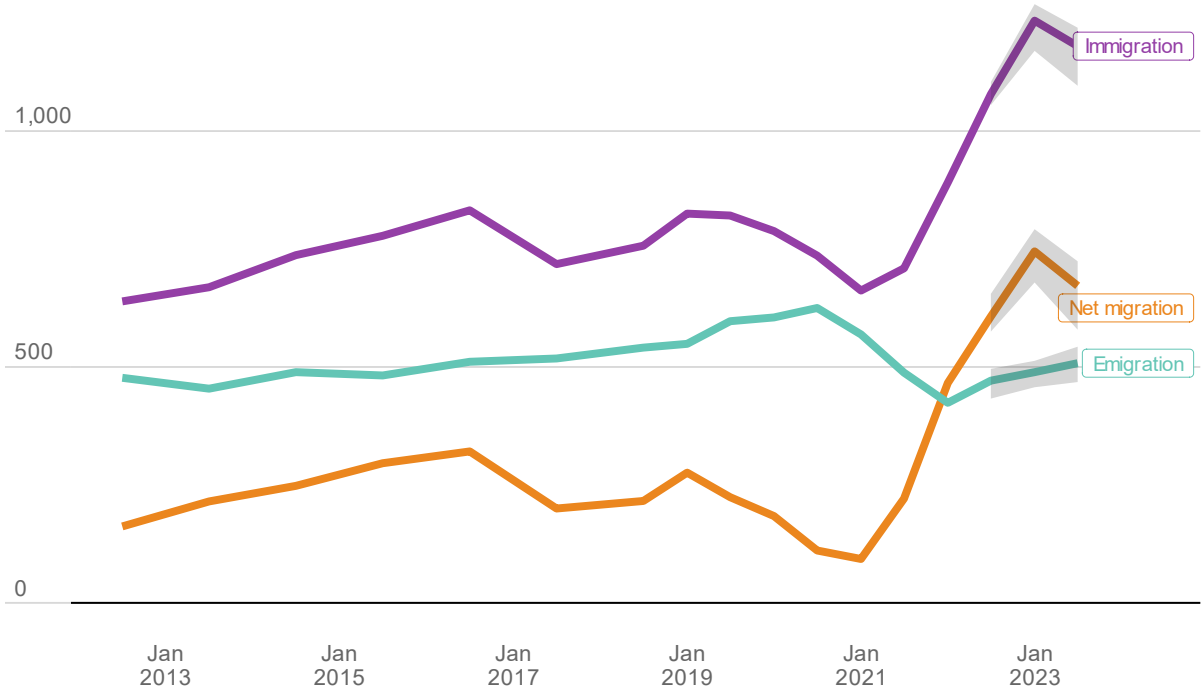
[23] Here "Europe" refers to Europe excluding Ireland

[24] Also, the way UK migration statistics are compiled is changing, from being survey-based before the COVID-19 pandemic, to being based on administrative data. The latest estimates use a new method that has been backdated to 2018, so that estimates from before and after this date are not fully comparable.

[25] McKinney CJ and Gower, M., Changes to legal migration rules for family and work visas in 2024, House of Commons Library, 14 March 2024

issued to non-EU nationals.[26] For the year ending June 2022, the top five non-EU nationalities for migration flows into the UK were Indian (253,000); Nigerian (141,000); Chinese (89,000); Pakistani (55,000); and Ukrainian (35,000).[27]

Figure 2.3A: International migration, UK, mid-2012 estimates to mid-2023 (provisional)
Annual flow in thousands

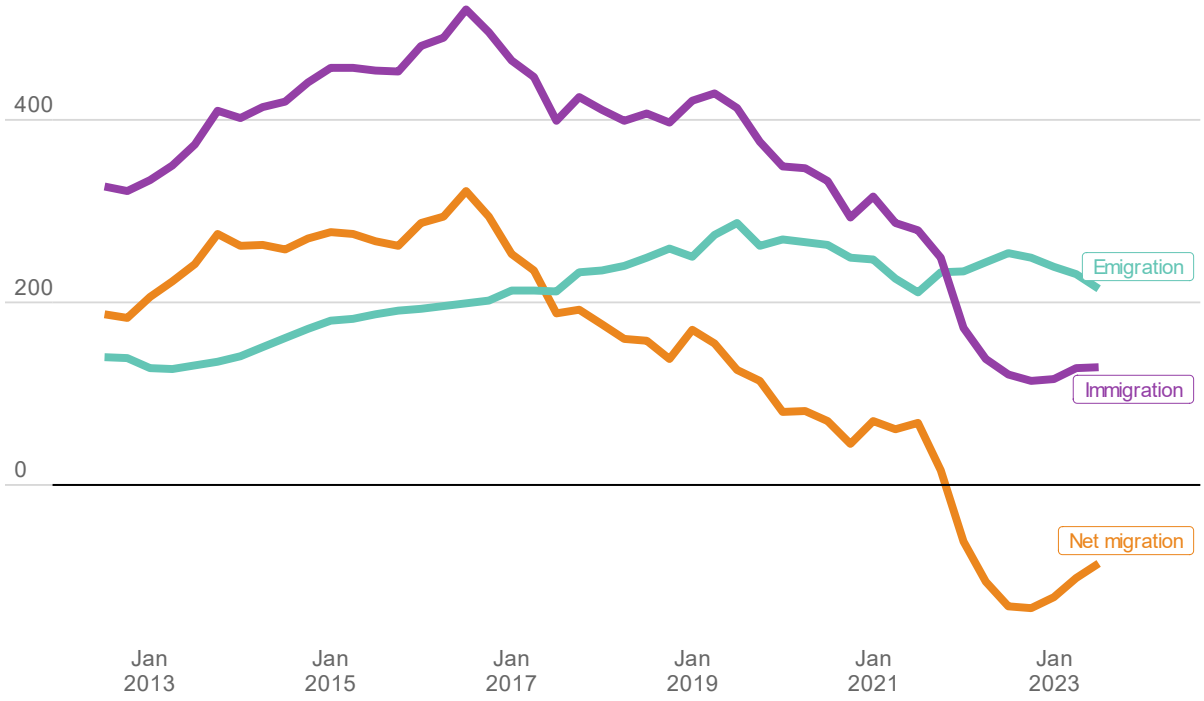


Source: ONS; Shading shows 95 per cent confidence intervals.

Figure 2.3B, charting migration between EU countries and the UK, shows reduced in-migration from the EU, and the return (from January 2016 onwards) of many Europeans to their countries. The chart shows, that since the end of 2021, EU net migration was negative, meaning more EU nationals left the UK than arrived. From around 2013, EU nationals have been the largest component of total UK immigration, but in 2021, non-EU nationals outnumbered those from the EU.

[26] Sturge, G., How has immigration changed under the UK's new 'points based' system?, House of Commons Library, 27 September 2022
[27] ONS, Long-term international migration, provisional: year ending June 2023, 23 November 2023

Figure 2.3B: International migration of EU nationals, UK, estimates for mid-2012 to mid-2023 (provisional)
Annual flow in thousands



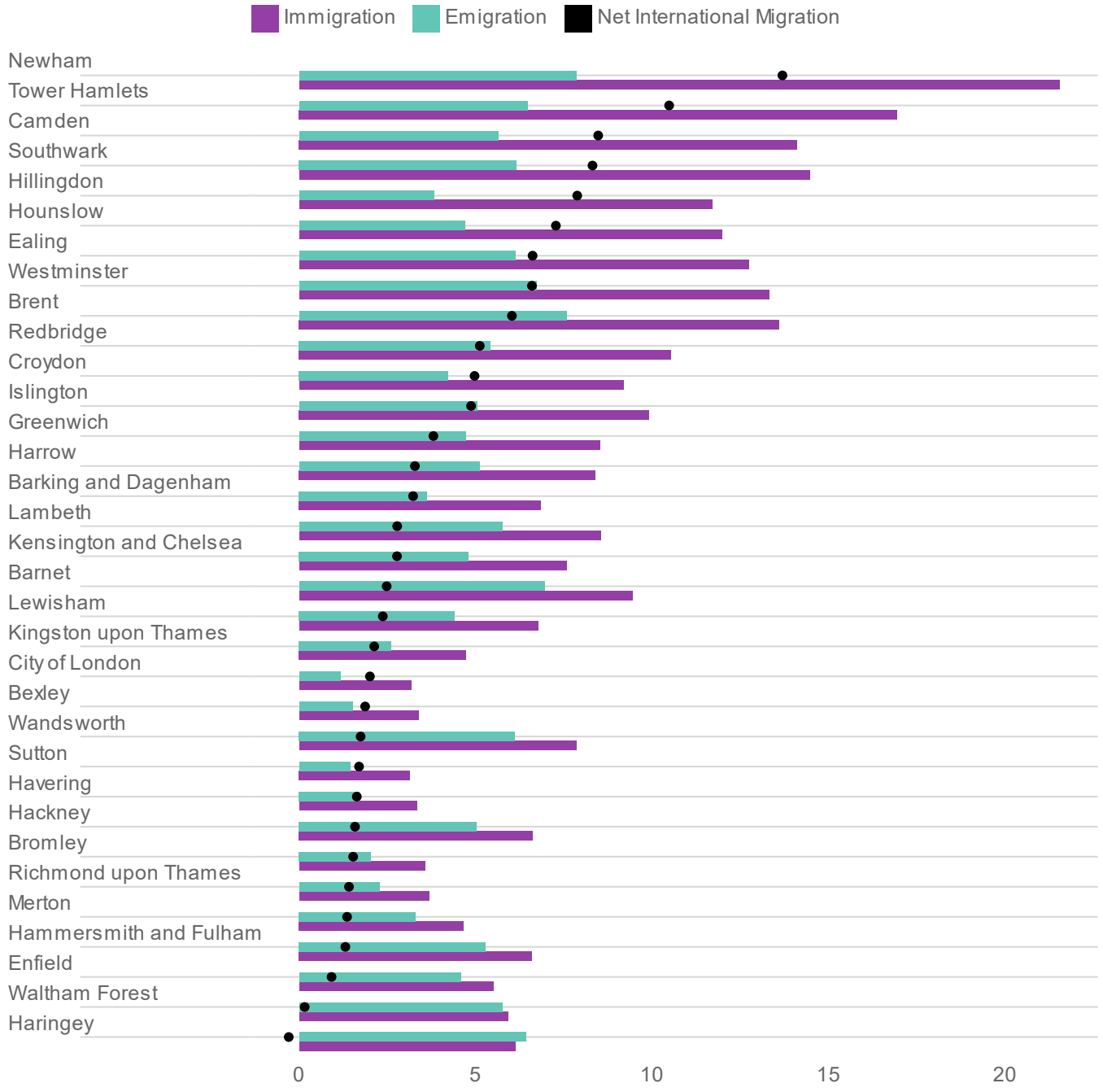
Source: ONS

While the data above relates to the whole of the UK, around one-third of the UK's foreign-born population live in London;[28] international migration trends in the region tend to track with those for the whole country. The 2022 mid-year estimates (recently released by the ONS) do indeed show a considerable increase in annual net international migration for London. It was assessed at 130,000 – a considerable increase from 78,000 in 2021, and greater than the previous peak value, in 2015, of 112,000.

This recent large net inflow is not uniformly distributed within London, as Figure 2.3C shows. This chart shows that international in-migration approximately balances out-migration in three boroughs only (all in North London): Haringey, Waltham Forest and Enfield. Figures for each are around 6,000. In contrast, international in-migration considerably outweighs out-migration in several Inner London boroughs – especially Newham and Tower Hamlets. For Newham, international in-migration was nearly 22,000, and out-migration was close to 9,000. So net international migration was estimated at nearly 14,000.

[28] See: Figure 4, the Migration Observatory, Migrants in the UK: An Overview, 2 August 2022

Figure 2.3C: Annual international migration flows by London borough, estimates for the year ending June 2022
Thousands of migrants



Source: ONS

These 2022 mid-year estimates are pertinent, as they show a recent steep increase in net international migration. This could have a significant impact on the numbers of primary school-age children in certain boroughs. The high level of net migration makes it clear that London continues to attract international migrants via its resilient economy (compared to other parts of the UK) and various amenities. It is also clear that reduced immigration from the EU since Brexit has been more than replaced by increased immigration from outside the EU.

Census data

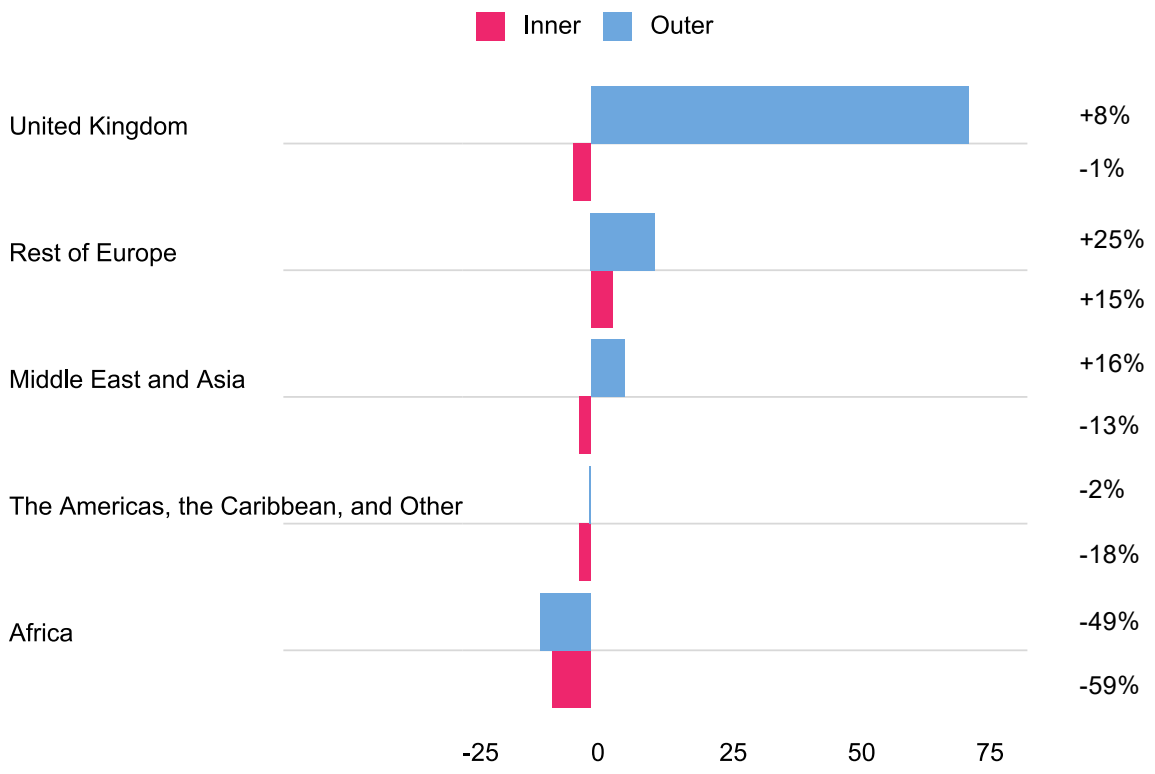
The census provides valuable additional information about the net impacts of international migration, as it collects data on usual residents' country of birth. Changes concerning country of birth between the 2011 and 2021 censuses indicate the nature of international migration from those specific countries/regions of birth across the period. As this analysis is focused on children, we will only cover those aged 0-15.

Figure 2.3D shows that, for London as a whole, the largest population increase by far is among those born in the UK: 70,000 from 2011 to 2021. It is important to note that many of these children will have parents who are born outside of the UK, and it is not possible to differentiate between these children and children with parents born in the UK.[29]

The next largest increase is children born in the rest of Europe (excluding Ireland): up 17,000 from Census 2011. The number born in the Middle East and Asia rose by only 4,000; and those born in the Americas and the Caribbean decreased by 2,000. The birth region showing the largest decrease by far was Africa, with 17,000 fewer children in London in 2021 than in 2011. The proportional changes in group size are noted to the right of the chart, showing that the Africa-born group declined by nearly 60 per cent in Inner London.

Figure 2.3D: Country of birth of all usual residents aged 0-15, change from Census 2011 to Census 2021

Thousands



Percentage changes from 2011 value are noted on the right; Sources: Census 2021, Census 2011

[29] For example, if a couple arrive in London from the Middle East or Asia and have a child the following year, the child's country of birth is the UK without any indication in the census that their parents were not born in the UK.

Figure 2.3D shows that Outer London accounted for most of the increase in UK-born children; there was with a small decrease in Inner London. The number of those born in the Americas/the Caribbean fell, and most of this decrease took place in Inner London. The number born in the Middle East/Asia rose overall across London, though there was a decrease in Inner London. We can see how, across most national groups, the decrease in numbers of children is greater in Inner than Outer London.

Most striking is the change in the number of Africa-born children. This dropped in both Inner and Outer London; in absolute numbers, it fell more in Outer London.

Looking at the decreases by country/region of birth across Inner London, the decrease in Africa-born children is the largest by some distance, at 7,500; UK-born children, which saw the next-biggest decrease, fell by 3,400.

This has important implications with respect to the declining number of children in Inner London. Our analysis reveals that Africa-born children make up the largest group accounting for this change (we discuss possible reasons for this in Section 4.1). We infer that declining international immigration has been a key factor in declining primary school intakes in Inner London.

The census data included in this analysis predates the steep increase in positive net international immigration (as revealed in mid-year 2022 estimates, and described in the first part of this section). It is challenging to predict how trends will evolve, given migration-related policies, past, present and future. One firm conclusion, with respect to the number of primary-school-age children in London, is that international migration has been, and will remain, a key influence.

3 Total population change

In this section we will examine trends in the resident population of London, with respect to size, numbers of households with dependent children[30], age structure and characteristics.

3.1 Population and household change

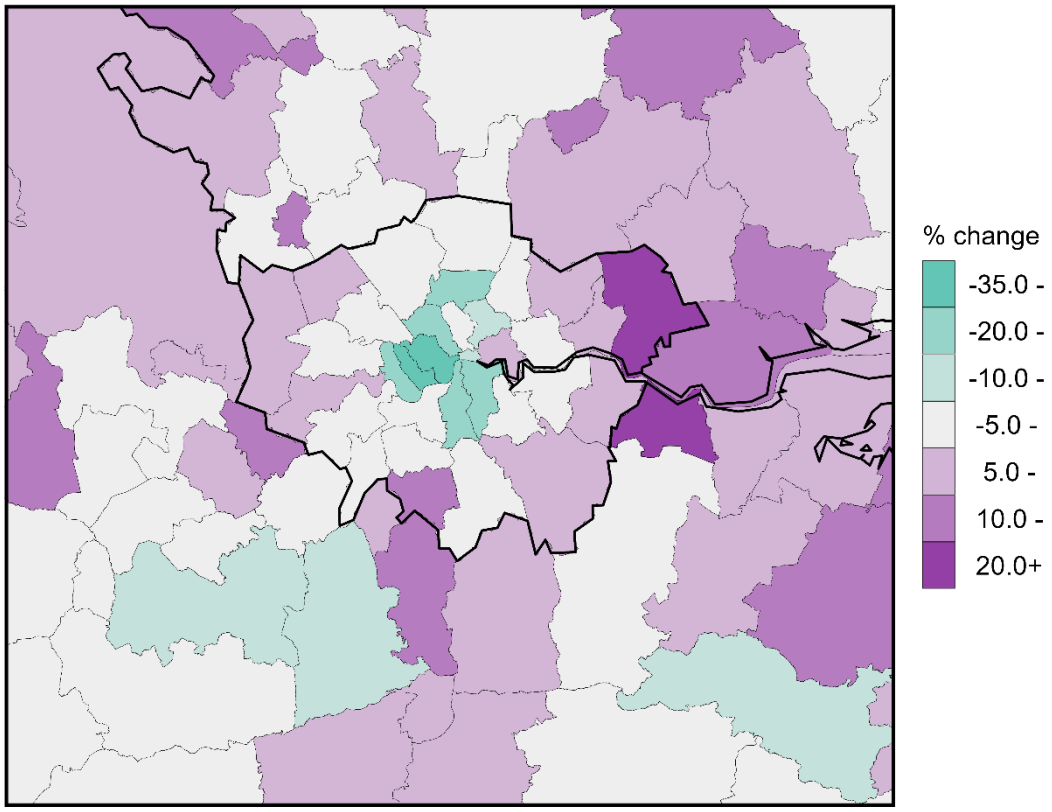
Key findings about change in London's population and households:

- In the last decade, most Inner London boroughs had large decreases in the number of young children. Most Outer London boroughs had stable or increased numbers (Figure 3.1A).
- Households with at least one dependent child became rarer between 2011 and 2021 in Inner London, while their number increased in most Outer London boroughs (Figure 3.1B).

As context for our exploration of population change, we can examine the change in the number of children aged 0-10 between the 2011 and 2021 censuses. Figure 3.1A shows how the size of this group has decreased in most Inner London boroughs, while in several outer London boroughs it has increased. The degree of change varies between boroughs, from -25 per cent in Westminster, and Kensington and Chelsea, to +23 per cent in Havering. This data indicates that migration is an important factor, alongside births, in explaining the decline in primary-school-age children in Inner London.

[30] Unless specified otherwise, a household with dependent children is derived by combining the Census household composition categories of married couple households with dependent children, cohabiting couple households with dependent children, lone parent households with dependent children, and other households with dependent children.

Figure 3.1A: Change in population aged 0-10 between 2011 and 2021 censuses



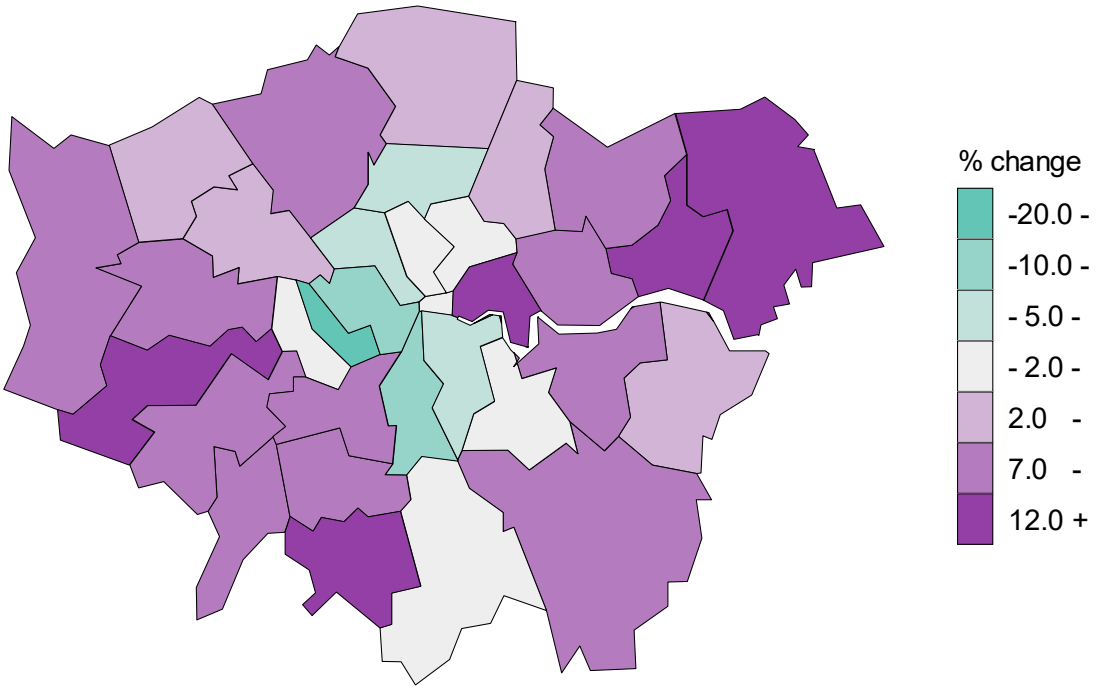
Source: ONS

It is also useful to look at change at household level using census data. Figure 3.1B maps the change, over the decade to 2021, in the number of households with any dependent children.[31] This shows broadly similar patterns to the maps showing the changes in child-cohort sizes (Figure 2.2A) and the number of young children (Figure 3.1A). Figure 3.1B shows that many Outer London boroughs had increased numbers of households with dependent children. The biggest rises were seen in Hounslow (an increase of 4,900 such households, translating to a 15 per cent increase) and Barking and Dagenham (increase of 4,600 households, a 16 per cent increase).

Conversely, most Inner London boroughs saw falls in households with dependent children. Kensington and Chelsea, Westminster, and Lambeth saw the steepest falls – all over 8 per cent. Tower Hamlets countered this pattern with an increase of 5,500 households – the greatest absolute, and the greatest proportional increase at 20 per cent. This is consistent with Figure 3.1A, where it was the only London borough with an increased population of children aged 0-10. Figure 3.1C shows the resultant situation in 2021.

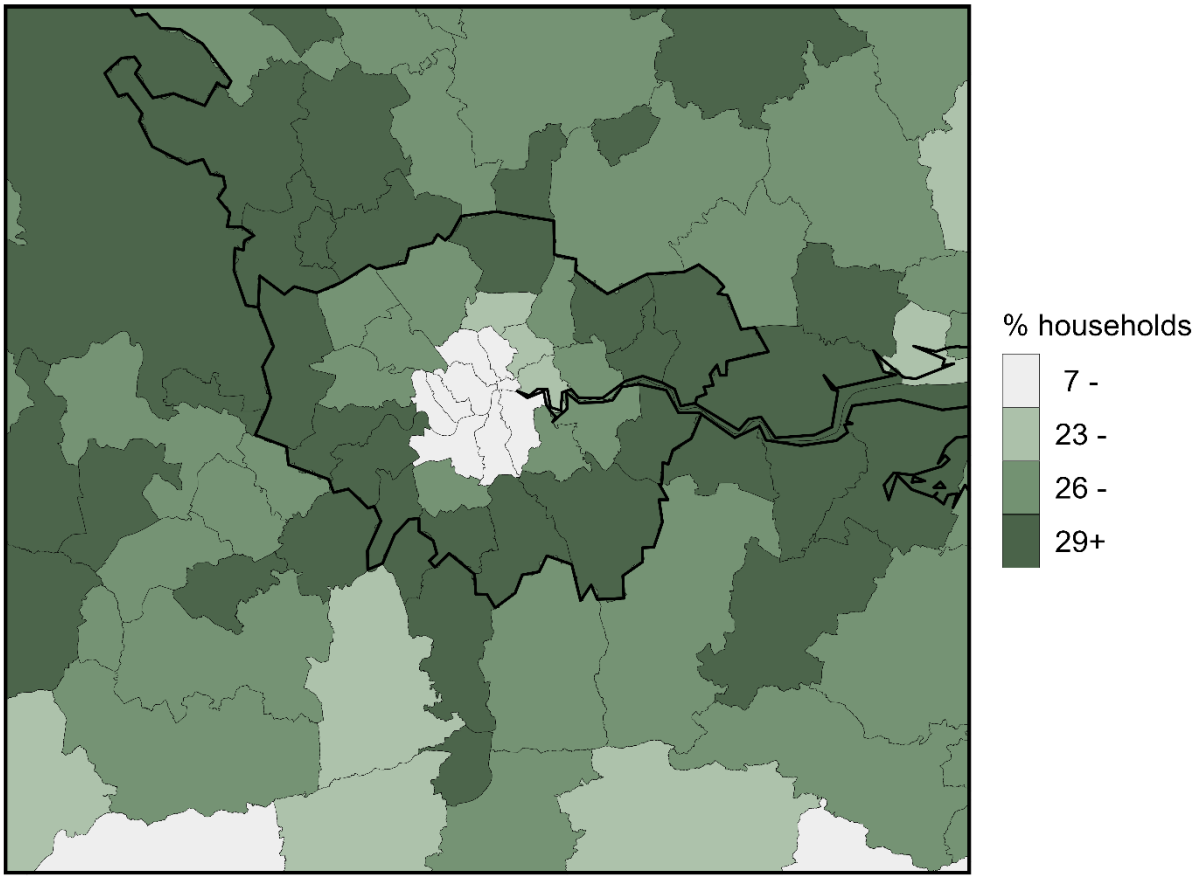
[31] A dependent child is defined as a child aged 0-15; or a child aged 16-18 who is in full-time education.

Figure 3.1B: Change in number of households with at least one dependent child between 2011 and 2021 censuses



Sources: Census 2021, Census 2011

Figure 3.1C: Proportion of couple and lone-parent households with dependent children, 2021



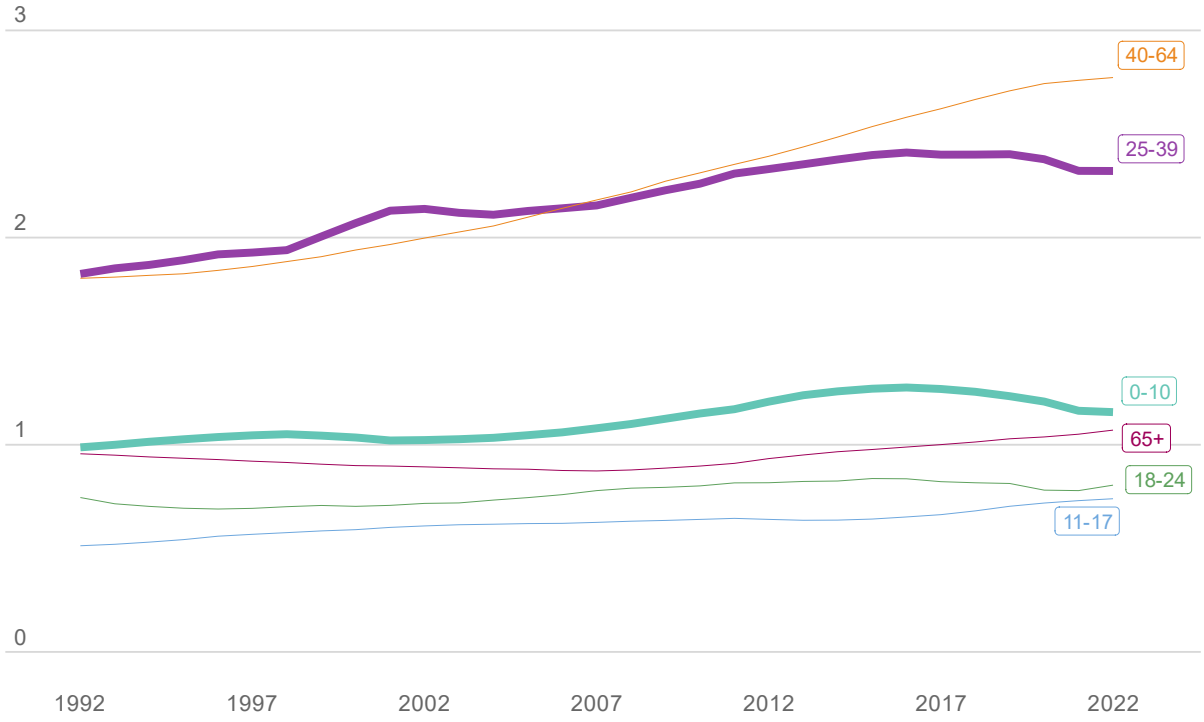
Source: ONS

3.2 Age structure change

Key findings about the change in age structure of London's population:

- The population aged 40-64 is increasing (Figure 3.2A).
- The size of age groups 0-10, and 25-39, increased until around 2016 (less so in Inner than Outer London); and since have had a decreasing trend (Figure 3.2B).
- Between 2011 and 2021, the number of households increased for all age groups of the youngest dependent child, except 0-4. This group of households decreased by 14 per cent in Inner London and 4 per cent in Outer London (Figure 3.2C)

Figure 3.2A Population of London by age group, 1993 – 2022
Millions

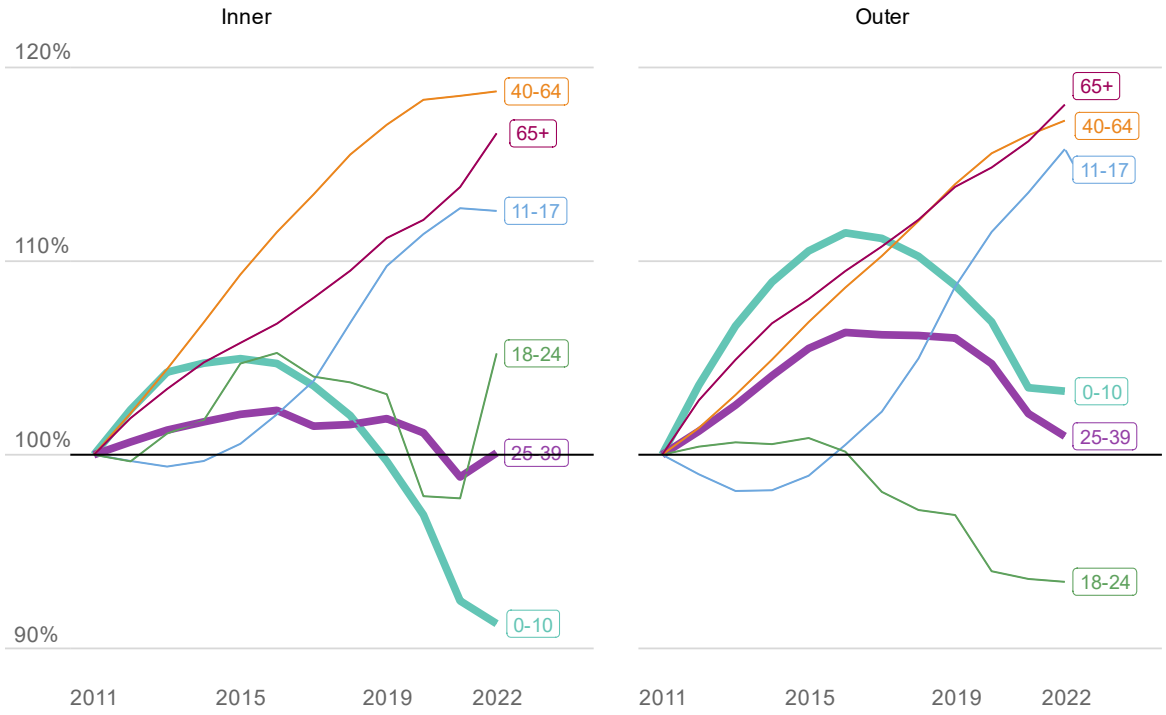


Source: ONS

Figure 3.2A shows London's population growth over the last three decades has mostly come from the increase in adults aged 25-64. Over the last decade, the trends for the younger and older parts of this group have diverged: the 40-64 group continues to grow, rapidly, while the 25-39 group plateaued.

Considering just the last decade, Figure 3.2B charts proportional growth in each of the age groups since 2011 for Inner and Outer London separately. It shows that the numbers aged 0-10 and 25-39 peaked around 2016 and have since tended to decrease. Inner London had slower growth and a greater decrease than Outer London for those aged 0-10. Of interest is the relative stability of the age group 25-39 in Inner London despite the decrease in age group 0-10 which indicates young adults living in Inner London are having fewer children than was typical previously.

Figure 3.2B: Indexed population of London by zone and age group, 2011-22
Indexed: 2011 = 100%



Source: ONS

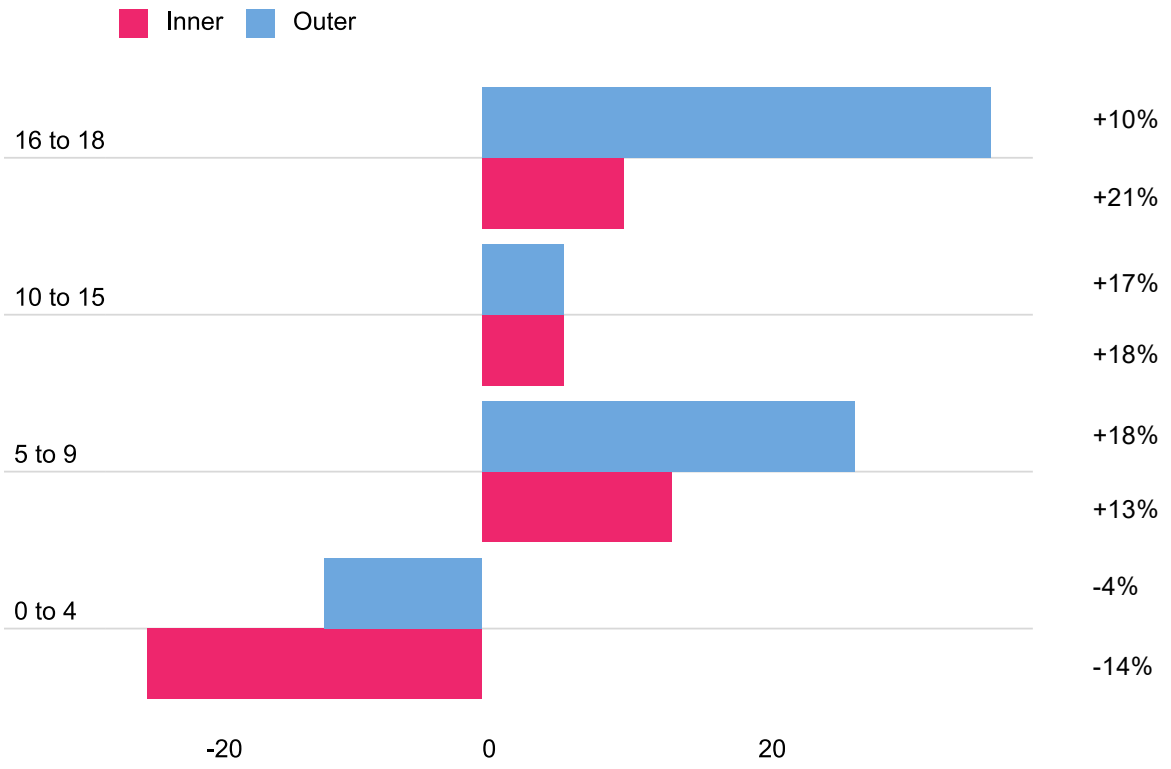
These patterns, (which indicate falling numbers of young families), can be largely attributed to the decrease in number of births (Figure 2.1A) and the increase in domestic migration flows (Figures 2.2C and D).

As well as looking at the change in age structure for usual residents across London, we can analyse the change in age structure for households. Using census data, we can break down the number of households with dependent children by the age of the youngest dependent child in the household.[32]

We start by noting that that of all couple/lone-parent households in Inner London, the proportion with dependent child(ren) has dropped from 56 to 51 per cent between the 2011 and 2021 censuses. In Outer London, the proportion was static at 58 per cent. Figure 3.2C shows the change between these censuses, disaggregated by age of youngest dependent child. It shows an increase, across all categories, in households with dependent children – except for households whose youngest dependent child is aged 0-4, which have decreased. The proportional intercensal changes in group size are noted to the right of the chart. This shows that both the absolute and proportional falls were greater in Inner London than in Outer London – Inner London saw a fall from 175,000 to 151,000 (14 per cent), and Outer London a fall from 285,000 to 274,000 (4 per cent).

[32] A constraint on this data is that only the age of the youngest dependent child (YDC) is reported. Thus, a household with a YDC aged 0-4 could have no other dependent children; or could have other dependent children aged up to 18. However, we consider that the variable still provides useful information and can be taken as a proxy of the type of household.
We interpret a household with YDC aged 0-4 as a "new" family, likely to have younger parents; and a household with YDC aged 16-18 as an "older" family with nearly adult children and older parents.

Figure 3.2C: Change in number of London households, by age of youngest dependent child, between 2011 and 2021 censuses
Thousands



Percentage changes from 2011 value are noted on the right; Sources: Census 2021, Census 2011

Analysing components of population-change, as described in earlier sections, can help explain this finding. Births have declined in recent years across London – particularly in Inner London – which would lead to fewer younger families. The domestic migration data showed a spike in net outflow of children aged 0-4 – again, the trend is particularly pronounced for Inner London. Domestic migration will also have had an indirect effect, via couples leaving London before having children (this will be indistinguishable in the data, as it is not possible to differentiate those who left London to have children from those who left for other reasons). And finally, we saw that patterns of international migration will have contributed to fewer children in London up to 2021, although there is no data allowing separate analysis of children aged 0-4.

The decrease in the proportion of households with dependent child(ren) in Inner London, and the decrease in proportion with youngest dependent child aged 0-4 in both Inner and Outer London, suggest that the drivers affecting the number of children in London are influencing younger, newer families more than families that have been settled in London for some time.

3.3 Changes in household characteristics

Key findings about intercensal changes in households' characteristics in London (analysis only includes households with dependent children):

- Ethnicity – There have been large increases in the number of households with a household reference person (HRP) of Asian ethnicity; and decreases in the number with an HRP of Black and White ethnicities (except for the Black African group in Outer London) (Figure 3.3A).
- Housing tenure – There has been a decrease in households owning their houses; and an increase in households in private rented accommodation (Figure 3.3B).
- Socio-economic status – There have been increases in both the highest/richest groups, and falls in others (Figure 3.3C).

In this section, we will briefly summarise findings from analysis of data from the 2011 and 2021 censuses. We have chosen variables for children and families, for which we scrutinise changes over time. We attempt to associate these with the changes observed in births, domestic migration and international migration, as described in Section 2. The analysis aims to explore whether the decreasing number of primary-school-age children in London might be associated with any specific group(s). This would shed further light on what might be driving the trends identified. We examine data on ethnic group, housing tenure, and National Statistics Socio-economic classification (NS-SEC).[33]

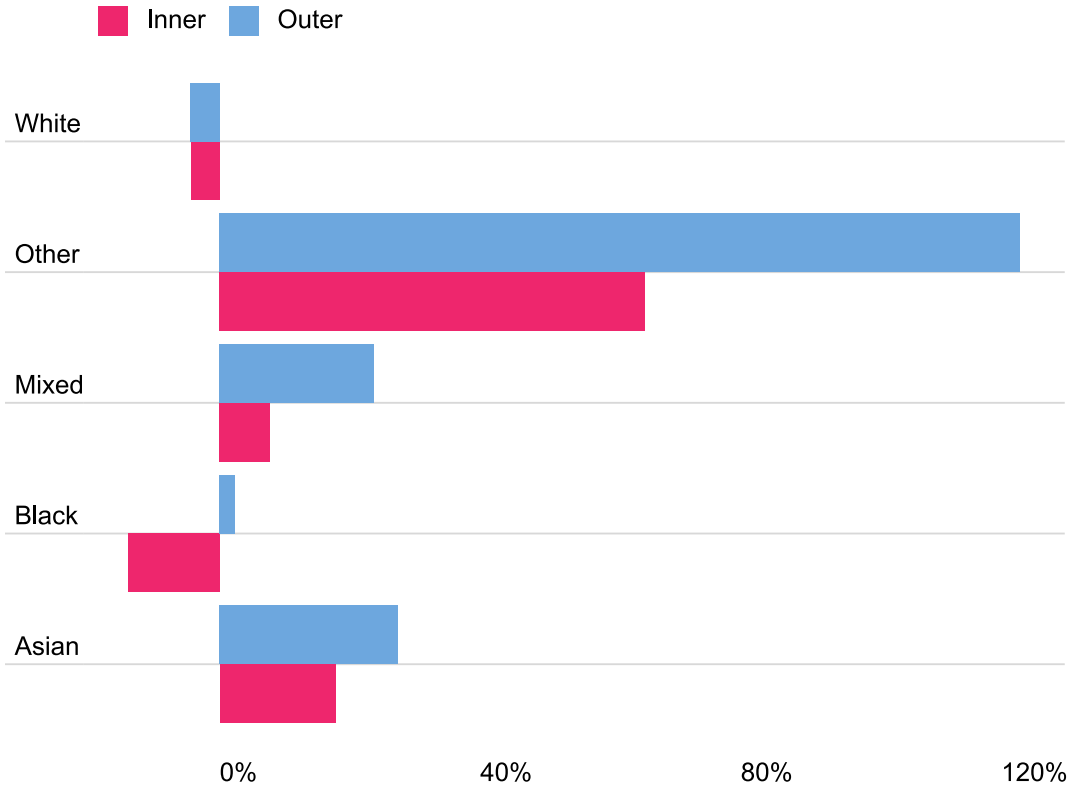
Ethnicity data from censuses

We examine ethnicity data for two reasons. First, because our analysis of births and fertility indicated variation over time by countries/regions of birth, shown in Figures 2.1M and O (fertility rates are not available by ethnicity). Second, because there is evidence of large differences in wealth in the UK by ethnicity of the household head.[34] Thus, data on ethnicity can be expected to provide findings that supplement those relating to other characteristics.

To study ethnic groups, we look at changes in the ethnic group of the HRP[35] for households with dependent children. Across London as a whole, there were substantial increases in households with dependent children and an HRP from the Asian or 'Other' ethnic groups (50,000 and 40,000 respectively). There were falls in households with dependent children and an HRP from the Black or White ethnic groups (10,000 and 24,000 respectively); and little change in size of the Mixed ethnic group. Figure 3.3A shows these changes expressed as proportions of the value in 2011.

[33] NS-SEC is the official UK socio-economic classification.
[34] See: Figure 3, ONS, Household wealth by ethnicity, Great Britain: April 2016 to March 2018, 23 November 2020. These differences persist after adjustment for household characteristics including age and household composition.
[35] For the purposes of the England and Wales census, the HRP is selected from household members depending on economic activity. See Annex.

Figure 3.3A: Change in number of London households with dependent children, by ethnic group of HRP between 2011 and 2021 censuses



Sources: Census 2021, Census 2011

We focus below on findings relating to households of Black ethnicity. This is because our initial analysis, shown in Figure 3.3A, showed this group had an unusual pattern of intercensal change; and because our findings relating to the Black ethnic group can be usefully integrated with those related to other household characteristics.

After disaggregating by Inner and Outer London, we found that, in Inner London, Black households accounted for the largest total fall in households with dependent children. To further investigate this trend, we present the change disaggregated by zone and detailed ethnic group in Figure 3.3B; and compare this against couple households and lone parent households without dependent children.[36] The charts plot absolute changes, while the proportional intercensal changes in group size are noted to the right of each chart.

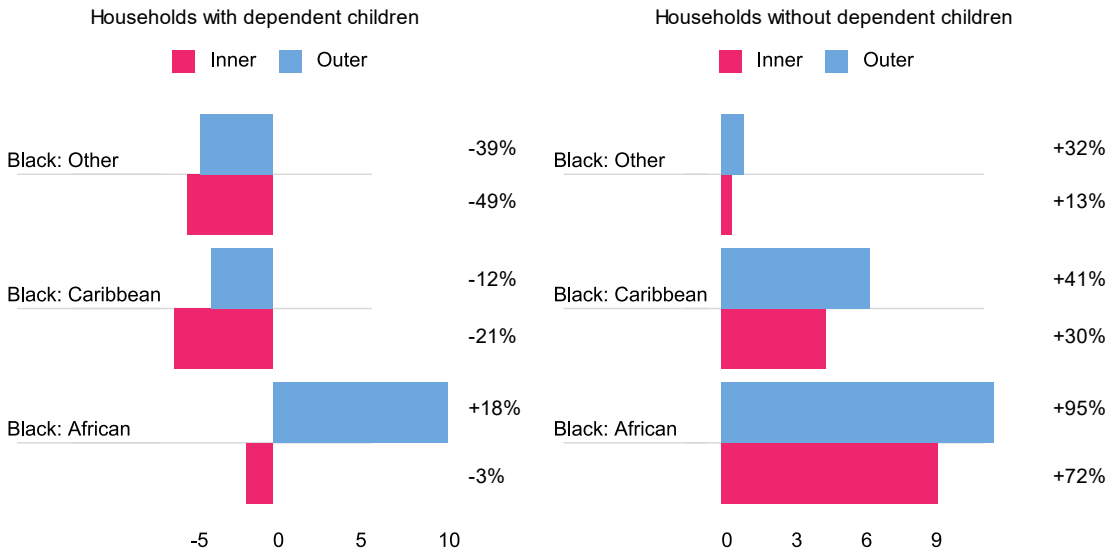
The left-hand chart shows that numbers of all detailed categories within the Black ethnic group fell in Inner London for households with dependent children. The number of families with a Black African HRP and dependent children increased by nearly 20 per cent in Outer London. Interestingly, for couples and lone parents without dependent children, the trend is in the opposite direction – there are *increases* in the number of households with an HRP identifying as Black, across all detailed ethnic groups and in both Inner and Outer London. One possible explanation is that families that previously had dependent children now

[36] The three categories in the census Household Composition variable that make this up are: married couple households with no dependent children; cohabiting couple households with no dependent children; and lone-parent households with no dependent children.

have adult children; and, due to falling fertility rates and/or net migration patterns, these older families were not replaced with new ones.

Figure 3.3B: Change in number of London households by Black ethnic groups of HRP between 2011 and 2021 censuses

Thousands



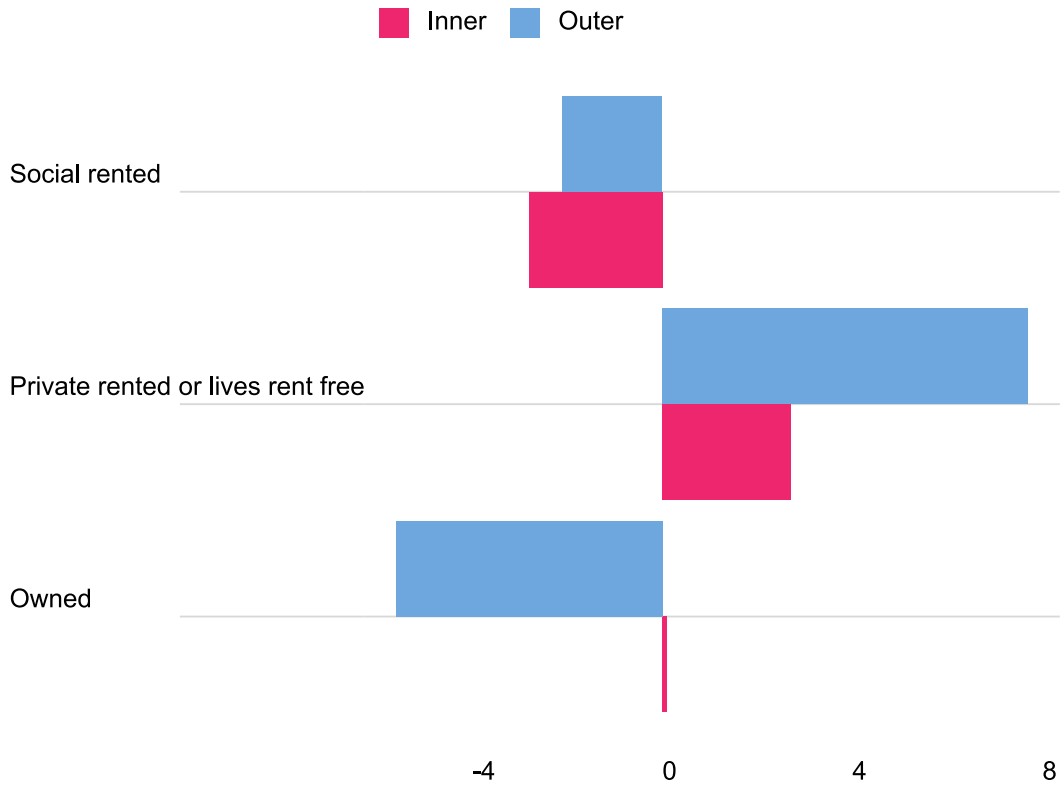
Percentage changes from 2011 value are noted on the right; Sources: Census 2021, Census 2011

Housing data from Censuses

The next characteristic we will look at is change in housing tenure, for households with dependent children. From 2011 to 2021, across London, there were fewer households in the social rented sector (from 293,000 to 283,000); fewer in the owned sector (from 465,000 to 459,000); and more in the private rented sector (from 251,000 to 331,000). Figure 3.3C shows this as changes in the shares of each housing tenure in Inner and Outer London.[37]

[37] The percentage point change is the difference between the percentage of this category in 2021, minus the percentage of this category in 2011.

Figure 3.3C Percentage point change in number of London households with dependent children, by household tenure, between 2011 and 2021 censuses
Percentage points



Sources: Census 2021, Census 2011

We can see that the changes observed for London in total above were mainly due to the changes in Outer London. The percentage privately renting increased much more in Outer London (by 7.7 percentage points) than Inner London (2.7 percentage points). The fall in the owned sector across London is almost entirely driven by Outer London (which had a percentage point fall of 5.6), with little change in Inner London. There is a decrease in households that have dependent children and own their accommodation; and an increase in private rented accommodation. This indicates that households increasingly stay in private rented accommodation in Outer London; and a higher proportion than a decade ago move away from London to purchase property, as children age and families get larger.

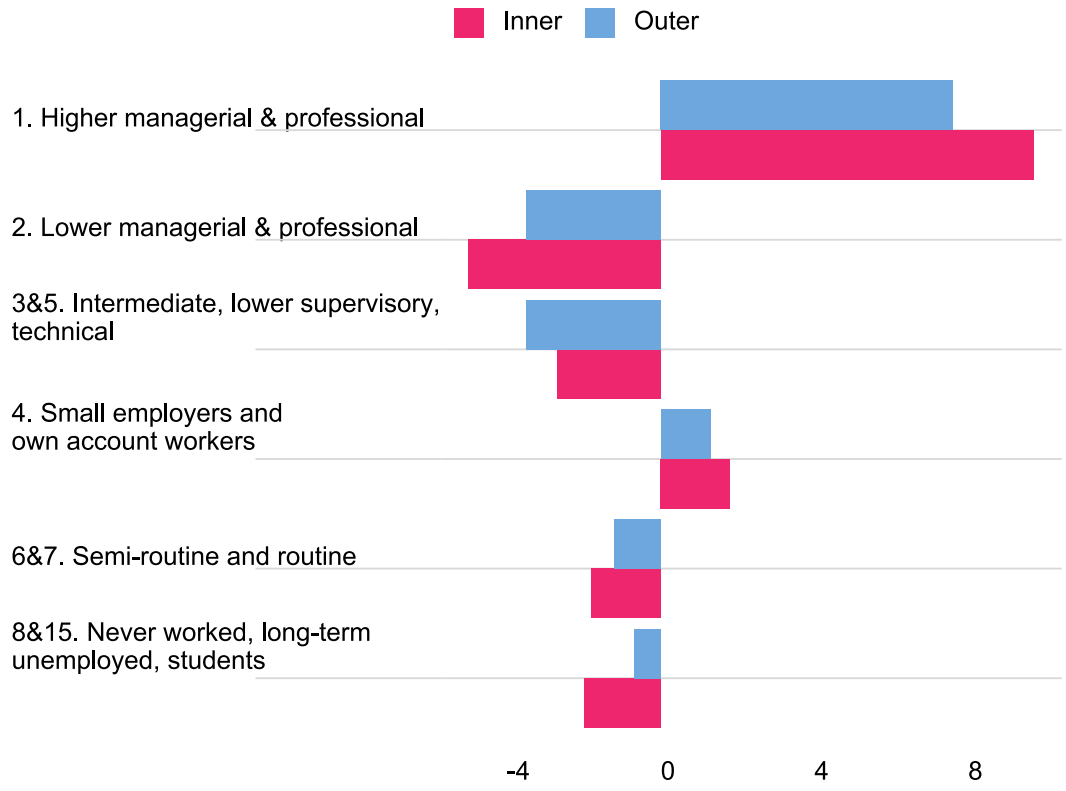
Socio-economic data from Censuses

The final characteristic we consider is NS-SEC. We compare data from the 2011 and 2021 censuses by the NS-SEC of the HRP for households with dependent children.[38] We show the findings expressed as percentage point changes in Figure 3.3D. We can see that the proportions in the two highest income socio-economic groups (*higher managerial and professional*; and *small employers and own account workers*) increased over the past decade, while all others fell.

[38] Here, the category of households with dependent children is made up of married couple households with children, and cohabiting couple households with children. It was necessary to exclude lone parent households with children and other households with children due to lack of household composition detail in 2011 for NS-SEC.

Figure 3.3D: NS-SEC for London households with dependent children, between 2011 and 2021 censuses

Percentage points



Sources: Census 2021, Census 2011

These findings support the premise that affordability is driving falling numbers of children across London; the differential between Inner and Outer London is salient in this respect. The greater increase in the groups inferred to be wealthier in Inner London (where it is most expensive to live) indicates that, as the cost of housing and other necessities increase, wealthier young families and older families (with the HRP more likely to be in a senior role) are better able to afford to stay in, or move to, Inner London; while other families may need to move elsewhere.

Having concluded our exploration of trends and geographical variation in demographic data, we will now summarise findings from our analyses and discuss possible influences on the observed patterns.

4 Discussion

This section gathers the most noteworthy findings about geographical variation and temporal trends London's population change, referring (where relevant) to findings about London's total population and changes in its characteristics. We suggest factors that may explain these patterns, recognising that some are likely to influence more than one component of population change, as shown in our causal model (Figure 1.2B). Finally, we suggest the most plausible future scenario for the population of primary-school-age children.

4.1 Births

Our analysis revealed the number of births in London peaked around 2012 and has since been falling. The fall comes despite an increase in the number of women of reproductive age; this indicates that a decrease in fertility rates is a driver. Over the last decade women have been having fewer children, and have given birth later in their lives, in Inner London compared to Outer London and the rest of the country. For all age groups under 35, fertility rates in London have been decreasing since 2012.

The current situation in London is one of declining births due to declining fertility in both UK-born and overseas-born women under 35. This pattern is consistent with most OECD[39] countries, since declining levels of fertility has become a widespread phenomenon.[40] Fertility decline is attributed, in the literature, to influences including socio-economic and educational factors (labelled "social and cultural factors" in Figure 1.2B); environmental and lifestyle factors; and economic factors. We will briefly consider the extent to which these are relevant for London.

Social factors, and concerns about the environment

Identified social factors influencing fertility decline include expanding education; rising income; the rise of gender equality; female labour force participation; consumerism; urbanisation; family disintegration; globalisation; and modern contraception.[41] Together, these factors have created two powerful drivers of the trend to have fewer or no children. The first of these has been described as the rise of "helicopter parenting", whereby parents invest much time and effort into optimising their children's education and upbringing.[42] The second is young adult's priorities apparently having shifted away from marriage and parenthood.[43]

An additional influence on fertility that has recently come to the fore is young people's fears about the environment. Recent evidence connects climate change-related concerns with reproductive decision-making: some people are deciding not to have children, because they fear their offspring would have to struggle through a climate breakdown.[44] Uncertainty about the future, and concerns about the ecological impact of the growing human population, are also factors identified as influencing decisions to have fewer or no children.[45]

[39] Organisation for Economic Co-operation and Development
[40] Aitken, R.J., The changing tide of human fertility, Human Reproduction, 37(4), pp.629-638, 25 January 2022
[41] Basten, S., et al., Future Fertility in Low Fertility Countries, Vienna Institute of Demography, 2013
[42] Financial Times, Why family-friendly policies don't boost birth rates, 16 June 2022
[43] According to survey research in the US, the competing priorities that most erode birth rates among young women are the desires to grow as a person and to focus on their career. In April 2023, 26 per cent of women reported that having children is important for a fulfilling life, compared to 61 per cent in 1993. See Financial Times, Why family-friendly policies don't boost birth rates, 16 June 2022; and Pew Research Centre, What makes for a fulfilling life?, 14 September, 2023
[44] Dillarstone, H., Brown, L. and Flores, E., Climate change, mental health, and reproductive decision-making: A systematic review, PLOS Climate 2.11: e0000236, 9 November 2023. The review included 13 studies conducted between 2012 and 2022, primarily in Global North countries (for example, the USA, Canada and New Zealand).
[45] Ibid.

For London's specific context, it is worth trying to identify the most relevant factors for parents/potential parents who settle in London from other countries, because more than half of London births are to non-UK-born mothers.[46] These factors are expected to depend on the cultural, social and economic contexts of their individual household, and of their countries of origin. Simplistically, if levels of education, health systems and income are lower in the parents' countries of origin than those in the UK, key factors may be access to contraception, and different attitudes about the role of women (including the acceptability of working, and choosing not to have children). If these levels are similar to or higher than those in the UK, key factors may be lack of family support compared to their country of origin; time and productivity pressures of work; and poor workplace support such as lack of parental leave. Clearly countries do not fall neatly on a continuum like this; within individual countries of origin, households experience a range of circumstances, and there are many other potent factors. We make these broad generalities simply to stress the diversity and multiplicity of influences on fertility in London.

Environment and lifestyle

Separate from individual decision-making are external influences on the capacity of couples to have a child, known as fecundity. Various drivers are implicated, including lifestyle factors (such as smoking, excessive alcohol intake, obesity and poor nutrition) and exposure to oestrogenic compounds and toxicants. There is evidence this exposure has led to a secular decline in circulating testosterone levels; a reduction in sperm counts; and various reproductive problems in women.[47] It is difficult to estimate the extent to which decline in fertility is due to decline in fecundity, and how much this is balanced by advances in fertility care. Medically assisted reproduction, including in vitro fertilisation, plausibly contributes between 3 and 10 per cent of births in European countries; and there is an increase of 0.05 to 0.1 in TFR in countries where fertility treatment is widely accessible.[48]

Affordability

Recent academic research suggests the financial burden of parenthood is a key factor in reproductive decision-making in the UK (together with social support and career opportunity costs).[49] Our analysis further evidences the key role of affordability in the declining number of primary-school-age children in London. For example, London's annual births reached their maximum value in 2012; this timing indicates their subsequent decline could be partly linked to "austerity" interventions, introduced in 2010 to stabilise the country's public debt after the 2008 financial crisis.[50]

Affordability will lately have restricted Londoners' lives even more, following the rise in energy and food prices. The poorest families have been hardest hit because of the high proportion of their income that is allocated to basic needs. Low- and middle-income households already faced a relatively high tax burden compared to other English-speaking developed economies.[51] Decisions on whether and where to have children will plausibly be shaped by these constraints. Some affordability issues (such as childcare and housing) affect current and potential families in London more than in other UK regions.

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[46] In addition we found: the increase in London births before the peak around 2012 was due to the increase in number of births to non-UK-born mothers (Figure 2.1L); and the average number of births per non-UK-born mother substantially decreased between 2007 and 2017 (Figure 2.1N).

[47] Aitken, R.J., The changing tide of human fertility, Human Reproduction, 37(4), pp.629-638, 25 January 2022

[48] Fauser et al., Declining global fertility rates and the implications for family planning and family building Human Reproduction Update, January 2024

[49] Brough, M, and Sheppard, P., Fertility decision-making in the UK: Insights from a qualitative study among British men and women Social Sciences 11.9: 409, September 2022

[50] Cuts that particularly affected Londoners were those related to housing – for example, government social housing funding was stopped, with the Treasury only funding homes let at 80 per cent of market rent thereafter. Also, restrictions on Local Housing Allowance were introduced from 2011.

[51] Institute of Fiscal Studies, How do UK tax revenues compare internationally?, March 2024

Childcare and benefits

The most recent annual survey of childcare costs in the UK[52] found Inner London costs to be the highest in the country. For example, 25 hours of care for a child under two had the following costs in Inner London:

- £179 for a childminder: this is £14 higher than Outer London, and £53 higher than England's average
- £199 for a nursery: this is £10 higher than Outer London, and £48 higher than England's average.

The costs have increased in line with the decline in the number of childcare settings in London, and the large number of private equity firms entering the sector.[53]

Changes to the benefits system during the last decade have made life harder for poorer families, and likely increased the numbers of families living in poverty.[54] For example:

- Changes introduced in 2017 restrict means-tested benefits to a family's first two children. This means larger families have less support per child.
- The cap on benefits introduced in 2013, to incentivise people into work, has affected Londoners more than others (the higher level at which the cap activates in London does not fully compensate for London's higher cost of living). Most capped households face major barriers to entering employment (including inadequate childcare support, and jobs often only being available with short notice, making it hard to plan childcare around working hours). Despite only accounting for 16 per cent of England's population, London accounted for 37 per cent of all capped households in November 2021.[55]
- The "bedroom tax" introduced in 2013 cut benefit for some social tenants. Also, rates of Local Housing Allowance were cut before being frozen (the freeze was lifted in April 2020).

Housing

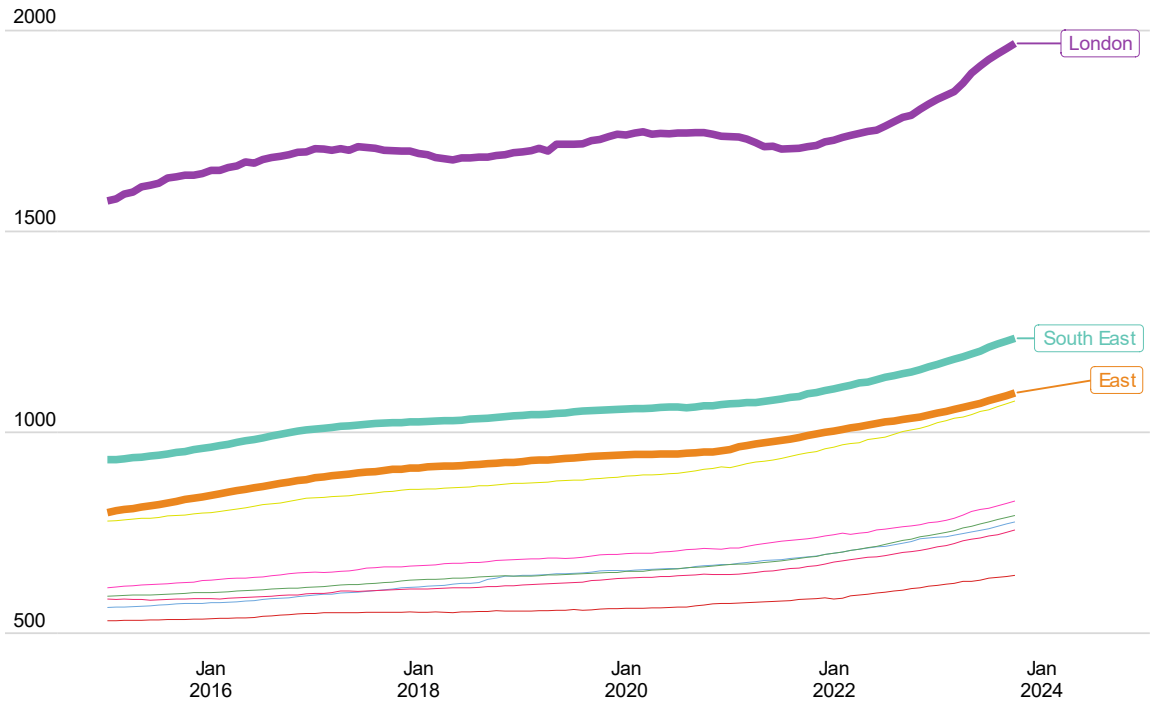
London has a larger private rental sector than other UK regions,[56] so Londoners are the least likely to own their home (homeowners make up less than half of households, compared to around two-thirds in all other UK regions). Also, there is an acute shortage of social housing in London, so many on low incomes can only choose between renting privately or leaving London.[57] Our analysis revealed that, for households with dependent children, the pattern of housing tenure in London has changed over the last decade. There has been a fall in the owned and social rented sectors; and a considerable increase in private renting.

Rental costs in London are much higher than in all other regions. London is the least affordable region for private rented accommodation; and was the only region above a 30 per cent affordability threshold for financial year 2021-22.[58] As an example, Figure 4.2A shows that the average monthly rental price is

[52] Coram Family and Childcare, Childcare Survey 2023
[53] UCL Social Research Institute and Nuffield Foundation, Acquisitions, Mergers and Debt: the new language of childcare, January 2022
[54] Nuffield Foundation, Compounding the hardship: The two-child limit, the benefit cap and the cost of living crisis, 15 November 2023
[55] Centre for London, Boroughs alone cannot pick up the pieces of a broken benefit cap, 7 April 2022
[56] This is true for both the private rental sector (30 per cent) and social rented (23 per cent). See: Figure 2, ONS, Housing, England and Wales: Census 2021, 5 January 2023
[57] Centre for London, Homes fit for Londoners: London's homes today, 17 August 2023 The reasons for the lack of social housing are touched on below, in Section 4.2.
[58] The indicator is percentage of a median renting household's income. London's value was 35 per cent and England's was 26 per cent.
See: Figure 4, ONS, Private rental affordability, England, Wales and Northern Ireland: 2022, 23 October 2023

significantly higher in London than its adjoining regions (East and South East).[59] Low-income Londoners are particularly affected – a household in the lower quartile of income in London would need to spend 46 per cent of their income on a lower quartile private rent, compared to 32 per cent across England as a whole.[60]

Figure 4.2A: Average Price Index of private rents, January 2015 to September 2023
Average monthly rental price (£)

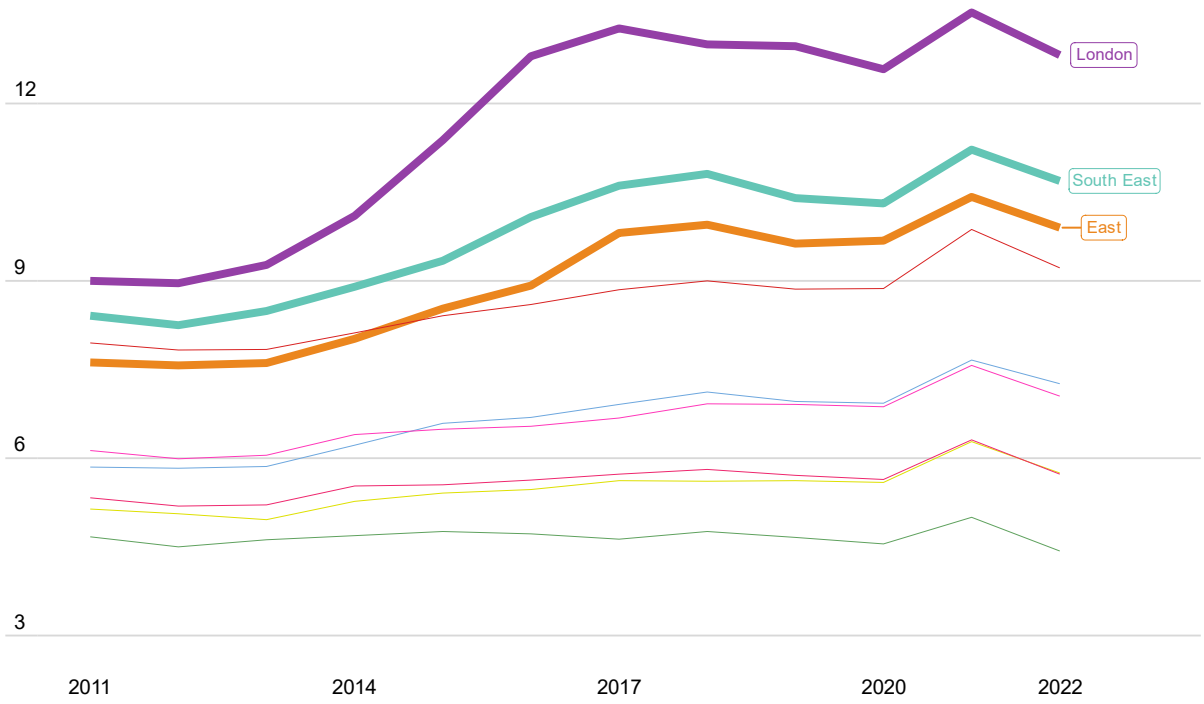


Source: ONS

With respect to the owned sector, house prices in London have increased faster than earnings over the last decade. When using the price-to-income ratio, house prices are less affordable than in any other region. Figure 4.2B shows an increase in this ratio over the past decade; and shows the difference between London and nearby regions for this indicator. Lower quartile house prices in London represented 12.8 years of average annual earnings in 2022, compared to nine years in 2011.[61]

[59] The average cost in October 2023 was £2,000 in London. The next largest was £1,200, in the South East.
[60] See: Figures 5 and 6, ONS, Private rental affordability, England, Wales and Northern Ireland: 2022, 23 October 2023
[61] The values for the next most expensive region, the South East, were 10.7 in 2022 and 8.4 in 2011.

Figure 4.2B: Ratio of lower quartile house price to lower quartile gross annual earnings, English regions, 2011-2022

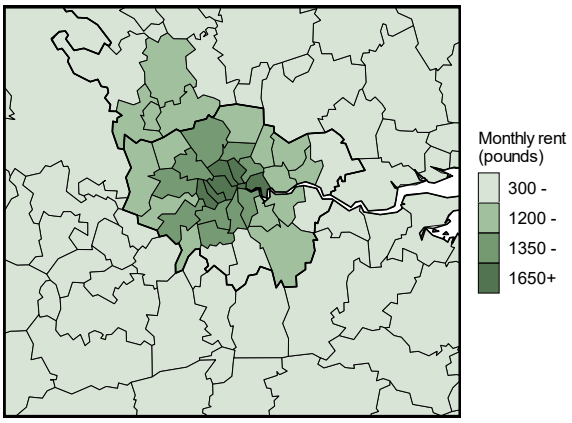


Source: ONS

In Figure 4.2C, the left map shows how rental costs vary between boroughs; and that most London boroughs have higher rents than surrounding local authority areas. The right map shows that purchase costs, as a proportion of earnings, also vary within London; but there is a much smaller gradient of increasing price from Outer to Inner boroughs, and the sharp contrast between London and surrounding areas in rental cost is not so evident. A constraint of this analysis is that it does not include the cost of mortgages.

Figure 4.2C Indicators of housing costs in London, 2022

Lower quartile rent cost for 2 bed flat



Source: ONS

Ratio of lower quartile house price to annual earnings

Source: ONS

The analysis above indicates that housing costs in London are significantly higher than the rest of the country. Thus, they may not only be a key factor influencing Londoners' decisions to postpone or abandon plans to start or grow a family; they may also be an important accelerator of outflows of young people (potential and actual parents) from London. We will review the findings from our analysis of demographic data that support both these suppositions.

Demographic evidence of affordability as a key influencing factor

We've analysed intercensal change in characteristics of households with dependent children in London. This analysis provides evidence of the influence of London's high cost of living (including housing) on migration and births. This evidence is summarised below.

Socio-economic status

We found an increase, between 2011 and 2021, in the number of higher socio-economic status households; there was more of an increase in Inner London. We infer that the wealthier young families and older families (with the HRP more likely to be in a senior role) are better able to move to, or stay in, London; and that those who are less wealthy are less likely to move to, or stay in, London. We earlier reported that many domestic and international migrants arrive in London each year, and increasingly choose to settle in London's more affordable areas, in the Outer London boroughs (and, for international migrants, in the Inner London boroughs of Newham and Tower Hamlets).

Households with dependent children

In Inner London, between 2011 and 2021, the proportion of all couple/ lone parent households with at least one dependent child, dropped from 56 to 51 per cent. In Outer London this proportion was static at 58 per cent. In both Inner and Outer London there was a decrease in proportion of households whose youngest dependent child was aged 0-4. We also found that between 2011 and 2021, the number of non-dependent children[62] increased by 35 per cent in Inner London, by 24 per cent in Outer London, and by 12 per cent in the rest of England and Wales.[63] The greater increases in London may indicate constrained household formation, with some young people unable to leave their family home due to high housing costs, and this may contribute to the trend of falling fertility rates in London.

Mother's country of birth and ethnicity of HRP

We found that the past decade has seen a considerable decline, in Inner and Outer London, in the number of births by Africa-born mothers. In Outer London, Africa-born mothers were the only ethnic group to have fewer births in 2011 than 2021. The decline cannot be attributed to a decline in potential mothers, as the proportional decline in births over this period exceeded the proportional decline in number of potential mothers.[64]

[62] Defined as children aged over 16-18 not in full-time education, or over 19 if still in full-time education.

[63] Data source: Non-dependent children in England and Wales: Census 2011 and Census 2021, 9 February 2023

[64] Between 2011 and 2012, for Inner London, births from Africa-born mothers declined by 48 per cent, while the number of potential mothers declined by 20 per cent. For Outer London the difference was greater – with a decline of 44 per cent in births and only 13 per cent in the number of potential mothers. As well as affordability, the decline in births from African-born mothers may be partly related to the following:

- Perceptions of racism during healthcare leading to poorer maternity outcomes for Black women in the UK. A recent inquiry found that Black women are four times more likely than White women to die in pregnancy or childbirth (see: Limb, M., Disparity in maternal deaths because of ethnicity is "unacceptable", British Medical Journal, 18 January 2021).
- Perceptions of racism during parenting. A recent study qualitative study of a small sample of Nigerian mothers revealed the existence of fear being penalised by authorities due to "cultural differences and institutional racial misconceptions". It was reported that some mothers return their child to live with relatives in their previous home country (see: Anglia Ruskin University, African families in UK are 'parenting in fear', December 2020. This blog summarises: Okpokiri, C. Parenting in fear: Child welfare micro strategies of Nigerian parents in Britain, The British Journal of Social Work, December 2020

We also found that the number of households with dependent children, and an HRP of Black ethnicity, fell in Inner and Outer London (except for the Black African group in Outer London). For couples and lone parents without dependent children in their household, the trend was the opposite – there were increases in the number of households with HRP identifying as Black, across all detailed ethnic groups and in both Inner and Outer London. We hypothesised that families that previously had dependent children now have adult children, and these families are not being replaced with the same number of new ones.[65]

Additionally, the proportional growth in London's Black ethnic population group between the 2011 and 2021 censuses is less than in the other broad ethnic minority groups of Asian, Mixed and Other (20, 25 and 98 per cent respectively).[66] Official data show that households with a head of Black ethnicity are significantly poorer than White British households.[67] So while this analysis does not prove that affordability is the key factor pushing people away from Inner London, the findings are certainly consistent with this.

Recent factors

We found that: the COVID-19 pandemic reduced the birth rate in the short term; this was followed by a compensatory uptick; and the trend appears to have returned to its previous downward trajectory. The temporary reduction in birth rate is likely to have occurred directly through Londoners choosing to delay starting a family. Also, the pandemic likely affected the birth rate indirectly by reducing the number of potential parents. We found increased flows of young people away from London, to other parts of the UK (during the pandemic more people worked from home, and many realised it was easier than they'd realised to live somewhere cleaner and greener) and, perhaps, to overseas destinations (anecdotal evidence indicates that some families with primary-school-age children returned to their country of origin). The pandemic also led to a temporary slow-down of inward migration to London from abroad.

In addition to population changes, a factor affecting school rolls is that, following the pandemic, some children and young people have not returned to school and are missing education.[68] There is no data available showing whether rates are higher in London than elsewhere. One can infer trends from data on persistent absenteeism, for which the rate is higher in Inner London than all other UK regions.[69] The high cost of living in Inner London may contribute to absence from school, since the cost-of-living crisis has increased wellbeing and mental health needs among school pupils.[70]

The UK's withdrawal from the EU has also been a recent contributor to London's reduction in birth rate. We found that net positive migration of EU nationals greatly decreased since 2016. Given these were mainly young people,[71] this would have reduced the number of families and potential future parents from this region.

[65] We do not suggest this finding relates uniquely to households of Black ethnicity. We need to do further work to ascertain to what extent it can be attributed to an ageing population in general.
[66] The only broad ethnic group that decreased in size between 2011 and 2021 was White, which fell by 3 per cent.
[67] See Figure 3, ONS, Household wealth by ethnicity, Great Britain: April 2016 to March 2018, November 2020
[68] Roberts, N., Danechi, S. and Lewis, A., Falling pupil rolls in England and school closures in London House of Commons Library, 5 June 2023
[69] For state-funded primary schools, the percentage of persistent absentees (10 per cent or more sessions missed) in Inner London increased from 8.6 to 19.4 per cent between 2016-17 and 2022-23. For Outer London the values were 8.2 and 17 per cent respectively; and for the whole of England, 8.2 and 16.2 per cent. Data source: Department of Education, Pupil absence in schools in England, 21 March 2024
[70] National Foundation for Educational Research, Cost-of-living crisis: Impact on schools, September 2023
[71] In 2022, nearly 50 per cent of EU-born migrants were under 34. See: Figure 4, the Migration Observatory, EU migration to and from the UK, 20 November 2023

Much more recently, there has been an uptick in international migration. If this continues, it could potentially increase birth rates in some areas. There is considerable uncertainty around levels of future international migration, as discussed in Section 4.3.

4.2 Domestic migration

Our analysis confirmed the 18-24 age group is exceptional, in that London's net migration for this group has been stable and positive over the last two decades. We assume this is due to London's economic attractiveness, and many cultural and social offerings. With respect to flow paths for children, we found a sizeable and stable net flow of children aged 0-10 from Inner London to the rest of the UK; and a lower (but again, stable) net flow from Inner to Outer London. In contrast, the net flow of young children from Outer London to the rest of the UK greatly increased over the last decade, from an initially low level. We found that the rate of net flow away from London was highest for children aged 0-5.

We can assume that most of these under-fives are leaving with adults over 25, and our previous analyses have revealed their destinations are primarily within the commuter belt around London.[72] So while they no longer live in London, one can surmise that many, if not most, still work there. For the reasons outlined in section 4.1, we infer that affordability is the main push factor, with COVID-19 being an additional factor, leading to companies offering more hybrid or fully remote roles.

Housing and inequality as linked drivers of internal migration

It is widely recognised that London has "entrenched structural inequalities".[73] London accounts for the regional extremes in the UK's wealth and poverty. Of the regions, London has both of the following:

- The highest average gross disposable incomes: in 2021 gross household disposable income was highest in London – each person had around £31,000 available to spend or save, while the UK average was around £22,000. The value in Westminster was £67,000.[74]

- The highest rates of poverty based on income after housing costs are taken into account: between 2019-2020 and 2021-2022, 25 per cent of people in London were in relative poverty, based on household income after deducting housing costs; the value for England was 22 per cent.[75]

Housing is arguably a significant factor accounting for inequality in London being higher than the rest of the UK, with under-supply a key element. In 1939 London's population reached a high of 8.6 million, and didn't rise to meet this figure until 2015. In the 1990s and 2000s, the supply of housing was thus relatively abundant (in retrospect). In the early 2000s, London's economic success, including as a financial and technology hub, drew many to move to the city. However, London's economic growth rate declined after the 2008 financial crisis.[76] The economic downturn, and continued increases in housing costs, adversely affected the most vulnerable, and a rapid growth in house prices widened wealth inequalities – especially between property-owners and renters. Currently, households in the London's richest decile own more than 60 per cent of the total wealth in London; and the richest 10 per cent have almost 10 times the income (after housing costs) of the lowest-income households.[77]

[72] GLA, Domestic Migration, 2023
[73] GLA, Mayor launches action plan to address inequalities across the capital, 25 May 2022
[74] ONS, Regional gross disposable household income, UK: 1997 to 2021, 14 September 2023
[75] House of Commons Library, Poverty in the UK: Statistics, April 2024. Dataset: Poverty trends by country and region.
[76] The rate of growth in economic output picked up slightly after the EU Referendum and before the pandemic. See: GLA Economics, The impact of Brexit on London's Economy – 2023 report, January 2024
[77] GLA Intelligence: Economic Fairness, Wealth Inequality and Income Inequality

It is not only Inner London's residents who are priced out of buying or renting a home. This also happens in other cities across the UK,[78] North America and Europe.[79] The suburbs of New York and Paris, for example, have areas with concentrations of lower-income and immigrant residents living in poor-quality housing. But London's situation started differently. Historically, London stood out from other Western cities for having low-cost social housing in the city centre, allowing low-income workers and their families to live there.[80] The right-to-buy policy dating from the 1980s, and other housing policies, led to large net loss of social housing units in London. Given there were fewer alternative affordable options in Inner London than in Outer London, this would have had the greatest negative impact on low-income households in Inner London. Housing associations partly filled the gap by building social rented and affordable homes, but in 2010 the funding model was changed – to the detriment of the affordable-housing supply.[81]

Inner London still has a high proportion of social housing compared to, for example, the centre of Paris.[82] But insufficient provision of new social housing, occurring in the context of an overall lack of new housing supply, has led to a shortage of affordable housing in Inner London compared to a decade ago. We contend that the lack of affordable housing in Inner London has combined with limited and expensive childcare and, more recently, high interest rates and inflation that affect the cost of basic necessities. This combination has created an unfavourable environment for low-income families with children.[83] The consequent movement of lower-skilled, lower-income workers into Outer London and beyond is changing the distribution of poverty (its "suburbanisation"[84]) and of schoolchildren.

4.3 International migration

International immigration plays a key role in the size of London's child population indirectly via births to non-UK-born immigrants, and directly via young children who arrive with their parents.[85]

Births data

We found the increase in London births during the 2000s was due to increases in children born to mothers from Africa, Asia and the EU. In the 2010s births in all three groups fell, especially in Africa-born mothers, contributing to the declining trend in London births – which shows no signs of levelling out.

Official migration statistics

Historically, negative net domestic migration was roughly balanced by positive net international migration. However, our analysis revealed significant changes in patterns of international migration to and from the UK since the Brexit referendum in 2016 – and especially since 2021, when free movement for EU citizens ended. Net positive migration of EU nationals has transformed to net negative migration since 2021, and now non-EU nationals outnumber EU nationals with respect to the number of immigrants. There has been a recent uptick in net migration for the year to mid-June 2022.

Immigration rules

The recent increase in net migration can largely be attributed to the new immigration system, implemented

[78] The Observer, "'All my friends have moved': how UK cities have been hollowed out by housing price rises, 17 December 2023
[79] Pathfinders, Turning the Tide on Housing: Alternatives to the Modern Orthodoxies of North America and Europe, December 2021
[80] Bloomberg, How London lost its place at the heart of Black Britain, 29 September 2023
[81] The Guardian, Affordable housebuilding in London is set to collapse by 75%. That's a problem wherever you live, 20 February 2024
[82] 32 per cent of all households in Inner London were in social housing in the 2021 Census, compared to 18 per cent of households living in social housing in central Paris in 2020 (see: Logement en 2020, Institut National de la Statistique et des Études Économiques (National Institute of Statistics and Economic Studies), 27 June 2023
[83] Polling by the GLA consistently signals the challenges experienced. See, for example: GLA, Nearly half of Londoners now struggling to make ends meet, 8 June 2022
[84] Centre for London, Housing and Inequality in London, April 2016
[85] The proportion of immigrants aged 0-15 in the UK's foreign-born population is less than half that in the UK-born population. See: Figure 3, the Migration Observatory, Migrants in the UK: An Overview, 2 August 2022

since January 2021. EU citizens (except those from Ireland) who wish to move to the UK are now subject to the same rules as citizens from the rest of the world; they need permission via a work, family or study visa. Further, a new employer-driven work permit system was introduced whereby all work migrants must have a job offer. Now non-EU citizens experience less restrictive rules than they did pre-2021 to move here for work.[86]

The year ending June 2022 saw the highest recorded number of issued residence visas. Most were for study, followed by work. Most of the substantial increase in work visas came from an 80 per cent rise in visas issued to non-EU nationals.[87] For the year ending June 2023, the top five non-EU nationalities for migration flows into the UK were Indian, Nigerian, Chinese, Pakistani and Ukrainian.[88] The current government is trying to reduce immigration, for example by increasing the minimum income required to sponsor someone for a spouse/partner visa.[89] However, government policy has not been effective in the past; and it has proven challenging for demographers to predict immigration levels. Consequently, there is much uncertainty around future prospects for this component of population change.

[86] Now a wider range of middle-skilled occupations qualify. See: Sumption, M. 2022. Shortages, high-demand occupations, and the post-Brexit UK immigration system, Oxford Review of Economic Policy, 25 January 2022
[87] Sturge, G., How has immigration changed under the UK's new 'points based' system? House of Commons Library, 27 September 2022
[88] ONS. Long-term international migration, provisional: year ending June 2023, 22 November 2023
[89] A timetable for implementing changes to tighten visa rules was announced in January 2024. See: McKinney, CJ and Gower, M., Changes to legal migration rules for family and work visas in 2024, House of Commons Library, 14 March 2024

5 Conclusion

Our objective was to examine patterns in London's population, focusing on children aged 0-10 (i.e., the cohort of pre-primary and primary-school-age children). Our goal was to outline prospects for future trends, and the broad distribution of primary-school-age children in London.

In Section 1 we described how the total number of primary school children has been falling in London for around eight years; and that the current trend is for a decrease in Inner London, while in Outer London numbers have stabilised. In Sections 2 and 3 we described the demographic factors accounting for the different patterns in Inner and Outer London. In Section 4 we explored potential influencing factors. With respect to future trends in London and geographical distribution of primary-school-age children in London, we predict that the situation is unlikely to change significantly over the next few years. We justify this assertion as follows:

- *Births* – After the peaks in births and fertility rates in 2012, these have shown fairly steady decreases. The timing of the start of the decline in births implicates economic conditions as a significant contributory cause. On average, Londoners' standards of living have not improved since 2012, and the COVID-19 pandemic compounded the challenges faced – particularly by those with lower income and fewer assets. There is at least a four-year time lag for changes in births to feed into numbers entering primary school. So, at least for the next four years, low numbers of births will continue to contribute to the decline in Inner London's primary-school children. For Outer London the forecast is more varied, with births in a small number of boroughs likely to increase, and this will feed through to increased numbers of school-age children there.

- *Domestic migration* – We noted high net outflows, from Inner London, of working-age adults and children under five. We inferred that this is most likely related to affordability issues, including of housing. An increased supply of new homes may improve affordability, but probably only gradually. So, as above for births, we infer that patterns of migration are unlikely to change in the short term; and will continue to contribute to reduced numbers of primary-school children in Inner London. Conversely, increasing numbers of primary-school-age children are to be expected in Outer London boroughs with a better supply of affordable housing.

- *International migration* – There is more uncertainty around international migration trends, and it is unclear whether the recent uptick in net migration will continue or flatten. While the recent net outflow of EU nationals may lead to a fall in demand for school places, increased inflow of non-EU nationals may have an upward effect. Thus, the effect of international migration on numbers of primary-school children is very unpredictable.

Our high-level interpretation of the analysis findings is that primary-school roll numbers will continue to fall in Inner London; and that, over the next few years, this fall will affect more Inner London boroughs, as well as some Outer London boroughs. In contrast, some Outer London boroughs will experience an increase in primary-school-age children.

We are not providing numeric forecasts for our population of interest. London Councils published a report in January 2024[90] forecasting a 4.4 per cent drop in demand, as a London average, at reception between academic years 2023-24 and 2027-28 (-8.0 per cent in Inner London, and -3.1 per cent in Outer London) based on local authorities' responses to the Department for Education School Capacity Survey. We consider

[90] London Councils, Managing falling school rolls in London, January 2024

these estimates credible, and therefore suggest our readers refer to this publication if numeric forecasts are required.

Current and upcoming related work

Borough-level data

Our analysis to date has been high level, and we deliberately do not provide data or forecasts for individual boroughs in this briefing. We intend to provide an online tool where users can access current data and trends at borough level. These will, of course, still not be applicable to smaller areas, since London boroughs include a mix of wealthier and less affluent areas, and of neighbourhoods experiencing different trajectories of growth, decline or "gentrification".[91]

Prospects for secondary schools

Our analysis does not extend to secondary-school level.[92] We can undertake further analysis to focus on this group if there is sufficient interest.

Population projections

The GLA publishes a range of annually updated population projections.[93] These include trend-based projections for local authority districts in England and Wales; and housing-led projections for small geographies in London. The outputs of these projections are available by single year of age and sex; and are commonly used to help inform planning for education and health provision, as well as other services and infrastructure. The GLA projections are derived from data released by the ONS. Therefore, recent delays in release of official data have fed through to publication of the GLA projections.

Modelled estimates of recent births

Official birth estimates are published with a typical time lag of 9-12 months from the end of the period covered. To provide planners with more timely birth data, the GLA produces estimates of recent births[94] modelled from monthly patient count data published by the NHS. These estimates can be updated monthly, with a time lag of one to two weeks from the end of the period covered.

Projected demand for school places

Since its inception, the GLA has provided support to school place planners in London local authorities through its School Rolls Projection Service – an optional subscription service giving users access to independently produced pupil projections for Education Planning Areas. Most outputs from the service are provided directly to subscribing local authorities under contract, and are not publicly available.

The GLA has published projections of demand for school places across London; the most recent outputs were published in 2018.[95] These projections were produced in response to internal requests for a strategic view of future demand for places across London.

In 2024, the GLA plans to begin publication of a new series of pupil projections, based on publicly available data and open-source methodology. The outputs of these projections will be available at subregional level (i.e., for groups of local authority districts) and will be updated annually.

[91] The Runnymede Trust, Pushed to the Margins – A Quantitative Analysis of Gentrification in London in the 2010s, June 2021
[92] For estimates of future demand see: London Councils, Managing falling school rolls in London, January 2024. This report forecasts that numbers of Year 7 pupils in London will drop by 4.3 per cent between 2023-24 and 2027-28.
[93] GLA, Population and household projections
[94] GLA, Modelled estimates of recent births
[95] GLA, Projected demand for school places

Annex – Definitions and methods

Age-specific fertility rate (ASFR)

ASFR is a measure of fertility specific to the age of the mother, so is useful for comparing the reproductive behaviour of women at different ages.

ASFR is calculated by dividing the number of live births to mothers of each single year of age, or each age group (usually five-year age groups), by the number of females in the population of that age; then expressed per 1,000 women in the age group.

Thus $ASFR_a = (B_a/E_a) \times 1000$ where:

- $ASFR_a$ = the age-specific fertility rate for women in age group *a*
- B_a = number of live births to women in age group *a* in a given year
- E_a = female population in age group a during the specified year.

Numerator: ONS provided the births data by single year of age, except for two categories: "under 20" and "40 and over". These groups were labelled as ages 17 and 42.

Denominator: As directed by ONS,[96] for women under 20, we included women aged 15-19; and for women aged 40, we included women aged 40-44. These groups were labelled as ages 17 and 42.

We calculated ASFRs for each single year of age between 20 and 39; and for the two age groups labelled 17 and 42. The calculated values of ASFR will be slightly overestimated for these two age groups, because the populations used as denominators were truncated, while the numerators include births to mothers aged under 15 and over 44.

Household Reference Person (HRP)

For the purposes of the England and Wales Census, where there is a family, multiple people or family groups in a household, the HRP is selected depending on economic activity. This uses the following criteria, presented in priority order:

- economically active, employed, full-time, non-student
- economically active, employed, full-time, student
- economically active, employed, part-time, non-student
- economically active, employed, part-time, student
- economically active, unemployed, non-student
- economically active, unemployed, student
- economically inactive, retired
- economically inactive, other.

[96] ONS, User guide to birth statistics, 23 February 2024

National Statistics Socio-economic classification (NS-SEC)

NS-SEC is the official UK socio-economic classification, constructed to measure the employment relations and conditions of occupations. It is used to help explain variations in social behaviour and other social phenomena (see ONS). We use the eight-class version:

1. Higher managerial, administrative and professional occupations
    1.1. Large employers and higher managerial and administrative occupations
    1.2. Higher professional occupations
2. Lower managerial, administrative and professional occupations
3. Intermediate occupations
4. Small employers and own account workers
5. Lower supervisory and technical occupations
6. Semi-routine occupations
7. Routine occupations
8. Never worked and long-term unemployed.

Standardised mean age (SMA) at birth (or "mean age at childbearing")

SMA at birth is a measure that eliminates the impact of any changes in the distribution of the population by age. It therefore enables trends over time to be analysed. The SMA is the mean age of mothers at the birth of their children, if women were subject throughout their lives to the ASFRs observed in a given year. The SMA is computed as the sum of ASFRs weighted by the midpoint of each age group, divided by the sum of the age-specific rates.

Thus SMA = $\Sigma(a \times ASFR_a)/ \Sigma ASFR_a$ where:

- SMA = standardised mean age at birth
- a = the mid-point for each age interval (a = 17.5 for the age group 15-19, a = 42.5 for the age group 40-44, otherwise a = the single year of age plus 0.5)
- $ASFR_a$ is the age-specific fertility rate for women whose age corresponds to the age group of which a is the midpoint.

To simplify coding, SMA was calculated as $(\Sigma(a \times ASFR_a)/ \Sigma ASFR_a) + 0.5$, where a = 17 for the age group 15-19; a = 42 for the age group 40-44, otherwise a = the single year of age.

Total fertility rate (TFR)

The TFR is a measure independent of variations in the age distribution of women of childbearing age. The TFR may be interpreted as representing the completed fertility of a synthetic cohort of women, that is, the average number of live children who would be born per woman (or per 1,000 women) if they experienced the ASFRs for the calendar year in question throughout their childbearing lifespan.

TFR is calculated as the sum of ASFRs weighted by the number of years in each age group. Thus:

- TFR = Σ $ASFR_a$ for single year age groups; or
- TFR = 5 Σ $ASFR_a$ for 5-year age groups

where $ASFR_a$ = age-specific fertility rate for women in age group *a* (expressed as a rate per woman; see the definition of ASFR above)

For this report, the TFR was calculated as:

TFR = Σ $ASFR_a$(for each year of age group 20-39) +

(5 x ASFR for age group 15-19) +

(5 x ASFR for age group 40-44).

CITY INTELLIGENCE

Greater London Authority
City Hall
Kamal Chunchie Way
London E16 1ZE

Tel 020 7983 4000
Minicom 020 7983 4000
Email intelligence@london.gov.uk

MAYOR OF LONDON