

2019-based Trend Projections

Review of Expert Panel Consultation

November 2020

Introduction

Each year the GLA produces a set of variant trend population projections updated with the most recent data and designed to provide users with an understanding of the potential for future population growth. In developing the inputs and assumptions for the 2019-based projections (released November 2020) the GLA has sought input from an expert panel of academics and demographers. The panel's work in advising on the development of model parameters and the plausibility of different projection trajectories has been central in the production of the 2019-based projections.

The current social and economic context provide significant challenges to anyone engaged in modelling and projecting. The pandemic, the threat of recession, and the changing nature of UK trade and migration policy in light of Brexit, all make projecting based on past trends more difficult. This is set in a context where intelligence about London's population and communities is central to recovery planning and policy formulation.

The 2019-based projections must respond to these challenges. The approach has been to produce a set of variant projections based on short- and long-term assumptions about migration levels. The key difference between the 2019-based projections and recent sets of GLA projections is the greater need to consider the potential for departures from the past trends.

It was decided that a panel of demographic, economic and subject area experts would be essential for developing and setting the model assumptions. It is our belief that the panel process ensures a more robust and transparent set of variant projections.

The panel

Membership of the panel was designed to cover the range of different areas of research and interest relevant to demographic projection modelling. The panel's areas of interest cover the specific components of population change (e.g. fertility, domestic migration, international migration), but also on more general concerns (modelling, uncertainty, economics). The panel are:

- Prof. Ann Berrington (University of Southampton)
- Prof. Tony Champion (University of Newcastle)
- Prof. Ian Gordon (London School of Economics)
- Dr. Jason Hilton (University of Southampton)

- John Hollis – (Independent demographic consultant (ret.))
- Madeleine Sumption (Centre on Migration, Policy and Society (COMPAS), University of Oxford)

Panel timetable

The panel was convened in September 2020 and provided input in three formal stages. In addition to these formal stages of consultation members of the panel were involved in ongoing conversations throughout the consultation process. The formal stages were:

1. A written questionnaire covering the full range of population component of change and contextual information (16th September – 5th October)¹.
2. An online panel consultation meeting where the responses to the questionnaire were reviewed and the range of model assumptions and parameters were discussed (21 October).
3. A model variant questionnaire which gathered feedback on initial variant projections using assumptions developed out of the earlier stages of the process (26th October – 6th November)².

Following the initial work with the panel on the detail of the components and wider contextual factors, a set of preliminary variant projections were produced for the panel for information and review. Panel input was sought on the specifics of the variants and any adjustments that were needed. In addition, the panel were asked to comment on which of the variants they considered to be reasonable high, central and low projections. Based on input at this stage changes were made to some of the gross international flows.

Summary of panel discussion

This summary provides an overview of the panel's input into the development of the assumptions for the 2019-based projections. The summary draws on both the written and verbal submissions of panel members to the consultation process.

Overall approach

The panel also supported the approach of splitting the projection period into three distinct phases (covid, transition, long-term), each with their own set of migration assumptions.

The panel advised against producing a set of 'story-based' scenarios. Such an approach was felt to be too restrictive and beyond the scope of a fundamentally trend-based modelling approach. Instead, a variant projection approach was favoured where a central projection was provided as one of a set of variants illustrating the range of sensitivity within the projection space.

International migration assumptions

The panel provided input on future levels of net international migration to London and opinion on the circumstances under which both high and low migration scenarios might occur.

Net international migration was chosen as the metric on which to base discussions as the balance between the gross flows is relatively stable over time and therefore simple to model from the net flow. In addition, the factors which affect in-migration also necessarily affect out-migration and so separating the components for the discussion would be somewhat artificial.

¹ See Appendix A

² See Appendix B

The unpredictability of international migration was a central theme of this discussion. Citing the example of Hong Kong, where there now appears some potential for significant flows of migrants to the UK (a disproportionate number of whom may settle in London), the panel noted there are often unforeseen and rapidly evolving factors which can greatly impact international flows. It was felt that this uncertainty reinforces the rationale for providing variants which cover high as well as low migration futures.

While it was felt that the balance of probabilities favour future reductions in migration over increases, the panel advised against discounting the possibility of higher levels of international migration. In support of this view, the panel cited:

- The resilience of trends over the last two decades despite significant socio-economic change.
- The potential of changes to UK immigration criteria to lead to a higher proportion of migrants becoming long-term settlers.
- Possible reductions in emigration rates of UK citizens in post-Brexit Europe.
- The scope for the global economic impacts of the pandemic to lead to increased migration from the Global South.
- Consistent failures to predict previous booms in migration.

The potential drivers of lower levels of future migration were discussed. Among them:

- A move to home working reducing the need for work-related migration.
- Negative economic impacts of COVID-19 and Brexit leading to lower international migration from both EU and non-EU countries for several years.
- The post-Brexit immigration system suppressing inflows of workers.

A consensus was reached on using an average of recent past levels of migration as the basis for the central assumption (95,000), and for this to be accompanied by high and low migration net migration variants set at 125,000 and 50,000 per year, respectively.

In addition to the quantum of migration flows the panel discussed changes to the characteristics of migrants. There was some consensus that there will be fewer arrivals from the EU in the future with the balance shifting towards non-EU countries. Work visa liberalisation could, in principal, benefit South Asian countries as the main source of work visa holders historically.

The panel discussed student migration and its drivers. It was felt that the UK market was stable and would continue to attract overseas students. However, there is some threat from competitor markets (e.g. US and Australia) and new and emerging markets (Canada, Japan, Singapore). Also to be considered is the ongoing investment in Chinese universities which is likely to reduce the number of Chinese national students in the long-term.

In addition to setting the net migration assumptions, the approach to modelling gross flows consistent with these, was adjusted following panel feedback.

Domestic migration assumptions

As with international migration the panel discussion highlighted the plausibility of both high and low domestic scenarios.

Implications of the pandemic

The panel discussed the potential for an increase in net out-migration from London, triggered by social and economic changes stemming from the COVID-19 pandemic:

- While it was felt the impact of home working may lead to increases in outmigration in some ages, the impact on younger adults would be less.
- It was argued that the pandemic might inspire more families to move as a result of greater premium being placed on outdoor space and lower population densities.
- The panel advised that media reports of a pandemic-inspired exodus from London should be treated with caution due to the limited data that is available at this point.
- Some of the reported recent increase in moves from London is likely to be due to pent-up demand stemming from the lockdown period as well as the stamp duty holiday in place until 2021.
- One panel member speculated that an increase in remote working could lead to a 'recolonisation' of big cities by older people.
- An alternative viewpoint put forward was that if an impact of Brexit/COVID-19 was a significant reduction in rents and house prices in London then we might anticipate that there would be increased domestic migration to the capital, particular of those in their twenties and thirties who might previously have found London unaffordable.
- Domestic migration of students both in and out of London was largely expected to hold up, even given the current pandemic-associated problems. It was felt that universities would continue to deliver courses in person and that the desire of young people to take part in university life would be a strong driver.

It was agreed that this is an area that will need to be closely monitored over the coming years for signs of changes to the established trends and behaviours, but that until compelling evidence of such changes emerge the best policy was to continue to use past trends to project future domestic migration flows.

Implications of ageing population

The panel discussed the ageing of London's population and the anticipated changes in the characteristics of the older population:

- It was suggested that the sub-peak in migration at retirement ages will reduce as more people leave at family-forming ages.
- Increasing ethnic diversity will further erode the trend for outward migration at older ages.
- Increased rates of home ownership and higher levels of income inequality among the older population may influence future patterns of domestic migration.

It was agreed that while there was currently insufficient evidence to support changes to the assumptions used in the projections, these areas would benefit from further research.

Choice of assumptions

The panel concluded that a set of domestic migration rates based on a ten-year average of past rate remains the most reasonable assumption for a central variant. This roughly corresponds with the length of a business cycle and the range of associated domestic migration behaviours. The use of longer period was discussed but it was unclear that it would add value over the standard ten-year approach the GLA has favoured in recent years.

The use of rates from the last five years (2015–2019) was proposed as a suitable basis for a higher domestic migration variant assumption. This was a period of economic growth with relatively high levels of net migration from London.

As the basis for a low domestic migration variant assumption, the five-year period dominated by the aftermath of the financial crisis (2008-2012) was proposed. Net outflows from London were greatly reduced over this period.

In both cases these five-year periods represent a range of values under similar economic circumstances. The panel found the approach and the data ranges selected to be sound.

There was discussion about the relationships between migration flows and whether this had implications for the combinations of assumptions about domestic and international migration used in the variants. One panel member described prior research on this subject which indicated that:

- Variation in 'deconcentration' outflows from London can largely be explained by long distance inflows (whether from the UK or overseas) and demand for housing.
- The additional domestic outflow associated with inflows varies with the background of the in-migrants. Inflows from rich nations are associated with higher levels of displacement than those from poorer countries.
- On average, changes in domestic outflows appear to offset 60-70% of the change in inflows.

Fertility

Short-term impacts of the pandemic

There was discussion of the potential for short-term impacts on fertility resulting from behavioural changes in response to the COVID-19 pandemic:

- There was agreement that any short-term effect would most likely be to reduce fertility rates.
- However, there was more uncertainty about whether immediate postponement of childbearing would subsequently be made up by increased fertility rates, or whether it would lead to some reduction in completed family sizes.

It was not felt that there was sufficient evidence yet to explicitly adjust assumptions to account for these effects.

Longer-term trends in fertility

The potential longer-term impacts on fertility resulting from changes to the nature and character of international migration were considered. In particular the potential impact on fertility as the balance of international in-migration shifts away from the EU to non-EU countries. The panel suggested that such a shift in migration patterns would not inevitably lead to increases in fertility rates, as:

- The reason for migration appears to be more significant than the origin of migrants.
- The selective nature of migration, particularly under a point-based immigration system, may mean that future migrants are less likely to form families irrespective of their country of origin.

Also of interest was the future childbearing plans of the second and third generation ethnic minority communities in Britain. Of particular note is the expectation for all ethnic groups that the age at which they will have children is older than that observed for earlier cohorts of ethnic minorities. These insights appear to chime with the significant reduction in teenage fertility across the UK and London in particular.

One panellist noted that looking at trends in Scandinavian nations suggested that there is scope for future downward movement in UK fertility rates.

The potential for London to diverge from national trends was considered but given the lack of evidence to support such assumptions, the panel agreed that the GLA's proposed approach of applying assumed future trends from the ONS national projections to London was reasonable.

Mortality

As with fertility, the potential for London to diverge from national trends was considered but it was felt there was no evidence to support the idea.

There was some discussion of the medium- to longer-term impacts of the COVID-19 pandemic on mortality rates. While there was some agreement that there are likely to be impacts from missed screenings, long-term health impacts of COVID-19, and increased poverty these are not yet understood and so cannot feasibly be incorporated into modelling.

A high migration variant was briefly discussed based on a scenario in which no effective vaccine against COVID-19 was forthcoming. The balance of probability for this scenario was not deemed significant enough to warrant an additional variant projection.

Housing & Labour market

The potential for changes to average household size (AHS) were discussed. The panel was split between those who felt that AHS would continue to rise as demand outstrips supply and those who saw the impacts of COVID-19 and Brexit reducing demand. The majority opinion was that in the short-term AHS would continue to rise while the longer-term was less certain as over longer period there could be supply side responses even if demand falls.

The cohorts of the high fertility period of the early 21st century will be reaching young adulthood over the coming years. This will potentially put greater pressure on housing in the short-term should historical trends of migration hold up.

Age-specific impacts of economic downturn – with declining employment rates at each end of the age spectrum as young adults will find it difficult to enter labour market, whilst older workers could be encouraged to take early retirement, some perhaps not wanting to undertake the commute following COVID.

Assumptions for the initial 'Covid period'

The panel were asked to comment on the specifics of the approach to modelling in the first three years of the projections (2020-2022 – the *covid period*). The assumed levels of migration and the assumptions on future mortality from COVID-19 were reviewed.

User requirements & outputs

The panel provided guidance on the range of variants which should be released as part of the 2019-based projections as well as the content and extent of the supporting information and documentation.

The panel supported the publication of an accompanying document that considered a wider range of variants than those selected as the GLA's principal projections as a form of sensitivity analysis.

Appendix A: Panel Questionnaire

International migration

- 1) International in flows to London have ranged between 170,000 and 21,300 over the last two decades. In 2019, 192,900 people settled in London from overseas. How will international in flows respond to current events in the short-term and long-term?
- 2) International out flows from London have ranged between 86,400 and 124,600 over the last two decades. In 2019, 115,500 people emigrated from London. How will international out flows respond to current events in the short-term and long-term?
- 3) What do you consider a reasonable range of values for international migration into and out of London in the short- and long-term?

	International In	International Out	International Net
Short term			
Long-term			

- 4) What changes might be expected to international flows in terms of:
 - a) Migrant origins
 - b) International student flows

Domestic migration

Domestic in flows to London have ranged from 169,000 to 255,000 over the last two decades while outflows from London to elsewhere in the UK have ranged between 237,000 and 349,000. Net flows have ranged between 32,000 and 110,000 net out flow. In 2019 the net out flow was 94,000.

- 5) What do you consider the most likely impacts on domestic migration flows into and out of London from:
 - a) Increased home working
 - b) Changes to in international migration flows
 - c) Changes to student behaviours / how universities deliver courses
- 6) Historically, older households have moved away from London at or around retirement age. What changes might be expected of baby boomers/the elderly who, among other differences, are more affluent and ethnically diverse than previous generations?
- 7) How might the proportion of families that choose to remain in London change?

Mortality

- 8) The GLA intends to use the NPP trajectory for England to project future change in age-specific mortality rates.
 - a) Do you consider the ONS 2018-based NPP principal mortality projections reasonable?
 - b) Will London diverge from rest of UK?

- 9) Should the projections make any assumptions about longer-term implications for mortality of COVID-19, e.g. as a result of disruption to screening and treatment.

Fertility

- 10) The GLA intends to use the NPP trajectory for England to project future change in age-specific fertility rates.
- a) Do you consider the ONS 2018-based NPP principal fertility projections reasonable?
 - b) Will London diverge from rest of UK?
- 11) How might fertility be expected to change under different levels of migration (domestic and/or international)?
- 12) How might fertility be expected to change if international migrant origins were to shift from lower TFR countries (e.g. EU) to higher TFR countries (e.g. Asia)?
- 13) Would you anticipate that the pandemic will have an immediate short-term effect on fertility and if so, what might the effect be?
- 14) What might be the effects of a major economic downturn on fertility (in both the UK and in London)?

Housing & Labour Market

- 15) Average household size in London has increased in recent years from 2.34 in 2001 to an estimate 2.46 in 2019. How might AHS be expected to change in the future, in both the short- and long-term?
- 16) One of the drivers of increasing AHS over the last two decades has been an increase in the number of multi-adult households and a decline in family households. Do you think this trend will continue or change?
- 17) Assuming higher levels of remote working, and consequently less commuting into London, what do you think would be the implications for London's functional work area and wider regional dynamics?
- 18) What changes to the relationship between jobs and housing, in London and the Wider South East (WSE) might be expected in the future?

Appendix B: Variant Projections Panel Questionnaire

1. Questions

1. Are you comfortable with the assumptions that have been made for projecting the initial 'covid period' (2020-22)? If not, what would you like to see done differently?
2. Which variant do you think we should consider to be the 'principal'?
3. Which variant do you think is the most useful 'low variant'?
4. Which variant do you think is most useful 'high variant'?
5. We intend to use 3 of these variants as our trend projection outputs (a high, central and low). Should we also publish the data for the other 6 alongside the main variants as supporting information?
6. Do you have any further comments regarding these variant projections?

2. Methodology overview

The projections can be split into three projection periods:

1. Covid period – 2020 to 2022. All variants assume the same conditions. This period is marked by significant adjustments to migration assumptions and the direct impact of COVID-19 deaths.
2. Transition period – 2023 to 2027. Variants begin to diverge. Migration rates and assumptions are incrementally adjusted in each year towards a final target level in 2028.
3. Long-term period – 2028 to 2050. Migration assumptions are held constant over this period. It is the assumptions in this period that give the variants their names.

3. Covid period

The 'covid period' is defined as the three-year period from mid-2019 to mid-2022.

International

	2020	2021 & 2022
International In	140,900	100,700
International Out	68,900	49,200
International Net	72,000	51,500

International migration in 2020 is assumed to be 70% of the 5-year migration flow average for both inflows and outflows. Migration was unaffected in the first 8 months of the year but in the final 4 months was severely impacted.

In the each of the following two years (2021-22) international flows are assumed to be 50% of the 5-year average. This reflects our belief that international migration will be significantly impacted in the immediate future both as a result of COVID-19 and Brexit uncertainty.

Domestic

Rates at 70% of 5-year average across all 3 years.

The rationale being that in the first year (2020) migration was unaffected for the first 6 months and should be assumed to follow recent trends. In the second half of the year migration was severely impeded by lockdown restrictions. Migration across the year is therefore estimated at 70% of the 5-year average.

In the following two years the impacts on migration are somewhat less direct – we are assuming that full lockdown will not recur and the effects on movement will be more a result of behavioural decisions rather than any direct external constraint.

In the most recent recession migration was suppressed as individuals' ability to make moves was hampered by their financial situation and wider fears associated with economic uncertainty. This suggests the potential for lower levels of migration but is balanced against the potential impacts on London's attractiveness stemming from the shift to home working.

Due to the nature and character of net domestic migration for London, a very low migration level will cause the population to rise quickly. Significant growth in the population in the very short term doesn't seem likely, however it is clear that the level of movement will be impacted somewhat. Migration for the years 2021 and 2022 is held at 70% of the 5-year average.

Fertility

First year rates trended forward from the last 5 years' rates, future rates are calculated using the change in the ONS 2018 NPP principal trajectory.

Mortality

Rates are trended forward from the last 5 years' rates and future rates are calculated using the change in the ONS 2018 NPP principal trajectory. An additional 8,400 deaths in London (55k nationally) are applied in 2020 and 4,200 (28k nationally) in 2021.

4. Post-covid / longer-term assumptions

The levels of migration for the long-term period (2028-2050) are as follows (for each of the migration components there are three variants):

	Low	Central	High
International IN	174,000	204,000	224,000
International OUT	124,000	108,000	99,000
International NET	50,000	95,000	125,000
Domestic rates	5-year average 2008-2012	10-year average 2010- 2019	5-year average 2015-2019

Note: the international central variants are the 10-year (2010-2019) average of flows

No covid variant

The 'no covid' projection uses 10-year averages for both international and domestic migration for the entire projection period. The fertility rates in the jump-off year are calculated as an average rather than a trend. There is no account made for deaths in the initial years from COVID-19. This projection is the GLA standard central trend projection setup and is presented here to give some further context to the variants.

5. Variant naming

Variants are named according to the international assumption followed by the domestic assumption:

Label	International migration variant	Domestic migration variant
CC	Central	Central
CH	Central	High
CL	Central	Low
HC	High	Central
HH	High	High
HL	High	Low
LC	Low	Central
LH	Low	High
LL	Low	Low