



Population Estimates

Population Statistics User Group

4 April 2023



Content

- The current situation
- Overview of different estimates
- Comparison of estimates
- Which should you use?



The current situation

- Population statistics in a state of flux
- Release of 2021 Census data triggered process of revising official annual estimates
- Will not be complete until November 2023
- Until then there will be gaps and inconsistencies in official estimates



The current situation

Also

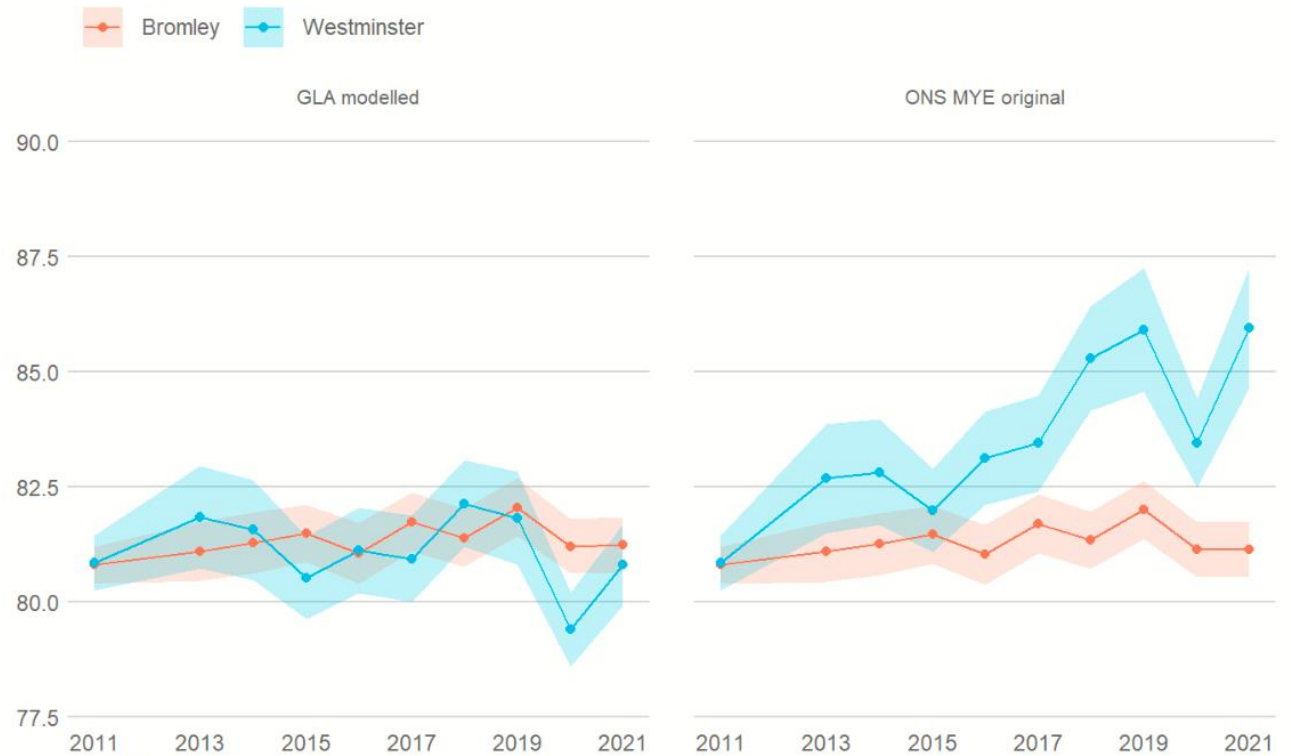
- ONS publishing experimental estimates as part of the Population Statistics Transformation Programme
- GLA publishing modelled estimates to support its own projections work

The current situation

Choice of estimates can have big impact on understanding of past trends

Life expectancy trends by choice of denominator0

male life expectancy at birth



Sources: ONS life expectancy estimates; ONS calendar year births; ONS MYE 'data for reconciliation'; GLA modelled backseries
Calculations: GLA Demography

Available estimates – LA districts

- Official 2021 MYE
- Original ONS MYE series 2011-2020 + 'rolled forward' 2021
- GLA modelled backseries 2011-2021
- ONS Dynamic Population Model 2011-2022

Upcoming

- ONS rebased MYE 2012-2020 – *May 2023*
- ONS 2022 MYE – *June 2023*

Available estimates – small areas

- Original ONS MYE series 2011-2020
- GLA best-fit modelled backseries 2011-2021 (for 2022 wards)
- Census 2021

Upcoming

- Official 2021 and 2022 estimates – *October/November 2023*
- ONS rebased estimates 2012-2020 – *October/November 2023*



Official 2021 MYE

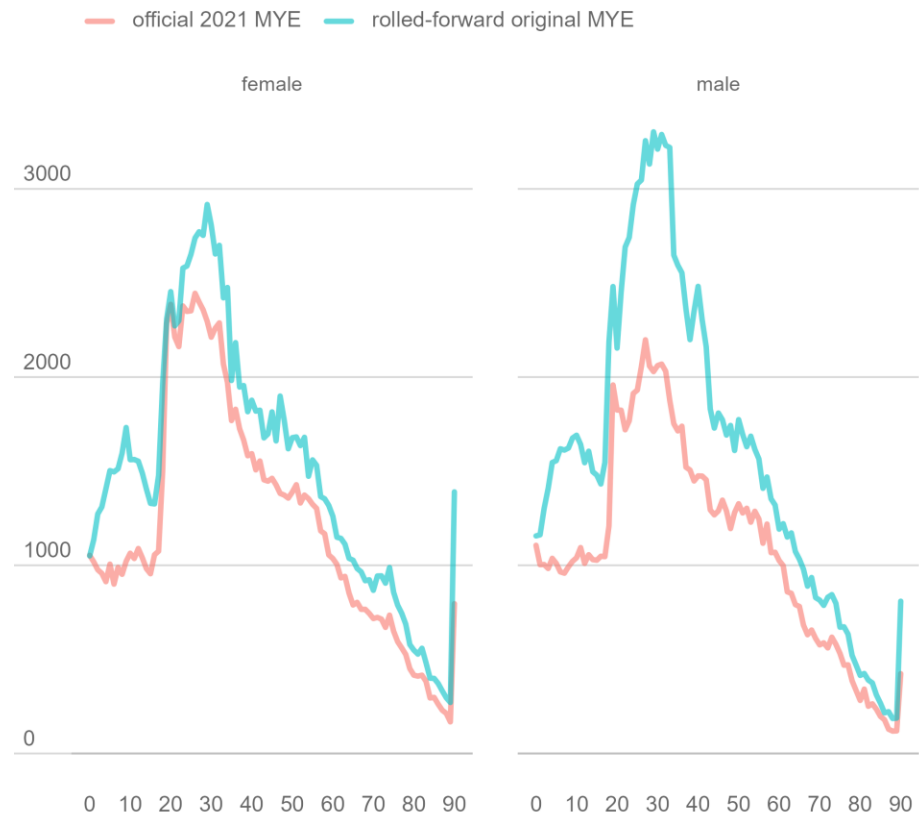
- Published December 2022
- Based on 2021 census + estimated change to mid-year
- Higher than usual level of uncertainty due to pandemic
- ONS have stated they may revise estimate in future

Original ONS MYE

- Anchored to 2011 Census
- Not consistent with 2021 MYE
- Drift over time due to errors in migration estimates
- ONS publish 'rolled forward' 2021 figures for comparison with post-census estimates

Population by age and sex 2021

Camden



GLA modelled backseries

- Created for use as inputs to GLA 2021-based projections
- Consistent with official 2011 and 2021 MYE
- Annual births, deaths, domestic migration same as MYE series
- Population and international migration generated by model

ONS Dynamic Population Model - 1

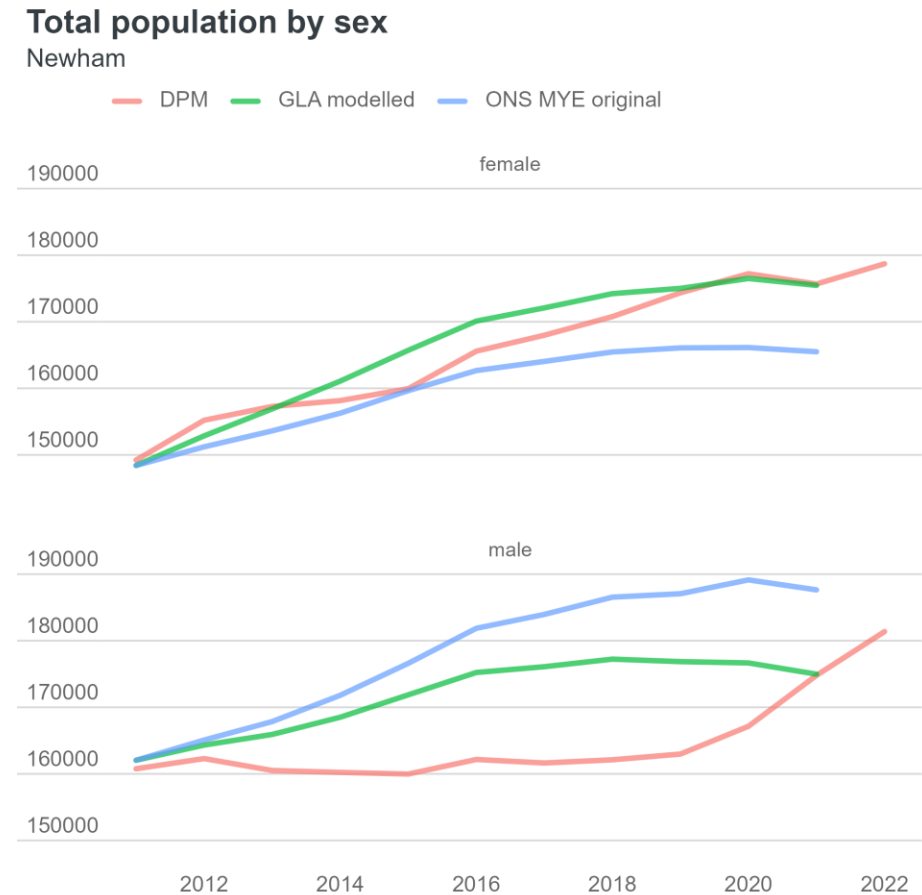
- New approach under development
- Candidate to eventually replace existing MYE method
- Brings together existing sources with admin data using probabilistic models
 - Limited admin data available prior to 2015
- Estimates include credible intervals by age

ONS Dynamic Population Model - 2

- Experimental outputs published Feb 2023
- Include 'provisional estimates' for mid-2022
 - Not all required data available for 2022
 - Use statistical modelling and number of births and deaths to forecast population
- Published data don't include breakdown of migration by domestic/international

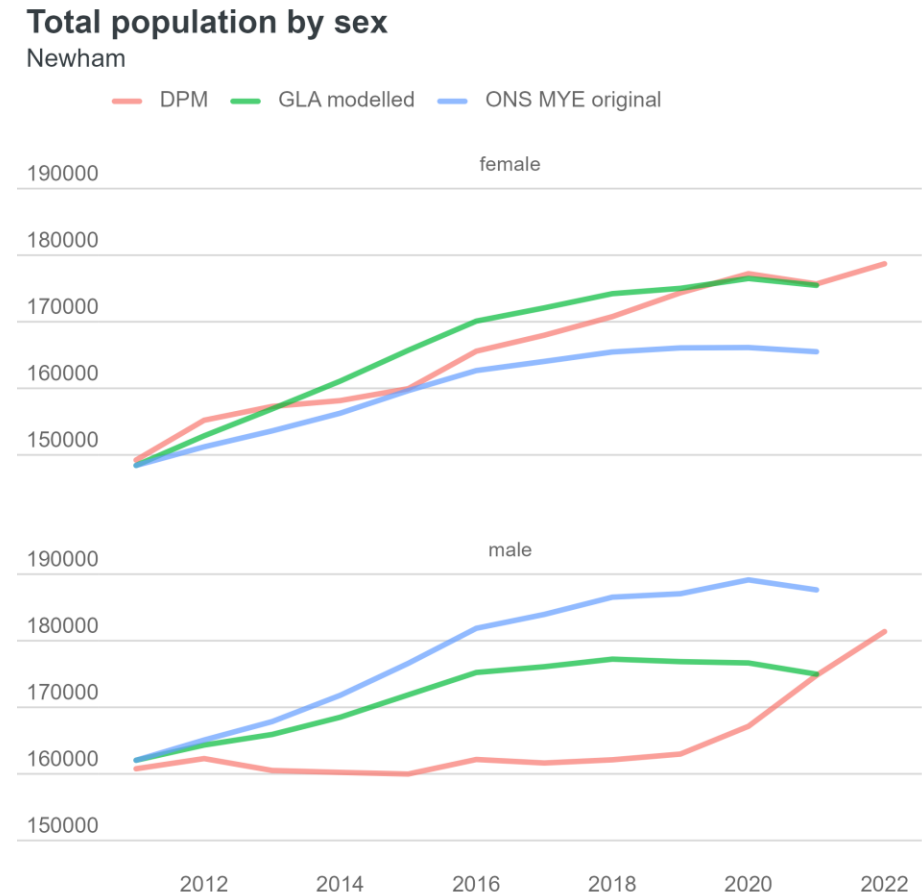
Comparison of estimates

- Both DPM and GLA modelled series match official 2011 and 2021 MYE
- But take different routes to get there



Comparison of estimates

- GLA approach means trajectory will tend to follow broad shape of original MYE
- DPM trajectory informed by available admin data



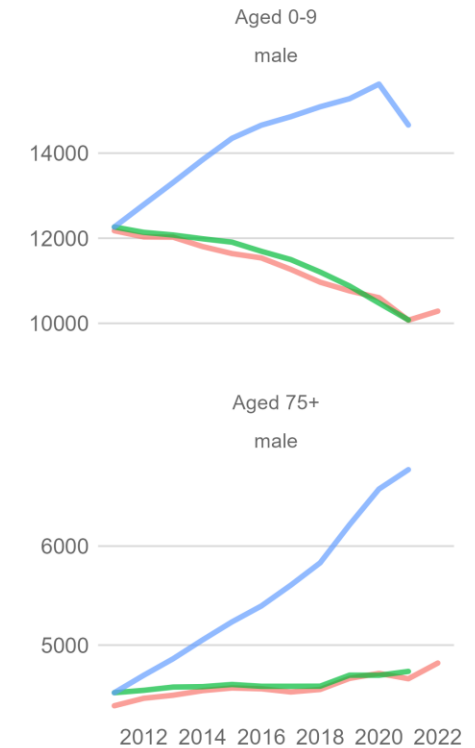
Comparison of estimates

- GLA and DPM tend to agree well for young and old age groups

Population by age band

Camden

— DPM — GLA modelled — ONS MYE original



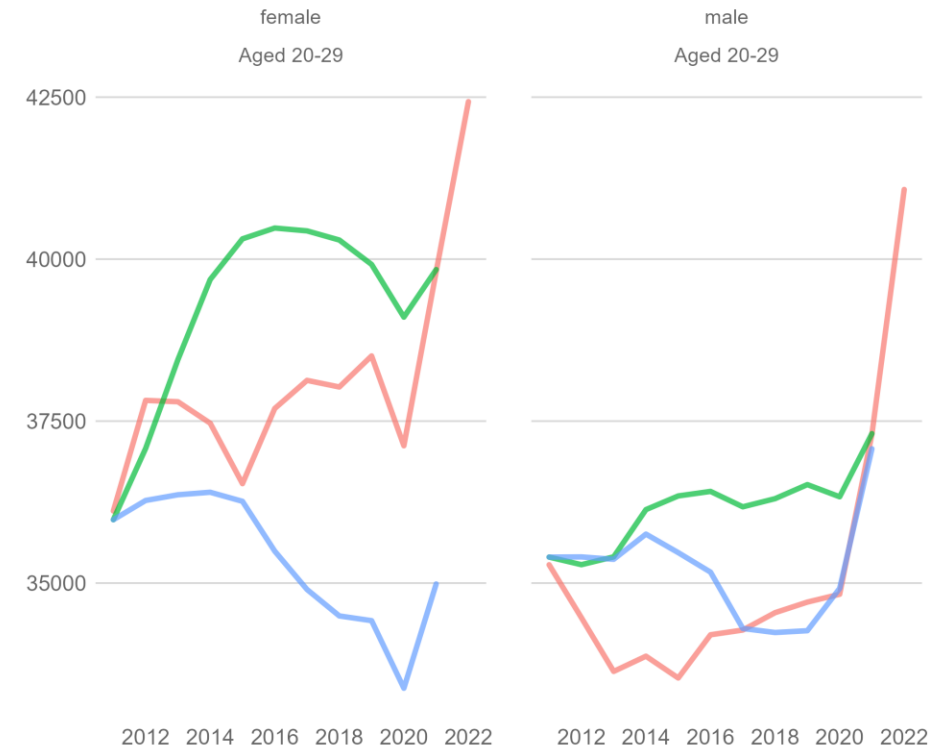
Comparison of estimates

- GLA and DPM tend to agree well for young and old age groups
- Less good agreement for ages in between

Population by age band

Tower Hamlets

— DPM — GLA modelled — ONS MYE original



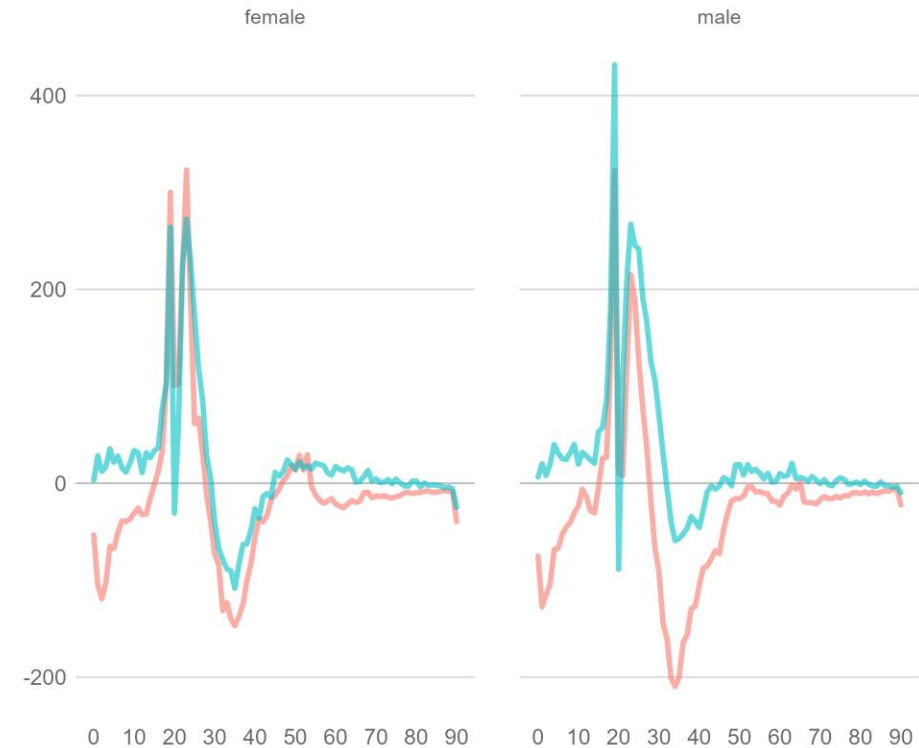
Comparison of estimates

- Issues with original MYE stem from errors in estimated size and age/sex structures of migration flows

Mean net migration 2012-2020

Westminster

— DPM — ONS MYE original

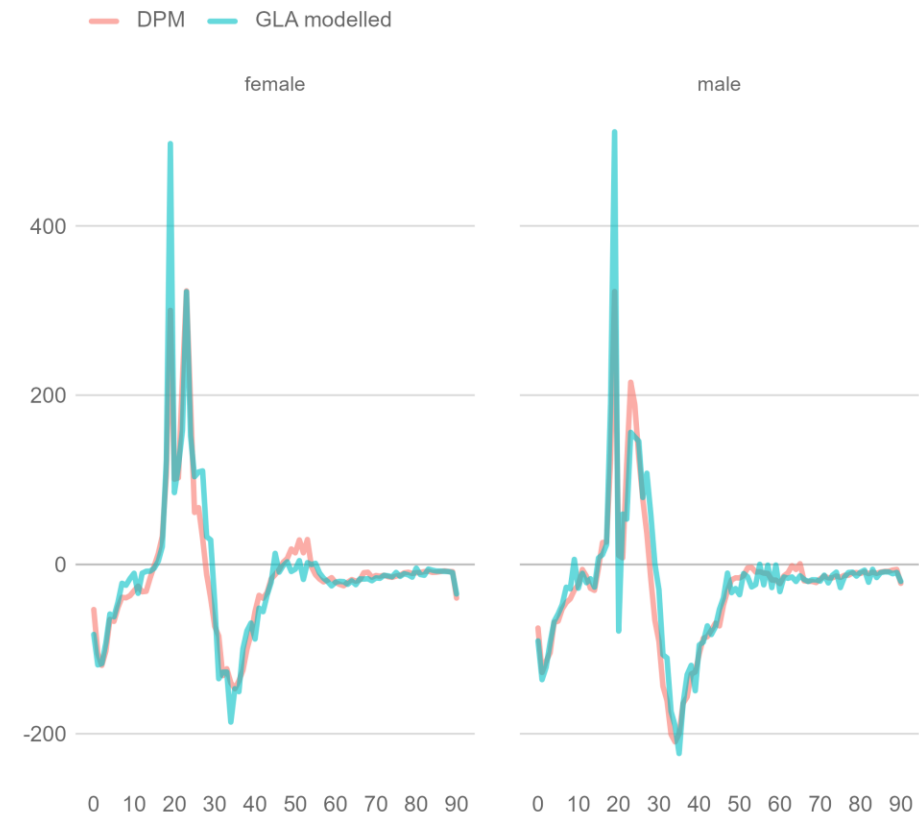


Comparison of estimates

- Issues with original MYE stem from errors in estimated size and age/sex structures of migration flows
- GLA and DPM arrive at similar migration structures

Mean net migration 2012-2020

Westminster

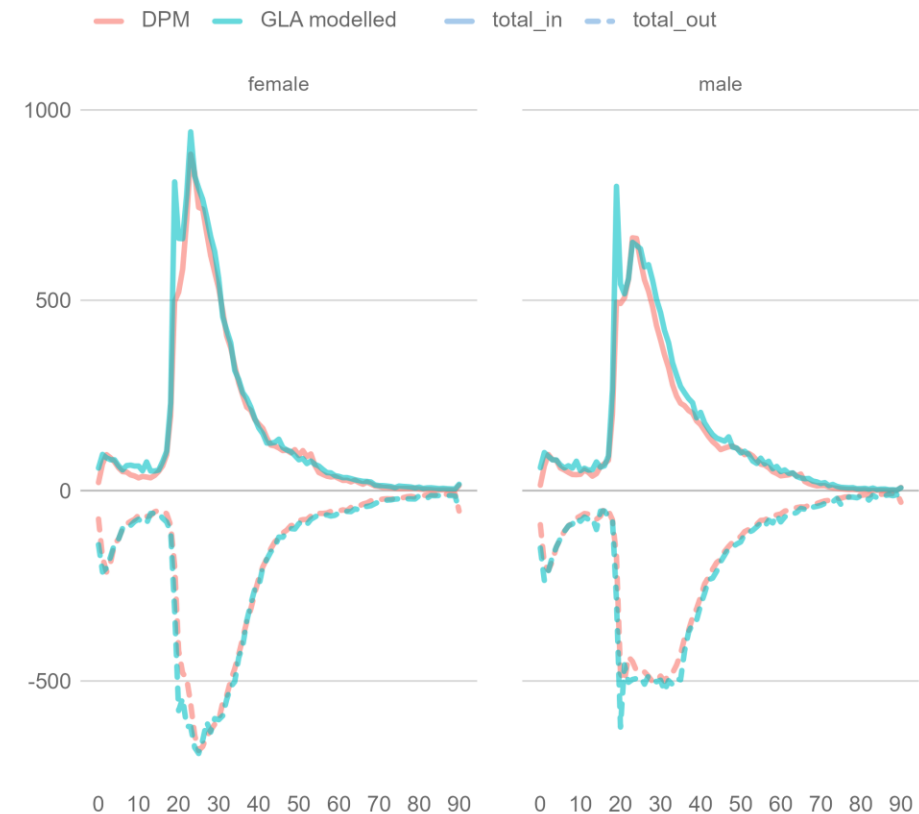


Comparison of estimates

- Issues with original MYE stem from errors in estimated size and age/sex structures of migration flows
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Mean migration flows 2012-2020

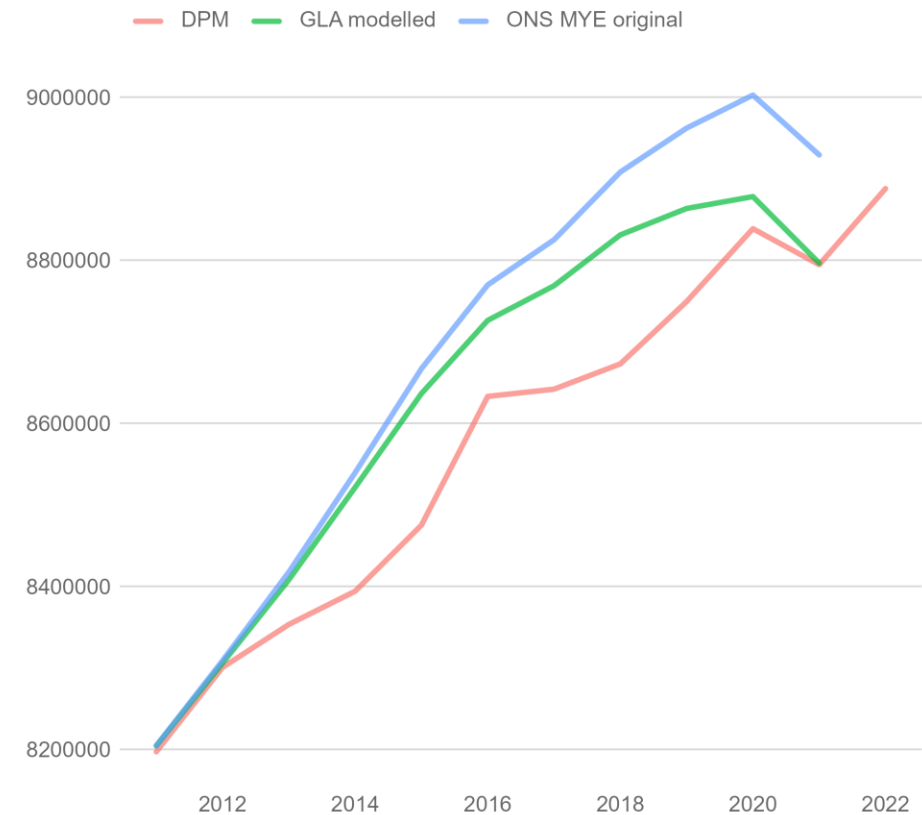
Westminster



DPM 2022 estimates

- Jury out on reliability of approach

Total population
London



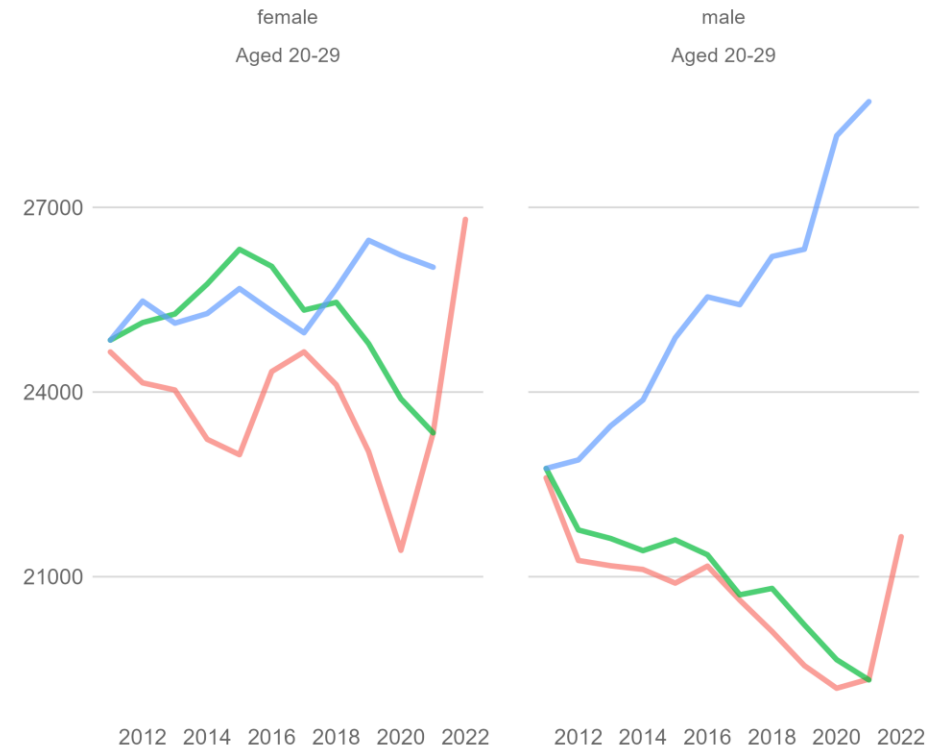
DPM 2022 estimates

- Jury out on reliability of approach
- Some 'striking' year-on-year growth...
- ... but 2022 was expected to be an exceptional year

Population by age band

Camden

— DPM — GLA modelled — ONS MYE original



Which should you use?

- Original MYE series can probably be ignored now
- GLA modelled series and DPM both have virtues
 - DPM has **potential** to more accurately capture annual change
 - But some question marks over reliability
- Close agreement for some groups so choice may not be critical

Which should you use?

- Official rebased estimates to be released by ONS in May
- Not sure what to expect - previous rebasing exercise was problematic
- We'll be reviewing and sharing our views once they're available



Links

- [ONS Mid-Year Population Estimates](#)
- [GLA modelled backseries](#)
- [Dynamic Population Model estimates](#)



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