2011 Census estimates comparison

Intelligence Update 19-2012

Introduction

The ONS released 2011 Census single year of age estimates at a local authority level on 25th September 2012. This *Update* compares these estimates for children age 0-18 years with four other sources of data.

The four sources of data are:

- ONS 2010 based sub-national population projections (SNPP);
- GLA 2011 round population projections;
- General Practitioner registrations; and
- Child benefit claims.

Data sources and comparison

All four data sources have been recalibrated to Census day on 27th March 2011 so as to be directly comparable with each other.

Sub-national population projections (SNPP)

The sub-national population projections (SNPP) were released by ONS in October 2011. The projection years for mid-2010 and mid-2011 were combined to give an estimate for Census day. In general, the SNPP are higher than the 2011 Census estimates for children age 0 to 9. However for the majority of boroughs there is a significant drop for children age 10 likely due to issues with the enumeration of children in the 2001 Census which form the basis of the 2010 base of SNPP.

Source: 2010 based sub-national population projections, ONS

GLA 2011 round population projections

The GLA published their 2011 round of population projections in December 2011. As with the SNPP, estimates for mid-2010 and mid-2011 were combined and factored to be representative of Census day in March 2011.

When compared to 2011 Census estimates and other data sources, the GLA 2011 round of population projections generally fall in between the other sources. GP registration and child benefit data were a consideration in the production of the GLA projections.

Source: GLA 2011 round population projections

General Practitioner (GP) registrations

GP registration data was obtained from NHS Connecting for Health for November 2011 by residence of person rather than location of GP. It was factored to March 2011 by shifting back the age of the children, i.e. those who were shown as age 1 were shifted back to be age 0.5 years. The dataset covers all people by single year of age registered with a GP on a set day. Due to people not being removed quickly enough from GP registers when moving, GP registers generally show there to be higher numbers of children than estimated by the Census.

However, Kensington & Chelsea is an anomaly as the results show there to be up to around 12 per cent fewer children registered with a GP than the Census. This is likely to be due to the high number of children in the borough possibly being registered with private doctors.

Source: GP register, NHS Connecting for Health

Child benefit claims

Child benefit claimant data was obtained from HM Revenue & Customs (HMRC) for 31st August 2011. It includes all children for whom child benefit is paid by local authority by single year of age of child. This data was recalibrated to represent 27th March 2011 in the same way as GP registration data although because of the date of the data, the age was only shifted back by 0.4 years, i.e. 1 year old children became children age 0.6 months.

The difference between the number of children for whom child benefit is claimed and the number estimated by the 2011 Census varies. However as was the case with GP registrations, Kensington & Chelsea and Richmond upon Thames have considerably lower numbers than estimated by the Census. This is likely to be due to these relatively affluent areas containing a higher proportion of families who opt to not claim child benefit.

There is also a noticeable drop in the number of children for whom child benefit is claimed post 16 years of age. This is because child benefit is only payable if the child when aged 16 or over (up to the age of 20) remains in full-time 'non-advanced' education at school, college or starting an approved training course.

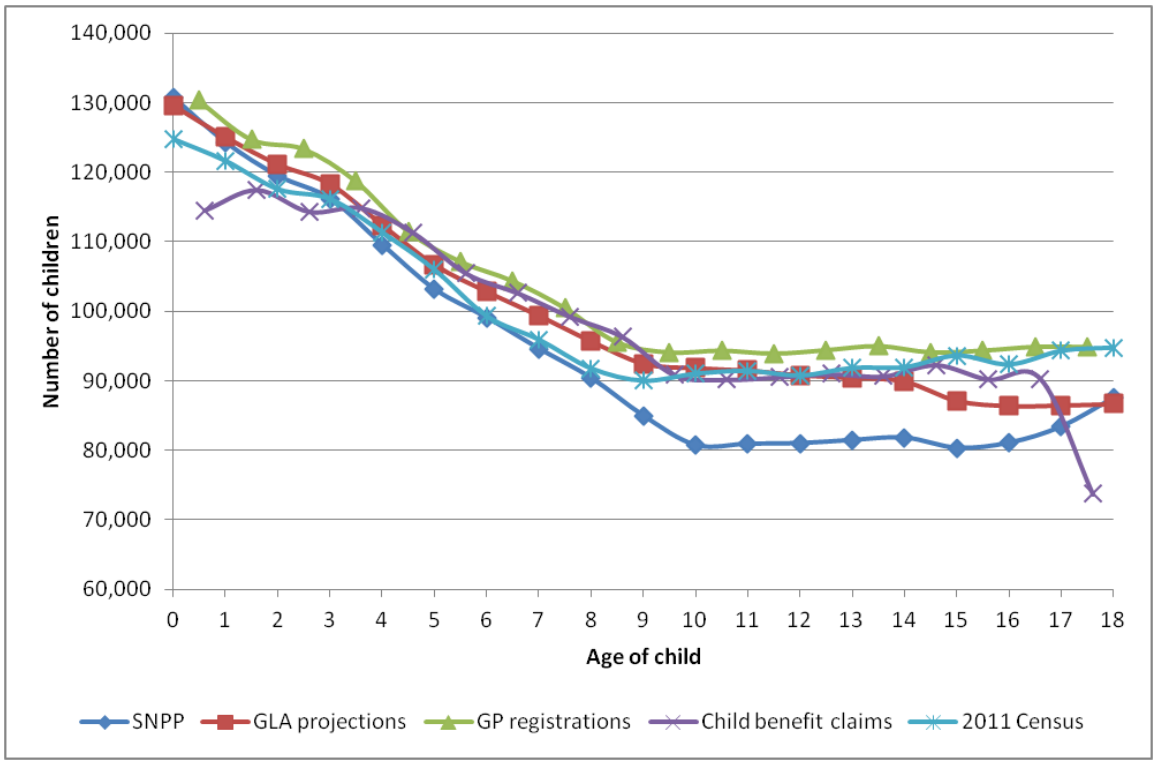
From 7th January 2013 a new measure comes into force which will have an impact on the universality of child benefit data for estimating the number of children. Those earning between £50,000 and £60,000 will have to pay a charge on the child benefit they are entitled to receive. For those earning over £60,000 the charge will equal the child benefit amount thereby effectively removing child benefit for high earners. This will therefore mean that using child benefit data as a source for estimating the number of children will become invalid. It is likely that more local authorities will have results like those seen for Kensington & Chelsea and Richmond upon Thames when this change comes into effect.

Source: Child benefit claimants, HMRC

Comparison

Chart 1 shows all five datasets for London as a whole by single year of age (0-18 year olds). Child benefit data shows there to be a lower number of children aged between 0 and 2 years than the other four data sources and also drops considerably from the age of 16. GP registration data shows the highest number of children for most ages. SNPP is constant with the other data sources to age 9 after which it is around 10,000 children lower in number (9-15 year olds) and the GLA population projections fall somewhere in between the other data sources. The main reasons for these inconsistencies with 2011 Census data have been detailed under each data source type above.

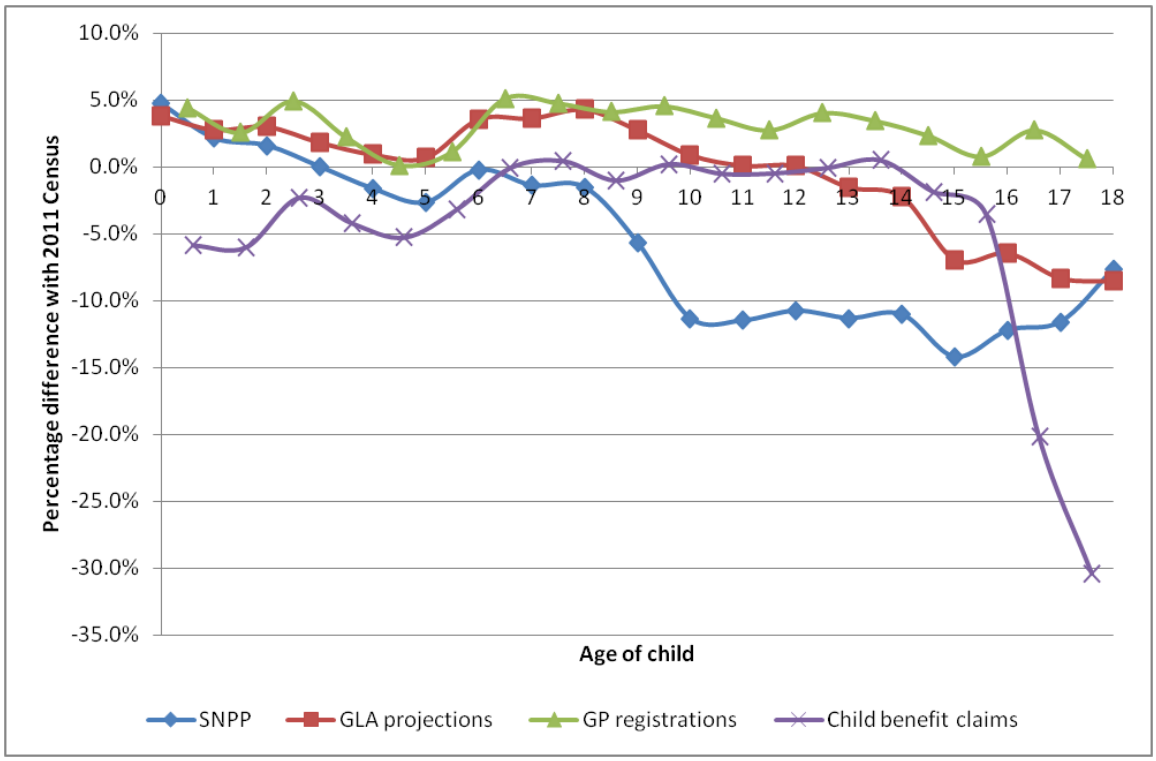
Chart 1: Number of children (0-18 years) based on five different data sources, London, March 2011



Sources: ONS, GLA, NHS, HMRC

Chart 2 presents the information in Chart 1 as a percentage difference when compared to 2011 Census estimates. Where the percentage difference is positive, this indicates that for a particular age, the number of children given by the comparator data source is higher than the 2011 Census estimates. A negative percentage change signifies that the 2011 Census estimates are higher.

Chart 2: Percentage difference between the number of children (0-18 years) estimated by the 2011 Census and four other data sources, London, March 2011



Sources: ONS, GLA, NHS, HMRC

Charts for all London boroughs comparing the percentage difference between the four data sources and 2011 Census can be found in the Appendix. These charts are for ages 0-15 only as post 16 the considerable drop in child benefit claims skews the scale of the y-axis making it harder to view the differences in the other age groups.

Conclusions

This *Update* compared four data sources to the 2011 Census population estimates for 0-15 year old children. In general, the GP registration data counted a higher number of children age 0-15 years than the Census whereas the SNPP, although it had higher numbers of young children, had considerably lower numbers of children age 9 and above due to 2001 Census enumeration issues.

Child benefit data is currently useful as an indication of child numbers up to the age of 16 although from January 2013 a change in entitlement will invalidate the usefulness of this data. GLA population projections have tended to fall in the middle of the other data sources when estimating numbers of children.

Appendix A: Percentage difference between the number of children (0-15 years) estimated by the 2011 Census and four other data sources, March 2011

Sources for all charts: ONS, GLA, NHS, HMRC (see detailed source information under the 'Data sources and comparison' section)

Chart A 1: London

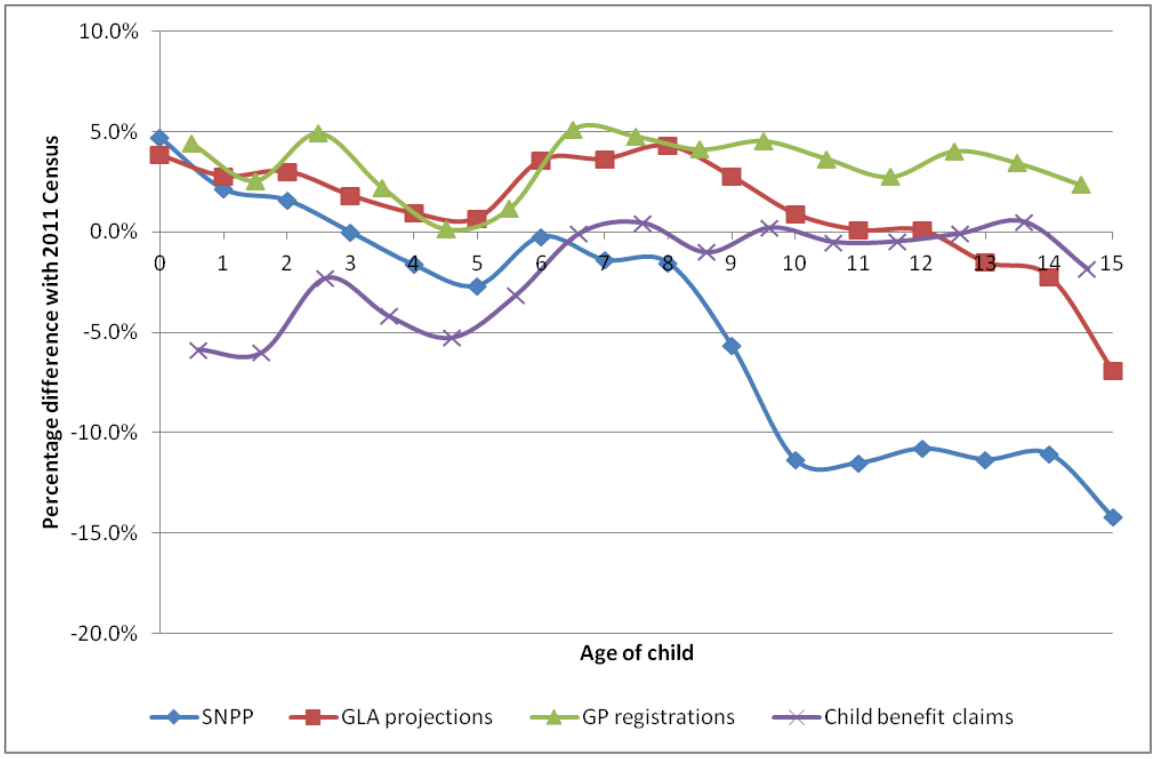


Chart A 2: City of London

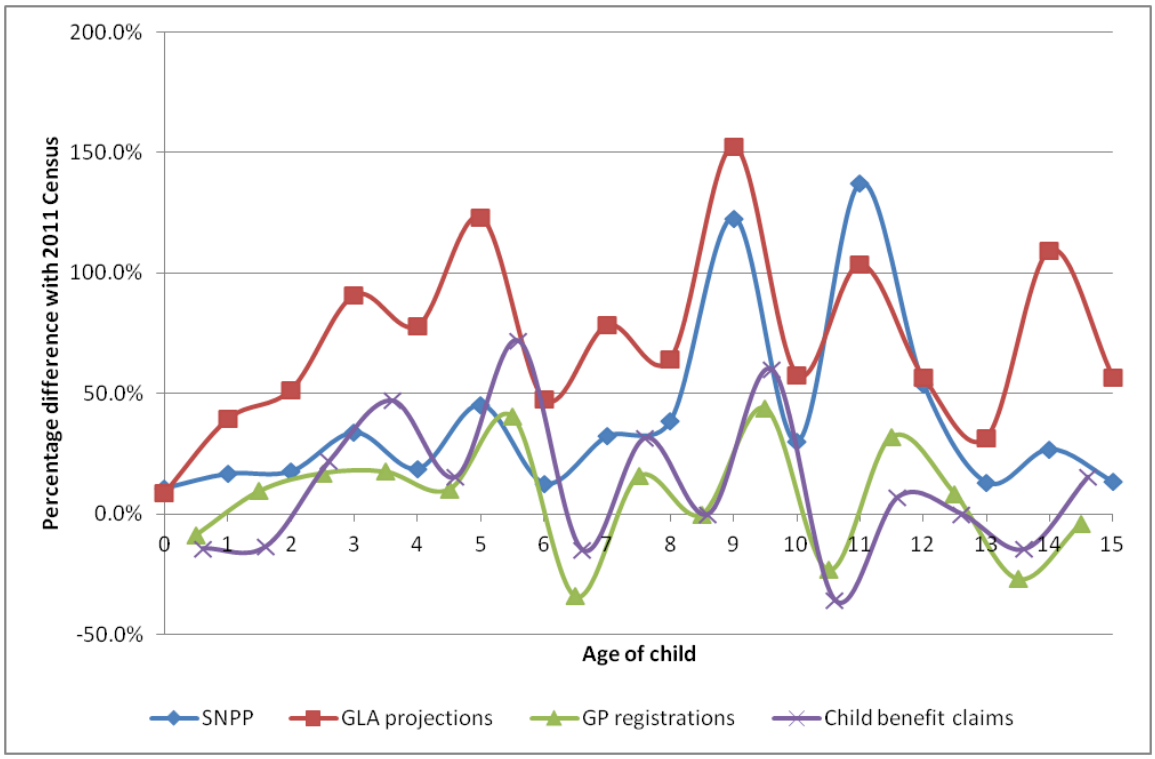


Chart A 3: Barking & Dagenham

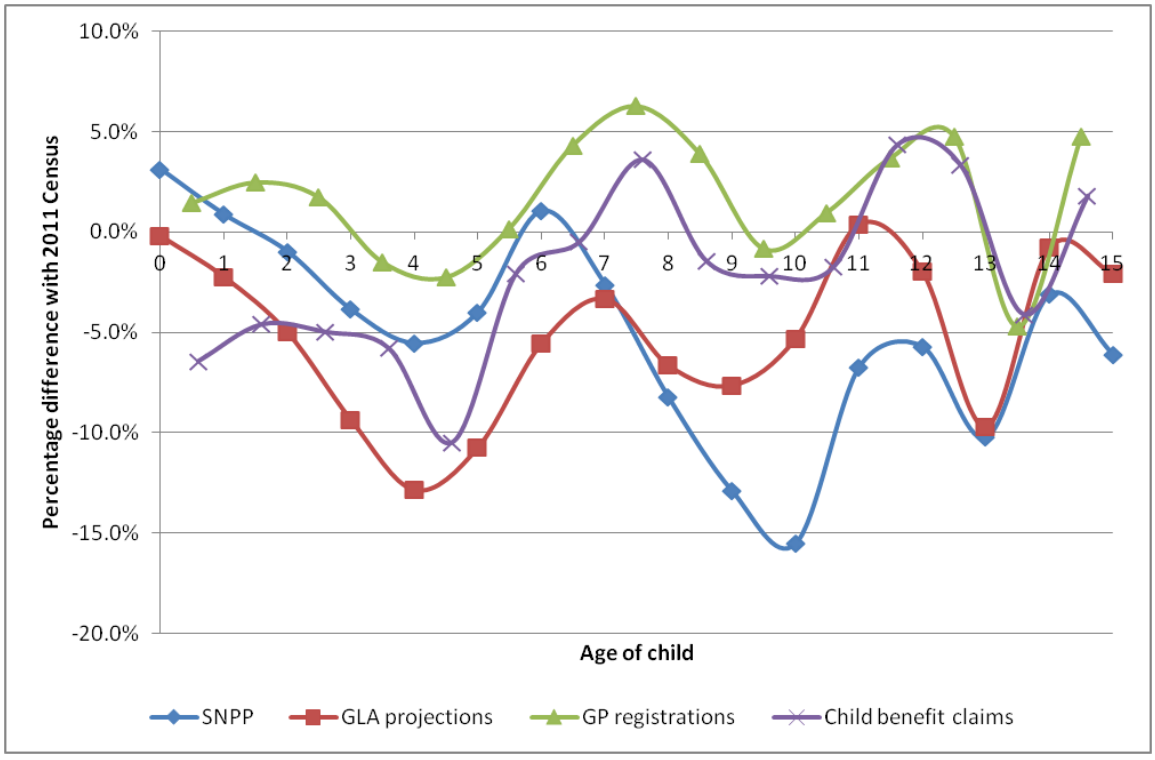


Chart A 4: Barnet

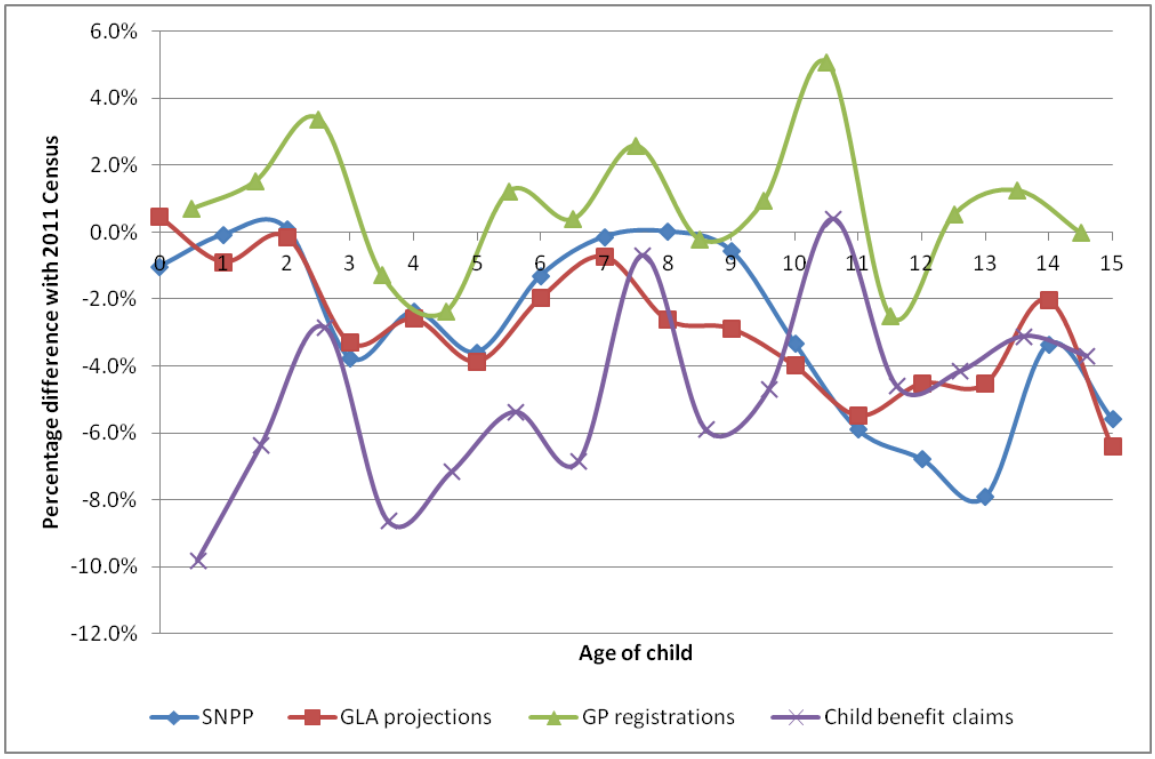


Chart A 5: Bexley

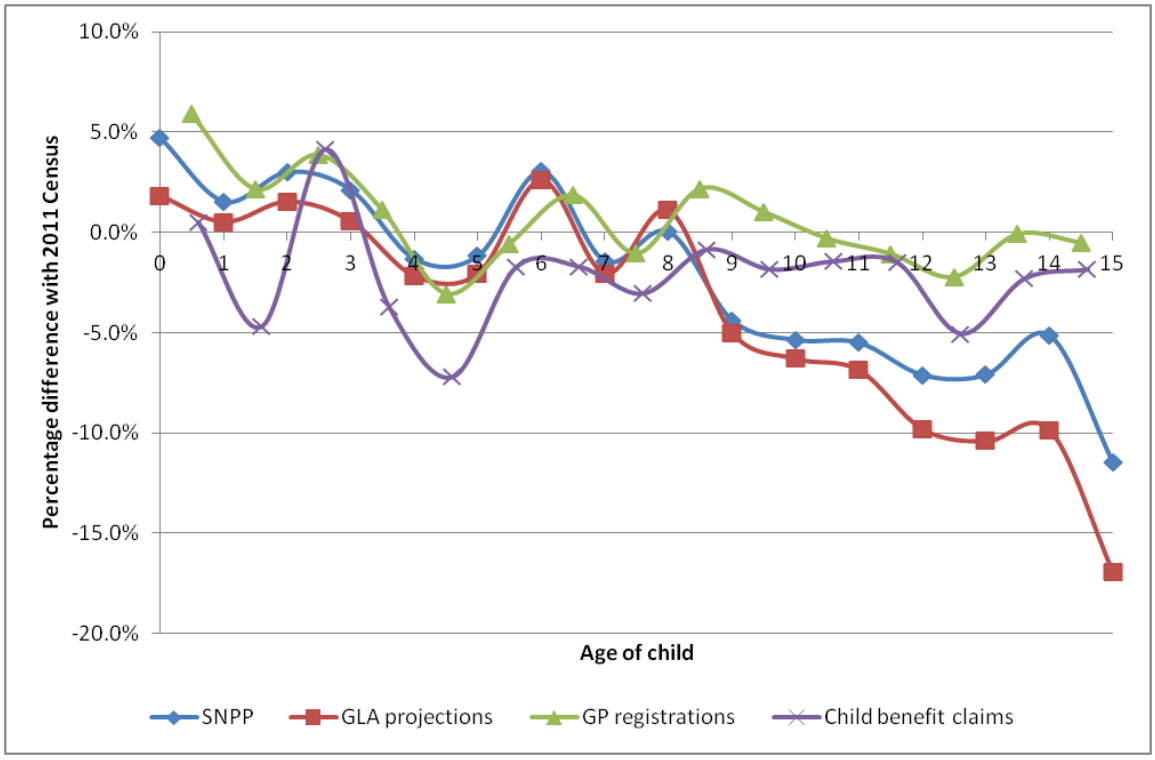


Chart A 6: Brent

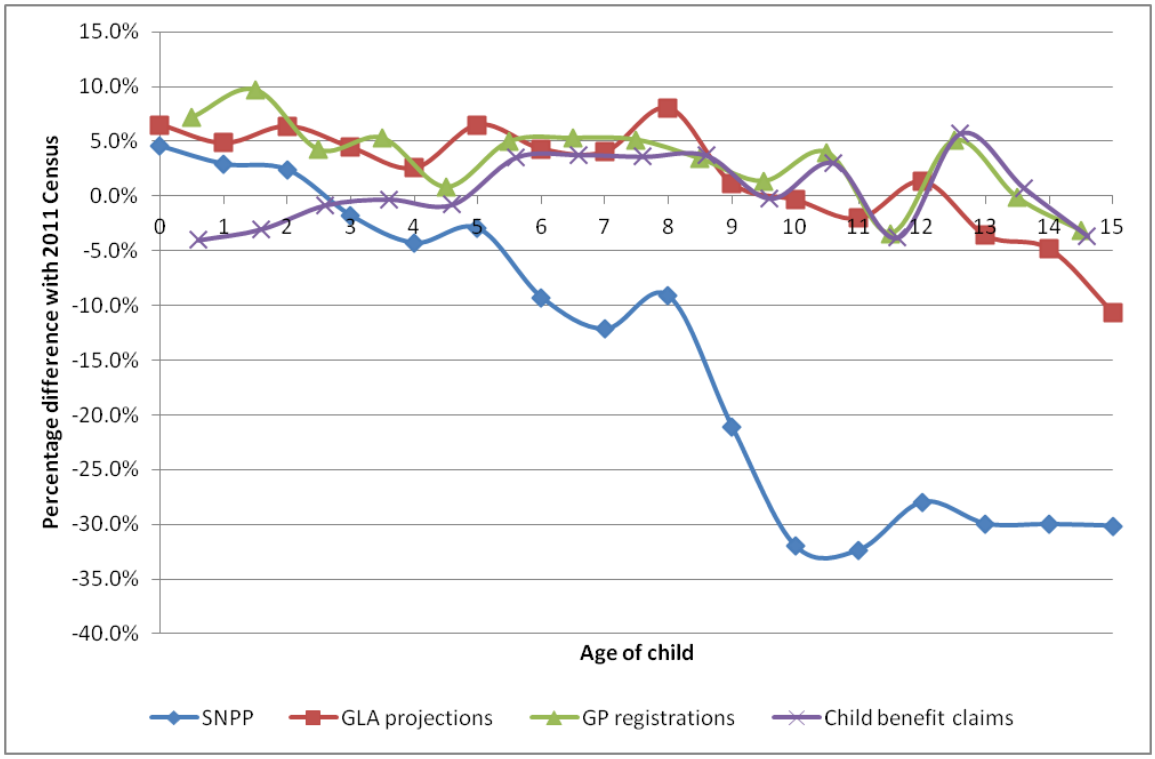


Chart A 7: Bromley

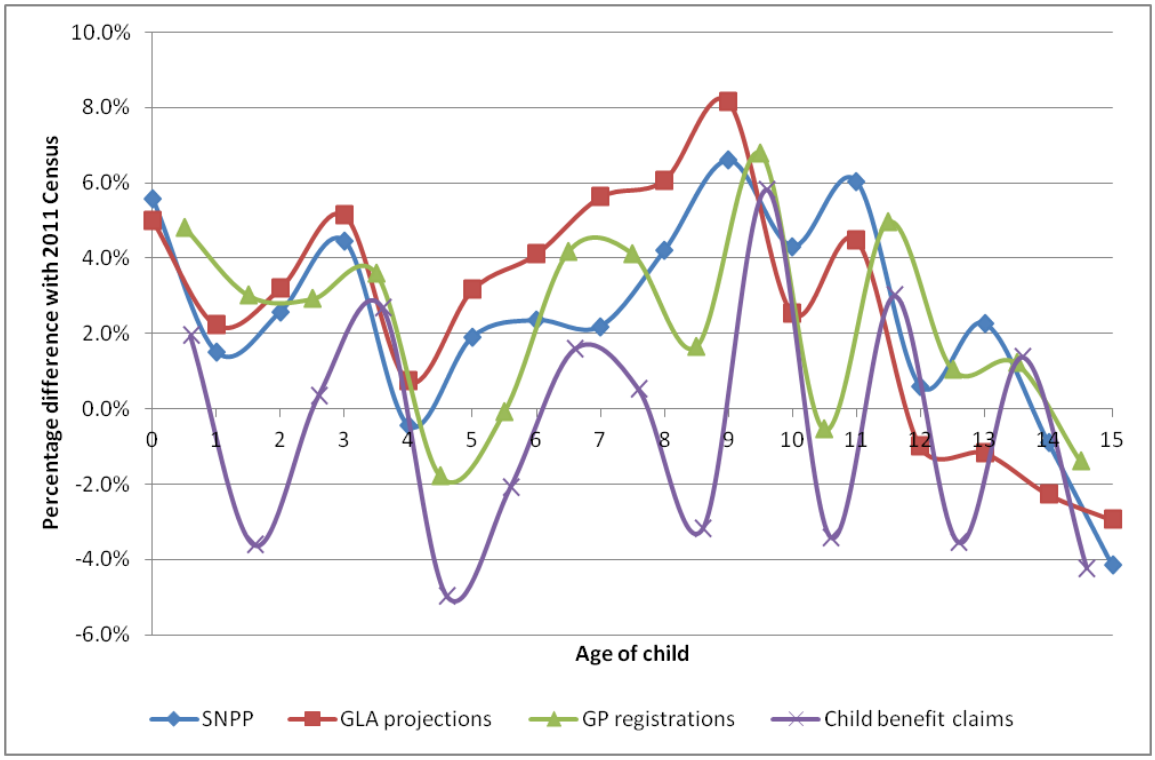


Chart A 8: Camden

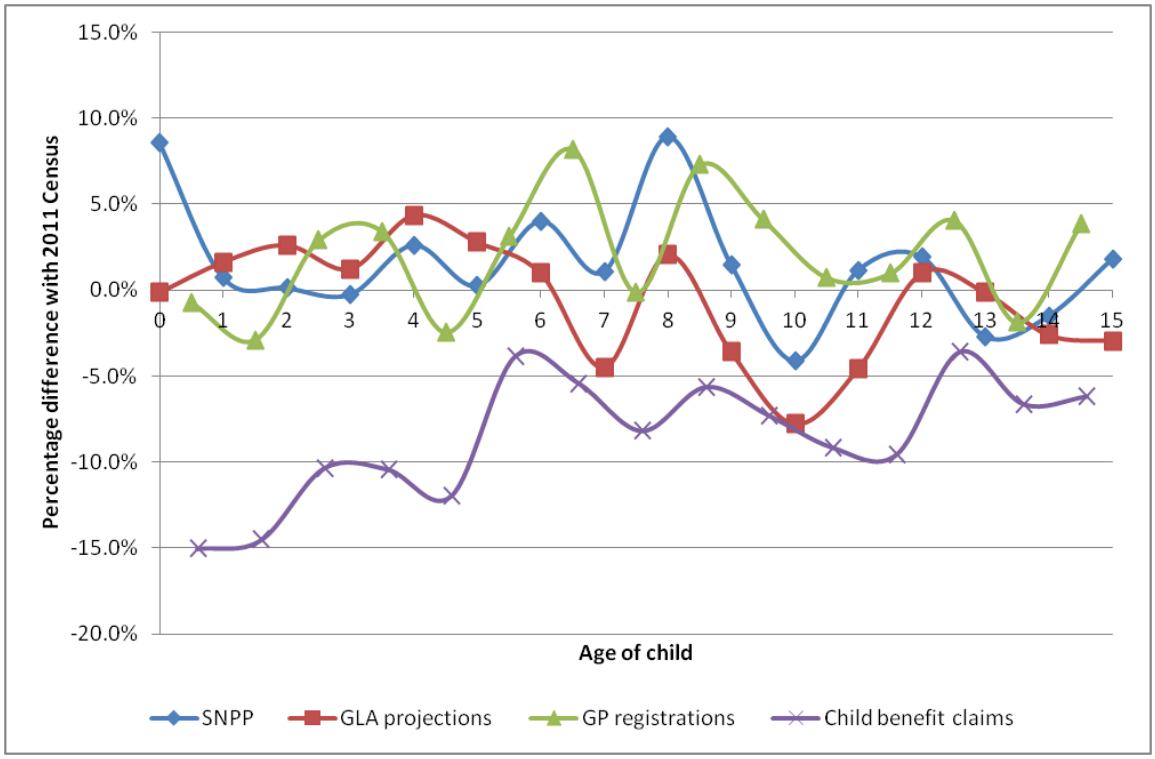


Chart A 9: Croydon

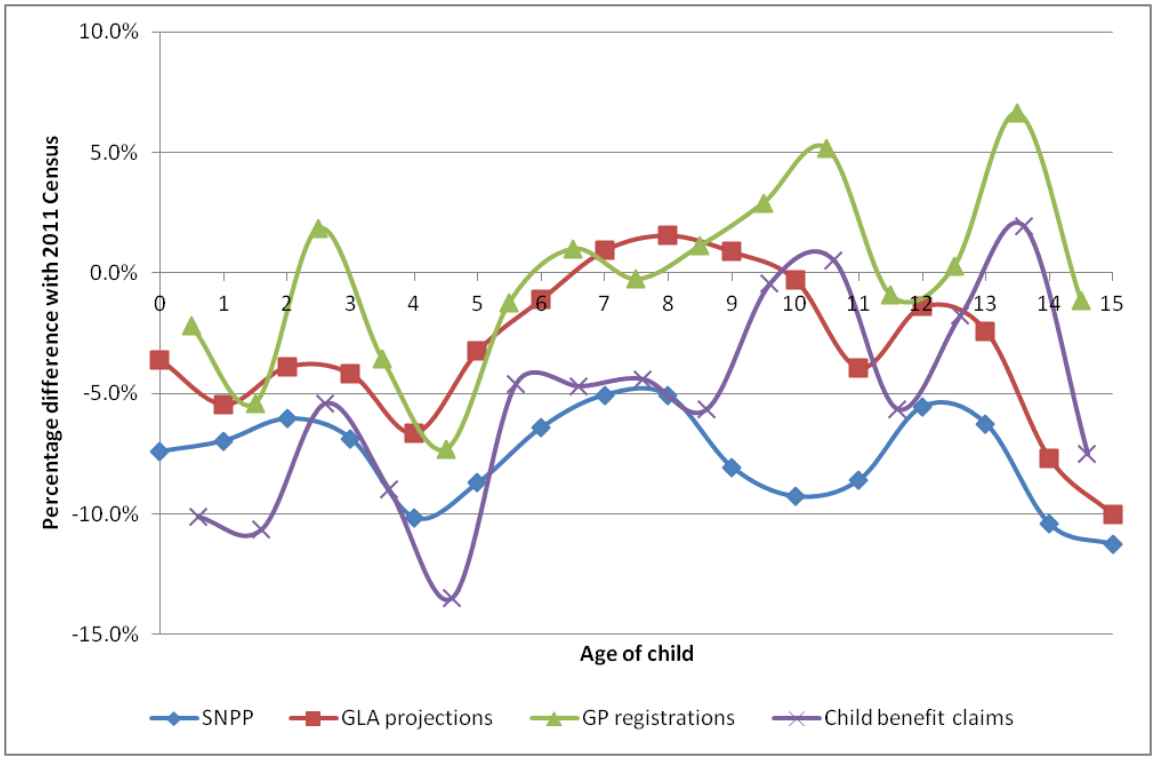


Chart A 10: Ealing

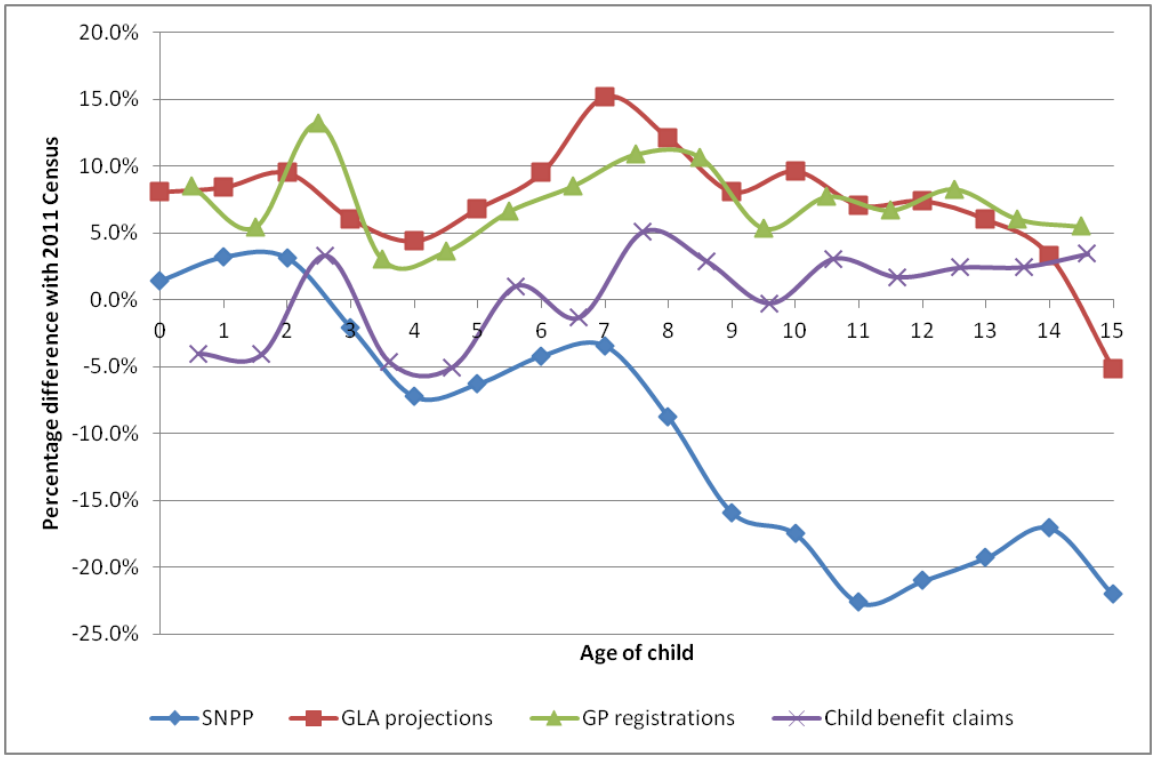


Chart A 11: Enfield

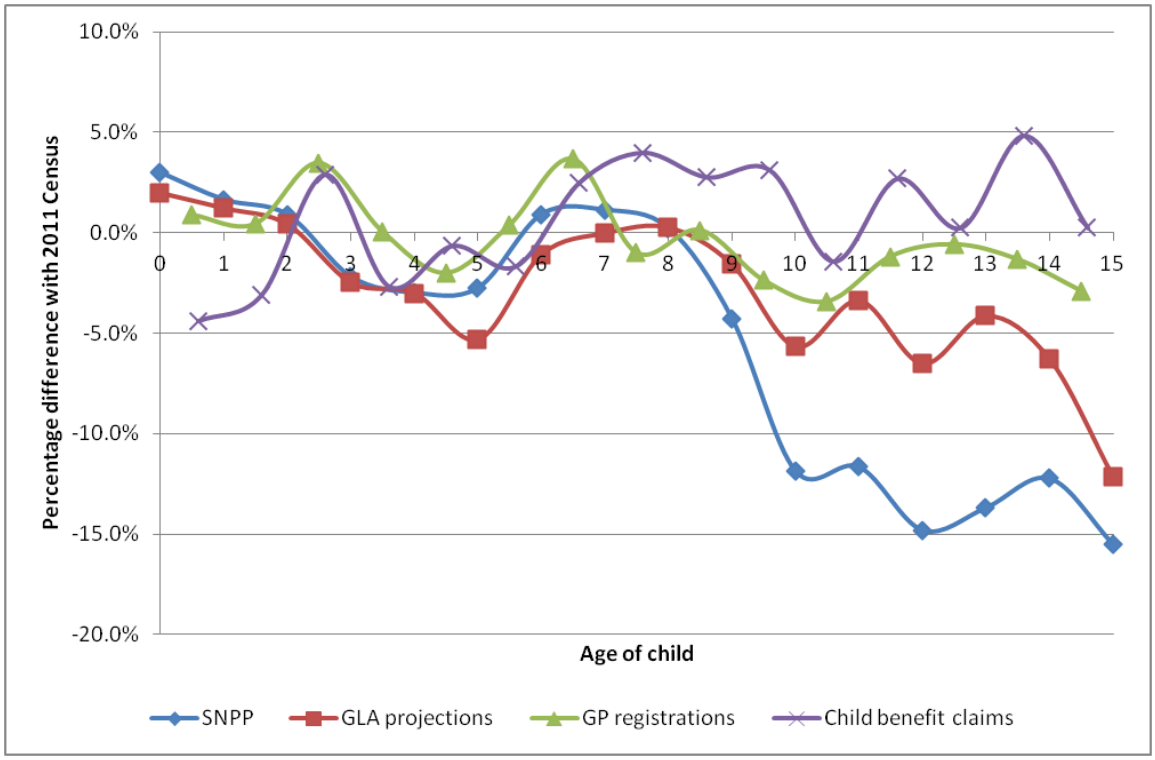


Chart A 12: Greenwich

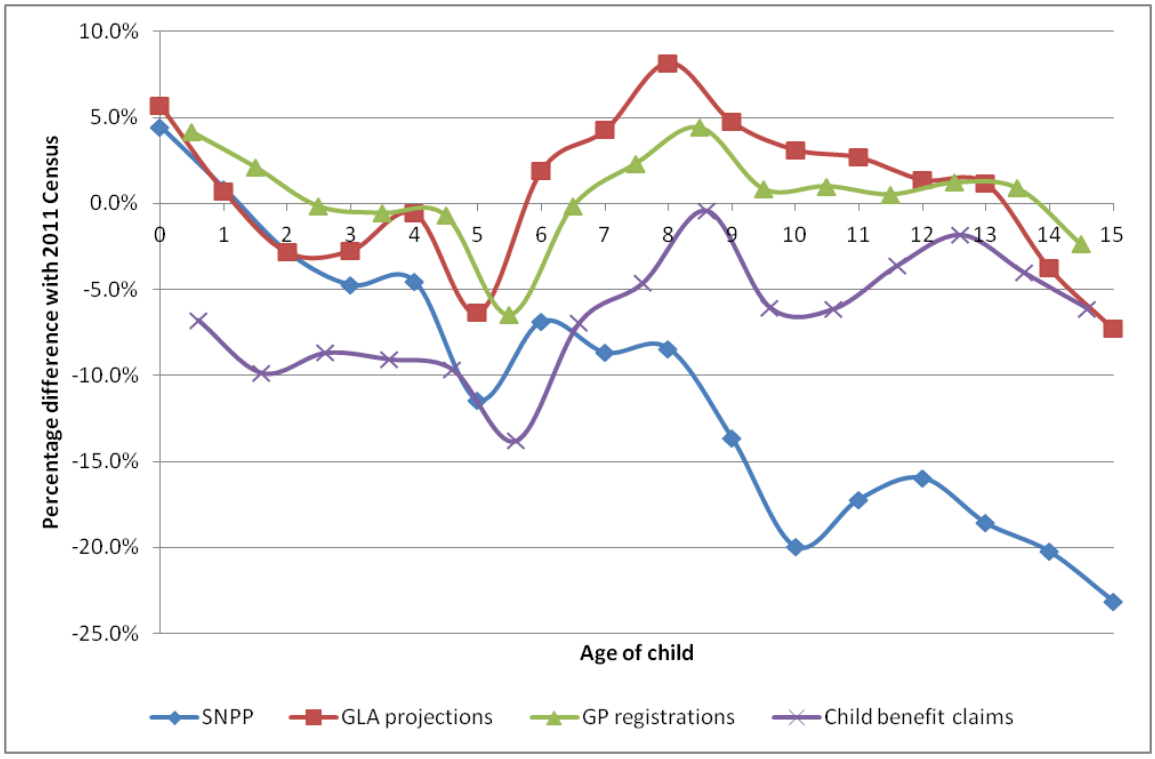


Chart A 13: Hackney

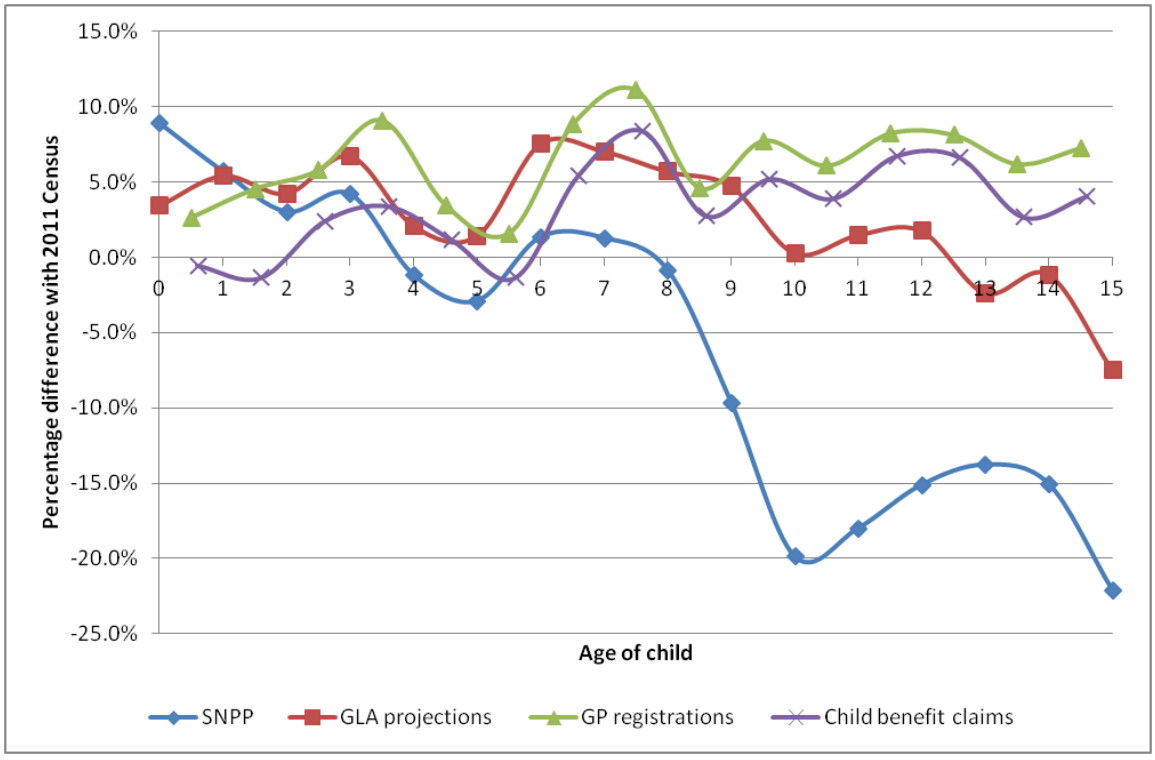


Chart A 14: Hammersmith & Fulham

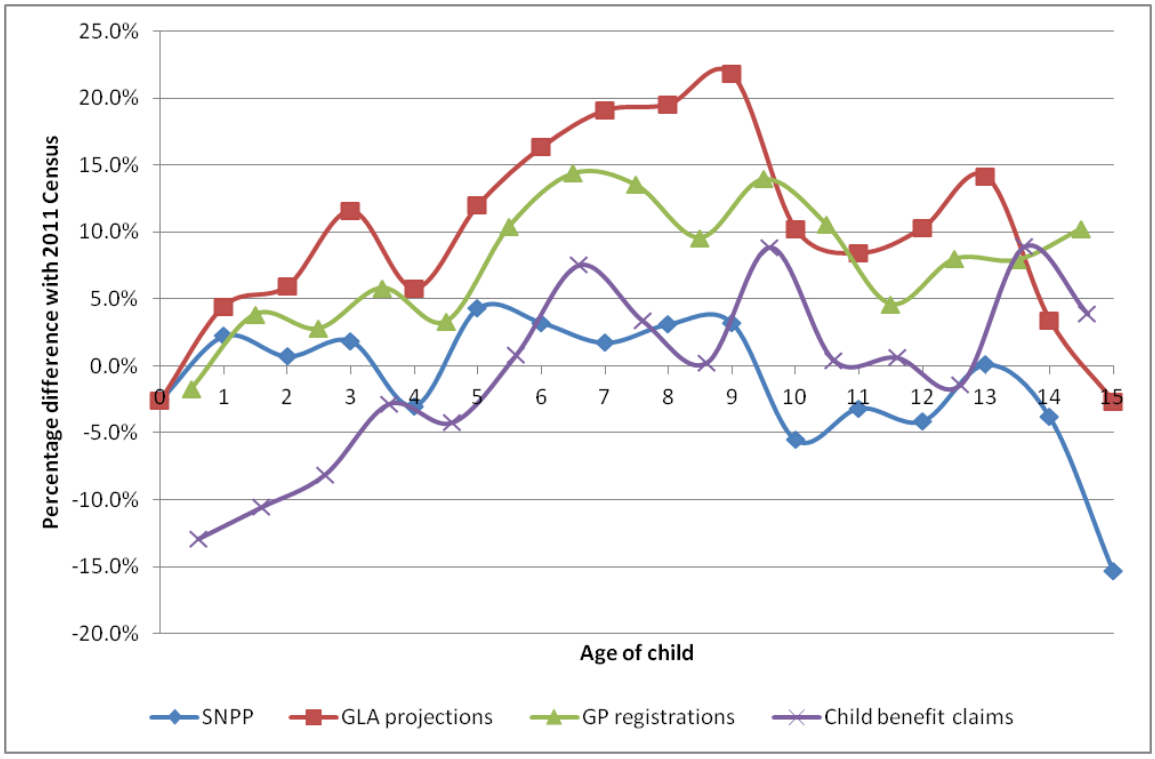


Chart A 15: Haringey

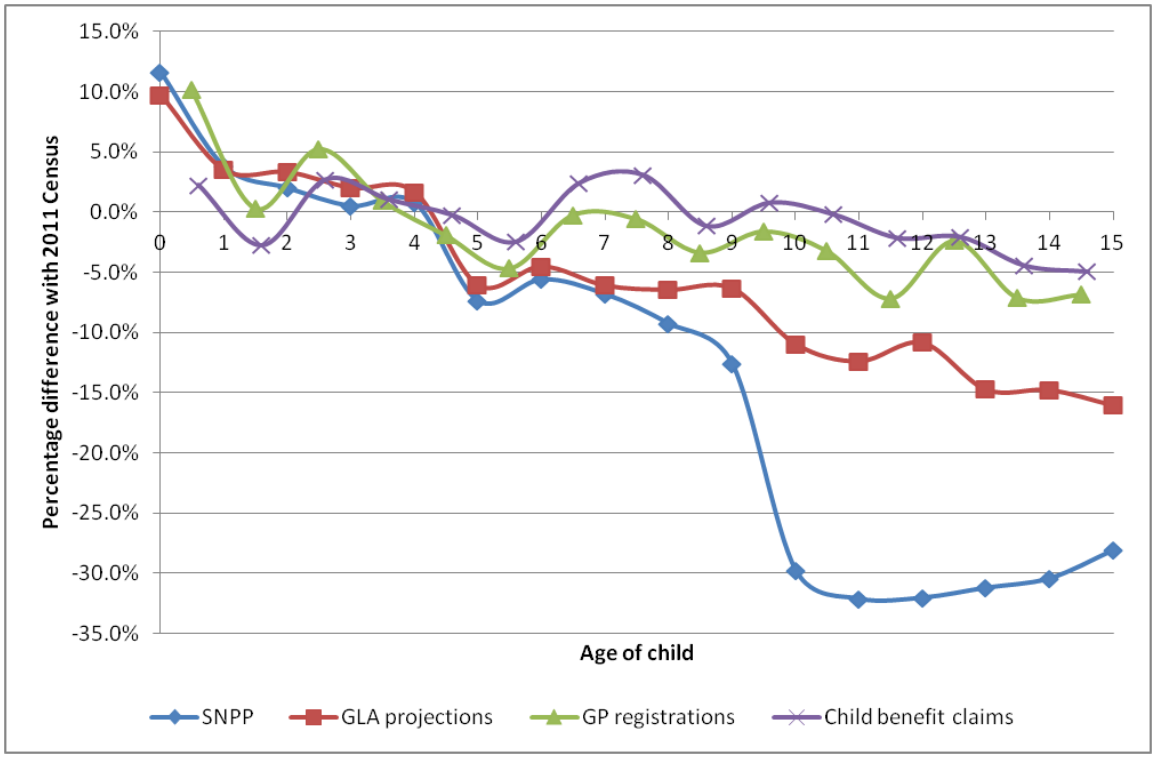


Chart A 16: Harrow

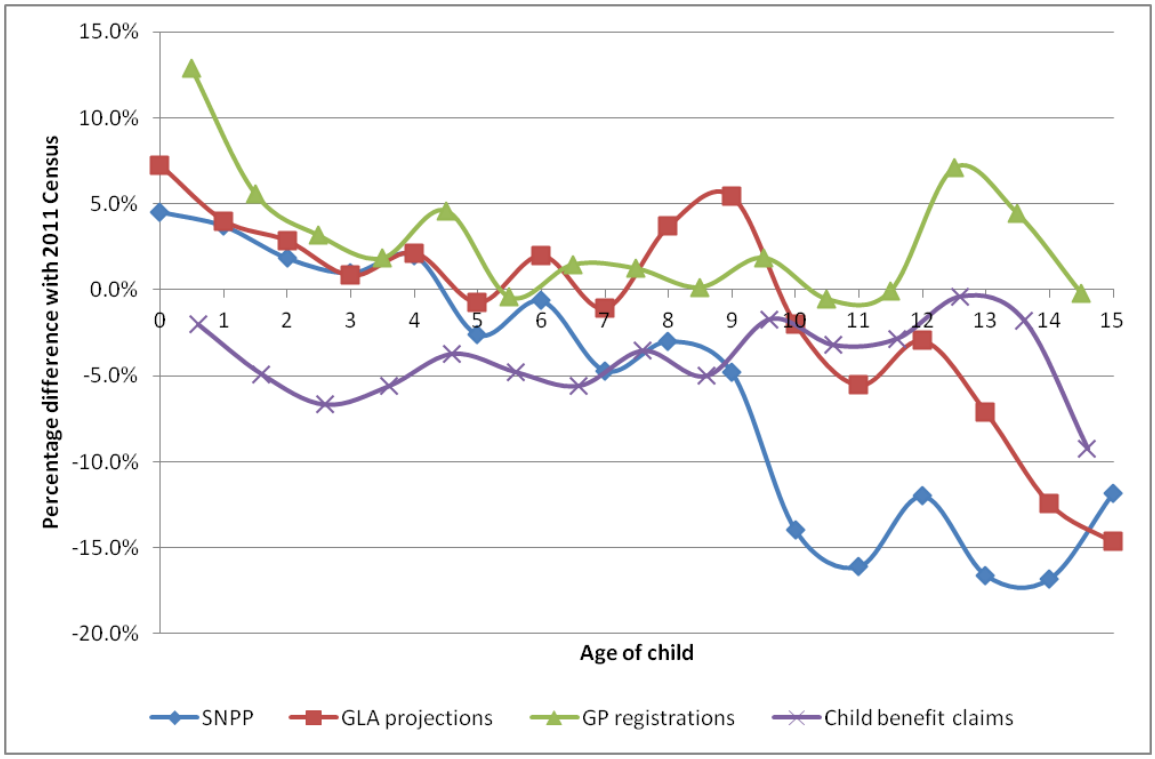


Chart A 17: Havering

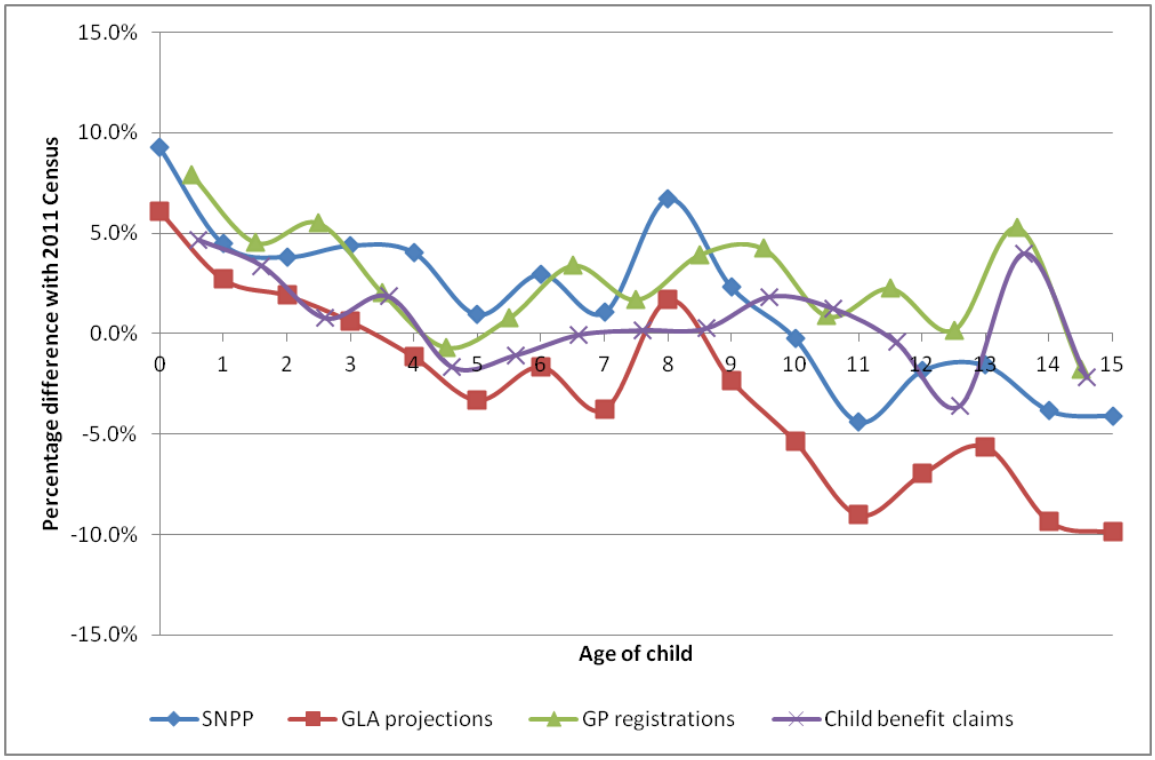


Chart A 18: Hillingdon

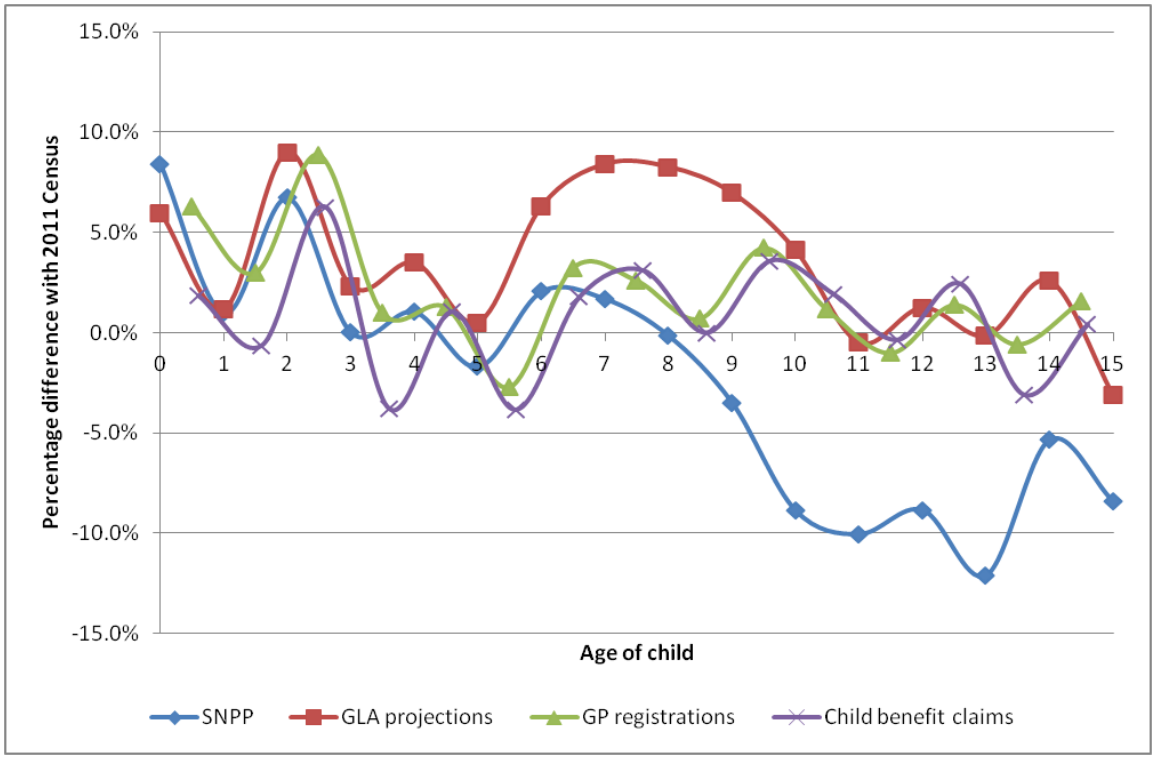


Chart A 19: Hounslow

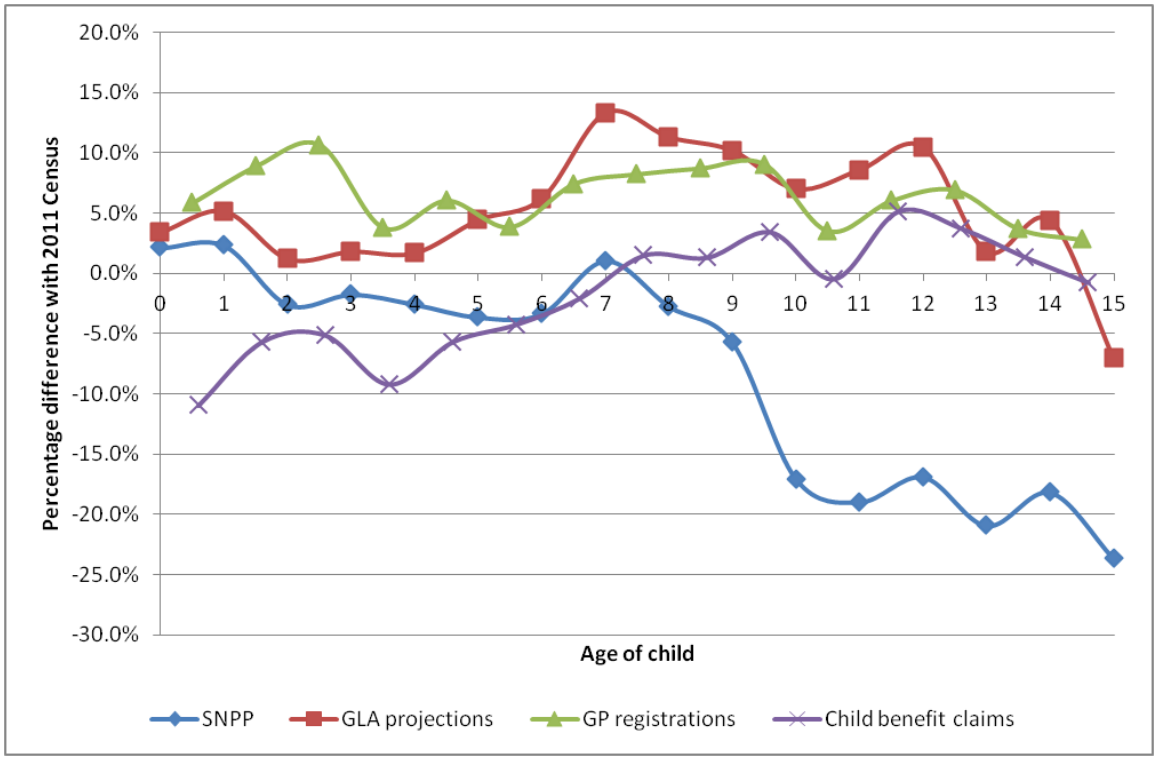


Chart A 20: Islington

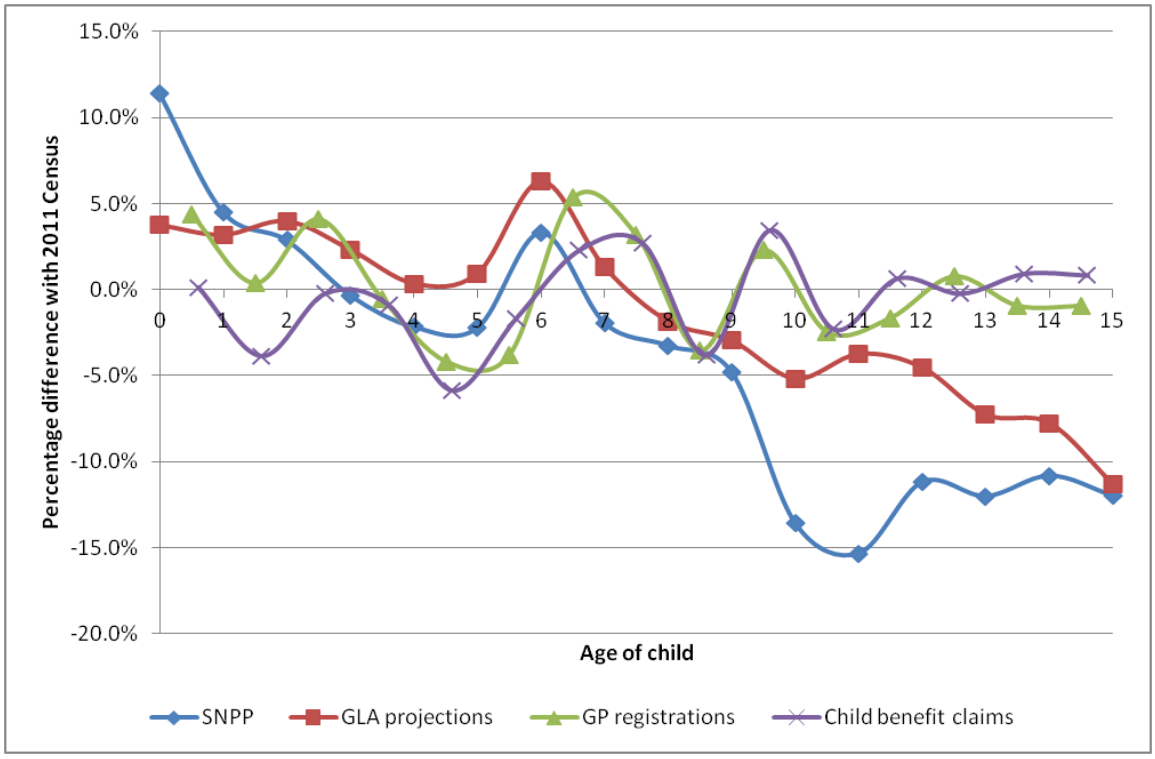


Chart A 21: Kensington & Chelsea

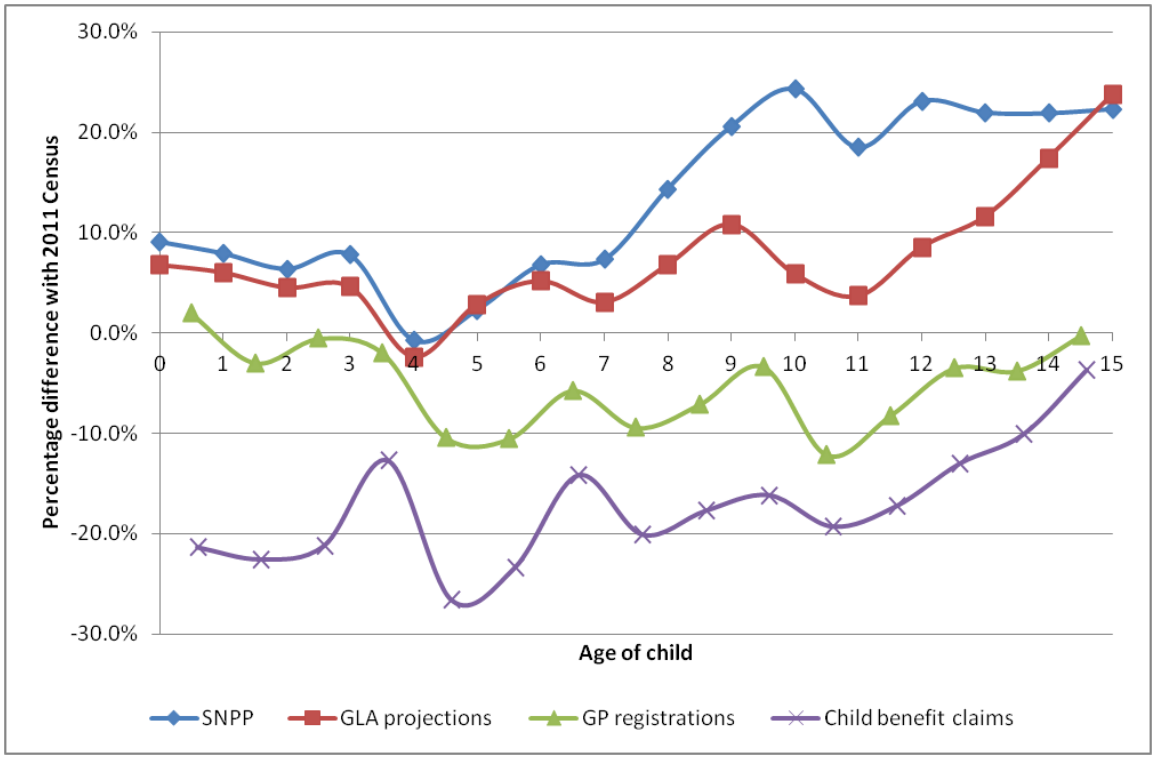


Chart A 22: Kingston upon Thames

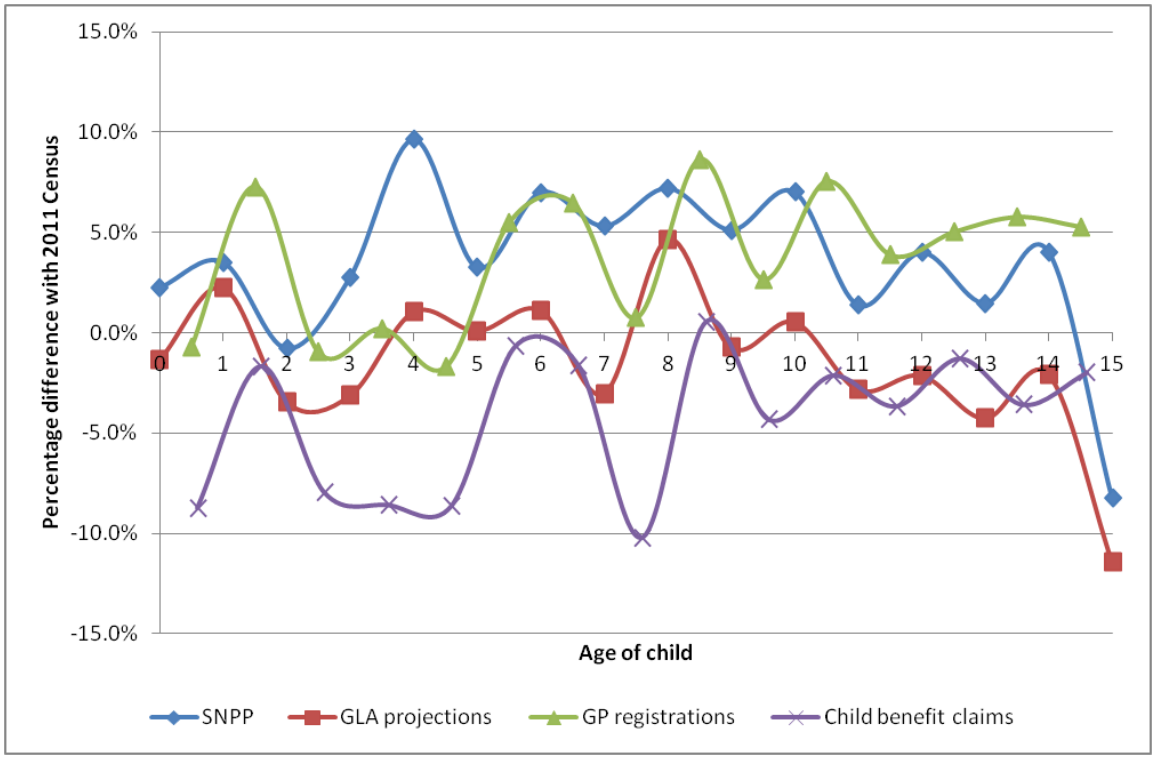


Chart A 23: Lambeth

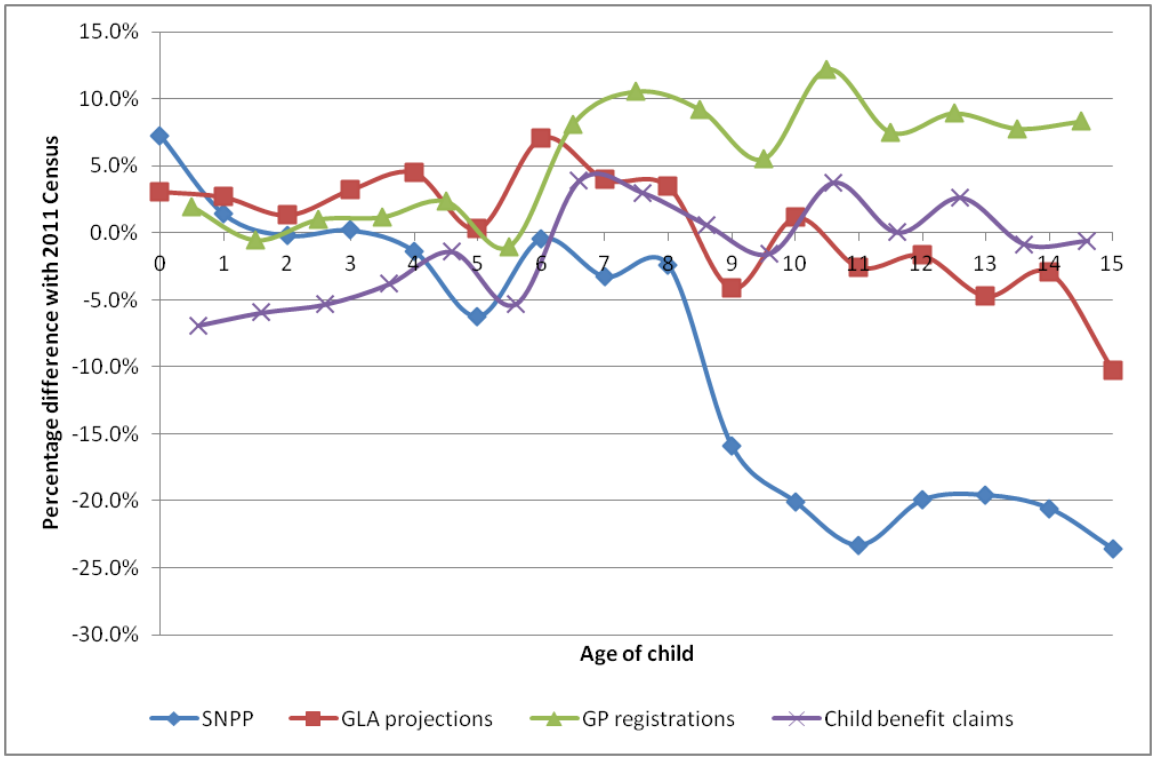


Chart A 24: Lewisham

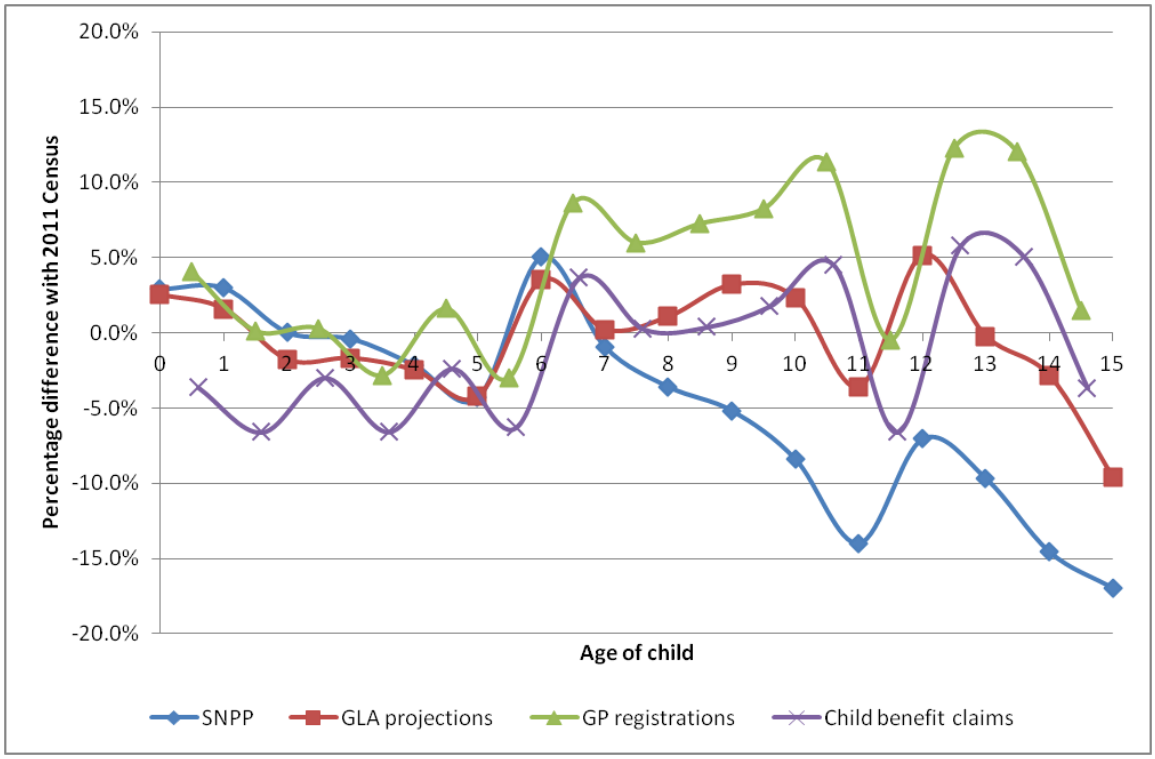


Chart A 25: Merton

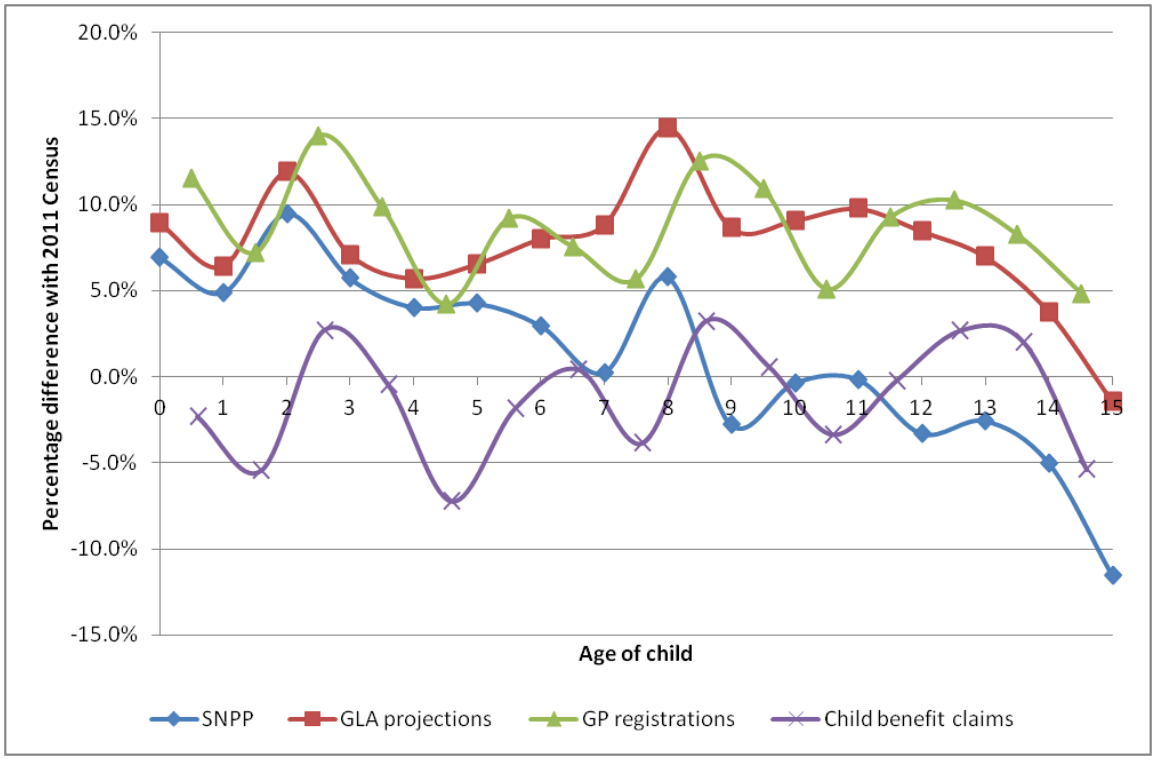


Chart A 26: Newham

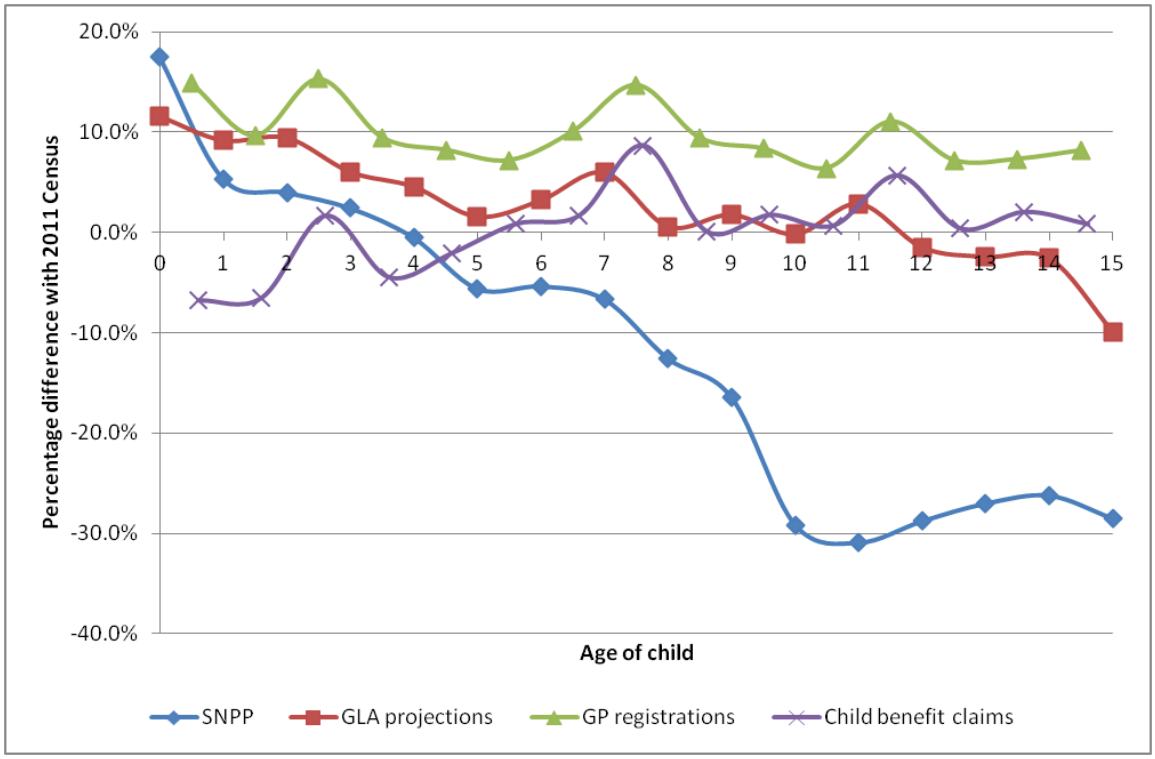


Chart A 27: Redbridge

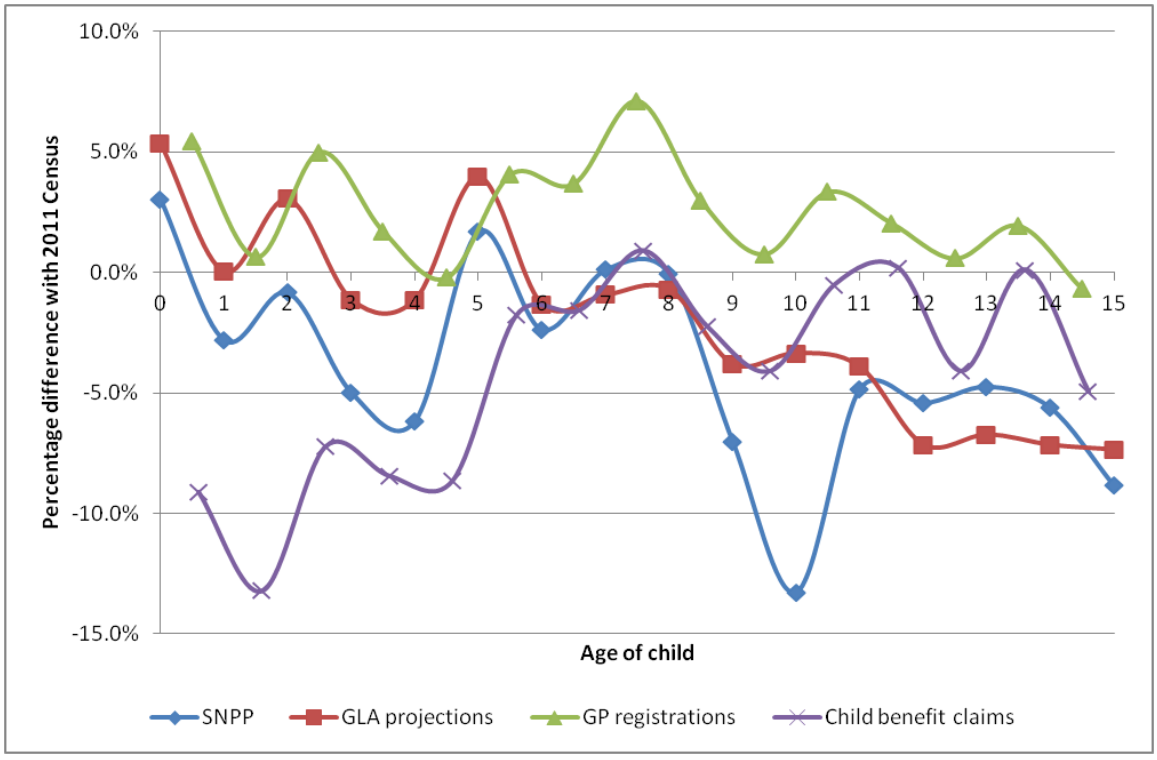


Chart A 28: Richmond upon Thames

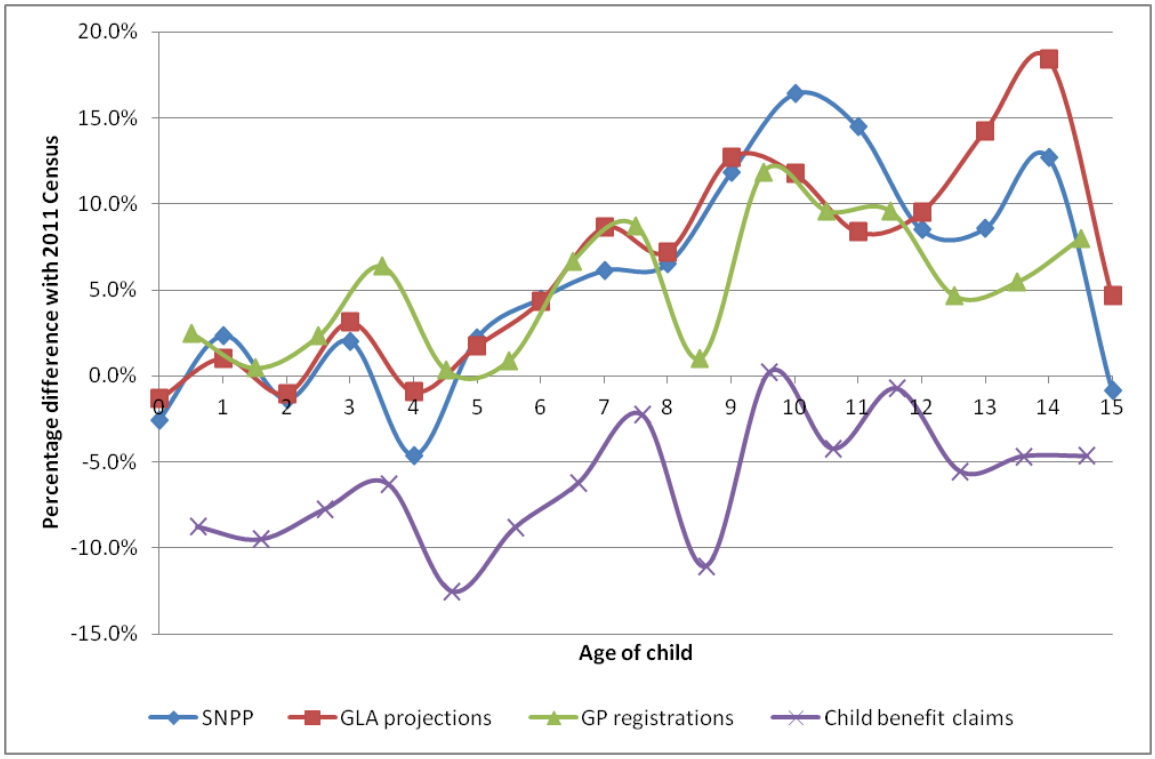


Chart A 29: Southwark

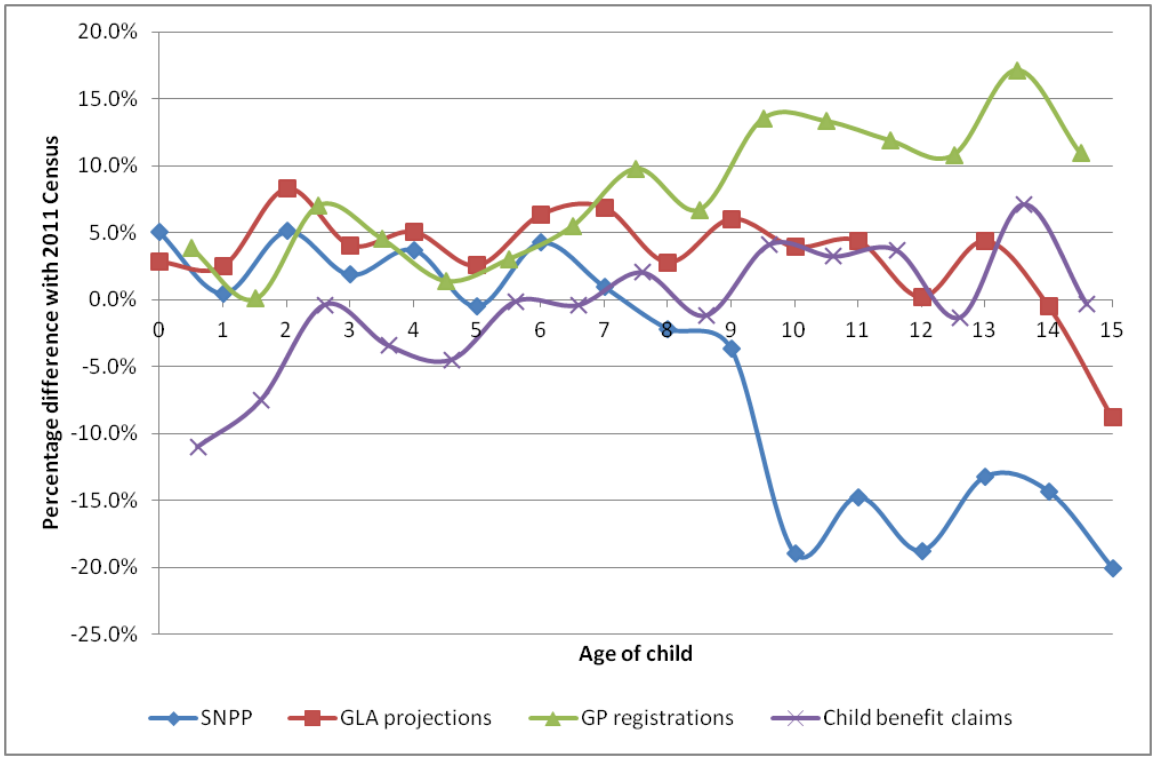


Chart A 30: Sutton

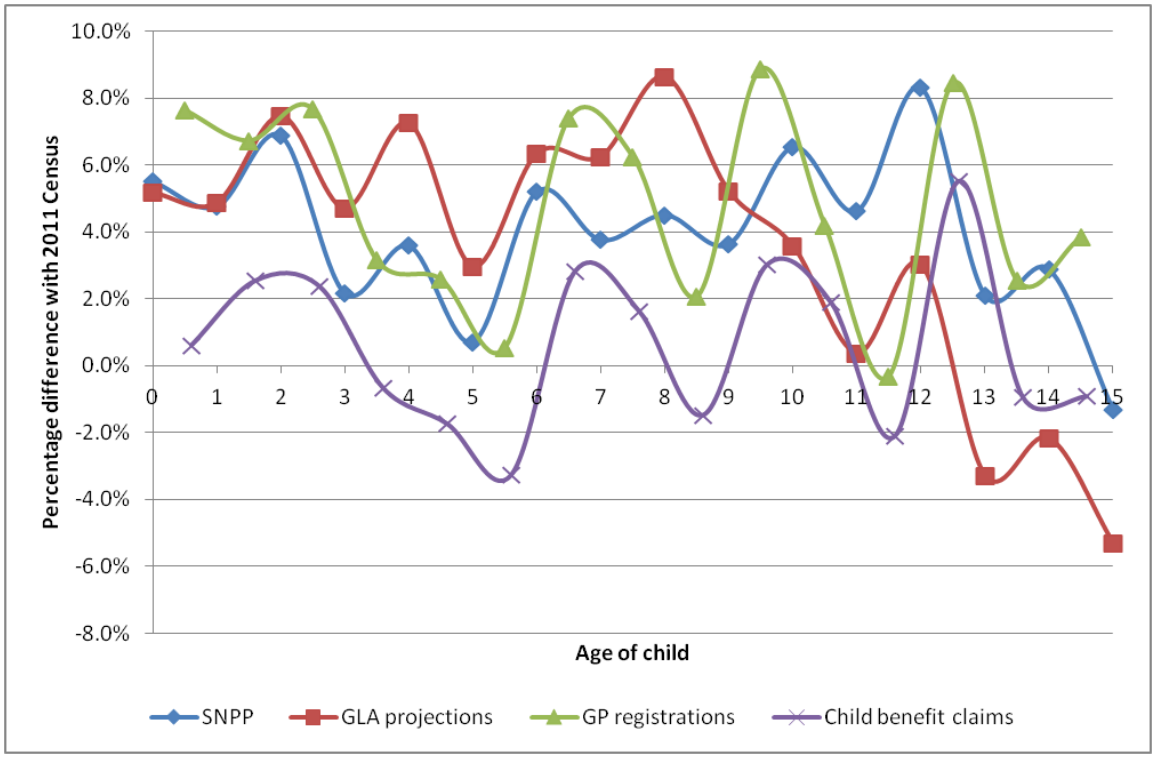


Chart A 31: Tower Hamlets

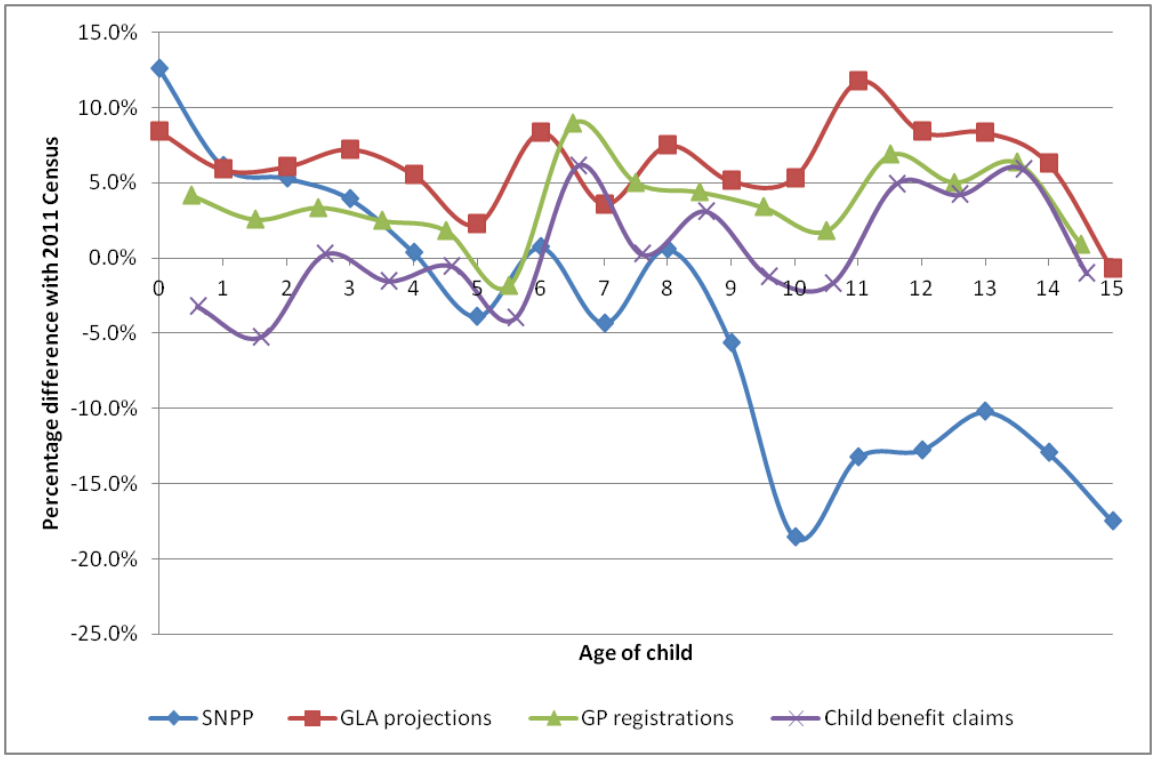


Chart A 32: Waltham Forest

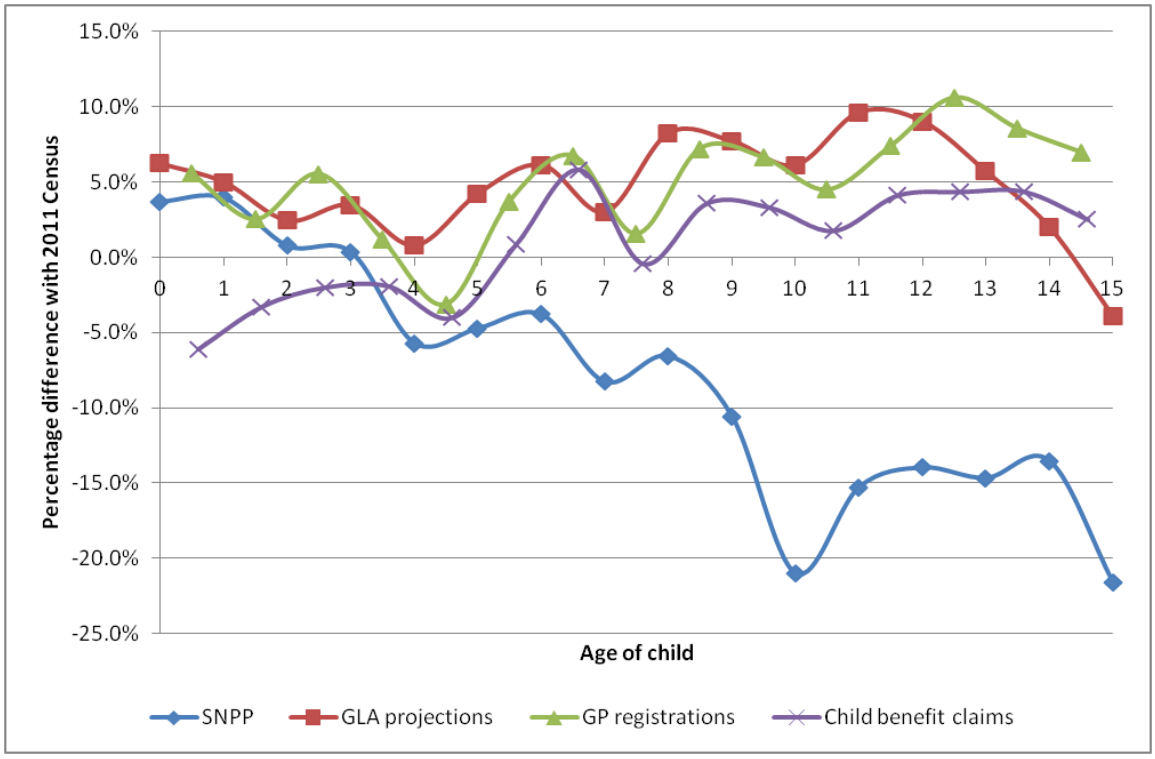


Chart A 33: Wandsworth

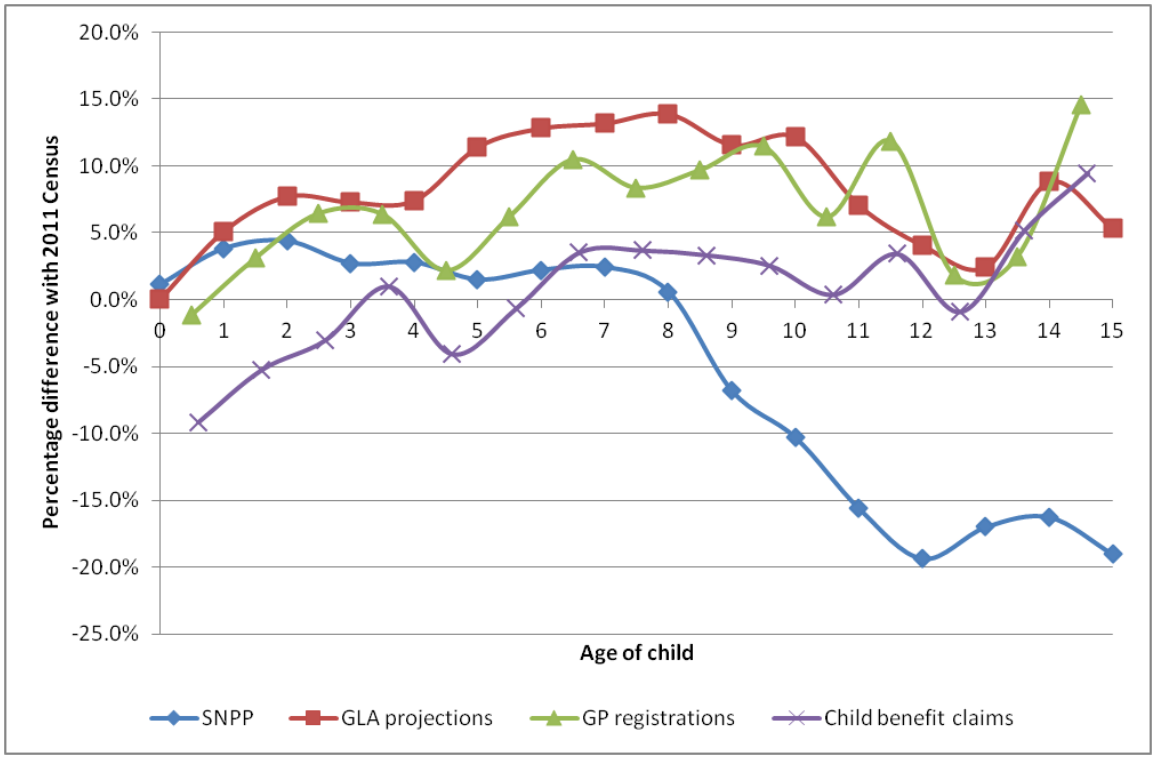
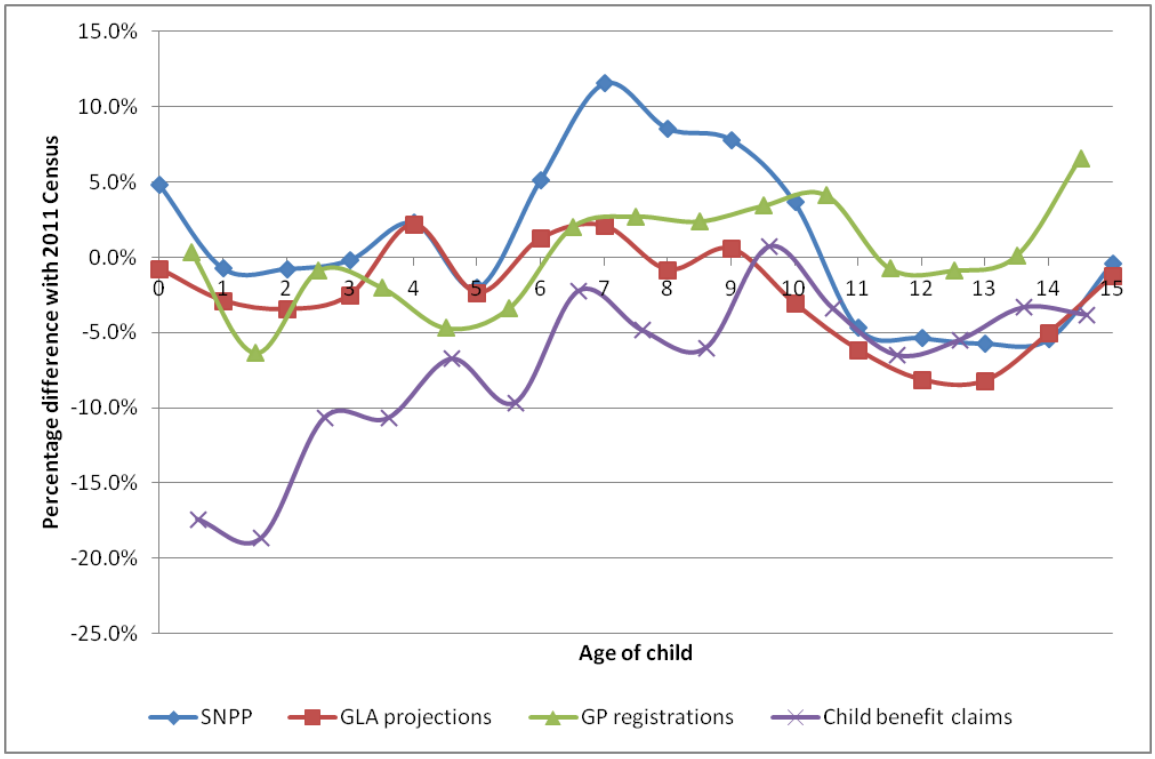


Chart A 34: Westminster



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