

# Alleviating Child Poverty: Insights from Policy, the Cost-of-Living crisis, and Enrichment opportunities

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## Overview of the Data Fellowship

During my data fellowship, I undertook three major projects. The first was a quantitative analysis, using IPPR's Tax-Benefit microsimulation, of the efficacy of different policy options for reducing child poverty. I modelled how changes to social security (such as removing the two-child limit or increasing the amount of Universal Credit that individuals receive) affects poverty rates across groups and the income distribution across households. This required a complex understanding of how poverty is measured and how the social security system functions. The results of my modelling were sent to Senior Advisors in government to support the ongoing work of the Child Poverty Taskforce. The second project was a comparison of different measures of inflation (Producer Price Index, Services Producer Price Index, Consumer Price Index) to assess the consistency of inflation across supply chains. The results of my analysis ended up being brought to the Data Science team at 10 Downing Street to investigate the sectors which I highlighted. The final project was completely different, as I was tasked with writing a blog-style piece proposing and defending a policy of individual enrichment accounts for children in households receiving Universal Credit. This policy proposal is available to read at IPPR's online research library. All of these projects provided me with a holistic understanding of both the causes and impacts of poverty and how nuanced policies which aim to alleviate poverty must be.



## Data Analysis

My first two projects were the most quantitatively intensive, allowing me to apply the skills I developed at university in a professional setting.

### Project 1: Child Poverty Modelling

I used IPPR's Tax-Benefit Microsimulation model, combining survey data from the Family Resources Survey with stochastic simulations, to evaluate alternative social security policies. Policy changes were implemented in Excel, with Python sampling the population to simulate effects. I analysed outcomes across all children, those in lone-parent households, and those in deep poverty, generating efficiency rankings



and graphs in Excel to assess which policies were most effective at reducing poverty.

### Project 2: Inflationary Analysis

I worked with the Cost-of-Living team at IPPR to analyse inflation across UK supply chains using the Producer Price Index (PPI), Services Producer Price Index (SPPI), and Consumer Price Index (CPI). I compiled and cleaned over 50 ONS datasets, creating a comparator table to show changes to the price level over time as percentage changes and as relative to an economy-wide baseline. This allowed me to identify sectors with unusually fast or slow inflation and assess claims of "greedflation." I produced detailed graphs comparing inflation imported from overseas, inflation within domestic manufacturing costs, and inflation experienced by consumers to understand how costs are being transmitted through supply chains.

## Key Skills Learnt

- **Research:** Learnt to recognise when to step back from imperfect data and make reasoned assumptions to provide clear, actionable insights. Developed resilience in navigating limited or misleading information while still producing strong policy recommendations.
- **Analytical:** Applied university skills in sampling, hypothesis testing, and data cleaning to real-world policy problems. Learnt the importance of balancing statistical rigour with political pragmatics and government priorities.
- **Professional:** Developed flexibility and a proactive attitude by saying yes to varied tasks. Gained valuable networking experience through talks by Ed Davey & James Cleverly, policy workshops with experts, and a visit to the incredibly welcoming team at IPPR North.