The UK's young adults are navigating a very different economic landscape to earlier generations, including low real wage growth, lower likelihood of owning their own home and the uncertain prospects of Brexit. **Rahat Siddique** explores another potential source of variation across generational groups: their consumer preferences and the consumer prices that they face.

The cost of being young: measuring intergenerational consumer prices

The UK's consumer prices index (CPI), a standard measure of inflation, is made up of a 'shopping basket' of items bought by the representative consumer. But the index may not reflect individual experiences of price rises (or price falls) because different people buy different items from the basket, reflecting demographic factors such as their age, gender and location.

For example, people living in rural parts of the country might spend more on fuel and motor vehicles, while those in urban areas may spend more on public transport. Younger members of the population may buy pushchairs and nappies for their children, while elder groups will not.

Clearly, there are intergenerational consumption differences, but does that matter? One reason that it might matter is that intergenerational variation in consumer prices could have macroeconomic implications. Malmendier and Nagel (2011, 2016) find that economic conditions in an individual's past affect their future investment decisions and inflation expectations.

For example, the negative macroeconomic shock of the Great Depression made a generation of Americans less likely to invest in the stock market and more pessimistic about future stock returns even if they did invest. Equally, experiences of price variation and inflation could have lasting effects on consumers.

Do millennials have a unique consumer basket?

There has been a lot of discussion recently about the 'millennial' generation: those who were born between 1981 and 1996 – which includes people who started their working lives during the global financial crisis of 2007-08 and its immediate aftermath.

Kurz et al (2018) do not find a distinct trend in consumption preferences for millennials – debunking the myth of avocado-eating, Uber-riding young adults – but they do note that across

Across generations, the young have repeatedly had different consumption choices than older cohorts

The cost of a fixed basket of household items has been consistently higher for the under-30s

generations, the young have repeatedly had different consumption choices than older cohorts. There have been changes in millennial spending, compared with previous generations, which are attributed to changes in housing costs and low wage growth. These changes mean that millennials have less disposable income than their parents' generation at the same age.

That said, the opportunities afforded to this generation have improved: 40% of the UK population held a university degree in 2017 compared with 19% in 1990; and the unemployment rate for recent graduates, those who graduated in the last five years, halved between 1993 and 2017 (Office for National Statistics, 2017). Yet millennials are navigating a very different economic landscape, and living standards have not improved for them relative to the previous generation.

Today's young adults aged 25-29 are considerably less likely to own a home at a given age than those born only five or ten years earlier. For those born in the late 1980s, the homeownership rate was 25% at the age of 27, compared with 33% for those born five years earlier (Cribb et al, 2018).

Age-specific price indices have been produced in the past. Until 2016, the Office for National Statistics (ONS) used alternative weights to create a 'pensioner RPI (retail prices index)' because of this group's reliance on pension benefits, implying different spending patterns compared with the rest of the population.

Similarly, it is plausible that a 'youth CPI' could be constructed to reflect the preferences of the UK's young adults, who are more likely to be renting than the previous generation; who are concentrated in cities; and who, unlike their parents' or grandparents' generations at the same age, have experienced extremely low real wage growth (or falling real wages) for more than a decade (Blanchflower et al, 2017).

Measuring intergenerational consumer prices in the UK

We use data from the Living Costs and Food Survey (LCF), which categorises expenditure variation across household groups by age, to create weights by generational group to develop a more granular picture of the consumption patterns of millennials.

In 2018, the LCF showed under-30s spending a higher proportion of their income on housing and fuel than any other age group, whereas 65-74 year olds were spending the most on recreational and cultural activities. We use CPI price quotes data to create a weighted basket of goods and services for each age group. After cleaning the dataset, we are left with a panel of 27 million observations.

Selecting basket items

The ONS emphasises that the CPI is a fixed-weight index and not a cost of living measure. A consumer price index is interpreted as the average purchases for the entire population, while a cost of living index can be measured in many ways. For some, this means the cost of items needed to maintain a certain standard of living, while others define it as the cost of basic essentials.

The ONS CPI basket is reviewed annually, which means that every year items are added and removed. For simplicity, we only keep items that are present over the 22 years, leaving us with 172 unique items to construct our basket, spanning the period from January 1997 to April 2019.

Our basket contains essential household items that are universal across genders, regions and ages. But this also means that we exclude all electronic devices that have been replaced by a new technology (cassettes to CDs, for example) or seen improvements in model (for example, televisions and smartphones) despite, arguably, being bought by consumers regularly. Therefore, our basket may not contain items reflective of all consumption trends.

Our basket is made up of 47% food and drink and 14% various articles of clothing. Household costs and cleaning make up 17% of our basket, and transport only makes up 4%.

Stylised facts

In real terms, the increase in the mean price of our universal basket has increased dramatically across all age groups, doubling over 22 years. In recent months, there has been a decline (an average of 14% between September 2017 and April 2019). Expenditure on the items in our fixed basket has been consistently higher for the under-30s than for other age groups, and has been more pronounced since 2010 (see Figures 1 and 2).

Of course, there are also regional disparities in the UK. Although there is no regularly recorded statistic on regional inflation levels, a recent ONS analysis of 2016 prices demonstrated the variation across UK regions.

This basket construction has static weights, so we cannot attribute this change to direct differences in preferences or geographical location. But this trend could indicate a tendency for young people to purchase items that are becoming more expensive. Across regions we see a similar pattern, where under-30s have the most costly consumer basket compared with other age groups.

Using generational weights

We use the LCF survey data on household expenditure by age to create our weights. In doing so, we face two challenges. The first is that our basket is more disaggregated than the LCF survey. This means that we have to adjust for having used the same weight multiple times for different items. We then rebase the weights, so that they sum to one for our fixed basket of goods.

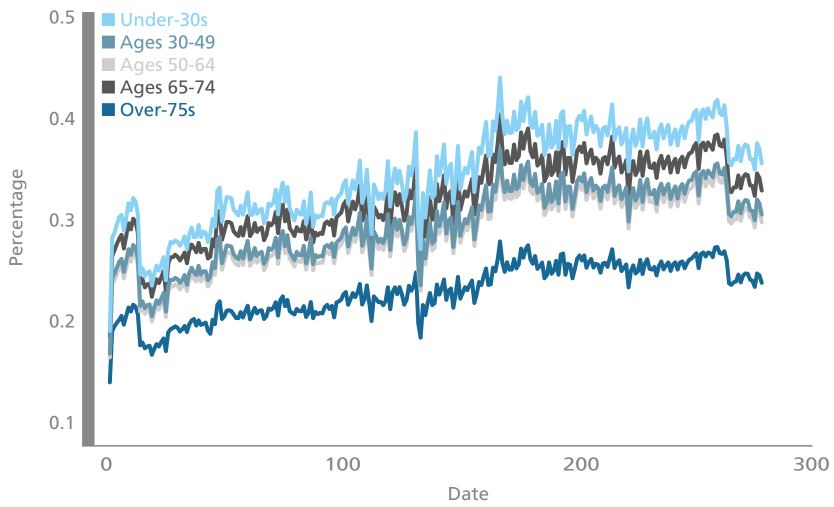
Our second challenge is using static weights for our panel data: static weights assume that consumption preferences for age groups remain the same over time.

To resolve the latter issue, we create dynamic weights for two additional years – 2001 and 2008 – by repeating the methodology used for 2018 weights. Comparing generational groups in 2008 and 2018, we find that consumption has increased in real terms by an average of 22% across all ages, though highest for over-70s (23.2%) and those aged 50-64 (22.5%).

A similar trend is apparent comparing 2001 and 2018: the average increase was 45% and highest for the 50-64s (48.1%) and under-30s (47.1%) – see Figure 3. In 2001, the under-30s basket cost £113; in 2018, it had increased to £166. The

Figure 1:

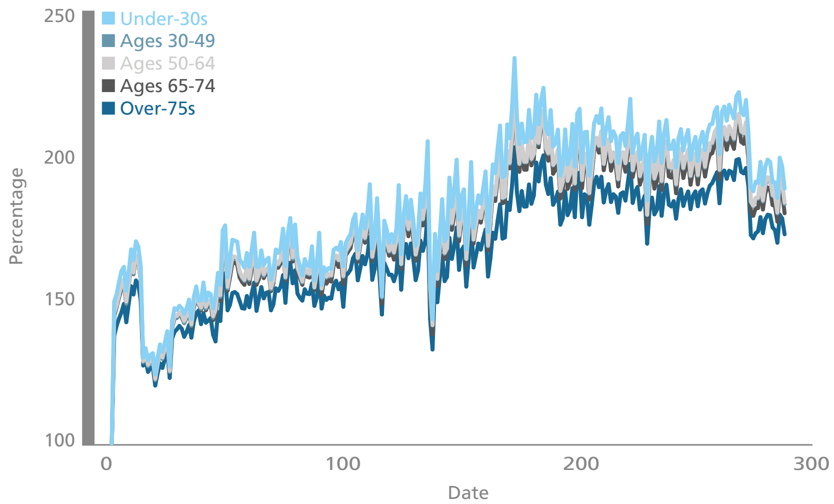
UK mean basket over time, nominal



Notes: Real price January 1997 to April 2019 where January 1997=100, rebased weighted-basket.
Source: ONS

Figure 2:

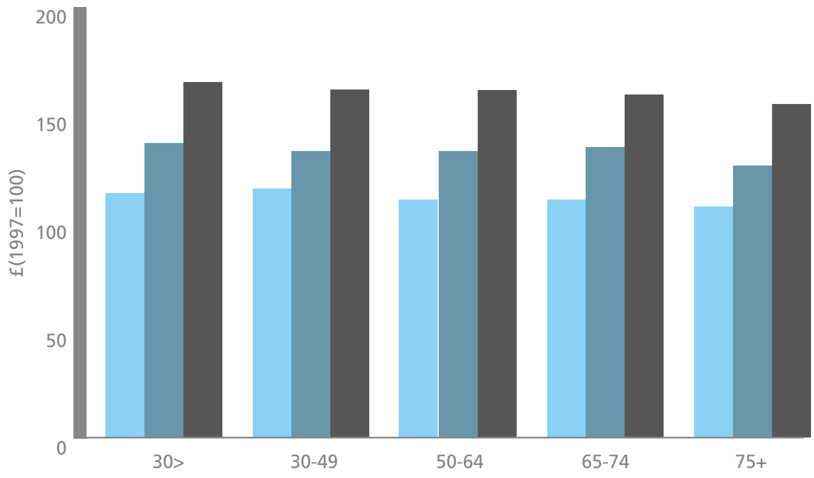
UK mean basket over time, real



Notes: Real price January 1997 to April 2019 where January 1997=100, rebased weighted-basket.
Source: ONS

The costs of being young extend beyond consumer prices for the UK's young adults

Figure 3:
Real basket cost over time, UK



Notes: Real price for annual basket where 1997=100, rebased weighted-basket.
Source: ONS

basket for the over-75s cost £107 in 2001, rising to £155 in 2018. This indicates that preferences for universal goods have not increased anomalously for young people, but have followed the same trend.

Policy implications
Considering the impact that negative macroeconomic experiences can have on an individual's investment decisions and inflation expectations, there could be scope for smarter policy. The UK's young adults not only joined the labour market during the Great Recession but they will also continue their adult lives navigating the economic effects of leaving the European Union. Combined, these pose challenges to living standards and are likely to inform the long-run investment and saving decisions of millennials.

The ONS (2018) finds that over 50% of young adults don't have a savings account. While there are many reasons for this, interventions such as automatic pension enrolment demonstrate the power of small government policies in addressing a future savings shortfall. Between 2012 and 2017, pension enrolment for eligible employees aged 22 to 29 saw a 44% increase in participation to 79%, the largest increase among all age bands (Department for Work and Pensions, 2018).

There is an appetite for reform, and policy-makers can make a difference in reducing intergenerational inequalities.

Conclusion
Our analysis finds that the cost of a fixed basket of consumer goods has increased by approximately the same proportion across age groups. While this is not a controversial finding in itself, the costs of being a young adult in the UK extend beyond consumer prices. For example, the millennial generation has had an acutely different economic experience of the past decade, including poorer post-recession wage growth than older people.

Our results provide an insight into why policy intervention might be important in the new economic landscape experienced by today's young adults. There is a growing body of research on the subject, and consumer prices illustrate only one aspect of the challenges that this generation faces. Policies to promote long-term saving and to ensure that consumers do not expect higher inflation in the future are areas where young adults may benefit.

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Further reading

David Blanchflower, Rui Costa and Stephen Machin (2017) 'The Return of Falling Real Wages (http://cep.lse.ac.uk/pubs/download/rwu006.pdf).

Jonathan Cribb, Andrew Hood and Jack Hoyle (2018) 'The Decline of Homeownership Among Young Adults', Institute for Fiscal Studies.

Department for Work and Pensions (2018) 'Automatic Enrolment Evaluation Report 2018'.

Christopher Kurz, Geng Li and Daniel Vine (2018) 'Are Millennials Different?', Federal Reserve Board Finance and Economics Discussion Series 2018-080.

Ulrike Malmendier and Stefan Nagel (2011) 'Depression Babies: Do Macroeconomic Experiences Affect Risk Taking?', *Quarterly Journal of Economics* 126(1): 373-416.

Ulrike Malmendier and Stefan Nagel (2016) 'Learning from Inflation Experiences', *Quarterly Journal of Economics* 131(1): 53-87.

Office for National Statistics (2018) 'How Well are You Doing Compared with Other Young People?'

Millennials' current economic experiences are likely to inform their long-run investment and saving decisions