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Donald Hirsch, Laura Valadez-Martinez & Laura Gardiner

# CONSUMING FORCES

*Generational living standards measured through household consumption*

## Acknowledgements

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## Executive Summary

Consumption – the amount spent by households on goods and services from week to week – is a key focus for those interested in living standards. That's true in general terms because a body of evidence suggests that, for either theoretical or empirical reasons, expenditure is a more direct way of capturing people's standard of living than the disposable income measures that are more commonly used. But it is perhaps especially true from a generational perspective because the perception in some quarters is that, while generational progress has stalled for today's young people in income or earnings terms, near-term living standards are being maintained by the focusing of limited resources on meeting current wants rather than investing for the longer term. Consumption opportunities for younger generations are also likely to be heightened by technological progress and a more connected world.

This report, the tenth for the Intergenerational Commission, has been prepared by the Centre for Research in Social Policy at Loughborough University, in collaboration with the Resolution Foundation, to dig further into this issue. It builds on previous evidence presented to the Intergenerational Commission which has shown that in income and earnings terms, young people today are failing to improve on the experiences of predecessors. For example, those millennials who've so far turned 30 have slightly lower real incomes than generation X before them when they were that age. This report considers whether these trends in generational incomes are mirrored in expenditure patterns or whether the young have in some way "spent" their way to higher living standards. We also explore how these patterns have been underpinned by the changing composition of the basket of goods and services that households consume.

This analysis uses data from the UK's main expenditure surveys over the past half century, focusing on the years 1963, 1989, 2000-01 and 2014. Alongside providing a broad, long-term perspective, the research places particular emphasis on the changes that have occurred between the final two time periods.

This survey data is the only option for exploring what different types of households spend their money on, but it presents challenges because of apparent growth in the under-recording of expenditure during the 1990s and early 2000s in comparison to National Accounts aggregates. For this reason, absolute changes since 1989 are interpreted with a high degree of caution – instead we focus on the relative differences between groups in the pace of consumption expenditure changes at different points in time.

### **The real-terms spending of working-age households has doubled since the 1960s, and its nature has been transformed**

In line with household income trends, consumption expenditure grew strongly during the 1960s, 1970s and 1980s. For adults age 25-64, mean equivalised real household consumption expenditure (including rents and mortgages) almost doubled between 1963 and 1989, from £162 to £293 (expressed in terms of the equivalent spending of a single-adult household). It is more difficult to interpret overall trends in the survey data since then, but it is clear from National Accounts aggregates that household spending

per person has performed just as badly as – if not worse than – household incomes have in the post-2007 period. So the story of the 21<sup>st</sup> Century so far is one of stalling consumption expenditure growth sitting alongside stalling income improvements.

A particularly prominent shift over the past 25 years has been the growing role of housing in working-age household expenditure. Rent and mortgages made up 12 per cent of spending for 25-64 year old adults in 1989, rising to 17 per cent by 2014. Whether by choice or as a result of circumstance, households have allocated increasing shares of their overall spending to housing – effectively “crowding out” other forms of expenditure.

Setting aside housing, over the past half century 25-64 year old households have spent progressively less, as a share of expenditure, on meeting their basic need for food, clothes and warmth. The proportion of all spending allocated to food, clothing and domestic fuel declined from almost half (47 per cent) of total non-housing spending in 1963 to just over one-fifth (22 per cent) in 2014. In this period spending has instead shifted towards leisure, communications and transport. The other striking change over the past half century has been the decline in the share of spending allocated to alcohol and tobacco, which made up 12 per cent of non-housing expenditure in 1963 but only 3 per cent by 2014.

## The baby boomers have experienced the fastest generation-on-generation expenditure progress, both when young and when older

Considering working-age adults of different ages, the most prominent shift during the 1960s, 1970s and 1980s was that young adults moved from having quite similar consumption expenditure (including housing) to other working-age adults in 1963, to spending noticeably more by 1989.

In 1963, 25-34 year olds spent 3 per cent less than 55-64 year olds on average, but by 1989 they were spending 11 per cent more. However, not all of this relative decline in the spending of older working-age adults should be seen as a bad outcome from their perspective – some was driven by a welcome reduction in their spending on housing.

In contrast, the change in spending including housing by 55-64 year olds in the 21<sup>st</sup> Century has outperformed that of those aged under 50. In 2000-01, 25-34 year olds were spending 13 per cent more than 55-64 year olds, but in 2014 they spent marginally (1 per cent) less.

In this more recent period, it's clear that housing spending has put greater pressure on the expenditure of younger working-age adults than older ones. The consumption of housing (that is, the amount spent on housing on average after accounting for changes in its cost) increased by £8 per week for both 25-34 and 40-49 year olds between 2000-01 and 2014, and by £5 for 55-64 year olds. This trend, driven by declining home ownership, is mirrored when focusing on lower-income adults within each age group.

The result is that young adults' consumption expenditure on items other than housing has been pegged back even further than the shift in total expenditures. In 2000-01, 25-34 year olds and 55-64 year olds had the same amount of non-housing spending; but by 2014, 25-34 year olds had expenditure on non-housing items 15 per cent lower than that of 55-64 year olds.

Taking these relative shifts by age together, we can see that members of the baby boomer generation born in the two decades after the second world war experienced faster-than-average non-housing expenditure growth on their predecessors both when young adults and when older.

In 1989, when baby boomers constituted roughly the younger half of the population aged 25-64, it was the younger groups who were doing best compared to their predecessors. For example, 25-34 year olds' non-housing spending compared to the same age group in the 1960s grew by 12 percentage points more than the average for all adults aged 25-64. Conversely, by 2014 when these boomers comprised roughly the older half of the 25-64 population, it was those aged 55-64 whose spending has improved most compared to their predecessors at the same age: non-housing spending had improved 11 percentage points faster for these older adults since 2000 than for 25-64 year olds on average.

In contrast, older millennials have so far underperformed. Spending among 25-34 year olds grew at a rate 5 percentage points slower than the average for all working-age adults between 2000 and 2014.

From this perspective, members of the baby boomer generation can be seen as relative winners from the last half century of expenditure changes.

## A detailed look at individual areas of consumption illustrates how lifestyles are changing for people of different ages

One area where no differences between age groups are apparent is in the shifts in expenditure across broad spending categories over time, which have been very similar indeed at different ages. On this basis it appears highly unlikely that a particular generation has been consistently on the losing side of price trends (and as a result it is unnecessary to seek to deflate generational income or earnings trends by group-specific inflation rates).

Rather than providing a comprehensive account of how lifestyle changes have combined with prices and incomes to determine changes in living standards across all areas of consumption expenditure, our analysis takes a selective look within five spending categories:

- In terms of patterns of spending on **eating in and eating out**, we find that younger adults spent less on the former and more on the latter than did older working-age adults in 2014. Eating out expenditure was 25 per cent higher among 25-34 year olds than among 55-64 year olds, mainly accounted for by the fact the younger group spent less eating in. However differences by income group were much more pronounced. And over the course of the 21<sup>st</sup> Century it is the consumption of older working-age adults that has shifted most towards eating out, much more so than it has for the young.

In other words, there is little support for the idea that “avocado toast” consumption in cafes (and other things eaten outside the home) is something the millennials are particularly engaging in at the expense of more long-term or purposeful spending (or saving). If anyone is eating more avocado toast it is older working-age adults.

- Turning to **transport**, young adults spent relatively less on private transport (mainly cars) than other age groups did in 2014 and more on public transport and

flights. Again, however, differences are much greater by income than by age, and the overall pattern appears to be driven by the spending of those with higher incomes in each age group. These differences partly reflect different trends by age over the 21<sup>st</sup> Century, with young people making less use of private transport than predecessors – echoing other research that has charted the decline of the young driver.

- In terms of **communications**, young adults today spend more on modern communications technologies than older ones: 25-34 year olds spent 32 per cent more on mobile phones and internet services than 55-64 year olds in 2014. Strikingly, young adults now spend more on mobile phones than they do on alcohol and tobacco combined (£7 per week compared to £6). But overall the differences between age groups and income groups within them are not huge, and changes over the past 14 years have been similar at different ages.

This suggests that far from there being an iPhone generation, modern communications items have come to be regarded as essentials for the broad majority of working-age adults today.

- **Leisure goods and services** are a larger category of expenditure for older working-age adults than for younger adults. Big decreases in the price of electronic and technology-related leisure goods (like computers and audio-visual equipment) in part explain the fact that consumption of these items has risen in volume terms in the past 14 years, for 55-64 year olds in particular. To some extent, this reflects technology “catch up”: in 2000, those aged 55-64 spent half as much as younger adults on these items, but in 2014 they spent 16 per cent more.

Changes in leisure services like sports clubs and cinema visits – from which consumption has ebbed overall, likely in response to fast-rising prices – are more varied by age. For example, all age groups gamble less than they did 14 years ago, but the decline in television and video services and sports and social clubs has been greatest for the young.

The biggest age gradient, however, is in the changing consumption of holidays: older working-age adults consume most and have experienced the strongest growth between 2000-01 and 2014. Once again the pop narrative – in this case that millennials are jet setting more than predecessors – is not represented in the facts.

- Consumption of **personal goods and services** has increased for 25-34 year olds over the 21<sup>st</sup> Century despite the apparent (likely under-recording influenced) faltering performance of overall non-housing spending. However, some of the most striking changes appear to be related to particular changes – like car seat regulation, and higher maternal employment driving up consumption related to having children – rather than independently-shifting preferences among young adults.

Overall, our findings across these five examples suggest that consumption differences are often greater by income than by age, and that wider price-related, social and technological shifts generally pervade across age groups. In addition, there is little evidence to support the characterisation of millennials as frivolous spenders – in terms of spending excessively on things such as eating out, communications technologies and holidays – compared to other age groups today or to their predecessors at the same age. Indeed, in many of the areas often seen as luxuries that the millennials in particular enjoy, from holidays to avocado toast, it is baby boomers who have actually experienced the fastest increases in consumption compared to their predecessors.

Some of the trends we have observed in this analysis reflect the image of millennials as a group which is organising consumption in new ways compared to its predecessors. However, to a large extent these shifts reflect changes in society that have affected *all* groups of working-age adults. Some changes can be seen as “adaptive”, deploying limited resources more strategically, such as not considering a large number of household goods or the purchase of a car to be essential and the prioritising of “experiences” such as eating out. However, young adults’ relatively poor expenditure performance and the squeeze on items such as leisure make inescapable the conclusion that a focus on consumption expenditure in no way undermines the story told by incomes: namely, that generational living standards progress is faltering.



## Section 1

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### Introduction: Income, consumption and living standards

*Consumption expenditure provides a direct and nuanced lens on households' standard of living. This has potentially even greater relevance from an intergenerational perspective, given the perception among some that today's younger generation is more prone than were their predecessors to consume in the here and now. Yet expenditure is analysed much less frequently than income, and the study of spending is made more complex by the divergence of survey data from other consumption expenditure measures in recent decades. In this introductory section, we set out the caveats this necessitates and the conclusions of past research into income, consumption and living standards.*

#### Expenditure provides an alternative perspective on households' living standards to more-commonly-used income measures

A range of previous research has argued that consumption expenditure is better than income for understanding long-term living standards.<sup>1</sup> Expenditure contributes to the picture in at least three important ways. First, a household's outgoings provide a more direct measure of the standard at which they are living at a given point in time than do its incomings. Income can be set aside for the future or used to pay old debts, whereas spending describes the standard of living being enjoyed by a household 'right now'. Economic theory also assumes that households will smooth their consumption over their life-course to match expectations of lifetime income, meaning that current consumption should provide a better guide to long-term resources than current income.

Second, breakdowns of what categories of goods and services people spend their money on can describe more about how they live than a headline measure of income. Over the long term, changing lifestyles mean that what a given income can buy changes qualitatively not just quantitatively. A general inflation rate is therefore an imperfect tool for translating changes in income into changes in living standards. For example, it is hard to say whether a household in 2017 is better off with an income allowing them to buy a certain quantity of goods and services including items such as smartphones and DVD players than a household a few decades earlier when these items did not exist. At a wider level, the balance of spending between broad categories such as leisure, food and transport can change substantially over time.

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<sup>1</sup> For example, see: M Brewer & C O'Dea, *Measuring living standards with income and consumption: Evidence from the UK*, Institute for Fiscal Studies, July 2012; R Blundell & I Preston, 'Income, Expenditure and the Living Standards of UK Households', *Fiscal Studies* 16:3, August 1995; B Meyer & J Sullivan, *Measuring the Well-Being of the Poor Using Income and Consumption*, NBER Working Papers, June 2003; H Noll, *Household consumption, household incomes and living standards*, *GESIS*, 2007; H Noll & S Weick, 'Consumption expenditures and subjective well-being: Empirical evidence from Germany', *International Review on Economics* 62, November 2014.

Third, there is evidence that expenditure data provides a more accurate reflection of living standards than incomes for certain groups. For example, research has found that incomes are likely to be under-recorded for households with low resources, and that expenditure data for such households provides a more consistent picture.<sup>2</sup>

## The perception that millennials are big spenders makes a focus on consumption particularly pertinent to intergenerational debates

These theoretical and empirical arguments support a focus on household consumption in studies of general living standards changes across the population. But there are additional reasons for those concerned with the living standards of different generations and how these compare over time to focus their attention on expenditure trends.

Research to date for the Intergenerational Commission has found that the commonly-accepted promise that each generation should have a higher standard of living than predecessors has shown signs of being broken for today's young people. For example, the real weekly earnings of those born in the late 1980s were lower at age 26 than the earnings at that age of those born 15 years before them.<sup>3</sup> And in terms of inflation-adjusted net equivalised household income – probably the most commonly-used summary measure of living standards – those millennials (the generation born 1981-2000) who have so far reached 30 are currently slightly worse off in early adulthood than generation X (born 1966-1980) were at the same age.<sup>4</sup>

In response to evidence such as this, some have suggested that these conclusions miss some of what is really going on, because millennials are deploying their incomes in new ways or spending more of what they have than previous generations did. Overwhelmed by the scale of their student debt, their rent and the amounts required to put down a deposit on a house, they are prioritising short-term spending over long-term saving. The typical response is, “save money into my pension? I'd rather blow it on a holiday.”<sup>5</sup> From other quarters, millennials have been accused of living their lives frivolously (particularly in terms of the consumption of avocado toast in cafes) rather than saving their financial resources effectively as previous generations did.<sup>6</sup> In any case, millennials are said to be overwhelmingly benefitting from the advent of smartphones and other new consumer technologies,<sup>7</sup> perhaps suggesting their income goes further than it did for others at the same age.

Together these kinds of arguments give the impression that we have less to be concerned about in terms of young people's living standards than an initial look at the income data might warrant. For those interested in the extent to which generational progress has indeed stalled, a deeper look into spending trends is therefore essential.

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2 M Brewer. A Goodman & A Leicester, *Household spending in Britain: What can it teach us about poverty?*, Institute for Fiscal Studies / Policy Press, 2006; M Brewer & C O'Dea, *Measuring living standards with income and consumption: Evidence from the UK*, Institute for Fiscal Studies, July 2012

3 L Gardiner & P Gregg, *Study, work, progress, repeat? How and why pay and progression outcomes have differed across cohorts*, Resolution Foundation, February 2017

4 A Corlett, *As time goes by: Shifting incomes and inequality between and within generations*, Resolution Foundation, February 2017

5 A Williams, 'Best of Money: Why millennials go on holiday instead of saving', *Financial Times*, February 12 2016

6 S Levin, 'Millionaire tells millennials: If you want a house, stop buying avocado toast', *The Guardian*, 15 May 2017

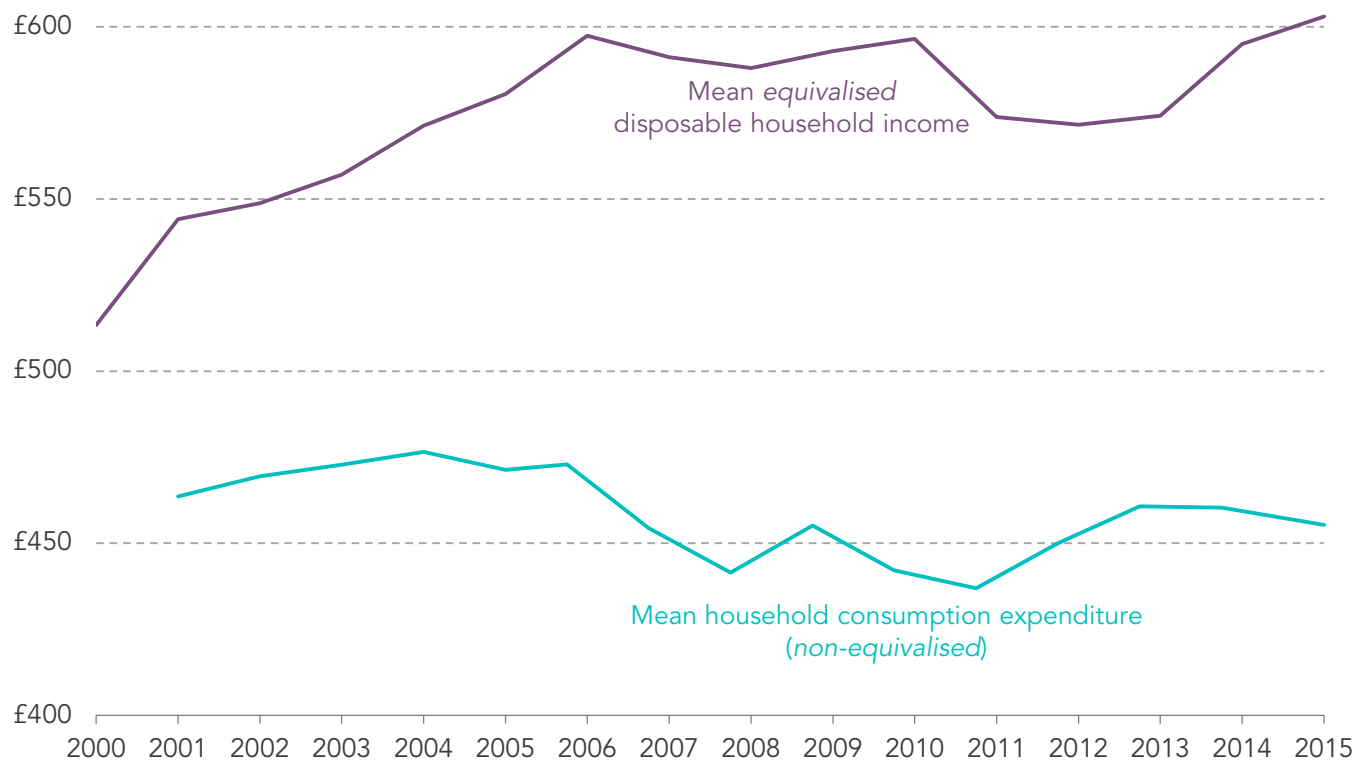
7 R Muir, 'A Record 91% of UK Millennials Own a Smartphone; Apple Devices Secure 78% Video Ad Completion Rate', *ExchangeWire*, 16 July 2015

## Spending and income have diverged, although different sources tell different stories so trends over time must be assessed with caution

The case for looking at expenditure and not just income is strengthened by material differences in how their respective levels have changed in the recent past. The Office for National Statistics's (ONS's) preferred expenditure survey (the *Living Costs and Food Survey*, or LCFS) shows that it has been depressed more in recent years than the stagnation in net household income as measured either in that same survey or in the preferred income survey (the Department for Work and Pensions's (DWP's) *Family Resources Survey*). Headline ONS data on income and consumption expenditure are presented in Figure 1,<sup>8</sup> which shows a marked divergence between income and expenditure in this century.

Figure 1: Average real household income and consumption expenditure over time: UK

Mean weekly income or expenditure (2015-16 prices, deflated using CPI-based indices)



Notes: The chart averages across minor discontinuities in the consumption expenditure series which reflect the switch from financial years to calendar years in 2006, and back again in 2015. The income series is deflated using CPIH, the expenditure series is deflated using separate price indices for different categories of spending. Income and expenditure data are not directly comparable, in particular because expenditure data is not equivalised; the fact that the number of people per household (2.4) was the same in 2015-16 as in 2007 suggests that this shouldn't overly affect trends observed.

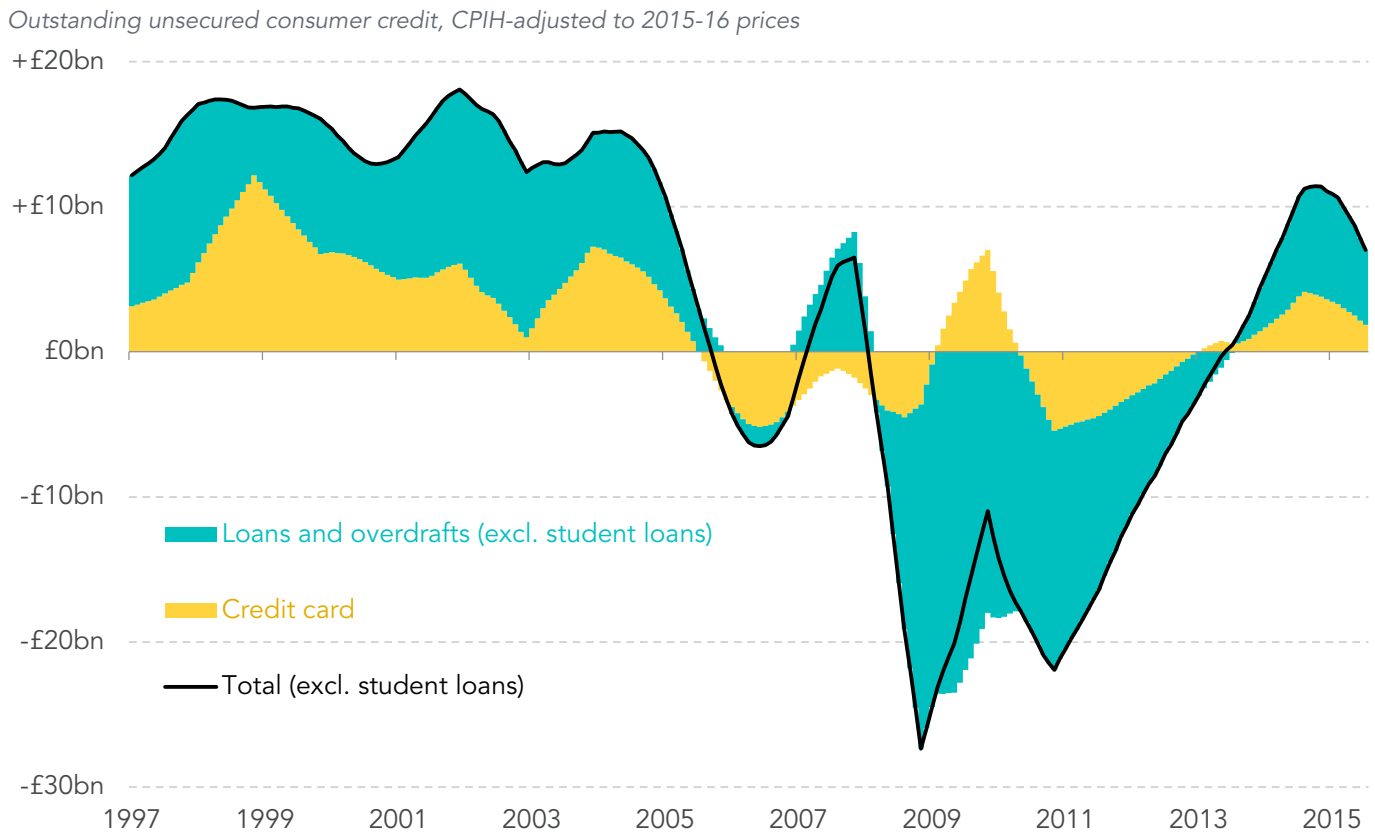
Source: ONS, *The Effect of Taxes and Benefits on Household Income*; ONS, *Family Spending*

<sup>8</sup> Note that the population covered – all households rather than 25-64 year olds – and the measure of expenditure differ from those used elsewhere in this analysis, however the relative income and spending trends described are very similar.

Focusing first on the period during and following the financial crisis, we find that the expenditure slowdown has been greater than the slowdown in incomes. Average household consumption expenditure across all households was 4 per cent down on its 2006 level in 2015-16, whereas mean income was 1 per cent up.<sup>9</sup> The ONS has suggested that weak consumer confidence and the different growth rate of real disposable household income across the income distribution may be drivers of this divergence.<sup>10</sup>

More broadly, any changes in rates of net saving – the combined effects of saving (or dis-saving) and taking on (or reducing) debt – would be expected to contribute to income and expenditure divergences. Trends in debt and savings are not directly captured in the LCFS, so direct analysis of their relation to individual households’ spending is not possible,<sup>11</sup> however aggregate data is available. Consistent with the survey-based findings in Figure 1, we know from National Accounts aggregates that the ‘saving

Figure 2: Annual change in real unsecured consumer credit, excluding student loans: UK



Notes: Series are seasonally adjusted. Annual change calculated based on annual rolling averages.

Source: Bank of England series BI2O & B4TS

9 The Households Below Average Income series (based on the Family Resources Survey) shows a very similar pattern, with real-terms equivalised mean income 1 per cent above its 2009-10 peak in 2015-16. See: Department for Work and Pensions, *Households Below Average Income: An analysis of the UK income distribution: 1994/95-2015/16*, 2017.

10 Office for National Statistics, *Family spending in the UK: Financial year ending March 2016*, February 2017

11 This is discussed in: M Brewer & C O’Dea, *Measuring living standards with income and consumption: Evidence from the UK*, Institute for Fiscal Studies, July 2012

ratio' – simply income less consumption expenditure, as a proportion of income – rose sharply in the post-crisis period,<sup>12</sup> and it appears that changes in indebtedness provide part of the explanation for this. As Figure 2 on the previous page shows, for much of the post-crisis period unsecured consumer debt was falling, meaning the paying off of debts was exceeding the taking on of new borrowing. This would mean that in comparison to the pre-2006 period, less new net borrowing was available to boost spending above that which was financed by income.

Stepping back from the most recent changes, however, the post-crisis trend of spending growing more slowly than income in the expenditure survey data (or indeed falling faster) marks a continuation of patterns observed in the 1990s, and the early-2000s period shown in Figure 1. As Box 1 sets out in detail, these pre-crisis trends contrast with those observed at the aggregate level in the National Accounts, in which consumption expenditure and income track one another much more closely. While survey-based income measures largely mirror the growth rates observed in National Accounts data, survey-based expenditure was underperforming up to the eve of the financial crisis. The suggestion is that there may be growing under-recording of household consumption expenditure in the surveys, meaning that trends over time in this data (and therefore the comparison of different generations or cohorts at the same ages) warrant a high degree of caution.

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12 While it had been reported that the saving ratio has recently fallen back to or below its pre-crisis level, recent revisions to past estimates (largely related to how dividend income is measured) are set to significantly revise this picture such that the saving ratio remained above 2008 levels in 2014 and 2015. See: Office for National Statistics, *National Accounts articles: An update to assessment of changes to sector and financial accounts, 1997 to 2015*, September 2017.

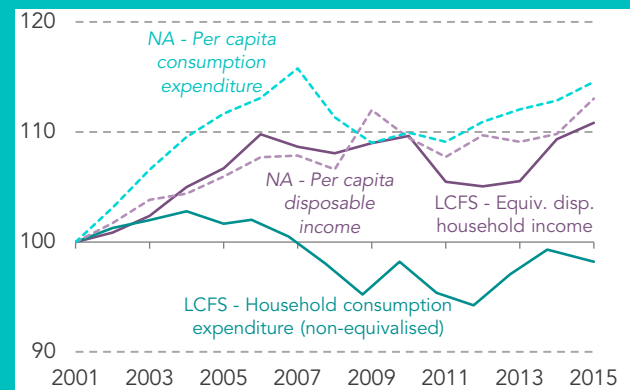
## i Box 1: The divergence of consumption expenditure trends in different sources

Previous analysis by Brewer and O’Dea has noted the high and growing under-recording of consumption expenditure in the main UK expenditure survey – the LCFS and the *Family Expenditure Survey* (FES) that preceded it – when compared to aggregate National Accounts data. The authors’ analysis shows that, “the ratio of total expenditure in the LCFS (grossed to national population levels using survey weights) to the total published in the National Accounts...has been falling steadily since at least the early 1990s, whereas that for income has been relatively stable.” Figure 3 shows these trends since 2001 (using ‘cash basis’ versions of the National Accounts data that are adjusted to better match survey-based estimates). The survey-based measure of spending clearly stands out from the other three series, diverging in the period up to 2007-08.

Recent analysis by the ONS has explored the degree of this under-recording in surveys by different components of spending. It found that certain items, in particular alcohol and tobacco and personal goods and services, have much lower coverage (in comparison to National Accounts aggregates) than other items like food, and that such low coverage is common across countries.<sup>2</sup> In terms of what’s driving the growth in under-recording, it’s not the case that household spending is on average shifting towards lower-coverage components over time, if anything the opposite is true. Rather, as Brewer and O’Dea’s analysis sets out, growing under-recording of consumption expenditure overall appears to have been driven by declining coverage *within* most expenditure components. Other research has looked into the issue of under-recording across countries and suggested

Figure 3: Income and consumption expenditure measured across different sources: UK

Index of real mean income or expenditure (deflated using CPI-based / National Accounts deflators), 2001-02=100



Notes: ‘Cash basis’ National Accounts series are used, which are adjusted from the headline National Accounts measures to better match survey-based estimates. The chart averages across minor discontinuities in the survey-based consumption expenditure series which reflect the switch from financial years to calendar years in 2006, and back again in 2015. The survey-based income series is deflated using CPIH; the survey-based consumption expenditure series is deflated using separate price indices for different categories of spending; both National Accounts-based series are deflated using the national accounts deflator. Survey-based income and consumption expenditure data are not directly comparable, in particular because expenditure data is not equivalised; the fact that the number of people per household (2.4) was the same in 2015-16 as in 2001-02 suggests that this shouldn’t overly affect trends observed.

Source: ONS, *The Effect of Taxes and Benefits on Household Income*; ONS, *Family Spending*; ONS, *Alternative measures of UK real households disposable income and the saving ratio*.

that rising income inequality may have played a role, in particular since it is challenging for surveys such as these to capture the very top of the income distribution.<sup>3</sup>

This issue of under-recorded consumption expenditure in the main UK expenditure survey is something that the ONS should explore and address, as well as accounting for it more fully in commentary on household spending.

1 M Brewer & C O’Dea, *Measuring living standards with income and consumption: Evidence from the UK*, Institute for Fiscal Studies, July 2012

2 Office for National Statistics, *The Distribution of Household Income, Consumption and Savings, an OECD study*, November 2015

3 G Bartlett, P Levell, K Milligan, *A Comparison of Micro and Macro Expenditure Measures Across Countries Using Differing Survey Methods*, NBER Working Papers, October 2013

## Nonetheless, relative expenditure changes across age groups provide important insights on how living standards and lifestyles are changing

While caution must be exercised, it should be noted that these surveys remain the main source of consistently-collected detailed information on the spending patterns of individual households, so analysis of what's changed is still likely to be an illuminating exercise despite the necessary caveats. And it is not an uncommon approach, for example the ONS conducts such analysis each year in its *Family Spending* publication.<sup>13</sup>

Further, there are at least three perspectives from which we do not need to be overly concerned about the growing under-recording of consumption expenditure hindering our ability to draw conclusions – perspectives that the analysis in this report is guided by:

- First, as discussed in Box 1, declining coverage is quite consistent across expenditure components. As such, analysis of how the *proportion* of expenditure taken up by different components has changed over time should be unaffected.
- Second, Brewer and O'Dea's analysis finds that under-recording of expenditures is much greater for those with high resources, and therefore concludes that consumption expenditure remains a particularly valuable way of measuring living standards changes for lower-income (or lower-expenditure) households.<sup>14</sup> As such, throughout this analysis we focus in particular on trends for those with low incomes as well as at the average.
- Finally, and most pertinently for our focus on experiences across generations, the share of expenditures in different headline categories is quite similar across the age range (as shown by Figure 12 in Section 3) meaning there is no suggestion that under-reporting varies by age. Brewer and O'Dea's analysis comes to similar conclusions in relation to pensioners' spending. On this basis, estimates of the *relative* change in expenditures over time at different ages can provide useful insights into expenditure changes across the generations.

### Navigating this report

This report, which has been prepared by the Centre for Research in Social Policy at Loughborough University and the Resolution Foundation for the Intergenerational Commission, therefore seeks to shed further light on living standards across generations by considering levels and patterns of expenditure for working-age households in detail. It uses surveys of household spending to explore how actual consumption expenditure has changed over time overall, and for different age and income groups.

<sup>13</sup> Office for National Statistics, *Family spending in the UK: Financial year ending March 2016*, February 2017

<sup>14</sup> M Brewer & C O'Dea, *Measuring living standards with income and consumption: Evidence from the UK*, Institute for Fiscal Studies, July 2012

The analysis is set out over four further sections, as follows:

- **Section 2** provides an **overview of what has happened to the average household spending of all adults** aged 25-64 since the 1960s.
- **Section 3** then considers **how these expenditure shifts have affected different age groups**.
- **Section 4** looks in more detail at **ways in which spending on particular types of goods and service is growing or shrinking**, and how this relates to changing prices and the quantity of consumption.
- **Section 5** concludes by commenting on **how these changes relate to particular contemporary consumption trends that have been noted by commentators**, and the extent to which they reveal distinctions between cohorts as opposed to more general changes that reach across generations.



## Section 2

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### Half a century of changing expenditure

*In this section we provide an overview of how the household expenditure of adults aged 25 to 64 has developed over the past half century. In line with household income trends, we find that spending grew strongly in the 1960s, 1970s and 1980s. A particularly prominent shift over the past 25 years has been the growing role of housing in household expenditures, driven by an increase in the volume consumed across tenures and by faster-than-average increases in rental prices. Setting aside housing, over the past half century households have spent progressively less in proportional terms on categories associated with meeting the most basic needs – food, clothes and warmth – with spending shifting towards leisure, communications and transport.*

#### The spending of working-age households nearly doubled between the early 1960s and late 1980s

The analysis in this report assesses the real (CPI-adjusted) equivalised household consumption expenditure of adults aged 25-64. The definition of consumption expenditure in the UK's expenditure surveys follows an internationally-recognised methodology that captures spending associated with supporting current living standards, and so excludes some items like cash gifts and donations and investments. To this definition we make one alteration: we include spending on mortgages (both interest and the repayment of capital). This is done to reflect the fact that buying a home is one method of meeting an essential consumption need: having somewhere to live. Although capital repayments can also be seen as a form of saving or investment in an asset that can yield capital gains, we think it is an important aspect of current consumption and living standards: households must find sufficient money to pay a mortgage to allow them to consume housing of a given size and quality.<sup>15</sup> This approach builds on the findings of recent analysis of housing affordability across the generations for the Intergenerational Commission.<sup>16</sup>

Further details on our approach are provided in Box 2.

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15 As far as possible, we don't capture second homes and buy-to-let spending in this definition, as this spending is not related to meeting personal housing need.

16 A Corlett & L Judge, *Home affront: Housing across the generations*, Resolution Foundation, September 2017

## i Box 2: Definitions and approach for this analysis

The analysis uses data from the 2014 *Living Costs and Food Survey* and its predecessor the *Family Expenditure Survey* in 1963, 1989 and 2000-01. 1963 and 1989 were chosen to capture changes over half and a quarter of a century (there was no 1964 survey), with 2000-01 included to give further detail on changes in this century and to allow comparisons of the latest data to the experiences of a preceding cohort at similar ages. As well as the caveats around comparing survey-based expenditure changes over time set out in Box 1 in the previous section, comparisons to earlier years can be challenging due to data quality and definitional changes, so the 1963 and 1989 survey years are used more minimally for broad conclusions only.

Our definition of consumption expenditure reflects the standard one used in expenditure surveys across countries, capturing spending associated with supporting current living standards. To this we add spending on mortgages, both in terms of interest payments and the repayment of capital, to capture how the broad cost of housing (including elements sometimes defined as saving or debt servicing) has changed and affected other spending.

Spending data refers to total household expenditure for the household in which individuals of different ages live. Expenditure data has been equivalised using the OECD-Modified scale, with the values representing the equivalent expenditure for one single adult. This process accounts for any change in household formation over time.

In each year, the analysis covers 25-64 year old adults (so as to capture those of working age but exclude a large share of those young adults still in education or living with their parents), and three groups of adults falling in ten-year age bands (25-34, 40-49 and 55-64). The generations we refer to in this report are defined in the same way as in other analyses for the Intergenerational Commission: the silent generation (born 1926-1945), the baby boomers (born 1946-1965), generation X (born 1966-1980) and the millennials (born 1981-2000).

As well as average spending for adults in a given age range, we explore the experiences of adults at different points on the income scale within their age group. Income

refers to total equivalised household disposable income. Those with low incomes are at the 10<sup>th</sup> to 30<sup>th</sup> percentiles, and high incomes at the 70<sup>th</sup> to 90<sup>th</sup> percentiles, of income within their own age group.

Our approach to comparing expenditure across groups and over time is as follows:

- » When we make cross-sectional comparisons between groups in a single survey year, we compare spending in cash terms or as shares of overall spending for that group.
- » When we assess changes in expenditure over a long period (back to 1989 or 1963), we adjust all consumption expenditure by the all-items CPIH when housing elements are included, or the all-items CPI when they are not (which are both estimated for earlier periods using RPI trends). This gives a rough indication of how spending has moved in relation to overall price changes over a period for which consistent item-specific price indices are not available. In addition, we look at changes in the share of expenditure on different items. Neither of these approaches tells about the changing volume of items consumed or their relative price changes.
- » For analysis of changes since 2000-01 (and 1989 in the particular case of housing expenditure), we adjust spending over time by the item-specific price indices that make up the Consumer Prices Index, in order to capture changes in the volume of consumption of that item. Comparing item-specific price indices to the overall CPI or CPIH index allows us to decompose expenditure changes in this more recent period into volume changes and the relative price effects (Box 3 provides full details of this approach). These volume changes get at the question of whether we are actually buying more of a given item, or just spending more because its price has risen faster than average.

These different approaches to deflation and measures for capturing changes in *consumption expenditure* (our catch-all term) over time can be hard to disentangle. For clarity, we prefer to refer to cash-terms values or changes in comparison to overall composite CPI/CPIH price indices as *spending* or *expenditure* changes, and changes since 2000-01 deflated by item-specific price indices as *volume* or *consumption* changes.

Figure 4 gives an approximation of average household expenditure for adults of working age at various points since the early 1960s, and how much of this has been pre-empted by paying for somewhere to live. The figures are expressed in 2014 prices adjusted by the CPIH inflation index, to give a broad indication of “real” expenditure changes over time (as discussed in Box 2, note that here we cannot adjust spending by individual category-specific price indices, so this is not a precise analysis of changes in the volume of goods and services consumed).

Figure 4: Average household consumption expenditure over time for 25-64 year olds: UK

Mean real weekly equivalised household expenditure, adjusted to 2014 prices using all-items CPIH



Notes: All expenditures deflated using all-items CPIH (which has been indexed back to 1963 using historic trends in RPI), to give an indication of ‘real’ consumption expenditure changes over time.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

Weekly household spending including rent and mortgages nearly doubled in the quarter-century to the end of the 1980s – from £162 to £293 (expressed in terms of the equivalent spending of a single-adult household). Over the next quarter century the picture was very different, with some further growth in the 1990s followed by an apparent shrinking of expenditure to the middle of the present decade. These findings over the more recent quarter-century should be treated with caution, however, given the growing under-recording of consumption expenditure in household surveys discussed in the previous section. On the other hand as Figure 3 in Box 1 in the previous section showed, even National Accounts aggregates for consumption expenditure (to which survey measures are compared) make clear that the stagnation in incomes in the post-2007 period is very

much mirrored – indeed amplified – in the performance of per-capita expenditures. So despite the caveats, the story of the 21<sup>st</sup> Century remains one of stalling expenditure growth sitting alongside stalling income improvements.

## Spending on housing has grown over the past quarter-century as a share of household budgets

Figure 4 also shows that over the past 25 years, expenditure on housing has grown relative to CPIH and as a proportion of overall expenditure. Rent and mortgages made up 12 per cent of consumption expenditure for 25-64 year old adults in 1989, rising to 17 per cent by 2014. While the measure here is somewhat different (for example in terms of which items of mortgage-related spending are included), this is very much in line with trends in housing affordability measured in terms of housing-cost-to-income ratios, discussed in recent analysis for the Intergenerational Commission.<sup>17</sup> Given that housing is usually regarded as a necessity, it appears to be increasingly “crowding out” other items of spending.

However these overall trends in housing spending over the past quarter century mask different patterns in different tenures, and do not tell us everything we might wish to know about what’s happening to housing costs. In particular, changes in the distribution of expenditure across categories do not directly show how consumption is being redistributed by volume, since relative prices also change continuously. If rents become relatively cheaper, for example, it is possible to maintain or increase the ‘amount’ of rental property consumed while spending less on it in terms of the real amount of money in relation to an overall price index.

As such, in this analysis we explore how particular changes in patterns of spending for certain items can be interpreted in relation to price and volume. Given the dominant role of housing spending evident both from Figure 4 above and previous analysis for the Intergenerational Commission, we take a detailed look at housing in this way in this section, with similar analysis for other items of spending across age groups in Section 4. A summary of the theoretical perspective on how the consumption of items by volume responds to changes in their price, and our empirical approach to determining price and volume changes, is provided in Box 3.

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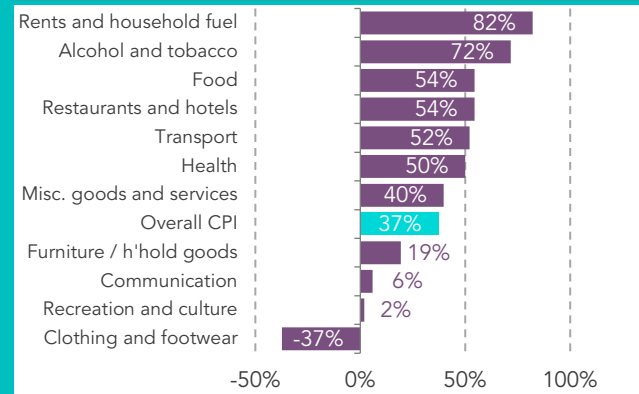
## i Box 3: Decomposing expenditure changes into price and quantity effects

In economic theory, spending should shift to categories that are becoming relatively cheaper, meaning that volume increases might be expected for those categories. In practice, other influences including social change can prevent this from happening, and where it does, the effect on the allocation of spending across categories depends on “elasticities”: the extent of responsiveness of consumption to price. Where demand is highly elastic, total spending on items becoming cheaper may rise; alternatively, a category becoming more expensive can pre-empt more household spending if it is inelastic, particularly if households regard it as a necessity that they are unable or unwilling to consume less of.

These arguments are material to this analysis because price growth can differ substantially between different items and indeed has done in the period we cover, as Figure 5 shows for the headline categories within the CPI (apart from education, because it’s particularly rapid growth of 197 per cent skews the picture).

In this analysis, we use standard decomposition methods to disaggregate changes in expenditure on an item relative to overall price changes into the “price” effects and the “quantity” (or volume) effects. The “quantity effect” is the change in the volume of an item consumed (expenditure on an item adjusted for the change in that item’s price), weighted by general CPIH (if housing elements are included) / CPI (if housing elements are not included) inflation over the period. The “relative price effect” is the change in the price of an item relative to

Figure 5: Average price changes for different categories of goods and services (excluding education) between 2009-01 and 2014: UK



From: Res Foundation research, based on the method outlined in spending growth and its quantity and price effects: CPIH and CPIH-adjusted inflation for the categories. Source: Longbridge Research, 2015. All values based on CPIH.

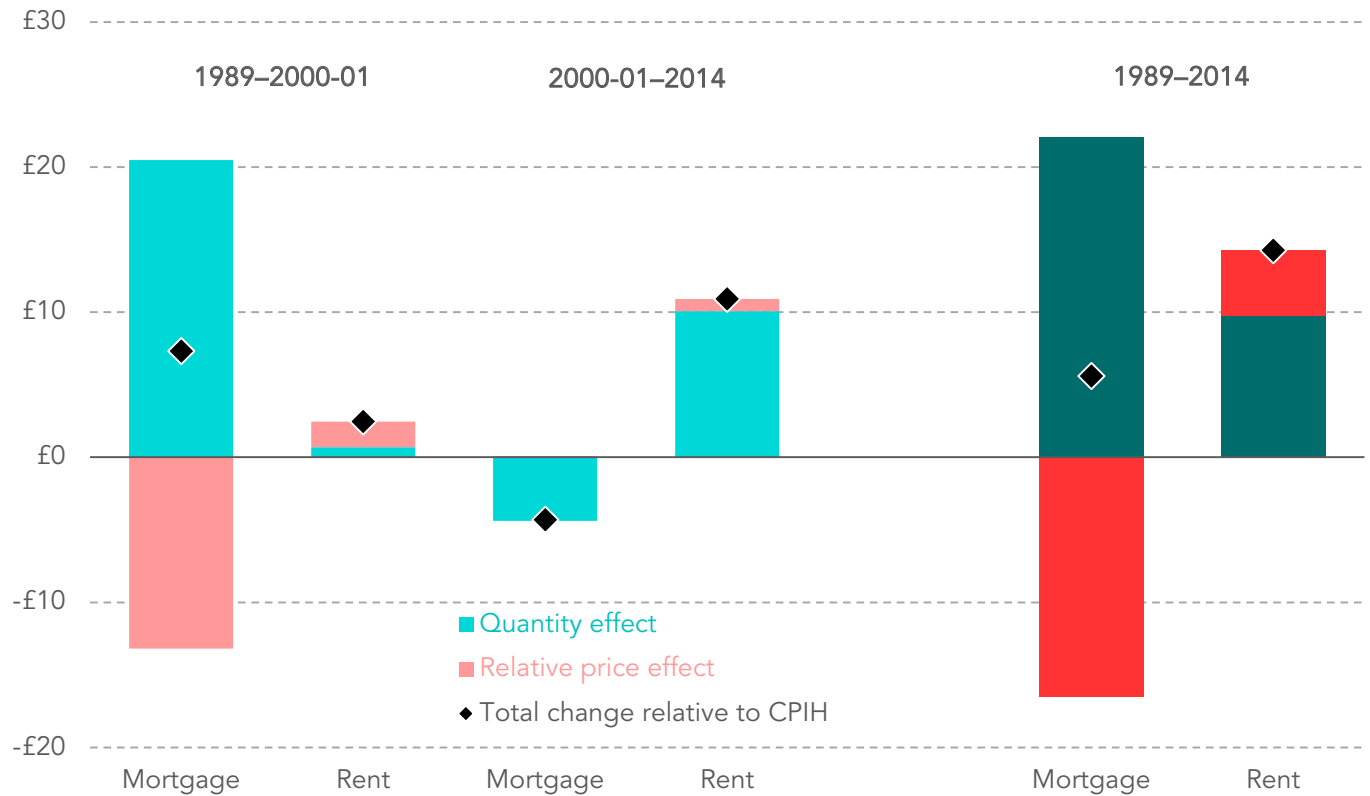
general CPI/CPIH inflation, weighted by the average volume of that item consumed over the period. “Total change relative to CPI/CPIH” is the sum of these effects, which is also equal to the real (all-items-CPI/CPIH-adjusted) change in expenditure over the period.

We conduct decompositions for specific items with the total consumption basket. If we were to do so for every item across all households, theoretically the relative price effects would all cancel each other out and sum to zero, reflecting the fact that overall CPI/CPIH is a weighted average of different price changes.

Figure 6 sets out the relative price and quantity effects on changes in spending on the two key categories of housing spending that are roughly substitutable – rent and mortgages – over the past quarter of a century. As before, magnitudes in this chart may be affected by the growing under-recording of consumption expenditure in household surveys in recent decades.

Figure 6: Decomposition of change in housing expenditure between 1989 and 2014 for 25-64 year olds: UK

Mean real weekly equivalised household expenditure, adjusted to 2014 prices using all-items CPIH



Notes: The 'quantity effect' is the change in the 'volume' of spending on an item (expenditure on an item adjusted for the change in that item's price), weighted by general CPIH inflation over the period. The 'relative price effect' is the change in the price of an item relative to general CPIH inflation, weighted by the average volume of that item consumed over the period. 'Total change relative to CPIH' is the sum of these effects, which is also equal to the real (all-items-CPIH-adjusted) change in expenditure over the period. Rental prices are based on the RPI rental index. The 'price' of mortgages is a constructed index of the payments that would need to be made buying an average-price house on a 25 year mortgage at prevailing interest rates.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey; Nationwide, House Price Index; Bank of England, Three Centuries of Data

Focusing on the first of the two shorter time periods on the left-hand side of the chart, we find that between 1989 and 2000-01, the price effects for rents and mortgages were rather different. The index of rents rose slightly faster than CPI so the rental price effect put upward pressure on expenditure, but a more important factor was the apparent decline in mortgage prices. We estimate the cost of a mortgage by constructing an index of the regular payments that would need to be made when buying a home of average contemporary value on a 25 year mortgage at current interest rates. While house prices went up considerably in this period, this was more than offset by falling interest rates, so the effective cost of buying with a mortgage fell. In practice, relative price changes may be more significant than this imperfect measure can capture,<sup>18</sup> but it is useful as a guide. The quantity effect offsets the fall in mortgage prices however, partly driven by the rise in home ownership over this period.

18 For example, rising prices will have driven up purchase costs not captured in our measure of mortgage spending, including deposits and stamp duty.

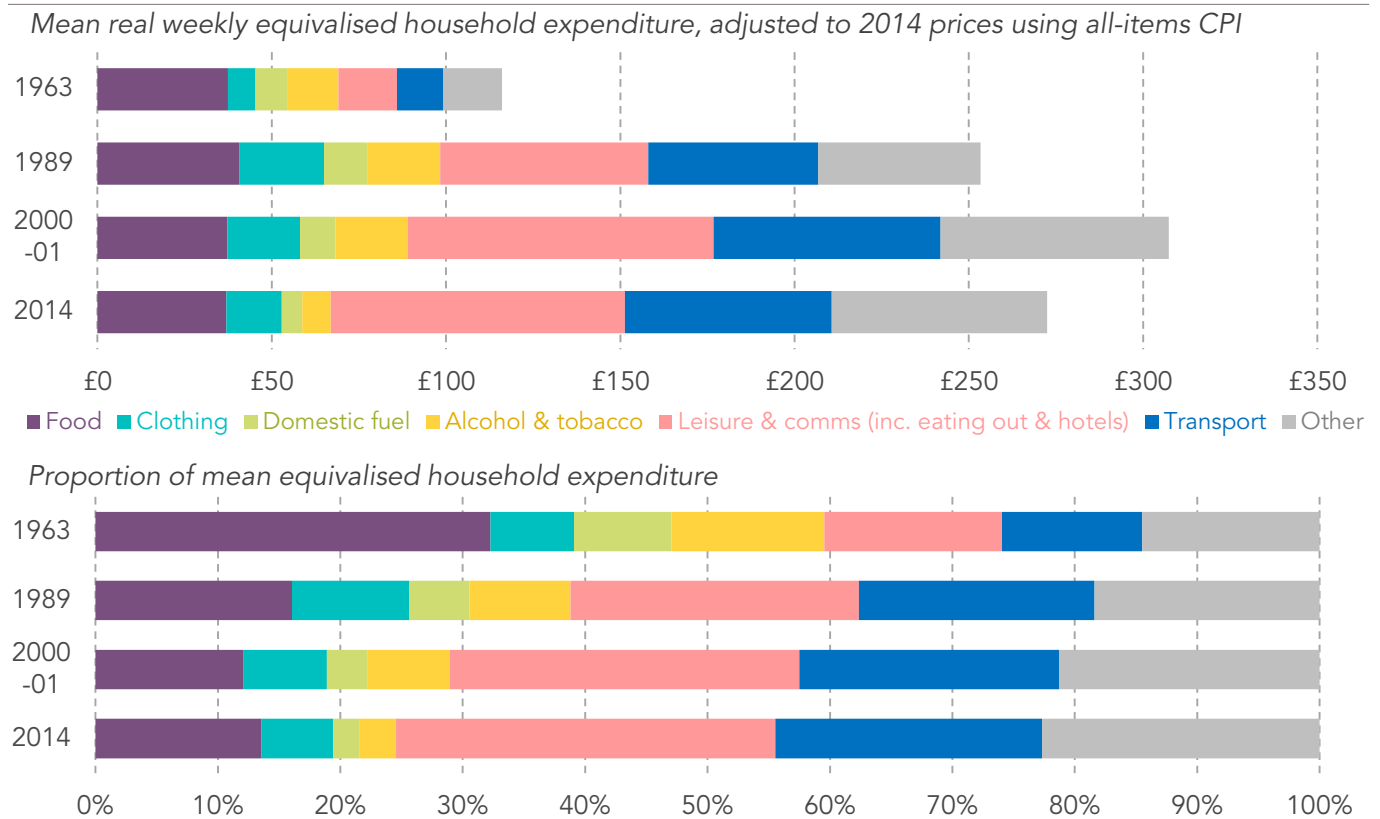
For the more recent period in Figure 6, the effect of price in both tenures has been relatively minor. The main changes in housing expenditure appear to be driven by quantity effects which will largely relate to a shift in the tenure balance of housing, with home ownership falling in this period.

Overall, the right-hand side of Figure 6 demonstrates that over the past 25 years, housing has grown in household expenditures for households of working age. Our decomposition approach shows that this has been driven by an increase in the volume consumed across tenures, with slower-than-average increases in effective mortgage prices acting in the opposite direction, but faster-than-average increases in rental prices pushing up overall expenditure further.

### The share of overall non-housing spending that households devote to essentials has halved in fifty years

So what – beyond housing – do households spend their money on? Trends by broad category of consumption expenditure are summarised in Figure 7.

Figure 7: Average household non-housing consumption expenditure over time for 25-64 year olds, by category: UK



**Notes:** All expenditures deflated using all-items CPI (which has been indexed back to 1963 using historic trends in RPI), to give an indication of 'real' consumption expenditure changes over time in different expenditure categories, benchmarked against composite price measures. This is in contrast to analysis elsewhere in this report which deflates expenditures using category-specific CPI indices (which in any case are not available on a consistent basis back to 1963, and in some cases 1989) to give a picture of changes in the volume of consumption after accounting for differential price changes of different items.

**Source:** Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

The most clear-cut finding is that over the long term, households have spent a declining share of their budgets on expenditure categories associated with meeting three “basic” needs: food, clothes and warmth. The first three sections of the bars show how much is devoted to purchasing food (excluding eating out), clothing and domestic fuel. This only imperfectly represents spending on meeting basic needs, since for example spending on fashionable clothing and luxury foods are included. Nevertheless, it is striking that:

- The proportion of all spending allocated to food, clothing and domestic fuel declined from almost half (47 per cent) of the total in 1963 to just over one-fifth (22 per cent) in 2014.
- In absolute terms, expenditure on these items grew by 42 per cent relative to estimated CPI between 1963 and 1989 (the period before growing under-recording of expenditures in surveys has been observed), while spending on other items grew by 186 per cent.
- While they partly relate to growing under-recording of expenditures, the measured consumption expenditure falls between 2000-01 and 2014 do not appear to have resulted in these “essentials” taking up a greater share of overall spending. In other words, spending on these items has fallen along with everything else.

Thus, the growth in household spending over the past half century has been entirely on items other than these three categories, and spending in these categories may have become more mutable. This indicates a huge diversification of household consumption, in which for example items associated with leisure and communications have become at least as important to maintaining living standards as spending on material essentials. The fact that when overall expenditure apparently dropped between 2000-01 and 2014, households did not revert to prioritising spending on food, clothes and warmth is indicative of how this more diverse pattern of consumption reflects how people now live, and what they value. The additional spending of the past half century does not simply comprise “discretionary” extras.

One further, striking aspect of Figure 7 is the decline in the share of spending allocated to alcohol and tobacco over the whole period. In 1963, this was 12 per cent of all expenditure, but by 2014 it was just 3 per cent.

Against this backdrop of broad trends in expenditure across different categories over the past half century for all adults aged 25-64, the following section looks in detail at the experience of different age groups (and income groups within them).



## Section 3

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### The consumption expenditure of different age groups and generations

*Having set out broad trends in the spending of working-age adults over the past half century, in this section we look at how experiences have differed by age. We find that the spending of older working-age adults has held up compared to that of those aged under 50 during the 21<sup>st</sup> Century. Part of the explanation for this is the greater pressure that housing spending has put on the expenditure of younger working-age adults than older ones over the past 14 years, a trend that is mirrored for low-income groups.*

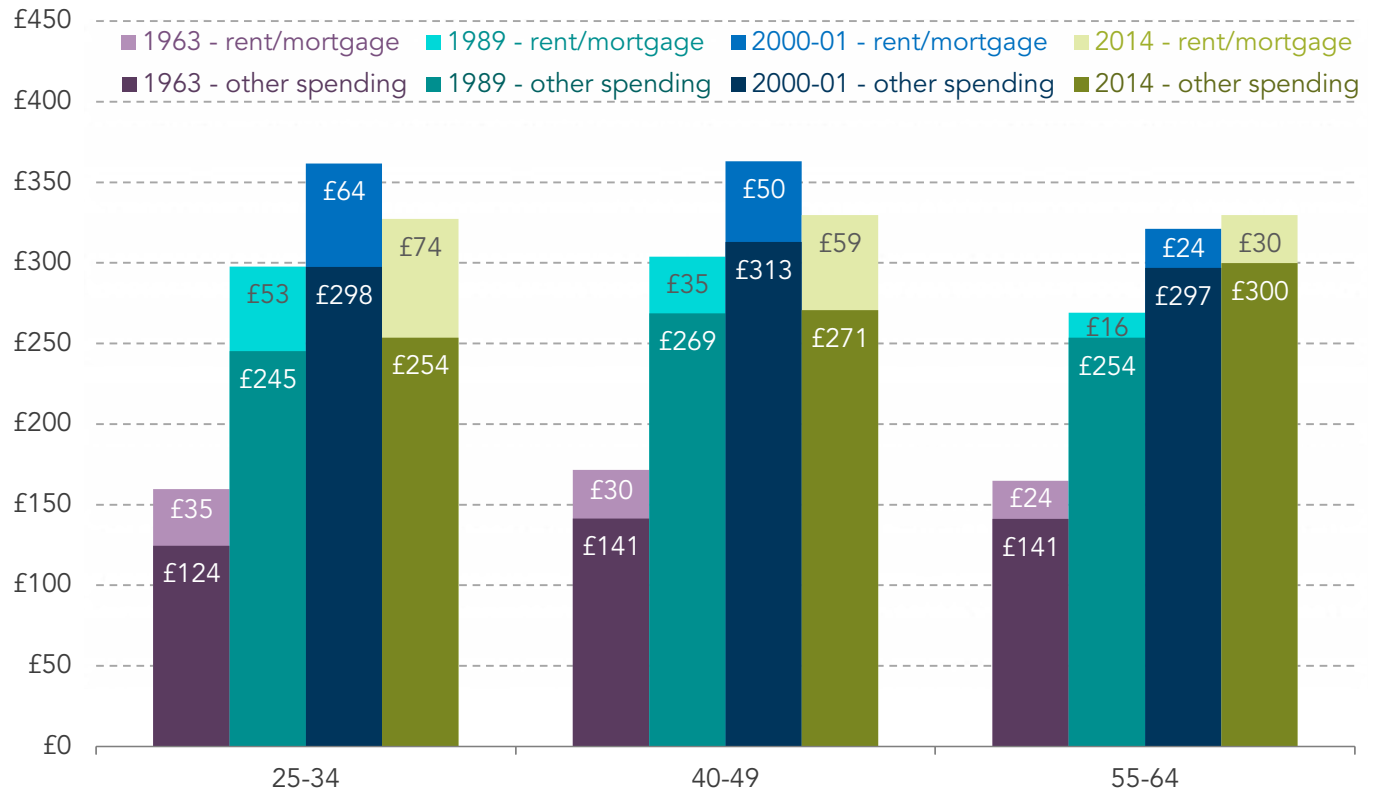
*Considering generations at different points in their lives, we find that members of the baby boomer generation born in the two decades after the second world war experienced faster non-housing expenditure growth on their predecessors than those of other ages both when young adults and when older. From this perspective they can be seen as relative winners from the last half century of expenditure changes. One area where no differences are apparent however is in the shifts in expenditure across broad spending categories over time detailed in the previous section, which have been very similar indeed at different ages.*

#### Older working-age adults' spending has been more resilient in the 21<sup>st</sup> Century than the expenditure of the under-50s

Figure 8 replicates the picture of changing overall consumption expenditure (with and without housing) over the past half century shown in Figure 4 in the previous section, but disaggregated by age. Again, deflation using (historically estimated) CPIH means this should not be taken as a measure of precise changes in the volume of different items consumed, but rather a broad-brush guide to changes in living standards as compared to composite price indices.

Figure 8: Average household housing and non-housing consumption expenditure over time, by age: UK

Mean real weekly equivalised household expenditure, adjusted to 2014 prices using all-items CPIH



Notes: All expenditures deflated using all-items CPIH (which has been indexed back to 1963 using historic trends in RPI), to give an indication of 'real' consumption expenditure changes over time.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

The most striking feature of changes at different ages during the 1960s, 1970s and 1980s was that young adults moved from having quite similar consumption expenditure (including housing) to other working-age adults in 1963, to spending noticeably more by 1989. In 1963, 25-34 year olds spent 3 per cent less than 55-64 year olds on average, but by 1989 they were spending 11 per cent more. However, not all of this relative decline in the spending of older working-age adults should be seen as a bad outcome from their perspective. Some of this change was driven by a modest and welcome reduction in housing spending between 1963 and 1989 for 55-64 year olds, compared to increases for the under-50s. This may be connected to large shifts into outright ownership within this group in this period.

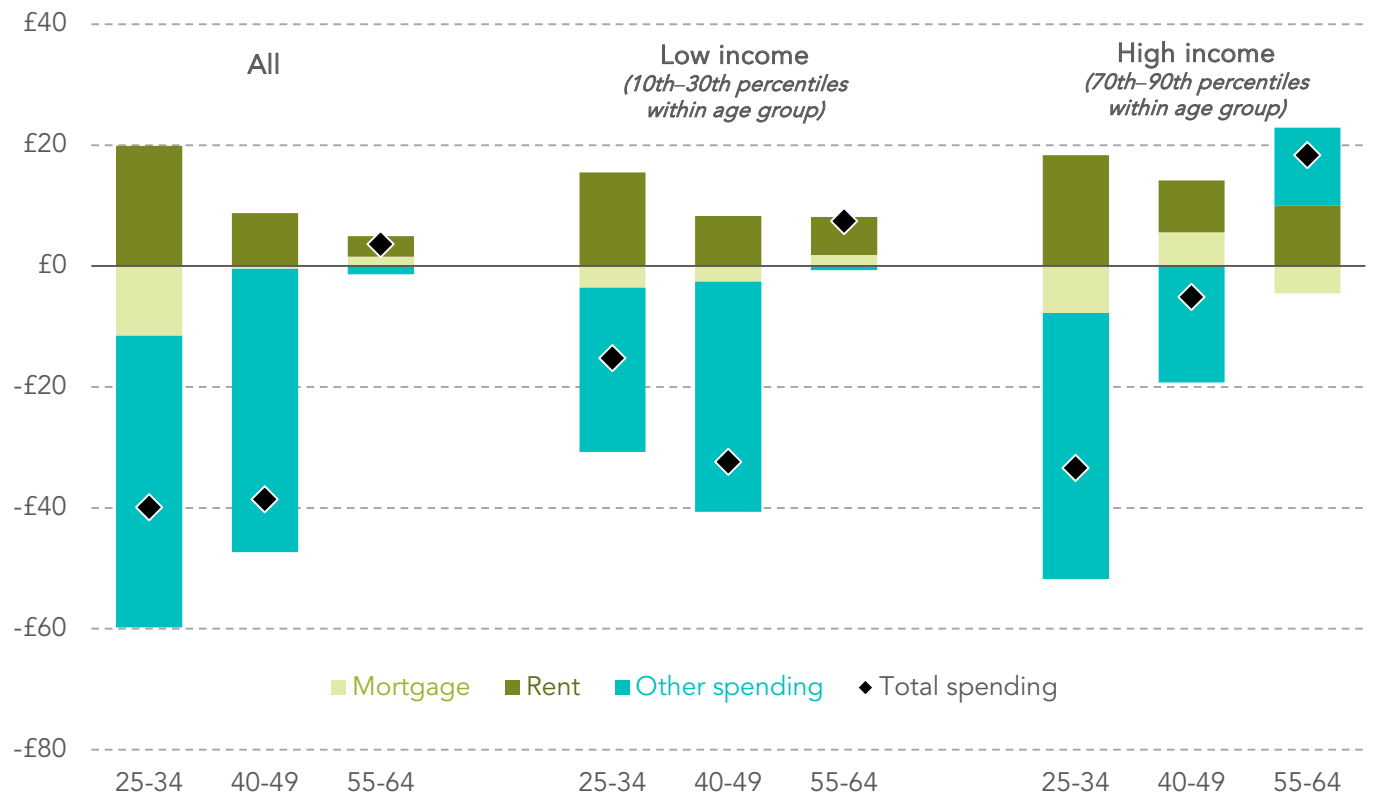
In the more recent period, what stands out is the fact that while the consumption expenditure of the under-50s apparently fell back between 2000-01 and 2014 (whether housing is included or not), for adults aged 55-64 it did not. In terms of the gap between different age groups, in 2000-01 25-34 year olds were spending 13 per cent more than 55-64 year olds, but in 2014 they spent marginally (1 per cent) less. As we have set out, this is a period during which absolute changes must be interpreted with caution, but the relative differences at different ages are striking. We explore these relative changes to spending on all items other than housing in more detail later in this section.

## Housing spending has weighed more heavily for the young and those of prime age than for older working-age adults in recent years

Figure 9 explores these trends over the 21<sup>st</sup> Century in more detail, separating out the role of rent and mortgages in housing spending. In this instance (due to the shorter time period) we can deflate these by individual rent and mortgage price indices rather than the overall CPIH, to show changes in volumes consumed. We additionally show trends near the top and bottom of income distributions within each age group, as well as at the average.

Figure 9: Change in volume of housing and non-housing consumption between 2000-01 and 2014, by age and income group: UK

Change in mean real weekly equivalised household expenditure, adjusted to 2014 prices using individual price indices for each item of spending



Notes: The 'price' of mortgages is a constructed index of the payments that would need to be made buying an average-price house on a 25 year mortgage at prevailing interest rates. 'Other spending' is adjusted by CPI.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

The left-hand side of this chart makes clear that, on average, housing consumption has increased more for adults under 50 than it has for 55-64 year olds between 2000-01 and 2014: the net increase is £8 per week for both 25-34 and 40-49 year olds, and £5 for 55-64 year olds.

Reflecting on the overall picture shown in Figure 8, the result is that young adults' spending on items other than housing has been pegged back even further than the shift in total expenditure. For example, in 2000-01 25-34 year olds and 55-64 year olds had the same amount of non-housing expenditure, but by 2014 25-34 year olds had expenditure on non-housing items 15 per cent lower than that of 55-64 year olds.

However, housing consumption volumes have increased for all age groups. This is in line with the conclusions of recent analysis for the Intergenerational Commission that declining housing affordability has been felt across generations.<sup>19</sup>

Figure 9 also shows trends for low-income and high-income adults within each age group. Given that the growing under-recording of consumption expenditure is much more problematic for households with high resources than for those with low resources (as discussed in Section 1), a focus on changes for low-income adults is likely to be particularly illuminating. Overall, the trends are fairly similar to those at the average. Differences of note include the fact housing weighs most heavily for 25-34 year olds with low-incomes (growing by £12 per week between 2000-01 and 2014, compared to £6 for 40-49 year olds and £8 for 50-64 year olds), however overall consumption has fallen most for 40-49 year olds.

Interpreting trends for those with high incomes is more challenging given under-reporting concerns, but we find that here the age-gradient is clearest, with the survey data suggesting that older working-age adults on high incomes are the only group to increase their non-housing consumption.

## Members of the baby boomer generation have experienced faster-than-average growth in non-housing spending both when young and older

As we have seen so far in this section, the caveats surrounding changes to survey-based consumption measures in recent decades set out in Section 1 make comparing the experiences of different cohorts or generations at the same age difficult. Having discussed how housing consumption has played out differently at different ages in recent years, here we attempt to overcome these measurement challenges to understand generational differences in all areas of consumption expenditure other than housing.

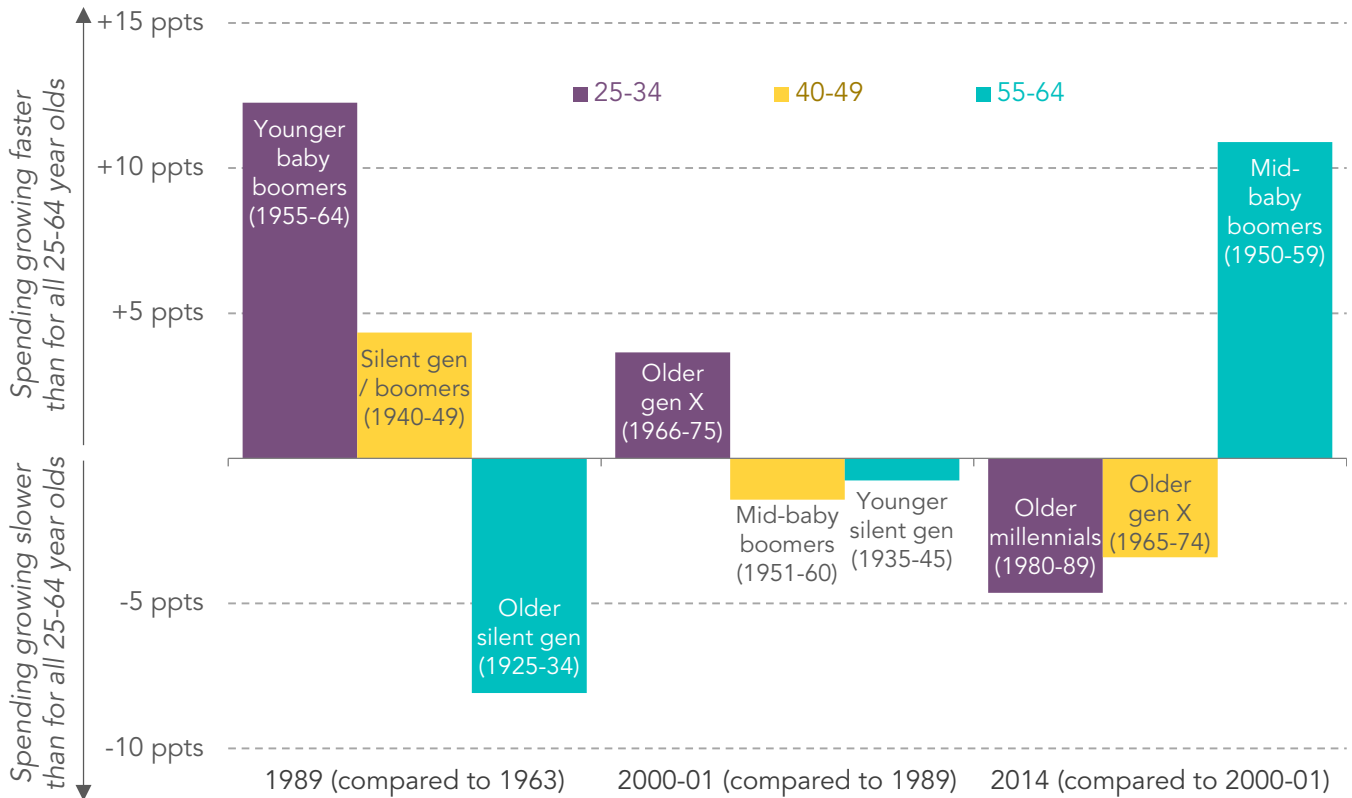
Figure 10 does this by exploring the relative difference between the experiences of an age group over a given period and the experience of all working-age adults over that same period. Positive relative changes tell us that non-housing spending has grown more rapidly for adults of that age (compared to predecessors at the same age) than is has overall; negative relative changes tell us that that age group is underperforming relative to the overall trend.

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Figure 10: Relative change in non-housing expenditure over time, by age: UK

Change in mean real weekly equivalised non-housing household expenditure compared to average change for all 25-64 year olds, adjusted using all-items CPI



Notes: Deflated using all-items CPI, which has been indexed back to 1963 using historic trends in RPI. In 2014, the cohorts captured do not quite map onto our standard definitions of generations, capturing one birth year of the preceding generation in each case.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

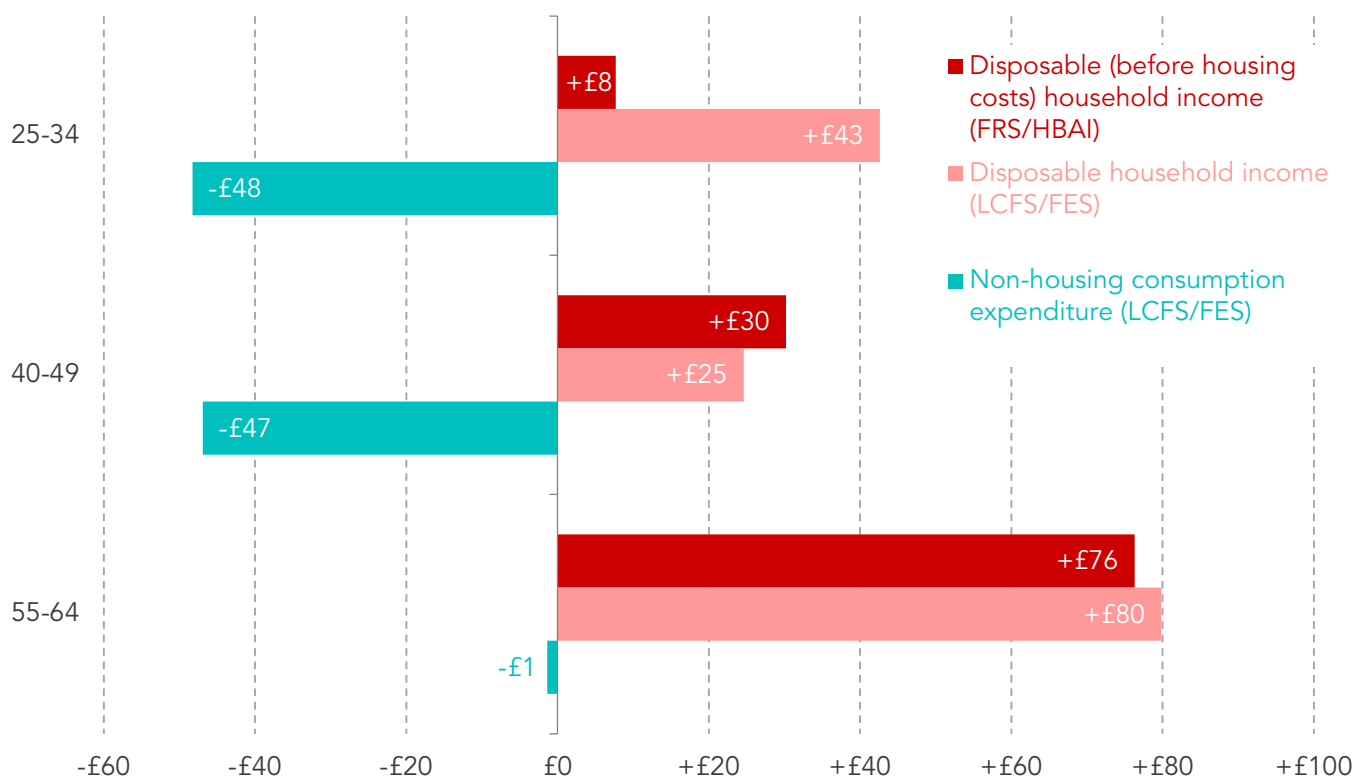
The pattern in Figure 10 is striking: in 1989 it was those aged under 50 – containing most of the baby boomers and the tail-end of the silent generation – who had the fastest non-housing spending growth compared to predecessors at the same age. For example, 25-34 year olds had growth 12 percentage points faster than growth for all 25-64 year olds. In 2000-01 growth on predecessors was quite similar at different ages, apart from the older two-thirds of generation X who did noticeably better than the average. And as we have seen already, in 2014 adults aged 55-64 – roughly the middle half of the baby boomers – were experiencing much faster-than-average (11 percentage points faster) non-housing expenditure improvements on predecessors at the same age, with generation X and the millennials underperforming (with growth for 25-34 year olds at a rate 5 percentage points slower than the average for all working-age adults). In relative terms, then, the baby boomers appear to have been on the right side of changes in non-housing spending over the course of their lives. So far – and they are still young so of course much is yet to come – the millennials have lost out in relative terms (as the silent generation did towards the end of their working-age lives).

Recalling that there are good reasons to prefer consumption to income as a measure of living standards, it's worth considering how our findings compare to the income trends discussed in the introductory section of this report. Figure 11 summarises income and

expenditure changes over the most recent 14 years for these age groups. It shows two (almost entirely comparable) measures of disposable income – one drawn from the expenditure surveys that our spending data also derives from, and one drawn from the preferred (larger-sample) income survey: the *Family Resources Survey*. To repeat, on the expenditure side of things the magnitudes of change should be taken with a pinch of salt given under-reporting concerns – the purpose of this chart is not to highlight these but to explore relative differences between age groups.

Figure 11: Change in income and consumption expenditure between 2000-01 and 2014, by age: UK

Mean real weekly equivalised income or expenditure, adjusted to 2014 prices using all-items CPI



Notes: The FRS/HBAI income series captures change up to 2014-15.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey; DWP, Households Below Average Income / Family Resources Survey

Of note is the fact that the two income measures shown in Figure 11 do not tell an entirely consistent story for 25-34 year olds, for whom the preferred survey suggests slower income growth between 2000-01 and 2014-15 than the expenditure surveys do (the reasons for which are unclear). Apart from this discrepancy, Figure 11 suggests that the relative differences between age groups are similar across income and expenditure changes. In both cases, older working-age adults have clearly experienced maintained or improving living standards to a greater extent than adults under 50, and the differences between age groups are relatively similar in magnitude. Therefore, setting aside the divergence of income and expenditure survey data across *all* households that was discussed in Section 1, changes in consumption expenditure by age tell a similar story to

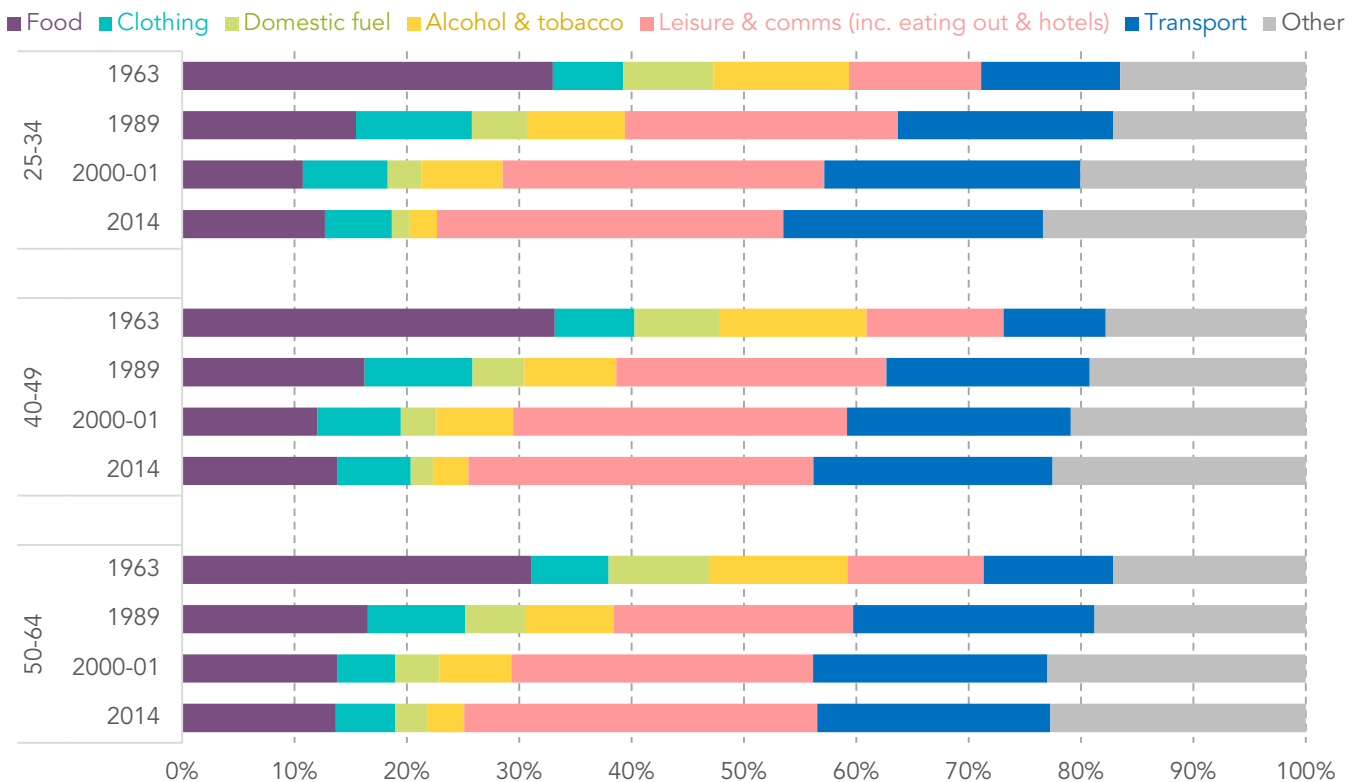
changes in income. Put differently (while it shows life stages and not generations so the comparisons to previous analysis for the Intergenerational Commission are not direct), Figure 11 provides no evidence that the finding drawn from income data that younger cohorts' living standards are falling behind those of predecessors is undermined by a focus on expenditure.<sup>20</sup>

## Adults of different ages spend very similar amounts in different broad spending categories

So far in this section we've focused on broad changes in expenditures across age groups and the different extent to which housing has crowded out other spending. Here we consider how expenditure in other broad categories varies for those of different ages. Figure 12 shows the share of non-housing spending falling into the broad categories we discussed in the previous section, over time and for different age groups.

Figure 12: Composition of household non-housing consumption expenditure over time, by age: UK

Proportion of mean equivalised household expenditure



Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

<sup>20</sup> For more detail on these findings see: A Corlett, *As time goes by: Shifting incomes and inequality between and within generations*, Resolution Foundation, February 2017

The clear finding is that the big shifts in the share of expenditure taken up by different goods and services for all working-age adults in the past half century are very consistently experienced within age groups. Young, prime age and older working-age adults devoted a similar proportion of their spending to each of food, clothing, domestic fuel, alcohol and tobacco, leisure and communications and transport in 2014 – as they did in 1963. As discussed in the following section, divergent patterns at different ages are sometimes apparent when we explore spending in finer detail, but it's clear that relative to overall consumption levels, the big expenditure shifts of the past 50 years have been broadly felt across adults of working age.

This finding relates to a potential challenge to analysis of generational income and earnings trends. It is possible that it might be inappropriate to use headline price indices

## i Box 4: Does the composition of expenditure produce very different inflation rates across groups?

An important reason for considering how consumption patterns differ across different groups – such as age groups and income groups – is that these differences could in theory create varying inflation rates particular to these groups that affect the comparison of living standards over time. For example, if certain basic commodities such as food and domestic fuel are rising more rapidly in price than goods and services generally, groups on low incomes whose expenditure is more strongly composed of such core essentials would face a higher effective inflation rate. This would cause the value of income or overall spending to rise more slowly than implied by deflation using overall price indices. For example, analysis has found that for much of the 21<sup>st</sup> Century those on the lowest incomes have experienced the fastest inflation rate. More recent analysis has found that this pattern has returned with the post-referendum inflation spike driven by devaluation and rising export costs, and is potentially a significant factor underpinning current movements in living standards.<sup>1</sup>

Testing whether such patterns have materialised over a very long period – for example, whether a particular cohort has experienced faster-than-average inflation over the course of a lifetime – is problematic for two reasons. First, the CPI was only introduced, in an earlier form, in

1996, and backwards estimates of its values before this time are not broken down except in highly selective broad categories. The Retail Prices Index does provide a longer time-series, but has fallen out of favour as an accurate reflection of household inflation experiences. Second, very long-term breakdowns of a prices index are of limited value, given how the composition of consumption changes within categories. There can be no single accurate figure that expresses how much more food costs now than in the 1960s, because the huge changes in what we eat means that this is like comparing “apples and oranges” (or Hovis and ciabatta).

Nevertheless, a simple comparison of how much the average expenditures of different age groups in 2000 had increased in price by 2014, is revealing. This comparison involves inflating each broad component of an age group's expenditure by the inflation reported in CPI for that component over the period. This exercise shows not much difference by groups defined by age. They are almost all in the range of 34 per cent to 36 per cent over the 14 years.

The suggestion is that over a long period, when inflation affects the relative prices of items in multiple ways, no factor has dominated to disadvantage a particular age group or cohort in a systematic way. Hence, it appears highly unlikely that a particular generation has been consistently on the losing side of price trends, and as such it is unnecessary to seek to deflate generational income or earnings trends by group-specific inflation rates.

1 S Clarke, *The going rate: Moving from CPI to CPIH and the inflation experiences of UK households*, Resolution Foundation, March 2017

2 S Clarke, 'Inflation Afflictions', *Resolution Foundation blog*, 18 July 2017



to express such trends in real terms, when a generation may have had very different inflation experiences to the average at certain points in their lives. For example, at that point they may be spending more on items that are rising in price more rapidly, and so the real value of their income is effectively lower. Box 4 considers this question in detail, with the conclusion that it is highly unlikely that differential inflation has affected a particular generation to the extent that their spending power has differed from the average over a sustained period.

Having established how the broad spending patterns discussed in the previous section have been experienced across different age groups and generations, the following section of this report looks in more detail at expenditure on selected goods and services. The purpose is to explore in a more nuanced fashion how lifestyles and spending preferences are changing, and the extent to which these changes pervade across age and income groups.

## Section 4

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### Changing consumption patterns: Five examples

*In this section we lift the lid on the broad categories of non-housing spending discussed in the previous two sections. We take five areas of consumption: eating in and out; transport; communications; leisure goods and services; and personal goods and services. We explore how spending in these areas has changed in response to differential price changes, and how these experiences vary by age groups and income groups within them.*

*Overall, we find that consumption differences are often greater by income than by age. Additionally, wider price-related, social and technological shifts generally pervade across age groups. There is little evidence to support the characterisation of millennials as frivolous spenders – in terms of spending excessively on things such as eating out, communications technologies and holidays – compared to either other age groups today or their predecessors at the same age.*

#### A detailed look at individual areas of consumption illustrates how lifestyles are changing for people of different ages

It is beyond the scope of this report to give a full account of how lifestyle changes combine with prices and incomes to determine changes in living standards. Our approach is therefore to take a selective look within five categories of spending. We consider interactions between volumes consumed, prices, age and income group and consider how these patterns change over time (mainly only during the 21<sup>st</sup> Century, given that consistent detailed price indices for different categories of spending are only available for this period). The five areas of spending we focus on are:

- Eating in and out;
- Transport;
- Communications (including mobile phones and the internet);
- Leisure goods (such as computers and printed material) and services (such as sports clubs and package holidays); and
- Personal goods and services (including personal cosmetics, domestic cleaning and childcare).

The findings in each of these areas of course differ, and the aim of the analysis in this section is not to come to a conclusive view on ‘what matters’ in determining expenditure by age. However, three broad inferences can be drawn across the five examples we look at.

First, the amount working-age adults spend today on different goods and services within categories of spending varies by age group, but perhaps less than might be imagined given perceptions of different lifestyles. For example, 55-64 year olds spent four-fifths as much as 25-34 year olds on eating out in 2014, and three-quarters as much on mobile phones and internet services (accounted for by the fact they spent more[?] on eating in and traditional communications technologies). Differences are usually much larger between those on different incomes *within* age groups.

Second, in many areas changes over the course of this century have been experienced to similar extents across age groups, often reflecting changing prices. For example, all age groups have shifted their consumption from traditional communications technologies to mobile phones and internet services between 2000-01 and 2014 to very similar extents. In addition, all age groups are buying relatively more (in volume terms) leisure goods as they become cheaper, compared to leisure services, which are becoming more expensive. However there are some areas where differences by age are more apparent, for example 25-34 year olds stand out because they appear to consume less private transport than 14 years ago despite it becoming relatively cheaper.

Finally, there is little evidence to support the common assertion – discussed in Section 1 – that millennials are spending like there is no tomorrow on certain “frivolous” items. While spending on leisure is not frivolous per se (social participation is integral to people’s lives), devoting a very high proportion of expenditure to items such as eating out or holidays may be seen as indicative of a focus on short-term gratification. Yet the evidence shows that it is 55-64 year olds who have experienced by far the biggest relative growth (compared to other age groups) in eating out at restaurants and cafes, and in the volume of consumption devoted to holidays.

To a large extent this reflects the fact that, as we saw in the previous section, older working-age adults’ overall non-housing expenditure has performed better in this century so they are more likely to have a greater amount of discretionary spending. These findings make clear that after accounting for overall consumption shifts over time and across age groups, there’s no evidence that young adults are approaching things like eating out, holidaying, or the latest communications technologies in a markedly different way to other adults today or predecessors at their age.

We now turn to each of our five examples in turn.

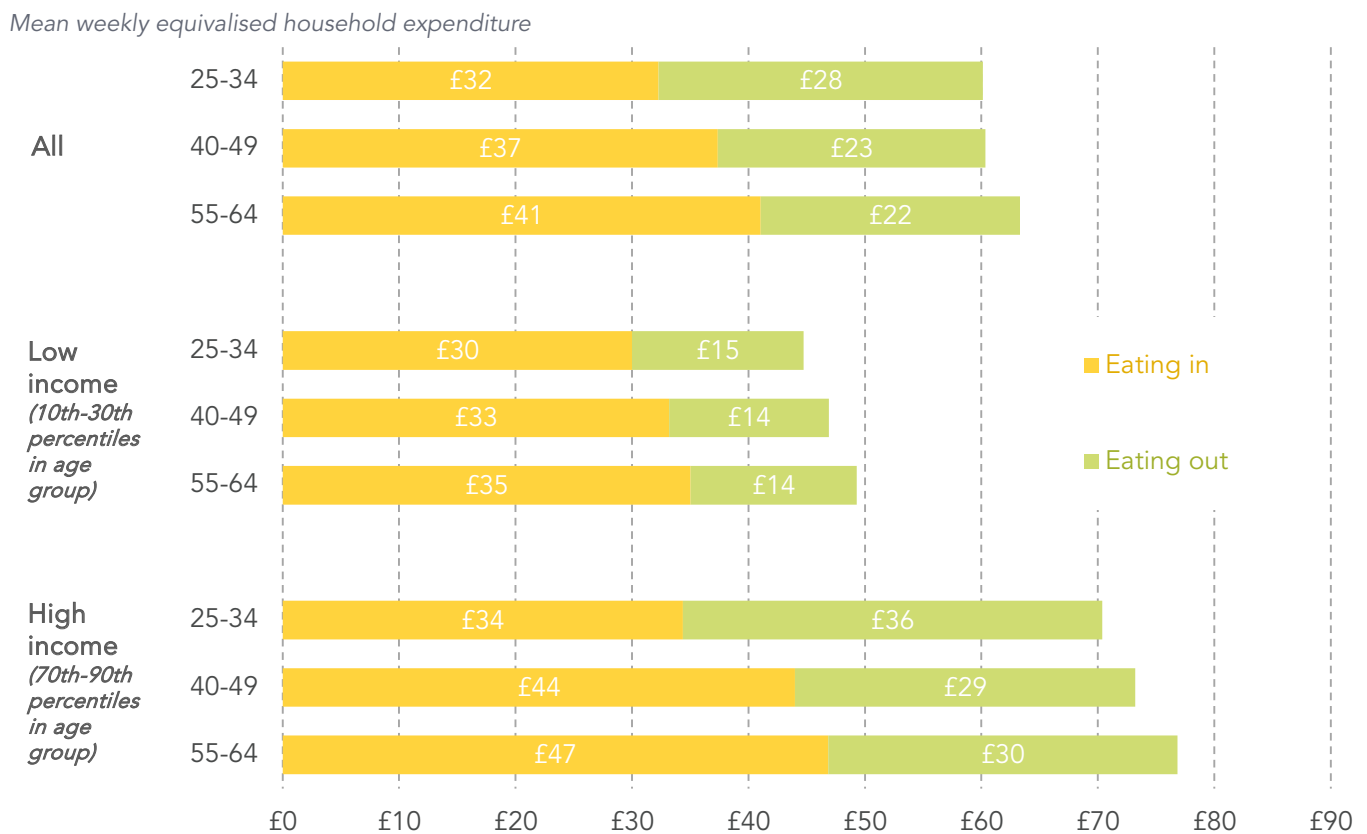
## Avocado toast? *Eating in and out*

Since the 1960s, there has been a striking change in how households consume food and its share in overall expenditures. In 1963, 25-64 year old households spent on average nearly nine times as much on eating in as eating out (which includes takeaways) – comprising 32 per cent and 3.7 per cent of all expenditure, respectively. By 2014, they spent only one and a half times as much on eating in as eating out – 11 per cent and 7.4

per cent of all expenditure respectively – and around half as much of total expenditure on food overall. Here we explore the precise incidence of these trends across age and income groups.

Figure 13 shows how much different age groups, and income groups within them, spent on eating in and eating out in 2014.

Figure 13: Expenditure on eating in and out, by age and income group: 2014, UK



Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

Overall we find much greater difference by income than by age, especially in the eating out category. For example, low-income adults of different ages spent almost identical amounts per week on average on buying food prepared outside the home, and far less than the average for their age.

While this picture contradicts an oversimplified image of all millennials spending their money at cafes and on takeaways rather than in the supermarket, the relative amounts spent on eating out *are* greater overall for adults aged 25-34 than for older groups. In 2014, 25-34 year olds spent nearly as much on eating out as on eating in, compared to only half as much in the case of 55-64 year olds. Comparing the two, the average 25-34 year old spent 25 per cent more on eating out in 2014 than the average 55-64 year old. However, these differences are likely to reflect normal lifecycle spending profiles that

have been established in past research. For example, young adults are more time poor (partly because they are more likely to be in work), and so can be expected to eat out relatively more than others.<sup>21</sup>

For parts of the last half century, the decline in overall expenditure on food was helped by food prices becoming relatively cheaper, meaning that grocery bills could take up a smaller part of a household’s budget without actual consumption declining. In the 1990s, overall prices measured by CPI grew by about 30 per cent but the food element by only 20 per cent. However, more recently the reverse has been true, with food prices growing by 55 per cent and CPI by only 38 per cent in the period from 2000-01 to 2014. Eating out also became 56 per cent more expensive over this period.

Using the same decomposition method described in Box 3 in Section 2, Figure 14 explores how these price changes during the 21<sup>st</sup> Century have interacted with changes in volumes consumed to determine overall food-related spending. As we’ve said previously, overall changes in this chart should be interpreted with some caution given the growing under-recording of consumption expenditure in this period.

Figure 14: Decomposition of change in expenditure on eating between 2000-01 and 2014 for 25-64 year olds: UK

Mean real weekly equivalised household expenditure, adjusted to 2014 prices using all-items CPI



Notes: The ‘quantity effect’ is the change in the ‘volume’ of spending on an item (expenditure on an item adjusted for the change in that item’s price), weighted by general CPI inflation over the period. The ‘relative price effect’ is the change in the price of an item relative to general CPI inflation, weighted by the average volume of that item consumed over the period. ‘Total change relative to CPI’ is the sum of these effects, which is also equal to the real (all-items-CPI-adjusted) change in expenditure over the period. See Box 3 in Section 2 for further details of our decomposition approach.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

21 M Aguiar & E Hurst, *Deconstructing Lifecycle Expenditure*, NBER Working Papers, March 2008

The effect of rising food prices is shown in the upper sections of the bars in Figure 14: this upward effect means that more overall spending (compared to the overall CPI) would have been needed to buy the same amount of food in 2014 as in 2000-01. By buying less food for eating in, working-age households (apparently, setting aside under-recording concerns) roughly maintained their overall spending in this category. On the other hand, they continued to allocate more to eating out despite higher prices.

How have these effects played out across age groups and income groups within them? Figure 15 addresses this question by investigating the ‘volume’ effects in Figure 14 – the change in expenditure on a category adjusted by the item-specific price index for that category – for younger and older working-age groups, and income groups within them.

Figure 15: Change in volume of consumption on eating in and eating out between 2000-01 and 2014, by age and income group: UK



Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

Again, the overall magnitude of changes in this chart should be interpreted with caution given under-reporting concerns, but relative changes for different age and income groups are illuminating. Overall, it's clear that older working-age adults' consumption of food prepared outside the home has increased more than that for young adults over the past 14 years. For low-income 55-64 year olds in particular this has been offset by volume reductions in eating in.

In fact, overall changes in food consumption are similar across low-income 25-34 year olds and 55-64 year olds – the difference between the two lies in the fact that 55-64 year olds on low incomes have shifted consumption towards eating out whereas low-income 25-34 year olds appear not to have. While there was very little difference between the average spending on eating out in younger and older low-income households in 2014, a sizeable gap existed in 2000-01 – with those aged 25-34 spending significantly more than those aged 55-64. The closing of this gap might therefore be characterised as a process of 'catch up' for the older group.

Reflecting on the discussion in Section 1, the analysis here provides little support for the idea that avocado toast consumption in cafes (and other things eaten outside the home) is crowding out more long-term or purposeful spending (or saving) for millennials. Young adults today *do* spend a bit more on eating out than today's 55-64 year olds, but this is entirely offset by less spent eating in. And in terms of the direction of recent changes, consumption has shifted towards eating out much more for older working-age adults than for the young. The story is not today's millennials eating out more than yesterday's generation X, but rather today's baby boomers going to cafes and restaurants to a greater extent than yesterday's silent generation.

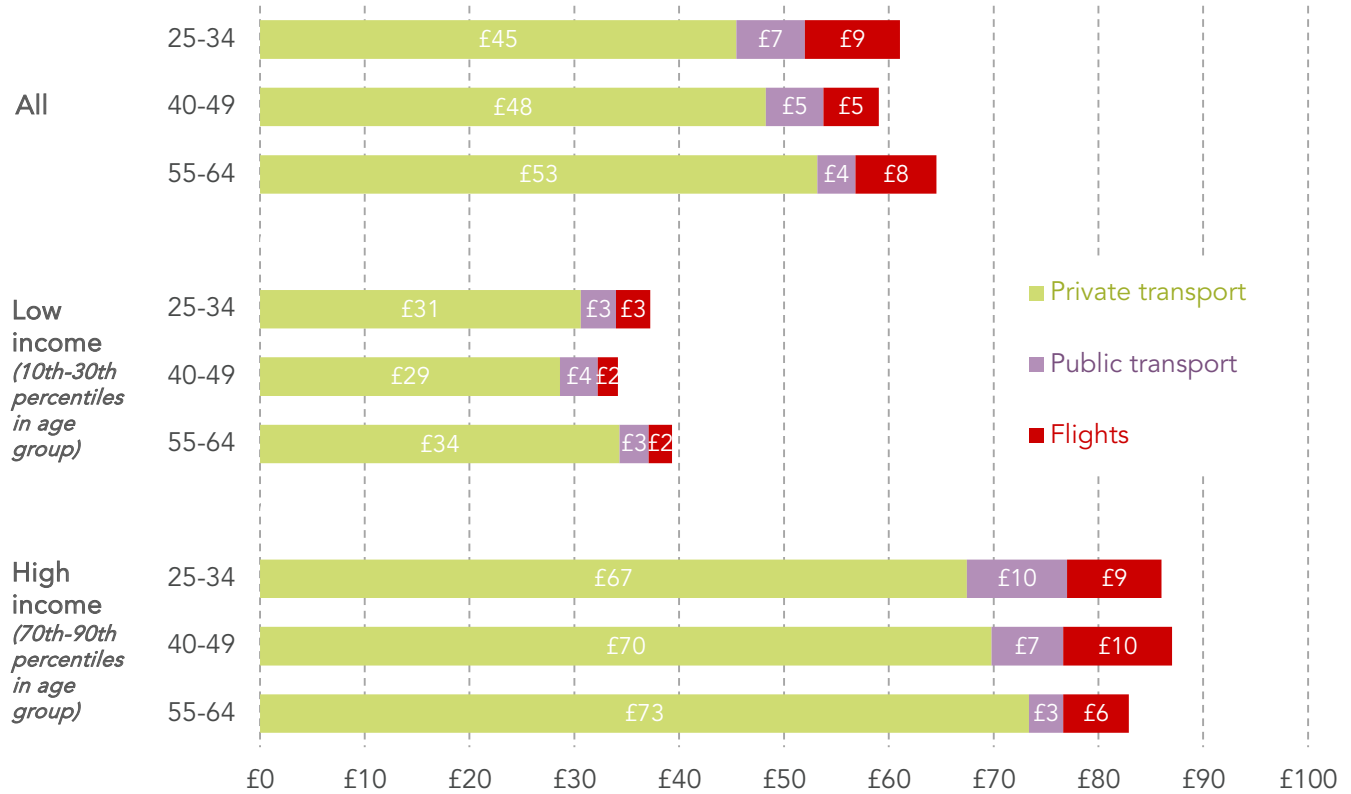
## End of the road for young drivers? *Transport*

We saw in Section 2 that spending on transport has grown in the past half century both relative to composite price indices and as a share of household expenditure. There are likely to be a variety of reasons for this, including rising female employment pushing up the amount of commuting that is done. Here we explore what types of transport people spend their money on and how this varies by age.

Figure 16 details spending on three different types of transport across age groups, and income groups within them, in 2014: private transport (mainly cars), public transport (including buses and trains), and flights.

Figure 16: Expenditure on transport, by age and income group: 2014, UK

Mean weekly equivalised household expenditure



Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

As with food, the biggest differences are across income groups. But differences by age are also evident. In particular, 25-34 year olds spent slightly more on both flights and public transport than either 40-49 year olds or 55-64 year olds. Largely offsetting this, they spent less on private transport, which makes up by far the largest category of spending for all age groups (and income groups within them).

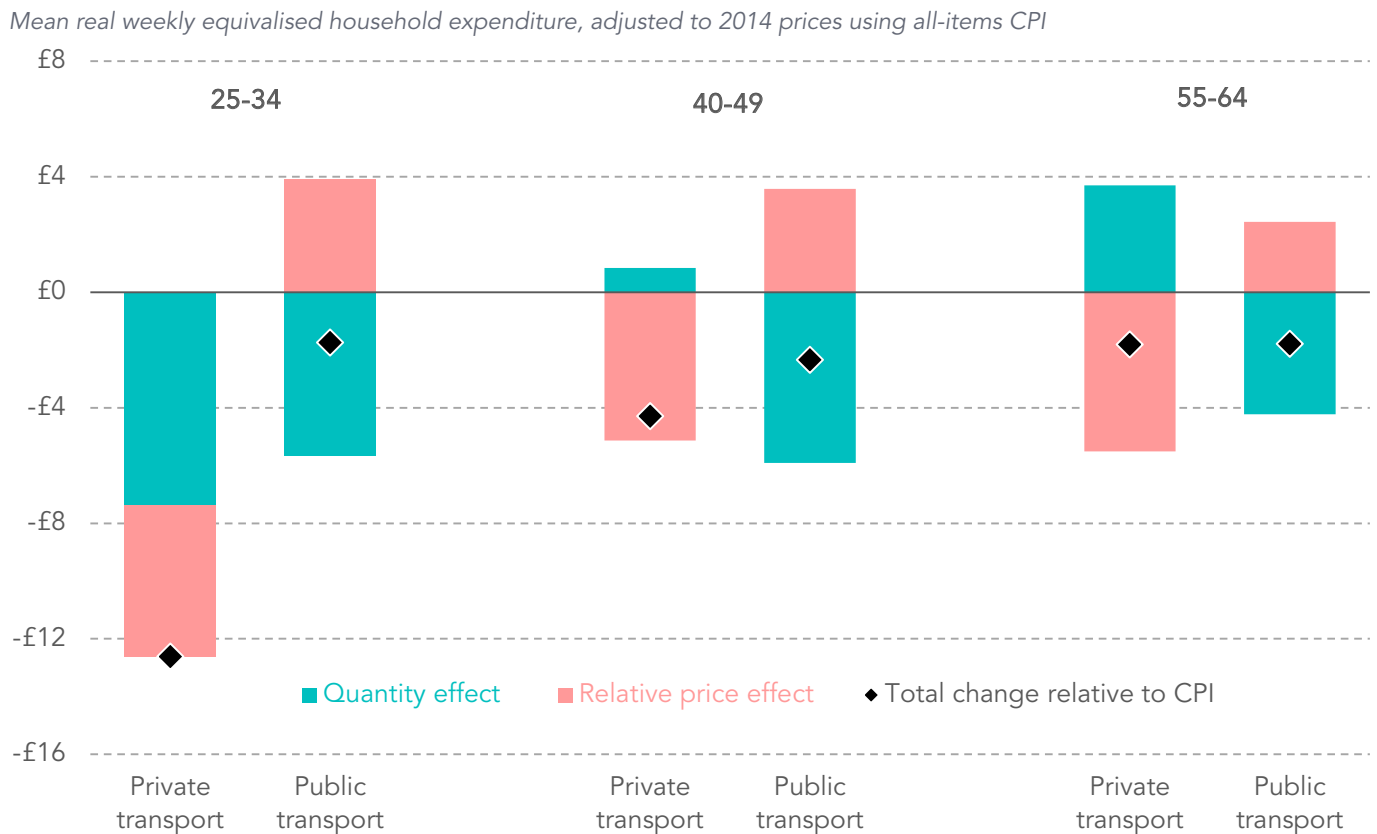
Those with low household incomes spent relatively similar (and modest) amounts on all three types of transport across age groups. For those on higher incomes however, there was a clearer age-based contrast. For example, high-income 25-34 year olds (the older half of millennials) spent over three times what high-income 55-64 year olds (the middle half of baby boomers) spent on public transport in 2014. And both high-income 25-34 year olds and high-income 40-49 year olds spent around seventy per cent more than high-income 55-64 year olds on flights (equivalent to around £470, £540 and £330 per year respectively).

Figure 17 decomposes changes to expenditure on transport for different age groups between 2000-01 and 2014 into price and quantity effects. It is not possible to include expenditure on flights here because of discontinuities caused by the way this spending



was reported.<sup>22</sup> Overall, the price of private transport grew more slowly than the overall CPI in this period (so the relative price effect on private transport is negative across age groups), while the price of public transport grew more quickly than overall CPI.

Figure 17: Decomposition of change in expenditure on transport (excluding flights) between 2000-01 and 2014, by age: UK



Notes: The 'quantity effect' is the change in the 'volume' of spending on an item (expenditure on an item adjusted for the change in that item's price), weighted by general CPI inflation over the period. The 'relative price effect' is the change in the price of an item relative to general CPI inflation, weighted by the average volume of that item consumed over the period. 'Total change relative to CPI' is the sum of these effects, which is also equal to the real (all-items-CPI-adjusted) change in expenditure over the period. See Box 3 in Section 2 for further details of our decomposition approach.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

While the overall magnitudes of change here may be skewed by growing under-recording of consumption expenditure, in terms of the direction of travel the response to these differential price changes has been as economic theory would suggest for 40-49 and 55-64 year olds. Consumption of private transport has increased as it has become cheaper, and consumption of public transport has fallen as it has become more expensive.

For young adults however, the volume of consumption of public and private transport has reduced to similar extents despite these differential price effects. In contrast to older age groups, today's millennials are therefore shifting away from private transport usage compared to their predecessors. This echoes evidence from other surveys that ownership of driving licences has fallen among the under-30s over the past two

<sup>22</sup> Rather than reporting spending on air travel only in the two week period before they were interviewed, survey respondents are now being asked about spending over the whole year, and that amount averaged on a weekly basis.

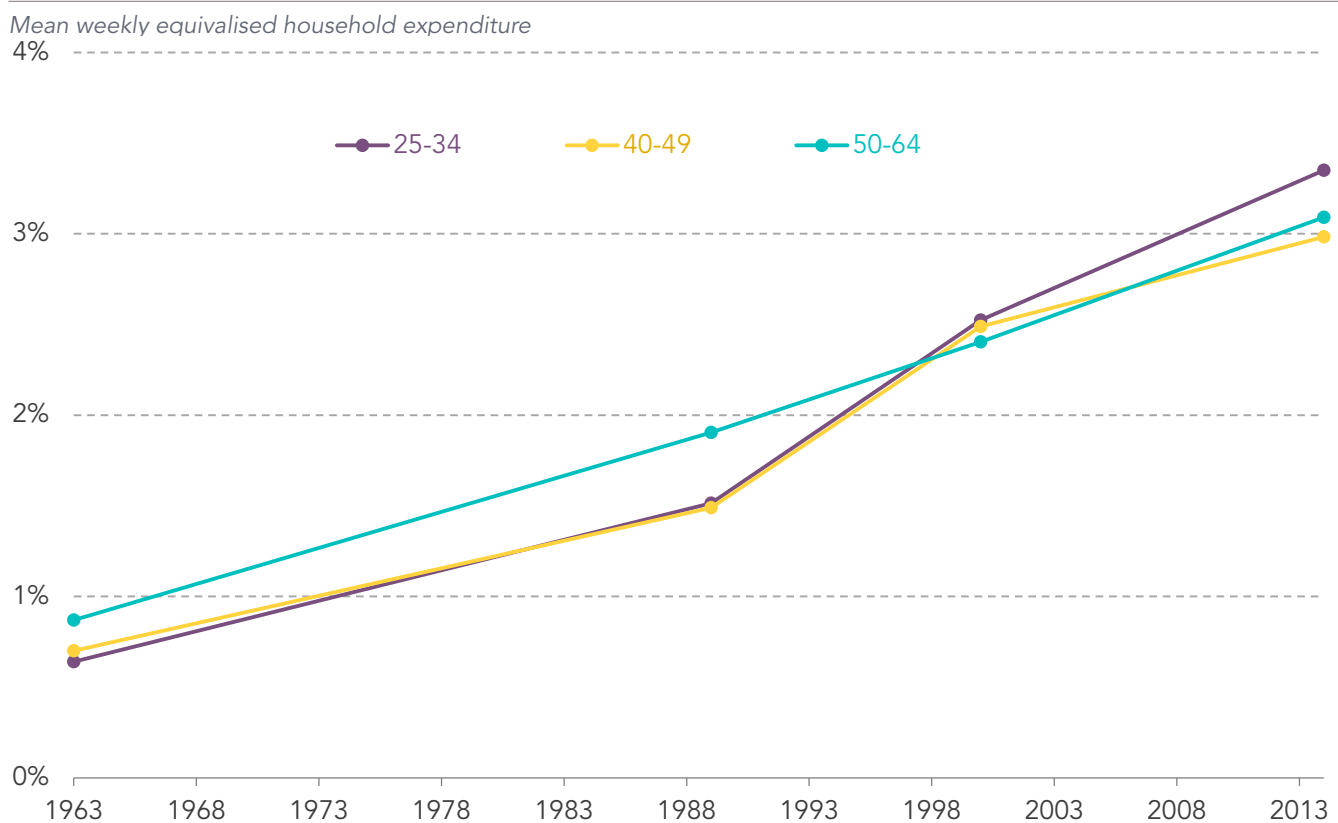
decades,<sup>23</sup> and US evidence showing that lower car ownership has been a consequence of lower incomes among the young.<sup>24</sup>

So today's patterns of expenditure on transport – young adults spending relatively less on private transport than other age groups do – appear to at least partly reflect different trends by age over the 21<sup>st</sup> Century, with young people making less use of private transport than predecessors.

### iPhone generation? Communications

Expenditure on communications is probably the area that receives most focus in discussions of how lifestyles have changed in recent decades, as well as the thorny question of whether price indices are capable of truly capturing the technological improvements that today's consumers have benefitted from.<sup>25</sup>

Figure 18: Communications spending as a proportion of total consumption expenditure, by age: UK



Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

Taking a historical perspective, however, Figure 18 shows that while the share of communications in total expenditure has increased steadily since 1963, it still makes up only a relatively small share of total expenditure today.

<sup>23</sup> G Eaton, 'What the decline of the young driver reveals about British politics in 2017', *New Statesman*, 3 September 2017

<sup>24</sup> N Klein & M Smart, 'Millennials and car ownership: Less money, fewer cars', *Transport Policy* 53, January 2017

<sup>25</sup> These questions were raised, for example, in: C Bean, *Independent Review of UK Economic Statistics*, March 2016

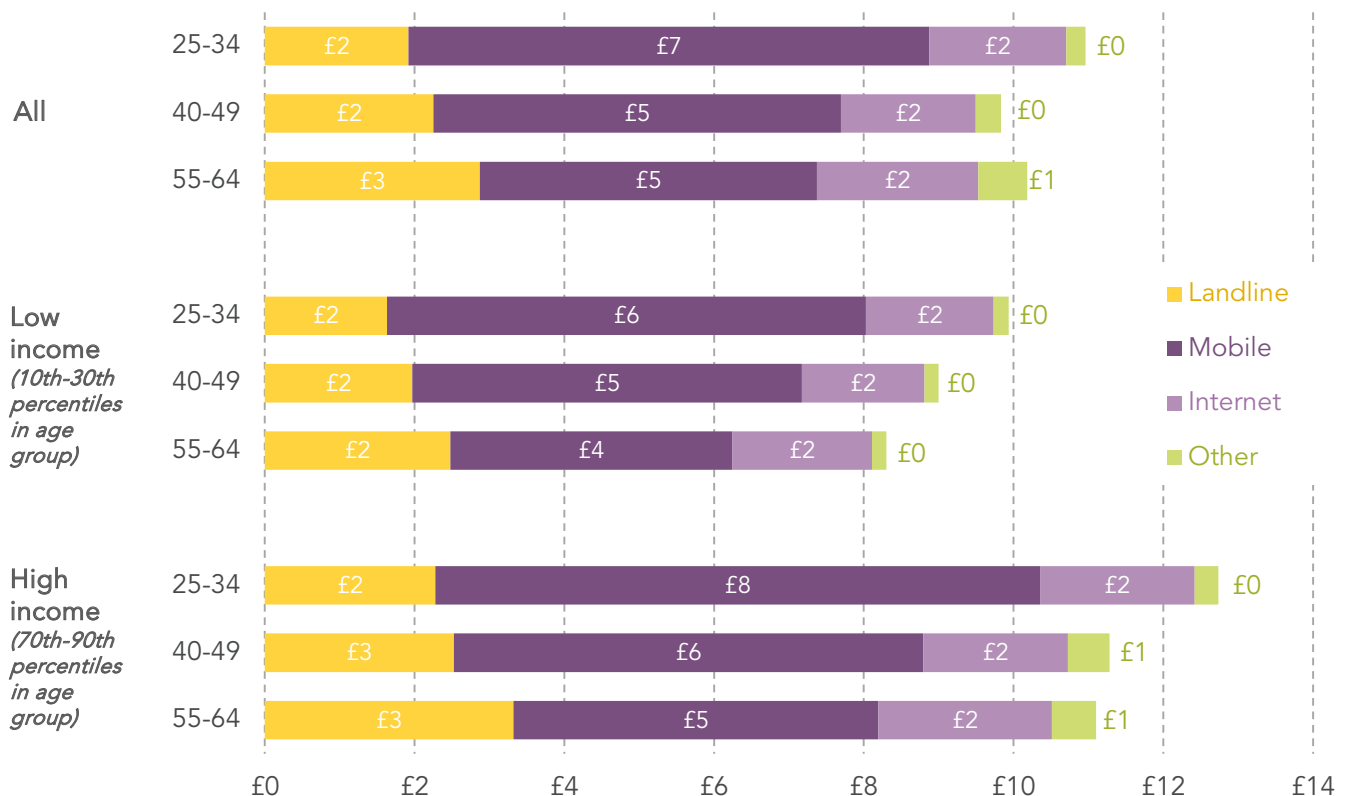
In 1963, working-age households spent a mere one shilling and sixpence per week, a thousandth as much in cash terms and less than a quarter the share of income than the £10.30 spent in 2014. This increase has been experienced across age groups: it seems that all generations have embraced new communications technologies. Today these are technologies that serve not only communication needs but also entertainment and many other needs, including making spending more cost-effective in other areas of spending (for example, by accessing discounts only available online or free streaming of entertainment).

Nevertheless, it is important not to overstate the importance of spending on communications as part of household budgets given that its overall share is still relatively small – around 3 per cent across age groups in 2014. The growth of communications expenditure is arguably important more in terms of how it has shaped other expenditures.

Figure 19 shows that overall expenditure on communications is very similar across age groups – between £10 and £11 per week in total in 2014 for the three age bands looked at in this study. Within this, young adults spent around one third (32 per cent) more on mobile phones and internet services than older adults, largely offset by lower spending on landlines and other communications (including postage). While this shows that younger adults don't spend enormous amounts more on mobile phones than older adults today, it should be noted that these estimates of spending do not capture the true value in terms of relative use. In particular, the perception is that young people use these devices more frequently and intensively than older adults, and so “get more out of them”.

Figure 19: Expenditure on communications, by age and income group: 2014, UK

Mean weekly equivalised household expenditure



Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

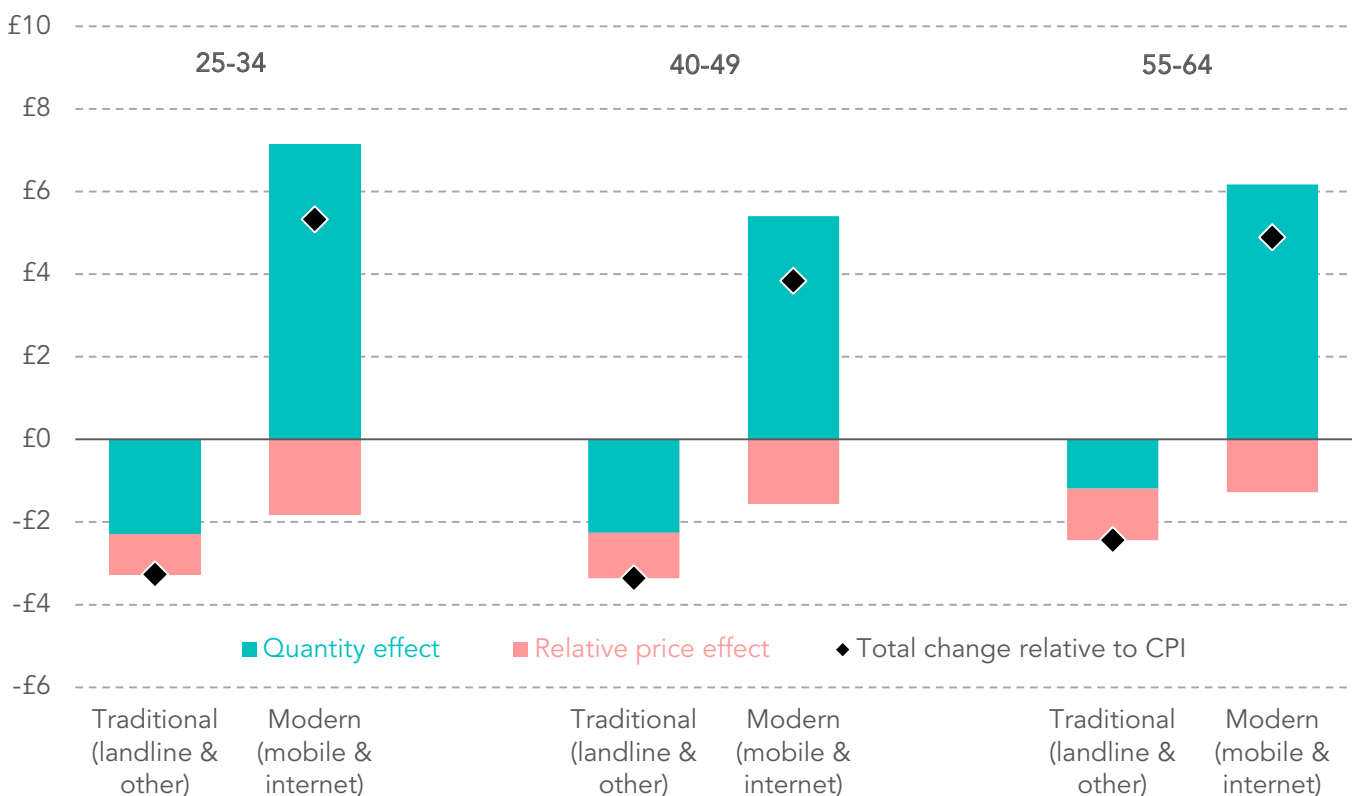
Of note is the fact that young adults now spend more on mobile phones than they do on alcohol and tobacco (on which 25-34 year olds spent £6 per week in 2014).

Figure 19 also shows clear differences by income groups within age bands, although these variations are smaller than those shown for transport and food, suggesting the existence of a certain 'baseline' level of access to mobile phones and the internet among modern households.

Mobile phones and the internet are two obvious new additions to household's expenditure over recent years. This increase in "modern" methods of communication has been accompanied by a decrease in expenditure in "traditional" communication methods like the landline and postage. Figure 20 decomposes these changes across age groups into the quantity and relative price elements. As we have said before, given under-recording concerns in the recent survey data, it is the relative differences by age we focus on here not the overall magnitude of changes.

Figure 20: Decomposition of change in expenditure on communications between 2000-01 and 2014, by age: UK

Mean real weekly equivalised household expenditure, adjusted to 2014 prices using all-items CPI



Notes: The 'quantity effect' is the change in the 'volume' of spending on an item (expenditure on an item adjusted for the change in that item's price), weighted by general CPI inflation over the period. The 'relative price effect' is the change in the price of an item relative to general CPI inflation, weighted by the average volume of that item consumed over the period. 'Total change relative to CPI' is the sum of these effects, which is also equal to the real (all-items-CPI-adjusted) change in expenditure over the period. See Box 3 in Section 2 for further details of our decomposition approach.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

The picture given by Figure 20 is one of very similar patterns of change for different age groups. Slower-than-average growth in the price of both traditional and modern communications goods and services (which are arguably understated given technology allows each device to do so much more than its earlier equivalent, more so than the CPI index captures) means the relative price effect is negative across the board. And the size of the quantity effect – the change in the volume consumed – is very similar across ages, with all age groups shifting spending from traditional communications to modern in the 21<sup>st</sup> Century.

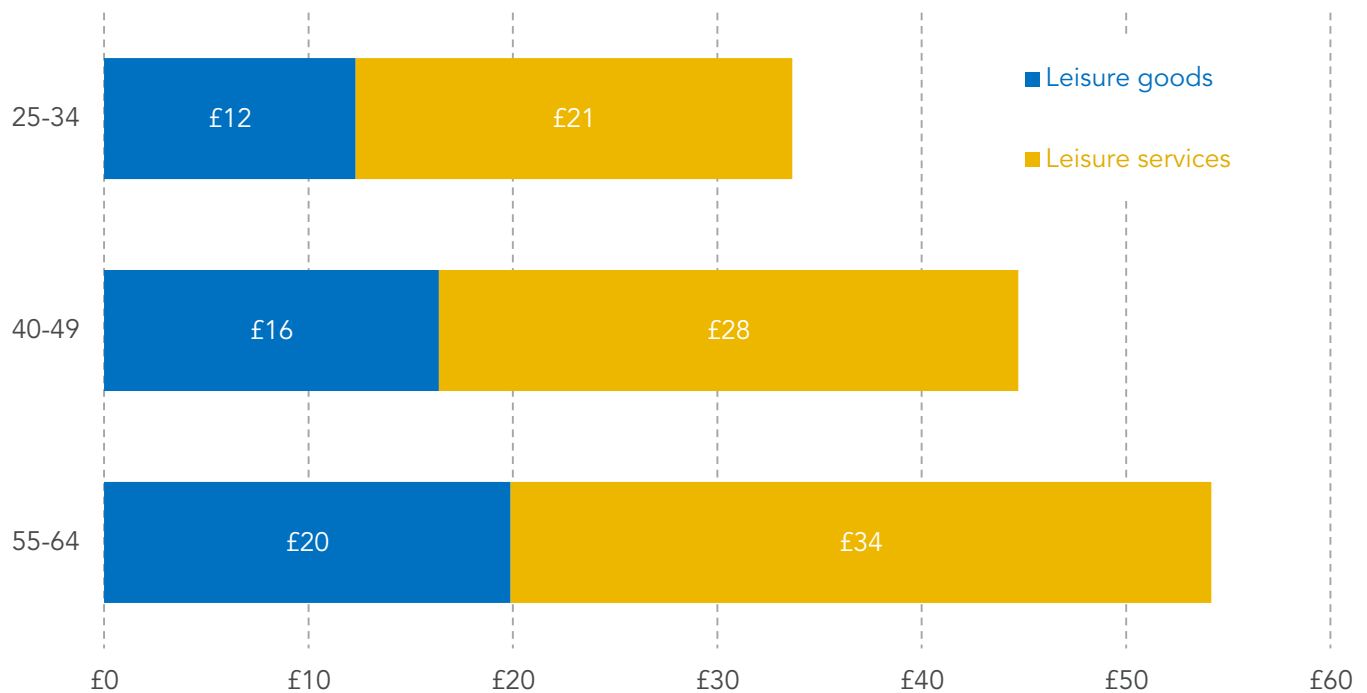
Overall the clear message is that while young people spend somewhat more on modern communications than older working-age adults, the differences are not huge, and changes over the past 14 years have been similar at different ages. Communications still takes up a relatively small share of overall expenditures. And the differences in spending by income group are smaller than for other items like transport and food, suggesting these items have come to be regarded as essentials for working-age adults today.

### Blowing it all in Ibiza? Leisure goods and services

Leisure is an important component of total expenditure, and one that varies in both absolute and relative terms by age to a greater extent than other consumption goods and services discussed in this section. In 2014 leisure represented 11 per cent of 25-34 year olds' total expenditure, 14 per cent of 40-49 year olds' total expenditure and 17 per cent of 55-64 year olds' total expenditure. The absolute values connected to these expenditure shares and their split across leisure goods (including computers and printed material) and leisure services (including sports clubs and package holidays) are summarised in Figure 21.

Figure 21: Expenditure on leisure goods and services, by age: 2014, UK

Mean weekly equivalised household expenditure

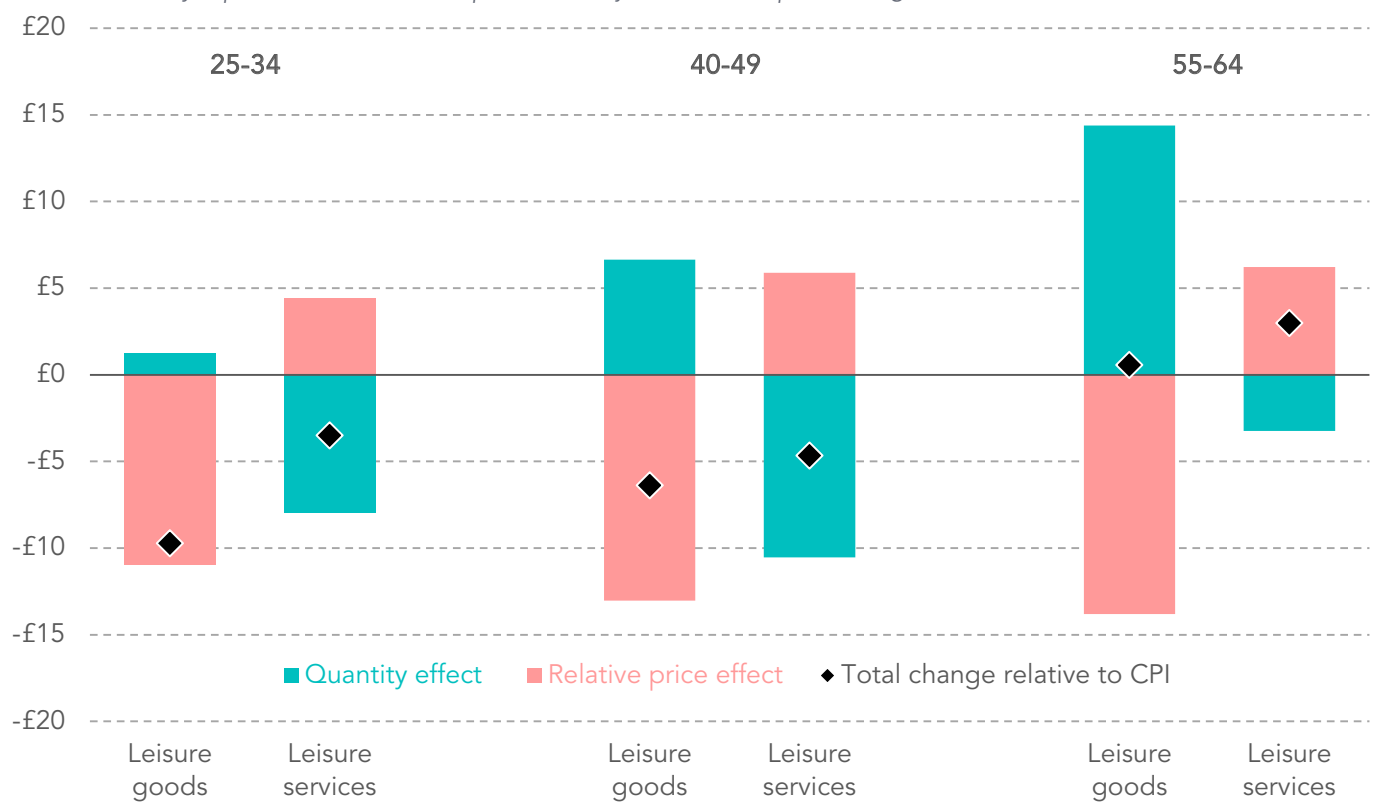


Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

Between 2000-01 and 2014 there was a decline in spending on leisure relative to the overall CPI, which will likely be partly driven by the growing under-recording of consumption expenditure in this period. Focusing therefore on the relative changes within this category we can once again explore their relationship to changes in relative prices. Figure 22 demonstrates this, decomposing changing expenditures on leisure goods and services into the influence of changes in price and in the quantity consumed across our three age groups.

Figure 22: Decomposition of change in expenditure on leisure goods and services between 2000-01 and 2014, by age: UK

Mean real weekly equivalised household expenditure, adjusted to 2014 prices using all-items CPI



Notes: The 'quantity effect' is the change in the 'volume' of spending on an item (expenditure on an item adjusted for the change in that item's price), weighted by general CPI inflation over the period. The 'relative price effect' is the change in the price of an item relative to general CPI inflation, weighted by the average volume of that item consumed over the period. 'Total change relative to CPI' is the sum of these effects, which is also equal to the real (all-items-CPI-adjusted) change in expenditure over the period. See Box 3 in Section 2 for further details of our decomposition approach.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

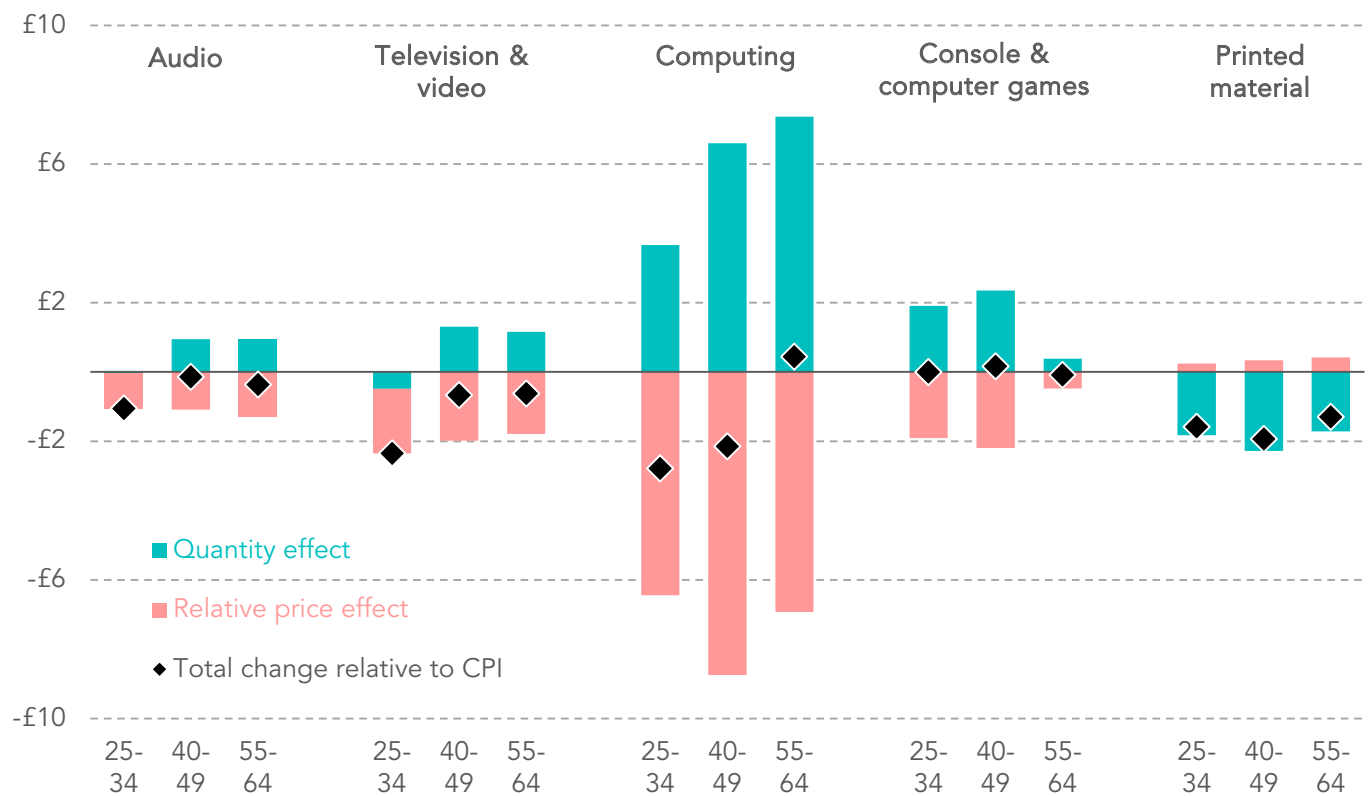
In terms of price effects, faster-than-average growth in the price of leisure services acted to push up expenditure in this area between 2000-01 and 2014 regardless of any change in the volume consumed. Slower-than-average growth in the price of leisure had the opposite effect. Figure 22 shows that volume effects have acted in the opposite direction to these price effects across age groups, with all working-age adults consuming more leisure goods and fewer leisure services. The absence of overall decreases for 55-64 year olds aligns with the fact that their expenditure has performed relatively better overall in this period.

Having established these high-level trends across leisure goods and services, below we explore each of these two categories of spending in more detail.

Turning first to leisure goods, Figure 23 presents the same decomposition across age groups for selected goods. It shows that even though in most cases less is being spent on a range of modern leisure appliances, their falling prices (to as little as a third of their 2000-01 level in the case of audio-visual equipment) have meant that the quantity consumed has nevertheless risen. This is in stark contrast to a more “traditional” category, printed materials, where prices have risen slightly faster than average and quantity effects have pulled in the opposite direction.

Figure 23: Decomposition of change in expenditure on selected leisure goods between 2000-01 and 2014, by age: UK

Mean real weekly equivalised household expenditure, adjusted to 2014 prices using all-items CPI



Notes: The ‘quantity effect’ is the change in the ‘volume’ of spending on an item (expenditure on an item adjusted for the change in that item’s price), weighted by general CPI inflation over the period. The ‘relative price effect’ is the change in the price of an item relative to general CPI inflation, weighted by the average volume of that item consumed over the period. ‘Total change relative to CPI’ is the sum of these effects, which is also equal to the real (all-items-CPI-adjusted) change in expenditure over the period. See Box 3 in Section 2 for further details of our decomposition approach.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

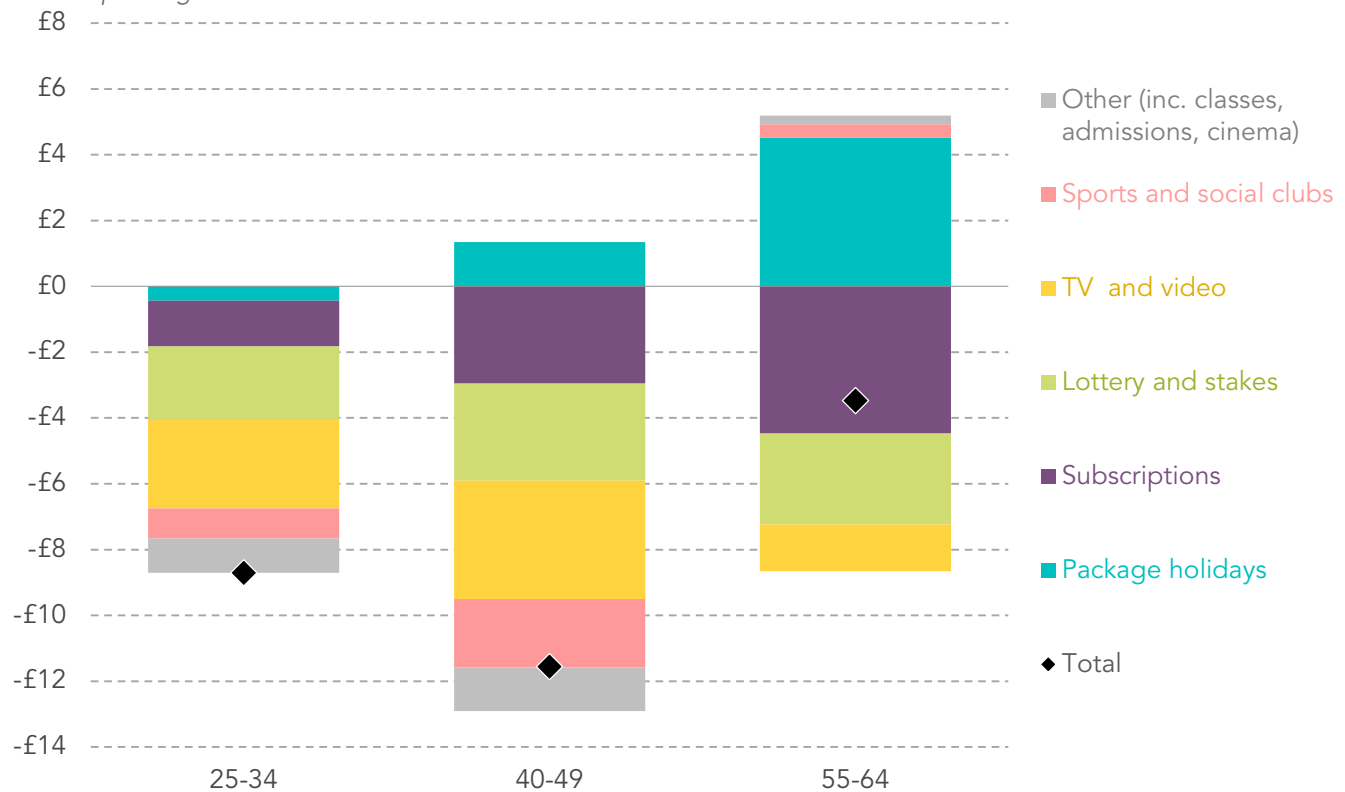
Figure 23 also shows somewhat different patterns by age in terms of the consumption of electronic and other technology-related goods. In particular, it is older working-age adults whose consumption of these items has risen most over the past 14 years. To some extent this simply aligns with the fact that their spending has performed relatively better overall in this period. But it potentially also reflects some technology “catch up”: in 2000, those aged 55-64 spent half as much as younger adults on these items, but in 2014 they spent 16 per cent more.

Even this conclusion hides many of the finer details of how spending on leisure goods differs by age. For example, more detailed data for 2014 shows that within the audio goods category (in which 55-64 year olds spent nearly twice as much as 25-34 year olds overall), 25-34 year olds spent four times more on headphones than older working-age adults. The discussions above about the other areas of consumption that ownership of a modern mobile phone facilitates, and the intensity of their use among young people, may be particularly relevant here.

One final point on leisure goods, not captured in these figures, is the question of whether the quality of goods today is better than the quality of goods that were available 14 years ago in ways that price indices do not account for. For example, comparisons of a smart television which provides a wide range of contents and features to an analogue television are challenging.

Figure 24: Change in volume of consumption on leisure services between 2000-01 and 2014, by age: UK

Change in mean real weekly equivalised household expenditure, adjusted to 2014 prices using individual price indices for each item of spending



Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

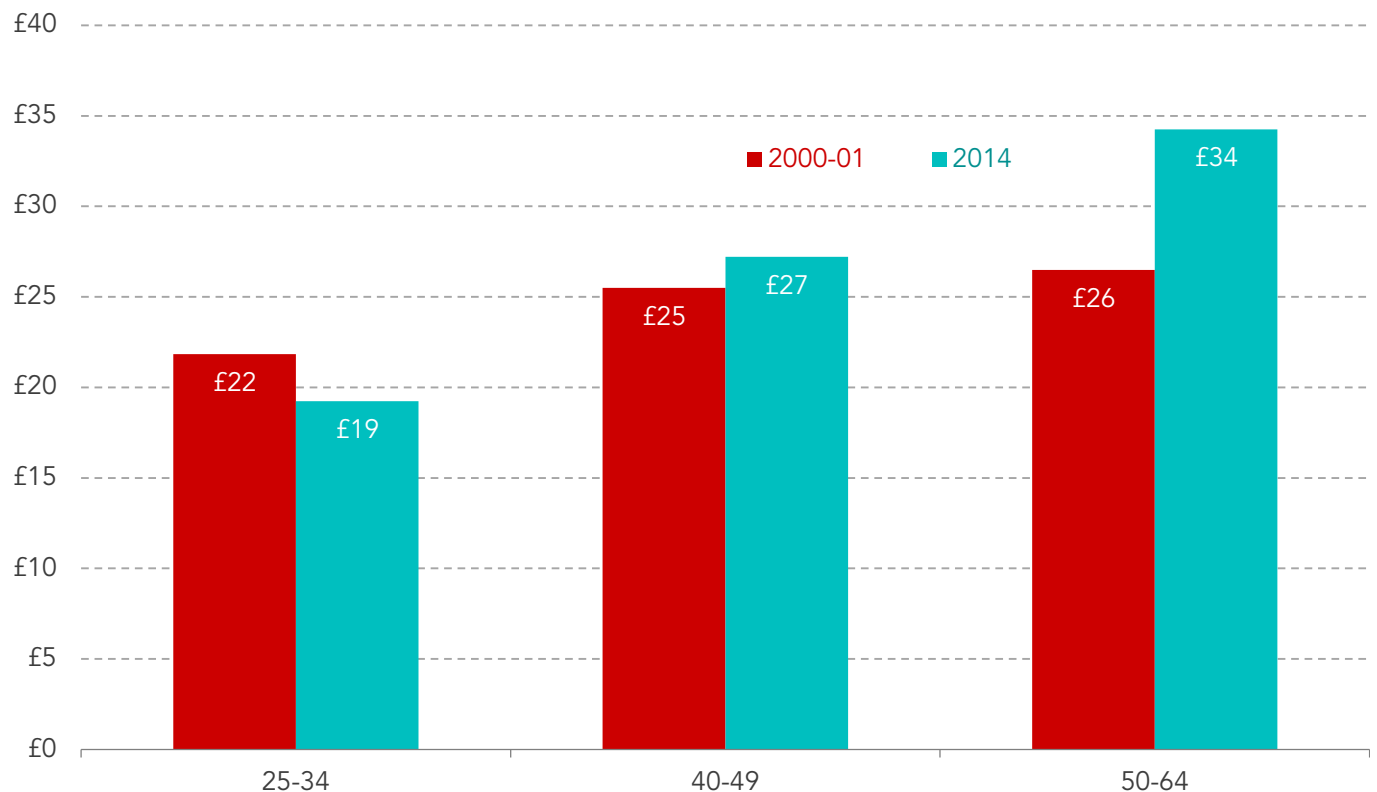


In contrast to the increased consumption of leisure goods, we have seen that households have shifted consumption *away* from leisure services during the 21<sup>st</sup> Century, likely partly in response to their faster-rising prices. Figure 24 shows changes in the volume of spending on different types of leisure services for each of our three age groups. While the magnitudes of change should be interpreted with caution given growing under-reporting of expenditures in this period, we find that in most cases and in line with overall expenditure trends, 55-64 year olds' consumption fell by less or increased by more than that of younger adults. The exceptions are gambling and subscriptions, where reductions in consumption are either consistent across the age range or larger for older working-age adults, likely related to changes in cultural norms.

There is a particular age contrast in changes in the consumption of package holidays (the largest of these leisure service categories overall). Figure 25 explores this in more detail, adding in other types of spending related to holidays from other consumption categories (apart from flights which were not measured consistently between 2000-01 and 2014).

Figure 25: Volume of consumption on holidays (excluding flights), by age and year: UK

Mean real weekly equivalised household expenditure on package holidays, hotel and self-catered holiday accommodation, holiday insurance and spending abroad, adjusted to 2014 prices using individual price indices for each item of spending



Notes: The overall CPI index is used to adjust money spent abroad.

Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

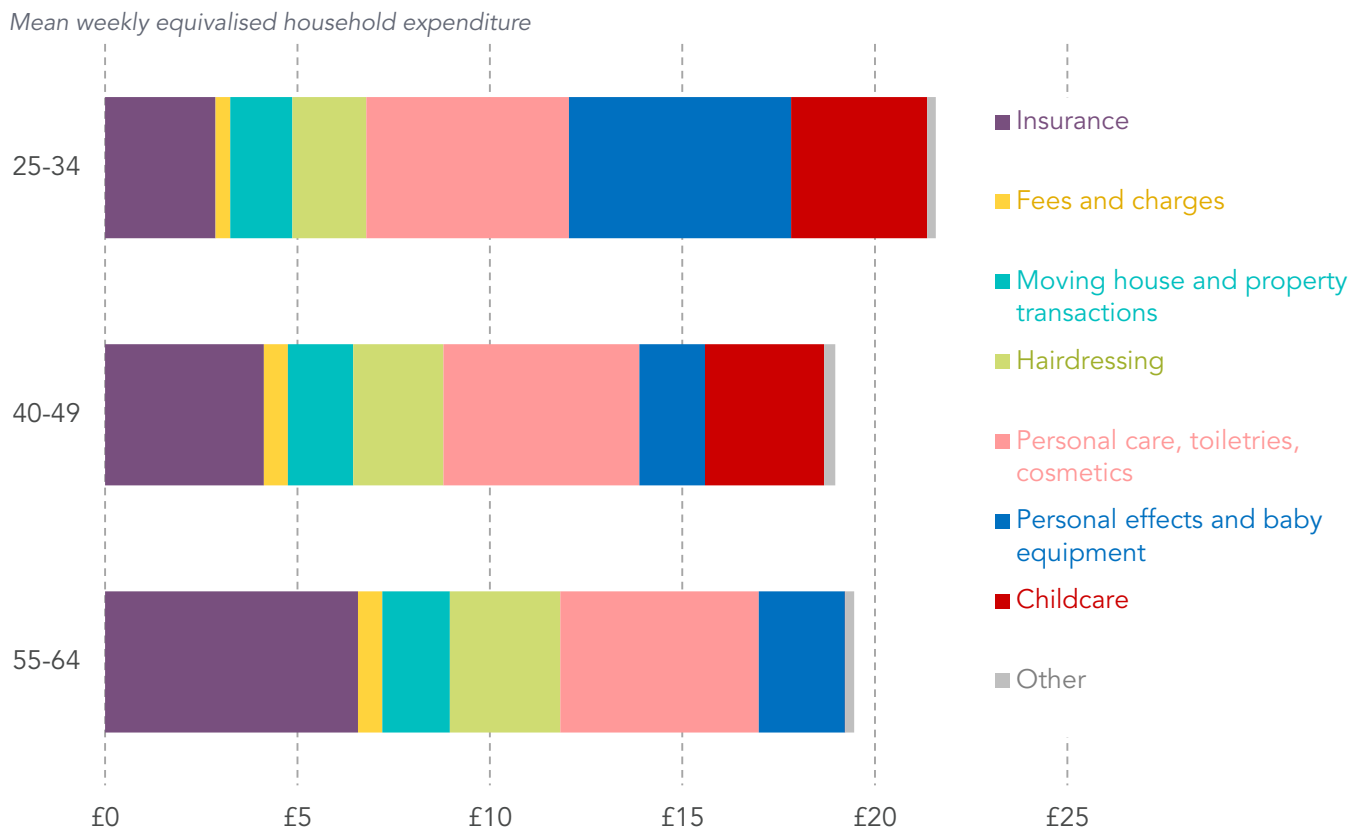
As always, the absolute changes are less helpful given under-reporting concerns in this period, but the picture remains striking: older working-age adults have higher holiday consumption in both periods and have experienced the strongest growth between 2000-01 and 2014. As we saw earlier in this section, the volume of flights consumed in 2014 was both low relative to these totals (£8-£9), and relatively similar for young and older working-age adults, so their exclusion is unlikely to have skewed this picture.

From a generational perspective, the story is not today’s millennials heading to Ibiza more than yesterday’s generation X, but rather today’s baby boomers heading off on cruises to a greater extent than yesterday’s silent generation.

### Paying someone else to do it? *Personal goods and services*

Over the course of the 21<sup>st</sup> Century, personal goods and services have grown as a share of expenditure. Figure 26 details what this category of spending comprised in 2014, and the values of expenditure at different ages. Overall expenditures were somewhat (£3 per week) higher for 25-34 year olds than for the older two age groups, but otherwise not that different. However there was a clear age gradient to spending on certain items: for example, childcare and personal effects and baby equipment were more common in young people’s spending, while insurance was a more common item for older working-age adults.

Figure 26: Expenditure on personal goods and services, by age: 2014, UK



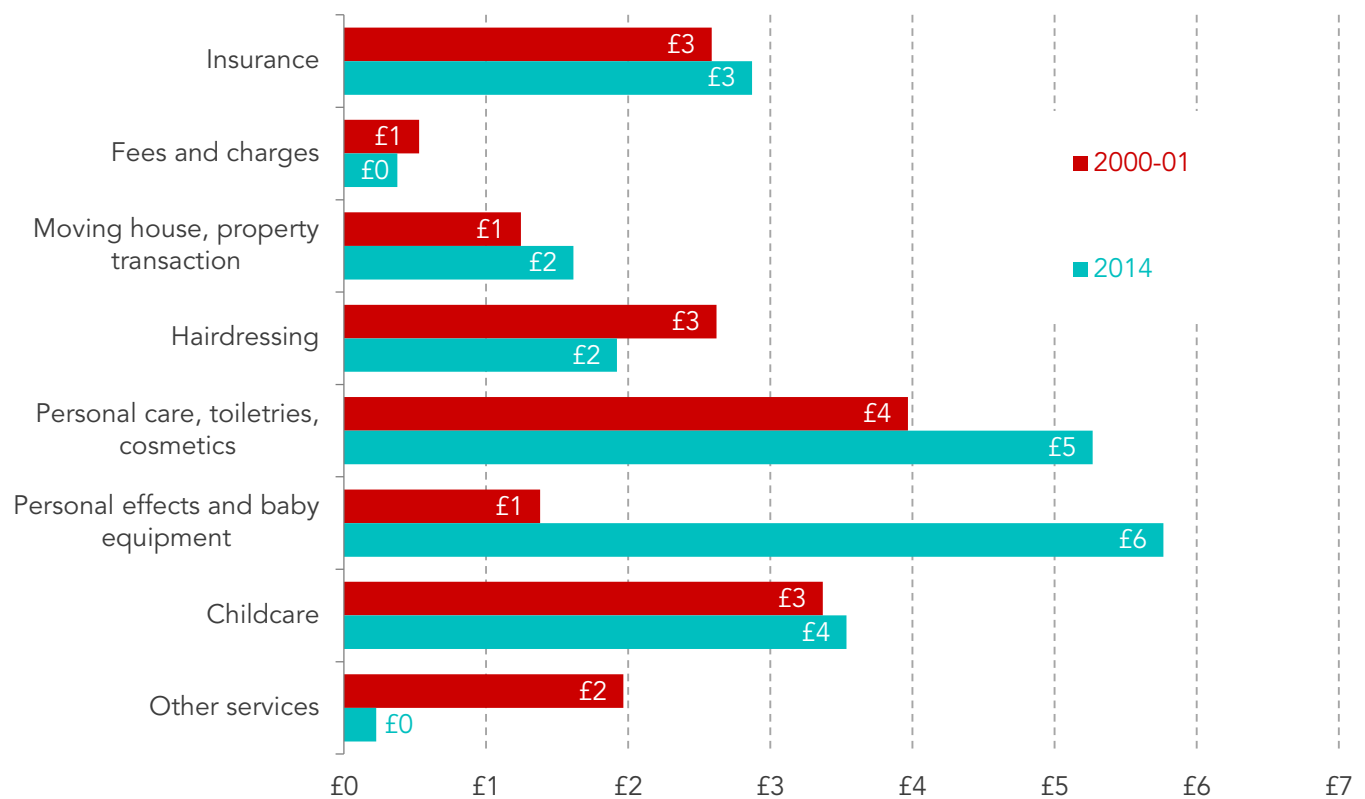
Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

Comparing the volume of personal goods and services consumed by young people over time, we find that 25-34 year olds in 2014 (made up of the older half of millennials), spent more than they did in 2000-01 (when the older two-thirds of generation X were that age). Taking inflation for the various components of this category into account, consumption in this area rose from £18 per week to £22 per week.

Figure 27 breaks this change down into component parts. It shows that 25-34 year olds consumed considerably more personal effects and child equipment, personal care, and childcare in 2014 than they did in 2000-01 (even against the backdrop of growing under-recording of expenditures overall). We can only speculate on what has driven these trends, but the striking increase in consumption in the category of personal effects and baby equipment could well be related to the fact that car seats became compulsory in the UK in September 2006, imposing a substantial additional cost on families. And the price-adjusted increase in spending on childcare is likely to be related to the continued increase in mothers' employment rates.

Figure 27: Volume of consumption on personal goods and services by 25-34 year olds, by year: UK

Mean real weekly equivalised household expenditure, adjusted to 2014 prices using individual price indices for each item of spending



Source: Loughborough University / RF analysis using ONS, Family Expenditure Survey; ONS, Living Costs and Food Survey

In contrast, 25-34 year olds appear to have consumed fewer haircuts (or, more accurately, hairdressing services) and “other” personal goods and services (which include domestic and cleaning services) over the course of this century.

It therefore appears that many of the most striking changes in spending on personal goods and services have related to wider labour market or regulatory shifts, rather than independently-shifting preferences among young adults.

This section has provided detailed analysis of how consumption has changed across age groups, and income groups within them, during the 21<sup>st</sup> Century in five areas of spending. The findings do not point conclusively in any one direction, but there is evidence that many broad consumption trends have been experienced by all age groups to similar extents. And it is older working-age adults rather than the young whose spending has shifted most noticeably towards certain items sometimes associated with millennials. In the final section of this report we reflect on the conclusions that can be drawn from these findings and those of the previous sections.

## Section 5

### Conclusion

The evidence presented in the previous section suggests some broad patterns in terms of how spending is changing, and how this affects the living standards of successive generations. In particular, many changes in the patterns of consumption over time affect adults of all ages in a similar way. However young people do tend to spend somewhat more on “newer” items, and have often been “early adopters” in terms of consumption changes.

In this context, it is worth returning to some of the ways in which millennials are characterised in relation to consumption, and ways in which their lives are working out differently to those of previous generations. Commentators have suggested, for example, that:

- The lack of opportunities to settle down in stable housing is affecting the perspectives of millennials, pushing them in particular towards short-termism; a phenomenon observed not just in the UK.<sup>26</sup>
- Linked to this, millennials are more interested in spending money on “experiences” rather than “stuff”.<sup>27</sup>
- An economy of mutual exchange (e.g. Freecycle) and informal transactions (e.g. Airbnb) is emerging (and is particularly popular among the young), making it harder to measure living standards purely through recorded expenditures.<sup>28</sup>

The evidence presented in this report certainly suggests that experiences such as eating out and going on holiday have become relatively more important compared to acquiring household goods, but in most cases for adults across working-age bands rather than the young in particular.

What is less tangible is the value in terms of living standards of living in a more connected world. While spending on communications has quadrupled as a share of all household expenditure, it still accounts for only a thirtieth. Yet online communications shape the context of how a large proportion of a household’s spending is incurred, and help to make it cost-effective. Communications technologies are also the source of a large amount of activity that does not involve expenditure but does contribute to living standards. At present, this may benefit younger adults in particular, as early adopters of social media and related innovations, and could be seen as compensating to some extent for poorer living standards progress when measured in terms of income or expenditure.

In the longer term, however, our analysis suggests that such trends are transforming the way everyone lives, not just the young. Young adults are often in the vanguard of

26 Z Bleemer et al., *Tuition, Jobs, or Housing: What’s Keeping Millennials at Home?*, Federal Reserve Bank of New York, November 2014

27 V Garikapati et al., ‘Activity patterns, time use, and travel of millennials: A generation in transition?’, *Transport Reviews* 36:5, June 2016; A Williams, ‘Best of Money: Why millennials go on holiday instead of saving’, *Financial Times*, February 12 2016

28 D Coyle, *The sharing economy in the UK*, January 2016

technological changes and global connectivity, but ultimately they benefit us all. And it would be highly misleading to suggest that they mean the stagnation of living standards as traditionally measured does not matter.

Furthermore, it is clear that the relatively poor expenditure performance of today's young adults, especially those with the most modest means, is constraining not just the acquisition of goods but also "experiential" spending on activities such as eating out, going on holiday and belonging to sports and leisure clubs. So while slower-than-average consumption expenditure improvements for millennials compared to their predecessors need to be interpreted in the context of different ways of living, overall they clearly represent a real threat to generational living standards progress.

On this basis then, while changes in living styles must always be borne in mind, the measurement of overall income and expenditure levels as indicators of changes in living standards over time and across generations remains justified and hugely important.

In particular, this analysis has suggested that the previously-established finding that generational living standards progress is stalling for today's young adults is not in any way undermined by a focus on consumption expenditure. And, in line with previous findings in relation to household income, this analysis once again draws attention to the particular squeeze that rising housing costs are placing on the living standards of all households – with younger adults at the sharp end of this squeeze. Although challenges in interpreting the survey data prevent us from drawing too firm a conclusion, if anything the picture looks more concerning on the expenditure side.



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*For more information on this Report, contact:*

**Laura Gardiner** Senior Research and Policy Analyst

[laura.gardiner@resolutionfoundation.org](mailto:laura.gardiner@resolutionfoundation.org)

020 3372 2954