



# Consumption led growth in an era of squeezed incomes

## DISCUSSION AND SCOPING PAPER

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The aim of this report is to provide an overview of some recent consumer trends, highlighting the importance of the consumer to the future of the UK and NI economies. The paper also provides an overview of cost pressures and potential income squeezes facing NI households. Finally, the paper concludes by outlining some options for further research.



## Introduction and background

### Introduction

Following the UK's decision to leave the European Union in the summer of 2016, the UK economic landscape has been extremely uncertain. The range of possible economic outcomes is much wider today than at any time since the global financial crisis. Although, some post-referendum data has been reasonably positive, the uncertainty of the UK's future trading relationships has the potential to delay business investment, slow export growth and dent consumer confidence. Therefore, **it is important to have a full understanding of the levers of growth, including associated risks.**

**Consumer spending is critical to the performance of both the local and UK economies, equivalent to 65% of GDP in the UK. This is excessively high by international standards.** The most recent UK GDP data (Q4 2016) indicates that the UK economy grew by 1.8% relative to a year earlier. In contrast household expenditure increased by 3.1% over the same period. Household expenditure accounted for almost all of the increase in GDP recorded in 2016.

**Business investment is currently lower today than it was in 2007, the UK is predominantly a net importer and therefore rarely makes a positive contribution to GDP growth and the UK Government continue to hold their foot over the brake with regard to public spending growth.** Therefore, the UK economy is overly dependent upon households continuing to spend at a time when the other major levers of economic growth are constrained. In other words, a key risk to the economy is a slowdown in consumer spending.

### Background

The concept for this paper originated from the most recent Ulster University Economic Policy Centre (UUEPC) board meeting. The Board were presented with an economic overview, including a discussion of the UK economy's vulnerability to a consumer slowdown. UUEPC Board members expressed a view that the issue should be researched further via a scoping exercise, which will ultimately provide options for further research relating to household incomes and expenditure.

### Objectives of the scoping research

This 'scoping' exercise has involved a number of distinct but complimentary phases. These have included:

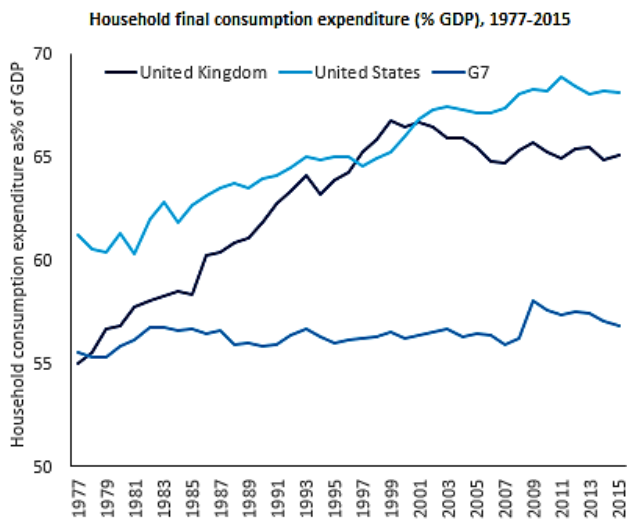
- A review of existing relevant literature and research related to consumer expenditure and household income trends;
- A review and assessment of the available data sources relating to income and expenditure;
- Gaining an appreciation of cost pressures on household budgets and their sensitivity to price inflation;
- Exploring the dynamics of consumer expenditure at different stages on the income distribution;
- Modelling potential household income squeezes on households with differing profiles of consumer expenditure; and
- A road map for a post-scoping phase full research exercise.

## Trends in income and expenditure

### Household spending's weight in national accounts

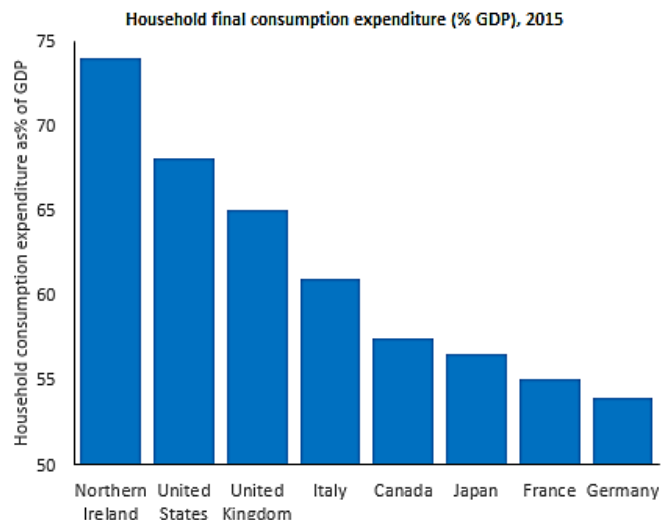
The fact that the UK economic model is supported by a nation of voracious shoppers is not a new phenomenon. **Household expenditure as a proportion of GDP was 55% in the mid-1970's, rising rapidly to a peak of 67% at the turn of the millennium.** It has since decreased slightly to 65%, which remains high by international standards.

#### *Household expenditure as a percentage of GDP*



Source: World Bank

Note: G7 average excludes United Kingdom



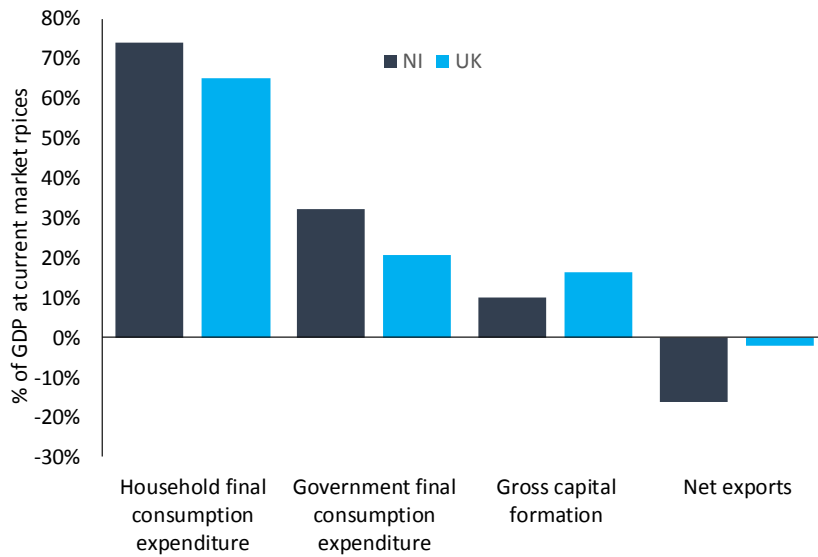
Source: World Bank, NISRA

The UK ranks second to only the US amongst the G7 countries, illustrating its place amongst the largest global consumer driven economies.

**A comparison of the components of GDP using experimental Input-Output accounts highlights that Northern Ireland (NI) is relatively more dependent on household spending than the rest of the UK,** accounting for almost three quarters of overall GDP<sup>1</sup>. With weaker business investment and a larger trade deficit NI is relatively more dependent upon government spending and household spending compared to the rest of the UK.

<sup>1</sup> These figures are derived from the experimental NI Supply use tables, and are subject to change as the methodology for developing Supply Use tables evolves in NI.

### Components of GDP, NI and UK, 2012

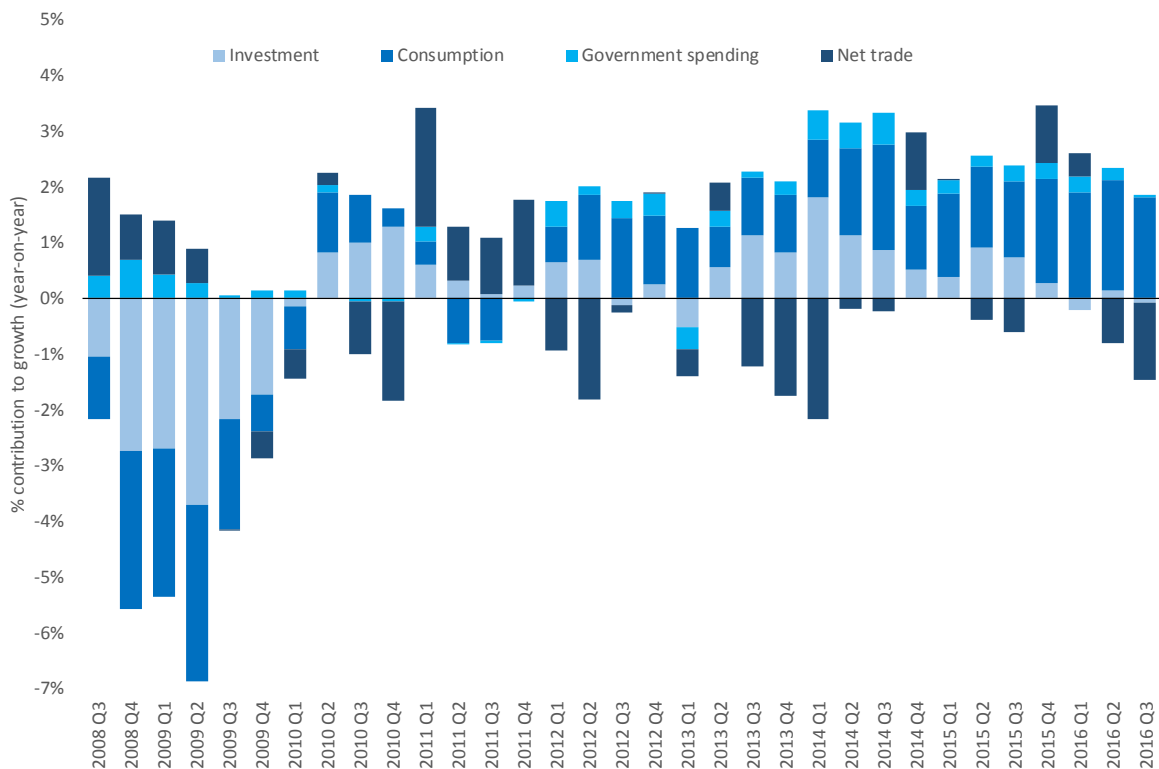


Source: NISRA experimental results from Economic Accounts project

### Household spending and economic growth

As consumer spending represents such a large proportion of overall GDP, its role in economic growth is extremely important. More recently, it has become the only component of the economy where the accelerator has been pressed. For example, in 2016 household spending accounted for almost all UK GDP growth.

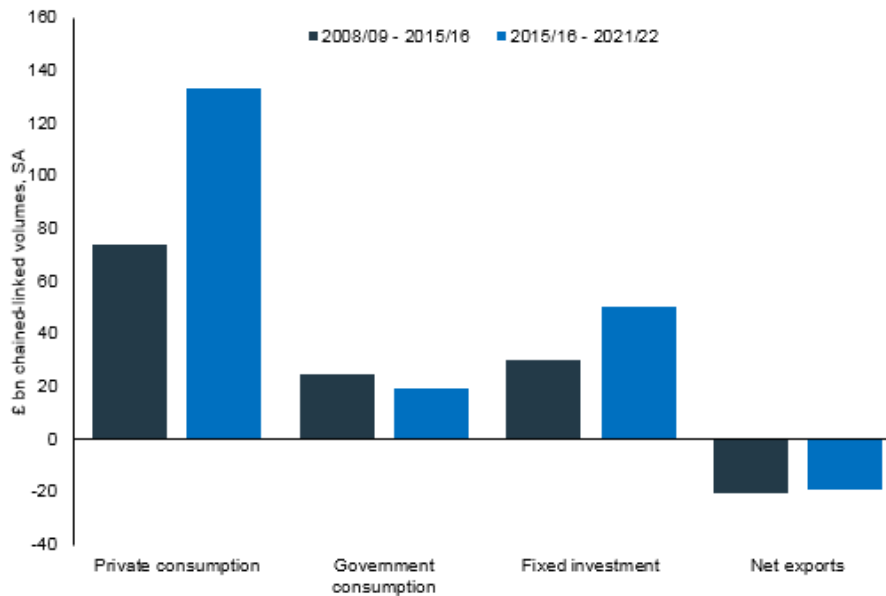
### Contributions to GDP growth, year-on-year, for expenditure components of GDP (real), UK, 2008-16



Source: National Accounts

**Current UK Government expenditure plans are predicated upon UK consumers continuing to increase their spending growth.** The latest OBR projections (upon which UK public expenditure decisions are predicated) indicate that household consumption will account for 67% GDP growth over the next 6 years. Therefore, the UK Government’s future growth model will continue to be based on consumer led growth, and will increase the consumption to GDP ratio further.

*Change in the components of GDP growth, UK, 2008/09 - 2021/22*



Source: OBR

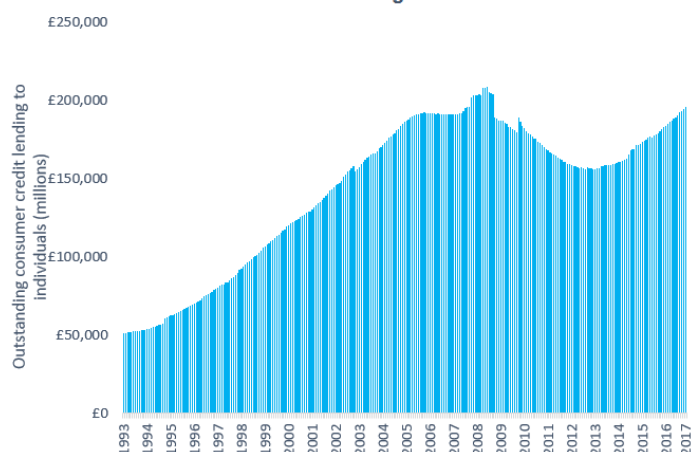
**Although the UK economy has been primarily driven by consumer spending throughout 2016, this will be more challenging to repeat in 2017 and 2018.** One reason for this is that income growth has been very weak in the post-recession era, and a significant proportion of consumer spending in 2016 appears to be financed by borrowing.

Unsecured credit, which is unsecured borrowing such as personal loans, credit cards and overdrafts, grew at 8% per annum in the latter months of 2016. The overall stock of unsecured consumer credit has increased to a level almost matching the levels recorded at the time of the 2007/08 financial crisis. **Long term spending growth driven by consumer credit is unsustainable as an engine of growth for the UK economy.**



## Unsecured consumer credit, UK, 1993-2017

Unsecured consumer credit heading back towards 2008 levels



Source: Bank of England

Credit based spending approaching double digit growth



Source: Bank of England

Recent research from economists at the Bank for International Settlements (BIS)<sup>2</sup> based on data from 54 countries found that past credit growth tends to hinder future growth. A consumption led expansion financed through borrowing ends up dampening future demand as households need to devote a larger fraction of their income to debt servicing. Their results suggest that the negative long-run effects of a high debt to GDP ratio tend to intensify as the household debt<sup>3</sup> to GDP ratio exceeds 60%, at which point households will begin to change their spending patterns. For GDP growth, that intensification seems to occur when the ratio exceeds 80%.

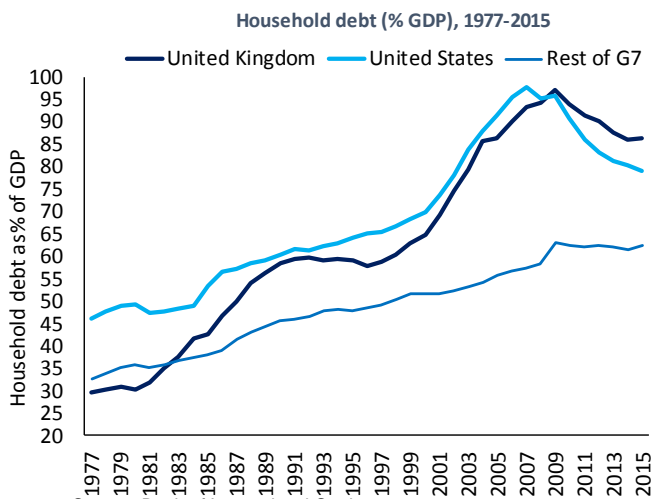
The UK's household debt to GDP ratio has remained above 80% since the mid 2000's. It is worth highlighting that it has not always been this high. In the early 1980's it was circa 30%, throughout the 1990's it remained close to 60% and by 2010 was almost equivalent to the sum total of UK GDP.

**From a longer term perspective much of the increase observed in the 1980's and 2000's was linked to increased mortgage debt. However, more recently upward pressure has come increasingly from increases in unsecured consumer credit.**

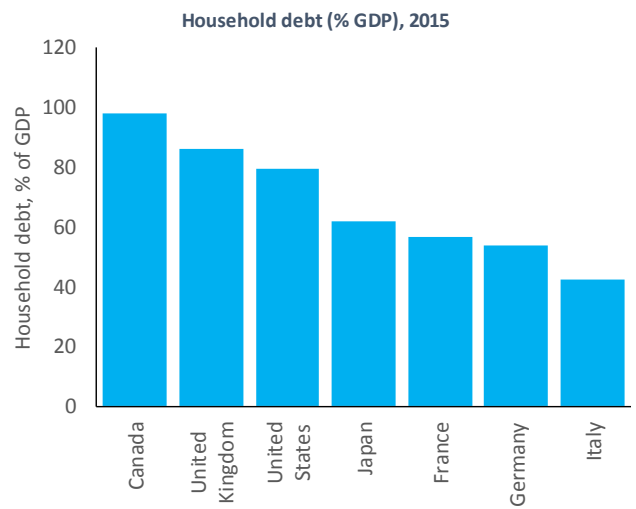
<sup>2</sup> Lombardi, M. Mohanty, M. & Shim, I. (2017) The real effects of household debt in the short and long run. BIS Working Papers. Number 607.

<sup>3</sup> Household debt is money borrowed by individuals, usually from banks or financial institutions. This includes mortgages, personal loans, student loans and credit card balances

### Household debt trends and comparison, UK, 1977-2015



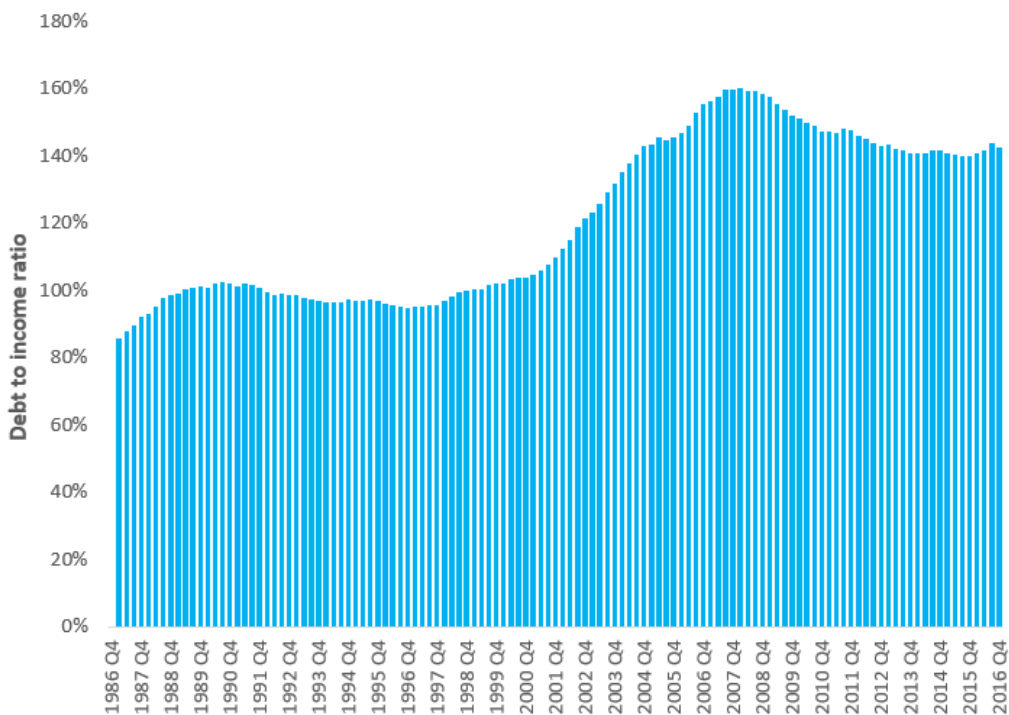
Source: Bank of International Settlements  
 Note: G7 average excludes United Kingdom and United States



Comparing the UK's position to other similar nations (the G7 group of countries) highlights that debt levels are much higher amongst Anglo-Saxon economies (Canada, UK, US). Other advanced nations such as Japan, France, Germany and Italy operate an economic system based on much lower levels of household debt. **This is in part linked to higher rates of home ownership in Anglo Saxon economies, which adds to the stock of debt as a higher proportion of people will have a mortgage.**

Household debt to income ratios are a better measure of an economy's debt position from the perspective of households. **While the UK's debt to income ratio has been increasing in recent quarters, it remains below the late 2000's recessionary peak.** Although there has been no return to pre-recession debt to income ratios, this remains a metric worth tracking.

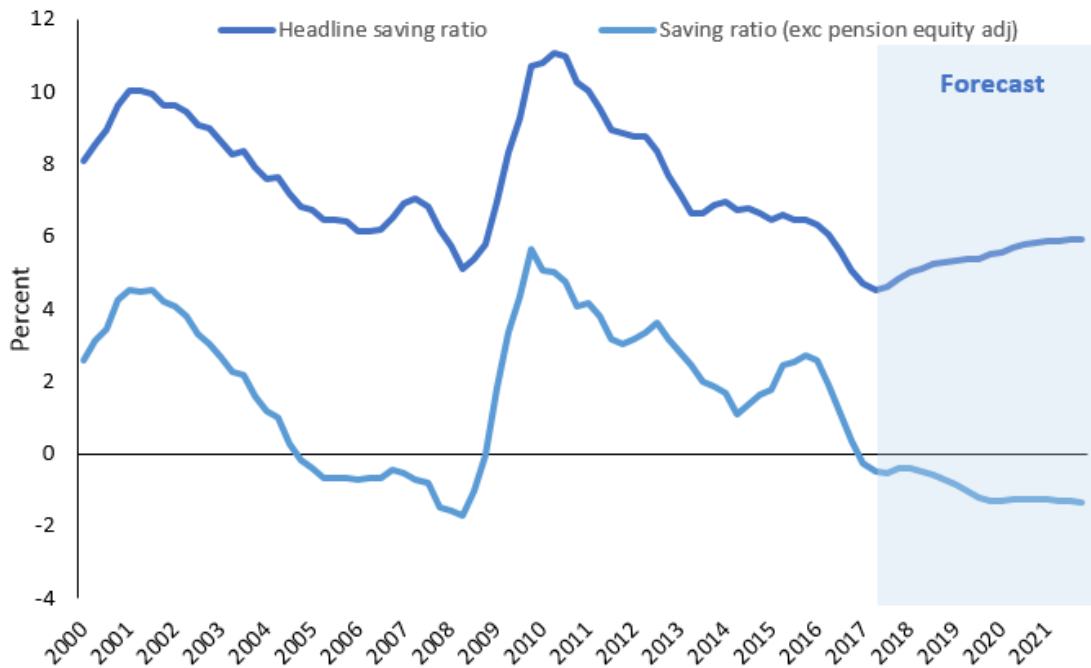
### Household debt to income ratio, UK, Q1 1987-Q4 2016



Source: ONS

Another important measure is the UK savings ratio, which measures the proportion of UK disposable income which is saved. **The most recent data for Q4 2016 indicated a sharp fall in the ratio to 3.3%, the UK's lowest savings rate since comparable records began in 1963<sup>4</sup>.** This is reflective of the recent increases in unsecured borrowing and static income growth.

*Household savings ratio, UK, 2000-2021*



**NB:** Both series show 4 quarter moving averages. The estimate of the savings ratio excluding the pension equity adjustment is calculated as a household disposable income less consumption, as a proportion of household disposable income.

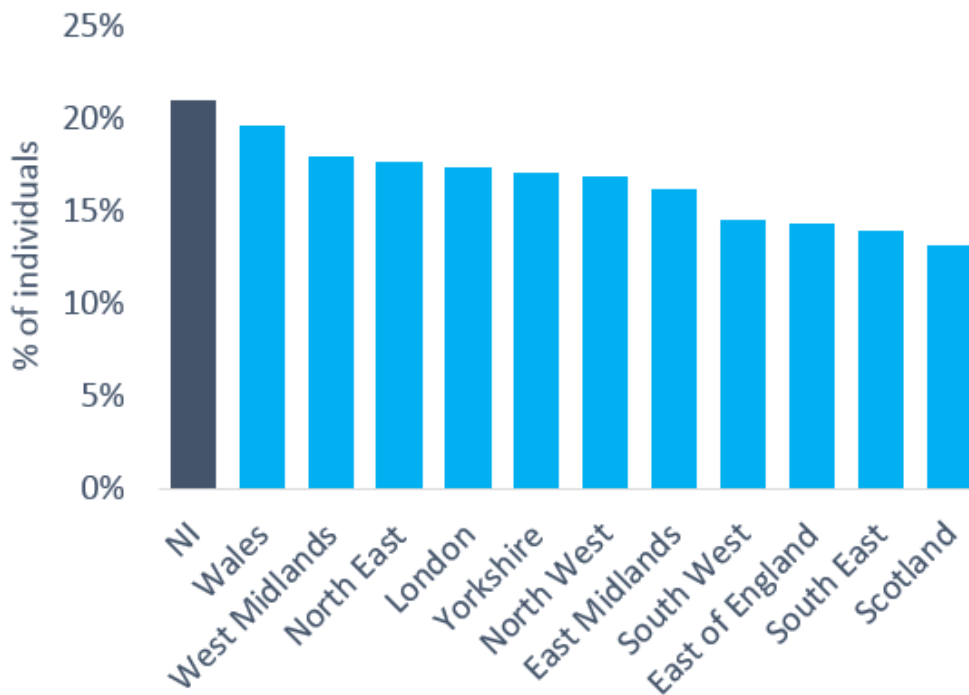
**Source:** OBR, ONS

Unfortunately, in NI there is relatively little information available relating to the quantum of NI's debt. From official statistics it is not possible to quantify measures such as total household debt or unsecured credit in the same way as in the UK. However, recent research by the Money Advice Service found that NI has a higher proportion of over-indebted people than any other UK region. **More than one in five people in NI are over-indebted, compared to one in six individuals in the UK as a whole.**

<sup>4</sup> The chart below will not match the 3.3% figure quoted. This is due to the chart illustrating the savings ratio based upon a 4 quarter moving average, which reduced the volatility in the type of data.



Proportion of over-indebted people, UK regions, 2015



Source: Money Advice Service, CACI

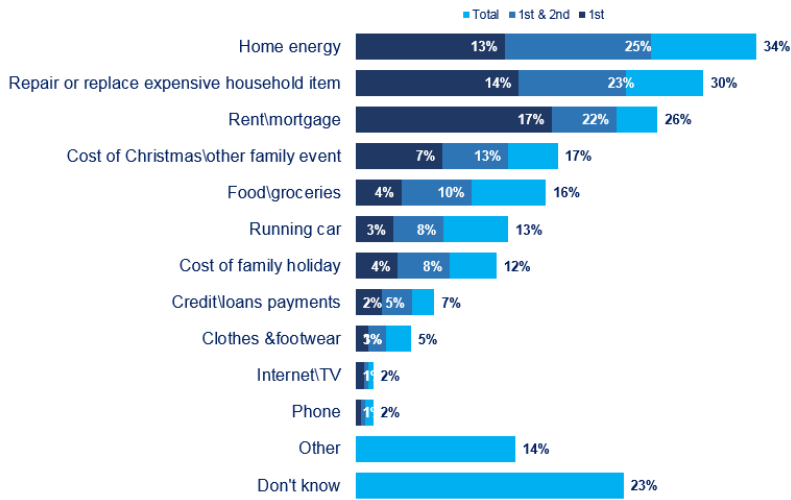
**Note:** Over-indebtedness is defined as either people who 'find keeping up with bills and credit commitments a heavy burden' and/or have 'fallen behind or missed payments in at least three of the past six months

In addition, the Consumer Council have developed a NI Consumer Outlook tracking consumers' financial positions and security, spending priorities and overall consumer confidence via a survey methodology.

Their latest research relating to the second half of 2016 highlighted one in ten (11%) individuals, had either no surplus or were in deficit funds at the end of a typical month. When asked about their capability to keep up with financial commitments 14% felt this was either a constant struggle or had fallen behind in some or all financial commitments. This figure increased to 37% when the chief income earner was recorded as not working, highlighting **significantly different pressures depending on economic activity within the household.**

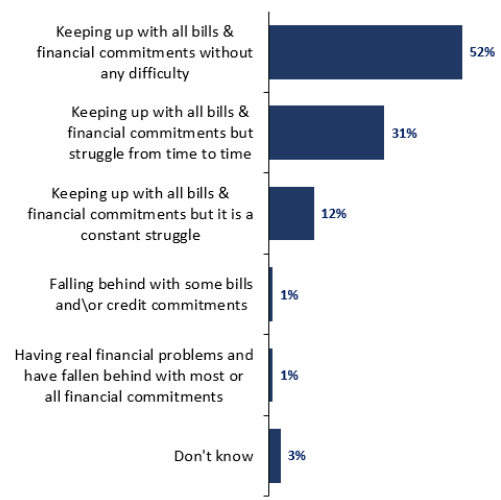
## Consumer's financial concerns, NI, 2016

### Three main areas of concern in household expenditure



Source: Consumer Council NI

### Keeping up with bills and credit commitments



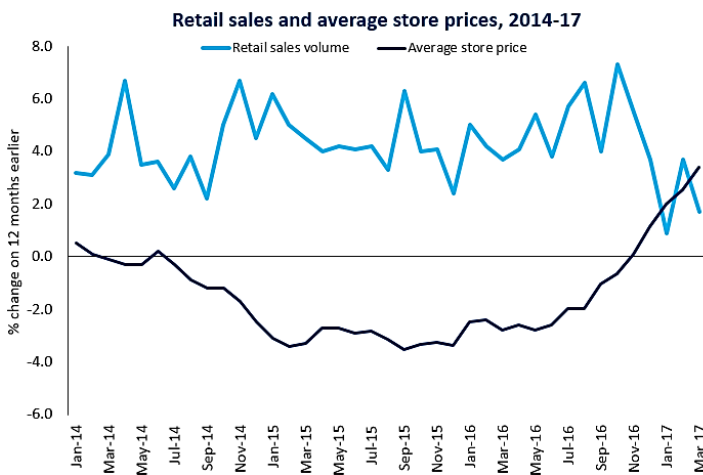
Source: Consumer Council NI

The chief areas of concern amongst NI households include home energy; having to replace an unexpected household item; and rent or mortgage payments. This concern around home energy suggests local households have some vulnerability to exchange rate fluctuations and changes in oil prices. Concerns regarding ability to pay for the repair or replacement of an unexpected household item indicates households have limited savings to cope with unexpected expenditure. Mortgage and rent concerns highlight that a number of households may be vulnerable to changes in interest rates and price changes in rents.

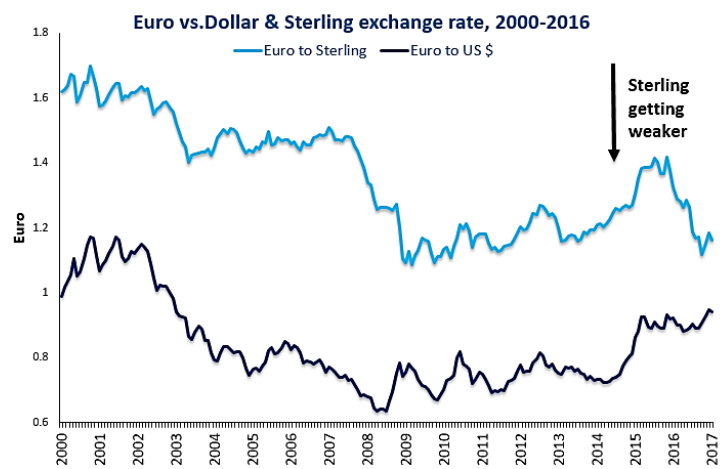
### Post-Brexit trends

The UK's decision to leave the European Union has triggered a set of economic trends in motion which will place pressure on the UK's consumer led economic model. **A weaker exchange rate has the effect of making imports relatively more expensive.** As a net importer, this creates upward inflationary pressure with more expensive goods squeezing household budgets.

### Exchange rate, Inflation and retail sales, UK, 1993-2017



Source: ONS  
NB: Average store price is estimated by dividing retail sales by retail volumes



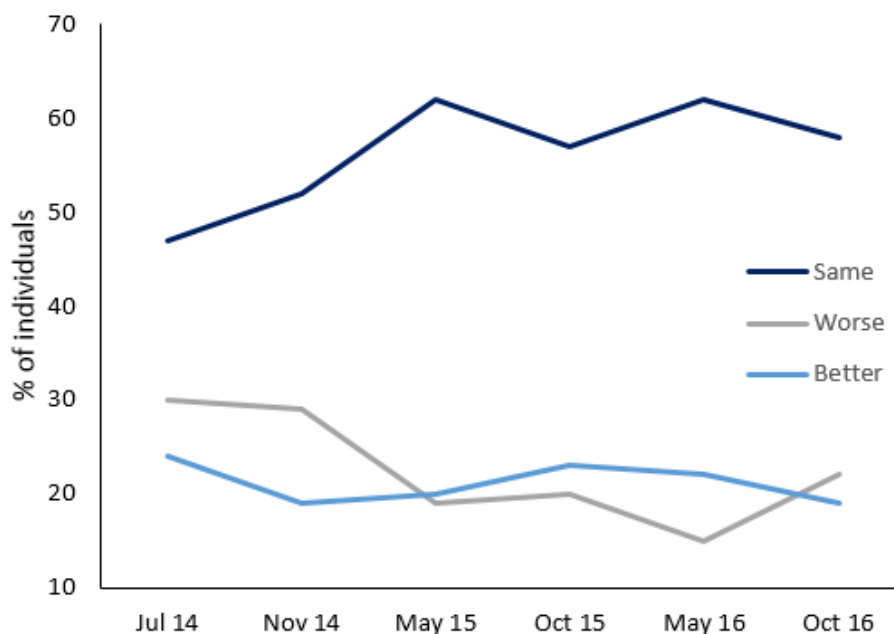
Source: Bank of England

Although the growth rate of retail sales in monetary terms has not yet recorded a slowdown, there has been a significant slowdown in retail sales volumes alongside price rises. In other words, **consumers are buying less goods, but at more expensive prices.**

In NI, in the absence of any national statistics, the main indicator of consumer trends is the consumer confidence survey undertaken by Danske Bank. In quarter 4, their survey indicated that consumer confidence had decreased relative to both the previous quarter and the same quarter 12 months earlier. Their survey also indicated that **NI households expected to spend less on high value items (such as furniture or holidays) over the next 12 months.**

The NI Consumer Outlook supports Danske Bank’s findings. It recorded an increase in financial deterioration in October 2016. That is, **22% of individuals felt their financial position had worsened relative to the previous 2 years**, a 7 percentage point increase from May 2016. Additionally, the survey has recorded a downward trend since October 2015 in the proportion of individuals who felt their financial position was better than two years ago.

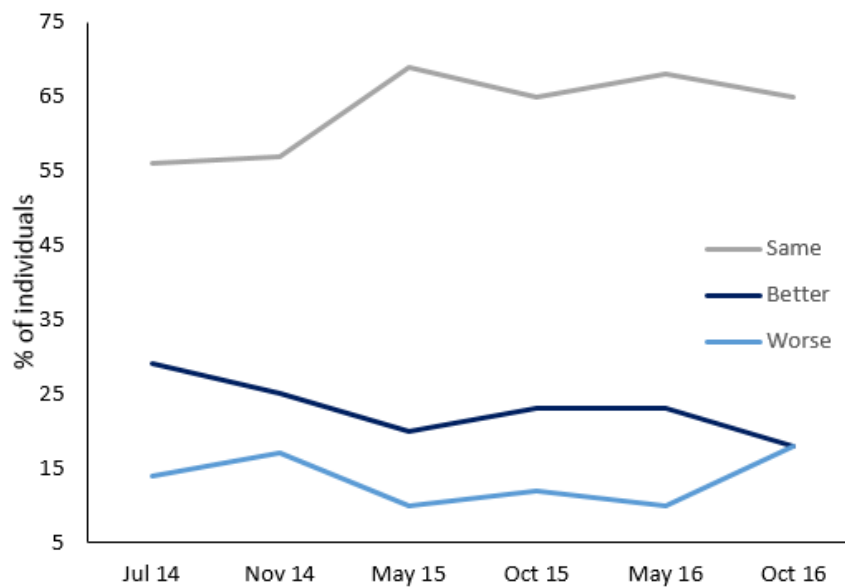
*Financial position compared with two years ago, NI, 2014-16*



Source: Consumer Outlook, Consumer Council

A similar trend was recorded when respondents were asked about their financial outlook two years from now. **The proportion of people who felt their financial position would be worse in two years’ time recorded an 8 percentage point increase from 10% in May 2016 to 18% in October 2016.** On the other hand, the proportion of individuals that felt their financial position would be better two years from now recorded a 5 percentage point fall, from 23% in May 2016 to 18% in October 2016.

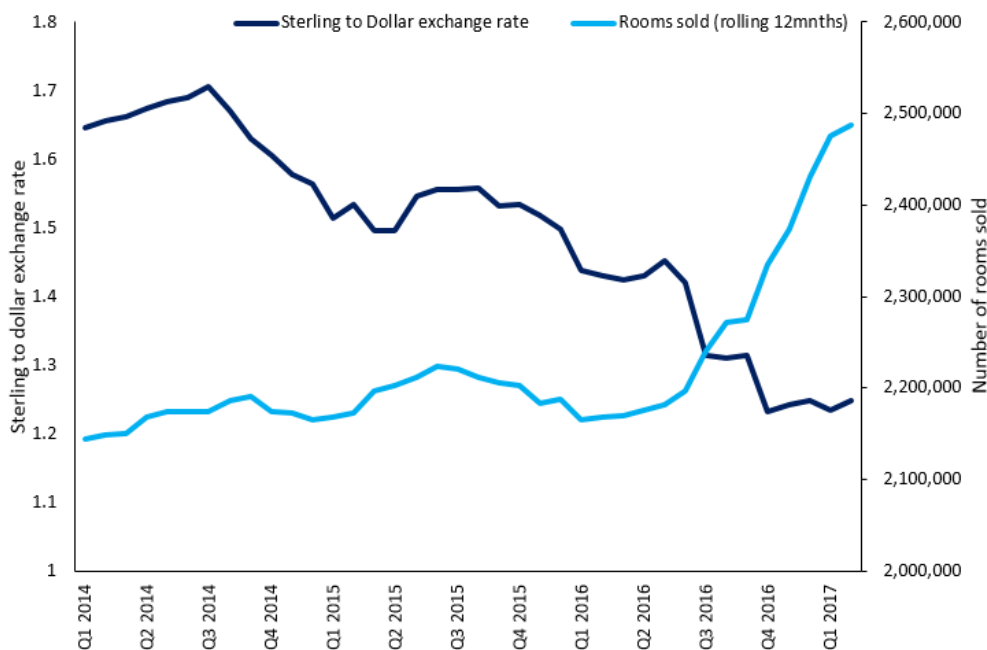
*Financial outlook two years from now, NI, 2016*



Source: Consumer Outlook, Consumer Council

While the exchange rate movements have made a representative basket of goods more expensive for local households, it has made visits to NI from overseas and cross border visitors relatively less expensive. In NI this has contributed to a surge in the number of hotel rooms sold. Therefore, the increase in visitor numbers and their associated spending will provide a short-term cushion while the exchange rate remains relatively weak.

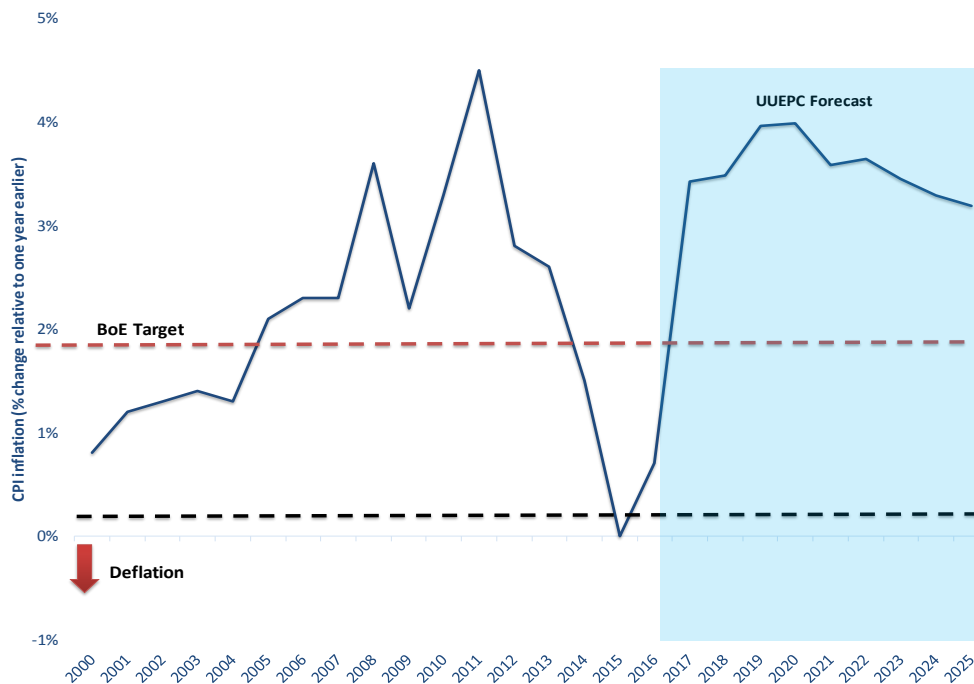
*Exchange rate and number of rooms sold, NI, 2014-2016*



Source: DfE

Higher inflation is expected to remain for some time. The UUEPC forecasts UK inflation increasing to approximately 4% by 2020, driven primarily by the depreciation in Sterling. Therefore, with higher inflation achieving real wage increases is crucial if high levels of consumption are to be sustained.

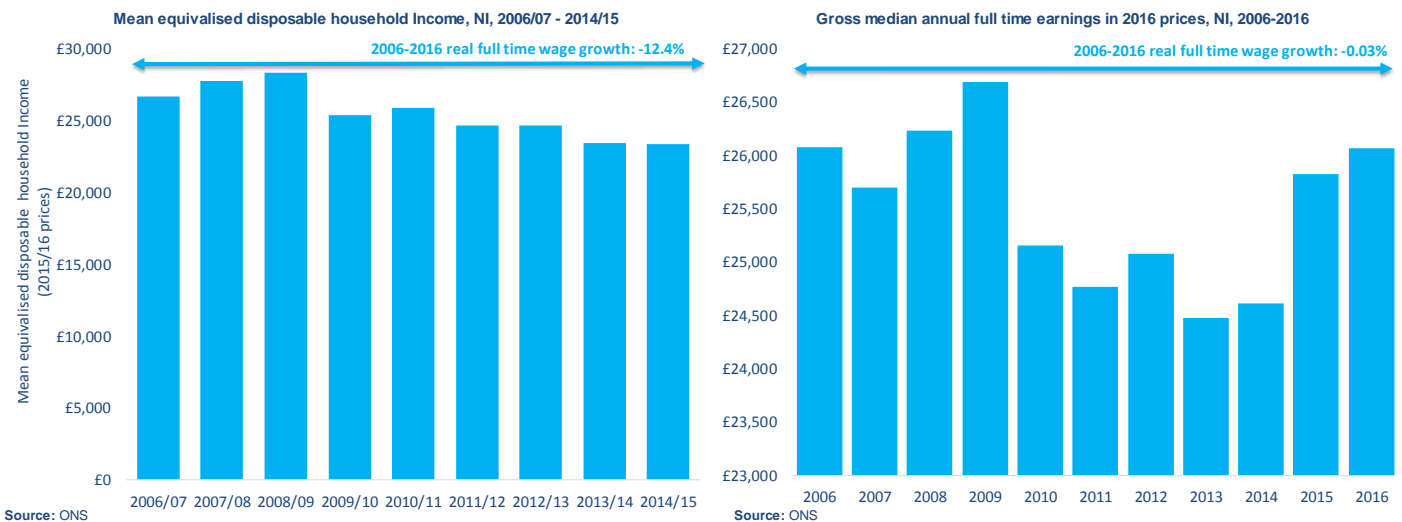
### Consumer price index (% change over 12 months), UK, 2000-2025



### Income and earnings trends

In both NI and the UK the likelihood of achieving above average inflation increases in earnings is far from certain. **Full-time earnings in NI are marginally lower in 2016 compared to 2006 (after adjusting for inflation), reflecting that NI’s workforce has not had a pay rise in more than a decade.**

### Income and earnings trends, NI, 2006-2016



**From a household income perspective, equivalised<sup>5</sup> disposable income<sup>6</sup> has fallen by 12.4% between 2006/07 and 2014/15.** This reflects not only the decline in median real wages for full-time

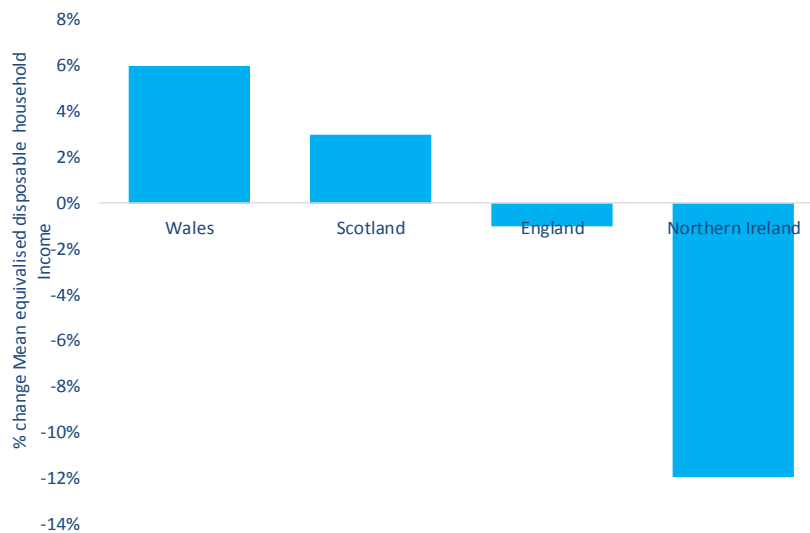
<sup>5</sup> Equivalisation takes into account the fact that larger households usually need a higher income than smaller households in order to achieve a comparable standard of living

<sup>6</sup> Disposable income is defined as gross income (earnings from employment, private pensions, investments and other non-Government sources plus income from cash benefits from the State) minus direct taxes.

workers, but also changes within the welfare state and the emergence of labour market weaknesses in the form of weak full-time employment growth (relative to part-time) and higher growth in more precarious forms of employment such as self-employment and temporary jobs.

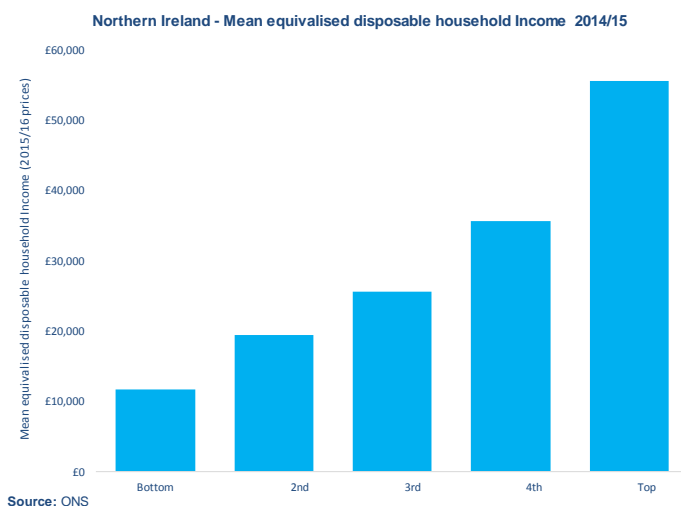
Relative to the other countries of the UK, **NI has experienced a fall in income more pronounced than either England, Scotland or Wales.** In fact, Scotland and Wales recorded increases in real household disposable income over the period.

*Change in mean equivalised disposable household income by region, 2006/07-2015/16*

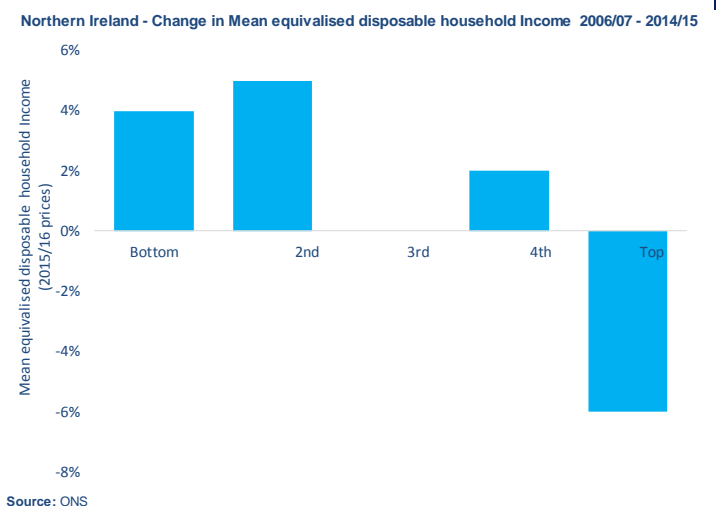


From a distributional perspective the largest losses have been recorded amongst the top income quintile. The bottom two income quintiles recorded a real increase in household disposable income, albeit from a low base.

*Distributional pattern of equivalised disposable household income, NI, 2006/07-2015/16*



Source: ONS



Source: ONS

Note: Quintile groups are based upon the UK distribution



## Why the health of the consumer is an important research area

The trends outlined in this chapter have outlined that recent sources of economic growth in the UK have been overly **dependent upon consumer spending**. This has occurred at a time where household **incomes have been squeezed** over a sustained period, which has led to an increase in **debt financed consumption**.

The recent pattern of income and expenditure data has led to a rise in number of metrics including unsecured credit and overall debt to income ratios. Both employee earnings and household incomes have not grown in real terms over much of the past decade. A combination of these two trends has led to a **sharp fall in the UK savings ratio** which is now at its lowest level since records began in 1963.

From a local perspective there is some evidence to support the view that UK consumption trends have been mirrored in NI. From official statistics we know that **NI has experienced a more pronounced income squeeze relative to the UK, and is equally, if not more, dependent upon consumers as a source of GDP growth**. Therefore, the NI economy's short to medium term future prospects are highly intertwined with local consumer trends. **Any slowdown in consumer spending represents a significant risk to future growth**.

NI does not have official statistics relating to debt, borrowing and consumer spending. There are a number of survey metrics available, from which it is possible to piece together a picture of the health of the NI consumer. However, while these are useful and timely metrics, they are no substitute for official data.

A number of key government statistics hold information related to the consumer. Although less timely than regular survey evidence, these sources are based upon more robust data and enable the possibility of undertaking analysis to enhance our understanding of the structure of household income and expenditure in NI. **Understanding the challenges faced by different types of households in NI is of crucial importance to policy makers**. Identifying the challenges faced by those most in need could potentially be important within the current economic climate to identify appropriate interventions where they may be needed.

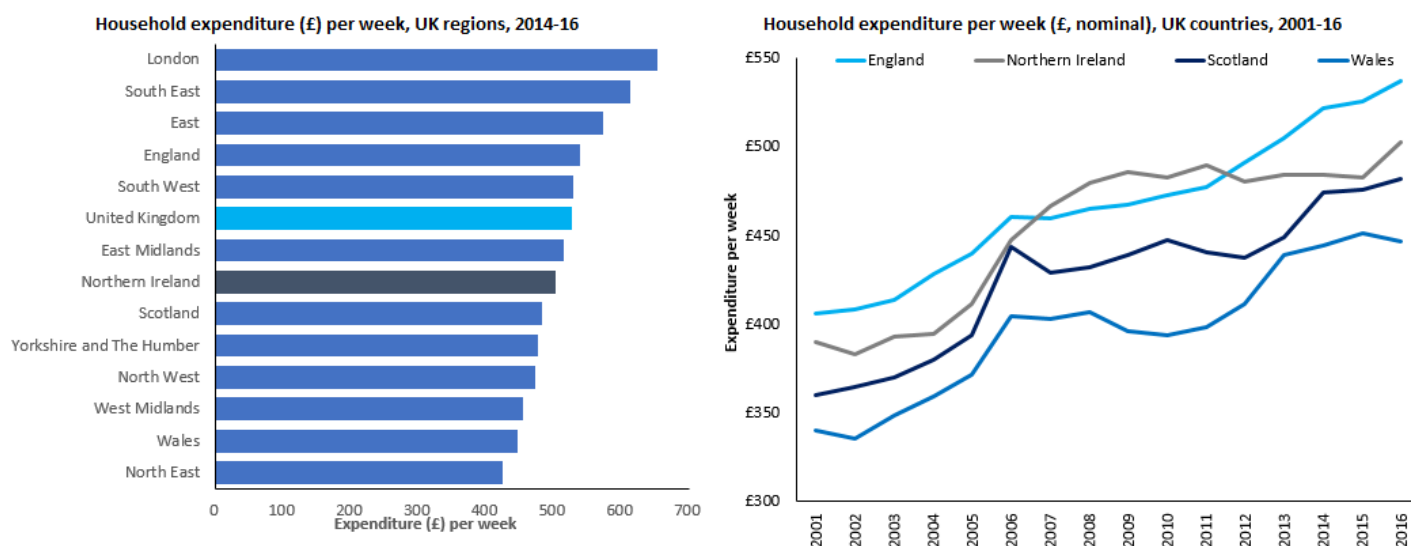
## Consumer spending patterns in NI

### Overall consumer spending

NI does not have a 'blue book' style set of economic accounts similar to that published for the UK as a whole. Therefore, it is not possible to track consumer spending both nationally and regionally via national accounting methods. However, the Living Costs and Food (LCF) Survey gathers data on UK household's spending patterns which can be disaggregated to regional level using three years of aggregated data.

The average total household expenditure in NI is £503 per week. Although this is slightly below the UK average (£527), NI ranks 7<sup>th</sup> of the UK's 12 Government Office Regions (GOR). This is in contrast to NI's performance on income measures. For example, NI equivalised household income ranks 12<sup>th</sup> of the UK GOR's on a before housing costs measure, and 10<sup>th</sup> using an 'after housing costs' measure.

### *Total household expenditure (real prices), NI and UK regions, 2001-16<sup>7</sup>*



Source: Living Costs and Food Survey

Note: Total expenditure refers to COICOP categories 1-12 plus 'other items recorded'

Considering the 2001-16 time period NI's nominal household expenditure has progressed upwards in two distinct phases. Firstly, between 2001-09 NI experienced expenditure growth in excess of other UK countries. Total household expenditure increased by 25% compared to 15% in the UK as a whole. Secondly, during the 2009-16 period NI household expenditure increased by only 3% compared to 14% in the UK. This is reflective of lower growth in NI relative to the rest of the UK in the post-recession era.

**In real terms total household expenditure in NI is 10% lower in 2016 relative to 2009.** In contrast, real household expenditure in the UK is only 1% lower when compared to 2009<sup>8</sup>.

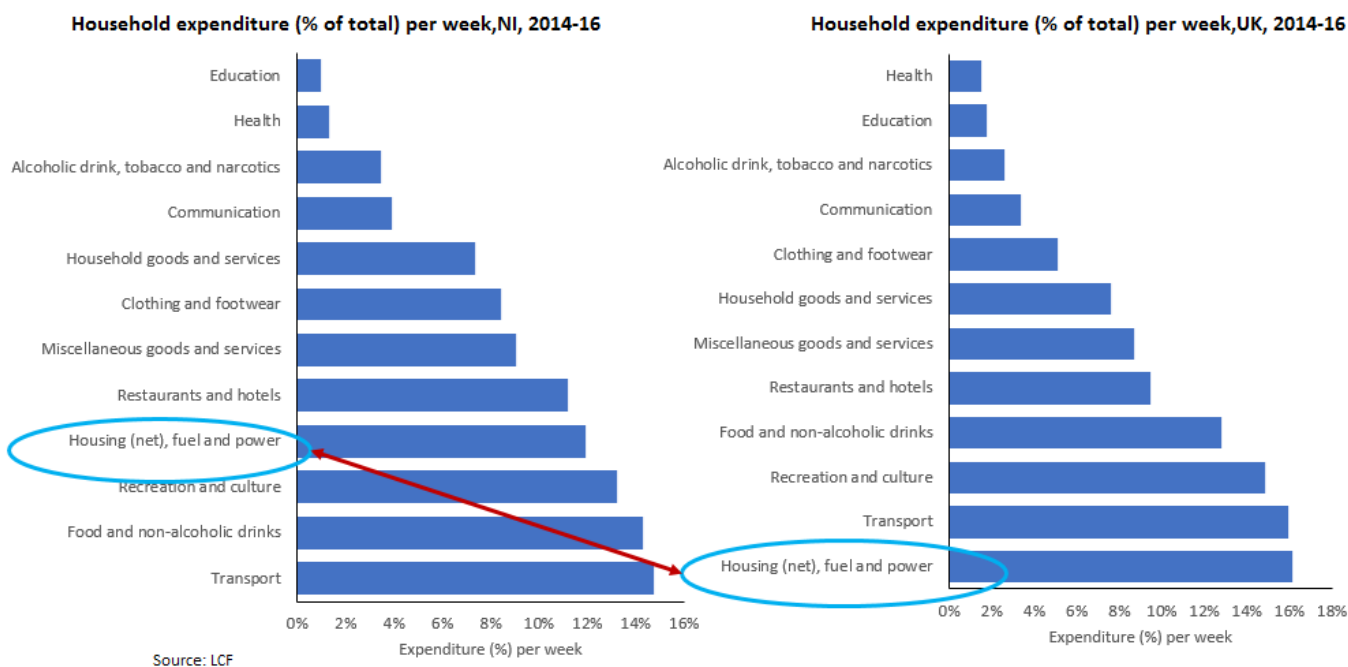
<sup>7</sup> The methodology of the Living Costs and Food Survey has changed a number of times of the years. For example, in some years the data is presented as a financial year, in others it represents a calendar year. Our dataset uses a 3-year average from 2006 onwards to account for small sample sizes, and to ensure a consistent time series we have assumed the end-point of the three years analysed to be reflective of that particular calendar year. For example, the data covering 2014-16 has been assigned to the 2016 calendar year in the graphics presented.

<sup>8</sup> Real terms comparisons between UK regions will reflect not only changes in the absolute expenditure of households, but also differences in the basket of goods between regions.

## Profile of consumer spending

NI consumers spend their income in a slightly different manner to the rest of the UK, reflecting a combination of cost, income and differences in consumer preferences. **NI households spend relatively more of their expenditure on food and non-alcoholic drinks; restaurants and hotels; clothing and footwear; and alcohol, tobacco and narcotics compared to the rest of the UK. Conversely, they spend relatively less on housing, fuel and power and recreation and culture.**

### Profile of consumer spending, NI versus UK, 2014-16



NI ranks 1<sup>st</sup> amongst the 12 UK GOR's in both relative and absolute terms across a number of consumer spending categories. This includes food and non-alcoholic drinks; alcohol, tobacco and narcotics; clothing and footwear; and communication.

### Profile of consumer spending, UK regions, 2015

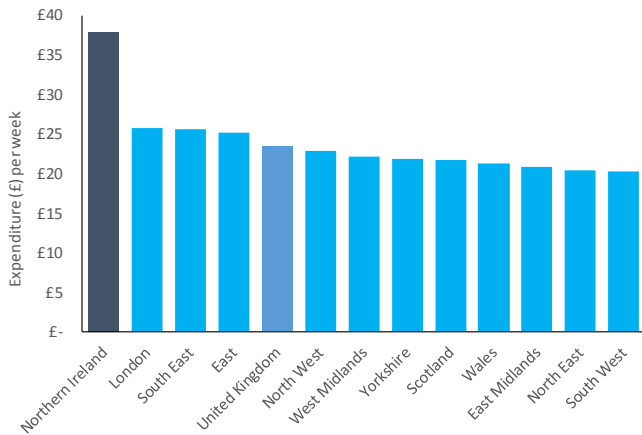
Category	Lowest weekly expenditure (% of total)	Highest weekly expenditure (% of total)	NI rank	Lowest weekly expenditure (£)	Highest weekly expenditure (£)	NI rank
<b>Food and non-alcoholic drinks</b>	London	<b>Northern Ireland</b>	1	North East	<b>Northern Ireland/South East</b>	1
<b>Alcoholic drink, tobacco and narcotics</b>	London	<b>Northern Ireland</b>	1	London	<b>Northern Ireland</b>	1
<b>Clothing and footwear</b>	South West	<b>Northern Ireland</b>	1	South West	<b>Northern Ireland</b>	1
<b>Housing (net)<sup>2</sup>, fuel and power</b>	<b>Northern Ireland</b>	London	12	<b>Northern Ireland</b>	London	12
<b>Household goods and services</b>	South West	North East	6	West Midlands	London	7
<b>Health</b>	Wales	Yorkshire and The Humber	8	Wales/North East	East/South East	8
<b>Transport</b>	London	Scotland	10	North East	South East	7
<b>Communication</b>	London	<b>Northern Ireland</b>	1	North East	<b>Northern Ireland</b>	1
<b>Recreation and culture</b>	London	North East	11	West Midlands	South East	11
<b>Education</b>	Wales	East Midlands	8	Wales	London	8
<b>Restaurants and hotels</b>	East Midlands	<b>Northern Ireland</b>	1	Wales	London	2
<b>Miscellaneous goods and services</b>	London	East	2	North East	East	4
<b>Other expenditure items</b>	<b>Northern Ireland</b>	London	12	North East	London	11

Source: LCF

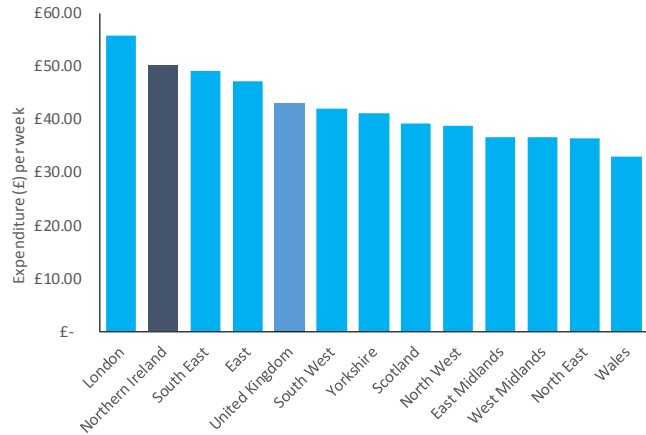
The figure overleaf highlights two selected COICOP categories where NI scores a high regional ranking – clothing and footwear; and hotels and restaurants. NI spends significantly more on average than any other region on clothing and footwear, spending 47% more than London, the next highest ranked region. NI also ranks second behind only London with regard to NI's households spending on hotels and restaurants, and spends 29% more than the UK average.

## Selected expenditure categories, UK regions, 2014-16

**Expenditure on clothing and footwear (£) per week, UK regions, 2014-16**



**Expenditure on restaurants & hotels (£) per week, UK regions, 2014-16**



Source: LCF

An analysis of more detailed product categories highlights some further differences between NI and the UK. The table below summarises the top 10 consumer expenditure categories where NI consumers spend of 20% more than the UK average.

### *Detailed spending categories where NI spends 20% more than the UK average, NI and UK, 2014-16*

Category	NI (£)	% of total NI spend	Percentage point difference to UK
Petrol, diesel and other motor oils	£33	7%	3%
Restaurant and café meals	£19	4%	1%
Other fuels	£14	3%	2%
Cash gifts and donations	£13	3%	1%
Women's outer garments	£12	2%	1%
Men's outer garments	£10	2%	1%
Take away meals eaten at home	£10	2%	1%
Alcoholic drinks (away from home)	£10	2%	1%
Vehicle insurance including boat insurance	£10	2%	1%
Cigarettes	£7	1%	0%

Source: LCF

The above table highlights how some characteristics of NI have contributed towards shaping NI households' expenditure patterns:

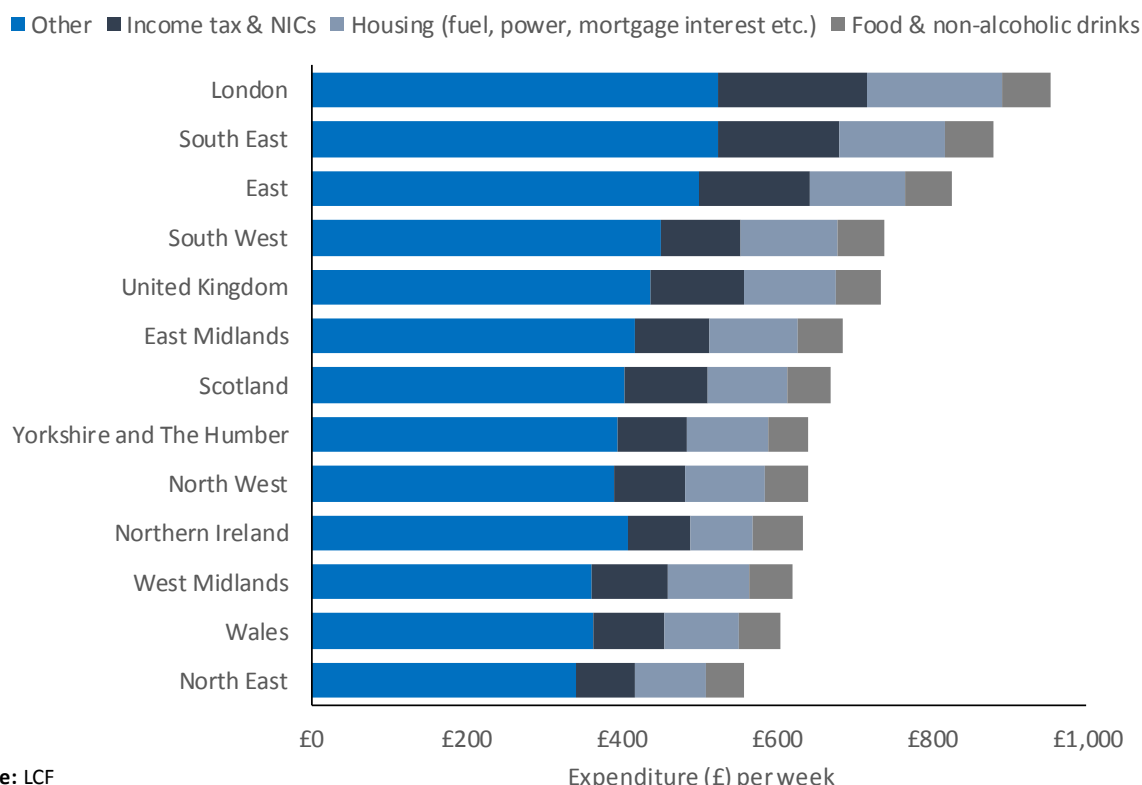
- **NI spends significantly more than the UK average on petrol, diesel and other motor fuels; and vehicle insurance**, which stems from NI's relatively higher rates of vehicle ownership.
- **The average NI household also spends more on 'other fuels' compared to the UK.** This largely represents home heating oil, and NI's relatively high average spend is due to the higher proportion of households in the UK which use gas to heat their homes. This is confirmed by much higher average spend on gas in UK households relative to NI. However, overall the average NI household spends 23% more on electricity, gas and other fuels relative to an average UK household.
- **A relatively higher spend on alcohol and tobacco in NI** is reflective of higher rates of consumption in NI<sup>9</sup>.

<sup>9</sup> The proportion of smokers in Northern Ireland is estimated at 19% which compares to the UK average of 17% as reported by the ONS Annual Population Survey 2015. Further alcohol-related death rates, which relate to causes of death most directly due to alcohol

On average NI also spends more than UK households on both male and female fashion; and meals at restaurants and takeaway meals. These items are more difficult to explain as they represent above average discretionary spending during a period where NI's income data has highlighted income squeezes.

**The local property market is an important factor when explaining these trends.** NI's relatively high consumption on some discretionary items appears to be in part financed through relatively lower housing costs which provide a cushion for disposable income.

*Household expenditure (£) per week, UK regions, 2014-16*



Source: LCF

Note: Based upon COICOP categories 1-12 plus additional expenditure items (13) and other items recorded (14)

If essential items of expenditure recorded within the LCF survey framework are considered to be income tax and national insurance contributions; housing costs; and food and non-alcoholic drink, the remaining expenditure can be considered to be a rough proxy for 'discretionary expenditure'. Although NI ranks 9<sup>th</sup> of the 12 UK GOR's with regard to overall expenditure, it ranks 6<sup>th</sup> when considering the 'other' category.

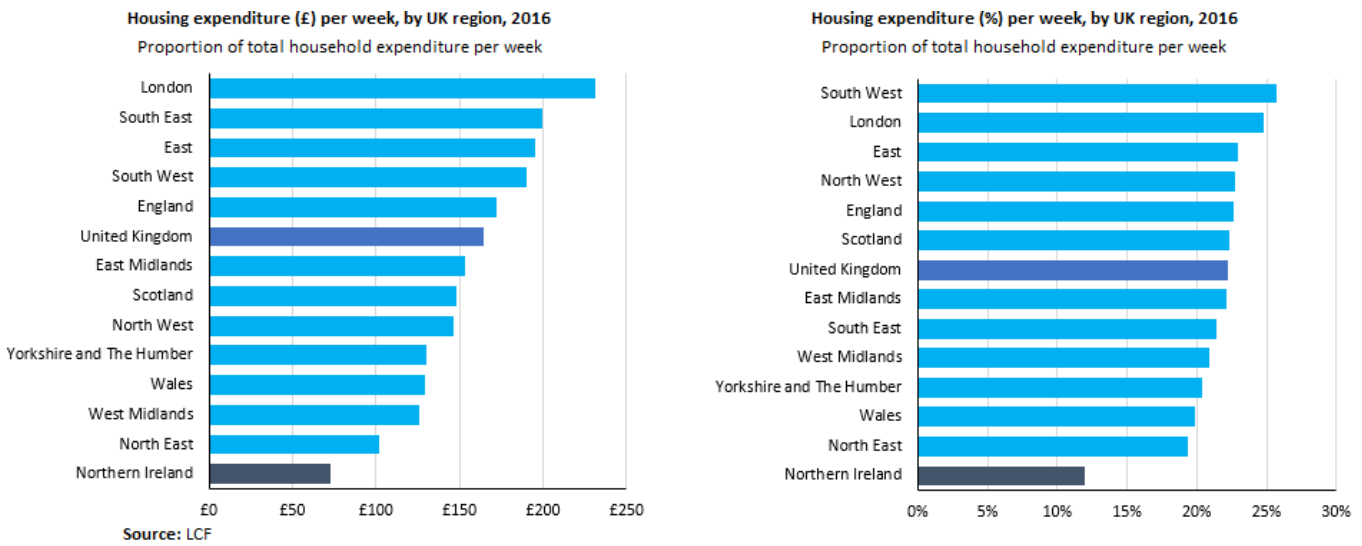
### Impact of housing

From the LCF survey it is possible to provide a more holistic overview of housing costs which includes all aspects of housing related expenditure (e.g. rents, mortgage costs, home insurance, repairs etc.).

**The average NI household spends £73 per week on housing related expenditure, which is less than half the amount spent in the UK (£165 per week). In NI this represents 12% of overall expenditure, compared to 22% in the UK.** Therefore, NI's housing related expenditure is much lower relative to the rest of the UK in both absolute and proportionate terms.

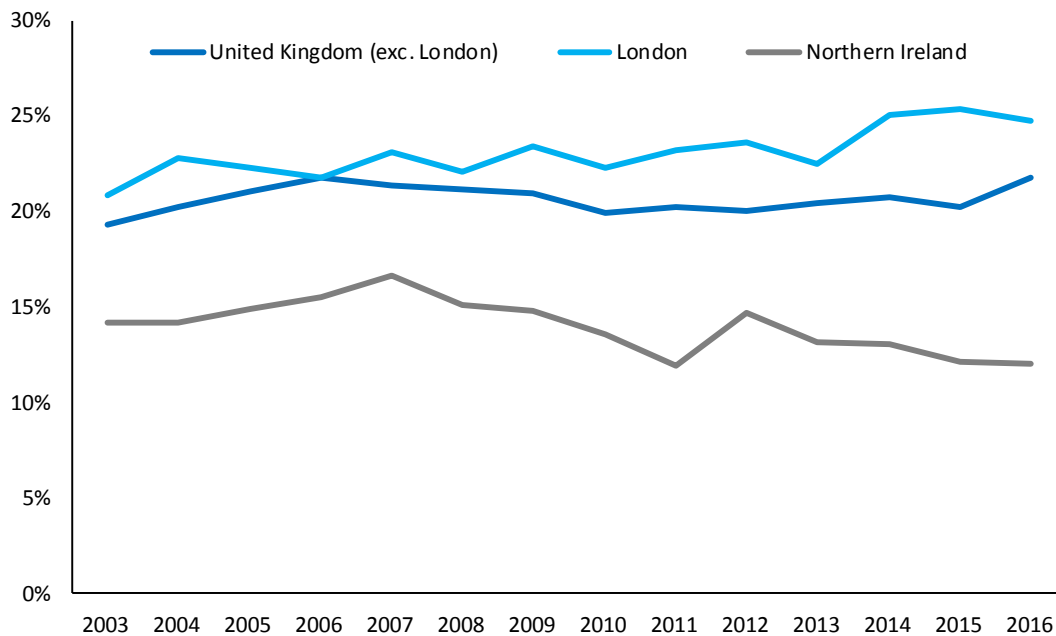
consumption, are reported in NI as 18 per 100,000 of the population, and compared to the UK average of 14.2 per 100,000 population as reported by ONS Alcohol Related Deaths in the UK series.

### Household expenditure (£) per week, UK regions, 2016



Since 2003 the proportion of overall expenditure in NI spent on housing related goods and services has remained comparatively static. In 2003 housing related expenditure accounted for 15% of total spending compared to 12% in 2016. In contrast, housing related expenditure increased from 21% to 25% of total spending in London over the same time period. In the rest of the UK excluding London housing expenditure has increased but to a lesser extent, from 19% to 22% over the 2003-16 period. **Therefore, in NI low property prices and rents have led to property expenses being less of a burden on NI households compared to the rest of the UK.**

### Housing expenditure as a proportion of household expenditure, 2003-16

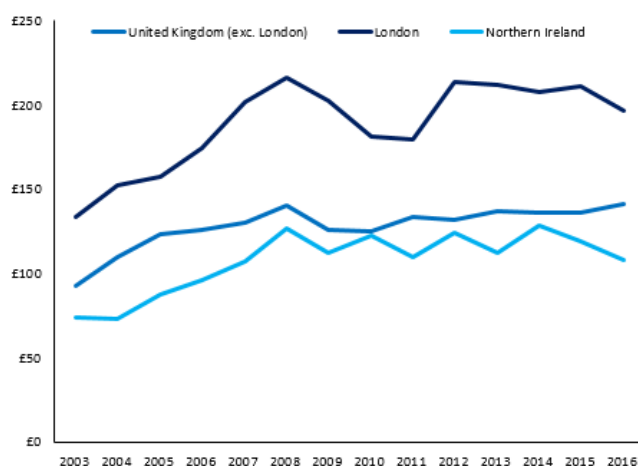


It is important to note that the above represents all housing related expenditure, which is a relatively broad measure. The figure below provides an overview of the specific rents paid by renters and mortgage payments by mortgage holders.

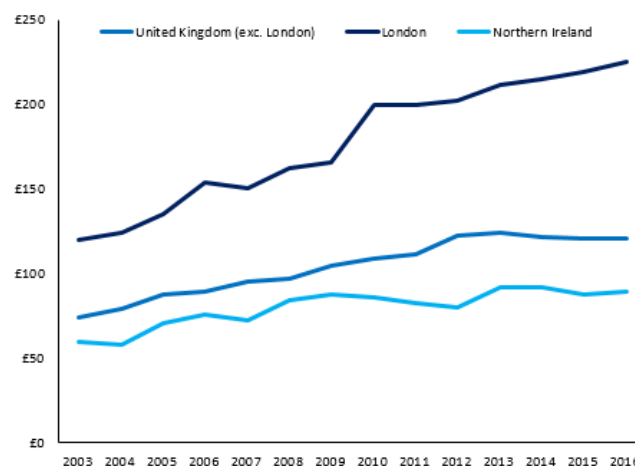


## Rental and mortgage spending<sup>10</sup>, 2003-16

Mortgage by mortgage holders (nominal) expenditure per week, 2003-16



Rent by renters (nominal) expenditure, 2003-16



Source: LCF

The average mortgage holder in NI spends £108 per week on mortgage payments, this compares to £142 in the UK (excluding London) and £197 in London. Therefore, lower property prices have led to NI having a lower burden in servicing mortgages compared to other parts of the UK.

The average renter in NI pays £89 per week compared to £121 in the UK excluding London and £225 in London. NI's rents have not risen as rapidly as in other parts of the UK. For example, in 2003 NI households' expenditure on rents were 24% lower than in the UK (excluding London), by 2016 NI rental expenditure was 35% lower. In comparison to London NI household's rental expenditure was 36% lower in 2003, and by 2016 was 53% lower. Therefore, **throughout the 13 years for which data is available NI household rental expenditure has been lower relative to the rest of the UK, and has risen at a slower rate which has widened the expenditure gap between households in NI and the rest of the UK.**

### Changes in consumer spending over time

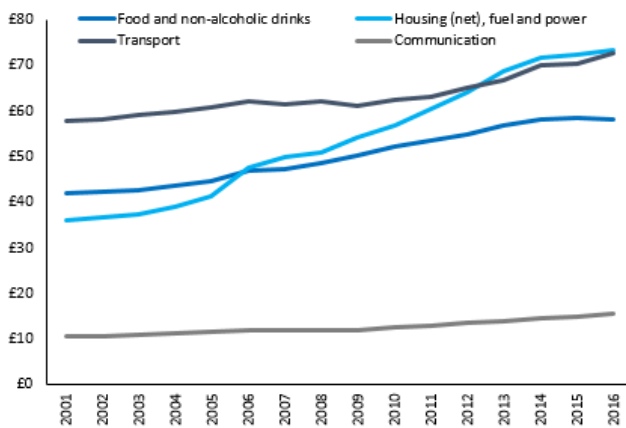
Trends in household expenditure since 2001 have diverged across UK regions. For example, in the UK housing, fuel and power costs have increased rapidly since 2001 relative to transport costs. In 2001 average UK household expenditure on transport was 72% higher than on housing, fuel and power. By 2016 this had reversed, spending on transport was 2% lower than expenditure related to housing fuel and power. This highlights the rapid increase in housing related costs in the UK relative to 15 years earlier.

In contrast, in NI although an increase in housing, fuel and power expenditure has been recorded since 2001 (66%), the increase was less than the UK (104%). Transport spending is relatively higher in NI, which is a product of a higher rate of car ownership in NI compared to the rest of the UK.

<sup>10</sup> Spending on mortgages covers both interest payments, mortgage protection payments and capital repayments.

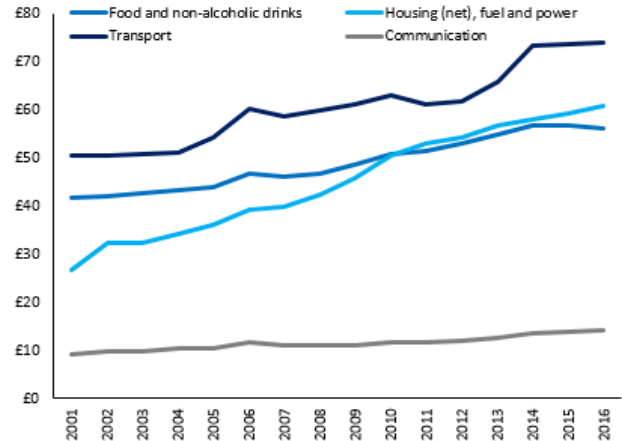
### Expenditure on selected categories, NI and UK, 2001-16

Household expenditure (£, nominal) per week, United Kingdom, 2001-2016



Source: LCF

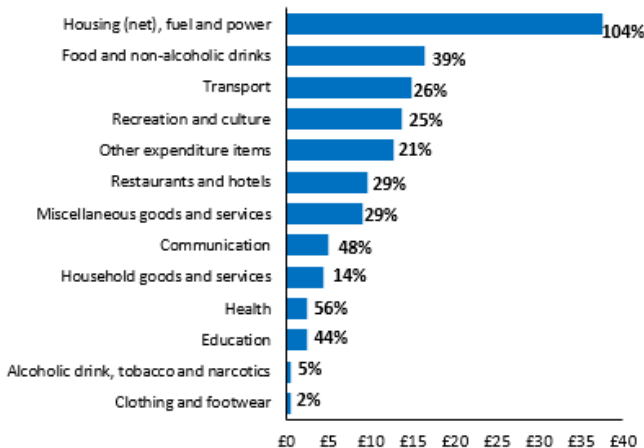
Household expenditure (£, nominal) per week, Northern Ireland, 2001-2016



The profile of expenditure increases recorded since 2001 has been relatively similar in NI and the UK. The largest increases were recorded in housing, fuel and power; and food and non-alcoholic drinks. Larger increases expenditure were recorded in NI relative to the UK in a number of categories including clothing and footwear; restaurants and hotels; communication; miscellaneous goods and services; and alcohol, tobacco and narcotics<sup>11</sup>.

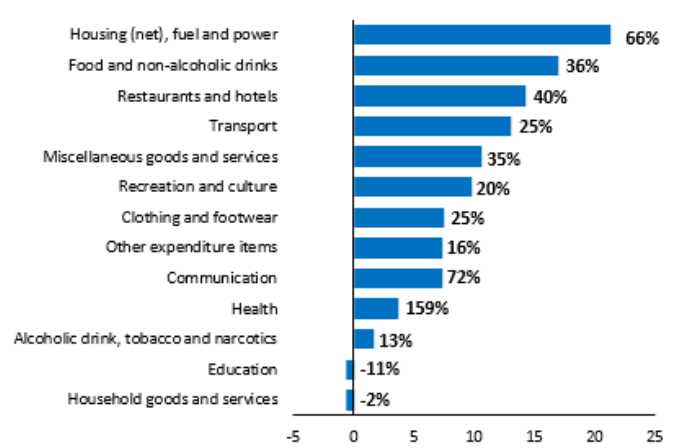
### Change in household expenditure, NI and UK, 2001-2016

Change in household expenditure (£, nominal) per week, UK, 2001-2016



Source: LCF

Change in household expenditure (£, nominal) per week, NI, 2001-2016



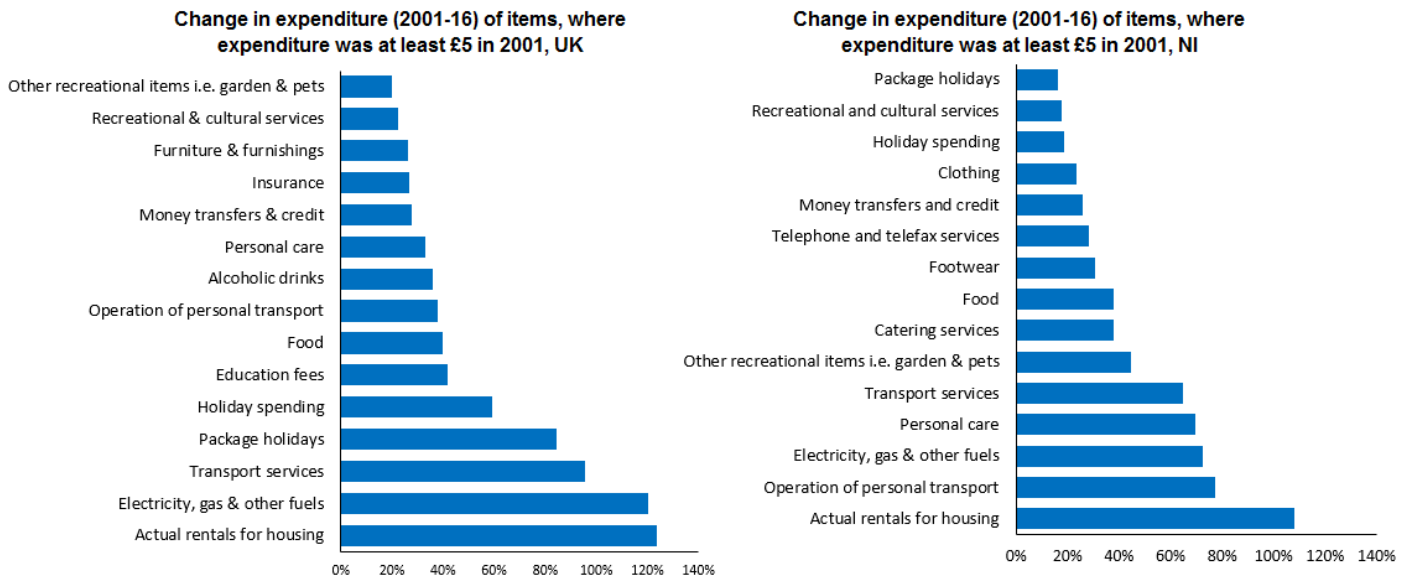
There are also a number of expenditure categories where the change between 2001-16 has been less than the change recorded in the UK. For example, larger increases in spending were recorded in the UK on housing, fuel and power; household goods and services; other expenditure items; recreation and culture; education; and transport.

A more detailed analysis of the change in spending between 2001 and 2016 highlights a number of further differences between NI and the UK<sup>12</sup>.

<sup>11</sup> COICOP expenditure categories where the increase in expenditure recorded was less than £1 have not been listed.

<sup>12</sup> However, it should be noted the following analysis only accounts the change in items where expenditure (per week) was at least £5 in 2001. This is because accounting for expenditure on items below this figure would highlight expenditure increases which represent a minimal weight in the representative basket of goods and services.

*Increasing nominal consumer spending by category, detailed categories, NI, 2001-16*



Source: LCF

**When the data is analysed by more detailed categories, the largest percentage increase over the 2001-16 period was recorded in housing rents.** Although average spending on rent has doubled, the recorded increase is lower than that recorded in the UK as a whole.

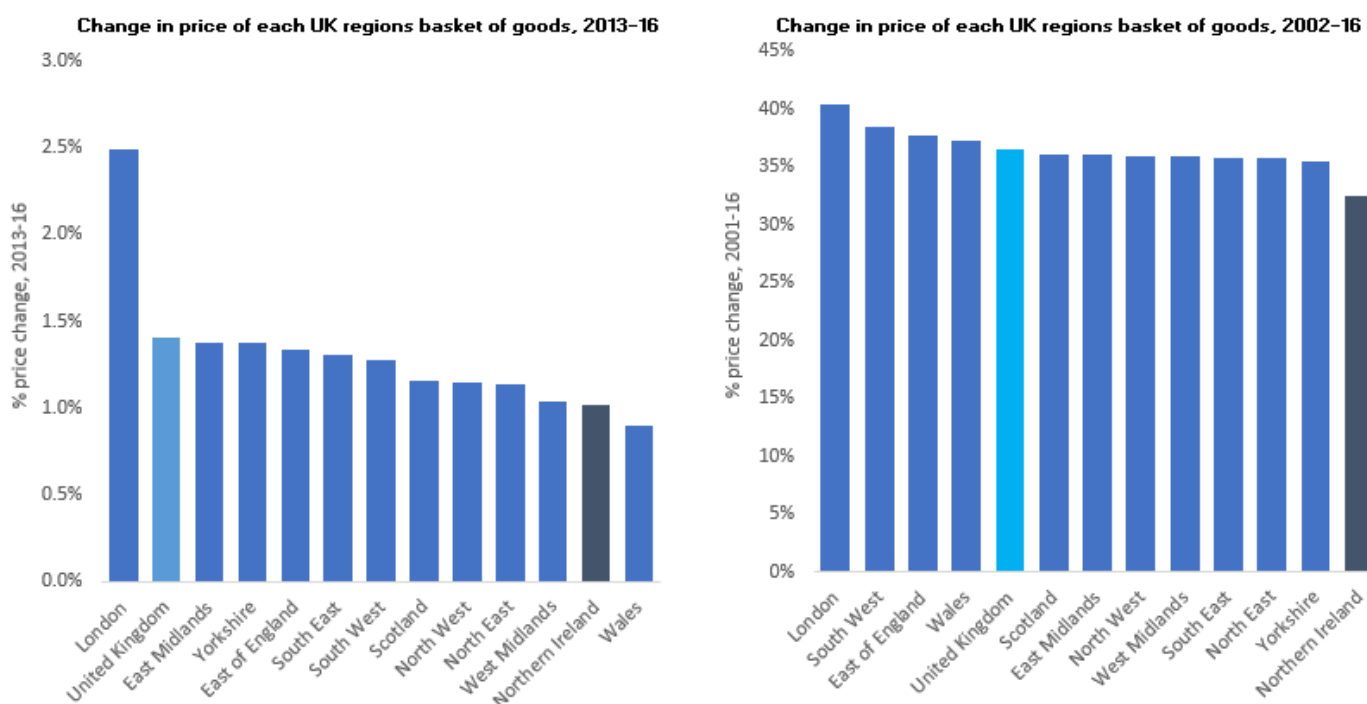
The second largest increase was recorded in the ‘operation of personal transport’ category where spending increased by 77%. This was higher than in the UK as a whole where spending increased by 38% over the same period, and is reflective of higher rates of vehicle ownership in NI.

## Price pressures

**Changes in expenditure are reflective of both changing consumer preferences and increases in prices.** Data relating to price changes exists primarily at a UK level via inflation metrics. The mix of consumers' shopping baskets differ across UK regions which will result in a range of different inflation rates across UK regions.

The figure below illustrates the implied price increase of a representative basket of goods and services across UK regions over the past 3 years<sup>1314</sup> and since 2002 to provide a longer term perspective.

*Price effect of a representative basket of goods, NI and UK, 2002-16*



Source: LCF

The data indicates that NI has faced relatively weaker price pressures relative to other parts of the UK. There are a number of key influences driving regional differences.

- **Rents:** NI has a smaller proportion of rented households in the overall housing stock relative to the rest of the UK. NI also has much lower rents than the rest of the UK which have risen at a slower rate contributing towards preventing the price of NI's overall basket of goods rising as rapidly as in other parts of the UK.
- **Transport costs:** NI has a relatively higher spend on transport compared to the UK, this is due to higher rates of private vehicle ownership. Almost half of transport expenditure in NI is comprised of petrol, diesel and other motor fuels. Petrol prices have been maintained at a relatively low level in recent years linked to low global oil prices. As an expenditure item with a high weight within NI's basket of goods, this has contributed towards a relatively low overall price change.

<sup>13</sup> This analysis assumes that the latest regional LCF data records a representative basket of goods for each UK region. ONS price deflators are then used to backcast this basket of goods for each UK region to provide an indication of differences in inflationary pressures.

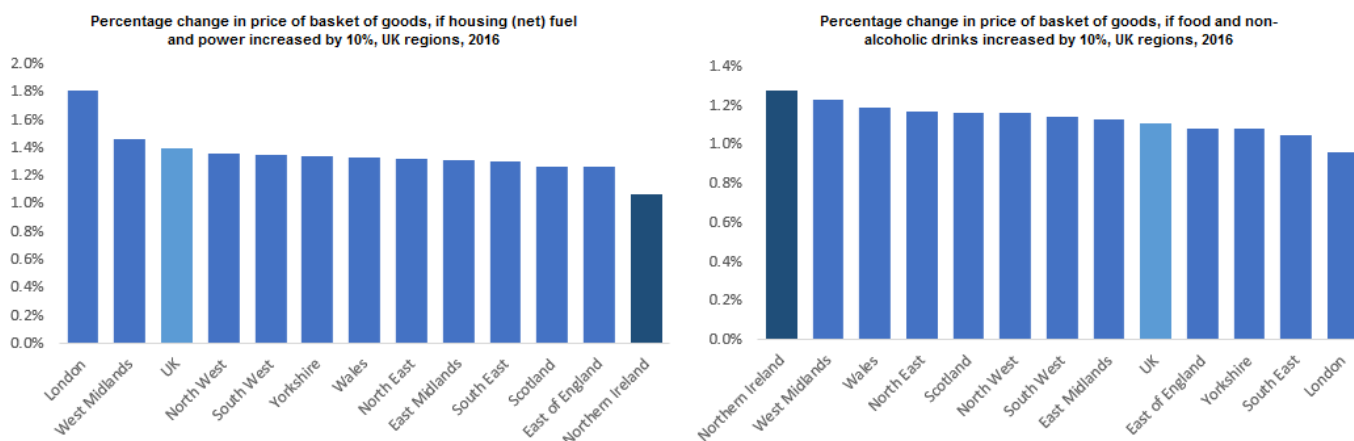
<sup>14</sup> The past three years are used in this analysis rather solely the most recent years data. This is due to the inflation rate being low in 2016, which would have resulted in minimal differences across UK regions.

- **Clothing and footwear:** NI spends a higher proportion of overall expenditure on clothing and footwear in both absolute and relative terms. This is an expenditure category where prices have decreased overall, thus it provides downward pressure on the headline price of NI's overall basket of goods to a greater extent than in other UK regions.

It is important to understand each regions price sensitivities to key items of expenditure. The figure below represents the impact on the overall change in price of each regions basket of goods under two scenarios.

- 1) An increase of 10% in housing rents (prices of all other items remain constant); and
- 2) An increase of 10% food and non-alcoholic drink (prices of all other items remain constant).

*Examples of selected price increases, UK regions, 2016 basket of goods*



Source: LCF

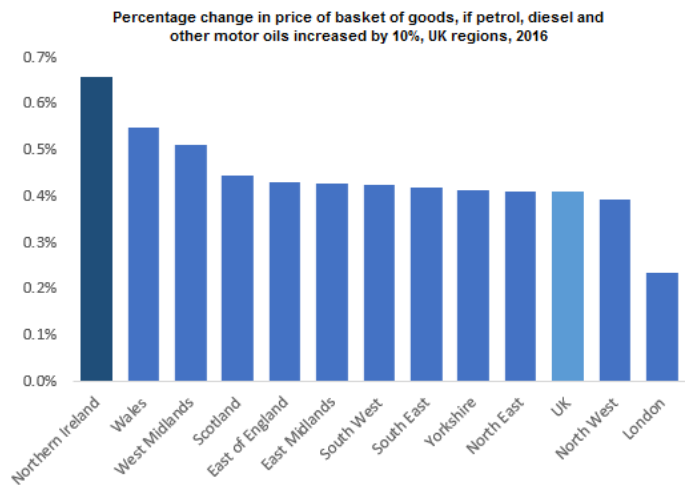
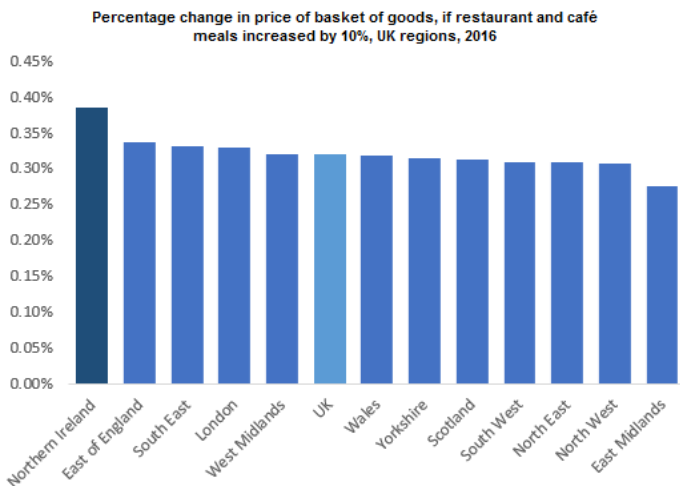
NI is the region least price sensitive to a change in the price of housing, fuel and power. This is due to the largest item of expenditure in most UK regions within this category being rents. Relative to the UK, NI has a smaller proportion of renters and a higher proportion of mortgage holders and the latter are not included within this category.

Looking at another essential item of expenditure, NI is more sensitive to a change in prices in the food and non-alcoholic drink category. This is due to its relatively higher weight in NI households' shopping baskets compared to other parts of the UK.

It is important to understand the impacts on the overall cost of NI's basket of goods if prices were to change in commodities which we know have a high weight in NI's overall basket of goods. The figure below represents two scenarios:

- 1) An increase of 10% in petrol, diesel and other motor fuels (prices of all other items remain constant); and
- 2) An increase of 10% in restaurant and café meals (prices of all other items remain constant).

### Examples of selected price increases, UK regions, 2016



Source: LCF

In both of the stylised examples above NI is the most price sensitive region to a change in prices. In the case of petrol, diesel and other motor fuels NI is more vulnerable to price increases than other UK regions due to higher rates of vehicle ownership. At the other end of the scale, London is less vulnerable to motor related costs, but is more sensitive to changes in public transport costs given a more intensive use of public transport services.

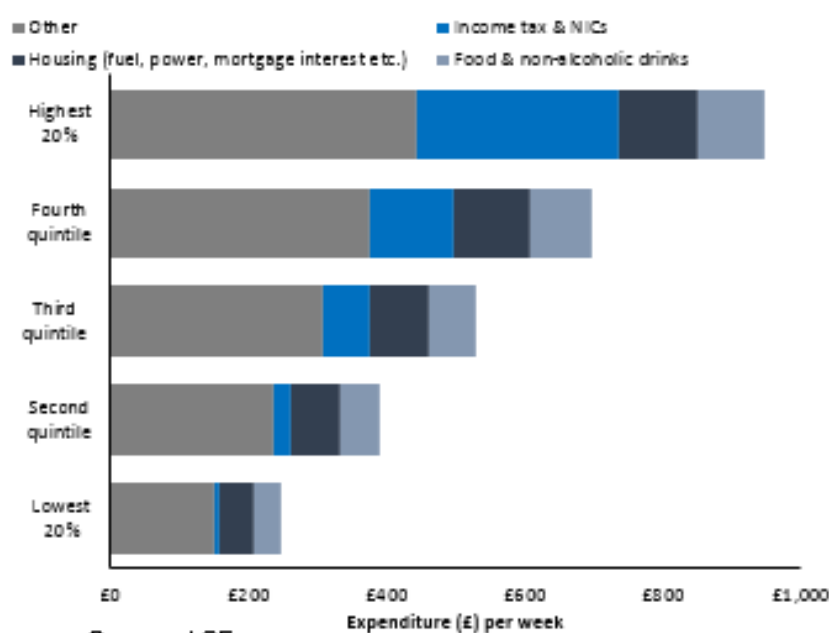
NI is also more price sensitive to spending on hotels and restaurants compared to other UK regions. This is attributable to its high weight in NI households expenditure. It is a product of low housing costs sustaining relatively high disposable incomes after accounting for essential spending. Therefore, a price increase is more likely to result in a change in consumption behaviour rather than be more inflationary due to the discretionary nature of this spending.

#### Income segmentation

Households in NI are varied with regard to their income, disposable income and therefore consumption patterns. However, the tax system plays an important role in reducing the differences between income quintiles. For example, although the overall level of before tax expenditure in the top quintile is almost four times that of the bottom quintile, once taxes and essential spending are accounted for the top quintile spends only three times as much as the bottom quintile.



### Household expenditure per week (£) by income quintile<sup>15</sup>, NI, 2014-16



Source: LCF

Note: Based upon COICOP categories 1-12 plus additional expenditure items (13) and other items recorded (14)

The figure overleaf presents the distribution of expenditure between households in the bottom 20% of the UK income distribution compared to households in the top 20%. **The major difference between the two groups relates to housing, fuel and power.** A key reason to explain the scale of this difference is that this expenditure category does not include mortgage payments. Households in the top income quintile are more likely to be home owners than households in the bottom income quintile. Essential items such as housing, fuel and power also represent a higher proportion of lower income households' expenditure given their more constrained income profile.

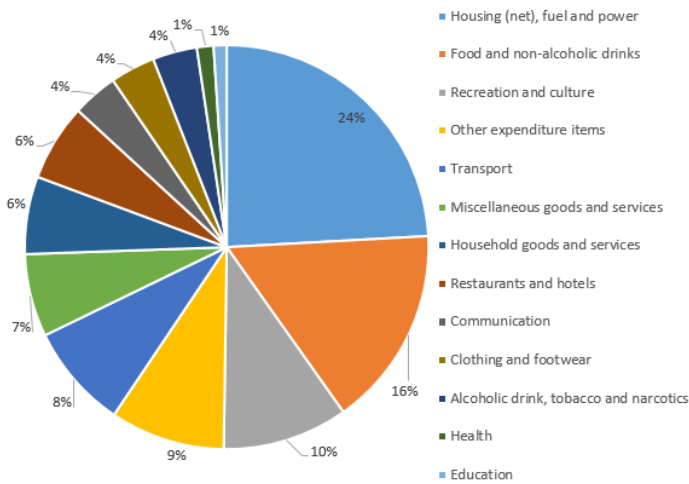
Spending on housing fuel and power and food and non-alcoholic drink represent 40% of total spending in the bottom income quintile compared to 19% in the top income quintile. Therefore, any increase in the price of items such as rent; food and drink; or fuel and power costs would disproportionately affect households in the bottom income quintile.

Households in the top income quintile are also more likely to own a vehicle, which explains their higher proportionate expenditure on transport (15% compared to 8%). Therefore, any increase in transport prices would disproportionately impact households in the top income quintile.

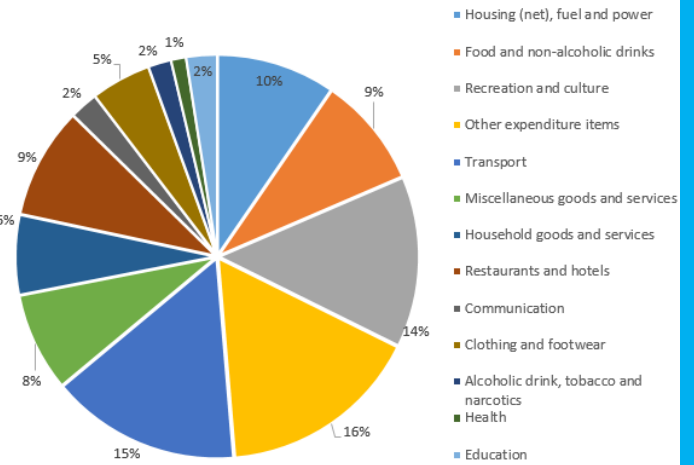
<sup>15</sup> Income quintiles are defined using the UK income distribution. In other words, the bottom quintile for NI represents NI households who fall within the bottom quintile of the UK distribution.

## Consumer spending by quintile, NI, 2014-2016

Household expenditure (£) per week, NI, bottom 20%, 2014-16  
Includes expenditure categories 1-13



Household expenditure (£) per week, NI, top 20%, 2014-16  
Includes expenditure categories 1-13

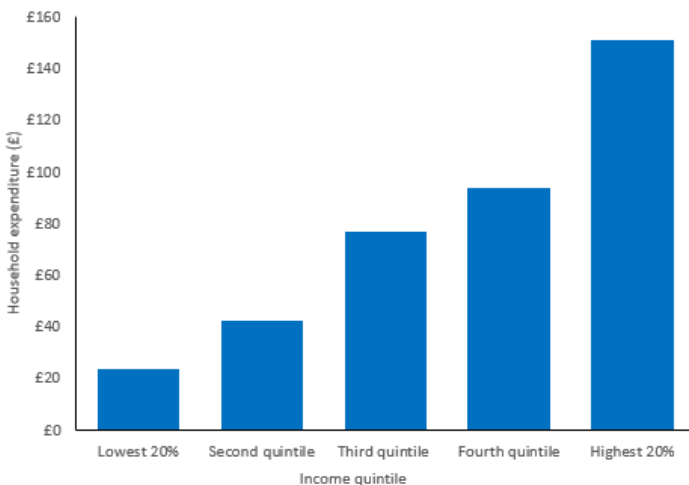


Source: LCF  
Note: Based on expenditure categories 1-13

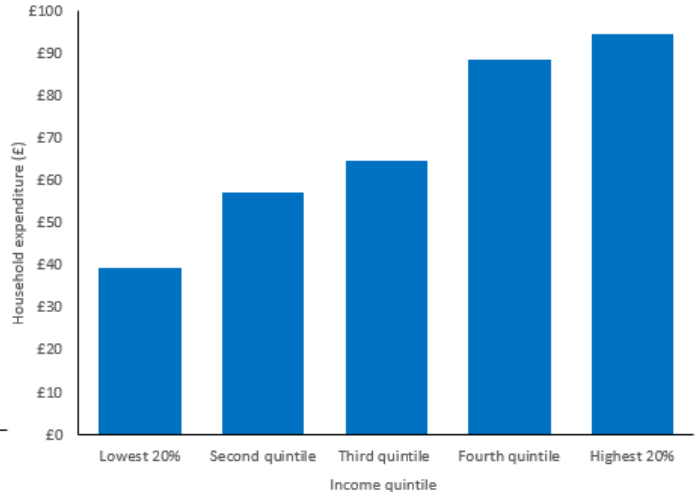
The above figure highlights transport; and food and drink expenditure by quintile. Across both categories, expenditure increases as households move up through the income quintiles. However, in the case of transport the top quintile spends 6.4 times the amount which the bottom quintile spends. However, the top quintile spends only 2.4 times more than the bottom quintile on food and non-alcoholic drink. The difference is that the former represents luxury spending and the latter is largely essential spending.

## Consumer spending on food and drink/Transport by quintile, NI, 2014-16

Transport household expenditure (£) per week, NI, 2014-16  
Based on a rolling average of 2014-2016



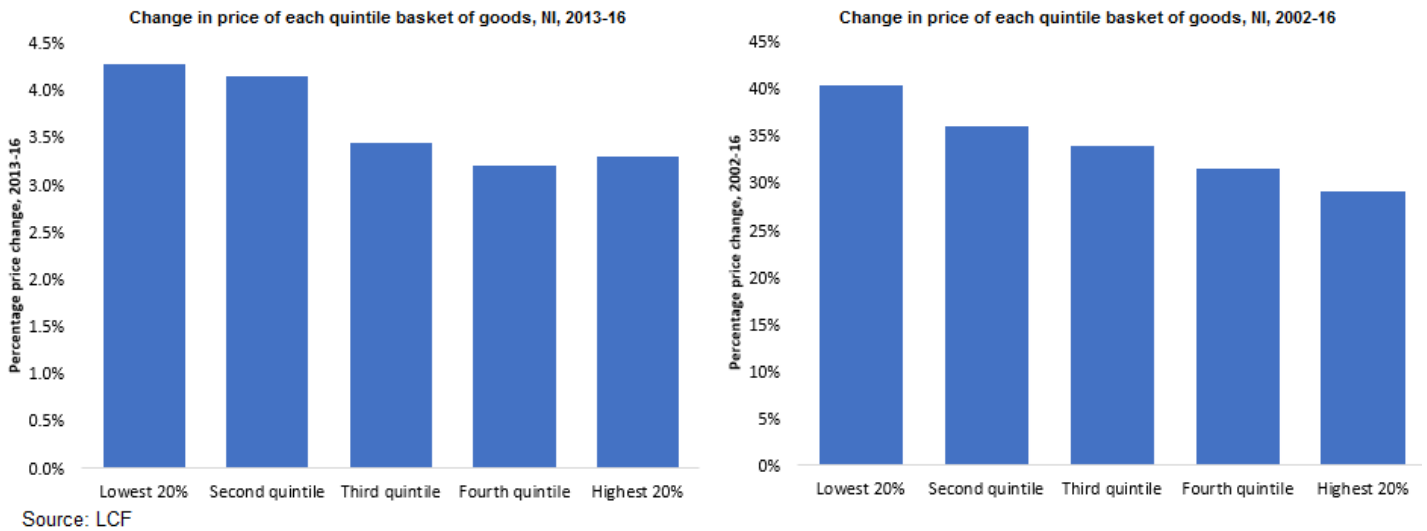
Food & non-alcoholic drink household expenditure (£) per week, UK, 2014-16  
Based on a rolling average of 2014-2016



Source: LCF

The differences in expenditure profiles across income quintiles in NI will result in different price pressures across income groups – and ultimately a different inflation rate. The figure below highlights the implied price increase of a representative basket of goods and services across income quintiles in NI over the past 3 years and since 2002 to provide a longer term perspective.

### *Inflationary pressures on NI's 2016 representative basket of goods, NI income quintiles, 2002-16*



The data indicates that price changes over both the short and long-term time frame affect the cost of a shopping basket for people in the lowest quintile to a larger extent. There are a number of key drivers behind this:

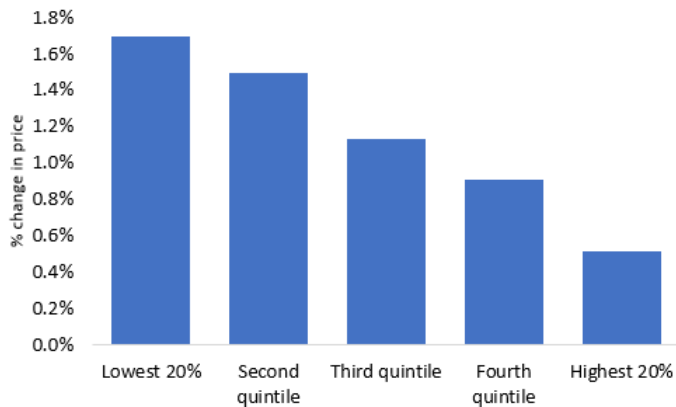
- **Products within the alcoholic drink, tobacco and narcotics expenditure category recorded relatively high inflation over the 2013-16 period.** This type of expenditure has a higher weighting in low income households where it represents 5% of overall expenditure compared to 2% in the richest 20% of households.
- **Housing costs, driven primarily by rents, provide more upward inflationary pressure to low income households relative to high income households.** For example, housing costs account for 17% of overall expenditure in households in the bottom 20% of the UK income distribution, compared to 5% amongst households in the top 20%.
- **Although increases in the price of food have been relatively modest, this type of essential expenditure accounts for a much higher proportion of expenditure in low income households.** For example, food and non-alcoholic account for 16% of expenditure across the poorest 20% of households, compared to 10% amongst the highest income households. Therefore, any increase in food prices will be disproportionately felt by low income households.

Using the same two scenarios which were illustrated earlier in this report at a UK regional level, the figure below illustrates two scenarios related to key items of expenditure.

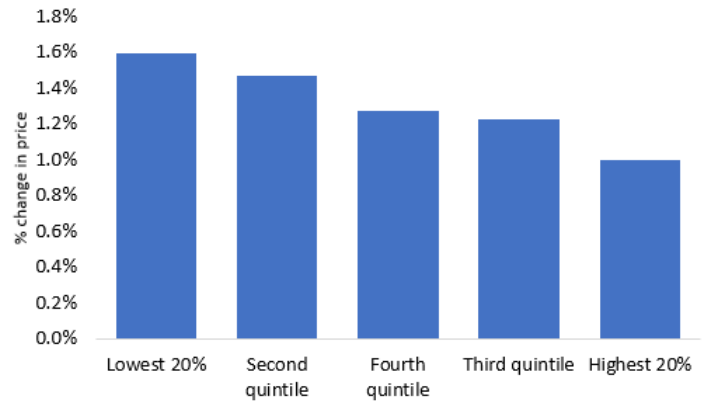
- 1) An increase of 10% in housing rents (prices of all other items remain constant); and
- 2) An increase of 10% food and non-alcoholic drink (prices of all other items remain constant).

### Examples of selected price increases, NI income quintiles, 2014-16 basket of goods

Percentage change in price of basket of goods, if housing (net) fuel and power increased by 10%, by NI income quintile, 2016



Percentage change in price of basket of goods, if food and non-alcoholic drinks increased by 10%, by NI income quintile, 2016



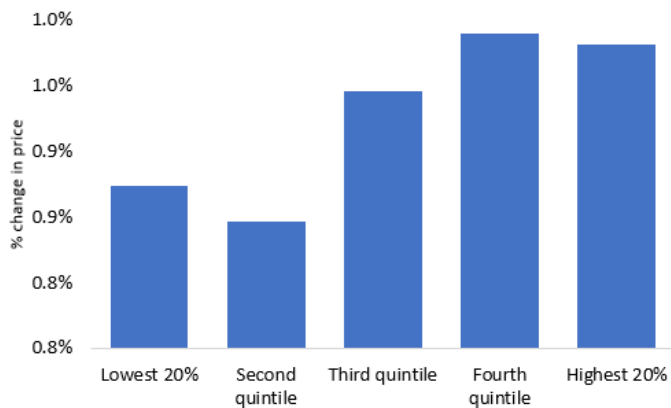
Source: LCF

At the other end of the scale, there are also commodities which have a higher weight in high income households shopping baskets. The charts below provide two illustrative examples:

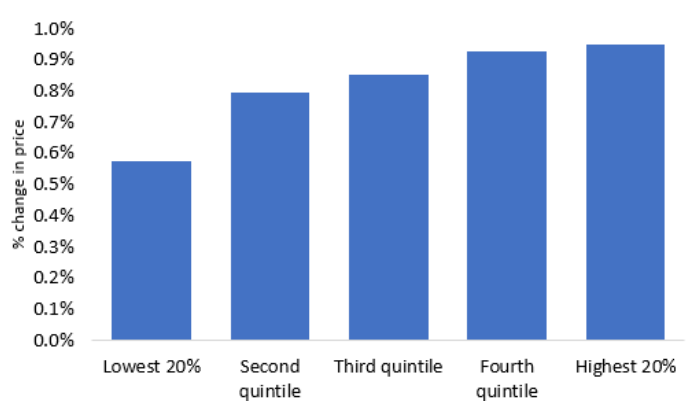
- 1) An increase of 10% in catering services (prices of all other items remain constant); and
- 2) An increase of 10% operation of personal transport (prices of all other items remain constant).

### Examples of selected price increases, NI income quintiles, 2014-16 basket of goods

Percentage change in price of basket of goods, if catering services increased by 10%, by NI income quintile, 2016



Percentage change in price of basket of goods, if operation of personal transport increased by 10%, by NI income quintile, 2016



Source: LCF

Higher income households spend a higher proportion of their income on catering services (which includes meals in cafes and restaurants) than low income households. Similarly, high income households spend a higher proportion of their income on the operation of personal transport due to their higher levels of vehicle ownership.

### What are the implications of the consumer trends highlighted?

The review of data in this chapter has highlighted that **household expenditure patterns in NI run counter to real income trends** which identify NI as a region with amongst the lowest income in the UK and static income growth for much of the past decade. In contrast, NI is a mid-ranked region with regard to the level of household expenditure.

The profile of household expenditure in NI compared to the UK highlights a relatively similar pattern with some key differences. **A major difference is housing costs, which plays an influence on the overall profile of household expenditure.** In NI housing related expenditure accounts for 12% of total household spending compared to 22% in the rest of the UK (excluding London).

**Lower housing costs (in both absolute and relative terms) has led to an expenditure profile which is not reflective of lower incomes in NI.** Local households spend a higher proportion of income on 'luxury' spending such as alcoholic drink, tobacco and narcotics; clothing and footwear; and hotels and restaurants.

**The differences in expenditure profiles results in NI being slightly more vulnerable in some areas from inflationary pressures.** For example, NI spends a greater proportion than the UK average on transport due to higher rates of vehicle ownership. Therefore, NI households are more vulnerable to inflation if there is a sudden price increase in, for example, petrol prices. In some other areas where NI households spend a relatively higher proportion of the effect of a price rise is likely to be a change in consumer behaviour rather than a price rise. For example, in the event of price rises in luxury areas of spending such as hotels and restaurants consumers are likely to reduce the weight of this type of expenditure in their shopping basket by spending less rather than experience significant personal inflation.

**Within NI different household types face different types of inflationary pressures given the different types of shopping baskets in low and high income households.** For example, essential spending such as housing costs and food costs have a much higher weight low income households' overall expenditure given their more constrained income profile and lower levels of total spending. Therefore, any increase in the price of essential expenditure items such as these will have a disproportionately greater inflationary impact on low income households compared to high income households.

## Options for future research

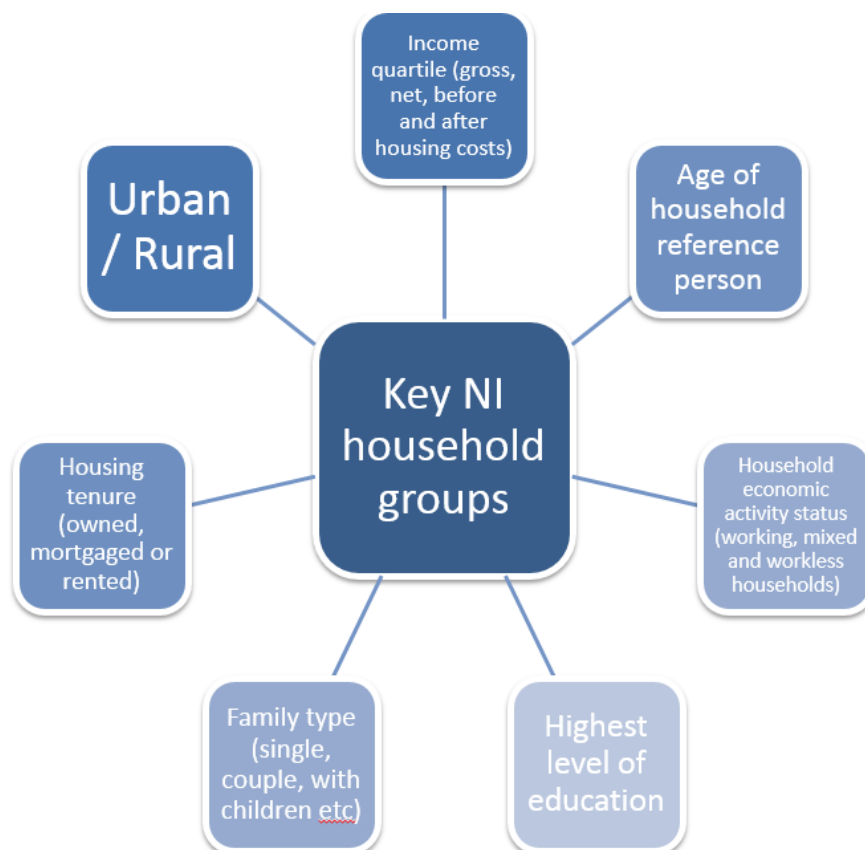
The data presented in this report represents a high level overview of income and expenditure trends in NI and the UK. However, from an NI perspective these data provide only high level overview of the 'average household'. Beneath the veneer of the concept of the 'average household', there lies a number of different types of household which face varied income and expenditure challenges over the coming years. For example, a working household has a very different expenditure profile to a workless household; households with children face a different set of challenges to those which do not; and households comprised of people from different age generations (e.g. baby boomers versus Generation Y) face a varied set of pressures on their income.

However, in NI little information exists relating income and spending profiles of different types of households in NI. Therefore, it is clear that given the local and national dependence on consumer spending to fuel economic growth further research is required to fully understand income and expenditure patterns for different types of households in Northern Ireland.

### Analysing household expenditure

The figure above outlines some potential major cuts of the Living Costs and Food Survey (LCF) which would provide insight into the expenditure patterns of different types of households.

*Potential expenditure analyses of major NI household types – major metrics*



- **Income quartiles:** Although some headline cuts of data were presented earlier in this report related to income quintiles, the defined quintiles referred to the UK income distribution. In other words, the top quintile refers to NI households which fall within the top quintile of the UK

distribution. We would recommend updating this analysis to only reflect the NI income distribution to account for differences between NI and the UK. We would also recommend undertaking the analysis using income quartiles instead of income quintiles, which will help to boost the sample size when undertaking analysis at a NI level.

- **Age of household reference person**<sup>16</sup>: The population profile of NI includes a number of distinct groups with diverse life experiences, socio-economic statuses and societal views. For example, as young adults, baby boomers had a good start in life, with free education, paid apprenticeships and work contracts that lasted an average of over 10 years. Pension provision was generous and helped by a lower retirement age, allowed baby boomers to retire comparatively early and to a good lifestyle. Home ownership was also more accessible, the first raft of baby boomer home owners purchased houses using mortgages roughly three times their salary. In comparison, today's young adults enter working life with an average of almost £20,000 in student debt<sup>17,18</sup>, a competitive labour market, fewer jobs offering an adequate pension and the possibility of home ownership an unrealistic possibility for many. These time bound generational influences have led to a very different career and earnings path for people of different generations. With this in mind it is important to consider the potential that any increase in price have across the generations. For example, one estimate in 2016 found that the personal inflation rate of UK millennials was twice that of baby boomers, owing to their different patterns of expenditure<sup>19</sup>. We would recommend an option to analyse households into 'generational' categories based on the age of the household reference person.
- **Household economic activity status**: Expenditure patterns differ across households depending on the economic status of the household. For example, working households tend to be associated with higher income, and therefore have higher relative expenditure on more discretionary items (e.g. hotels and restaurants etc.).
- **Highest level of education of household reference person**: Education is often an explanatory factor relating to many analyses of poverty and economic activity. An analysis based upon the highest qualification of the household reference person may produce some differences.
- **Family type**: It is possible to analyse the different expenditure types by family type. For example, the total amount of household expenditure and profile of expenditure will differ greatly between single person households, lone parent households and couples with and without children.
- **Housing tenure**: There may be significant differences in household spending between mortgaged households and rented households. This could potentially become an important factor in the short-term future as interest rate rises become more likely when inflation increases throughout the remainder of 2017.
- **Urban / rural**: Distance from services and transport costs are likely to cause differences in the expenditure profiles between urban and rural households.

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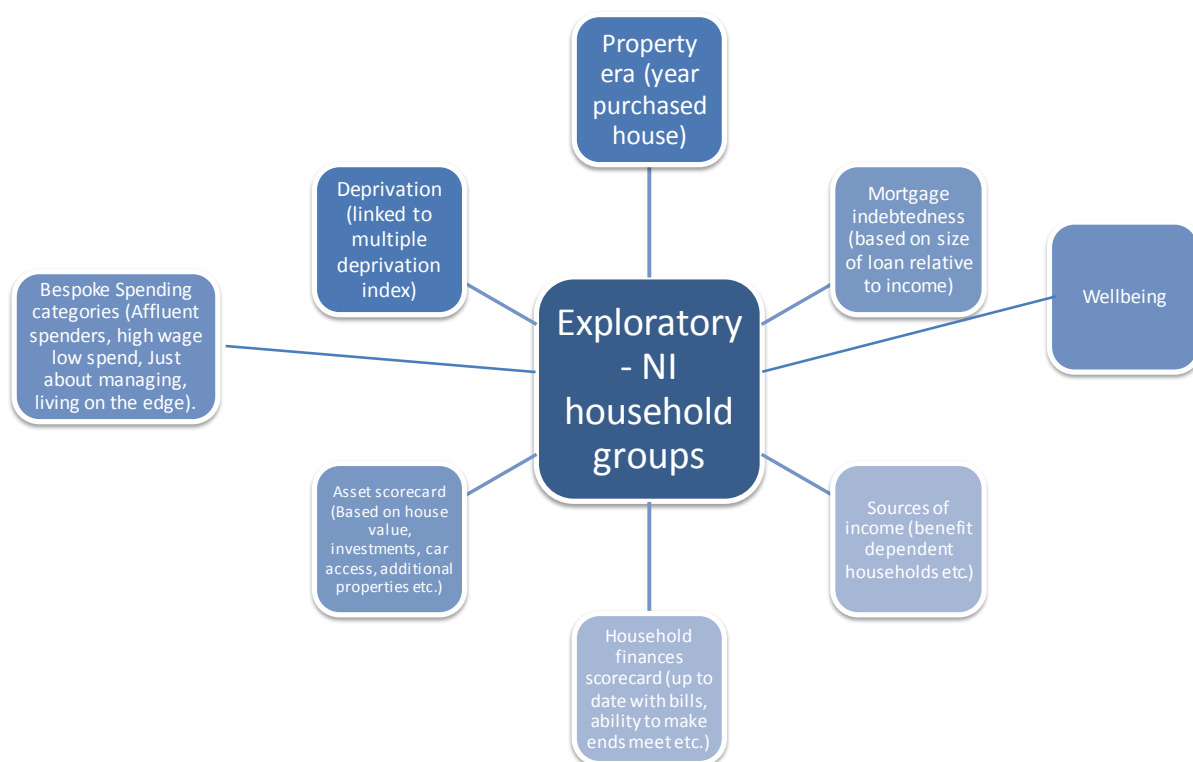
<sup>16</sup> The household reference person is the highest income householder.

<sup>17</sup> In NI students who started repaying their loans in 2016 on average owe £19,270.

<sup>18</sup> Graduates who paid fees in UK Universities up to £9,000 per year have left University with an average of £44,000 of debt.

<sup>19</sup> <http://www.telegraph.co.uk/work-salary/news/millennials-suffering-twice-the-rate-inflation-of-baby-boomers/>

*Potential expenditure analyses of major NI household types – exploratory*



The figure above represents more detailed potential analysis of household expenditure which may be possible within the LCF survey framework.

- **Property era:** The relative affluence of owner occupied households is highly dependent upon the year when they first purchased a property. For example, a household purchasing a home in 2012 will have gained access to a step on the housing ladder at a much more affordable price relative to a first time buyer in 2008. Therefore, the point in time at which homes were purchased ultimately determines the level of mortgage indebtedness, and therefore disposable income which are likely to lead to a differing expenditure profile.
- **Mortgage indebtedness:** It is possible to estimate different loan to value ratios for NI households within LCF survey. Following the property crash in 2007/08, there remain a sizable number of households in NI who are either in negative equity or have loan to value ratios above the recommended levels. This could be a potentially useful frame of analysis considering the likely inflationary pressures throughout 2017 and increasing probability of an increase in interest rates in either 2017 or 2018.
- **Well-being:** Northern Ireland has consistently outscored other regions of the UK with regard to average life satisfaction during the five year in which data has been collected. The LCF survey includes questions related to wellbeing. Therefore, there is potential to analyse expenditure patterns across NI households based on their reported life satisfaction. Using the questions related to well-being it is possible to categorise households into segments for analysis (e.g. happy households, content households, anxious households etc.).
- **Sources of income:** The LCF collects detailed data decomposing all varieties on income. Different types of households are reliant upon various forms of state support covering both out of work and in-work benefits. At a time where there is significant change underway in the welfare system it is important to understand the balance sheets of these households. For example, in late 2017 inflation is forecast to reach its highest rate since 2012. This



coincides with a time where a number of key benefits are frozen and will not increase in line with inflation<sup>20</sup>. An examination of the different benefit combinations which households are dependent upon would highlight differences in the inflation rate between households at a time where we anticipate incomes will be squeezed.

- **Household finances scorecard:** The LCF includes a series of questions related to household finances. This includes information related to income, loans and credit cards. Therefore, using this information it would be feasible to segment NI households based upon a measure reflecting attitudes towards debt (e.g. overall debt to income ratio; unsecured debt to income ratio's etc.).
- **Household assets scorecard:** The LCF gathers data on a range of topics related to assets including property ownership (including multiple properties), income from investments, vehicle ownership (including value).
- **Consumer categories:** using a combination of questions it is possible to categorise consumers based on their income and expenditure categories. Some possible categories include affluent spenders; high wage low spend'; just about managing; and living on the edge).
- **Deprivation quartile:** Under a secure data access agreement via ONS it would be possible to segment NI households into categories based on their ranking in Northern Ireland's multiple deprivation index.

Overall the LCF is a rich dataset enabling a variety of analyses of household expenditure patterns in NI. All of the above segmentation are possible based upon a review of the questionnaire. However, sample sizes of sub-populations may constrain some of the above proposed cuts of data. Sample sizes of sub-populations will not be known until the work commences.

#### Research options:

- 1) Small scale analysis of NI household expenditure patterns based upon a small selected number of household segmentation types
- 2) A large scale analysis of NI household expenditure patterns based upon all household segmentation types where a statistically significant analysis is achievable.

## Analysing household income

### Family Resources Survey

The FRS is NI's premier survey on incomes. The Family Resources Survey (FRS) is a continuous household survey which collects information on a representative sample of private households in NI. Detailed information is recorded on respondents' income from all sources; housing tenure; caring needs and responsibilities; disability; expenditure on housing; education; pension participation; childcare; family circumstances; child maintenance.

The FRS uses a questionnaire framework similar to that of the LCF. This is a positive for research purposes as it enables the possibility of developing metrics on both income and expenditure types across categories of NI households for which no data is currently published. The NI household segmentation types for which data is available across the two surveys include:

- Income quartiles;

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<sup>20</sup> Jobseeker's Allowance, Employment and Support Allowance (Work Related Activity Group), Income Support, Housing Benefit, Universal Credit, Child Tax Credits, Working Tax Credits and Child Benefit.

- Age of household reference person;
- Household economic activity status
- Education of household reference person;
- Family type;
- Housing tenure;
- Urban/rural;
- Property era;
- Mortgage indebtedness;
- Well-being;
- Household finances scorecard;
- Household assets scorecard;
- Consumer categories; and
- Deprivation quintile.

It should be noted that although there is consistency across the two surveys with regard to a core set of questions, the FRS asks a much more detailed set of questions relating to income. Many of these questions are not reported upon in the headline FRS report at a regional level. Therefore, any published outputs at either NI level or sub-categories of NI households would represent original research. The table below summarises some of the questions asked in the FRS which we would propose to examine as part of a potential study.

Household segmentation type	FRS questions for analysis
<b>Property related</b>	<ul style="list-style-type: none"> <li>● Housing tenure (owned outright, mortgaged, co-ownership, rent etc.).</li> <li>● Property details (number of rooms, bedrooms, length of time at address).</li> <li>● Rented accommodation (landlord details – social or private rented).</li> <li>● Owned accommodation (Year purchased, purchase price, original mortgage amount, re-mortgage details, type of mortgage, amount outstanding on mortgage, amount of last mortgage payment).</li> </ul>
<b>Well being</b>	<ul style="list-style-type: none"> <li>● Overall, to what extent do you feel that the things you do in your life are worthwhile?</li> <li>● Overall, how happy did you feel yesterday?</li> <li>● How anxious did you feel yesterday?</li> </ul>
<b>Household finances</b>	<ul style="list-style-type: none"> <li>● Would you be able to pay an unexpected expense of £200?</li> <li>● Would your household be able to pay an unexpected, but necessary, expense of £750?</li> <li>● Thinking of your household's total monthly or weekly income, is your household able to make ends meet, that is, pay your usual expenses?</li> <li>● Thinking of the household's basic needs, what is the very minimum amount of money the household needs each month to pay its usual expenses?</li> <li>● Are you behind with any of your bills?</li> <li>● How many times were you unable to pay the rent/mortgage on time in the last 12 months? (similar questions are asked relating to other key bills)</li> </ul>
<b>Household assets</b>	<ul style="list-style-type: none"> <li>● Total savings</li> <li>● Roughly how much was left in the [Current account and Basic Bank Account] at the end of last (month/pay period)?</li> <li>● Details of investments (shares, bonds, unit trusts etc).</li> <li>● Details of pension scheme.</li> <li>● Details of multiple property ownership.</li> <li>● Details of all vehicles owned.</li> </ul>

The above list is intended to be indicative, to provide some examples of the questions asked in the data rich FRS. There are many more questions asked within the above areas. However, to have listed every relevant question would have resulted in an exhaustive list.

#### Research options:

- 6) Small scale analysis of NI household income trends based on the selected consumer segments identified in (1)
- 7) A large scale analysis of NI household income trends based upon all household segmentation types where a statistically significant analysis is achievable.
- 8) Wider analysis of the FRS survey dataset to explore variables unpublished for NI, and undertake cross-tabular analysis where applicable.

#### Household income administrative database

A project is currently underway within the Department for Communities to develop a household income database based on administrative data. The database draws together income from HMRC Summary of Earnings (PAYE) and the Self-Assessed; HMRC Savings; HMRC Child Benefit and Tax Credits; and Social Security Benefits data.

As mentioned previously, the FRS is NI's premier survey on incomes. However, a database developed using administrative records is vastly superior to a survey methodology as a data source to track incomes. This data is not currently available to external resources, and would only be accessible via strict data sharing arrangements. Although it is not currently available, in the future this source is likely to become the authoritative source relating to household incomes in NI.

#### Household accounts

An option is to bring the income and expenditure data for NI to develop a consistent set of household accounts for different groups. This is certainly possible using the LCF and FRS as long as sample sizes are sufficient.

However, although not publically available, the household income administrative database represents a more robust data source than the FRS. Therefore, it may be worth exploring potential usage of this database with officials within the Department for Communities. The list of fields available in the database would need to be analysed to confirm the potential groups of people in NI which could be identified for analysis within the database.

#### Research options:

- 9) Development of household accounts using LCF (expenditure) and FRS (income)
- 10) Delay the development of household accounts to examine the potential for using administrative data sources.

#### Tracking the health of the NI consumer

As was previously mentioned in this report, NI lacks timely data from official sources which can be used to provide up to date data on NI incomes and expenditures. There are however data available from a range of survey and other providers.

We have undertaken a brief review of all available data sources relating to incomes and expenditure in NI. The results are summarised in Annex A.

Based on our review we have identified a range of data suitable to be an input into the development of a bi-annual index related to the NI consumer. The figure below provides an outline of our proposed index.

### *Overview of UUEPC consumer index*

#### Consumer sentiment

- How do you feel your current financial position compares with two years ago? (Consumer Outlook)
- How do you expect your financial position to change in the next two years? (Consumer Outlook)
- How do you expect your savings will change in the next 12 months? (question asked in Danske Bank Consumer Confidence Survey)
- How do you find keeping up with your financial commitments? (Consumer Outlook)

#### Consumer economy

- New car sales (SMMT)
- Footfall tracker (Northern Ireland Retail Consortium and Springboard)
- Vacant commercial buildings (Northern Ireland Retail Consortium and Springboard)

#### Consumer finances

- Number of personal debt related queries (Step Change Debt Charity, Citizens Advice)
- Median earnings (Labour Force Survey)
- Household borrowing of which is unsecured credit (British Banking Association)

It is proposed that a consumer tracking index is calculated from the indicators stated under each of the three sub-headings; consumer sentiment; consumer economy; and consumer finances. The remainder of this section provides a more detailed overview of the sub-headings and the indicators we envisage forming part of a consumer tracking index.

#### Consumer sentiment

Consumer sentiment broadly captures consumer attitudes within the NI economy. It accounts for past and predicted changes in financial positions, future saving expectations and current ability to manage financial commitments. These subjective indicators provide a gauge for consumer perceptions within NI and will help highlight consumer's responsiveness to economic climates, cycles and events.

More specifically, it is important to consider the construct of indicators to ensure survey results and trends are appropriately reflected in the index and its outcomes.

There are five possible responses for indicators one and two, from which respondents select one; much better; a little better; the same; a little worse; or much worse.

Similarly, there are six possible responses for the third indicator, from which respondents select one; substantially better; marginally better; the same; marginally worse; substantially worse; or don't know.

Lastly, there are six possible responses for indicator four, from which respondents select one; keeping up with bills and financial commitments without any difficulty; keeping up with bills and

commitments but struggle from time to time; falling behind with some bills and/or credit commitments; having real financial problems and have fallen behind with most or all financial commitments; or don't know.

It is proposed that one figure is calculated for each indicator via the following method;

- Calculate the proportion of respondents who respond much better or a little better;
- Calculate the proportion of respondents who respond much worse or a little worse; and
- Calculate the relative score of the two.

It should be noted that whilst the method above relates to the responses of indicator one and two (much better, a little better etc.) the same method can be applied to the remaining indicators (substantially better, marginally better etc. and excluding 'don't knows' were relevant).

### Consumer economy

The performance of the consumer economy (given there are no official retail sales figures in NI) is broadly captured by trends in new car sales, footfalls within town and city centres, the number or rate of vacant stores and surveys capturing retail sales.

In relation to recording figures for each of the indicators under the consumer economy the following recommendations should be considered to standardise results;

- New car sales recorded per 100,000 of the working age population;
- Footfalls recorded per 10,000 of the population; and
- Vacant stores recorded as a proportion of total commercial stores.

### Consumer finances

Critical to analysing consumer trends is understanding how consumers finance spending. As there is limited data on personal debt levels in Northern NI (relative to the UK) it is proposed that the position of consumer finances is captured through; records of debt related queries to debt advice services, median earnings; and unsecured household borrowing.

It is suggested that the data is recorded as follows;

- The number of debt queries as per 100,000 of the working age population;
- Median earnings (based on the previous two quarters from the Labour Force Survey); and
- Household borrowing of which is unsecured credit as a proportion of total household borrowing.

Once the data has been collected for each of the ten indicators an index can be constructed whereby each indicator is weighted equally at 10% and the base year set to 2012.

#### Research options:

- 11) Development of an index to track the health of the NI consumer.

## UUEPC recommended research

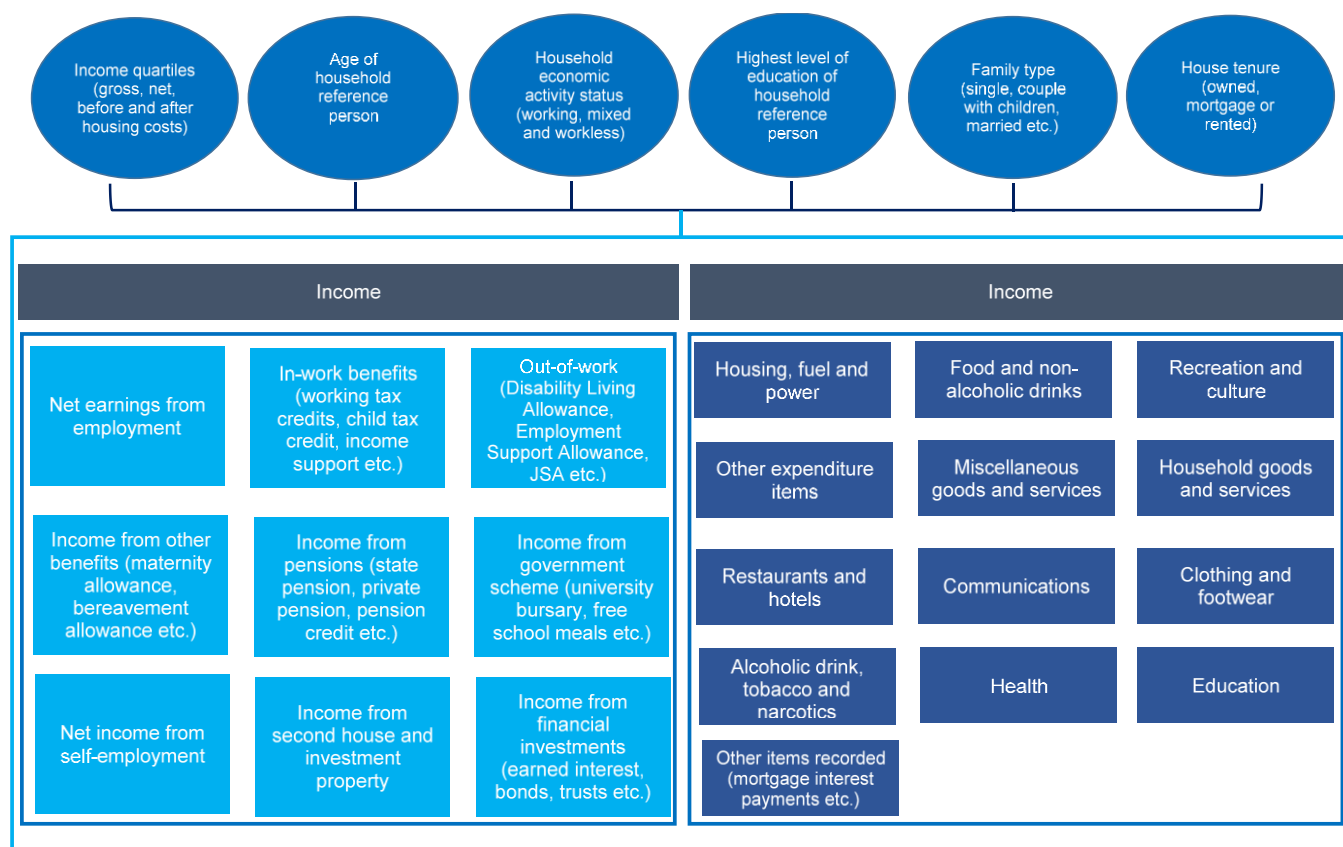
Although it is possible to develop an index measurement to track the health of the NI consumer by combining data from a range of local sources UUEPC does not recommend proceeding with this option. The lack of available data which is published on a regular basis in NI would limit an index to a relatively small number of variables from a limited range of sources. With this in mind, it is our view that a tracker would contribute minimal value added above the existing published data. If more data is made available in the future, the concept of an index tracker could perhaps be revisited.

The UUEPC considers that the construction of household accounts would be a useful development, and informative for policy by providing insight regarding the income and expenditure pressures facing different types of households.

UUEPC recommends proceeding with research option 9, the construction of household accounts. This would be based upon a the ‘major’ household categories illustrated earlier in this chapter. These major categories represent experimental research, and for this reason it is recommended that initial research in this area should be limited to the ‘major’ household types. Although a range of more bespoke ‘other’ household types have been identified as potential feasible for analytical purposes, as a first step it is recommended that any household accounts. Further analysis could be undertaken at a later date following the successful completion of a set of household accounts for NI based on major categories.

The graphic below provides a conceptual overview of a set of household accounts for key groups in NI.

### A framework for household accounts



UUEPC also recommends proceeding with research option 8, which is to undertake analysis of the wider FRS data. This would involve cross tabular analysis of detailed variables (e.g. wellbeing and poverty related indicators outlined on page 36) alongside the major household category types. This will provide data related to questions such as:

- What are the major differences across household types with regard to wellbeing measures (e.g. is there a significant difference between people in owned accommodation versus rented?).
- Which types of households are most at risk if they had to pay for an unexpected item?
- Which household types are asset rich and asset poor, and where do the largest differences exist?
- How has the role of housing affected household balance sheets (e.g. loan size relative to property values, outstanding mortgage debt etc.)?

It is envisaged that the outputs for the analytics proposed above would include tables based in Microsoft Excel alongside a short report summarising key trend and drawing out policy messages. This framework will have the capability to provide insight on:

- Income vulnerabilities across quartiles from a change to either the benefit system or a change in earnings trends.
- Income diversity across the generation groups and how some groups are more vulnerable to changes than others (e.g. the effect on older households of a change in the pension system).
- Income and expenditure pressures across working, workless and mixed households and an assessment of each household types sensitivity to a change in the benefits system.
- The differences that owning an asset such as a home can make to a households' expenditure pattern.
- An understanding of the income and expenditure pressures that different family types face will identify how they may potentially respond to any squeeze in income.
- An examination of the income and expenditure patterns across education levels may provide some insight into the long term outcomes resulting from the long tail of under achievement in Northern Ireland's education system.

Before proceeding with further research in this area it is our intention to fully discuss any potential for further work with UUEPC Board members at the next Board meeting in June 2017. If the Board expresses an interest in taking this research stream forward, a project initiation document can be developed to more clearly define the research.

## Annex A: Review of ‘consumer’ related statistics

### Study background – Living costs and food survey

Data provider	Office for National Statistics
Study description	<p>A household expenditure survey has been conducted each year in the UK since 1957. From 1957 to March 2001, the Family Expenditure and National Food Surveys (FES and NFS) provided information on household expenditure patterns and food consumption for government and the wider community. In April 2001 these surveys were combined to form the Expenditure and Food Survey (EFS).</p> <p>In 2008, selected government household surveys, on which the Office for National Statistics (ONS) leads, were combined into one Integrated Household Survey (IHS). In anticipation of this, the EFS moved to a calendar year basis in January 2006. The EFS questionnaire became known as the Living Costs and Food (LCF) module of the IHS in 2008, to accommodate the insertion of a core set of IHS questions.</p> <p>More information about the IHS can be found on the ONS website. In summary, the design allows for the collection of common core data across the pooled samples of the constituent surveys, achieving the biggest pool of UK social data after the Census. The large sample allows a detailed level of analysis to be conducted, and allows results to be reported for smaller geographic areas.</p>
Methodology of data provider	<p>Households selected for the LCF are asked to complete an interview covering information about the household, regular items of household expenditure and income details. Following this, all adults within the household are asked to keep a diary to record all items of expenditure in the following two weeks.</p> <p>Children aged 7 to 15 years are also asked to keep a record of their personal expenditure.</p>
Current uses of the study	<p>The main reason, historically, for instituting a regular survey on expenditure by households has been to provide information on spending patterns for the Retail Prices Index (RPI).</p> <p>Apart from the RPI, the LCF expenditure data are used for National and Regional Accounts to compile estimates of household final consumption expenditure; they provide the weights for the Consumer Price Index (CPI) and for Purchasing Power Parities (PPPs) for international price comparisons; and they are used by the Pay Review Bodies governing the salaries of HM Armed Forces and the medical and dental professions.</p>



## Study assessment – Living costs and food survey

Relevance	The survey represents the largest available dataset relating to consumer expenditure. Data on both income (sources) and expenditure (CIOCOP) is included. The advantage of this data relative to others is that it includes a number of variables related to household characteristics, which enable analysis of spending patterns across different types of households.
Accuracy	<ul style="list-style-type: none"> <li>• <b>Sample selection:</b> A systematic random sample of 300 private addresses is drawn from the Land and Property Services Agency's (LPSA) property database. From January 2010 the NI sample used for the LCF was reduced to a sample proportionate to the NI population relative to the UK.</li> <li>• <b>Response rate:</b> The response rate for Northern Ireland was 60% for 2014. This represents a decrease of 1 percentage point from the 2013 survey year. In 2013, the eligible Northern Ireland sample was 251 households. The number of cooperating households who provided usable data was 152 households. Data risks occur if the profile of non-respondents differs from respondents (e.g. a higher non response rate amongst low income households will overstate overall spending).</li> <li>• <b>Partial responses:</b> All adult members of households are asked to supply detailed information about their income (full income). Some respondents are reluctant to provide this level of detail.</li> <li>• <b>Difficult to obtain information:</b> Some data is imputed at the editing stage where respondents do not have the required information.</li> <li>• <b>Proxy interviews:</b> Where a member of the household is absent during the interview another member of the household may be able to answer on their behalf. However, under LCF rules the expenditure diary cannot be entered by proxy and are classified as an 'absent spender'. The proportion of proxy interviews has increased from 14% in 2006 to 29% in 2014 in GB.</li> <li>• <b>Impact of proxy interviews:</b> Analysis of the 2014 data revealed that the inclusion of proxy interviews increased response from above average income households. For the 2014 survey, the average gross normal weekly household income was 19% higher than it would have been if proxy interviews had not been accepted. Similar findings were obtained with respect to expenditure: total spending was 14% higher than if proxy interviews had not been included.</li> </ul>
Timeliness	The survey results are published annually. The results are published with a time lag. The latest available results relate to 2014.
Accessibility	The main results from the survey are published by ONS in the annual report Family Spending, which can be found on the ONS website. Family spending is a publication based on the most recent LCF, and is published one year later. For example, the 2015 Family spending publication is based on data from the 2014 LCF. Regional results are available within the Family spending publication. However, due to small sample sizes regional results are based on an aggregation of the three most recent available years. In the detailed expenditure categories (3 digit COICOP categories) a number of data points are flagged as being unreliable due to small sample sizes. Cross tabular analysis of data is possible. However, it is likely that this would have to be limited to a small number of categories. An initial data request has been processed to cut the data by income quintile for each 2 digit COICOP category. It is unlikely that any cuts are possible for 3 digit COICOP categories.
Interpretability	There are a number of possible cuts available to analyse the data to provide insight beyond the published statistics: <ul style="list-style-type: none"> <li>• Gross income decile group.</li> <li>• Disposable income decile group.</li> <li>• Total weekly household income (£)</li> </ul>

- Age of household reference person.
- Economic activity of the household reference person.
- Self-employed households versus employee jobs households.
- Age at which the household reference person completed continuous full time education.
- Highest level of qualification of household reference person.
- Socio-economic classification of household reference person.
- Household type (pensioner versus non-pensioner OR single, couple, with children, without children etc).
- Number of children in the household.
- Tenure (Own outright, own with mortgage, social, private rented).
  - Note: Further analysis may be possible by deriving bespoke variables for owner occupiers – e.g households where mortgage payments account for more than xx% of gross income).
- Urban / rural.
- Households who own a 2<sup>nd</sup> home versus other types of households.
- Households with a private vehicle versus households without.
- **Derived variable: Mortgage details.** Year mortgage taken out, re-mortgaged properties, purchase price of the house, size of loan, re-mortgaged amount, outstanding amount on mortgage, monthly mortgage payment etc.
- **Derived variable: Credit cards.** Data is recorded on credit card fees and interest payments. This data could be used to develop a proxy indicator to compare households high credit versus low credit households.
- **Derived variable: Loans.** This data could be used to develop a proxy indicator to compare households with loans or without – or alternatively a derived metric based on the amount of expenditure on loans.
- **Derived variable: Wellbeing.** It is possible to categorise households based on wellbeing measures (e.g. derived categories such as happy households, content households, anxious households).
- **Derived variable: Income.** Households with income from investments; households 'dependent' on social security benefits; high wage households versus low wage households etc.
- **Derived variable: Deprivation.** Link to multiple deprivation index. Data analysis by deprivation percentile (e.g. top 25% most deprived areas versus bottom 25% least deprived).
- **Derived variable: Spending.** User defined variables are possible based on a spending profile of respondents. For example, Affluent spenders; high wage low spend; just about managing; and living on the edge.

#### Coherence

- **Comparability issues:** The Household Final Consumption Expenditure estimates use a number of administrative and survey sources, of which the LCF survey is one. As a result differences occur in the estimates published, because of sources and concepts (e.g. for housing expenditure LCF includes actual expenditure by households, whereas National accounts include imputed rent (a theoretical cost that home owners would have to pay if they rented their own home) to be consistent with international National Accounting Standards.
- **Unit of analysis:** The data is presented on a 'household basis' and is therefore not directly comparable to other data sources on an 'individual basis' or 'benefit unit basis'.
- **Household balance sheet:** Care must be taken when interpreting data. For example, the average expenditure on motor vehicles in published tables will not accurately

reflect the costs faced by motorists since not all households have access to a vehicle. To examine the average expenditure on motor vehicles experienced by motorists it is required that the data is cut by households who own a motor vehicle. The same issue occurs across multiple expenditure categories (e.g. mortgages, rent etc).

### Study background – Family Resources Survey

Data provider	ONS / Department for Communities
Study description	The Family Resources Survey (FRS) was launched in October 1992 to meet the information requirements of analysts in the Department for Work and Pensions (DWP). Traditionally Northern Ireland departments had relied on other government social surveys. The FRS was extended to Northern Ireland in 2002/03.
Methodology of data provider	<p>Prior to 2002/03 the survey covered Great Britain; from 2002/03 the survey was extended to include Northern Ireland. The fieldwork for the survey here is managed by DSD and is currently carried out by the Northern Ireland Statistics and Research Agency.</p> <p>In total 3,600 addresses are selected (out of approximately 751,600 address records), with the number of addresses drawn from each region proportional to the number of addresses in the region. Each address has approximately a 1-in-209 chance of being selected for the survey.</p>
Current uses of the study	<p>The FRS is used widely across Government Departments. The main uses are:</p> <ul style="list-style-type: none"> <li>• <b>Households Below Average Income (HBAI).</b> This publication uses household disposable incomes, adjusted for household size and composition, as a proxy for material living standards or, more precisely, for the level of consumption of goods and services that people could attain given the disposable income of the household in which they live. A shorter Northern Ireland Poverty Bulletin provides high level analysis of the HBAI dataset.</li> <li>• <b>Pensioners income series:</b> The HBAI dataset is also used in the Pensioners' Income Series, the Department's analysis of trends in components and levels of pensioners' incomes.</li> <li>• <b>European Union Statistics on Income and Living Conditions (EU-SILC):</b> From April 2012 the FRS is also being used as the survey source for the cross-sectional element of the EU-SILC. The FRS also provides the first wave of the longitudinal element of the EU-SILC which is carried out by the Office for National Statistics (ONS).</li> <li>• <b>Policy simulation model (PSM):</b> The Policy Simulation Model (PSM) used extensively by DSD and DWP analysts for policy evaluation and costing of policy options. FRS responses are updated to current prices, benefits and earnings levels and can be calibrated to the DSD/DWP Departmental Report forecasts of benefit caseload. Using FRS data has made it possible to model some aspects of the benefit system which could not be done previously, for example severe disability premiums or allowances for childcare costs. In addition to their use in formal modelling, FRS data play a vital role in the analysis of patterns of benefit receipt for policy monitoring and evaluation, and benefit forecasting.</li> <li>• <b>Poverty and Social Exclusion Survey:</b> The FRS has also been used as a sampling frame for follow-up studies to look at particular groups. For example, a follow-up survey of FRS respondents has been used for the Poverty and Social Exclusion survey (<a href="http://www.poverty.ac.uk/">http://www.poverty.ac.uk/</a>).</li> <li>• <b>Benefit take up:</b> Although primary users of FRS data remain within the DSD, the survey is increasingly being used outside the Department. HM Revenue and</li> </ul>

Customs, for example, uses the FRS to produce information on the take-up of Child Benefit and Tax Credits.

- **Wellbeing:** FRS data are used by ONS to help develop new measures of national well-being. The aim is to provide a fuller picture of how society is doing by supplementing existing economic, social and environmental measures (<http://www.ons.gov.uk/ons/guidemethod/user-guidance/well-being/index.html>).

### Study assessment – Family Resources Survey

Relevance	The FRS is NI’s premier survey on incomes. The Family Resources Survey (FRS) is a continuous household survey which collects information on a representative sample of private households in NI. Detailed information is recorded on respondents’ income from all sources; housing tenure; caring needs and responsibilities; disability; expenditure on housing; education; pension participation; childcare; family circumstances; child maintenance.
Accuracy	<p>The FRS is a household survey and is subject to the weaknesses of using a survey, including:</p> <ul style="list-style-type: none"> <li>• <b>Sampling error.</b> This will vary to a greater or lesser extent depending on the level of disaggregation at which results are presented.</li> <li>• <b>Non-response error.</b> Systematic bias due to non-response by households selected for interview in the FRS. In an attempt to correct for differential non-response, estimates are weighted using population totals.</li> <li>• <b>Survey coverage.</b> The FRS covers private households in the United Kingdom. Therefore, individuals in nursing or retirement homes, for example, will not be included. This means that figures relating to the most elderly individuals may not be representative of the United Kingdom population, as many of those at this age will have moved into homes where they can receive more frequent help.</li> <li>• <b>Sample size.</b> Although the FRS has a relatively large sample size for a household survey, small sample sizes may require several years of data to be combined.</li> <li>• <b>Response rates:</b> The original sample chosen for 2013-14 consisted of 3,600 addresses. However, 442 were then found to be ineligible because they were not defined as private households or were empty households. Adjusting the uncertain eligibility by the proportion of known ineligible gives the effective sample of 3,152 households. In total, 1,965 households fully co-operated (62 per cent), 112 partially cooperated (4 per cent) and 935 refused to proceed with the interview (30 per cent). The interviewer was unable to make contact with 102 households (3 per cent).</li> <li>• <b>Absent household members:</b> Proxy interviews are accepted only under restricted circumstances. In 2013/14, for those households classed as fully co-operating, proxy responses were obtained for 22 per cent of adults</li> </ul> <p>Specific weaknesses of the FRS include:</p> <ul style="list-style-type: none"> <li>• <b>Benefit under-reporting.</b> The Methodology chapter shows that the FRS is known to under-report benefit receipt.</li> <li>• <b>Income under-reporting.</b> We rely on respondent recall of very detailed financial information across a comprehensive range of income sources. Some of these are hard for respondents to recall. For more information on incomes please refer to the Households Below Average Income publication.</li> <li>• The data relating to savings and investments should be treated with caution. Questions relating to investments are a sensitive section of the questionnaire and have the lowest response rate. A high proportion of respondents do not know the interest received on their assets and in these cases interest received is imputed</li> </ul>

	<p>(around one in five cases are imputed). It is thought that there is some under-reporting of capital by respondents, in terms of both the actual values of the assets and the investment income.</p> <ul style="list-style-type: none"> <li>• The FRS does not capture information on non-liquid assets. Therefore, property, physical wealth and pensions accruing, are not included in estimates of savings and investments. It also does not capture detailed information on expenditure (except for housing costs) and debts. Therefore, it is not possible to get an overview of how households are coping financially.</li> </ul> <p>Strengths of the FRS include:</p> <ul style="list-style-type: none"> <li>• <b>Capturing information on incomes:</b> it captures more detail on different income sources compared to other household surveys.</li> <li>• <b>Wider background variables:</b> It collects a lot of contextual information on the household and individual circumstances, such as employment, educational level and impairment. The FRS is therefore a comprehensive data source allowing for a wide variety of detailed analysis.</li> </ul>
Timeliness	The NI FRS began in 2002/03 and so allows for comparison over time.
Accessibility	Researchers and analysts outside government can also access the data through the UK Data Archive ( <a href="http://www.data-archive.ac.uk/">http://www.data-archive.ac.uk/</a> )
Interpretability	<p>There are a number of possible cuts available to analyse the data to provide insight beyond the published statistics:</p> <ul style="list-style-type: none"> <li>• Household type (pensioner versus non-pensioner OR single, couple, with children, without children etc).</li> <li>• Total weekly household income (£)</li> <li>• Highest level of qualification of household reference person.</li> <li>• Age of household reference person.</li> <li>• Age at which the household reference person completed continuous full time education.</li> <li>• Number of children in the household.</li> <li>• Socio-economic classification of household reference person.</li> <li>• Economic status of household (workless households etc.).</li> <li>• Urban / rural.</li> <li>• Tenure (Own outright, own with mortgage, social, private rented).</li> <li>• Households with a private vehicle versus households without.</li> <li>• <b>Derived: Mortgage details.</b> Year mortgage taken out, re-mortgaged properties, purchase price of the house, size of loan, re-mortgaged amount, outstanding amount on mortgage, monthly mortgage payment etc.</li> <li>• <b>Derived: Rented Accommodation.</b> Year started renting, landlord details, amount of rent</li> <li>• <b>Derived: Annual rates bill.</b> (including details of exemptions or discounts.</li> <li>• <b>Derived: Sources of income.</b> Households with income from investments; households 'dependent' on social security benefits; high wage households versus low wage households etc.</li> <li>• <b>Derived: Household finances.</b> There are a series of questions relating to households ability to pay household debts. Variables include 'burden of repayments', ability to pay an 'unexpected expense', 'make ends meet', 'minimum monthly household income', 'up to date with bills', 'behind with payments'.</li> <li>• <b>Derived variable: Income.</b> Households with income from investments; households 'dependent' on social security benefits; high wage households versus low wage households etc.</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Derived variable: <i>Spending</i>.</b> User defined variables are possible based on a spending profile of respondents. For example, Affluent spenders; high wage low spend; just about managing; and living on the edge.</li> </ul>
Coherence	<ul style="list-style-type: none"> <li>• In line with the Households Below Average Income (HBAI) report, the FRS uses the Retail Price Index to equalise prices between survey years. This means that figures from previous years (i.e. prior to 2013/14) have been adjusted for inflation.</li> <li>• Throughout the report, tables refer to households, benefit units or individuals. The definition of a household used in the FRS is ‘a single person or group of people (not necessarily related) living at the same address who share cooking facilities and share a living room, sitting room, or a dining area’</li> <li>• A household will consist of one or more benefit units, which in turn consists of a number of individuals (adults and children). ‘Benefit unit’ is defined as ‘a single adult or couple living as married and any dependent children’. A dependent child is aged under 16 or an unmarried 16 to 19-year-old in full time non-advanced education. So, for example, a man and wife living with their young children and an elderly parent would be one household but two benefit units. It should be noted that ‘benefit unit’ is used throughout the report as a description of groups of individuals regardless of whether they are in receipt of any state support.</li> </ul>

### Study background – Households Below Average Income

Data provider	ONS / Department for Communities
Study description	Households Below Average Income (HBAI) uses household disposable incomes, after adjusting for the household size and composition, as a proxy for material living standards. More precisely, it is a proxy for the level of consumption of goods and services that people could attain given the disposable income of the household in which they live.
Methodology of data provider	The main source of data used in this publication is the Family Resources Survey Northern Ireland (FRS NI). The Family Resources Survey (FRS) collects information on the incomes and circumstances of private households in Northern Ireland. It has been running in Great Britain since October 1992, but 2002-03 saw the introduction of Northern Ireland for the first time. The latest report relates to 2013-14 in which 1,965 households were interviewed.
Current uses of the study	<p>Although the NI HBAI is specifically of interest to the Department for Social Development (DSD), other government departments and outside researchers and analysts from a wide range of disciplines in both the public and private sectors, will benefit from the availability of such a data source.</p> <ul style="list-style-type: none"> <li>• HBAI is used to monitor the NI Assembly, Office of the First Minister and Deputy First Minister (OFMDFM) Lifetime Opportunities strategy. More specifically, it is used to monitor child poverty measures as outlined in the Child Poverty Act 2010</li> </ul>

### Study assessment – Households Below Average Income

Relevance	The HBAI is Northern Ireland’s key source of information on household incomes and is used to monitor poverty indicators both at the Northern Ireland level and the United Kingdom level.
Accuracy	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• All figures presented in this publication are based on estimates taken from a sample survey (the FRS). The focus of the FRS is capturing information on incomes and it continues to exist as the primary method of assessing income in Northern Ireland, as</li> </ul>



such it captures more detail on different income sources compared to other household surveys.

- The FRS captures a lot of contextual information on the household and individual circumstances, such as employment, educational level and disability. This is therefore a very comprehensive data source allowing for a range of different analysis. The Northern Ireland FRS is an annual survey which began in 2002-03 and so allows for comparisons over time.

**Weaknesses**

- **Under-reporting of benefit receipt.** This is partly due to the FRS only interviewing members of private households and not those residing in institutions. Also not all respondents refer to documents when stating which benefits they are in receipt of and may therefore respond in error.
- **Income under-reporting** – the survey relies upon the respondents to recall very detailed financial information across a comprehensive range of income sources. Some of these are hard for respondents to recall. There are particular problems with the collection and quality of data relating to the incomes of the self-employed
- **Investment income.** The FRS also records a shortfall in investment income when compared with National Accounts totals. This may lead to an understatement of total income for some groups for whom this is a major income component, such as pensioners, although this is likely to be more important for those at the top of the income distribution.
- **Survey coverage** - the FRS covers private households in Northern Ireland. Therefore individuals in communal establishments such as barracks, prisons, university halls of residence, nursing or retirement homes, or those who are homeless will not be included. This means, for example, that figures relating to the most elderly individuals may not be representative of the Northern Ireland population, as many of those at this age will have moved into homes where they can receive more frequent help.
- **High incomes** - comparisons with Her Majesty’s Revenue and Customs’ Survey of Personal Incomes (SPI), which is drawn from tax records, suggest that the FRS underreports the number of individuals with very high incomes and also understates the level of their incomes. There is also some volatility in the number of high income households surveyed. Since any estimate of mean income is very sensitive to fluctuations in incomes at the top of the distribution, an adjustment to correct for this is made to ‘very rich’ households in FRS-based results using SPI data. The median-based low-income statistics are not affected.

Timeliness	The data is released once a year. The latest data released related to 2013/14.
Accessibility	The data is available on the Department for Communities website. Microdata is available via the UK Data Service.
Interpretability	<ul style="list-style-type: none"> <li>• <b>Equivalisation:</b> Income measures used in HBAI take into account variations in the size and composition of the households in which people live. This process is called equivalisation. Equivalisation reflects the fact that a family of several people needs a higher income than a single individual in order for them to enjoy a comparable standard of living. Equivalence scales conventionally take a couple with no children as the reference point. The incomes of larger households are adjusted downwards and the incomes of smaller households adjusted upwards relative to this reference point.</li> </ul> <p>The variables available in the HBAI dataset mirror those available in the FRS. The main variables are:</p>

- Income quintile
- Material deprivation
- Family type (couple with children, single no children etc)
- Economic status of adults in the households
- Educational achievement
- Gender and adulthood
- Age
- Disability (and in receipt of disability benefits)
- Housing tenure (owner occupied, buying with a mortgage etc)
- Savings and investments

#### Coherence

**Unit of analysis.** The unit of analysis is the individual, so the populations and percentages in the tables are numbers and percentages of individuals – both adults and children. The living standards of an individual depend not only on his or her own income, but also on the income of others in the household. Consequently, the analyses are based on total household income: the equivalised income of a household is taken to represent the income level of every individual in the household. Equivalisation, a technique that allows comparison of incomes between households of different sizes and compositions. Thus, all members of any one household will appear at the same point in the income distribution. The definitions of individuals, households and benefit units are consistent with those used in the FRS.

**Adjustment for inflation:** HBAI uses variants of Retail Price Index (RPI) to adjust for inflation to look at how incomes are changing over time in real terms. Whilst the weaknesses and limitations of the RPI measure are understood by the HBAI team, at present there are no suitable alternatives with appropriate before and after housing costs indices available.

**Comparability:** Traditionally HBAI presents analysis of disposable income on two basis: Before Housing Costs (BHC) and After Housing Costs (AHC). While an after housing costs analysis is comparable for both NI and UK, a before housing costs analysis is not. This is due to the difference in the way water charges are collected. NI operates a Rates system whereby local taxes, including water and sewerage costs, are collected in one payment. Therefore it is not possible to identify each component separately and so water and sewerage costs have already been deducted in the BHC analysis for NI.

There are three definitions of poverty used in the HBAI study:

- **Relative poverty:** An individual is considered to be in relative poverty if they are living in a household with an equivalised income below 60% of UK median income in the year in question.
- **Absolute poverty:** An individual is considered to be in absolute poverty if they are living in a household with an equivalised income below 60% of the (inflation adjusted) UK median income in 2010-11.
- **Combined Low income and material deprivation:** A further poverty measure related to child poverty and included in the Northern Ireland Child Poverty Strategy is the Combined Low Income and Material Deprivation measure. A child is defined as poor on this measure if the household in which they live has an income below 70% of the contemporary UK median household income and has a material deprivation score of 25 or more reflected by enforced lack of adult and child goods and services.



### Study background – Northern Ireland Household Income Administrative Database (NIHAD)

Data provider	Department for Communities (DfC) / Analytical Services Unit (ASU)
Study description	The Households Income Administrative Database (HIAD) is envisaged to bring together all sources of income – both benefit related and employment related.
Methodology of data provider	<p>The HIAD is created by linking all sources of income including; social security benefits; tax credits; savings; occupational pensions or earnings from employment. More specifically, the HIAD utilises national insurance number records as a unique personal identifier to link the following sources;</p> <ul style="list-style-type: none"> <li>• HMRC Summary of Earnings (PAYE) and the Self-Assessed;</li> <li>• HMRC Savings;</li> <li>• HMRC Child Benefit and Tax Credits; and</li> <li>• Social Security Benefits data.</li> </ul> <p>The General Register Office (GRO) Births and Deaths Registration data is also utilised but linked through fields containing personal information as national insurance number is not available.</p> <p>To generate a benefit unit database from sources, which primarily collect data at an individual level, the HIAD utilised data from individual records as to whether the individual is cohabitating.</p>
Current uses of the study	<p>The HIAD has seen some early uses. It has been part of the Benefit Uptake Targeting Strategy since 2014. It also informs a joint research project by DSD/DHSSPS Disability Research Steering Group relating to daily living of individuals claiming DLA both in and out of employment.</p> <p>It is anticipated it will be used, in its entirety to facilitate an assessment of income for all individuals and households/benefit units across NI.</p>

### Study assessment – Northern Ireland Household Income Administrative Database (NIHAD)

Relevance	The HIAD facilitates an assessment of income for all individuals and household/benefit units across Northern Ireland. This includes income from both employment and benefits.
Accuracy	<p>Income can only be accurately estimated on an annual basis as HMRC Summary of Earnings (P14) (key data source for this analysis) relates to annual earnings provided within the end of the tax year.</p> <p>There are significant time-lags with HMRC data. For instance, the most up to date HMRC P14 and tax credits data currently relates to the 2014/15 financial year and HMRC Savings data relates to 2013/14 financial year. Although there has been some scope to address this problem by accessing HMRC Real Time Information data, it too comes with problems regarding data extracts and data quality encountered by HMRC.</p> <p>The HIAD does not include self-assessed earnings as the HMRC P14 data relates to individuals on the PAYE scheme and does not cover self-assessed data. A separate HMRC data source has been provided to identify self-assessed individuals, however this does not include the income amount. It is anticipated the HIAD could in future be merged with the Family Resources Survey to fill this information gap.</p> <p>Overall, validation exercises suggest the database performs well at the individual level i.e. HIAD recorded 1,318,102 individuals in the 20+ age cohort which is very similar to NISRAs estimate of 1,358,910 in the same cohort. However, the database does not perform as well at the benefit unit level, which is suggested to be a result of too many single benefit units recorded. For instance, the 2013/14 version of the database recorded 1,046,716 benefit units whereas the 2013/14 Family Resource Survey estimates the number at 941,000.</p>
Timeliness	n/a

Accessibility	The HMRC data within the HIDB is shared on the basis of strict legal data sharing gateways. The department must seek permission from HMRC in order to use the database for any purpose that is not detailed within current data sharing agreement with the providers. Thus, accessibility requires a clearly defined intended use of the data to bypass sharing restrictions.
Interpretability	At the time of writing a full variable list for this database is unavailable. However, as it is drawn from the social security and tax administrative data it is likely to enable extensive analysis. As the data is currently inaccessible to external researchers without a legal gateway it is not possible at this stage to fully examine the variable list to make an assessment of the level of analysis that would be possible with the database. However, it should be noted that as the database is based on administrative data, once it is fully developed it is likely to be the authoritative data source on household incomes in NI.
Coherence	The HIAD is provided at a benefit unit level, as entitlements to many social security benefits and tax credits are based on circumstances of the benefit unit as opposed to the individual. A benefit unit is defined as a single adult or married/cohabiting couple together with dependent children. The construction of the database at a household level was ruled out of the initial build due to multiple benefit units being able to reside in one household - causing difficulties to benefit entitlement access. However, construction at a household level has remained a priority for the future.

### Study background – Annual Survey of Hours and Earnings

Data provider	ONS, NISRA, Department for the Economy
Study description	The Annual Survey of Hours and Earnings (ASHE) is a UK wide survey that provides a wide range of information on hourly, weekly and annual earnings by gender, work pattern, industry and occupation including public and private sector pay comparisons.
Methodology of data provider	The survey uses a random sample of 1% of all employee jobs from HMRC's PAYE system, taken in January of the reference year. The sample is drawn in such a way that many of the same individuals are included from year to year, thereby allowing longitudinal analysis of the data. A total of 6,847 returns were received by NISRA (92.4% of those sampled).
Current uses of the study	Some examples of uses: <ul style="list-style-type: none"> <li>• Labour Market Division (ONS) - statistics used in various analyses of conditions in the labour market, feeding into publications;</li> <li>• HMRC - various routine uses including investigation of changes to rates of taxation;</li> <li>• Department for Work and Pensions (DWP) - analysis of pension scheme membership; contributions and persistency of saving for policy development, monitoring and evaluation;</li> <li>• Department for Business, Innovation and Skills (BIS) &amp; the Low Pay Commission (LPC) – data used in review body remits to analyse pay comparability. Data used for low pay and National Minimum Wage (NMW) briefing, policy analyses and analyses of annual leave, agency workers and pay generally. Data used to analyse the structure of earnings, monitor the impact of NMW and recommend future rates;</li> <li>• Trade Unions - statistics used to support pay negotiations;</li> </ul>

## Study assessment – Annual Survey of Hours and Earnings

Relevance	
Accuracy	<ul style="list-style-type: none"> <li>• <b>Size &amp; coverage</b> - the ASHE dataset contains information on approximately 180,000 jobs in all industries, occupations and regions, making it the most comprehensive source of earnings information in the UK and enabling a vast range of analyses;</li> <li>• <b>Quality</b> - alternative sources of earnings information such as the Labour Force Survey (LFS) rely on self-report or proxy data, which are known to be less reliable than information from employers' administrative systems; and</li> <li>• <b>Uniqueness</b> - for many uses, ASHE is the key data source, and for some uses it is the only data source.</li> <li>• <b>Self employed:</b> Since ASHE is a survey of employee jobs, it does not cover the self-employed or any jobs within the armed forces.</li> <li>• <b>Seasonal work:</b> Given the survey reference date in April, the survey does not fully cover certain types of seasonal work, for example employees taken on for only summer or winter work.</li> <li>• <b>Disaggregation:</b> the quality of estimates at low levels of disaggregation can be poor.</li> <li>• <b>Weighting:</b> Returned data are weighted to UK population totals from the LFS based on classes defined by occupation, region, age and sex.</li> </ul> <p><b>Socioeconomic characteristics:</b> Lack of personal demographic information such as ethnicity, religion, education, disability and pregnancy;</p>
Timeliness	<p>The survey reference date for ASHE is in April of each year. Provisional results for ASHE and Low Pay, which contains estimates for the number of jobs paid below the national minimum wage, are published in November of the same year and revised results are published in November of the following year.</p>
Accessibility	<p>The headline data is available on the Department for the Economy website. Microdata is available via the UK Data Service under a special licence arrangement.</p>
Interpretability	<p>The main variables of relevance which are included within the ASHE survey are:</p> <ul style="list-style-type: none"> <li>• <b>Demographic information:</b> This includes age, gender etc.</li> <li>• <b>Job sector / occupation:</b> The SIC and SOC description of the employee job.</li> <li>• <b>Job type:</b> Whether it is a full time or part-time position; whether the job is permanent or temporary.</li> <li>• <b>Job details:</b> Whether the job is the employee's main job or 2<sup>nd</sup> job; whether the job is an apprenticeship</li> <li>• <b>Hours worked:</b> Details of basic hours worked and overtime worked.</li> <li>• <b>Pay details:</b> Gross pay, basic pay, overtime pay, incentive pay and other pay.</li> <li>• <b>Pension details:</b> Type of pension, employer contribution and employee contribution.</li> <li>• <b>Firmographics:</b> Legal status; size of firm etc.</li> </ul>
Coherence	<ul style="list-style-type: none"> <li>• <b>Time series:</b> ASHE replaced the New Earnings Survey (NES) from 2004, and ASHE comparisons are therefore only available on a consistent basis from that year onwards.</li> <li>• <b>Inflation:</b> The data are presented in current prices</li> </ul>

## Study background – Asda Income tracker

Data provider	ASDA / Centre for Economics and Business Research
Study description	The ASDA Income Tracker is a barometer for the economic welfare of ‘middle Britain’ and was originally formed in 2008. It is a measure of ‘discretionary income’, reflecting the amount remaining after the average UK household has had taxes subtracted from their income and bought essential items such as: groceries, electricity, gas, transport costs and mortgage interest payments or rent. The income tracker measures the amount left over to spend on discretionary purchases such as leisure and recreation goods and services.
Methodology of data provider	<p>The ASDA Income Tracker is calculated from the following equations:</p> <p><b>Total household income – taxes = net income</b></p> <p><i>The total household income</i> from the UK is derived from the Living Costs and Foods Survey (LCFS). The tracker uses official statistics on average earnings, unemployment, social security payments, interest rates and pension income to provide monthly updates. Earnings data from the ONS that is released in the month of the report refers to the previous month. Earnings data is forecast for the month of the report.</p> <p><i>Taxes</i> (average amount paid) are derived from the LCFS and subtracted from total household income to estimate net/disposable income. The tracker uses ONS data and Centre for Economic and Business Research (Cebr) modelling to update this on a monthly basis.</p> <p><b>Net income – basic spend = ASDA Income Tracker</b></p> <p><i>Basic spend (cost of living)</i> is based on a list of items created by a collaboration between ASDA and Cebr in 2008 when the tracker was originally formed and constitutes basic or ‘essential’ spending. This data is updated on a monthly basis using consumer price data and the trend growth rate in the volume of essential goods and services over the most recent 10-year period.</p> <p>All components of the ASDA Income Tracker are forecast using the central scenario from Cebr in-house UK economy model including inflation by category, unemployment and wage growth.</p>
Current uses of the study	The ASDA Income Tracker is primarily used by ASDA to obtain greater understanding of its customers’ finances and the key costs they face on a monthly basis. However, the study is publically published and monitored by HM Treasury, Bank of England and EU Commission, as well as most major international banks.

## Study assessment – Asda Income tracker

Relevance	The ASDA Income Tracker reflects the amount average UK household; spends on essential items, pays in taxes and thus the amount left to spend on leisure and recreation. It is provided at a UK regional level including NI.
Accuracy	A strong foundation for the ASDA Income Tracker is the Living Costs and Food Survey thus all previously outlined accuracy points are relevant. In addition, the ASDA Income Tracker relies heavily on the Cebr macroeconomic model and thus assumptions within such model. Further insight into the model can be found via the following link <a href="https://www.cebr.com/">https://www.cebr.com/</a>
Timeliness	A monthly report has been produced since 2008 with accompanying quarterly report.
Accessibility	Monthly and Quarterly reports are publically available from <a href="http://your.asda.com/income-tracker">http://your.asda.com/income-tracker</a> .
Interpretability	<p>The frequency of the ASDA Income Tracker provides a number of relevant cuts that can be compared over a time series from 2008. This includes;</p> <ul style="list-style-type: none"> <li>• Total weekly average household income (£) by age, income decile, household type, demography and region;</li> </ul>

	<ul style="list-style-type: none"> <li>• Discretionary weekly average household income (£) / Average household weekly tax payments (£) by age, income decile, household type, demography and region;</li> <li>• Overall trends in average spend on ‘essential’/ ‘basic’ items (cost of living) as well as more detailed analysis on drivers of overall trends by age, income decile, household type, demography and region;</li> <li>• Household/ family spending power per week (£)by age, income decile, household type and demography; and</li> <li>• Households essential costs by category i.e. mortgage interest, clothing, health etc.</li> </ul> <p>It is not likely that ASDA Income Tracker would openly provide the raw data files and thus the above cuts and methodological information are likely to act as guidance to the NI consumer study.</p>
Coherence	The ASDA Income Tracker is provided solely on a household basis.

### Study background – Danske Bank consumer confidence index

Data provider	Danske bank
Study description	Danske Bank commissioned Millward Brown to conduct a survey of consumer confidence in Northern Ireland and develop into an index. The index provides insight into consumer’s opinions/perceptions on their current and future financial position, job security, spending patterns and household savings.
Methodology of data provider	<p>Overall, the index consists of four sub-indexes, that is;</p> <ul style="list-style-type: none"> <li>• Consumer’s opinions of how their financial position compares to 12 months ago;</li> <li>• Expectations of how household financial positions will change over the next 12 months;</li> <li>• Job security over the next 12 months; and</li> <li>• Expectations of the amount that consumers will spend on high value items (e.g. furniture, holidays etc.) over the next 12 months.</li> </ul> <p>The survey also gathers information on household savings.</p> <p>Specifically the following six questions are asked in the survey;</p> <ol style="list-style-type: none"> <li>1. How does your current financial position compare to 12 months ago?</li> <li>2. How do you expect your household financial position to change over the next 12 months?</li> <li>3. How would you rate your job security over the next 12 months?</li> <li>4. With regard to your expenditure on big value items over the next 12 months such as furniture, holidays and home improvements, do you expect to spend...?</li> <li>5. Do you think the amount your household will save in the next 12 months will be...?</li> <li>6. A bespoke question e.g. where, if anywhere, do you plan to spend your main holiday this year?</li> </ol> <p>Broadly speaking, there are six possible responses; substantially better; marginally better; the same; marginally worse; substantially worse; don’t know.</p> <p>For questions 1-5 individual indexes are calculated as follows:</p> <ul style="list-style-type: none"> <li>• Calculate the percentage of respondents who respond substantially better or marginally better</li> </ul>

	<ul style="list-style-type: none"> <li>• Calculate the percentage of respondents who respond substantially worse or marginally worse</li> <li>• Calculate a relative score by working out the difference between the two and adding 100</li> <li>• Construct an index with 2008 Q3 set to a value of 100</li> </ul> <p>The headline index is based on the individuals indexes for questions 1-4 only It is calculated as a simple average of the index scores for the four questions in a set time period i.e. they all have an equal weight.</p> <p>The regions in the survey are defined as follows:</p> <ol style="list-style-type: none"> <li>7. Belfast City – including most of Castlereagh and Newtownabbey.</li> <li>8. North – Carrickfergus, Antrim, part of Newtownabbey, Ballymena, Larne, Ballymoney and Moyle.</li> <li>9. South – Lisburn, North Down, Ards, Down, Newry and Mourne, Banbridge, Craigavon and Armagh.</li> <li>10. West – Coleraine, L/Derry, Limavady, Magherafelt, Cookstown, Dungannon, Omagh, Fermanagh and Strabane.</li> </ol>
Current uses of the study	The Danske Bank Northern Ireland Consumer Confidence Survey is a primary data source on consumer confidence in Northern Ireland. It is utilised by Danske Bank, businesses, researchers and journalists to assess confidence in the Northern Ireland economy.

#### Study assessment – Danske Bank consumer confidence index

Relevance	The Danske Bank Northern Ireland Consumer Confidence Survey reflects consumer perceptions and opinions specific to Northern Ireland. This overview of general consumer confidence in Northern Ireland can help support and explain trends in consumer behaviour.
Accuracy	The survey is carried out by circa 1000 people every quarter and is statistically representative of the Northern Ireland population with a variance of +/- 3 per cent.
Timeliness	Quarterly
Accessibility	<a href="https://www.danskebank.co.uk/en-gb/About-the-bank/Bank-in-brief/Economic-Research/Pages/ConsumerConfidenceSurvey.aspx">https://www.danskebank.co.uk/en-gb/About-the-bank/Bank-in-brief/Economic-Research/Pages/ConsumerConfidenceSurvey.aspx</a>
Interpretability	The quarterly publication of Danske Bank Consumer Confidence Survey allows consumer confidence in Northern Ireland to be tracked and analysed over time. That includes; <ul style="list-style-type: none"> <li>• Overall consumer confidence index, 2012-2017;</li> <li>• Past and expected direction of household financial position, 2012-2017;</li> <li>• Expectations for future savings, 2012-2017;</li> <li>• Expectations for job security, 2012-2017; and</li> <li>• Expectations for spend on high value items, 2012-2017</li> </ul>



### Study background –Borrowing across Northern Ireland (Postcode level)

Data provider	British Bankers Association / Council for Mortgage Lenders
Study description	The British Banking Association and Council for Mortgage Lenders report borrowing details for individuals and businesses by postcode. The level of individual borrowing is of particular interest for this research topic.
Methodology of data provider	Participating lenders provide data on; SME lending; residential mortgages; and unsecured personal loans. All figures represent the total amount of outstanding borrowing on consumer accounts. Participating lenders in the personal loan datasets are; Bank of Ireland; Danske Bank; First Trust Bank; Ulster Bank; Barclays; Lloyds Banking Group; HSBC; Santander UK; Clydesdale; and Nationwide Building Society. Participating lenders in the SME database are; Bank of Ireland; Danske Bank; First Trust Bank; Ulster Bank; Barclays; HSBC; RBS Group; and Santander UK
Current uses of the study	The information provided by the British Banking Association interests both member banks in developing strategy and the wider public through the development of policy.

### Study assessment – Borrowing across Northern Ireland (Postcode level)

Relevance	The data held on personal loans is of particular importance in understanding the finances of consumers.
Accuracy	To ensure customer confidentiality the British Bankers Association and the Council for Mortgage Lenders have agreed a set of parameters with Government to both protect customer privacy and comply with data privacy. This results in some postcode sectors being redacted. For instance, for any postcode sector with less than ten active borrowers the borrowing amount will not be disclosed.
Timeliness	Quarterly
Accessibility	Publically available <a href="https://www.bba.org.uk/news/statistics/northern-ireland-banking/">https://www.bba.org.uk/news/statistics/northern-ireland-banking/</a>
Interpretability	All figures represent the total amount outstanding on customer accounts. The figures will fluctuate over a time series for the following reasons; new borrowing agreements; customer repayments; existing agreements mature; borrowers move location; borrowers switch (both into and out of) alternative finance products; and borrowers switching to an alternative lender.  The value of personal loans outstanding in Northern Ireland could be tracked over time, with potential to look in more detail at aggregating data into different geographical areas such as super output areas; output areas; wards and local government districts. However, as part of customer privacy protection, data cannot be linked to third-party sources which limits the ability to cut data by demographic characteristics.

### Study background – Car registrations - SMMT

Data provider	Society of Motor Manufacturers and Traders (SMMT)
Study description	SMMT is a primary source of data within the UK automotive industry. Of particular interest is the data SMMT collect on car registrations and car sales.
Methodology of data provider	We do not have access to this data to study the survey methodology <a href="https://www.smmt.co.uk/vehicle-data/mvris-new-vehicle-registrations-uk/">https://www.smmt.co.uk/vehicle-data/mvris-new-vehicle-registrations-uk/</a>
Current uses of the study	The data is the primary source of information in motor industry utilised by journalists and researchers. More specifically, the data is used to produce reports which develop SMMT members business plans and competitive advantage.

### Study assessment – Car registrations- SMMT

Relevance	The stock of car registrations and car sales can be used as a proxy for the consumer economy.
Accuracy	We do not have access to this data to study the survey methodology
Timeliness	Monthly
Accessibility	An overview UK figures is published however membership is required for more detailed information.
Interpretability	The number of new car sales in Northern Ireland can be tracked over a time series to help understand trends in consumer behaviour. This may be compared to other regions of the UK on a per 100,000 population basis.

### Study background – The Northern Ireland Transport Statistics (vehicle registrations)

Data provider	Department for Infrastructure
Study description	The Northern Ireland Transport Statistics are National Statistics and the publication has been produced since the 1990s. Currently, the publication includes information on vehicle registrations, driver and vehicle testing, the road network, freight, road safety, public transport, air transport, accessible transport and other transport statistics.
Methodology of data provider	The report brings together in one publication a variety of useful transport information published by a number of different sources. The vehicle registration section will be of particular relevance to a consumer study. The statistics specifically relating to vehicle registrations are taken from the Driver and Vehicle Agency (DVA) records.
Current uses of the study	The statistics in the publication are National Statistics and are used in the development and monitoring of Government policies and strategies. These include, the Regional Development Strategy, Review of Regional Transportation Strategy, and the bid for Plugged in Places The information provided in the publication is also utilised for general information and research. For instance; figures have been used for tax gap models run by HM Revenue and Customs; the Republic of Irelands National Climate Change Policy; and calculation of Green House Gas emissions from transport.

### Study assessment – The Northern Ireland Transport Statistics (vehicle registrations)

Relevance	Vehicle Registration figures provide a proxy of the consumer economy as there are no general retail sales figures in Northern Ireland
Accuracy	The data on vehicle registrations is taken from an administrative database with full coverage and incorporates various validation checks.
Timeliness	The report is published each year at the end of September.
Accessibility	The report is publically available via the DfI website. <a href="https://www.infrastructure-ni.gov.uk/articles/northern-ireland-transport-statistics">https://www.infrastructure-ni.gov.uk/articles/northern-ireland-transport-statistics</a>
Interpretability	The published data provided on vehicle registrations provides a number of relevant cuts in assessing consumer behaviour; <ul style="list-style-type: none"> <li>• Number of licenced vehicles per annum (including UK regions comparison);</li> <li>• Number of vehicles licenced by body code <ul style="list-style-type: none"> <li>○ This may include tracking over time the number of licenced motorhomes/caravans, vans etc. to provide deeper analysis of consumer behaviour and potentially their reactiveness to economic cycles</li> </ul> </li> <li>• Number of private light goods vehicles by make and model; <ul style="list-style-type: none"> <li>○ This may include tracking the number of 'luxury' cars bought over a period of time i.e. Mercedes, BMW etc.</li> </ul> </li> <li>• Number of individuals that have access to either one or more, or two or more car/vans.</li> </ul>



### Study background – Consumer Council – Consumer Outlook and Index

Data provider	Consumer Council
Study description	The Consumer Council commissioned Millward Brown Ulster to assess NI consumer confidence and consumer experience in the general economy. The research provides insight into how consumers are coping financially, their spending priorities, financial security and overall consumer confidence.
Methodology of data provider	Millward Brown conducted (via Omnibus) two six monthly dips (bi-annual) of circa 1000 interviews per wave, surveying consumer confidence and consumer experience. The survey sample is a representative of the NI 16+ population, in terms of age, gender, region and socio-economic group. The Consumer Outlook Index takes responses from 19 of the survey questions (attitudinal questions which provide insight into affordability, financial security or consumer confidence and are single coded have been selected); responses are weighted accordingly and divided by the total number of responses to generate a mean score per question. Mean scores are combined and expressed as a proportion of 100.
Current uses of the study	The Consumer Council utilise the outlook and index as part of their statutory duty to educate and inform the consumer. The published results are available for individuals, firms, researcher's etc. to analyse, interpret and avail off.

### Study assessment – Consumer Council – Consumer Outlook and Index

Relevance	The Consumer Outlook and Index provides a general catalogue of consumer attitudes and experiences in NI. Consumer perceptions, attitudes and experiences can help support and explain key trends in consumer behaviour.
Accuracy	The data is based on a survey with a representative sample of c. 1000 interviewees per wave.
Timeliness	The Consumer Outlook report and Index are intended to be published bi-annually however, January 2015 was the last publication.
Accessibility	A summary report, alongside a copy of the survey responses is published on the Consumer Council website; <a href="http://www.consumercouncil.org.uk/consumer-outlook/">http://www.consumercouncil.org.uk/consumer-outlook/</a>
Interpretability	The Consumer Council research offers a number of data cuts from their survey responses which provide insight into consumer trends, attitudes and experiences; <ul style="list-style-type: none"> <li>• Banking arrangements by age, working status and socio-economic group;</li> <li>• Loan/ credit arrangements by age, working status and socio-economic group;</li> <li>• Reason for not having loan/credit arrangements by age, working status and socio-economic group;</li> <li>• How to deal with expenses, by age, working status and children in household, marital status, housing tenure and urban or rural; <ul style="list-style-type: none"> <li>○ Repair or replace an expensive household item;</li> <li>○ Clothes and footwear;</li> <li>○ Cost of Christmas or other family event;</li> <li>○ Cost of family holiday;</li> <li>○ Food cleaning products and toiletries;</li> <li>○ Home energy i.e. electricity, gas or home heating oil;</li> <li>○ Internet or Television;</li> <li>○ Phone;</li> <li>○ Rent or mortgage; and</li> <li>○ Running a car;</li> </ul> </li> <li>• How to keep up with financial commitments by working status;</li> <li>• End of month surplus or deficit and amount, by working status;</li> </ul>

- Financial position compared with two years ago by age, working status, children in household, housing tenure and urban or rural;
- Reasons for household being in a better position than two years ago;
- Reasons for household being in a worse position than two years ago;
- Financial outlook two years from now by age, working status, children in household, housing tenure and urban or rural;
- Actions taken to make ends meet within the last two years by age, working status and socio-economic group;
- Currently worried about ability to make ends meet by age socio economic group, working status, marital status, housing tenure, disability and urban or rural;
- Worried about ability to make ends meet in the future by age, socio-economic group, working status, marital status, housing tenure, disability and urban or rural;
- Risk of losing home because of not being able to afford mortgage or rent by age; socio-economic group, working status, marital status, housing tenure, disability and urban or rural.
- Worried about the cost of food and grocery shopping by age, socio-economic group, working status, marital status, housing tenure, disability and urban or rural;
- Always making sure money is saved for a rainy day by age, socio-economic group, working status, marital status, housing tenure, disability and urban or rural; and
- Impact of interest rates by age, working status and housing tenure.

It should also be noted that, if the consumer council begin to publish regularly consumer trends can be interpreted over a period of time and responses could be aggregated to increase robustness of interpretations.

### Study background – The Money Advice Service – Over-indebtedness

Data provider	The Money Advice Service / CACI
Study description	The Money Advice Service (MAS) commissioned CACI to build a model that could accurately estimate the level of “over-indebtedness” across the United Kingdom.
Methodology of data provider	<p>The term “over-indebtedness” was defined as a survey respondent who answered yes to either one or both of the following questions;</p> <ul style="list-style-type: none"> <li>• Do you find keeping up with bills and credit commitments a heavy burden?</li> <li>• Have you fallen behind or missed payments in at least three of the last six months?</li> </ul> <p>Both questions were asked in each of the following surveys and CACI collated the responses;</p> <ul style="list-style-type: none"> <li>• YouGov’s quarterly “Debt Tracker” survey;</li> <li>• YouGov omnibus of two surveys; and</li> <li>• MAS 2015 Financial Capability Strategy (FinCap)</li> </ul> <p>It should be noted survey responses were de-duped across surveys and waves and the total sample size was 16,000 - 2,500 of which were classified as over-indebted. The CACI database of individuals relating to demography and lifestyle were matched to the survey responses in order to identify characteristics of over-indebted individuals (versus not over-indebted individuals). This allowed CACI to build a statistical model that uses CACI data to predict how likely a person is to become over-indebted. The model was applied to the Ocean database to generate regional and national estimates of over-indebtedness probabilities.</p>

Current uses of the study	The study is currently utilised by MAS to continue work with their partners to put in place efficient services for over-indebted people. The insight provided by this research has helped MAS engage with people earlier, work with individuals to resolve crisis and support individuals in the long-term.
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### Study assessment – The Money Advice Service – Over-indebtedness

Relevance	This provides a useful insight into debt levels in NI, as NI does not participate in the Wealth and Assets Survey such data is sparsely available with such detail.
Accuracy	<p>The estimate of over-indebtedness is generated from a model which can be summarised as follows;</p> <ul style="list-style-type: none"> <li>• Over-indebted individuals are identified via research survey responses;</li> <li>• CACI data (over 500 variables including demography and lifestyle data) are matched to the survey responses;</li> <li>• A statistical model (logistic regression) applies CACI data to predict how likely it is that a person is over-indebted;</li> <li>• The model is applied to the Ocean database to generate an over-indebtedness probabilities for 50million adults in UK; and</li> <li>• Individual probabilities are added to generate a total for each local authority, region, and UK country.</li> </ul> <p>It should be noted the model variables are best predictors of over-indebtedness, and thus not necessarily an exhaustive list of the underlying causes of over-indebtedness.</p>
Timeliness	This report on ‘over-indebtedness’ is the first of its kind from the MAS and it is unclear if it be a regular publication or not.
Accessibility	Findings summary and technical report available via the following link: <a href="https://www.moneyadviceservice.org.uk/en/corporate/debt-publications">https://www.moneyadviceservice.org.uk/en/corporate/debt-publications</a>
Interpretability	<p>There are number of relevant cuts to be utilised from the MAS over-indebtedness paper. This includes the number, proportion and variation of ‘over-indebted’ individuals across;</p> <ul style="list-style-type: none"> <li>• UK regions;</li> <li>• Local authorities;</li> <li>• Age bands;</li> <li>• Gender;</li> <li>• Housing tenure;</li> <li>• Family size and composition;</li> <li>• Household income</li> <li>• Working status</li> </ul> <p><b>Derived variable; Deprivation.</b> Link to the Multiple Deprivation Index to compare ‘over-indebtedness’ by level of deprivation. OCEAN database has a further list of variables which have the potential to be linked to ‘over-indebtedness’;</p> <ul style="list-style-type: none"> <li>• <b>Derived variable; Occupation.</b> Level of ‘over-indebtedness’ by occupation i.e. a profile of high skilled occupations versus low skilled occupations linked to levels of ‘over-indebtedness’</li> <li>• <b>Derived variable; Attitudes.</b> Are ‘over-indebted’ individuals anxious about their level of debt or happy with their standard of living?</li> </ul> <p>The full list can be found via the following link; <a href="http://www.caci.co.uk/sites/default/files/imce/Ocean_Variable_Listing_2015v2.pdf">http://www.caci.co.uk/sites/default/files/imce/Ocean_Variable_Listing_2015v2.pdf</a></p>

### Study background – Northern Ireland Banking

Data provider	British Banking Association
Study description	Northern Ireland Banking depicts trends in deposits and finances for households and businesses that are banking in Northern Ireland (Northern Ireland balance sheets).
Methodology of data provider	The dataset is comprised of information from Bank of Ireland; Danske Bank; First Trust Bank; and Ulster Bank. The business related elements also include information from SME customer business of Barclays; HSBC; RBS; and Santander.
Current uses of the study	The datasets are used by researchers and journalists to analyse and report trends in banking statistics.

### Study assessment – Northern Ireland Banking

Relevance	Tracking trends in the levels of unsecured borrowing by consumers is key to understanding the health of the consumer economy.
Accuracy	The datasets relate to banks support for customers that reside within Northern Ireland as well as, a small number of individuals that reside within the UK but utilise banking services provided by Northern Ireland banks.
Timeliness	Quarterly
Accessibility	The headline figures are published publically. <a href="https://www.bba.org.uk/news/statistics/northern-ireland-banking/">https://www.bba.org.uk/news/statistics/northern-ireland-banking/</a>
Interpretability	Trends in household borrowing and deposits could be tracked over time series. In relation to deposits, this can be broken into trends in the proportion of which are 'sight' and trends in the proportion of which are 'time'. On the other hand, with reference to borrowing, the time series can be split into the proportion of which is mortgages and the proportion of which is unsecured credit.

### Study background – Retail Footfall and Vacancies Monitor

Data provider	British Retail Consortium/Springboard
Study description	The monitor collects data on consumer activity within town and city centre locations, as well as in and out of shopping sites throughout the United Kingdom. Vacancy rates in towns and cities are also gathered.
Methodology of data provider	The monitor records weekly footfalls of around 120 million at 1500 counting locations in over 400 shopping sites within over 250 towns and cities across the United Kingdom. Further, vacancy rates are collected through an online survey of town centre managers in 450 locations throughout the UK.
Current uses of the study	The study is largely used by journalists and researchers in following the performance of the consumer economy, in the absence of official retail sales figures. In addition, footfall monitors are also often used by government in infrastructure research.

### Study assessment – British Retail consortium

Relevance	Footfall measures and vacancy rates provide a strong proxy for the performance of the consumer economy as NI does not have an official source for retail sales.
Accuracy	Springboard counting data has been confirmed 98% accurate by a third party auditor. The monitor covers main areas in Scotland, Wales, England and Northern Ireland as well as a representative sample of secondary and smaller town centres.
Timeliness	Monthly
Accessibility	Headline figures are published publically and more detailed cuts are available through membership.
Interpretability	Footfall and vacancy rates within Northern Ireland can be tracked on a monthly basis overtime to develop a time series trend in footfalls and vacancy rates.