NatCen
Social Research that works for society

Advice on the Measurement of the Poverty Premium across UK markets

Final report

Authors: Sarah Tipping, Nancy Kelley, Mari Toomse-Smith, Thomas Crossley, Peter Levell
Date: 27/02/2019
Prepared for: The Competition and Markets Authority

At **NatCen Social Research** we believe that social research has the power to make life better. By really understanding the complexity of people's lives and what they think about the issues that affect them, we give the public a powerful and influential role in shaping decisions and services that can make a difference to everyone. And as an independent, not for profit organisation we're able to put all our time and energy into delivering social research that works for society.

Institute for Fiscal Studies

Contents

List of Abbreviations

AHC   After Housing Costs (with respect to income measurement)
ATM   Automated Teller Machine
BHC   Before Housing Costs (with respect to income measurement)
BPS   British Population Survey
BSA   British Social Attitudes Survey
CDRC   Consumer Data Research Centre
CMA   Competition and Markets Authority
COICOP   Classification of Individual Consumption by Purpose
CPI   Consumer Price Index
DfT   Department for Transport
DWP   Department for Work and Pensions
EHS   English Housing Survey
EU   European Union
EU-SILC   European Union Statistics on Income and Living Costs
FCA   Financial Conduct Authority
FLS   Financial Lives Survey
FRS   Family Resources Survey
IFS   Institute of Fiscal Studies
JRF   Joseph Rowntree Foundation
LCF   Living Costs and Food Survey
NTS   National Travel Survey
Ofgem   Office of Gas and Electricity Markets
ONS   Office for National Statistics
PLS   Private Landlords Survey
PSM   Propensity Score Matching
SMF   Social Market Foundation
SVT   Standard Variable Tariff
UC   Universal Credit
USoc   Understanding Society
WAS   Wealth and Assets Survey

Executive summary

Executive Summary

The poverty premium is the term used to describe the way in which low-income consumers may pay higher prices than their higher-income counterparts for the same goods and services ('the poor pay more').

For the purposes of this feasibility study the poverty premium has been defined as:

*"the extra cost that households **on low incomes** incur when purchasing the **same** goods and services as households on **higher incomes".**

The proposed definition is a relative measure of the poverty premium, since it measures the costs incurred by low-income households relative to those incurred by households on higher incomes.

It should be noted that the concept is not universally accepted: some commentators argue that apparent poverty premiums are a direct consequence of cost-reflective pricing. This is discussed further in the report.

Aims and objectives

As part of its strategic focus on vulnerable consumers, the Competition and Markets Authority (CMA) commissioned this feasibility study to investigate the measurement of the poverty premium in the UK. The aims were to:

a) Advise on the feasibility of developing a robust methodology that would provide insight on how the prices paid by customers on lower incomes compare with those paid by customers in other income groups;
b) Help to identify those markets more likely to display poverty premiums and for which developing a poverty premium measure would be feasible;
c) Advise on how the CMA should define customers on lower incomes for these purposes and the appropriate group or groups for comparison;
d) Advise on what would be involved for the outputs of the methodology to be capable of being updated on a regular basis; and
e) Understand the options available in developing a robust methodology and the trade-offs between the options, e.g. costs, difficult to implement, less reliable.

The feasibility study involved a review of the current literature, interviews with expert stakeholders, and an assessment of existing and modifiable data sources. This report summarises the findings and makes suggestions for ways in which the poverty premium might be robustly measured in different markets in future.

Key markets and methodologies

Unlike many other approaches to measuring the poverty premium, which only cover the poverty premium in markets for 'essential' goods and services, this feasibility work considered the full range of markets in the UK.

The Office of National Statistic's Classification of Individual Consumption by Purpose was used as a starting point and a number of key markets were identified where there

was either previous evidence or a strong theory that a poverty premium exists in that market.

For each of these key markets, we identified what existing data could potentially be used to measure whether prices paid varied by income. Where data were available, we identified a methodology to measure the difference in prices paid; where the data were not available, we describe the gaps and outline what form of primary data collection would be required to fill those gaps.

Different methodologies are proposed in different markets as the mechanisms vary by market and the aim was to have the most robust measurement per market, rather than a single methodology. Despite this, there are two basic steps to measurement that are common across most markets in our report:

1. The first step is to establish the price differences related to different products and services in the market (i.e. establish the range of possible prices that a household could pay). This may be a more or less complex/extensive exercise depending on the nature of the market.

2. The second step is to identify the prices paid by low-income and comparator households in that market. This step generally requires survey data. Again, this is more straightforward in some markets than others, with complexity increasing where there are quality differences between products.

The availability of the data required for Step 2 varies between markets. For some markets (Housing, Food and Groceries, Clothing and Footwear) the necessary information is available in an existing dataset. In other markets (Transport, some sub-markets of Recreation and Culture, Household Energy, Communications, Financial Services and Insurance) there are small gaps in the existing data. In these instances, we set out options for enhancing data collection by including some additional questions on existing surveys. This is suggested as a cost-effective alternative to collecting new data from scratch, as it would be overly expensive to design a bespoke survey that repeats entire modules of an existing survey, simply to ensure one or two new items can be covered. There are no available data in the remaining markets (Household Goods, and other sub-markets of Recreation and Culture). New data collection is suggested to measure the poverty premium in these markets.

A single data collection exercise to collect price data across all markets via a survey has not been proposed, since such an exercise would be exceedingly burdensome on the respondent.

Options for measuring the poverty premium across markets

The table below summarises the available data and methodological options to measure the poverty premium in the key markets. These options reflect NatCen's current view, given the level of research it has done, on how best to attempt to measure any poverty premium in each market:

Market	Summary of options
Transport	There is no single UK-wide source of information on travel. The most comprehensive data source for travel in England is the National Travel Survey, which collects trip information in a seven-day travel diary. This includes origin, destination, purpose, time, mode of travel, ticket type and cost. The NTS also collects gross (banded) income.
	In Scotland, the Scottish Household Survey collects similar information, as does the Travel Survey for Northern Ireland (although less frequently, it was last updated in 2016). There is no equivalent information in Wales, meaning an information gap exists.
	These existing data sources will allow prices to be compared for low-income and comparator households in England, Scotland and Northern Ireland. However, comparison is not straightforward; it is not sufficient to simply directly compare the amount spent on transport by low-income and comparator households. The two groups have very different travel behaviour and will make very different ticket choices (as a consequence of their relative incomes) and it is important to control for these differences before prices can be compared. We suggest Propensity Score Matching as a suitable method of controlling for these differences.
	Two possible poverty premiums are discussed; the premium due to bulk purchase discounts, which can be measured once differences in travel behaviour are controlled for (using the Propensity Score Matching) and the poverty premium from substituting more expensive modes of transport with low cost, less convenient modes. In principle, the linked data could be used to model this poverty premium in England, Scotland and Northern Ireland. However, more methodological work is required to confirm data access, permissions, and the likely match rates between data sources (which will impact on available sample size).
Housing	**Private rents vs. mortgage payments**
	This poverty premium can be measured using the imputed rent data generated by the European Union Statistics on Income and Living Costs (EU-SILC). 'Imputed rents' are the equivalent value that an owner-occupier household would pay in rent for their property, they incorporate information on dwelling type and property maintenance costs. Measurement involves a straightforward comparison between imputed rents and the actual payments made by low income and comparator households. No additional data collection would be required;

| | however it should be noted that there is a risk of EU-SILC changing after the UK leaves the EU.

Premium due to benefit receipt

The Private Landlord Survey could be used to investigate whether a benefit receipt-related poverty premium exists in England and, if one exists, what proportion of landlords are involved. If a premium is uncovered, then a bespoke survey of landlords in the UK might be considered. It should be noted that the information about what proportion of landlords are affected is needed in order to design (and therefore cost) a bespoke survey. |
|---|---|
| **Household energy and water** | The best source of survey data to measure household energy costs is the Living Costs and Food (LCF) survey. This survey collects detailed information on income, pre-payment meter usage, not using direct debit and electronic billing. It includes information on costs of all utility bills, including gas, electricity and water. However, information is lacking on the exact tariff, current fuel provider and recent switching behaviour.

Without this information it is not possible to calculate the **poverty premium associated with being on a standard variable tariff**, since it is difficult to identify which households are on such a tariff. It is also not possible to calculate costs associated with different types of tariff *within* different product types, for example, different tariffs of pre-payment meter, different tariffs with direct debit payment, etc.

This information would need to be added to the LCF to be able to accurately calculate the poverty premium due to being on a standard variable tariff. This premium affects a large number of low-income households, which means adding this information to the LCF should be a priority over the addition of other questions.

Without information on the exact tariff, only 'blunt' comparisons can be made for the **poverty premiums due to having a pre-payment meter** and **not using the most cost-effective method of payment**. This would involve comparing the different proportions of low-income and comparator households that do and do not have a pre-payment meter or pay by direct debit, and using information collected during desk research on available tariffs to calculate the average costs associated with this. These comparisons could be made using existing data from the LCF and by using online consumer comparison sites to identify the average prices for different types of tariff. |

Food, groceries, clothing, footwear and smaller household items	The food, groceries, clothing, footwear and smaller household items markets have been grouped together because the same enabling factors were identified in each market, namely that having access to a range of suitable low-cost goods means low-income consumers can choose products that best suit their needs. The main driver of poverty premiums in these markets was therefore a lack of access (either physical or online) to a choice of low-cost goods. Two areas were identified where low-income and comparator households may pay different prices for food, groceries and similar items. Options for these two areas are set out below: **1. Understanding whether differential prices are paid for the same products by low-income and comparator households** The analysis carried out by the Institute of Fiscal Studies, using data from Kantar World Panel to measure differences in the prices paid for food and groceries by household income, should be repeated regularly to check whether a premium has emerged. **2. Understanding whether the poverty premium arises due to poor access to online or physical shops** The poverty premium related to access to online shopping and low-cost shopping stores can be measured using Kantar World Panel data to investigate differential pricing by store type. However, this measure does not take into account differences in travel behaviour by income group. For that reason, an alternative measure is also proposed that uses a mixture of information on store locations and transactions from the Consumer Data Research Centre and data from the NTS on household income, shopping trips and online access. This analysis could be carried out in England, Scotland and Northern Ireland; however, the required information is not collected in Wales and additional data collection would be required. Physical access to reasonably priced goods is not straightforward to measure. The suggested methodology is therefore complex. Measurement could be improved by including a question on the NTS to capture where households would prefer to shop.
Communications	The LCF survey contains detailed information on household income and a wide range of data on communications packages. This information could be used to calculate the relative proportions of low-income and comparator households that make cost savings from purchasing communication and entertainment packages as a 'bundle'. However, it cannot be

	used to calculate the cost of not switching tariffs – this cannot be estimated as questions on switching and length of contract are not included in the LCF. Additional information would need to be collected in the LCF to allow these costs to be calculated. Switching tariffs has a big impact on the prices paid by different households, hence collecting this information should be a priority. The information that is presently collected in LCF could be used in conjunction with market data on available tariffs and their associated costs to estimate the costs incurred by different households due to not using direct debit or purchasing communication and entertainment packages as a 'bundle'. The market information would be gathered using desk research; this would involve using online consumer comparison sites to identify the prices for different products.
Household appliances and electrical items	Measuring the differences in prices paid for large household goods and electronic items is not straightforward. This is because these high cost durables have a lifetime cost associated with them due to substitution; where low-income households may purchase cheaper items that need replacing sooner. The suggested approach therefore includes more complex analyses to control for such differences. Hedonic regression[1] is one approach that could be explored to establish how the price of the product relates to each of its different features (for example, the cost of a computer would relate to its processor speed, the size of the hard disk drive and the amount of memory). The model would identify the additional unit costs of each feature. A significant amount of desk research would be needed to collate information on the price and available features of different types of household goods that would be needed for the modelling. In addition to the information on prices and features, survey data would be needed to collect the make and model of the items purchased by different households, which would then be linked to the features of each make and model identified in desk research. It would be important to also know whether the household purchased the item new or acquired it second-hand. We would also need to know how much the household paid in total (if, for example, they had paid in instalments). The household income is also required. Currently no existing survey

---

[1] Hedonic regression is a statistical technique that allows researchers to estimate marginal prices of different characteristics of a product. This is done by comparing prices of products with different characteristics.

	collects this information. Bespoke data collection would be required. The model, which would be generated using the information on prices and features, would be applied to the survey data and used to generate the expected price for goods purchased. The premium is measured as the difference in actual and modelled prices paid by low-income and comparator households.
Financial services	The LCF and Financial Lives Survey (FLS) contains most of the information required to measure the costs paid to access cash and credit by low-income and comparator households. The LCF contains detailed information on household income and forms of payment for a range of consumer durables, including rent-to-own and mail order catalogues. It also contains information about total loan amounts and recent payments. However, it does not include a detailed breakdown by loan type. This means high-cost loans (such as payday loans, doorstep loans and pawnbroker loans) cannot always be identified as the respondent would have had to select 'other' loan type and self-report the specific type of loan. We therefore expect some misclassification and under-reporting. We suggest benchmarking the rates of self-reported users of payday loans against FLS (where information on payday loans is collected as a distinct category) to check for under-reporting. The FLS contains information on the use of pre-paid plastic cards in the last 12 months and information on the number and type of loans, including payday loans. This means the FLS can be used to benchmark the different types of high-cost loan that have been self-reported in the LCF. (The FLS cannot be used directly as it only asks about monthly payments needed to service those loans and not the total amounts borrowed or repaid. For this reason, we propose using the LCF, where this information is collected, but use the FLS to check the proportion of respondents using different loan types). There are a number of data gaps where information has not been collected in either survey. Neither survey (nor any other robust data source) contains information on usage rates for fee-charging ATMs and for cashing cheques. There is also no data available on the proportion of households using Christmas hamper schemes. We suggest questions covering this could be added to either LCF or FLS. However, the number of households using these services is relatively low, which implies collecting this additional information is not a priority. The suggested methodology for measuring the poverty premium in the Financial Services market requires information to be

	collected on the available products and their associated costs. This information can be gathered using online consumer comparison sites. It will be used to identify the cost impact of using specific financial products.

Then survey data are needed to identify the relative proportions of low-income and comparator households that incur these costs. The FLS contains the information required to measure costs due to pre-paid plastic cards. The LCF contains the information needed to measure costs due to rent-to-own and mail order catalogues. The LCF contains information to measure costs due to high-cost loans, however this information needs benchmarking against FLS to check for possible under-reporting in LCF.

It is not possible to measure the costs of using fee-paying cash machines, fee-paying cheque cashing services or Christmas hamper schemes, as no survey data is available. |
| **Insurance** | The survey data required to measure the prevalence of any **risk-based poverty premium** can be taken from any large household survey that collects detailed information on household income and dwelling type and can be matched to local deprivation indices. We suggest the LCF.

The measurement would be based on using online consumer comparison sites to identify the relative price of insuring the same home in deprived and non-deprived areas, then using survey data to compare the proportion of low-income and comparator households in those areas.

The survey data needed to measure the poverty premium due to **not being on the best contract, using more expensive methods of payment** and **not switching insurance providers** does not exist. These premiums cannot be measured. Two key questions on insurance provider and length of contract could be used to match on the product's Defaqto star rating, which would provide the information required to compare costs. FLS could be a suitable vehicle to collect this information, as it collects a lot of corresponding information about insurance products. |

1 Introduction

The poverty premium has been defined in a range of ways in the UK and international literature, but central to all definitions is the proposition that in some markets low-income consumers may pay higher prices than higher-income consumers for the same goods and services ('the poor pay more'). The concept is not universally accepted: some commentators argue that apparent poverty premiums are a direct consequence of cost-reflective pricing.

As part of its strategic focus on vulnerable consumers, the Competition and Markets Authority (CMA) commissioned NatCen Social Research in partnership with the Institute of Fiscal Studies (IFS) to conduct a feasibility study on measuring the poverty premium in the UK.

Our approach has been to: review the literature on defining and measuring the poverty premium, interview expert stakeholders, and assess existing data and modifiable data sources in order to consider options for a range of ways in which the poverty premium might be robustly assessed in different markets. Whilst it is important to build on existing research and government datasets, new data collection was not ruled out. Such measures, regularly updated, could also be used to inform the public debate about the presence and extent of the poverty premium.

It is important to note that estimating the extent of the poverty premium is an empirical matter. A priori, it is not obvious whether customers on lower incomes are likely to pay higher or lower prices for different goods and services compared with customers on higher incomes. On the one hand, the benefits of getting a good deal (relative to income) are higher for customers on lower incomes and the opportunity costs of shopping around may be lower. However, low income is also correlated with other measures of vulnerability, which may increase barriers to engagement (for example, through lack of time or capability in engaging in certain markets). In addition, low-income customers may not have the 'gateway products' that are necessary to access other goods, services or better prices (such as a car or reliable internet access). There is some evidence that customers on lower incomes are likely to pay higher prices for different goods and services in some markets but not all, this is discussed more fully in Section 4.

The purpose of this study is to:

a) Advise on the feasibility of developing a robust methodology that would provide insight on how the prices paid by customers on lower incomes compare with those paid by customers in other income groups;
b) Help identify those markets more likely to display poverty premiums and for which developing a poverty premium measure would be feasible;
c) Advise on how low-income consumers should be defined for these purposes and the appropriate group or groups for comparison;
d) Advise on what would be involved for the outputs of the methodology to be capable of being updated on a regular basis; and
e) Understand the options available in developing a robust methodology and the trade-offs between the options e.g. costs, difficult to implement, less reliable.

It was important that any comparisons in prices were made on a like-for-like basis. The feasibility work included an investigation into how such comparisons could be made. This was more challenging in some markets than others, where quality differentials between available products and services meant comparison was not straightforward.

Our study was UK-wide, but also recognised the importance of geography and localised differences as factors in differential pricing.

The views contained in this report are those of the authors from NatCen and IFS and do not necessarily reflect the views of CMA.

2 Conceptual framework

This section contains an outline of the different drivers of poverty premiums and some discussion of the conceptual issues of quality differentials, substitution and risk-based pricing. These conceptual issues are important as they can impact on which goods and services can be included in any measure of the poverty premium and how prices can be measured. For the purposes of this feasibility study, the CMA is interested in whether low-income households pay different prices for like-for-like goods. This is therefore the focus of the discussion.

2.1 Drivers of possible poverty premiums

In this section we outline the main drivers of possible poverty premiums in the UK. It should be noted that low income tends to be correlated with other vulnerabilities, such as disability and age. Therefore, the drivers outlined here may also affect other vulnerable groups.

The main drivers of possible poverty premiums include:

- Consumer engagement factors, and
- Gateway factors (geography and digital access).

These are each outlined in more detail below.

The way in which low-income consumers engage with markets can determine pricing. Low engagement may range from not switching tariffs and energy suppliers to not using coupons and discounts when grocery shopping. These **consumer engagement factors** may occur for a number of reasons, for example, being on a constrained and/or irregular income requires a high degree of control over household budgets and short term 'jam jar accounting'.[2] This can mean that predictability and regularity may be more important to a low-income consumer than overall price, leading to sub-optimal consumer choices from a pricing perspective.[3] The psychological stress associated with living on a low income can also constrain financial decision making, making it harder to engage with complex pricing structures and increasing risk-aversion.

Many (if not all) of these engagement barriers affect a range of vulnerable consumers in addition to low-income households.[4] These vulnerability factors may vary on a market-to-market basis.

---

[2] Hirsch, D. (2013) "Addressing the Poverty Premium – Approaches to Regulation", Consumer Futures
[3] Dearden, C., Goode, J., Whitfield, G., and Cox, L. (2010) "Credit and Debt in Low-Income Families", Joseph Rowntree Foundation. Also Burton, M. (2011) "Making Ends Meet: The Costs and Implications of Money Management for Low-Income Consumers", Consumer Focus, and Cambium Advocacy (2015) "Still Addressing the Poverty Premium", Citizens Advice Scotland
[4] For example, Ofgem's "State of the Energy Market 2017" report identified a range of long and short-term factors that increase consumer vulnerability in the energy market, including poverty and long-term health conditions or disabilities as well as short-term shocks such as bereavement and unemployment.

Some experts refer to these engagement factors as 'discretionary' and question whether they should be included in measurement of a poverty premium.[5] Others argue low consumer engagement is imposed on low-income households by financial stress and therefore an intrinsic part of the poverty premium.[6] The CMA, however, is concerned with ensuring that 'markets work well for consumers, businesses and the economy', a remit that includes consumer engagement as well as market practices. Evidence suggests it is possible to increase the quality of consumer engagement through targeted interventions.[7]

The second set of factors are **gateway factors**. This includes geography and digital exclusion, both of which affect the ability of low-income consumers to access reasonably priced goods.

Geography has a significant impact on two levels. First, local infrastructure determines whether low-income consumers can make active, engaged consumption choices in their community; whether they have access to local outlets that allow them to 'shop around' for the best deal, or whether they are dependent on either access to public transport or on online shopping. The implication of this is that the poverty premium is likely to be significantly higher in more rural and less well-connected areas than in urban or well-connected places. Second, people on low incomes are more likely to live in communities that are exposed to a higher level of risk (of crime, environmental impact, etc.) that gives rise to cost-reflective pricing in markets such as higher insurance premiums.[8]

Lack of **digital access** and **digital exclusion** can also create or compound price differentials in a range of markets. While the picture on both internet access and digital skills continues to shift rapidly, the most recent data from the Office for National Statistics (ONS) Internet Access Survey show that in 2017, ten per cent of the population did not have internet access at home, rising to 39 per cent amongst adults over 65. Similarly, while most of the population reported shopping online, 23 per cent of the population have not shopped online in the last 12 months.[9] Digital exclusion is correlated with relative low income, meaning there is a risk of low-income consumers being excluded from online deals or switching tools, and left with a smaller range of options from which to choose.

Finally, in addition to these factors, there are other aspects of the financial lives of people in poverty that may create or compound poverty premiums. The reduced ability of low-income consumers to **bulk buy** means many low-income households are unable to access many of the best prices. **Debt** also affects the way in which low-income households can operate in the market place, by reducing choice and tying households

[5] For example, Hirsch, D. (2013) "Addressing the Poverty Premium – Approaches to Regulation", Consumer Futures
[6] Davies, S., Finney, A., and Hartfree, Y. (2016) "Paying to be Poor: Uncovering the Scale and Nature of the Poverty Premium", Personal Finance Research Centre, University of Bristol
[7] The 'check your energy deal' trial, amongst others, for more information see Ofgem (2016) "Implementation of the CMA Remedies" Ofgem.
[8] Corfe, S. and Keohane, N. (2018) "Measuring the Poverty Premium", Social Market Foundation; Davies, S., Finney, A., and Hartfree, Y. (2016) "Paying to be Poor: Uncovering the Scale and Nature of the Poverty Premium", Personal Finance Research Centre, University of Bristol.
[9] Office for National Statistics (2018) "Internet Access – Households and Individuals, Great Britain: 2017", Office for National Statistics

to existing providers. Unmanaged debt can also lead to higher charges and more rapid repayment schedules. Similarly, **irregular income** (for instance through self-employment, flexible contracts and 'gig economy' work) may exacerbate risk aversion among low-income consumers,[10] tying them into more predictable, but higher cost products and reduce their ability to bulk purchase.

2.2 Quality differentials and the challenges associated with identifying goods and services that are 'the same'

This feasibility study is focused on understanding whether low-income households pay different prices for like-for-like goods and services. In this section we discuss the challenges around identifying what 'like-for-like' goods and services are. In order to make a comparison between prices, it is important to first establish what goods and services can be counted as equivalent and can therefore be compared.

Establishing equivalence requires an assessment of both function and quality, to control for 'substitution effects' as low-income households will replace goods and services with cheaper alternatives (less comprehensive insurance products, poorer quality shoes and clothing). Low-income consumers are also less able to 'bulk buy' in some markets, which introduces pricing differences that relate to unit size.

Equivalence is a more significant issue in some markets than others. In the energy market there is a relatively constrained set of products and services, and establishing equivalence is more straightforward. However, it is a very significant issue in other markets, such as food and groceries, where many versions of goods are available to consumers. Here, comparability has been considered extensively in the literature and there are many approaches that are used by statistical agencies when calculating national indices, such as the Consumer Price Index (CPI), that could be employed in other areas.

These approaches have been developed to compare the prices of different brands and pack sizes and include straightforward techniques; such as using a defined set of rules to account for changes in pack size in a consistent way, or by using aggregate data to ensure a greater degree of overlap between different sub-groups when making comparisons, to more complex methods, such as the use of hedonic regression to compare prices. A detailed description of approaches to equivalence in the food and groceries sector can be found in Appendix B.

In practice, the approach to equivalence will vary by market, and will be dependent on the range of relevant products and services and the availability of data or feasibility of data collection.

2.3 Risk-based pricing

Some market differentials may be the result of cost-reflective pricing, which arises because of the additional cost to serve or additional risk associated with low-income

---

[10] Hardy, G. and Lane, J. (2018) "Walking on Thin Ice: The Cost of Financial Insecurity", Citizens Advice

consumers. Clearly, there is justification for some cost-reflective pricing, but evidence suggests that in some cases the associated premium is higher than the value of the additional cost or risk.[11] Assessing the justified component of cost-reflective pricing is a key methodological challenge for robust measurement of the premium. This may be an area where a 'deep dive' may be appropriate to further investigate the reasons for higher prices.

2.4 Substitution

A key question (related to equivalence) is whether the poverty premium should address substitution: where low-income consumers substitute a lower quality, lower price product for a high quality, high price product and experience detriment as a consequence.

The impact of substitution will vary by market. In some markets, such as groceries, the quality differentials between an own brand product and the market leader may be negligible. In other markets the impact will be far greater, particularly for gateway products such as transport, where higher quality transport options would enable low income households to gain access to other low-cost services.

Addressing substitution introduces a significant challenge to the dominant conceptual framework in the UK literature: that the poverty premium is limited to only those situations where the poor pay more for 'the same' goods and services.[12] However, by excluding substitution from the premium we exclude a significant form of consumer detriment associated with poverty. In some cases, this may mean building a measure that does not capture the primary way in which low-income consumers experience harm. One example of this is the transport market, where there is a premium associated with bulk buying discounts (the cost per trip for a season ticket holder as compared to a pay-as-you-go traveller), but a far more significant detriment associated with the substitution of lower cost lower quality transport options such as bus travel as a consequence of the high cost of surface rail, underground and car (see Section 4.1).

---

[11] Hirsch, D. (2013) "Addressing the Poverty Premium – Approaches to Regulation", Consumer Futures
[12] The conceptual framework for the poverty premium in international development literature is inclusive of a range of factors including both substitution and market exclusion.

3 Definitions

In this section we put forward a working definition for the poverty premium as well as recommendations for defining and measuring the low-income group, and the comparison group.

3.1 Defining the poverty premium

We propose the following definition of the poverty premium:

*"the extra cost that households on low incomes incur when purchasing the **same** goods and services as households on **higher incomes"**.*

The proposed definition is a relative measure of the poverty premium, since it measures the costs incurred by low-income households relative to those incurred by households on higher incomes.[13]

Critically, unlike other approaches to measuring the UK poverty premium, this definition does not limit consideration of the poverty premium to markets for 'essential' goods and services.

3.1.1 Defining low-income households

There is significant debate amongst academics, policy makers and advocacy organisations about the most conceptually and empirically robust way to define 'poverty' or 'low-income'. Commonly-used approaches include not only a range of equivalised household income measures,[14] but also measures of material deprivation or destitution[15], and even long-term outcomes.[16]

While these approaches have merit, we recommend that for calculating poverty premiums, low-income consumers be defined as those with below 60 per cent of median household income, adjusted for household size and composition, estimated both on a before and after household costs basis (BHC and AHC). This measure includes income from earnings, state support, pensions and investment and is net of tax. Median income is used as a benchmark as medians are less sensitive to extreme values.

Most importantly, this measure has the benefit of consistency, since it is used across government departments and in official statistics. It is the measure used by the Department for Work and Pensions to monitor poverty in the UK. The average

---

[13] The poverty premium literature contains studies that have measured 'absolute' poverty premiums (i.e. the difference between prices paid by low income consumers and the best price available on the market) rather than the 'relative' measure discussed here, which considers only the additional costs that are incurred by low income consumers relative to other households.

[14] The Households Below Average Income series calculates 40 per cent, 50 per cent, 60 per cent and 70 per cent of median.

[15] See for example, Fitzpatrick, S., Bramley, G., Sosenko, F., Blenkinsopp, J., Johnsen, S., Littlewood, M., Netto, G., and Watts, B. (2016) "Destitution in the UK", Joseph Rowntree Foundation.

[16] See for example the non-statutory life chances indicators set out in "Improving Lives: Helping Working Families", Department for Work and Pensions (2017).

(median) weekly net disposable income in 2017 before housing costs was £494, the corresponding value after housing costs was £425[17]; the corresponding 60 per cent benchmarks are therefore £296 and £255 for before and after housing costs, respectively.

More generally, use of this measure will:

- Ensure coverage of all low-income consumers, rather than subsections of low-income consumers, such as the materially deprived or destitute[18];
- Focus on the way in which low-income consumers are being disadvantaged in markets for goods and services, with the drivers and outcomes of poverty out of scope;
- Establish a measure of the poverty premium that is robust and can be updated on an annual basis; and
- Apply a standard measure that is used as the core poverty measure in the UK, across the EU and a range of other countries.

We suggest, under this definition of low income, that the appropriate comparison group for low-income households is all households with income levels above this cut off. Hence, if low-income households are defined as those whose income falls *below* 60 per cent of median household income adjusted for household size and composition, then the comparator group should be higher income consumers whose income is *on or above* 60 per cent of median household income adjusted for household size and composition.

---

[17] Department for Work and Pensions (2018) "Households Below Average Income: An Analysis of the UK Income Distribution: 1994/95-2016/17", Department for Work and Pensions
[18] Measuring material deprivation or destitution is also highly complex, so not well suited to the robust annual uprating process that this piece of work is seeking to achieve.

4 Markets

In this section we discuss the markets covered by this feasibility work and summarise the findings from the literature. For each market we outline where the literature has identified the mechanisms by which a poverty premium may arise and discuss the current evidence for those mechanisms.

The figure below shows the proportion of household expenditure by market. We have taken this into account in the order in which we present the markets.

Figure 4-1 Overall household expenditure in the UK, % of total expenditure, financial year ending 2017
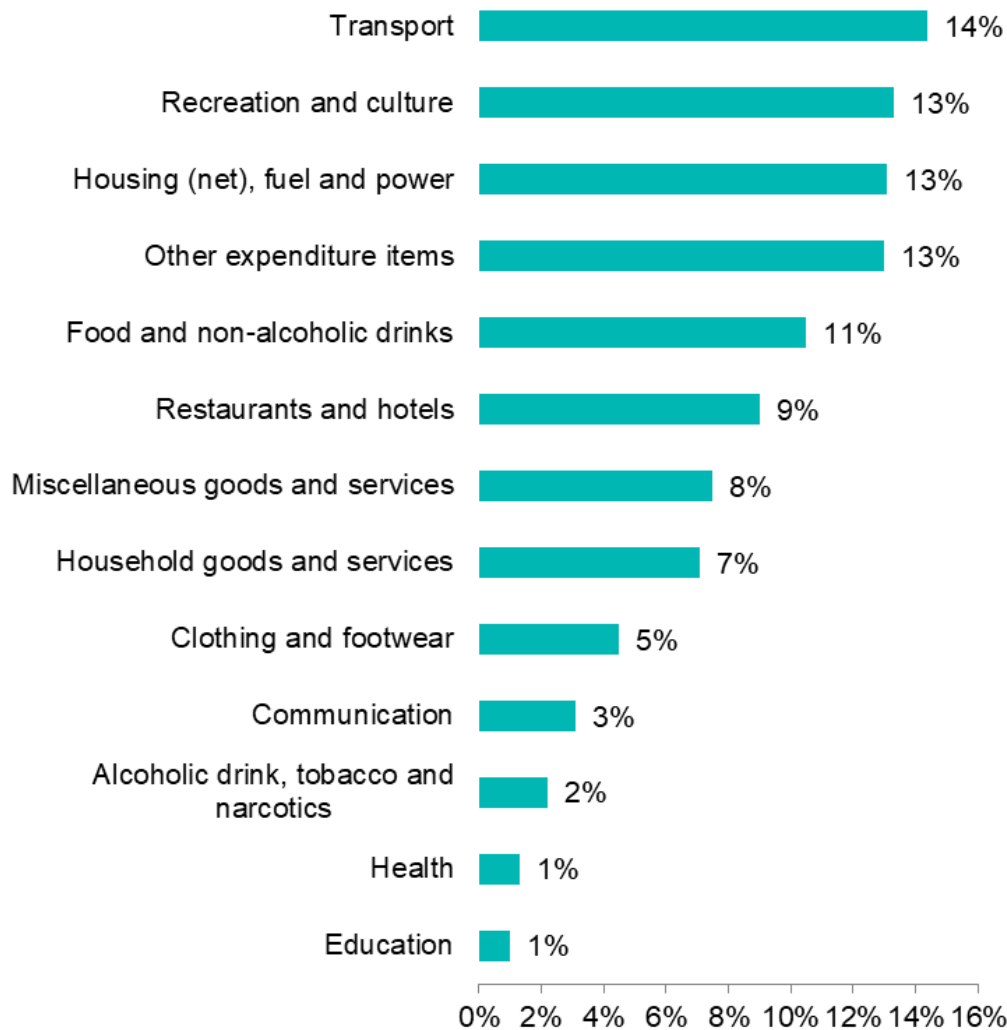
Notes:
1. Mortgage interest payments, council tax and NI rates are excluded from Housing (net)
2. Components of spending based on fewer than ten respondents, or where the average rounds to zero, are excluded
Source: Office for National Statistics, 2018

Our starting point for identifying markets was COICOP (Classification of Individual Consumption by Purpose, also used in LCF), cross referenced against spending data

from LCF and the detailed consensual budgets developed as part of the Minimum Income Standards programme.

4.1 Transport

Transport costs have been identified (along with housing) as having the greatest ranges in terms of real household expenditure, and therefore a large potential for negative impact on low-income consumers.[19] Previous research has suggested that transport exhibits a poverty premium,[20] but despite this the sector has not been substantively explored in studies to date.

Premiums may emerge through the following mechanisms:

- Higher costs because of not being able to afford bulk discounted purchases (season tickets and other multi-trip discounts);
- Higher costs associated with car ownership;
- Substantially lower quality travel associated with the inability to afford higher costs modes; and
- Geography, and specifically rurality being associated with poor transport infrastructure and dependence on access to cars.

4.1.1   Discounted bulk purchases

The literature suggests that there is potential for a poverty premium to arise in public transport driven by the accessibility of season tickets and other forms of discounted bulk purchasing.[21] Annual and monthly tickets for both surface rail and underground railway have relatively high upfront costs, which may make them inaccessible to lower income consumers. The additional costs have been illustrated by Corfe and Keohane (2018):

"*To give an example, at the time of writing, a worker living in Zone 4 in London and commuting to a job in the city centre (Zone 1) would currently pay £1,960 for an annual travel card. In contrast, buying 12 monthly season tickets costs £2,258 – £298 more. Purchasing 48 weekly season tickets (assuming four weeks of holidays without travelling in London) would cost £2,352, a poverty premium of £392 compared with an annual season ticket.*"

In addition, the ability of a consumer to purchase advance tickets or make use of deals (often online) is likely to affect the prices they pay.

---

[19] Richards, B. (2015) "Bargaining on a Low-Income - A Better Deal for Consumers", Social Market Foundation
[20] Richards, B. (2015) "Bargaining on a Low-Income - A Better Deal for Consumers", Social Market Foundation; and Keohane, N. (2017) "Stick or Switch? Making Markets Fairer and More Competitive", Social Market Foundation
[21] Ibid.

4.1.2 Higher costs associated with car ownership

While people on low incomes are far less likely to own and operate a car than people on higher incomes, where they do, they may be exposed to a poverty premium in car insurance as a consequence of being more likely to live in an area that is assessed as higher risk.[22]

4.1.3 Substitution due to the inability to afford the most efficient mode of transport

Whilst substitution in other markets may have a minimal impact on a low-income household, substitution in the transport market can have a large impact on the ability of low-income households to access low-cost goods, find work, etc. For this reason, it merits further discussion.

There is a clear income gradient in the mode of transport people choose, with people on lower incomes far more likely to choose bus travel than people on higher incomes.[23] Although for some households this may represent a proactive choice, a more likely explanation is that low-income households are forced to purchase a lower quality (slower, less convenient) transport product as a consequence of being on a lower income.[24]

This clearly raises the question of what the relevant comparison in the transport market is. If the unit of comparison is the trip (from say work to home) then we can measure the substitution of the poorer quality product as part of the transport poverty premium. If the unit of comparison is the trip and the mode of transport, then this substitution would not be included in the calculation of the premium.

4.1.4 Geography

Rurality has a very significant impact on average **distance** travelled, and on **choice** in the transport market, as many communities are poorly served by public transport, leading to far greater dependence on cars:

 "*The distance travelled per head is 80% more in the smallest settlements and rural areas than in the Greater London Built-Up Area and car driver travel per person three times more.*"[25]

Cars offer families the opportunity to travel together at low marginal cost for each trip, but require significant expenditure to purchase, tax and insure, which may be beyond the means of some low-income households.

For low-income families in rural areas, being unable to afford a car may incur very significant premiums in two ways. First, it is a more extreme version of not being able

---

[22] Davies, S., Finney, A., and Hartfree, Y. (2016) "Paying to be Poor: Uncovering the Scale and Nature of the Poverty Premium", Personal Finance Research Centre, University of Bristol
[23] See Department for Transport (2018), "Travel by Household Income Quintile and Main Mode: England (with chart)", Department for Transport.
[24] See Titheridge, H., Mackett, R. L., Christie, N., Oviedo Hernández, D., and Ye, R. (2014) "Transport and Poverty: A Review of the Evidence", UCL Transport Institute, University College London.
[25] Department for Transport (2018) "Analysis from the National Travel Survey", Statistical Release, Department for Transport

to afford the most efficient mode of transport. Second, in more rural communities, having a car is a gateway to being able to avoid premiums in other areas, particularly food and groceries (without the ability to shop around, the consumer cannot engage with the market effectively and a poverty premium may emerge).

4.2 Recreation and culture

The recreation and culture market has not been addressed in the literature in its entirety, although aspects of it have been included by proxy through the Financial Services market as access to credit and access to cash are closely correlated with some of the goods and services in this category.

Recreation and culture includes expenditure on:

- Audio-visual equipment, such as televisions, CD players, DVD players, digital cameras, computers and tablets;
- Television subscriptions, such as Sky or Netflix;
- Computer games;
- Film development;
- Toys;
- Sports and camping equipment;
- Entry to leisure facilities and gym subscription;
- Garden equipment; such as plants, BBQ, seating, swings;
- Other major durables, such as musical instruments, boats, trailers, horses, caravans and campervans;
- Pets, pet food and vet bills;
- Tickets for spectator sport;
- Entry to cinemas and theatres;
- Gambling;
- Newspapers, books and stationery; and
- Package holidays.

For many of these goods and services, market exclusion is a significant factor. Campervans, boats and horses are all beyond the means of households in poverty, and even in lower value expenditure categories such as gym membership low-income households are likely to avoid discretionary spending as a way of managing income inadequacy.

With smaller items, such as pet food, smaller toys, computer games, and smaller items of garden equipment, the purchasing behaviour of consumers is likely to be similar to that in the food and groceries market. Poverty premiums may occur for these items due to lack of access to stores that sell a good range of reasonably priced goods.

Bulk purchasing discounts such as season tickets for spectator sports and memberships for theatres and cinemas may attract a premium. However, it would be very difficult to control for the desire for regular attendance.

There may be poverty premiums in relation to audio-visual equipment, such as televisions, CD players, DVD players, digital cameras, computers and tablets. As with

the premium associated with white goods (see below) these will be driven by access to low cost credit. There may also be poverty premiums for television subscriptions, such as Sky or Virgin Media. However, we will cover these in the communications market as they will often be associated with wider 'bundles' that include broadband and mobile phone contracts.

In practical terms, where the methodology adopted makes use of existing data sets, it will be possible to capture and analyse a wide range of goods and services in this market.

4.3 Housing

Housing costs represent a substantial proportion of most working-age household budgets, and housing affordability represents one of the most significant contemporary policy challenges. Though mentioned in the literature, housing costs are not typically analysed as part of the UK poverty premium. This is because differences in housing costs are not straightforward to measure; poor and affluent households do not consume the same goods; as the quality of a home not only includes the size, fittings and condition, but also local amenities.

Premiums may emerge through the following mechanisms:

- Higher housing costs associated with private renting as compared to homeownership;
- Higher home insurance costs caused by cost-reflective pricing; and
- Risk-based charges in the rental market, particularly targeting those on benefits.

4.3.1   Owning versus renting

Data from the English Housing Survey (EHS) 16/17 shows that home ownership was highly concentrated in the two highest income quintiles (37 per cent of home owners are in the top income quintile; 29 per cent in the second). This is unsurprising given the high cost of entry: average (mean) deposit in 16/17 was £48,591 (£25,000 median).[26]

Home ownership can enable households to pay lower housing costs than renters. In 15/16, the English Housing Survey Report on Housing Costs and Affordability found that the average (mean) rent for private renters was £184 per week, while the average (mean) mortgage payment was £159. This was driven by exceptionally high rental costs in London: renting and owning were broadly similar in terms of weekly costs outside of London.[27]

This gap between the cost of renting and owning widens over time, as rents increase steadily (and recently, very sharply) while mortgage costs can be fixed or rise more slowly. Ultimately, mortgagors become outright owners, with no housing costs and a significant asset, while renters continue to pay for their housing on an ongoing basis.

---

[26] Department for Communities and Local Government (2017) "English Housing Survey: Housing Cost and Affordability Report, 2015-16", Department for Communities and Local Government
[27] Ibid.

There are also large generational differences in housing costs. While the rate of home ownership remains high and relatively steady (63 per cent of households in England were owner-occupiers in 16/17), the composition of that group is changing rapidly. In 2006-07, about three quarters (72 per cent) of those aged 35-44 were owner-occupiers. By 2016-17, this had fallen to half (52 per cent). Over the same period, the proportion of 25-34-year olds in owner occupation decreased from 57 per cent to 37 per cent.[28]

4.3.2   Higher cost home insurance

People in poverty are more likely to live in areas that are considered high risk to insurers. For home owners in poverty, this may give rise to a higher insurance costs as a consequence of cost-reflective pricing in the home insurance market. This is discussed further in Section 4.10.

4.3.3   Risk-based charges in the rental market

Although it is not documented in the literature, it is possible that there are also potential premiums associated with risk-based charging for low-income benefit claimants, particularly since the implementation of policies such as the benefit cap, which particularly affects households with high housing costs, and payment direct to tenant, which removes the certainty of income associated with Housing Benefit claimants.

4.4 Household energy and water

Poverty premiums relating to domestic electricity and gas are well-documented. A number of recent studies conducted in the UK[29] demonstrated the existence of premiums in this market. This was also recognised by the CMA's energy market investigation in 2016.[30]

Other studies have investigated whether poverty premiums arise in water bills (Cambium Advocacy, 2015), however the evidence suggests the regulation of water companies, different to other utilities, means poverty premiums are less likely to arise as water companies must take account of the needs of vulnerable customers.

Premiums for energy may emerge through the following mechanisms:

- Failure to switch to the best tariff; and
- Having a pre-payment meter.

---

[28] Ibid.

[29] Corfe, S. and Keohane, N. (2018) "Measuring the Poverty Premium", Social Market Foundation; McBride, K. and Purcell, S. (2014) "Food, Fuel, Finance - Tackling the Poverty Premium", Church Action on Poverty; Keohane, N. (2017) "Stick or Switch? Making Markets Fairer and More Competitive", Social Market Foundation

[30] Competition and Markets Authority (2016) "Energy Market Investigation: Final Report", Competition and Markets Authority

4.4.1   Switching

Energy providers offer several tariffs, which are either fixed-term or standard variable tariffs (SVTs). SVTs are suppliers' basic offer and are usually more expensive than other tariffs. Customers can either choose to be on an SVT or are moved to an SVT after the end of a fixed-term contract. Customers are free to move from SVTs to other tariffs, but to do so they need to actively engage with the market, compare tariffs available to them and switch to a cheaper tariff. Tariff comparisons (and switching) are facilitated by different price comparison websites.[31]

Poverty premium literature often uses not having switched energy providers in the last three years as a proxy for not being on the cheapest tariff. There are a number of reasons why customers may not change energy providers:

- Inertia – as energy is provided to customers regardless of whether they actively engage with choosing a tariff, it is easier to put off decision making or not to consider it necessary to change tariff if customers are otherwise satisfied with their current supplier;
- Awareness – results from the CMA's Energy Market Investigation showed that 26 per cent of customers were not aware that they could change their energy tariff;
- Not able to access the internet – as most tariff comparisons are facilitated by dedicated price comparison websites, customers who do not have access to the internet or are not confident users of the internet may find the comparison and switching process difficult;
- Risk aversion – some customers are concerned that things may go wrong when changing energy providers;
- Not having mental bandwidth to engage with decision making – some customers, particularly those on lower incomes, may find it difficult to spend mental energy on yet another potentially stressful decision.

Except for the first, all these drivers are likely to be more common among low-income customers, leading to poverty premiums. Ofgem (2017) found that those on low incomes were less likely to switch energy provider. A survey conducted by the Personal Finance Research Centre, found that 73 per cent of low-income households had not switched fuel supplier in the last two years.[32]

4.4.2   Pre-payment meters

Pre-payment meters are energy meters that allow customers to pay for energy in advance by putting money on a smart card that is then inserted into the meter. These 'pay-as-you-go' meters have higher tariffs and are more common among low-income consumers. Pre-payment meters are more expensive for suppliers to serve, which is part of the reason for higher tariffs. However, the CMA Energy Market Investigation

---

[31] Keohane, N. (2017) "Stick or Switch? Making Markets Fairer and More Competitive", Social Market Foundation; also Joseph Rowntree Foundation (2016) "UK Poverty: Causes, Costs and Solutions", Joseph Rowntree Foundation

[32] Davies, S., Finney, A., and Hartfree, Y. (2016) "Paying to be Poor: Uncovering the Scale and Nature of the Poverty Premium", Personal Finance Research Centre, University of Bristol

(2016) showed that even after accounting for this, customers with pre-payment meters were paying substantially more per year.[33]

4.5 Food and groceries

Food, like housing and energy, meets basic household needs, and food alone accounts for 14 per cent of disposable income in low-income households, compared with around 11 per cent for all other households.[34]

The food and groceries market has been widely explored in the poverty premium literature, and there has been some debate around the nature of premiums within these markets. However, a number of recent high-quality studies have concluded there is no evidence that low-income households pay more for the same products. A key study carried out by IFS[35] used Kantar World Panel data to investigate the cost paid by lower and higher-income households for their food and grocery shopping. This study used barcode-level data to compare prices paid on identical products and found no evidence that lower income households were paying more than higher-income households for the same goods. This study showed that lower-income households paid slightly lower prices than higher-income households.

This might be explained by the fact that the food and groceries market is easy for consumers to navigate and understand. Theoretically, one might expect to see a premium arising from the ability to purchase in bulk, however this is not borne out by empirical studies including work by Griffith, Leibtag, Leicester, and Nevo (2009) who found that bulk buying was negatively related to income, and Beatty (2010) who found that lower income households took advantage of bulk purchasing to pay lower prices.

However, there are two compounding factors that may give rise to poverty premiums in this area:

4.5.1   Geography

Many recent studies highlight geography as a significant issue in this market.[36] There is a growing body of research in the UK and internationally on 'food deserts',[37] with more recent studies focusing on rural areas, where low-income households without cars are dependent on local convenience stores where prices are higher, and the range of goods is narrower.[38] This is reflected in the IFS study which found evidence that low-

---

[33] Competition and Markets Authority (2016) "Energy Market Investigation: Final Report", Competition and Markets Authority

[34] Office for National Statistics (2018) "Detailed Household Expenditure as a Percentage of Total Expenditure by Disposable Income Decile Group: Table 3.2", Office for National Statistics

[35] Blow, L. and Leicester, A. (2012) "Do the Poor Pay More? An investigation of British Grocery Purchase Prices", Institute for Fiscal Studies

[36] Davies, S., Finney, A., and Hartfree, Y. (2016) "Paying to be Poor: Uncovering the Scale and Nature of the Poverty Premium", Personal Finance Research Centre, University of Bristol; Corfe, S. and Keohane, N. (2018) "Measuring the Poverty Premium", Social Market Foundation

[37] Beaumont, J., Lang, T., Leather, S., and Mucklow, C. (1995) "Report from the Policy Sub-Group to the Nutrition Task Force Low Income Project Team of the Department of Health", Radlett, Hertfordshire: Institute of Grocery Distribution

[38] Tinson, A., Kenway, P., Bushe, S., and MacInnes, T. (2014) "Poverty and the Cost of Living", Joseph Rowntree Foundation; McBride, K. and Purcell, S. (2014) "Food, Fuel, Finance - Tackling the Poverty Premium", Church Action on Poverty

income households were more likely to shop in local stores, and that households without a car pay, on average, slightly higher prices.

4.5.2   Digital exclusion

A second compounding factor which merits exploration is the impact of digital exclusion among lower-income groups on the prices paid in this market. This would require analysis of like-for-like pricing online and instore.

4.6 Clothing and footwear

Clothing and footwear accounts for just 3.7 per cent of the disposable income of low-income households, compared to 4.5 per cent for higher-income households. Whilst these markets have not been widely covered in the literature, there is evidence to suggest these are markets that low-income households are able to navigate well.[39] Richards (2015) identified choice and flexibility as being key reasons low-income households could find low-cost items in the food and grocery market, and the same enabling factors are present in the clothing and footwear market, with cheap, fashionable clothing that is widely available in the high street, in larger supermarkets and online.

However, as with food and groceries, the compounding factors of **geography** and **digital exclusion** may give rise to poverty premiums, particularly for people living on a low income in rural or poorly-connected areas. Further, substitution of lower quality goods may be a significant problem in this market, which in turn may lead to a more frequent replacement cycle.

4.6.1   Buying clothes via catalogues

Davies, Finney and Hartfree (2016) estimated that six per cent of low-income households have used mail order catalogues in the last 12 months. These catalogues offer flexible payment options that allow consumers to spread payments over a period of time, rather than pay in a lump sum. The companies generally do not require a good credit rating. However, the total cost of payments tends to be substantially higher than the cost of the one-off payment, which makes this a form of high-cost credit. This potential premium will be considered in the financial markets section.

4.7 Communications

The communications market comprises telephone and internet services and telephone equipment. As noted above, this is increasingly linked to television services through 'bundles'. The literature suggests that there may be poverty premiums in the communications market, but these markets are fast moving with the offer to consumers changing rapidly as consumer engagement increases.[40]

---

[39] Davies, S., Finney, A., and Hartfree, Y. (2016) "Paying to be Poor: Uncovering the Scale and Nature of the Poverty Premium", Personal Finance Research Centre, University of Bristol
[40] Ibid.

Premiums may emerge in the following ways:

- 'Loyalty penalties' (i.e. when longstanding customers pay more than new customers for the same services) in telephone and internet services; and
- Higher costs for pay-as-you-go products.

4.7.1 Switching

The mechanisms that may lead to a poverty premium in the telephone and internet services market are similar to those that have been found in the energy market. While there is no direct equivalent to SVTs in this market, there is a similar mechanism by which new customers are offered cheaper prices for a fixed period of time (typically 12 to 24 months), which at contract expiry revert to a more expensive tariff. Customers therefore need to actively engage to compare prices and move to a cheaper contract, and evidence suggests inertia is relatively high.[41] Unlike with the energy market there is some variability in what is offered in terms of broadband speed and mobile signal coverage, which customers may take into account when making decisions.

The communications regulator (Ofcom) has carried out investigations into the price implications of not switching suppliers. Their most recent report was published in 2018 and showed that customers who did not switch are penalised in terms of pricing.[42] Customers who did not engage with the market and stayed in a contract beyond the minimum fixed term generally paid higher prices; an additional average monthly cost of £7 for landline and broadband customers and £12 for customers with landline, broadband and pay-TV. They note that the increased choice and complexity of the market may discourage some consumers from engaging.

In 2018, the CMA investigated a super-complaint from Citizens Advice which raised concerns about a loyalty penalty in five 'essential service' markets – mobile, broadband, cash savings, home insurance and mortgages. As part of this, the CMA considered whether particular groups of consumers – such as those who may be considered vulnerable – are more likely to pay a loyalty penalty in these markets. In communications, (phone, internet and pay-TV), while there are limitations in the existing evidence base, the survey data suggests that those on low incomes and the elderly are significantly more likely to say that they shop around for deals 'not very much/not at all' (51 per cent of those earning £17,500 or less; 74 per cent aged 75+). As a result, they may be more likely to pay a loyalty penalty. [43]

4.7.2 Pay-as-you-go tariffs

Pay-as-you-go tariffs enable customers to closely monitor their expenditure with upfront payments, but are higher cost on a per unit (data or talk) basis. Unlike contract deals, pay-as-you-go tariffs do not require a credit check, so are open to people on low-income with poor credit histories. Pre-paid mobile phone deals have been considered

---

[41] Ofcom (2016) "Switching Mobile Network Provider: Consumer Experience", Ofcom
[42] Ofcom (2018) "Pricing Trends for Communications Services in the UK", Ofcom Research Document
[43] Competition and Markets Authority (2018) "Tacking the Loyalty Penalty: Response to a Super-Complaint Made by the Citizens Advice on 28 September 2018", Competition and Markets Authority. See chapter 4, paragraph 4.35 for further details.

in the poverty premium literature in the past due to sharp distinctions in pricing.[44] The introduction of pay-as-you-go bundles has blurred the line between pay-as-you-go and contract tariffs, but also created a new potential detriment as the 'credit' from a bundle expires at the end of each month, increasing the effective price of the service.

4.8 Household goods

Household goods is a wide market. The COICOP classification has three major categories:

- Household goods and services (including white goods);
- Furniture and furnishings; and
- Goods and services for routine household maintenance.

A number of the products included in these categories (furniture, textiles, glassware and tableware, tools and equipment, and goods for routine maintenance) should be treated in a similar way to groceries, as cheap goods are generally available but there may be premiums associated with **geography** and **digital exclusion**.

Premiums may emerge through the following mechanisms:

- Compounding factors: geography and digital exclusion giving rise to premiums;
- The interaction between white goods and high-cost credit; and
- Substitution: lower cost white goods that are also lower quality, giving rise to a higher lifetime cost.

4.8.1　Household appliances

Household appliances, like audio-visual appliances may have potential to attract a poverty premium through the interaction with **high cost credit**. Findings from the Financial Conduct Authority's review of high-cost credit indicate that 'rent-to-own' introduces a poverty premium for low-income consumers purchasing both white goods and audio-visual appliances.

Rent-to-own enables consumers to pay for these large appliances in weekly or monthly instalments over a pre-agreed term, with the ability to hand back the item and stop paying at any point in the term. However, the overall costs of purchasing through this route are very high, providers charge fees for repayment and if customers default on their payment schedule, providers can simply take the item back.

Evidence suggests that there is a significant overlap between customers using this form of hire purchase, and customers using doorstep lending, indicating the existence of a specific subset of people in poverty who have a very high degree of exposure to high-cost forms of credit.[45]

---

[44] Davies, S., Finney, A., and Hartfree, Y. (2016) "Paying to be Poor: Uncovering the Scale and Nature of the Poverty Premium", Personal Finance Research Centre, University of Bristol
[45] Worton, S., Sparham, I., Grew, S., Shaw, A., Wise, K., and Yeatman, A. (2018) "Usage and Experiences of High Cost Credit: Consumer Research Report", Financial Conduct Authority

Finally, with both white goods and electrical appliances there are issues around **substitution** and quality: low-income households buy cheaper goods that may need replacing sooner. This implies a higher 'lifetime' cost, as the savings from buying cheaper goods are generally short-term.

4.9 Financial services

This market has been covered extensively in the poverty premium literature. Mechanisms that may give rise to premiums in financial services can be broadly grouped into those associated with access to cash, and those associated with access to credit.

Premiums may emerge through the following mechanisms:

Access to cash:

- Compounding factors: geography and ATM fees;
- Fees to cash cheques;
- Pre-paid cards;
- Access to a bank account; and
- Remittance – the cost of transferring money abroad.

Access to credit:

- Rent-to-own for the purchase of durable household appliances;
- Payday loans;
- Home-collected (doorstep) loans;
- Sub-prime personal loans;
- Pawnbroker loans;
- Sub-prime credit cards;
- Mail order catalogues and store cards; and
- Christmas hamper food schemes (paid up front by instalment).

4.9.1   Access to cash

ATMS

Most ATM machines, particularly those provided directly by banks, are free to use (estimated by LINK to be around 97 per cent of the ATMs in the UK). The number of fee-charging ATMs in the UK has been steadily decreasing since their peak in 2007.[46] However, around sixteen thousand still exist and they are disproportionately located in deprived areas. Low-income households, especially those without access to good transport links, are therefore more likely to use fee-paying machines to access their money. Davies, Finney, and Hartfree (2016) estimated this to affect around 27 per cent of low-income households.

---

[46] Statista (2018) "Number of Fee-Based ATMs in the United Kingdom (UK) from 2001 to 2017 (in 1,000s)", Statista

Cheque cashing

Individuals without a bank account, or those who have a bank account but have difficulty accessing the bank, may end up using cheque cashing services that charge fees. Low-income households are also more likely to use cheques, rather than direct bank transfers or online transfers. This is partially due to issues around digital inclusion and associated risk aversion. Davies, Finney, and Hartfree (2016) estimated four per cent of low-income households had used such a service.

Pre-paid debit cards

Individuals who have a low credit rating or county court judgements will be unable to access most credit or debit cards but will be able to use a pre-paid card. The user needs to put money on the card prior to using it and cannot make any purchases if they have no credit. As with other products targeting the low-income consumer, pre-paid cards offer certainty and control. However, they may also give rise to a poverty premium. Pre-payment cards can have many fees attached, including application fees, monthly fees, renewal fees, usage fees (at ATMs or over the counter) and even inactivity fees. This can make them an expensive means of accessing cash that disproportionately affects low-income households who are unable to access other forms of cash.

4.9.2   Access to credit

There are a range of forms of high-cost credit, linked by key characteristics of their business models, which is to lend relatively small amounts to consumers with poor credit ratings, often at short notice, offering a flexible and timely service. However, they all also charge high interest rates that may give rise to a poverty premium. In some cases, this can be justified by reference to cost-reflective pricing based on risk and/ or cost to serve. However, there is some evidence that the additional charges are not wholly justified, (for instance studies using wider data sources to assess credit worthiness suggest that many low-income consumers are in fact low risk[47]).

Rent-to-own

See sections covering electrical goods and household appliances.

Payday loans

Payday loans companies make short-term loans to consumers with poor credit ratings but charge high interest rates. Concern about the impact of payday loans on low-income consumers led the Financial Conduct Authority (FCA) to introduce a cap on interest rates in 2015, in order to minimise consumer detriment in this market. However, payday loans remain more expensive than other forms of personal loan, and some evidence suggests that in response to the cap, lenders have introduced changes that will tend to exacerbate rather than reduce the cap. A key example of this is the extension of the repayment window beyond the standard 30 days, which while adding flexibility, also increases interest repayments and therefore total cost to the

---

[47] For example, work by Credit Kudos, part of Fair by Design.

consumer.[48] Payday loans are subject to cost-reflective pricing, as customers may be higher risk, so understanding the degree to which cost-reflective pricing is justified will be key to measuring the premium in this market.

Doorstep lending

As with payday loans, doorstep lending provides a flexible service to customers with poor credit ratings, but at considerably higher rates of interest. The FCA has been challenged to consider extending the cap on interest rates to this sector. As with payday lending, doorstep lenders justify rates based on risk, but also cost-to-serve. Evidence suggests that the additional cost associated with the doorstep model may be considerable. A 2009 study by Kempson, Ellison, Whyley, and Jones aimed to test the viability of a not-for-profit doorstep lending model and found that even on a subsidised and not-for-profit basis the cost of this form of credit would be very high.[49]

Mail order catalogues and store cards

See clothing and footwear.

4.10   Insurance

Premiums may emerge through the following mechanisms:

- Cost-reflective pricing: insurance premiums can be higher for individuals living in low-income areas, as these areas are considered riskier and are subject to a higher premium from the insurer;
- Loyalty penalties;
- Bulk purchasing: payment schedules; and
- Bulk purchasing: general contents insurance versus single item insurance.

4.10.1 Risk-related poverty premiums

Insurance premiums reflect the risk associated with a particular underwriting. The risk cannot often be directly measured, so it is approximated from other, measurable characteristics. In the case of life insurance this would be age, health status, smoking and so on (although location and income might also factor). In the case of property, content and car insurance it also includes information about the area where the customer lives in, as there are likely to be more claims in areas with higher crime rates. Higher insurance premiums in low-income areas are well-documented. It can be argued that the higher costs paid by low-income households simply reflect higher risk; and that the insurance purchased by a household in a low-risk area is a different product to that purchased in a high-risk area, and the two cannot be compared directly. However, what is important in this context is how much of the cost-reflective pricing is justified.

---

[48] Rodrigues, L. (2016) "Payday Loans: The Next Generation", StepChange
[49] Kempson, E., Ellison, A., Whyley, C., and Jones, P. A. (2009) "Is a Not-for-Profit Home Credit Business Feasible?", Jopseh Rowntree Foundation

4.10.2 Loyalty penalties

Like energy and communication providers, insurance providers use a pricing model where new customers are offered cheaper prices compared to existing customers. As with other markets, this requires customers to actively engage with the market to get a better price. The reasons for not engaging are also likely to be similar: inertia and putting off decision making, low internet literacy, not being aware of the possibility to change and not having the mental capacity to engage in decision making.

As referenced earlier, in its super-complaint response the CMA considered whether particular groups of consumers are more likely to pay a loyalty penalty in the five markets it investigated. In home insurance, the existing evidence base suggests that consumers on low incomes, who are elderly, or have a physical or mental health condition, may be less likely to switch providers and therefore may be more likely to pay a loyalty penalty as a result. [50]

4.10.3 Bulk purchasing

Certain types of insurance contracts such as motor insurance or house insurance are cheaper if paid for up front than when payments are spread over a longer period. It is likely that low-income customers are less likely to be able to afford these higher upfront costs, which could lead to a poverty premium.

4.10.4 Insuring specific items

General contents insurance typically covers a wide range of individual items such as white goods, mobile phones etc. It is also possible to purchase insurance contracts that cover these items on an individual basis. These contracts are often more expensive than covering the same items through general contents insurance, particularly if purchased at the point of sale. It is possible that low-income consumers are unable to afford general contents insurance, and instead purchase item-specific cover, which may give rise to a poverty premium.

4.11 Summary

This section outlined and summarised the current poverty premium literature by market. In the next section we outline the data sources available in each market and, based on this, identify where these differences can be practically measured and monitored.

---

[50] Competition and Markets Authority (2018) "Tacking the Loyalty Penalty: Response to a Super-Complaint Made by the Citizens Advice on 28 September 2018", Competition and Markets Authority . See chapter 4, paragraph 4.36 in particular.

5 Measurement of the poverty premium

In this section we discuss methods that could be used to measure the poverty premium.

We start by outlining how we would measure poverty itself. Then, for each of the key markets identified in Section 4, we outline what data are available to measure the prices paid in each market and whether this varies by income. Where data are available, we identify how this comparison would be made; where the data are not available, we describe the gaps and outline what form of primary data collection would be required to fill those gaps.

We have not proposed a single data collection exercise to collect price data across all markets since such an exercise would be exceedingly burdensome on the respondent.

5.1 Measuring poverty

Measuring the poverty premium in any market requires information not only on the prices paid by low-income and higher-income households, but also on household income itself. Adopting 60 per cent of median income BHC and AHC as our measure of 'poverty' has methodological implications. Households Below Average Income is calculated using data from the Family Resources Survey (FRS), a continuous household survey of over 19,000 adults per annum, with an average interview length of well over an hour and detailed questions on all income components.

Whether the poverty premium is being measured through a primary data collection exercise, or using existing data sets, it is very unlikely that the level of detail provided by the FRS will be available. This means that there will be the need to assess any potential data source for the quality of income information collected. If primary data collection is required for any markets, then a set of variables that enable the 60 per cent of median income BHC and AHC to be estimated will also be required.

5.1.1 Measuring poverty using existing data sets

There are a range of existing data sources, including both surveys and commercial data held by the Consumer Data Research Centre (CDRC), that are capable of shedding considerable light on consumer purchasing behaviour. However, to be used as the basis for calculating poverty premiums, these data also need to incorporate enough information to robustly and defensibly identify households in poverty. As with primary data collection, there is a balance to be struck between the desire for the most accurate measure possible and exploiting the value of the existing data. When reviewing existing sets, we will include an assessment of their ability to measure poverty in different household types, based on their inclusion of key data items:

- Household size and composition;
- Income from earnings (for all adults in household);
- Income from welfare benefits (for all members of household);
- Income from private pensions;

- Income from savings and investments;

- Income from other sources;

- Tenure; and

- Housing costs.

5.1.2 Designing income questions for any new data collection

As part of a project on the political and social attitudes of people on low incomes funded by JRF, NatCen developed a set of questions for the British Social Attitudes Survey that are designed to deliver a more robust way of identifying people in poverty without having access to the breadth of data provided by the FRS. This set of questions is included in Appendix A.

This year, we conducted analysis to test how this set of questions (and a smaller subset thereof – 'full set' and 'reduced set'[51]) performed against FRS and the standard approach to measuring poverty used in BSA. The results of this analysis are set out in Table 5-1.

Table 5-1 Comparison on proportion of households in relative poverty in FRS and BSA

	BSA 2017		FRS 2016/17
	Full set	**Reduced set**	
	In poverty	**In poverty**	**FRS 2016/17**
Family type	%	%	%
Pensioner couples	15	18	13
Single male pensioners	19	6	18
Single female pensioners	11	4	23
Couples with children	40	30	24
Couples without children	20	13	12
Single persons with children	44	56	48
Single males without children	24	13	26
Single females without children	20	10	25
All	25	20	22
Unweighted base	*1,998*	*2,602*	
Weighted base	*1,975*	*2,425*	

The analysis shows that the full set of questions providers a more accurate picture (i.e. is closer to FRS estimates) for some household types but not for others (differences are particularly large for single female pensioners and couples with and without

---

[51] The 'reduced set' used the standard BSA household income grid with additional questions on housing costs and disability.

children). More work is needed to understand why this is happening before this set of questions is adopted for other surveys.

5.2 Surveying low-income households

It is important that any data source that is used to measure poverty premiums is robust and representative of the UK population as a whole.

Given the focus on low-income households, it is particularly important that this group is well-covered. There are a number of reasons why people on low incomes can be inadequately represented in surveys:

- They are less likely to have access to the internet or to be regular users of the internet, which means that they are likely to be under-represented in online-only surveys;
- They are generally less trusting of, and less interested in the government and by extension survey requests, which means that more effort is required to persuade them to take part. This can be best overcome by using financial incentives and face-to-face or telephone interviewers.
- They are more likely to have disabilities and not to have English as their first language, which can make participating in surveys more difficult. Any survey therefore needs to provide accessible options for participation.

When reviewing existing survey data sources, we have only discussed surveys that meet these requirements and thus provide adequate coverage of low-income households. We have also kept these requirements in mind when suggesting new data collection.

5.3   Transport

In this section we outline what data are available to identify the prices paid by different income groups for transport. We then describe how we can use this information to identify like-for-like travel in order to compare the prices paid by low-income and comparator households for the equivalent travel options. Finally, we discuss the impact of substitution on transport options (i.e. where low-income households are forced to take less optimal forms of transport) and propose methods to measure this.

5.3.1 Data available

There is no single UK-wide source of information on travel. The most comprehensive data source for travel in England is the National Travel Survey (NTS). Survey participants are asked to keep a seven-day travel diary of any trips made, which includes origin, destination, purpose, time, mode of travel, ticket type and cost. The NTS includes information on the type of ticket. In addition, the Department for Transport (DfT) links price information to NTS data on season tickets. The NTS collects income in two steps. Respondents are shown a list of different sources of income and asked to name all their sources. They are then asked for the gross income from each source, collected as banded income.

In Scotland the Scottish Household Survey collects a one-day retrospective travel diary that includes information on travel by adults, including journey purposes, mode of transport used, distance and duration. It also collects household income. Similar information is collected in the Travel Survey for Northern Ireland, although this is less frequent. The survey was last updated in 2016.

However, there is no equivalent dataset in Wales. The National Survey for Wales collects limited information on active travel (walking and cycling) but no comprehensive information on travel is collected. New data collection is therefore required in Wales. This could be done by extending NTS to Wales. However, the cost of such an exercise (likely to be more than half a million pounds) may prove to be prohibitive.

Additional information could potentially be merged to the NTS to allow more complex investigation into the prices paid for travel in low-income and comparator households. The DfT collects information on the road network that can be downloaded. It also collates the Traveline National Dataset (TNDS). The TNDS contains public transport timetables for bus, light rail, tram and ferry services in Great Britain and their fares. Network Rail can provide information on rail services, although fare information may need to be provided by the rail companies themselves as they do not form part of Network Rail's open source data. Similar travel network information could be merged to the Scottish Household Survey and Travel Survey for Northern Ireland.

These matched datasets could be used to investigate the impact of substitution (where low-income households are using less optimal forms of transport), as the linked data would allow alternative options to be identified for any trips the respondent made. However, more investigation would be required to secure permissions from the data owners, practical issues around matching the data, and likely matching rates (and the impact of low matching rates on available sample sizes and sample bias). A large programming task would also be needed to calculate the alternative routes.

Missing information

The above datasets would allow us to compare the cost of travel but not enable us to understand the reasons *why* a commuter has made a particular choice, which means they cannot be used to understand the trade-offs made by consumers. The DfT regularly consults with stakeholders over content for the NTS. A new question could be proposed to collect this information. This question could either ask only about the main reason, or be multi-code and allow a range of reasons (with a follow-up question on main reason).

5.3.2   Measurement

Our review highlighted two main potential poverty premiums in transport: a premium due to bulk purchase discounts and a premium due to the affordability of the most efficient mode of transport. These premiums are both likely to be compounded by geography. The customer's engagement with the ticket purchasing process will also affect the prices they pay for transport; a less engaged customer will be less likely to purchase tickets in advance or online. The poverty premiums in this section focus on the differential prices available to low-income and comparator households due to bulk

purchasing and mode of transport. The measurement of these premiums is discussed in this section.[52]

Bulk purchase discounts

Our review identified a potential poverty premium due to bulk purchase discounts. This is the difference in price per trip when purchasing a daily ticket, rather than a season ticket, for a regular trip.

When considering the differences in prices paid, it is not sufficient to simply directly compare the amount spent on transport by low-income and comparator households, as the two groups have very different travel behaviour (as a consequence of their relative incomes). Similarly, we cannot simply compare the prices paid by low-income and comparator households for a specific ticket type, since the choice of ticket type is affected (and restricted) by the household's income. It is important to control for these differences in travel behaviour before prices can be compared.

One option would be to use Propensity Score Matching (PSM[53]) methods to control for differences in travel behaviour. PSM is a matching technique that is used in impact evaluations. It can be used to adjust the profile of a control sample (in this instance, the comparator households) to match that of the treatment sample (the low-income households) for a set of key characteristics (travel behaviour[54]). The aim is to make the two samples as similar as possible to ensure we are comparing like with like.

Once the two samples are matched, we would then calculate the differences in prices paid by the two groups. This value would reflect the premium paid due to having better access to a bulk buy discount, as this is the difference in cost that remains once the other differences in travel behaviour have been controlled for.

This method could be applied in England, Scotland and Northern Ireland as the National Travel Survey, Scottish Household Survey and Travel Survey for Northern Ireland each contain sufficient data to run the matching process.

Mode of transport

A second potential poverty premium is less straightforward to measure. This poverty premium is associated with mode of transport, where low-income households are

---

[52] There is a third transport poverty premium associated with higher costs of car ownership, namely high car insurance premiums. This is covered in the section on measuring the insurance premium.

[53] A specific form of PSM called kernel matching would be used. The first step of this method is to generate a propensity score for individuals making regular trips (both those in low-income households and those in comparator households). This propensity score is generated using a logistic regression model where the outcome variable is the household type of the individual (i.e. low-income household or comparator group) and the predictor variables are the various trip characteristics described above. The propensity score is the predicted probability that an individual belongs to the low-income household group, based on the characteristics of that individual. The score is a means of summarising the different characteristics of individuals in the sample; two individuals with the same characteristics and travel behaviour but in the two different household groups would have the same propensity score. The next step is to generate a set of weights based on the propensity scores. These weights, once applied to the data, will make the profile of the individuals in the comparator group match that of the low-income group on the key characteristics included in the model. The cost of travel can then be compared. We suggest testing the approach on NTS data first as it would be important to assess the robustness of the propensity model.

[54] Specifically, mode of transport, distance travelled, time of travel, duration of travel, trip purpose, co-travellers (i.e. travelling by self or with others), geography, age, gender, household type, etc. Any factor related to ticket pricing would be included, except for whether the ticket was a season ticket or not.

forced to substitute more optimal forms of transport with slower, less convenient forms due to cost.

This poverty premium is only an issue if the cost savings for the less efficient mode are not in line with additional time taken (i.e. if the reduction in cost was 50 per cent but the journey took three times as long).

To measure this poverty premium, we would need to identify the counterfactual i.e. what alternative modes of transport were available to each household. In Section 5.3.1 we outline the potential for linking survey data (which contains information about the actual trip made) to data from the wider transport network (which contains information about alternative options). This data could hypothetically be used to identify actual and alternative journeys and compare the costs of each.

MEASUREMENT OPTIONS

The potential poverty premium due to bulk purchase discounts can be measured using Propensity Score Matching which controls for differences in travel behaviour. The premium from substituting more expensive modes of transport with low cost, less convenient modes can, in principle, be measured by linking survey data to data from the wider transport network. However, more methodological work is required to confirm data access, permissions, and the likely match rates between data sources (which will impact on available sample size).

5.4 Recreation and culture

The recreation and culture market covers a wide range of products and includes expenditure on:

- Audio-visual equipment, such as televisions, CD players, DVD players, digital cameras, computers and tablets;
- Television subscriptions, such as Sky or Netflix;
- Computer games;
- Film development;
- Toys;
- Sports and camping equipment;
- Entry to leisure facilities and gym subscription;
- Garden equipment; such as plants, BBQ, seating, swings;
- Other major durables, such as musical instruments, boats, trailers, horses, caravans and campervans;
- Pets, pet food and vet bills;
- Tickets for spectator sport;
- Entry to cinemas and theatres;
- Gambling;
- Newspapers, books and stationery; and
- Package holidays.

The bulk of these products are covered in other sections of this report. The split is largely one of scale. More expensive items, such as audio-visual equipment, larger

items of garden equipment and other major durables are covered with household goods in Section 5.10, as the costs of these goods and the subsequent purchasing behaviour reflects that of other expensive bulky household goods. Smaller items, such as computer games, film development, smaller toys, sports and camping equipment, smaller garden equipment, newspapers, books and stationery, pets and pet food would be covered alongside food, groceries and clothing in Section 5.7, since the types of store visited and the purchasing behaviour will be very similar. In addition, television subscriptions are included in telecoms in Section 5.9, specifically this covers the higher subscription costs for consumers who cannot afford 'bundles'.

What remains is entry to leisure facilities and gym subscriptions, tickets for spectator sports, entry to cinemas and theatres, gambling and package holidays. As discussed in Section 4.2, there may be bulk purchasing discounts within these markets; for example, season tickets for spectator sports and memberships for theatres and cinemas will attract a premium, however it would be very difficult to control for the desire for regular attendance (or lack thereof). In other areas, such as package holidays, the main factor for low-income households is around market exclusion, rather than differential costs. For these reasons, and due to the fact these sub-markets make up a small proportion of overall expenditure, these sub-markets have not been pursued further.

5.5 Housing

In this section we outline what data are available to identify the price paid for housing by low-income and comparator households. We then describe how we can use this information to compare the prices paid for private renters and owner-occupiers for equivalent accommodation. Finally, we discuss the more complex approach needed to investigate risk-based charges in the rental market due to Housing Benefit no longer being paid directly to landlords.[55]

5.5.1 Data available

The European Union Statistics on Income and Living Costs (EU-SILC) collects annual information on 7,500 households and covers the whole of the UK. EU-SILC contains 'timely and comparable cross-sectional and longitudinal multidimensional microdata on income, poverty, social exclusion and living conditions'.[56] EU-SILC contains detailed information on household income, dwelling type, tenure and the amount paid for rent or mortgage payments.

EU-SILC is used to compare rates of housing affordability across the 28 member states. Unaffordability is defined as spending more than 40 per cent of the household equivalised income on housing. The data show that unaffordability is highest among private renters (35 per cent of private renters were in unaffordable housing in 2016) and lowest for persons in owner-occupied dwellings with a loan or mortgage (four per cent).[57]

---

[55] There is also a potential housing premium related to higher cost of contents and building insurance. This will be covered in the section on insurance markets.

[56] Eurostat (2018) "European Union Statistics on Income and Living Conditions (EU-SILC)", Eurostat

[57] Eurostat (2018) "Housing Cost Overburden Rate by Tenure Status, 2016 (% of Population)", Eurostat

EU-SILC includes a measure of imputed rent. This is a derived variable described in the EU-SILC user-guide as 'the value that shall be imputed for all households that do not report themselves as paying full rent, either because they are owner-occupiers, or they live in accommodation rented at a lower price than the market price, or because the accommodation is provided rent-free'.[58] It incorporates information on the mortgage, housing type and minor repair costs (of the type that would normally be carried out by landlords). It excludes information on utilities or repairs leading to improvement. However, it should be noted that imputed rents rely on complex models; hence we recommend that the imputed rents are reviewed periodically to ensure they are fit for purpose.

Imputed rent is derived for all households in EU-SILC that do not pay full rent. If a household is in the private rental sector and paying full rent, then their imputed rent would simply be the equivalent value. However, an owner-occupier household would likely have an imputed rent *higher* than their actual mortgage payments, since mortgage costs tend to go down over time and are generally lower than their equivalent rental costs. Hence for each household in EU-SILC it will be possible to identify their actual housing costs and equivalent imputed rents; therefore, it will be possible to calculate the cost savings due to being an owner-occupier and compare these costs saving by household income.

The inclusion of imputed rent and UK-wide coverage of EU-SILC mean it is more suited for price comparisons than other housing surveys, such as the English Housing Survey; this collects comprehensive and detailed information about the conditions and costs of housing in England. However, the survey does not have full coverage and would require a measure of imputed rent to be derived from scratch.

The ONS has committed to EU-SILC going forward,[59] which means the data should be available to monitor over time. Although it should be noted that this is an EU study and Britain's departure from the EU may impact on this.

Specific data on private landlords

The Private Landlords Survey (PLS) could potentially be used to investigate whether there are additional costs charged by private landlords to offset perceived risks associated with Housing Benefit being paid to the tenant, rather than paid to them directly. This move in payment method is linked to the roll out of Universal Credit.

The PLS was commissioned by the Ministry of Housing, Communities and Local Government and collects information from around 6,000 landlords and 2,000 agents in England. The survey gathers data on renting properties to tenants in receipt of benefits, as well as income. One difficulty is that the questionnaire groups Housing Benefit, Universal Credit and Local Housing Allowance into a single category, so it could not be used to look at the specific impact of the roll-out of Universal Credit.

---

[58] More information on the derivation of imputed rents can be found here: Eurostat (2017) "The Distributional Impact of Imputed Rent in EU-SILC 2007-2010: 2013 Edition", Eurostat.
[59] Office for National Statistics (2018) "Transformation of the ONS Household Financial Statistics: ONS Statistical Outputs Workplan, 2018 to 2019", Office for National Statistics

However, the PLS does ask whether any current tenants are in receipt of benefits and whether these are paid directly to the landlord or whether they go to the tenant. It also collects information about the types of tenants a landlord or agent would not be willing to let to, including people in receipt of Housing Benefit, Universal Credit or Local Housing Allowance (again grouped into a single category). There are follow-up questions for those who selected this group, asking why they are unwilling to let to these tenants and then what might encourage them to do so. Finally, the PLS collects information on whether there has been any change in the size of rents for different tenancies on the same property and the reasons for this.

The PLS covers England only and there is no directly equivalent survey in Scotland or Northern Ireland (although a similar study is due to be commissioned in Wales), meaning there are information gaps.[60]

5.5.2   Measurement

Private rents vs. mortgage payments

We look first at comparing private rents against mortgage payments. This calculation could potentially become very complicated if treated as a lifetime cost, given that there are large cohort effects in mortgage costs, and the current payment will depend on the size of the initial deposit, and the length and type of mortgage. There are also quality differences between the types of property that are bought or rented.

For practical reasons we therefore suggest a comparison of current costs. This would involve a direct comparison between the current rental value and the current typical mortgage costs for the same house, which circumvents issues of age cohorts, mortgage type, location and housing quality, since comparisons are made on same property.

EU-SILC contains the information needed for this comparison. For each private renter and owner-occupier households in EU-SILC it will be possible to identify their actual housing costs and equivalent imputed rents. The difference in costs (imputed rent minus actual housing costs) represents the cost savings due to being an owner-occupier. This would allow for a comparison of the cost savings for low-income and comparator households.

Benefit receipt-related premium

There may be a risk-based poverty premium associated with the method by which benefits are paid to private landlords. The Private Landlords Survey could be used to investigate whether landlords are more reluctant to rent to benefit claimants in situations where the benefit is not paid directly to the landlord, and, if this is the case, whether landlords are likely to attach extra costs to this. If there is evidence of this

---

[60] Prior to any new data collection, an initial investigation should be carried out to identify whether the hypothesised risk-based premium actually exists; whether the data collected by PLS can be used to identify whether landlords are more reluctant to rent to benefit claimants in situations where the benefit is not paid directly to the landlord, and whether they are likely to attach extra costs to this. This analysis will also indicate whether the sample size in the PLS is sufficient to measure the cost of the poverty premium due to payment of benefits to landlords, which would allow a new UK-wide survey of private landlords to be designed and costed.

hypothesised behaviour, then the PLS could be used to compare the values of rents paid by each group.

This will need to be reviewed when the PLS data are available, since the analysis will depend on the sample size of landlords with tenants on benefits. 2018 survey has now finished and the data will be available from the UK Data Service for analysis later in 2019.

MEASUREMENT OPTIONSS

The main source of data for comparing housing costs is the European Union Statistics on Income and Living Costs (EU-SILC). EU-SILC collects detailed information on income, tenure, dwelling type and housing costs from 7,500 households annually across the UK. Importantly, EU-SILC includes a measure of imputed rent. This is a derived variable that gives the imputed rental costs that a household would pay for their home. It is derived for all households that do not pay full rent, which includes owner-occupiers.

EU-SILC contains all the information required to calculate and monitor any **poverty premium due to private rental costs**. For each private renter and owner-occupier household in EU-SILC it will be possible to identify their actual housing costs and equivalent imputed rents. The difference in costs (imputed rent minus actual housing costs) represents the cost savings due to being an owner-occupier. These cost savings could then be compared for low-income and comparator households. This could be carried out annually.

However, it should be noted that there is a risk of EU-SILC changing after the UK leaves the EU. In addition, we suggest that the imputed rents are reviewed periodically to ensure they are fit for purpose.

There is a second, hypothesised **premium due to benefit receipt.** The Private Landlord Survey could be used to investigate whether there is evidence that this hypothesised premium exists; whether landlords are more reluctant to rent to benefit claimants in situations where the benefit is not paid directly to the landlord, and, if there is evidence, whether landlords are likely to attach extra costs to this and what proportion of landlords are involved. If the premium exists then a bespoke survey of landlords in the UK would be required to measure and monitor this. It should be noted that the information about what proportion of landlords are affected is needed in order to design (and therefore cost) a bespoke survey.

5.6   Household energy and water

Household energy premiums could be measured using a mixture of desk research, and survey data. Below we outline the various data sources required to compare prices and then specify how each of the premiums will be measured.

5.6.1 Data available

The Living Costs and Food Survey (LCF) is an annual survey of 5,000 households that collects detailed information on income and household expenditure. The survey is run

by the Office of National Statistics and covers the whole of the UK. The LCF collects information on pre-payment meter usage, the use of direct debit and electronic billing. It collects information on household energy bills and other utilities, including water. However, it does not include information on specific tariffs, the current fuel provider and recent switching behaviour. One option would be to liaise with the Office of National Statistics about the feasibility of including these questions. Switching behaviour has a big impact on the prices that households pay, hence collecting this information should be viewed as a priority over other potential additions to the LCF.

Energy consumption is not included in the LCF, but it is doubtful that consumption could be accurately recorded in a survey. We therefore do not suggest collecting data directly from respondents on consumption, and the LCF should not be extended to include this.

In addition to the survey data, desk research will be used to identify the available products and their associated costs. For example, they would be used to identify the cost of a typical standard variable tariff (SVT) and the cost of the cheapest available equivalent, and to identify the costs of paying by direct debit, versus other methods. The required information could be sourced using online comparison sites, a task which should not take more than a few days to complete.

5.6.2 Measurement

The mechanisms that can be expected to lead to household fuel poverty premiums are:

- Not being on the cheapest tariff; and
- Having a pre-payment meter.

The same basic methodology applies to the measurement of each premium:

1. Desk research will be used to identify the available products and their associated costs. The required information for each of the potential premiums will be available on online comparison sites.

In order to collect information on available tariffs, an appropriate household type would need to be selected that could be used as a benchmark for comparison. This could be a typical low-income household of average size.[61] An alternative would be to take a range of household types (family home, single person flat, pensioner household, etc.) and investigate costs by household type.

Typical values of fuel consumption would also be needed. These could be based on the most recent version of Ofgem Typical Domestic Consumption Values. This gives typical values for low, medium and high rates of usage. It would not be appropriate to base the comparison on the lowest levels of fuel consumption only as low users can be impacted separately through the imposition of standing charges. To avoid this, the comparison should be based on tariffs that assume medium usage or should be carried out for all three categories of usage and the average taken.

---

[61] Davies, Finney, and Hartfree (2016) used a customer address based in a deprived area for their comparison of fuel costs to have a figure closer to the value paid by a low-income household.

2. Survey data would then be used to identify the relative proportion of low-income and comparator households that incur each of these costs. The availability of survey data for each of the poverty premium mechanisms is discussed below.

- **Not being on the best tariff** – to measure this we would need the proportion of low-income and comparator households on SVTs to estimate the relative proportion of households that will pay this cost. The LCF does not ask directly whether a household is on a SVT (possibly because many households would be unlikely to know, leading to poor data quality). However, the LCF does contain detailed information about payment type, cost, period covered, and housing type. It may be possible to estimate the proportion indirectly, although the survey is missing information on consumption, recent switching and the fuel provider, which would otherwise have helped this, hence this is not recommended. There are no other data sources that collect this information.

- **Costs of having a pre-payment meter** – the LCF collects whether or not a household is on a pre-payment meter, although it does not collect the specific tariff. This data could be used to identify the proportion of low-income and comparator households with pre-payment meters. This would allow us to work out the relative proportion of low-income and comparator households that pay additional costs due to being on a pre-payment meter. However, we would be unable to identify any additional costs associated with specific pre-payment tariffs.

There may be some savings if the household pays for gas and electricity together. We could use the LCF to identify what proportion of households use the same provider for both (as this may vary for low-income and comparator households). We would then use the price comparison websites to investigate the scale of the savings. If there was evidence of differential use of combined bills between low-income and comparator households, and evidence of differential rates of saving, then we would recommend calculating the poverty premium separately for households that received separate bills and households that receive combined bills. Rates of dual fuel billing can be taken from the LCF. This could be done for each of the premiums.

It may also be possible to include measures of actual consumption, rather than basing the rates of low, medium and high usage on Ofgem typical rates which assumes low-income and comparator households have same rates of usage. However, it is unclear how accurately consumption would be recorded in a survey. In addition, a household's usage will be a reaction to the cost (a low-income household may avoid using fuel if they are struggling with bills), so actual usage may be a poorer measure of the premium.

MEASUREMENT OPTIONS

The best source of survey data to measure household energy costs is the Living Costs and Food (LCF) survey. This collects detailed information on income, pre-payment meter usage, not using direct debit and electronic billing. It includes information on costs of all utility bills, including gas, electricity and water. However, information is lacking on the exact tariff, current fuel provider and recent switching behaviour.

Without this information it is not possible to calculate the **poverty premium associated with being on a standard variable tariff**, since it is difficult to identify which households are on such a tariff. It is also not possible to calculate costs associated with different types of tariff *within* different product types, for example, different tariffs of pre-payment meter, different tariffs with direct debit payment, etc.

This information would need to be added to the LCF to be able to accurately calculate the poverty premium due to being on a standard variable tariff. This premium affects a large number of low-income households, which means adding this information to the LCF should be a priority over the addition of other questions.

This lack of information on the exact tariff means only 'blunt' comparisons can be made for the **poverty premiums due to having a pre-payment meter** and **not using the most cost-effective method of payment**. This would involve comparing the different proportions of low-income and comparator households that do and do not have a pre-payment meter, pay by direct debit, and using information collected during desk research on available tariffs to calculate the average costs associated with this. These comparisons could be made using existing data from the LCF and by using online consumer comparison sites to identify the average prices for different types of tariff.

5.7   Food, groceries, clothing, footwear and smaller household items

In this section we identify what data are available to measure the prices of food, groceries, clothing, footwear and smaller household items.

These markets have been grouped together because our review identified the same enabling factors in each market, namely that having access to a range of suitable low-cost goods means low-income consumers can choose products that best suit their needs.

As described in Section 4, the food and groceries market has been widely explored in the literature. These studies suggest that, *for a given store type and location,* there was no evidence that the prices paid vary between low and higher-income consumers. The factors that enable low-income consumers to successfully engage with the food and groceries market, namely, the low barriers to entry (goods are relatively cheap), ease of navigation and physical dimension (low-cost goods can be attained in person, not just online), may have implications elsewhere. The main driver of poverty premiums in these markets was therefore a lack of access (either physical or online) to a choice of low-cost goods. As a result, this section focuses on how to measure the poverty premium due to access issues. It does not look at the measurement issues around comparisons of like-for-like purchases and the many issues around establishing equivalence; this is discussed fully in Appendix B. In Section 4.5 we highlight the body of work investigating the prices paid by low-income and comparator households for the same food and grocery products and note that there is ongoing work being carried out by IFS that will be of interest to the CMA.

5.7.1 Data available

In order to measure access issues, it was important to identify a large-scale survey that collected information on both physical and online access to shops, in addition to income and location.

The Labour Force Survey, Living Costs and Food Survey and Survey of Living Conditions all collect some information about internet access (although nothing specific about online purchases), and each have detailed information on income, however none collect detailed information about physical access. The Wealth and Assets Survey does not include information on internet access. The British Population Survey collected this information but has not been updated since 2015.

The preferred option is the National Travel Survey (NTS). This collects information about trips made to local shops (frequency, mode of transport, length of time taken) as well as questions about food deliveries and internet shopping. These questions were included by the Department for Transport (DfT) to assess the impact of online shopping on people's need to travel. The questions indicate the general type of item purchased and the frequency. The NTS does not include prices paid for these items, but the proposed methodology does not require actual prices paid by individual households. The NTS data will be used to identify differential levels of physical and online access to shops; commercial data will be used to identify the prices associated with those shops.

The NTS allows us to identify households who say they have access issues due to poor public transport, but it does not allow us to identify where they would have preferred to shop. In addition, the idea of 'access' is very specific to households: two households could be in the same location, with the same access to transport, but the specific circumstances of one household (i.e. health issues) mean the access issues for the two households are very different. Our suggested methodology ignores this level of detail in order to propose an approach that, for practical reasons, is less complex.

The NTS collects income but the question is not very detailed (banded income is collected), in addition the survey covers England only. Similar surveys are available in Scotland and Northern Ireland, specifically the Scottish Household Survey and the Travel Survey for Northern Ireland. However, a bespoke survey would be needed to collect comparable data in Wales.

The Kantar World Panel and Consumer Data Research Centre (CDRC) contain the transactional data required for the analysis. These data sources will be used to identify the average prices associated with different locations and different types of store. They can also be used to identify the relative prices of goods if purchased online or in store. It should be noted that there will be access requirements (specifically for the CDRC data where the transactional data will need to be merged to survey data) and cost implications associated with using commercial data.

5.7.2   Measurement

To investigate the poverty premium, we would need information about different rates of access, both online and physical, for low-income and comparator households. This

would need to be used in conjunction with information about differential pricing for online and shop-based goods, and by location.

We suggest using the following steps to measure any premiums:

- The price comparisons would be made on a theoretical basket of commonly purchased food, clothing and footwear items. The choice of items in this basket could either be guided by an analysis of purchases made on the Living Costs and Food Survey, by looking at which items appear in the Consumer Price Index or using the Minimum Income Standard (whilst the proposed approach does not require these items to be commonly purchased by both low-income and comparator households, having some degree of overlap will improve the credibility of the measurement).
- Transaction data (from the CDRC) will be used to identify the relative prices of goods purchased online or in store. We envisage many online sites and stores would be used and the average price taken.
- Survey data would be used to identify what proportion of low-income and comparator households would **potentially** purchase online goods (i.e. the relative proportions of low-income and comparator households who shop online).[62]
- We would then compare the prices available to the two groups of households. For example, if the average cost of purchasing the basket in physical stores was £100 and the average online cost was £90, if the relative proportions of low-income and comparator households purchasing goods online was 70 per cent and 80 per cent (assuming all remaining households are forced to purchase the basket in physical stores) then the total cost paid by 100 low-income households for the basket would be £9,300 and the total cost paid by 100 comparator households for the basket would be £9,200, indicating the additional cost paid by low-income households due to lower rates of online shopping is £100 (i.e. £1 per household). There would need to be large differences in price between online and physical stores, and in the rates of online access for this premium to make a large impact.

This approach bases the comparison on the cost of purchasing a theoretical basket of goods. Using a theoretical basket, rather than actual prices paid, also gets around issues caused by households substituting branded goods for cheaper versions and where households avoid buying goods altogether. It also means we do not need information about actual purchases made. Using a theoretical basket of goods and by basing the measurement on the potential to purchase, means the difference in price is solely due to differential rates of online access.

Ideally, we would want to look at online access and physical access together, as the impact of poor internet access is smaller if a household has good physical access, and vice versa. This method could therefore be extended by basing the physical prices on stores that are local to the low-income and comparator households, and identifying the

---

[62] This will be a better indicator of online access than simply taking the relative proportions of low-income and comparator households who have internet access as it takes account of differential rates of digital capability, broadband quality, security and confidence in online shopping.

proportion of low-income and comparator households that have both online access and good physical access. This could be done using the methods outlined below.

Comparing prices by **physical access** is trickier as physical access is harder to define than online access. We suggest two approaches, which could potentially be used in conjunction with each other. However, there are shortcomings with both, which we outline below. Both approaches aim to avoid issues of overlap, so are again based on a theoretical basket of goods.

The two methodologies below could be used for both food and groceries and clothing and footwear, however, physical locations for shops selling these items will vary, and hence the analysis for each should be carried out separately.

The first approach can be used to provide additional evidence. Here we would make a comparison based on the different store types accessed by low-income and comparator households. Data from the Kantar World Panel could be used to get the average cost of the theoretical basket of goods in different types of stores. The same data would be used to identify what proportion of low-income and comparator households use each store type (Kantar World Panel includes equivalised household income, hence it could be used to identify the store types commonly used by low-income and comparator households). The premium would then be calculated as the difference in the total amount paid for the basket by a theoretical number of low-income and comparator households. Hence if we assume there are 100 low-income households and 100 comparator households, each purchasing the theoretical basket of goods. The basket costs £15 at a convenience store but only £10 in out-of-town store. If the World Panel data indicates that 50 per cent of the low-income households mainly shop at convenience stores and 50 per cent at out-of-town stores, the total cost paid by the 100 low-income households is £1,250. However, if the World Panel data shows that only 25 per cent of the comparator households shop mainly at convenience stores and the rest at out-of-town stores, then the total cost paid by the 100 comparator households is only £1,125. The premium would be the difference between the two. This is a simplified example for the purposes of demonstration. The approach could be refined to account for the fact that there will be a range of store types accessed by each low-income and comparator household, and the fact that some goods, such as milk, are more likely to be purchased locally than others.

In addition, the data does not identify whether the low-income household was *forced* to shop in the convenience store specifically due to access issues. It assumes that, where possible, a household would always choose to access the store that gives most value for money. Despite these shortcomings, the analysis would enable us to quantify the additional costs due to disproportionate use of convenience stores.

The second approach uses data from the NTS. This approach attempts to take into account differences in travel behaviour by income group. The NTS travel diary collects detailed information about travel behaviour and can be used to identify all trips made by low-income and comparator households for shopping. The diary data can be used to identify the location of shopping areas used by each household type.

We would then match on the average cost of the theoretical basket of goods for shops in those shopping locations. CDRC transactional data could be used to identify prices

for the theoretical basket of goods, which could be aggregated to small regional levels to get average prices by location.[63] The matched data would allow us to compare the median cost of the theoretical basket of goods in areas accessed by low-income and comparator households. The difference in price would be the poverty premium. We expect it to reflect inequalities in access. The shortcoming of this approach is that it is based on the average prices in the shopping location, rather than the actual stores accessed by low-income and comparator households. In addition, there are uncertainties around data access. Despite that, this approach could be a useful indicator of the difference in average prices available to the two household types.

The NTS also collects information about internet shopping, as the DfT is interested in the impact of online shopping on people's need to travel. It would therefore be possible to incorporate rates of online access into this measurement, i.e. the measurement could be carried out separately for households with and without online access.

MEASUREMENT OPTIONS

The food, groceries, clothing, footwear and smaller household items markets have been grouped together because the same enabling factors were identified in each market, namely that having access to a range of suitable low-cost goods means low-income consumers can choose products that best suit their needs. The main driver of poverty premiums in these markets is likely therefore to be a lack of access (either physical or online) to a choice of low-cost goods.

Two areas were identified where low-income and comparator households may pay different prices for food, groceries and similar items. Suggestions for these two areas are set out below:

1. Understanding whether differential prices are paid for the same products by low-income and comparator households

The analysis, carried out by the Institute of Fiscal Studies using data from Kantar World Panel to measure differences in the prices paid for food and groceries by household income, should be repeated regularly to check whether a premium has emerged.

2. Understanding whether the poverty premium arises due to poor access to online or physical shops

The poverty premium related to access to online shopping and low-cost shopping stores can be measured using Kantar World Panel data to investigate differential pricing by store type. However, this measure does not take into account differences in travel behaviour by income group. For that reason, an alternative measure is also proposed that uses a mixture of information on store locations and transactions from the Consumer Data Research Centre and data from the National Travel Survey on household income, shopping trips and online access. This analysis could be carried out

---

[63] This data is currently only available in an anonymised form, so there may be access issues which cannot be clarified at this point. In addition, any application process is likely to be lengthy, but again, it is not clear at this point.

in England, Scotland and Northern Ireland; however, the required information is not collected in Wales and additional data collection would be required.

Physical access to reasonably priced goods is not straightforward to measure. The suggested methodology is therefore complex. Measurement could be improved by including a question on NTS to capture where households would prefer to shop.

5.8   Clothing and footwear

The clothing and footwear markets have been incorporated with food and groceries in Section 5.7 due to similarities in the mechanisms of the poverty premium. The same methodologies can be applied to both markets.

5.9   Communications

In this section we identify data sources that contain information on household income and expenditure on communications products. We then identify approaches for measuring differences in prices paid by low-income and comparator households.

5.9.1 Data available

As with the household energy market (in Section 5.6) desk research could be used to collect information about available products and their associated costs. This could be carried out using online comparison sites. As with the household fuel market, some consideration would be needed to identify a typical level of usage to use as a benchmark for comparison. This could be done using desk research (i.e. what rate of usage is the typical product designed for), or this information could be gathered from the providers themselves.

Survey data would then be used to identify the relative proportion of low-income and comparator households that incur each of these costs.

The Living Costs and Food Survey (LCF) collects annual data from 5,000 households across the UK. It collects detailed information on household income and a wide range of data on communications packages, including information about combined payments (packages including phone, TV subscription, internet), including the method of payment of the combined package (direct debit, standing order, payment on receipt of the bill by post, telephone, online or at bank/post office), name of provider and the cost of the package and cost of individual services.

Data gaps

There is a data gap on the length of contract or recent switching behaviour. Questions about contract length and when the individual last switched providers or renewed the contact could be added to either the LCF or the Financial Lives Survey (FLS) to allow any poverty premiums to be estimated. Switching tariffs has a big impact on the prices paid by different households. This information would be an important addition to the questionnaire and allows measurement of whether there is any premium due to not switching communication providers.

5.9.2 Measurement

The communications market comprises telephone services, internet services and telephone equipment. Our desk research on the market identified the following possible premiums in the communications market:

- Not changing to a cheaper deal; and
- Not paying by direct debit.

Measuring the cost of not switching to a cheaper deal is not possible as no existing data source contains data on household income, expenditure on communications packages and recent switching.

Desk research would be used to identify the difference in cost for **direct debit payments** compared to equivalent tariffs without these payment features. Data from the LCF could then be used to identify the proportion of low-income and comparator households who use these forms of payment.

There is also a potential for households to make **cost savings from purchasing communication and entertainment packages** as part of a 'bundle'. A household will get discounts for receiving their television subscription, broadband and mobile services from the same provider. This information is collected by the LCF. It could be used with corresponding desk research to identify available packages, and can be used to identify the differences in costs incurred by low-income and comparator households from buying their services separately or as part of a combined package.

MEASUREMENT OPTIONS

The Living Costs and Food Survey (LCF) contains detailed information on household income and a wide range of data on communications packages. This information could be used to calculate the relative proportions of low-income and comparator households that do not use direct debit and make cost savings from purchasing communication and entertainment packages as a 'bundle'. However, it cannot be used to calculate the cost of not switching tariffs – this cannot be estimated as questions on switching and length of contract are not included in the LCF. Additional information would need to be collected in LCF to allow these costs to be calculated.

Switching tariffs has a big impact on the prices paid by different households. This information would be an important addition to the questionnaire and allow measurement of the poverty premium due to not switching communication providers.

The information that is presently collected in LCF could be used in conjunction with market data on available tariffs and their associated costs to estimate the costs incurred by different households due to not using direct debit or purchasing communication and entertainment packages as a 'bundle'. The market information would be gathered using desk research; this would involve using online consumer comparison sites to identify the prices for different products.

5.10 Household appliances and electrical items

This section includes household appliances and audio-visual equipment, such as computers, tablets, televisions and digital cameras. We set out the data required and then explain the method needed to compare prices paid by low-income and comparator households.

5.10.1 Data available

Data are required on prices and attributes for various goods, such as washing machines, tumble driers, fridges, televisions, computers, etc. The attributes are the features of each specific product type. For example, the attributes for a computer would include processor speed, the size of the hard disk drive and the amount of memory, the attributes for a washing machine would include spin speed, capacity, child locks, noise, energy use, etc. This information would need to be collected for both historic and currently available goods, since they would need to cover purchases made in the last 12 months.[64] It can be collected using desk research. Household appliances and electrical goods are rated and tested by companies such as Which?, hence one option would be to use the reviews to identify relevant attributes for different products.

In addition to pricing information, we would also need survey data that records the make and model of the items owned (purchased) by different households. Knowing the make and model of the items would allow us to link it to the features of each make and model identified through earlier desk research. It would be important to also know whether the household purchased the item new or acquired it second-hand. We would also need to know how much the household paid in total (if, for example, they had paid in instalments). Currently no existing survey collects this information.

One approach would be to have additional questions added to the Living Costs and Food Survey. This survey currently collects information on cost but does not collect details on the exact attributes of the durables purchased. However, this could potentially be a large number of additional questions, which is harder to accommodate than the single questions suggested for some of the other markets.

We therefore propose new data collection to get the detailed information required on the various household appliances and audio-visual equipment. More detail and costings for this are given in Section 5.13.

5.10.2 Measurement

Our desk research identified poverty premiums for household appliances and audio-visual equipment due to high-cost credit (which is covered in the financial services section) and lifetime costs due to substitution, which is discussed here. Substitution is

---

[64] Where possible it would be preferable to use the information collected by other research companies, since a wide range of detailed information would be needed (more so than other markets) and it would be time-consuming and expensive to collect from scratch. The ONS uses a contractor to collect prices for CPI . The Kantar World Panel does not comprehensively include these goods and could not be used to access these prices. Consumer Data Research Centre contains transactional data for online goods and in store purchases but information on attributes would still need to be matched in.

addressed with respect to this specific market due to the high cost of the goods involved.

The same methodology can be applied for both household appliances and electrical items. We recommend that further consideration is given to using hedonic regression to identify whether low-income households pay more than comparator households for the same quality audio-visual equipment and household appliances.

The ONS uses hedonic regression[65] to compare prices for electrical goods for the CPI. The approach is used to compare the cost of items where there are obvious and measurable quality differences. The approach involves running a regression model to identify the relationship between the attributes and price. The model outcome is price and the various attributes would be included as predictor variables. The model is run using data collected from desk research on available products. It involves modelling the relationship between the various attributes of an item and its price.

The model, which has been generated using the price data, is applied to the survey data. The model can be used to generate the expected price for the goods purchased by the low-income and comparator households. So, for each household, we would know the actual price paid and the price that the model indicates is fair, given the specific attributes of the purchased item. The difference in the actual and modelled price will be calculated for both low-income and comparator households. The difference paid in additional costs for the low-income and comparator households is the poverty premium.

This approach identifies the total additional amount that low-income households pay for these appliances, in the financial services section (Section 5.11) we discuss methods used to identify the poverty premium specific to different sources of finance.

MEASUREMENT OPTIONS Measuring the differences in prices paid for large household goods and electronic items is not straightforward. This is because these high-cost durables have a lifetime cost associated with them due to substitution; where low-income households may purchase cheaper items that need replacing sooner.

The recommended approach therefore includes complex modelling. Hedonic regression is an approach that could be used to establish how the price of the product relates to each of its different features (for example, the cost of a computer would relate to its processor speed, the size of the hard disk drive and the amount of memory). The model would identify the additional unit costs of each feature.

A significant amount of desk research would be needed to collate information on the price and available features of different types of household goods that would be needed for the modelling.

In addition to the information on prices and features, survey data would be needed to collect exact attributes of the items purchased by different households. It would be important to know whether the household purchased the item new or acquired it second-hand. We would also need to know how much the household paid in total (if, for example, they had paid in instalments). The household income is also required.

---

[65] For more information see Office for National Statistics (2014) page 28-51

Currently no existing survey collects this information. Bespoke data collection would be required.

The model, which would be generated using the information on prices and features, would be applied to the survey data and used to generate the expected price for goods purchased. The premium is measured as the difference in actual and modelled prices paid by low-income and comparator households.

5.11 Financial services

This section covers data and methods to measure any poverty premiums due to access to cash and access to credit. Firstly, we outline the available data, and then the measurement of each form of finance is addressed in turn.

5.11.1 Data available

The main sources of data on finance are the Financial Lives Survey (FLS) and the Living Costs and Food Survey (LCF).

The FLS is a survey that collects detailed information about the income and finances of around 13,000 individuals across the UK (although the data can also be weighted to provide robust household-level estimates). This includes information on the use of pre-paid plastic cards in the last 12 months and information on the number and type of loans, including payday loans (FLS asks about monthly payments needed to service those loans but not the total amounts borrowed or repaid).

The LCF collects annual data from 5,000 households across the UK. It contains detailed information on household income and forms of payment for a range of consumer durables, including rent-to-own and mail order catalogues. The LCF collects information about total loan amounts and recent payments but does not include a detailed breakdown by loan type. This means high cost loans (such as payday loans, doorstep loans and pawnbroker loans) cannot always be identified as the respondent would have had to select 'other' loan type and self-report the specific type of loan. We therefore expect some misclassification and under-reporting. We suggest benchmarking the rates of self-reported users of payday loans against FLS (where information on payday loans is collected as a distinct category) to check for under-reporting.

The large sample size of both surveys means there will be sufficient sample for both low-income and comparator households. In addition, both surveys are annual, which allows ongoing monitoring.

In addition to the survey data, a range of market data would be required to measure and benchmark differences in prices. This includes:

- An estimate of average charges for fee-paying ATMs (an up-to-date value can be obtained from Link);

- The average charges for cashing cheques, which could be collected from main providers, such as The Money Shop, Money Station and Cash Converters;

- An estimate of average charges from typical providers of pre-paid plastic cards. There are many different schemes available across a range of providers. This could be collected using online desk research;

- An estimate of average prices paid for a typical product(s) in a general store, such as Argos or Tesco, and the price that would be paid in a typical rent-to-own store, such as BrightHouse or Perfect Homes; and

- An estimate of typical repayment rates for various high-cost loans, mail order schemes, hamper schemes and other forms of high cost credit. These could be collected using online services, such as Money Saving Expert.

Data gaps

There are a number of data gaps. Neither survey (nor any other robust data source) contains information on usage rates for fee-charging ATMs and for cashing cheques. There is also no data available on the proportion of households using Christmas hamper schemes. However, the number of households using these services is relatively low, which implies this information need not be a priority.

One option would be to extend either the LCF or FLS and add questions on whether households have used fee-paying ATMs and cheque cashing services in last 12 months, plus the frequency. In addition, information would also need to be collected about typical amounts cashed by cheque. Information about the use of hamper schemes as a specific saving category could potentially be added to the LCF saving module.

5.11.2 Measurement – access to cash

This includes any poverty premiums due to charges for using cash machines, charges to cash cheques, and the fees associated with pre-paid plastic cards.

It is not currently possible to measure the poverty premium associated with **charges to cash machines**. To do this would require an estimate of average charges (obtained from Link) and an estimate of the rate of usage by low-income and comparator households (note, charges are made per use and not linked to the amount withdrawn). However, there are no robust data available on rates of usage by income.

Neither is it possible to measure the poverty premium due to **charges to cash cheques**. To measure this would require an estimate of average fees charged by providers (fees for these services are typically linked to the face value of the cheque, so an estimate of the typical amount cashed and the frequency would also be needed).[66] An estimate of rate of usage for both low-income and comparator households is also needed, however, no robust data source currently collects that information.

It is possible to estimate whether there is a poverty premium for **pre-paid plastic cards.** It would require the collection of average charges from typical providers, plus an

---

[66] Although this can be circumvented by using a theoretical amount for comparison. Davies, Finney, and Hartfree (2016) based their costs on cashing three cheques of £100 per year.

estimate of the proportion of low-income and comparator households who use these cards. This information can be obtained from the FLS, which collects information on frequency of use of pre-paid cards in the last 12 months.

5.11.3 Access to credit

This includes whether there are poverty premiums in a range of sources of high cost credit:

- Rent-to-own for the purchase of durable household appliances;
- Payday loans;
- Home-collected (doorstep) loans;
- Sub-prime personal loans;
- Pawnbroker loans;
- Sub-prime credit cards;
- Mail order catalogues and store cards that do not require a good credit rating; and
- Christmas hamper food schemes (paid up front by instalment).

Rent-to-own – it would be possible to measure this using existing data. Measurement requires information on the price paid for a typical product(s) in a general store, such as Argos or Tesco, and the price that would be paid in a typical rent-to-own store, such as BrightHouse or Perfect Homes. These prices could be gathered from online sources. We would also need the proportion of low-income and comparator households who have purchased items through these services. This information could be taken from LCF, which collects information about forms of payment for a range of consumer durables.

Payday loans – this can be measured in a sub-optimal way. The fees and rates associated with payday loans will depend on the number and size of loans taken out. Estimates of this can be taken from the LCF, which collects information on total loan amounts and recent repayments. Typical rates can then be identified using online sources. However, as noted previously, the LCF does not include 'payday loans' (or doorstep and pawnbroker loans) as a distinct category of credit. Respondents will only be identified as such if they have self-reported this form of credit. This means some under-reporting and misclassification is expected. We suggest benchmarking the rates of self-reported users of payday loans against that reported in FLS to check for under-reporting.

Doorstep loans – as above.

Pawnbroker loans – as above.

Mail order catalogues, store cards and loans from TV shopping – it would be possible to measure this using existing sources. Desk research would be needed to identify typical rates and charges, which can be carried out online. LCF data would be used to get rates of use for low-income and comparator households, plus information about frequency and amounts and types of goods purchased.

Christmas hamper food schemes – this cannot currently be measured using existing data sources. Desk research (using online sources) would be needed to identify the typical costs and content of a hamper purchased through a Christmas hamper scheme, such as Park Christmas Savings and Intu Shopping Centres, plus comparable rates of purchasing the same goods directly from a typical supermarket. However, there is no existing robust data on the proportion of low-income and comparator households who use such schemes.

MEASUREMENT OPTIONS The Living Costs and Food Survey (LCF) and Financial Lives Survey (FLS) contain most of the information required to measure the costs paid to access cash and credit by low-income and comparator households.

The LCF contains detailed information on household income and forms of payment for a range of consumer durables, including rent-to-own and mail order catalogues. It also contains information about total loan amounts and recent payments. However, it does not include a detailed breakdown by loan type. This means high-cost loans (such as payday loans, doorstep loans and pawnbroker loans) cannot always be identified as the respondent would have had to select 'other' loan type and self-report the specific type of loan. We therefore expect some misclassification and under-reporting. We suggest benchmarking the rates of self-reported users of payday loans against FLS (where information on payday loans is collected as a distinct category) to check for under-reporting.

The FLS contains information on the use of pre-paid plastic cards in the last 12 months and information on the number and type of loans, including payday loans. This means the FLS can be used to benchmark the different types of high-cost loans that have been self-reported in LCF. (The FLS cannot be used directly as it only asks about monthly payments needed to service those loans but not the total amounts borrowed or repaid. For this reason, we recommend using LCF to identify the cost of the loan, since this information is collected, but use the FLS to check the proportion of respondents using different loan types).

There are a number of data gaps where information has not been collected in either survey. Neither survey (nor any other robust data source) contains information on usage rates for fee-charging ATMs and for cashing cheques. There is also no data available on the proportion of households using Christmas hamper schemes. We suggest questions covering this are added to either LCF or FLS.

The suggested methodology for measuring any poverty premium in the Financial Services market requires information to be collected on the available products and their associated costs. This information can be gathered using online consumer comparison sites. It will be used to identify the cost impact of using specific financial products.

Then survey data are needed to identify the relative proportions of low-income and comparator households that incur these costs. The FLS contains the information required to measure costs due to pre-paid plastic cards. The LCF contains the information needed to measure costs due to rent-to-own and mail order catalogues. The LCF also contains information to measure costs due to high cost loans, however, this data needs benchmarking against FLS to check for possible under-reporting in LCF.

It is not possible to measure the costs of using fee-paying cash machines, fee-paying cheque cashing services or Christmas hamper schemes as no survey data is available. However, the number of households using these services is relatively low; hence collecting this information need not be a priority.

5.12 Insurance

This section covers the measurement of possible poverty premiums within different areas of the insurance market, such as household, car, life, health, household appliance, pet and mobile phone. There are two forms that the poverty premium may take in the insurance market: premiums associated with risk and behavioural-related premiums resulting on being on sub-optimal contracts or using expensive ways of payment. In this section we identify what data are available, and then discuss how premium may be measured.

5.12.1 Data available

The Financial Lives Survey (FLS) collects detailed information on household income and information about insurance for home, contents, car, trip, pet, gadget, high-value items and other specific items. It collects data on the frequency of insurance payments and use of third parties. However, it does not collect information on the amount or form of insurance payments (i.e. direct debit versus other payment types). This means the FLS in its current form has limited applications with regards to measuring the differential costs of insurance for low-income and comparator households.

The FLS could be used to estimate the prevalence of some types of insurance behaviour; specifically households insuring single items, rather than having comprehensive cover, since it collects information on different types of insurance policies and items covered. It also does not collect information about the exact insurance contract, which means it could not be used to investigate the poverty premium due to switching insurance providers. Additionally, it does not collect information about form of insurance payment, so we are unable to identify any premium due to using direct debit versus other forms of payment.

The necessary information could be provided by adding two additional questions to the FLS; a question asking respondents to name their insurance provider and a question asking how long the respondent had been with that provider. That information should be sufficient to match on the product's Defaqto star rating. This summarises the quality and comprehensiveness of insurance products and can be used to compare products.

The Living Costs and Food Survey (LCF) contains information on 5,000 households across the UK. It collects detailed information on household income and dwelling type. It should be possible to match deprivation indices or local crime rates to the data using postcodes. The matched dataset could then be used to assess the risk-based insurance poverty premium.

5.12.2 Measurement

The risk-based poverty premium can be measured. It would involve desk research on the cost of insuring a typical property in a deprived area. Deprived areas will be defined using the Index of Multiple Deprivation. A typical family property could be defined using English Housing Survey. Online sources could be used to compare prices for a number of policies to get an estimate of the additional payment required in a deprived area.

In addition, measurement would require information on the proportion of low-income and comparator households in deprived areas to estimate the proportion of households in each group that are affected by this premium. This information could be taken from LCF, or any national survey where the household's location and income are collected. A more detailed approach would be to identify the additional cost of insuring a range of property types in deprived areas (i.e. family home, bungalow, flat, etc.) and then work out the proportion of low-income and comparator households in each of these dwelling types and use this to estimate the proportion of each group who are affected. LCF collects detailed information on dwelling type.

The following three premiums cannot currently be measured as the required survey data do not exist.

- **Not being on the best contract** – it would be possible to use online comparison sites or to contact insurance companies to identify the typical savings from switching suppliers or challenging the renewal price. We would take a set of typical products (car, content insurance, etc.) and identify the cost of same insurance for a new customer compared to an existing customer. However, there are no survey data available to identify the proportion of low-income and comparator households that incur each of these costs.
- **Using more expensive methods of payment** – online comparison sites could be used to identify the annual cost for a typical policy compared to the cost of paying in monthly instalments, also the difference in cost of paying by direct debit or other payments. Again, there are no survey data available to identify the proportion of low-income and comparator households that incur each of these costs.
- **Having insurance for specific items rather than comprehensive insurance** – online comparator sites could be used to establish the cost of insuring appliances that are commonly insured on their own. However, no survey data exists that would allow us to identify the proportion of low-income and comparator households that incur each of these costs.

MEASUREMENT OPTIONS

The survey data required to measure **the risk-based poverty premium** can be taken from any large household survey that collects detailed information on household income and dwelling type, and can be matched to local deprivation indices. We suggest the Living Costs and Food Survey.

The measurement would be based on using online consumer comparison sites to identify the relative price of insuring the same home in deprived and non-derived areas,

---

then using survey data to compare the proportion of low-income and comparator households in those areas.

The survey data needed to measure the poverty premium due to **not being on the best contract, using more expensive methods of payment** and **not switching insurance providers** does not exist. These premiums cannot be measured. Two key questions on insurance provider and length of contract could be used to match on the product's Defaqto star rating, which would provide the information required to compare costs. The Financial Lives Survey would be the best vehicle to collect this information, as it collects a lot of corresponding information about insurance products.

5.13 Measurement options summary

The extent to which data required to measure poverty premium is available varies between markets. The markets can be divided into four groups based on the extent to which data is available:

- Data required to measure poverty premium exists;
- Most of the data required exists, but there are some gaps;
- Data required to measure poverty premium exists, but not for the whole of the UK;
- Data required to measure poverty premium is limited or does not exist.

The following table shows which markets (and sub-markets) fall into each of these categories.

Table 5-2 Markets by data availability

Market	Data exists	Most of data exists	Data exists, but not for the whole of the UK	Data does not exist or there are large gaps
Transport			X	
Recreation and culture		X		
Housing	X			
Household energy and water		X		
Food and groceries	X		X	
Clothing and footwear	X		X	

		X		
Communications		X		
Household goods				X
Financial services		X		
Insurance		X		

Note: Markets can have more than one mechanism that leads to poverty premium and the level to which data is available for these can vary.

For each of the markets, desk research is also required to establish the price differences related to different products and services.

A lack of information about the prices actually paid by different categories of consumers has been the biggest factor that has restricted previous attempts to estimate the poverty premium. Without such data, estimates of the poverty premium will be more speculative so it is important to take stock of where there are evidence gaps.

5.13.1 Markets with existing data

There are three markets where existing data is sufficient for calculating part of the poverty premium – food and groceries, clothing and footwear, and housing. For food and groceries and clothing and footwear, a combination of sources including purchase data (the Kantar World Panel data) and the Living Costs and Food Survey collect enough information to assess the existence of poverty premium for 'the same' products.

The Institute for Financial Studies calculated poverty premium for food and groceries in 2012 and is currently repeating the analysis. They are enhancing the original analysis by linking the information from Kantar World Panel to add calorific information, which will allow for a broader definition of 'the same'. The 2012 analysis showed no poverty premium on the UK food and groceries market for items purchased in the same store type. The new analysis will identify whether the substitution of branded goods for non-branded goods impacts on nutrition. It is recommended that the analysis is repeated every three to four years to check whether this remains the case.

Similar analysis has not been conducted for the clothing and footwear market, but is possible using the same methodology. Identifying like-for-like products in this market is more problematic but not impossible, as discussed in Appendix B. It is suggested that this analysis is also conducted every three to four years.

For housing we suggest using the EU-SILC data, which contains imputed rent information and covers the whole of the UK. We are unaware of any research on poverty premium using this data, so the analysis would need to be set up and repeated every three to four years. EU-SILC is an EU harmonised statistic and in the UK is collected by ONS. Data becomes available for research purposes two years after the

survey year (the latest available data refers to 2016). Currently there are no plans to stop EU-SILC data collection after the UK exits the EU.

5.13.2   Markets with small gaps in data

There are a few markets where there are small gaps in the existing data. In these instances, we suggest enhancing data collection by including some additional questions on an existing survey, instead of collecting new data from scratch. This is because it would be overly expensive to design a bespoke survey that repeats entire modules of an existing survey, simply to ensure one or two new items can be covered.

For insurance, household energy, communications and financial services, most of the required data exists in the Living Cost and Food Survey (the case of the first three markets) and in the Financial Lives Survey (in the case of financial services). For these markets there are a few pieces of information that are currently not collected by those surveys, but which would be required to assess the existence of poverty premium. These items are:

- Insurance (FLS): name of product and provider and when last switched provider;
- Household energy (LCF): when last changed tariff, fuel provider;
- Communications (LCF): when last changed contract; and
- Financial services (LCF): include Christmas hampers as a form of saving in the savings module; and (FLS): include information on use of fee-paying cash machines and fee-paying cheque cashing.

The last of these bullets (including Christmas hampers as a form of saving, collecting information about fee-paying cash machines and fee-paying cheque cashing services) is the lowest priority, as only a relatively small proportion of households use these services. The impact of not switching providers, whether for fuel, insurance or communications, has a far larger impact on prices paid by a larger number of households. This information should therefore be prioritised. Given the wealth of data already collected by LCF and FLS, it is recommended that these additional questions are added to these surveys where possible. Only a few questions need to be added to both surveys.

The costs for this approach will be driven by the survey selected, sample size, as well as the number of questions. It does however; tend to be more cost-effective to add questions than increase sample size.

5.13.3   Markets with available data that does not cover the whole UK

Three markets require transport survey data – transport, food and groceries, and clothes and footwear. This is available in the form of the NTS for England and similar surveys in Scotland and Northern Ireland. Equivalent data source does not exist for Wales. In principle, a face-to-face transport survey could be conducted in Wales, but the cost of this would be high.

5.13.4 New data collection

There are two markets where data does not exist to measure at least one of the mechanisms likely to cause poverty premium: housing and household goods.

Housing

For housing, information is lacking on whether the changes to benefit payment rules under the Universal Credit are leading private landlords to charge more or require higher deposits from benefit claimants. An ad-hoc survey of landlords, Private Landlords Survey, is currently taking place for England and includes some of the information relevant to this possible premium. We suggest that this survey is analysed first to establish whether there is an indication of an emerging poverty premium. If this is found, then a UK-wide survey of private landlords would be required to measure the poverty premium. A web-telephone survey is likely to be the most cost-effective means of achieving this.

Household goods

Detailed information on the household goods owned by households is required to estimate any poverty premium in this market. The gap in data is larger than for any other market, which means that adjusting any of the existing surveys is unlikely to be feasible. Instead we recommend a new short survey to collect information on the model and make, as well as the year of purchase of the most common household goods.

We suggest an omnibus or panel survey as the most cost-efficient way of collecting this information. The costs for this option will be driven by the number of questions, and the size and source of the sample. In particular, there is a cost difference between using an open access non-probability panel (such as Populus, YouGov, or Lightspeed) and a random probability panel (of which the NatCen Panel is the only current vehicle.[67])

---

[67] Other online panels include those run by Kantar and Ipsos MORI, both of which are based on non-random probability samples. The ONS runs an omnibus survey (the Opinions and Lifestyle Survey) that is based on random probability sampling, but currently uses face-to-face interviewing, which would incur greater costs.

6 Conclusions

The term 'poverty premium' is used to describe the way in which low-income consumers can end up paying more than higher-income consumers for the same goods and services.

The definition used in this study is a 'relative' measure of the poverty premium, since it measures the costs incurred by low-income households relative to those incurred by households on higher incomes. The poverty premium is defined in this report as:

*"The extra cost that households on low incomes incur when purchasing the **same goods and services** as households on **higher incomes**."*

There is a wide literature on the concept of the poverty premium that have identified a number of structural and behavioural factors that lead to low-income consumers facing higher costs than their higher-income equivalents in a number of markets. However, it should also be noted that the nature of the poverty premium is debated, with some commentators arguing that apparent poverty premiums are a direct consequence of cost-reflective pricing and high risk (i.e. low-income households are more likely to be in deprived areas, which tend to have higher crime rates and higher insurance premiums).

The CMA commissioned NatCen Social Research in partnership with the Institute of Fiscal Studies (IFS) to conduct a feasibility study on measuring the poverty premium in the UK. The aims of this study were to:

a) Advise on the feasibility of developing a robust methodology that would provide insight on how the prices paid by customers on lower incomes compare with those paid by customers in other income groups;
b) Help to identify those markets more likely to display poverty premiums and for which developing a poverty premium measure would be feasible;
c) Advise on how customers on lower incomes should be defined for these purposes and the appropriate group or groups for comparison;
d) Advise on what would be involved for the outputs of the methodology to be capable of being updated on a regular basis; and
e) Understand the options available in developing a robust methodology and the trade-offs between the options e.g. costs, difficult to implement, less reliable.

The feasibility study involved a review of the current literature, interviews with expert stakeholders, and an assessment of existing and modifiable data sources. The intention was to build on previous work in this area (for example, that carried out by the Personal Finance Research Centre at the University of Bristol, the Social Market Foundation, Save the Children and the Joseph Rowntree Foundation, amongst others).

Key markets and methodologies

The Office of National Statistic's Classification of Individual Consumption by Purpose was used as a starting point. This covers the full range of markets in the UK. A number of key markets were identified where there was either previous evidence or a strong theory that a poverty premium existed in these markets.

For each of these key markets, the mechanism by which the poverty premium occurred was identified. These mechanisms included both structural and behavioural factors. The nature of these mechanisms varies by market.

A methodology was then designed to measure the poverty premium in each market.

Different methodologies are suggested in different markets. The aim was to have the most robust measurement per market, rather than a single methodology. Despite this, there are two basic steps of measurement that are common across most markets:

1. The first step is to establish the price differences related to different products and services in the market (i.e. establish the range of possible prices that a household could pay). This may be a more or less complex/extensive exercise depending on the nature of the market. For each market this step can be done using desk research.
2. The second step is to identify the prices paid by low-income and comparator households in that market. This step generally requires survey data. Again, this is more straightforward in some markets than others.

The main options for measuring the poverty premium are:

- Where the feasibility study has identified that data exists, this should be used to measure whether there are poverty premiums in practice. The necessary data is currently available for the Housing, Food and Groceries and Clothing and Footwear markets, although some issues have been identified around access and permissions.
- Where the feasibility study has identified small gaps in the existing data that prevent a robust measure being calculated (i.e. where one or two key data items are missing), the next steps should be to liaise with the data owner to assess the feasibility of adding these data items. This is suggested as a cost-effective alternative to collecting new data from scratch, as it would be overtly expensive to design a bespoke survey that repeats entire modules of an existing survey, simply to ensure one or two new items can be covered.
- Where the feasibility survey has been unable to identify an existing date source, we suggest new data collection and provide ballpark costs. This is the case for the Household Goods, and other sub-markets of Recreation and Culture.

References

- Aguiar, M., and Hurst, E. (2007) "Life-Cycle Prices and Production." American Economic Review, 97 (5): 1533-1559
- Beaumont, J., Lang, T., Leather, S., and Mucklow, C. (1995) "Report from the Policy Sub-Group to the Nutrition Task Force Low Income Project Team of the Department of Health", Radlett, Hertfordshire: Institute of Grocery Distribution
- Beatty, T. (2010) "Do the Poor Pay more for Food? Evidence from the United Kingdom." American Journal of Agricultural Economics, 93, (3): 608–621
- Blow, L. and Leicester, A. (2012) "Do the Poor Pay More? An investigation of British Grocery Purchase Prices", Institute for Fiscal Studies. URL: https://www.ifs.org.uk/uploads/publications/mimeos/British_grocery_prices.pdf
- Burton, M. (2011) "Making Ends Meet: The Costs and Implications of Money Management for Low-Income Consumers" Consumer Focus. URL: https://www.bl.uk/britishlibrary/~/media/bl/global/social-welfare/pdfs/non-secure/m/a/k/making-ends-meet-the-cost-and-implications-of-money-management-for-lowincome-consumers.pdf
- Cambium Advocacy (2015) "Still Addressing the Poverty Premium", Citizens Advice Scotland. URL: https://www.cas.org.uk/system/files/publications/final_formatted_copy.pdf
- Competition and Markets Authority (2016) "Energy Market Investigation: Final Report", Competition and Markets Authority. URL: https://www.gov.uk/cma-cases/energy-market-investigation
- Competition and Markets Authority (2018) "Tacking the Loyalty Penalty: Response to a Super-Complaint Made by the Citizens Advice on 28 September 2018", Competition and Markets Authority. URL: https://assets.publishing.service.gov.uk/media/5c194665e5274a4685bfbafa/response_to_super_complaint_pdf.pdf
- Corfe, S. and Keohane, N. (2018) "Measuring the Poverty Premium", Social Market Foundation. URL: http://www.smf.co.uk/wp-content/uploads/2018/03/Measuring-the-Poverty-Premium.pdf
- Davies, S., Finney, A., and Hartfree, Y. (2016) "Paying to be Poor: Uncovering the Scale and Nature of the Poverty Premium", Personal Finance Research Centre, University of Bristol. URL: https://www.bristol.ac.uk/media-library/sites/geography/pfrc/pfrc1615-poverty-premium-report.pdf
- Dearden, C., Goode, J., Whitfield, G., and Cox, L. (2010) "Credit and Debt in Low-Income Families", Joseph Rowntree Foundation. URL: https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/credit-debt-low-incomes-full.pdf
- Department for Communities and Local Government (2017) "English Housing Survey: Housing Cost and Affordability Report, 2015-16", Department for Communities and Local Government. URL: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/627683/Housing_Cost_and_Affordability_Report_2015-16.pdf
- Department for Transport (2018) "Analysis from the National Travel Survey", Statistical Release, Department for Transport. URL:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674568/analysis-from-the-national-travel-survey.pdf

- Department for Transport (2018) "Travel by Household Income Quintile and Main Mode: England (with chart)", Department for Transport. URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/550557/nts0705.xls

- Department for Work and Pensions (2018) "Households Below Average Income: An Analysis of the UK Income Distribution: 1994/95-2016/17", Department for Work and Pensions. URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/691917/households-below-average-income-1994-1995-2016-2017.pdf

- Department for Work and Pensions (2017) "Improving Lives: Helping Working Families", Department for Work and Pensions. URL: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/621364/improving-lives-helping-workless-families-web-version.pdf

- Eurostat (2018) "European Union Statistics on Income and Living Conditions (EU-SILC)", Eurostat. URL: https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions

- Eurostat (2018) "Housing Cost Overburden Rate by Tenure Status, 2016 (% of Population)", Eurostat. URL: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Housing_cost_overburden_rate_by_tenure_status,_2016_(%25_of_population)_YB18.png

- Eurostat (2017) "The Distributional Impact of Imputed Rent in EU-SILC 2007-2010: 2013 Edition", Eurostat. URL: https://ec.europa.eu/eurostat/documents/3888793/5857525/KS-RA-13-011-EN.PDF/516f90a7-25d4-4359-a297-fa8311758a1a

- Fitzpatrick, S., Bramley, G., Sosenko, F., Blenkinsopp, J., Johnsen, S., Littlewood, M., Netto, G., and Watts, B. (2016) "Destitution in the UK", Joseph Rowntree Foundation. URL: https://www.jrf.org.uk/file/49076/download?token=UAmOk9PN&filetype=full-report

- Fox, K. J. and Melser, D. (2014) "Non-Linear Pricing and Price Indexes: Evidence and Implication from Scanner Data", The Review of Income and Wealth, 60 (2), 261-278

- Griffith, R., Leibtag, E., Leicester, A., and Nevo, A. (2009) "Consumer Shopping Behavior: How Much Do Consumers Save?" Journal of Economic Perspectives, 23 (2): 99–120

- Groningen Growth and Development Centre (2017) "Penn World Table: Version 9.0", Groningen Growth and Development Centre. URL: https://www.rug.nl/ggdc/productivity/pwt/

- Hardy, G. and Lane, J. (2018) "Walking on Thin Ice: The Cost of Financial Insecurity", Citizens Advice. URL: https://www.citizensadvice.org.uk/Global/CitizensAdvice/Debt%20and%20Money%20Publications/Walking%20on%20thin%20ice%20-%20full%20report.pdf

- Hirsch, D. (2013) "Addressing the Poverty Premium - Approaches to Regulation", Consumer Futures. URL: https://dspace.lboro.ac.uk/dspace-jspui/bitstream/2134/16999/1/Addressing-the-poverty-premium.pdf

- Joseph Rowntree Foundation (2016b) "UK Poverty: Causes, Costs and Solutions", Joseph Rowntree Foundation. URL: https://www.jrf.org.uk/file/49624/download?token=GyY6faNM&filetype=full-report-epub

- Kempson, E., Ellison, A., Whyley, C., and Jones, P. A. (2009) "Is a Not-for-Profit Home Credit Business Feasible?", Jopseh Rowntree Foundation. URL: https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/home-credit-business-full.pdf

- Keohane, N. (2017) "Stick or Switch? Making Markets Fairer and More Competitive", Social Market Foundation. URL: http://www.smf.co.uk/wp-content/uploads/2017/10/WEB-OF-STICK-SWITCH.pdf

- McBride, K. and Purcell, S. (2014) "Food, Fuel, Finance - Tackling the Poverty Premium", Church Action on Poverty. URL: http://www.ekklesia.co.uk/sites/ekklesia.co.uk/files/poverty_premium_report.pdf

- OECD (2001) "Fisher's Ideal Index (Volume)", OECD Glossary of Statistical Terms. URL: https://stats.oecd.org/glossary/detail.asp?ID=989

- Office for National Statistics (2014) "Consumer Price Indices: Technical Manual: 2014 Edition", Office for National Statistics. URL: https://webarchive.nationalarchives.gov.uk/20160109133536/http://www.ons.gov.uk/ons/rel/cpi/consumer-price-indices---technical-manual/2014/index.html

- Office for National Statistics (2018) "Detailed Household Expenditure as a Percentage of Total Expenditure by Disposable Income Decile Group: Table 3.2", Office for National Statistics. URL: https://www.ons.gov.uk/file?uri=/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/datasets/detailedhouseholdexpenditureasapercentageoftotalexpenditurebydisposableincomedecilegroupuktable32e/financialyearending2017/table32final201617.xls

- Office for National Statistics (2018) "Internet Access – Households and Individuals, Great Britain: 2017", Office for National Statistics. URL: https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/bulletins/internetaccesshouseholdsandindividuals/2017

- Office for National Statistics (2018) "Transformation of the ONS Household Financial Statistics: ONS Statistical Outputs Workplan, 2018 to 2019", Office for National Statistics. URL: https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/articles/transformationofhouseholdfinancialstatistics/statisticaloutputsworkplan2018to2019

- Ofcom (2018) "Pricing Trends for Communications Services in the UK", Ofcom Research Document. URL: https://www.ofcom.org.uk/__data/assets/pdf_file/0030/113898/pricing-report-2018.pdf

- Ofcom (2016) "Switching Mobile Network Provider: Consumer Experience", Ofcom. URL: https://www.ofcom.org.uk/__data/assets/pdf_file/0029/82649/mobile_switching_qualitative_research_feb16.pdf

- Ofgem (2016) "Implementation of the CMA Remedies" Ofgem. URL: https://www.ofgem.gov.uk/gas/retail-market/market-review-and-reform/implementation-cma-remedies
Ofgem (2017) "State of the Energy Market 2017", Ofgem. URL: https://www.ofgem.gov.uk/system/files/docs/2017/10/state_of_the_market_report_2017_web_1.pdf
- Richards, B. (2015) "Bargaining on a Low-Income - A Better Deal for Consumers", Social Market Foundation. URL: http://www.smf.co.uk/wp-content/uploads/2015/02/Social-Market-FoundationSocial-Market-Foundation-Publication-Bargaining-on-a-low-income-A-better-deal-for-consumers-FINAL-Embargoed-250215-0001.pdf
- Rodrigues, L. (2016) "Payday Loans: The Next Generation", StepChange. URL: https://www.stepchange.org/Portals/0/documents/Reports/Payday-loans-next-generation.pdf
- Statista (2018) "Number of Fee-Based ATMs in the United Kingdom (UK) from 2001 to 2017 (in 1,000s)", Statista. URL: https://www.statista.com/statistics/445060/cash-machines-with-fees-united-kingdom/
- Tinson, A., Kenway, P., Bushe, S., and MacInnes, T. (2014) "Poverty and the Cost of Living", Joseph Rowntree Foundation. URL: https://www.jrf.org.uk/file/45952/download?token=N3V3D8CE&filetype=full-report
- Titheridge, H., Mackett, R. L., Christie, N., Oviedo Hernández, D., and Ye, R. (2014) "Transport and Poverty: A Review of the Evidence", UCL Transport Institute, University College London. URL: http://discovery.ucl.ac.uk/1470392/
- Worton, S., Sparham, I., Grew, S., Shaw, A., Wise, K., and Yeatman, A. (2018) "Usage and Experiences of High Cost Credit: Consumer Research Report", Financial Conduct Authority. URL: https://www.fca.org.uk/publication/research/usage-and-experiences-of-high-cost-credit-consumer-research-report.pdf

Appendix A. Questions on income measurement

BSA 2018 Income question
3 Versions
Income from earnings – employees
Location: following respondent employment questions

IF EMPLOYED AT EmployB OR WORKED <10 HOURS IN PAST WEEK (YES AT NPWork10)
RIncEarn
Now I'd like to ask you some questions about your earnings from employment, please think about all paid work that you do, including any second jobs or casual work.

How much do you receive from earnings from all employment before taxes and other deductions? Please include any tips, bonuses, overtime pay or commissions. If you're not sure just give us your best estimate.

INTERVIEWER ENTER AMOUNT IN POUNDS HERE AND ENTER THE TIME PERIOD AT NEXT QUESTION

IF IN A TRANSITION PERIOD (E.G. WAITING TO START WORK) 'Please think about your current earnings, based on recent payments. Do not include future payments.'

IF RESPONDENT HAS CONCERNS OR IS RELUCTANT TO GIVE INCOME DETAILS: 'We are asking these questions so that we have an accurate picture of income in Britain today, and to understand how people are getting by financially. Anything you tell me is completely confidential, and the findings of this study will not identify you or your family.'
0..999997

IF AMOUNT GIVEN AT RIncEarn
RIncEaPe
What period does that cover?
1   One week
2   Two weeks
3   Three weeks
4   Four weeks
5   Calendar month
7   Two calendar months
8   Eight times a year
9   Nine times a year
10   Ten times a year
13   Three months/13 weeks
26   Six months/26 weeks
52   One year/12 months/52 weeks
90   Less than one week
95   One off/lump sum
97   None of these (WRITE IN)
(Don't know)
(Refusal)

RincChk
Can I just check, was the amount you just gave me your gross earnings **before tax**, or was it your net take home pay **after tax**?
  1   Gross pay before tax
  2   Net pay after tax

IF DK AT RINCEARN
RincEaRo
CARD M1
Do you know **roughly** how much you receive from earnings from employment, before taxes and other deductions? Please include any tips, bonuses, overtime pay or commissions. You can just give me a letter from the card.

SHOWCARD FOR EARNINGS FROM EMPLOYMENT:

WEEKLY earnings BEFORE tax		MONTHLY earnings BEFORE tax		ANNUAL earnings BEFORE tax
Less than £100	**T**	Less than £430	**T**	Less than £5,210
£100 - 180	**O**	£430 - 780	**O**	£5,210 - 9,350
£181 - 240	**L**	£781 - 1,000	**L**	£9,351 - 12,500
£241 - 300	**Z**	£1,001 - 1,300	**Z**	£12,501 - 15,600
£301 - 360	**F**	£1,301 - 1,600	**F**	£15,601 - 18,700
£361 - 420	**D**	£1,601 - 1,800	**D**	£18,701 - 21,800
£421 - 510	**A**	£1,801 - 2,200	**A**	£21,801 - 26,500
£511 - 630	**G**	£2,201 - 2,700	**G**	£26,501 - 32,800
£631 - 830	**X**	£2,701 - 3,600	**X**	£32,801 - 43,200
£831 or more	**P**	£3,601 or more	**P**	£43,201 or more

97. Refused

IF SPOUSE EMPLOYED AT EmployB
SIncEarn
Now I'd like to ask you some questions about your {*wife/husband/partner*}'s earnings from employment, please think about all paid work that {*she/he*} does, including any second jobs or casual work.

How much does your partner receive from earnings from all employments, before taxes and other deductions? Please include any tips, bonuses, overtime pay or commissions. If you're not sure just give us your best estimate.

INTERVIEWER ENTER AMOUNT IN POUNDS HERE AND ENTER THE TIME PERIOD AT NEXT QUESTION

IF IN A TRANSITION PERIOD (E.G. WAITING TO START WORK) 'Please think about {*his/her*} current earnings, based on recent payments. You should not include future payments.'

IF RESPONDENT HAS CONCERNS OR IS RELUCTANT TO GIVE INCOME DETAILS: 'We are asking these questions so that we have an accurate picture of income in Britain today, and to understand how people are getting by financially. Anything you tell me is completely confidential, and the findings of this study will not identify you or your family'

IF AMOUNT GIVEN AT SIncEarn
SIncEaPe

What period does that cover?
1   One week
2   Two weeks
3   Three weeks
4   Four weeks
5   Calendar month
7   Two calendar months
8   Eight times a year
9   Nine times a year
10   Ten times a year
13   Three months/13 weeks
26   Six months/26 weeks
52   One year/12 months/52 weeks
90   Less than one week
95   One off/lump sum
97   None of these (WRITE IN) (Don't know)
(Refusal)

SincChk
Can I just check, was the amount you just gave me your {*wife/husband/partner*}'s gross earnings **before tax**, or was it {*his/her*} net take home pay **after tax**?
    1   Gross pay before tax
    2   Net pay after tax

IF DK AT SINCEARN
SincEaRo
CARD M1
Do you know **roughly** how much {*she/he*} receives from earnings from all employments, before taxes and other deductions? Please include any tips, bonuses, overtime pay or commissions? You can just give me a letter from the card.

SHOWCARD FOR EARNINGS FROM EMPLOYMENT:

WEEKLY earnings BEFORE tax		MONTHLY earnings BEFORE tax		ANNUAL earnings BEFORE tax
Less than 100	T	Less than £430	T	Less than 5,210
£100 - 180	O	£430 - 780	O	£5,210 - 9,350
£181 - 240	L	£781 - 1,000	L	£9,351 - 12,500
£241 - 300	Z	£1,001 - 1,300	Z	£12,501 - 15,600
£301 - 360	F	£1,301 - 1,600	F	£15,601 - 18,700
£361 - 420	D	£1,601 - 1,800	D	£18,701 - 21,800
£421 - 510	A	£1,801 - 2,200	A	£21,801 - 26,500
£511 - 630	G	£2,201 - 2,700	G	£26,501 - 32,800
£631 - 830	X	£2,701 - 3,600	X	£32,801 - 43,200
£831 or more	P	£3,601 or more	P	£43,201 or more

97. Refused

Income from earnings – self-employed

IF SELF-EMPLOYED AT EmployB
RIncSemp
Now I'd like to ask you some questions about your earnings from employment, please think about all paid work that you do, including any second jobs or casual work.

On average what was your weekly or monthly earnings from over the last 12 months, before deductions for any tax, national insurance or pension contributions, but after paying for any materials, equipment or goods that you use in your work?

If you're not sure just give us your best estimate.

IF RESPONDENT HAS CONCERNS OR IS RELUCTANT TO GIVE INCOME DETAILS: "We are asking these questions so that we have an accurate picture of income in Britain today, and to understand how people are getting by financially. Anything you tell me is completely confidential, and the findings of this study will not identify you or your family"

INTERVIEWER: Code whether the amount will be given weekly or monthly.
1 Weekly
2 Monthly

RIncSWk
IF income over last 12 months = weekly
INTERVIEWER: Enter average weekly income over last 12 months.
Range: 0..999997

RIncSMo
IF income over last 12 months = monthly
INTERVIEWER: Enter average monthly income over last 12 months.
Range: 0..999997

IF AMOUNT GIVEN AT RincSWk or RincSMo
RincSChk
Can I just check, was the amount you just gave me your gross earnings **before tax**, or was it your net take home pay **after tax**?
    1   Gross pay before tax
    2   Net pay after tax

IF DK AT RINCSEMP OR **RincSWk or RincSMo**
RincSeRo
CARD M1
Do you know **roughly** how much you receive in income from your work, before taxes and other deductions, but after paying for any materials you use in your work? You can just give me a letter from the card.

SHOWCARD FOR EARNINGS FROM EMPLOYMENT:

WEEKLY earnings BEFORE tax		MONTHLY earnings BEFORE tax		ANNUAL earnings BEFORE tax
Less than 100	T	Less than £430	T	Less than 5,210
£100 - 180	O	£430 - 780	O	£5,210 - 9,350
£181 - 240	L	£781 - 1,000	L	£9,351 - 12,500

£241 - 300	**Z**	£1,001 - 1,300	**Z**	£12,501 - 15,600
£301 - 360	**F**	£1,301 - 1,600	**F**	£15,601 - 18,700
£361 - 420	**D**	£1,601 - 1,800	**D**	£18,701 - 21,800
£421 - 510	**A**	£1,801 - 2,200	**A**	£21,801 - 26,500
£511 - 630	**G**	£2,201 - 2,700	**G**	£26,501 - 32,800
£631 - 830	**X**	£2,701 - 3,600	**X**	£32,801 - 43,200
£831 or more	**P**	£3,601 or more	**P**	£43,201 or more

97. Refused

IF SPOUSE SELF-EMPLOYED AT EmployB
SIncSemp
Now I'd like to ask some questions about your *{wife/husband/partner}*'s income from *{his/her}* work, please think about all paid work that *{he/she}* does, including any second jobs or casual work.

On average what was your *{wife/husband/partner}*'s weekly or monthly income from over the last 12 months, before deductions for any tax, national insurance or pension contributions, but after paying for any materials you use in *{his/her}* work? If you're not sure just give us your best estimate.

IF RESPONDENT HAS CONCERNS OR IS RELUCTANT TO GIVE INCOME DETAILS: "We are asking these questions so that we have an accurate picture of income in Britain today, and to understand how people are getting by financially. Anything you tell me is completely confidential, and the findings of this study will not identify you or your family

INTERVIEWER: Code whether the amount will be given weekly or monthly.
1 Weekly
2 Monthly

SIncSWk
IF income over last 12 months = weekly
INTERVIEWER: Enter average weekly income over last 12 months.
Range: 0..999997

SIncSMo
IF income over last 12 months = monthly
INTERVIEWER: Enter average monthly income over last 12 months.
Range: 0..999997

IF AMOUNT GIVEN AT SIncSWk or SIncSMo
SincSChk
Can I just check, was the amount you just gave me *your {wife/husband/partner}*'s gross earnings **before tax**, or was it *{his/her}* net take home pay **after tax**?
   1   Gross pay before tax
   2   Net pay after tax

IF DK AT SINCSEMP OR **SIncSWk or SIncSMo**
SincSeRo
CARD M2

Do you know **roughly** how much *{he/she}* receives in income from work, before taxes and other deductions, but after paying for any materials you use in *{his/her}* work? You can just give me a letter from the card.

SHOWCARD FOR EARNINGS FROM EMPLOYMENT – 6 CATEGORIES:

WEEKLY earnings BEFORE tax		**MONTHLY earnings BEFORE tax**		**ANNUAL earnings BEFORE tax**
Less than £100	**T**	Less than £430	**T**	Less than £5,210
£100 – 200	**O**	£430 – 900	**O**	£5,200 – 10,400
£201 – 400	**Z**	£901 – 1,800	**Z**	£10,401 – 21,000
£401 – 600	**D**	£1,801 – 2,600	**D**	£21,001 – 31,000
£601 – 800	**P**	£2,601 - 3,500	**P**	£31,001 - £42,000
£801 or more	**F**	£3,501 or more	**F**	£42,001 or more

97. Refused

Income from private pensions

Location: following questions on pensions

ASK ALL
RPenSrc
CARD N2

Do you *(or your husband/wife/partner)* **receive payments** from any of the pensions on this card at present?
INTERVIEWER: IF RECEIVING A PENSION FROM A DECEASED SPOUSE'S PREVIOUS EMPLOYER CODE 1
INTERVIEWER: IF RECEIVING STATE PENSION CODE NONE, THIS WILL BE COLLECTED LATER IN THE QUESTIONNAIRE
CODE ALL THAT APPLY
1   Occupational or workplace pension(s)
2   Private pension(s)
3   None of these

IF R HAS A PARTNER ASK FOR EACH PENSION GIVEN AT RPenSrc
RPenPar
Is it you or your [^husband/wife/partner] who receives the [^name of payment type], or both of you?
1   Respondent only
2   Partner only
3   Both – jointly
4 Both – separately

FOR EACH SOURCE MENTIONED AT RPenSrc
RIncPen
How much {*do you / does your [^husband/wife/partner] / do you and your [^husband/wife/partner]*} receive(s) from {*ANSWER SELECTED AT RPenSrc*} **before tax***?* If you're not sure just give us your best estimate.

INTERVIEWER ENTER AMOUNT IN POUNDS HERE AND ENTER THE TIME PERIOD AT NEXT QUESTION

IF RESPONDENT HAS CONCERNS OR IS RELUCTANT TO GIVE INCOME DETAILS: 'We are asking these questions so that we have an accurate picture of income in Britain today, and to understand how people are getting by financially. Anything you tell me is completely confidential, and the findings of this study will not identify you or your family'

FOR EACH SOURCE MENTIONED AT RPenSrc
RPenPe
What period does that cover?
1   One week
2   Two weeks
3   Three weeks
4   Four weeks
5   Calendar month
7   Two calendar months
8   Eight times a year
9   Nine times a year

10 Ten times a year
13 Three months/13 weeks
26 Six months/26 weeks
52 One year/12 months/52 weeks
90 Less than one week
95 One off/lump sum
97 None of these (WRITE IN)

ASK IF DON'T KNOW AT RINCpEN

RPenRo

CARD M5

Do you know roughly how much *{you/your [^husband/wife/partner]/you and your [^husband/wife/partner]}* receive(s) from their *{ANSWER SELECTED AT Q2}* before tax? You can just give me a letter from the card.

CARD FOR OTHER INCOME SOURCES:

WEEKLY amount BEFORE tax		MONTHLY amount BEFORE tax		ANNUAL amount BEFORE tax
Less than £50	Q	Less than £220	Q	Less than £2,600
£50 – 65	T	£220 – 280	T	£2,600 – 3,380
£66 – 80	O	£281 – 350	O	£3,381 – 4,160
£81 – 100	K	£351 – 430	K	£4,161 – 5,200
£101 – 125	L	£431 – 540	L	£5,201 – 6,500
£126 – 150	B	£541 – 650	B	£6,501 – 7,800
£151 – 200	Z	£651 – 870	Z	£7,801 – 10,400
£201 – 350	M	£871 – 1,500	M	£10,401 – 18,200
£351 – 600	F	£1,501 – 2,600	F	£18,201 – 31,200
£601 or more	J	£2,601 or more	J	£31,201 or more

97. Refused

Income from benefits

Location: following existing BSA benefits questions

ASK ALL
[AnyBN3] **(current BSA question)**
CARD P18
Do you *(or your husband/wife/partner)* receive any of the **state** benefits or tax credits on this card at present?
1   Yes
2   No
8   (Don't know)
9   (Refusal)

IF 'Yes' AT [AnyBN3]
[BenFTNFW] **(current BSA question)**
CARD P18 AGAIN
Which ones? PROBE: Which others?
Multicoded (Maximum of 20 codes)
1   State retirement pension (National Insurance)
2   War Pension (War Disablement Pension or War Widows Pension)

3   Bereavement Allowance/ Widow's Pension/ Widowed Parent's Allowance
4   Jobseeker's Allowance (CAN INCLUDE PENSIONER PREMIUM)
5   Income Support (CAN INCLUDE PENSIONER PREMIUM)

6   Pension Credit
7   Child Benefit / Guardian's Allowance
8   Child Tax Credit
9   Working Tax Credit
10   Housing Benefit (Rent Rebate/ Rent Allowance)
11   Council Tax Benefit (or Rebate/ Reduction/ Support)
12   Universal Credit
13   Incapacity Benefit / Employment and Support Allowance (formerly Sickness Benefit / Invalidity Benefit)
14   Disability Living Allowance (for people under 65)
15   Personal Independence Payment
16   Attendance Allowance (for people aged 65+)
17   Severe Disablement Allowance
18   Carer's Allowance (formerly Invalid Care Allowance)
19   Industrial Injuries Benefits
20   Other state benefit (WRITE IN)
98   (Don't know)
99   (Refusal)

IF R HAS A PARTNER ASK FOR EACH BENEFIT GIVEN AT BenFTNFW
RBenPar
Is it you or your [^husband/wife/partner] who receives [^name of payment type], or both of you?
IF BOTH: Do you and your [^husband/wife/partner] receive [^name of payment] jointly or separately.
INTERVIEWER: IF RESPONDENT RECEIVES PAYMENT JOINTLY WITH SOMEONE
OTHER THAN THEIR PARTNER CODE RESPONDENT ONLY.
IF PARTNER RECEIVES PAYMENT JOINTLY WITH SOMEONE OTHER THAN RESPONDENT CODE PARTNER ONLY
1 Respondent only
2 Partner only
3 Both - jointly
4 Both - independently

FOR EACH SOURCE MENTIONED AT BenFtNFW
RIncBen
How much *{do you / does your partner / do you and your partner}* receive(s) from *{ANSWER SELECTED AT RPenSrc}?* If you're not sure just give us your best estimate.

INTERVIEWER ENTER AMOUNT IN POUNDS HERE AND ENTER TIME PERIOD AT NEXT QUESTION

IF DK BECAUSE RECEIVE WITH OTHER BENEFITS ENTER THE FULL AMOUNT HERE
ENTER 9997 IF AMOUNT COUNTED ELSEWHERE
IF RESPONDENT HAS CONCERNS OR IS RELUCTANT TO GIVE INCOME DETAILS: 'We are asking these questions so that we have an accurate picture of income in Britain today, and to understand how people are getting by financially. Anything you tell me is completely confidential, and the findings of this study will not identify you or your family'

FOR EACH SOURCE MENTIONED AT BenFtNFW
RBenPe
What period does that cover?
1   One week
2   Two weeks
3   Three weeks
4   Four weeks
5   Calendar month
7   Two calendar months
8   Eight times a year
9   Nine times a year
10 Ten times a year
13 Three months/13 weeks
26 Six months/26 weeks
52 One year/12 months/52 weeks
90 Less than one week
95 One off/lump sum
97 None of these (WRITE IN)

ASK IF DON'T KNOW AT RIncBen
RBenRo
CARD P19
Do you know **roughly** how much *{you/your partner/you and your partner}* receive(s) from *{ANSWER SELECTED AT BenFTNFW}*? You can just give me a letter from the card.

WEEKLY payments		FORTNIGHTLY payments (every 2 weeks)		4 WEEKLY payments		ANNUAL payments
Less than £50	**Q**	Less than £100	**Q**	Less than £200	**Q**	Less than £2,600
£50 – 65	**T**	£100 – 130	**T**	£200 – 260	**T**	£2,600 – 3,380
£66 – 80	**O**	£131 – 160	**O**	£261 – 320	**O**	£3,381 – 4,160
£81 – 100	**K**	£161 – 200	**K**	£321 – 400	**K**	£4,161 – 5,200
£101 – 125	**L**	£201 – 250	**L**	£401 – 500	**L**	£5,201 – 6,500
£126 – 150	**B**	£251 – 300	**B**	£501 – 600	**B**	£6,501 – 7,800
£151 – 200	**Z**	£301 – 400	**Z**	£601 – 800	**Z**	£7,801 – 10,400
£201 – 250	**M**	£401 – 500	**M**	£801 – 1000	**M**	£10,401 – 13,000
£251 – 350	**F**	£501 – 700	**F**	£1001 – 1400	**F**	£13,001 – 18,200
£351 or more	**J**	£701 or more	**J**	£1401 or more	**J**	£18,201 or more

97. Refused

Income from other sources

Location: after benefits questions

> ASK ALL
> **ROthSrc**
> CARD P20
> Now I would like to ask you about **other** income sources, apart from {earnings,} benefits and pensions. Which of these is a source of income for you *(or your [^husband/wife/partner])* at present?
> INTERVIEWER CODE 6 SHOULD ONLY INCLUDE AN **OTHER** SOURCE OF INCOME NOT INCLUDED ESLEWHERE – NO EARNINGS, BENEFITS OR PENSIONS
> PROBE: 'Which others'
> CODE ALL THAT APPLY
> 1   Interest from savings or investments
> 2   Student grant, bursary or loans
> 3   Financial assistance from parents or other relatives
> 4   Rental income
> 5   Child maintenance
> 6   Other source of income that you haven't already told me about in this interview (PLEASE SAY WHAT)
> 7   None of these
>
> IF R HAS A PARTNER ASK FOR EACH "OTHER" SOURCE GIVEN AT ROTHSRC
> **RothPar**
> Is it you or your [^husband/wife/partner] who receives [^name of payment type], or both of you?
> IF BOTH: Do you and your [^husband/wife/partner] receive [^name of payment] jointly or separately.

INTERVIEWER: IF RESPONDENT RECEIVES PAYMENT JOINTLY WITH SOMEONEOTHER THAN THEIR PARTNER CODE RESPONDENT ONLY.

> IF PARTNER RECEIVES PAYMENT JOINTLY WITH SOMEONE OTHER THAN RESPONDENT CODE PARTNER ONLY
> 1 Respondent only
> 2 Partner only
> 3 Both – jointly
> 4 Both – separately

ASK IF 'INTEREST' AT ROTHSRC
ROthInci
How much (do you / does your partner / do you and your partner) receive from interest from savings or investments before any tax deductions?
If you're not sure just give us your best estimate.

INTERVIEWER ENTER AMOUNT IN POUNDS HERE AND ENTER THE TIME PERIOD AT NEXT QUESTION

IF RESPONDENT HAS CONCERNS OR IS RELUCTANT TO GIVE INCOME DETAILS: 'We are asking you about your income so that we have an accurate picture of our respondents' income level. Anything you tell me is completely confidential, and the findings of this study will not identify you or your family.'

IF AMOUNT GIVEN AT ROTHINCI
ROthPei
What period does that cover?
   1   One week
   2   Two weeks
   3   Three weeks
   4   Four weeks
   5   Calendar month
   7   Two calendar months
   8   Eight times a year
   9   Nine times a year
   10 Ten times a year
   13 Three months / 13 weeks
   26 Six months / 26 weeks
   52 One year/12 months / 52 weeks
   90 Less than one week
   95 One off/lump sum
   97 None of these (WRITE IN)

IF DON'T KNOW AT ROTHINCI
ROthRoi
CARD P21
Do you know **roughly** how much {you / your partner} receive(s) from savings or investments before any tax deductions?
You can just give me a letter from the card.

WEEKLY amount BEFORE tax		**MONTHLY amount BEFORE tax**		**ANNUAL amount BEFORE tax**
Less than £1	**E**	Less than £4	**E**	Less than £50
£1 – 5	**T**	£4 – 20	**T**	£50 – 250
£6 – 20	**O**	£21 – 90	**O**	£251 – 1,000
£21 – 100	**Z**	£91 – 450	**Z**	£1,001 – 5,000
£101 or more	**D**	£451 or more	**D**	£5,001 or more

ASK FOR EACH "OTHER" SOURCE GIVEN AT ROTHSRC EXCEPT 'INTEREST FROM SAVINGS'
ROthInc
How much {*do you / does your partner / do you and your partner*} receive(s) from {*ANSWER SELECTED AT ROthSrc*}? If you're not sure just give us your best estimate.
INTERVIEWER ENTER AMOUNT IN POUNDS HERE AND ENTER THE TIME PERIOD AT NEXT QUESTION

INTERVIEWER IF RESPONDENT HAS CONCERNS OR IS RELUCTANT TO GIVE INCOME DETAILS: 'We are asking these questions so that we have an accurate picture of income in Britain today, and to understand how people are getting by financially. Anything you tell me is completely confidential, and the findings of this study will not identify you or your family.'

IF AMOUNT GIVEN AT ROTHINC
ROthPe
What period does that cover?
1   One week
2   Two weeks
3   Three weeks
4   Four weeks
5   Calendar month
7   Two calendar months
8   Eight times a year
9   Nine times a year
10 Ten times a year
13 Three months / 13 weeks
26 Six months/26 weeks
52 One year / 12 months / 52 weeks
90 Less than one week
95 One off/lump sum
97 None of these (WRITE IN)

ASK IF DON'T KNOW AT ROTHINC
ROthRo
CARD P22
Do you know **roughly** how much *{you / your partner / you and your partner}* receive(s) from *{ANSWER SELECTED AT RothSrc}*? You can just give me a letter from the card.

WEEKLY payments		FORTNIGHTLY payments (every 2 weeks)		4 WEEKLY payments		ANNUAL payments
Less than £50	Q	Less than £100	Q	Less than £200	Q	Less than £2,600
£50 – 65	T	£100 – 130	T	£200 – 260	T	£2,600 – 3,380
£66 – 80	O	£131 – 160	O	£261 – 320	O	£3,381 – 4,160
£81 – 100	K	£161 – 200	K	£321 – 400	K	£4,161 – 5,200
£101 – 125	L	£201 – 250	L	£401 – 500	L	£5,201 – 6,500
£126 – 150	B	£251 – 300	B	£501 – 600	B	£6,501 – 7,800
£151 – 200	Z	£301 – 400	Z	£601 – 800	Z	£7,801 – 10,400
£201 – 250	M	£401 - 500	M	£801 – 1000	M	£10,401 – 13,000
£251 – 350	F	£501 – 700	F	£1001 – 1400	F	£13,001 – 18,200
£351 or more	J	£701 or more	J	£1401 or more	J	£18,201 or more

97 Refused

Housing costs

Location: following existing Tenure question

ASK ALL
Tenure7 (current BSA question)
Does your **household** own or rent this accommodation?
PROBE IF NECESSARY
IF OWNS: Outright or on a mortgage?
IF RENTS: From whom?
1   OWNS: Owns outright
2   OWNS: Buying on mortgage
3   Shared ownership (e.g. part rent, part buy)
4   RENTS: local authority / council
5   RENTS: Housing Association / charitable trust / new town development corporation
6   RENTS: property company
7   RENTS: employer of a household member
8   RENTS: other organisation
9   RENTS: relative/friend (before living here) of a household member
10   RENTS: other individual / private landlord
11   Rent free, squatting
97   Other (WRITE IN)
98   (Don't know)
99   (Refusal)

IF BUYING ON A MORTGAGE (CODE 2 AT TENURE7)
MortgCst
How much was the last total monthly payment you {and your [^husband/wife/partner]} made on all mortgages or loans for this property?

INTERVIEWER: ENTER TOTAL AMOUNT PAID BY RESPONDENT (AND PARTNER) FOR ALL MORTGAGES INCLUDING EXISTING AND NEW MORTGAGES.
IF ASKED: INCLUDE ANY OVERPAYMENTS MADE
INCLUDE LIFE INSURANCE PAYMENTS IF PAID WITH MORTGAGE.
IF ENDOWMENT MORTGAGE, INCLUDE BOTH PREMIUMS AND INTEREST.
IF DON'T KNOW, PROBE FOR APPROXIMATE AMOUNT.
0..99997
8   (Don't know)
9   (Refusal)

IF RENTING AT (CODES 3-10 AT TENURE7)
RentCst
How much was your (and your [*^husband/wife/partner*]'s) last rent payment including any services or water charges? If you receive housing benefit for some or all of your rent, please say the amount **you** paid after housing benefit?
INTERVIEWER:
IF 100% RENT REBATE/PAID FOR BY HOUSING BENEFIT CODE 0
IF IN A MULTI-ADULT SHARED HOUSE INCLUDE RENT PAID BY RESPONDENT (AND THEIR PARTNER) ONLY
IF DON'T KNOW, PROBE FOR APPROXIMATE AMOUNT
0..99997
888   (Don't know)
999   (Refusal)

RentPe
What period did that cover?
CODE ONE ONLY
1   One week
2   Two weeks
3   Three weeks
4   Four weeks
5   Calendar month
7   Two calendar months
8   Eight times a year
9   Nine times a year
10   Ten times a year
13   Three months / 13 weeks
26   Six months / 26 weeks
52   One year / 12 months / 52 weeks
90   Less than one week
95   One off/lump sum
97   None of these (WRITE IN) (Don't know)
(Refusal)

(IF ONE OR MORE ADULTS LIVING IN HOUSEHOLD OTHER THAN R AND PARTNER)

HsDepnd

CARD P9

{Apart from your *[^husband/wife/partner]*,} Which of these best describes your financial arrangements with the other adult(s) in the household?

1. **I support them** by regularly providing financial support, accommodation and / or meals
2. **They support me** in the form of financial support, accommodation and / or meals
3. **Another arrangement** – e.g. you pay bills together or share meals but everyone contributes, or you don't share anything with them
4. SPONTANEOUS: I have a different relationship with different adults in the household – PLEASE SAY WHAT

Appendix B. Discussion on establishing equivalence in price comparison

Comparability has been considered extensively in the literature with regards to food and groceries and there are many approaches that are used by statistical agencies when calculating national indices, such as the CPI, that could be employed in poverty premium measurement. These approaches have been developed to compare the prices of different brands and pack sizes and are outlined in more detail below.

The statistical agencies take many steps to ensure comparisons are made like-for-like. The starting point for most agencies is to identify goods that are as similar as possible. The aim is to collect the prices of exact same items over time. The representative items the ONS selects for the CPI basket of goods are chosen in part to make this annual task as easy as possible.

Where comparable items cannot be found, and where there are obvious and measurable quality differences, one approach is to use hedonic regression (outlined in more detail in Section 5.10). This approach is mainly used by ONS for electrical items where the various attributes of an item tend to be related to its underlying quality and price. This approach applies regression models to identify the impact that each of the attributes has on price. For example, for computers, the attributes would include processor speed, the size of the hard disk drive and the amount of memory. These would be included in the model as predictor variables. The model could be used to indicate the impact on price of changing one of these attributes, whilst holding others constant.

Price comparison is difficult where the unit cost of a product varies by size. This is a common occurrence in food and groceries where, for example, it is less expensive to purchase a single two-litre bottle of soft drink than two one-litre bottles of the same product. Statistical agencies usually stipulate that price collectors find an item of the same pack size when comparing prices over time. However, this is not always possible as the weight or pack size of the product may change (for example, a company changes the size of its chocolate bar). In this case it is common for statistical agencies to scale the price down by volume. This means, if chocolate bars decrease in size by 20 per cent, then one should scale up the price recorded for chocolate bars by 25 per cent. This should be done with caution however, as it requires many assumptions to be made about the relationship between price and quality.[68]

If there are goods for which a comparable item cannot be located and the ONS is not confident in applying a hedonic adjustment, the ONS currently assumes that the price of those goods increases in line with the other items in its elementary aggregate (this is equivalent to dropping it from the calculation). This is problematic as it reduces the representativeness of the price index being compared. A similar issue would apply in cases where no overlap exists between the goods purchased by a low-income household and the goods purchased by a higher-income household. IFS attempted to

---

[68] The relationship between pack and price size is often approximated using linear scaling. See Fox and Melser (2014) for a discussion of the implications for linear scaling of scanner data.

avoid this in their 2012 study by effectively imputing prices for missing items.[69] They grouped households together on observable characteristics, such as income, age and family composition, and used the average price paid for goods within that group.

There are some challenges posed by discounts on prices due to coupons or sale items. Again, the ONS has several set approaches. With buy-one-get-one-free offers, the typical approach is to only take the price of the first item and assume the second item is of less value to consumers because they have been 'forced' to buy it. This assumption will not always hold, and may affect the comparison if offers are targeted more heavily at low-income consumers than high-income ones.

The ONS faced some additional challenges with regards to identifying comparable clothing items that may be applicable to other markets. Fashion items can change rapidly over time; the price of a highly fashionable shirt or dress is unlikely to hold over time as that item falls out of fashion and becomes less desirable. There may be other markets where the desirability of goods may be subject to rapid change, which is reflected in their price. An example may be the telecoms market, where data allowances become more important than the number of texts. The ONS sought to address this challenge by relaxing the requirements for finding exactly comparable clothing items from one month to the next in 2010. This led to a big increase in the variance of prices being recorded but had the benefit of boosting sample size, leading to a larger number of prices for comparison.

In addition to the work by Blow and Leicester (2012), there are international studies that have attempted to compare prices across low-income and higher-income consumers. Aguiar and Hurst (2007) calculate a price index comparing what price consumers would pay for their bundle of goods if they had faced average prices for each of the goods (rather than the price they paid), although this still required a set of decisions to be made as to what goods constituted the 'same goods'. In addition, a further problem is what economists call 'substitution bias'. If consumers did pay different prices then they would not purchase the same set of goods. For instance, households might steer away from products that are more expensive for them (making it look like there is less of a difference in prices they pay than there is). The main way to address substitution bias is to use an appropriate index formula, for example, the Fisher ideal index[70]. This index takes account of substitution behaviour – the more consumer spending changes between one period and the next in response to the price rises the less effect those price rises will have on the index; however, this requires there to be overlapping goods purchased by the two sets of comparator households. Such an approach cannot be used if the low-income and comparator households buy completely different sets of goods.

There are also the international comparisons of prices that underpin the Penn World Table[71], where a list of products is selected across countries that satisfy the properties of being both *representative* and *comparable* (i.e. both the kind of goods or service a typical household would buy and something that price collectors would be able to find

---

[69] Blow, L. and Leicester, A. (2012) "Do the Poor Pay More? An investigation of British Grocery Purchase Prices", Institute for Fiscal Studies
[70] For further information see OECD (2001)
[71] Groningen Growth and Development Centre (2017) "Penn World Table: Version 9.0", Groningen Growth and Development Centre

in all the countries including in the project. For this to work each country must investigate whether each of the products on the list is available within their own country and test whether it is feasible for the process of those products to be collected.

This means the overall list of products is not representative of any single country but indicative of the products for which there is overlap. It also means each country collects prices of some products that would not necessarily be included in their own CPI.

Appendix C.   Table on data sources

The following surveys and data sources were reviewed against the data requirement for measuring the poverty premium: the Living Costs and Food Survey, the Family Resources Survey, the Financial Conduct Authority's Financial Lives, the Office for National Statistics' Consumer Trends dataset, the Ofgem's Consumer Engagement Survey, the Bank of England's NMG Household Survey, the ONS's Wealth and Assets Survey, the English Housing Survey, the British Population Survey, the National Travel Survey and Understanding Society.

It should be noted that data from different surveys are released at different time points. This needs to be considered when constructing measures from more than one data source.

Data Source	Target population / sample size	Geographic coverage	Type of survey	When released	Topics of interest
Living Cost and Food Survey	16+ 5,000	GB & NI	Cross-sectional F2F interview & diary	Q1, released annually	Collects information on spending patterns and the cost of living Respondents complete a diary of their expenditure for two weeks
Family Resources Survey	16+ 19,000 HH	GB & NI	Cross-sectional F2F interviews	February/ March, released annually	Includes information on household costs
Financial Lives Survey	18+ 13,000	UK	Cross-sectional F2F & online interviews	October 2017; June 2018	Information on the types of consumers and their experiences of financial products and services
ONS Consumer Trends dataset	-	-	-	Quarterly release	Uses data from Retail Sales Inquiry & LCF
Ofgem Consumer Engagement survey	4,000	GB	F2F & some qual interviews	Q3, released annually	Includes consumer behaviour, attitudes, perceptions, knowledge and outcomes
Bank of England NMG Household survey	6,000	GB	Cross-sectional Online	December, released annually	Includes consumer spending

ONS Wealth & Assets survey	18,000	GB	F2F interviews Every 2 years	January/ February, released biennially	Includes information on assets, borrowing, saving, debt and financial planning
English Housing survey	14,000	England	F2F interviews & follow-up physical inspection	July, released annually	Includes information and costs of renting/ mortgages
British Population survey	7,000	GB	Monthly F2F interviews	Released monthly (2008-2015)	Includes intentions and motivations to purchase and online purchases
National Travel survey	7,000	GB	Cross-sectional F2F interview & diary	July, released annually	Includes information on travel costs
Understanding Society	16+ adult survey 10-15 youth questionnaire 40,000 HH	UK	Longitudinal F2F & online	November, released annually	Includes information on a range of topics: health, work, education, income, family and social life
European Union Statistics on Information and Living Costs (EU-SILC)	7,4500	UK (EU)	Cross-sectional with a longitudinal element	Frequent data releases, by country throughout the year	Includes detailed information on income, poverty, social exclusion and housing