



Research report 2/2020

Budget standards: international measures and approaches

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The contents of this paper are the responsibility of the author and the research has been conducted without the involvement of members of the Fair Work Commission.

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- Australian Chamber of Commerce and Industry (ACCI);
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- Australian Council of Social Service (ACOSS);
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Abbreviations list

2018–19 Review	Annual Wage Review 2018–19
Act	<i>Fair Work Act 2009</i> (Cth)
APS	Annual Population Survey (UK)
BLS	Bureau of Labor Statistics (US)
CBS	Consensual budget standards
CEX	Consumer Expenditure Survey
Commission	Fair Work Commission
CONEVAL	National Council for the Evaluation of Social Development Policy (<i>translated</i>)
CPI	Consumer Price Index
CRSP	Centre for Research in Social Policy
EPI	Economic Policy Institute
Expert Panel	Expert Panel for annual wage reviews
EU	European Union
FBC	Family Budget Calculator
FBU	Family Budget Unit
FCSPRU	The Family Centre Social Policy Research Unit
HHS	US Department of Health and Human Services
HUD FMR	US Department of Housing and Urban Development Fair Market Rent
LCFS	Living Cost and Food Survey
LPC	Low Pay Commission
LWC	Living Wage Commission
LWF	Living Wage Foundation
MBM	Market Basket Measure
MESL	Minimum Essential Standard of Living
MIHL	Minimum income for healthy living

Budget standards: international measures and approaches

MIS	Minimum Income Standards
MIT	Massachusetts Institute of Technology
NCLS	National Conference of State Legislatures
NLW	National Living Wage
NMW	National Minimum Wage
NZHES	New Zealand Household Economic Survey
ONPES	French National Observatory on Poverty and Social Exclusion (<i>translated</i>)
ONS	Office for National Statistics (UK)
RB	Reference Budgets
SPRC	Social Policy Research Centre
UK	United Kingdom
USDA	United States Department of Agriculture
VPSJ	Vincentian Partnership for Social Justice

Executive Summary

This research report provides a summary of the contemporary methodologies used to construct budget standards in relevant comparator countries to inform discussion and research regarding budget standards in Australia. It also focuses on how budget standards are updated. Budget standards are a way of estimating how much income a particular household type, living in a particular place at a particular time, needs to achieve a particular standard of living.

Budget standards are relevant as the Expert Panel for annual wage reviews (Expert Panel) is required to consider relative living standards and the needs of the low paid. In assessing the needs of the low paid, the Expert Panel examines the extent to which low-paid workers are able to purchase the essentials for a decent standard of living to engage in community life, assessed in the context of contemporary norms.¹ The Expert Panel uses a variety of measures when determining the needs of the low paid, including budget standards. In particular, the Expert Panel stated in the 2018–19 Review decision that they saw merit in future research regarding how budget standards could be best updated over time.

The report considers recent Australian budget standards research, as well as broader budget standards literature and contrasts this with differing approaches from a selection of relevant comparator countries. It finds that there is a degree of commonality in the methodology and process for calculating budget standards, especially in terms of the broad aim of developing a basket of items necessary to purchase in order to achieve a particular standard of living. There is, however, variance in how organisations in different countries define and calculate budget standards, often dependent on the purpose. Different research aims lead to varied approaches that can provide different outcomes.

Differences occur in that some budget standards are informed by bottom-up research, where focus groups of members of the public inform the construction of the basket of goods and services. This research tends to have members of the public consensually agree upon a basket of items for a particular standard of living, typically a standard of living that is above just the basic necessities and which incorporates social inclusion and participation. Budget standards research in other countries takes a more top-down approach, preferring to construct the basket based on expert advice and existing quantitative data. In fact, most budget standards research uses some combination of these data sources and approaches.

A further consideration is the type of households in which to determine budgets. The approach in the United Kingdom is to calculate at the individual level so that a standard can be derived for over one hundred household types. Others calculate budget standards for certain household types chosen based on specific country socioeconomic or cultural circumstances.

¹ [2019] FWCFB 3500 at [17].

1 Introduction

Each year, the Expert Panel for annual wage reviews (the Expert Panel) must take into account certain considerations regarding the modern awards and minimum wages objectives, addressed in s.134 and s.284 of the *Fair Work Act 2009* (Cth) (the Act). As part of these objectives, the Expert Panel is required to consider relative living standards and the needs of the low paid. In assessing the needs of the low paid, the Expert Panel examines the extent to which low-paid workers are able to purchase the essentials for a decent standard of living to engage in community life, assessed in the context of contemporary norms.² As stated in the Annual Wage Review 2018–19 (2018–19 Review) decision, the Expert Panel uses a variety of measures when determining the needs of the low paid, including budget standards.³

This research report provides a summary of the contemporary methodologies used to construct budget standards in relevant comparator countries to inform discussion and research regarding budget standards in Australia. It also focuses on how budget standards are updated.

Budget standards, as they are known in Australia, are a way of estimating how much income a particular household type, living in a particular place at a particular time, needs to achieve a particular standard of living (Saunders & Bedford 2017).

In Australia, research on budget standards for selected household types was undertaken in the 1990s by the Social Policy Research Centre (SPRC) and most recently by Saunders and Bedford (2017). This most recent budget standards research was discussed in the Annual Wage Review 2017–18 and 2018–19 Review decisions. In the 2018–19 Review decision, the Expert Panel stated:

‘...we see merit in future research addressing how the budget standards can be appropriately updated to take account of price changes over time to accurately match the various budget standards with the relevant household disposable income’ ([2019] FWCFB 3500 at [315]).

The calculation of budget standards is often determined by either public discussion and agreement (a consensus approach); by using expert opinion, judgement, and secondary data; or a combination of both (Saunders & Bedford 2017: 2).

A bottom-up approach focuses on building public consensus of lived experiences through focus groups (such as the United Kingdom (UK)). It places greater emphasis on asking people what they believe is needed to be purchased in order to achieve a defined standard of living. This can be contrasted with a ‘top-down’ approach which focuses on initially obtaining expert knowledge or quantitative data to determine what households currently purchase.

The recent budget standards research in Australia used a ‘top-down’ approach; where the main information source for prices and basket items comes from expert opinion or expenditure data. Public opinion through focus groups was only used as a sounding board to check the assumptions of experts.

While the Australian ‘top-down’ approach is based on the Minimum Income for Health Living (MIHL) standard, many of the other countries covered in this report follow the Minimum Income Standard (MIS) ‘bottom-up’ approach, which was developed in the UK at Loughborough

² [2019] FWCFB 3500 at [17].

³ [2019] FWCFB 3500 at [201].

University's Centre for Research in Social Policy (CRSP). Despite the different approaches, the aim of budget standards research is broadly comparable—they all attempt to set a minimum standard of living for different household types.

This report finds that whilst there is a degree of commonality in the research methodology used across countries, the approach taken to define, calculate and update budget standards depends on the purpose, use or available resources.

Section 2 of the report outlines the differences between budget standards, minimum wages and living wages. Following a short description of budget standards research in Australia in Section 3, Section 4 looks at the methodologies in key comparator countries (the UK, Ireland, Canada, US, and New Zealand) and how the budgets are updated. Section 5 looks at additional countries where relevant budget standards research has taken place with the assistance of researchers from the UK: Japan, France and Mexico, as well as relevant research from the European Union. Section 6 concludes the report.

2 Differences between budget standards, minimum wages and living wages

There is often a relationship between budget standards and a minimum threshold for wages. Although this does not exist in Australia, other countries considered in this report rely on budget standards to calculate living wages—which often have a different purpose to minimum wages.

A minimum wage is a legally enforceable wage floor which applies to all, or a defined section, of a country's workforce. The setting of minimum wages often requires various considerations, such as any effects on employment, the ability of business to absorb higher wages, living standards of affected workers and whether the economy is able to sustain increased prices. As part of the annual wage review, the Fair Work Commission's (Commission's) Expert Panel considers a variety of economic factors pursuant to s. 284(1)(a) of the Act when assessing the performance and competitiveness of the national economy, including: productivity; business competitiveness and viability; inflation; and employment growth. The UK Low Pay Commission (LPC) has the remit to 'raise pay as high as possible without damaging employment prospects' (LPC 2019: vii) with respect to the national minimum wage. However, unlike the LPC, the Expert Panel has broader scope to consider social factors such as promoting social inclusion through workforce participation; relative living standards and the needs of the low paid; the principles of equal remuneration; and the needs of junior employees, employees to whom training arrangements apply and employees with a disability.

Unlike the setting of minimum wages, living wages place less emphasis on economic or employment implications, and more on the needs of households to achieve a particular standard of living. However, some living wage frameworks (such as the UK and Ireland) limit annual increases to more 'sustainable' levels and to encourage greater adoption by employers (Republic of Ireland Living Wage 2019). In most jurisdictions covered in this report, living wages coexist alongside a lower legal minimum standard.

A living wage is calculated in relation to a particular standard of living, or to provide enough income in order to allow employees and their households to enjoy a subjectively decent standard of living and to participate and contribute to society (Living Wage Commission 2016: 5). In some countries studied in this paper, budget standards research is used to form part of their calculation of a living wage.

Budget standards represent how much a particular family living in a particular place at a particular time needs to achieve a particular standard of living (Saunders 2018: 4). A budget standards framework allows many different budgets to be calculated for any number of different household types. The needs of households will differ by their size and composition. Single people or couples working full time will require different needs to households with children. This leaves researchers with the problem of deciding the number and types of households to consider. Budget standards are also required to be updated so that their value and the basket of goods and services remain relevant.

While there is a great deal of overlap in the construction of budget standards and living wages, they are different concepts. Budget standards involve determining and pricing a basket of goods and services. A living wage, on the other hand, is the income required to cover the cost of the basket of goods and services, incorporating elements such as interactions with the tax-transfer system and the number of hours that people are expected to work. Budget standards, therefore, tend to underpin the determination of a living wage.

In Australia, the Expert Panel does not set a living wage. The national minimum wage and modern award minimum wages are not solely determined by budget standards research. Instead, it makes up one aspect of the Panel's consideration of relative living standards and the needs of the low paid alongside other information and data sources, in conjunction with the broader economic and social considerations.

3 Budget standards research in Australia

The Commission is responsible for reviewing and setting the national minimum wage and modern award minimum wages in the national workplace relations system. Each year, the Commission's Expert Panel conducts a review and must consider the minimum wages objective (s.284) and the modern awards objective (s.134) of the Act. Both objectives require that the Expert Panel takes into account, among other considerations, the relative living standards and the needs of the low paid. In the past two annual wage reviews, this has included the consideration of recent Australian budget standards research. This research does not form the basis of a living wage calculation, as occurs in some other jurisdictions discussed in this report.

3.1 Australian budget standards research

Published in 2017, the research determined its budgets by specifying and pricing every item needed by the family, summing to produce the overall budget (Saunders & Bedford 2017: 1).

The calculation of the 2017 budget standards was in part motivated because Australian researchers were relying on updated estimates of outdated research undertaken in the 1990s (Saunders et al. 1998) The new research accounted for changes in social practices and community norms, as well as advances in budget standards research practices (Saunders & Bedford 2017: 1). The report produced budgets that reflected the amount required to satisfy contemporary 'basic' needs, without allowances for modest or occasional 'luxuries' and minimum wastage. The authors noted that the more recent budget standards '...are extremely tight and leave no room for even the most modest of special treats' (Saunders & Bedford 2017: 41).

The Australian budget standards research applied the MIHL standard developed in the UK public health literature⁴. The MIHL standard is designed to ensure that all individuals are able to lead healthy lives and participate in society (Saunders & Bedford 2017: 1). The budget standards were estimated using three types of data: normative expert data on what is needed to attain specific standards; behavioural (survey) data on household expenditure; and experiential data (focus groups) on how families budget and meet their needs (Saunders & Bedford 2017: 2).

The Australian research used a 'top-down' approach that mainly relied on expert knowledge. Focus group participants roles were advisory, acting as a sounding board for experts to check the appropriateness of their assumptions about the basket and their behaviour. Focus group discussions were used to validate assumptions that were required to develop the budget components, items, quantities, lifetimes and prices, as well as to confirm assumptions made by researchers regarding shopping habits, participation and social activities were accurate. The focus groups involved participants from low-income backgrounds who were asked about the relevance of the budgets to their own circumstances, as well as their thoughts on whether the estimated budgets were adequate to meet their needs to the MIHL standard (Saunders & Bedford 2017: 2).

The budgets calculated in the research were priced in the second half of 2013 and were updated to the June quarter 2016 using the Consumer Price Index (CPI) 'to maintain their relevance' (Saunders & Bedford 2017: 73). Updating the budgets by changes to the CPI maintains the real value of the budget standards in the short term and is considered to be 'standard practice in the budget standards literature' and 'will not induce major errors into the estimates' (Saunders & Bedford 2017: 38–39). However, the authors suggested that, beyond seven years, 'it is preferable to review and revise the entire budgets to ensure that items, quantities and lifetimes as well as prices are reviewed and adjusted to reflect changes in community norms and average living standards' (Saunders & Bedford 2017: 39).

Table 1 shows the main basket items and household types modelled in the budget standards report. Adults were either assumed to be in work and receiving the national minimum wage, or not in the labour force and receiving all relevant income support payments they were entitled to (Saunders & Bedford 2017: 2).

⁴ See Morris et al. (2000) *A minimum income for healthy living*, Journal of Epidemiology & Community Health, Volume 54, Issue 12, December 2000, pp. 885–889; and Morris et al. (2007) *Defining a minimum income for healthy living (MIHL): older age, England*, International Journal of Epidemiology, Volume 36, Issue 6, December 2007, pp. 1300–1307

Table 1: Summary of main MIHL components

Basket items	Household types	Child ages
Food	Single person (Male, 40; female 35)	None
Clothing and Footwear	Couple (M, 40 & F, 35)	None
Household goods and services	Couple (M, 40 & F, 35)	1 child (F, 6)
Transport	Couple (M, 40 & F, 35)	2 children, (F, 6 & M, 10)
Health	Sole parent (F, 35)	1 child (F, 6)
Personal Care		
Recreation		
Education		

Note: Housing costs are excluded from the budgets. The non-housing budgets have been grossed-up by including estimates of the weekly rents paid in different locations within capital cities in Australia derived from data on market rents by the authors.

Source: Saunders P & Bedford M (2017), *New Minimum Income for Healthy Living Budget Standards for Low-Paid and Unemployed Australians*, SPRC Report 11/17, Social Policy Research Centre, UNSW Sydney,

4 Budget standards across key comparator countries

Seminal research conducted for the UK has formed the basis for much of the research on budget standards around the world. However, as discussed in this section, there tends to be methodological differences between countries.

The UK MIS focus on public consensus to establish a basket of goods and services using a ‘bottom-up’ approach to identify needs (Bradshaw et al. 2008). These groups negotiate to consensually determine how these needs can be met. Like Australia, other countries used a ‘top-down’ approach, such as New Zealand, which places more emphasis on secondary data sources (Scott, 2014; King & Waldegrave 2012:3–4). Methods applied in the United States also predominantly use secondary data, consisting of surveys on expenditure, and expert opinion to define a minimum needs basket (Nadeau 2018) without the use of focus groups. Budget standards research that employs a more ‘top-down’ approach measures what low-income people currently purchase, which is shaped by the financial resources that a person or household currently has access to, and may not necessarily consider what people need to reach a particular standard of living (Davis et al. 2015).

As mentioned in Section 2, it is important that budget standards are updated so they remain relevant with contemporary norms and costs of living. There are various approaches to updating budget standards that are discussed in this report.

The remainder of this section explores the methodologies used by a number of countries to derive a budget standard and how these standards are updated. Table 2 provides a broad overview and comparison of the different methodological approaches.

Table 2: Comparison of budget standards

Country	Methodology and Calculation	Focus groups	Household selection	Updating method
Australian budget standards	Budget standards are estimated using 3 types of data: normative expert data on what is needed to attain specific standards; behavioural (survey) data on household expenditure; and experiential data (focus group) on how families budget and meet their needs	Involved low-income participants whose roles were advisory, acting as a sounding board for experts to check the appropriateness of assumptions about the basket and low-income households' behaviour, with reference to MIHL standards.	Single adult Couple no children Couple, 1 child (6 year old girl) Couple, 2 children (6 year old girl and 10 year old boy) Sole parent, 1 child (6 year old girl)	Suggested approach to be updated yearly in line with movements in the CPI at the relevant group level, with the only exception being Personal care, which is indexed to All groups CPI. Research suggested this method could be employed for 7 years without inducing major errors and suggested beyond 7 years that the budgets should be reviewed and revised.
UK Minimum Income Standard (MIS)	Focus groups negotiate public consensus on the basket of goods and services needed to achieve a decent standard of living. Through a number of stages, these standards are reviewed and reassessed by other focus groups to test strength of consensus. Prices are gathered by the research team from various stores and suppliers in the UK.	Include a mixture of socio-economic backgrounds, made up of participants from within the household type under discussion. Participants determine what constitutes an acceptable minimum living standard for UK society at a point in time by achieving a negotiated consensus. Experts and researchers primarily play a confirmatory role. Different focus groups are used to review the budgets to ensure that they are representative.	13 core household types consisting of coupled and single households with or without up to 4 children.	Timing of adjustments to the MIS basket is based on a 4-yearly cycle where, in Years 1 and 3, households undergo a review or rebase to ensure the basket reflects current social norms. In the other years, inflation and policy changes to the tax and benefits system are considered ensuring baskets reflect current prices.
New Zealand Living Wage Income Research	Establishes a basket of items needed to provide households with the basic necessities of life which enables them to live with dignity and actively participate in society. However, initial focus group results were deemed too high and indefensible. As such calculation relies on secondary data sources; primarily the NZHES, nutrition data, and rental data. Data taken from the NZHES uses the average expenditure of the bottom 5 income deciles.	Comprised of households from low to medium income backgrounds. Participants estimated costs based on a list of items derived from the NZHES. After initial estimates were significantly higher than existing expenditure data, focus group estimates were moderated by secondary data.	2 Adults, 2 Children	Updated annually in line with increase in average wages measured by the Quarterly Employment Survey. Periodic Measurement Reviews are undertaken which considers and incorporates new data sources.

Country	Methodology and Calculation	Focus groups	Household selection	Updating method
Canada Market Basket Measure (MBM)	The MBM calculates a basket of goods that achieves a modest standard of living (the MBM is used to calculate Canada's official poverty line). Calculation uses a variety of data sources ranging from nutrition research, Census, household surveys, and other social research.	Focus groups take a more consultative role, composed of those with low incomes or those experiencing poverty, and only feature during review processes.	2 Adults, 2 Children	The measure is reviewed periodically to adjust baskets to more contemporary standards and assumptions, such as the incorporation of new data sources or incorporating different housing costs. Focus groups are held as part of reviews, as well as wider public consultation. Between reviews, MBMs are updated to reflect the availability of new data or updated by the CPI.
Ireland Minimum Essential Standard of Living (MESL)	Aligns closely with the UK MIS approach. Minimum standard expenditure baskets for a decent standard of living are determined by focus groups and supplementary expert opinion. MESL considers urban and rural differences in its calculation.	A deterministic role, similar to the UK MIS. Participants from diverse social, economic, and geographical backgrounds.	2 Adults, 1–4 Children; 1 Adult, 1–4 Children; Single adult; Cohabiting couple; Pensioner living alone; and Pensioner couple.	Indexed annually in line with sub-group CPI components. More thorough reviews undertaken periodically (first was in 2012 followed by for 2018–19) where baskets are rebased and re-priced.
US MIT <i>Living Wage Calculator</i> and EPI <i>Family Budget Calculator</i>	Focuses on expert and expenditure data rather than public consensus. Data is gathered from various sources including (but not limited to) national food guidelines, published state-based statistics, Census data, expenditure survey data, and local data where relevant. The MIT living Wage Calculator calculates a frugal or subsistence wage. The FBC measure income needed to attain a modest but adequate standard of living	No focus groups implemented.	MIT: 1–2 Adults, 0–3 Children. EPI: 1–2 Adults, 0–4 Children.	Updated annually for new data, adjusted by inflation where necessary.

4.1 United Kingdom

The UK Government reviews and sets the National Minimum Wage (NMW) and the National Living Wage (NLW) each year based on advice from the independent LPC. The NLW is not based on budget standards research and has a target of reaching 60 per cent of median earnings by 2020 for employees aged 25 years and over (LPC 2018: vii).⁵

The LPC is an advisory non-departmental public body that submits a report each October to the UK Government recommending adjustments to the NLW and NMW rates (LPC 2019) which are generally accepted by the UK Government each year (OECD 2018: 19). The benchmark of 60 per cent of median earnings is subject to the economy experiencing sustained economic growth, which the LPC interprets to mean annual GDP growth of 1 per cent (LPC 2018: ix). The LPC's recommendations are based on evidence regarding employment and hours worked, the performance of the economy and input from stakeholders, consultations and additional research. The LPC do not explicitly take into account the MIS.⁶

Separate to the LPC, the Living Wage Commission (LWC) was set up in January 2016 to oversee the calculation of a voluntary living wage. This wage is calculated each year with reference to the income needed to purchase a basket of goods based on the MIS research (Living Wage Foundation 2019; D'Arcy & Finch 2018: 2).⁷ The LWC is appointed by the Living Wage Foundation (LWF) and comprises 10 members drawn from employers that have pledged to pay their employees at least the voluntary living wage, as well as trade unions, civil society and 'independent experts' (LWF 2019a).

MIS research underpins the 'core' basket of goods and services for the living wage calculation. While the basket is equivalent in London and the rest of the UK, there are minor variations in the cost calculation. The living wage utilises different housing (rent and council taxes), transport, and childcare costs reflecting variations in costs between London and the rest of the UK leading to different wages for each region.⁸ The relative weighting of households also varies to reflect the prevalence of certain household types in each region (for example, 'single' households have a larger weighting in London).⁹ The living wage calculation also considers the impact of the UK tax-transfer system (Cominetti 2019: 5).

⁵ The UK also has various youth and apprentice rates.

⁶ Reference to the MIS was, however, made in the 2019 LPC report regarding the impact of NLW and NMW increases on pay and how it is perceived by workers and their representatives. Trade union Unite noted '...that the Minimum Income Standard, based on what the public think is needed for a "minimum acceptable standards of living" has increased faster than other measures of inflation' (LPC 2019: 57).

⁷ Initially the CRSP undertook both the MIS research and calculated the voluntary living wage.

⁸ For example, rental costs in London are 60 per cent higher compared to the rest of the UK.

⁹ The living wage is set for 17 household types, with the hourly rate calculated by taking a weighted average of the earnings needed for a range of family types in order to achieve that standard. These weights are presented in Appendix B. The voluntary living wage uses the Living Cost and Food Survey (LCFS) to weight family types based on the proportions of each household type (the LCFS is used more widely in the MIS calculations), whereas the voluntary living wage for London uses the Annual Population Survey (APS), which is the data source recommended by the UK Office for National Statistics (ONS) to assess the population of different family types (D'Arcy, C & Finch D, 2016; 26–27).

4.1.1 Minimum income standards research

MIS research in the UK was first established in 2008 (Bradshaw et al. 2008), blending methodologies of the Family Budget Unit (FBU) research at the University of York and the Consensual Budget Standards approach (CBS) by the CRSP at Loughborough University.¹⁰

This research produces budgets for different household types based on what members of the public agree is needed for a minimum acceptable standard of living at a point in time. One of the distinct characteristics of MIS research is the emphasis on establishing public consensus to answer the question ‘[w]hat level of income is needed to allow a minimum acceptable standard of living?’ (Bradshaw et al. 2008: 1). A minimum income standard was defined by members of the public as the following:

‘A minimum standard of living in Britain today includes, but is more than just, food, clothes and shelter. It is about having what you need in order to have the opportunities and choices necessary to participate in society’ (Bradshaw et al. 2008: 1).

The MIS is established by using focus groups consisting of members of the public to specify the items they agree need to be included in a minimum household budget (basket), supported and informed by expert knowledge where required (for example, advice on nutritional standards). Participants are requested to define and determine what constitutes an acceptable minimum living standard for UK society at a point in time. Combining public consensus with expert opinions allows for ‘budgets based on social consensus to be tested against expert knowledge and research’ (Bradshaw et al. 2008:3).

The MIS results are published in annual reports and feed into the Minimum Income Calculator, maintained by the CRSP, where the current budgets for specified household types can be observed. The calculator shows weekly budgets (and the level of income required to reach the minimum) allowing for adjustments in assumptions for variables and costs such as household type, rent, employment status, and childcare.¹¹ As the data are collected at the individual level, budgets for over one hundred different household types (according to numbers and ages of family members) can be calculated (Davis, A et al. 2015: 4). While not covering all possible household compositions, they account for around 80 per cent of the population (Davis et al. 2015:11). Table 3 outlines the major household types and child ages that are considered.

4.1.1.1 Methodology

Over the decade of research from 2008 to 2018, input from over 120 focus groups has been incorporated to derive a basket of items required for a minimum household budget (Davis et al. 2018: 5). Focus groups typically consist of 6 to 8 people and include a mixture of socio-economic backgrounds, made up of participants from within the group under discussion (for example, budgets for parents with children are discussed by groups of parents with children) (Davis et al. 2015: 3). Unlike other research that consults exclusively with people from low-income

¹⁰ The FBU method was informed by documented guidance, expert opinion and statistics (expert judgement) in establishing a budget given a specified living standard, while the CBS utilised panels of ordinary people (representing diverse family and household backgrounds).

¹¹ In addition to the standards themselves, the research also explores insights into various themes, including estimates of the number of people living below the MIS (nearly 19 million in 2017–18) (Padley and Stone., 2020, p. 1), monitoring the experience of those living below the MIS by tracking a group of low-income families (looking at geographical variations and budgets for different household types), addressing the additional costs associated with disability, and whether a ‘greener’ minimum standard of living is possible.

backgrounds, by considering a socially diverse mix, the methodology is able to develop a budget intended to be suitable for the general population, not just for those with low incomes (Bradshaw et al. 2008: 6). This is a key difference between the application in Australia by Saunders and Bedford. The Australian research focuses only on the low paid and unemployed, whereas the UK research sought input from across British society.

A negotiated consensus is achieved by asking group members to work collectively to consider the needs of a hypothetical individual in the same demographic situation as their own. Experience has shown that, in general, consensus is reached quickly for most items, however, in-depth discussion can occur with members of the group challenging and negotiating with each other to establish consensus (Bradshaw et al. 2008: 8–9). There is not always agreement within or between groups as to the difference between a ‘want’ and a ‘need’; with moderators reminding groups that it is not an aspirational budget (Bradshaw et al. 2008:8). However, since the first focus groups, there has been an agreed principle that an acceptable standard of living is one that provides for more than just survival and acknowledges the importance of social participation and choice.

The original MIS employed consultation with experts and researchers to play a confirmatory role, assessing the reasonableness of assumptions and assisting with the costing and verification of items, not deciding on the items themselves. However, the role of experts in contemporary UK MIS research has been limited, for example, to guiding the construction of nutritional food baskets based on the discussions of focus groups (basket items fall under the broad categories presented in Table 3).

The methodology also incorporates a period of ‘critique and reassessment’ as a robustness check. Following the composition of an initial list, different focus groups are used to review the budgets to ensure that they are realistic, that differences have been addressed, and to test the consensus (Bradshaw et al. 2008:7–10). Appendix A provides a broad outline of the key stages of MIS research fieldwork, including the stages of deliberative focus group discussions and consultation with experts and researchers. The UK MIS underpins and has guided other international budget standards research, discussed later in this report.

Table 3: Summary of main MIS components

Basket items	Major household types	Child age groups
Food	Single working age	0–1 years
Alcohol	Couple working age	2–4 years
Tobacco	Single pensioner	Primary school aged
Clothing	Couple pensioner	Secondary school aged
Water rates	Lone parent, one child	
Council tax	Lone parent, two children	
Household insurances	Lone parent, three children	
Fuel	Couple, one child	
Other housing costs	Couple, two children	
Household goods	Couple, three children	
Household services	Couple, four children	
Childcare		
Personal goods and services		
Motoring		
Other travel costs		
Social and cultural participation		
Rent		

Note: Childcare and Rent costs are excluded from the headline budget rate.

Source: Hirsch (2019), *A Minimum Income Standard for the United Kingdom in 2019*, Joseph Rowntree Foundation.

4.1.2 Updating the MIS

In order for the MIS to remain relevant it is updated annually so that the items reflect current prices and current societal norms. The MIS have a 4-year cycle which has been applied since the development of the first set of MIS in 2008, as shown in Table 4.

Every second year the budgets are updated based on inflation. However, every other year they are either rebased or reviewed. A ‘rebase’ refers to re-establishing a minimum basket from scratch and a ‘review’ is an analysis of how adequately needs are being met by the basket reflecting potential social changes (Hirsch 2019: 3). Both involve conducting new focus group research. This is done separately for ‘households without children’ and ‘families with children’.

Table 4: How the MIS is updated

	Year 1	Year 2	Year 3	Year 4
Households without children	Review	Inflation uprating	Rebase	Inflation uprating
Families with children	Rebase	Inflation uprating	Review	Inflation uprating

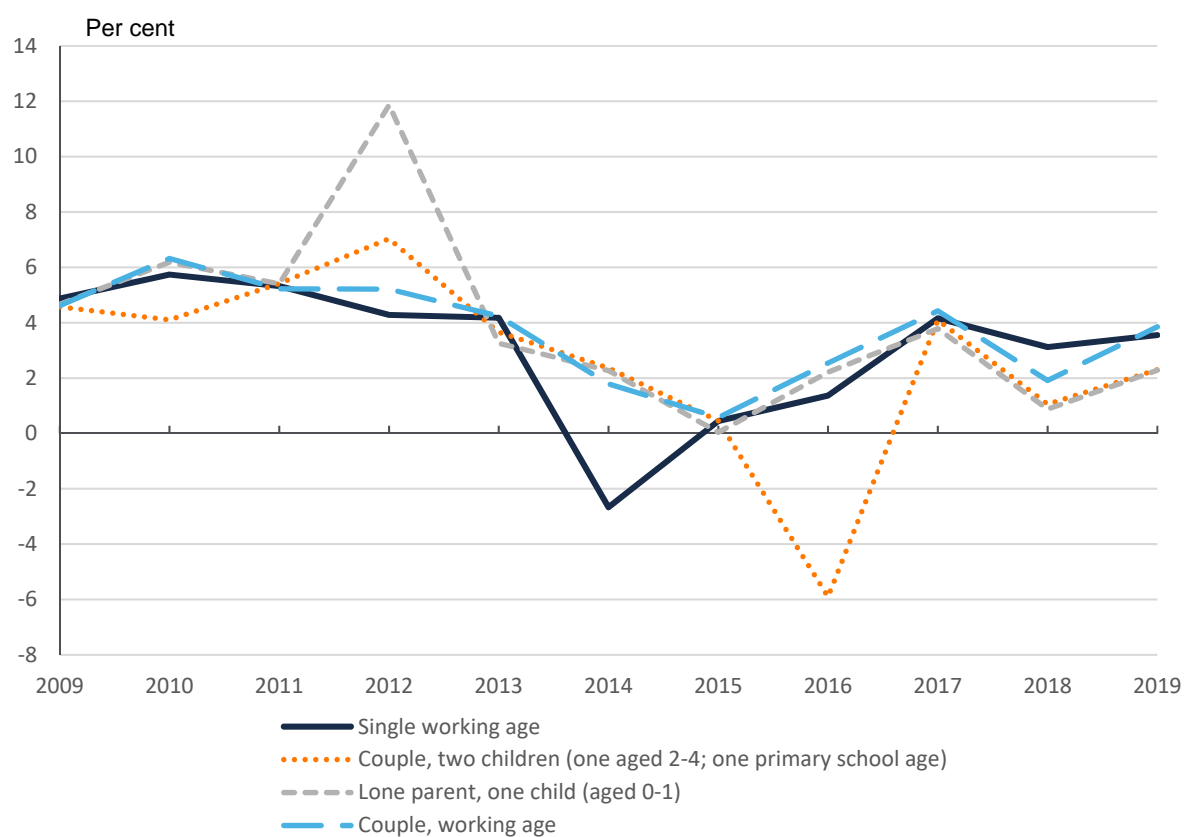
Source: Hirsch (2019), *A Minimum Income Standard for the United Kingdom in 2019*, Joseph Rowntree Foundation, p. 3.

One of the main criticisms of the MIS approach is the reliance on select focus groups and that outcomes would differ if other randomly chosen people were selected (Storms et al. 2014: 51; Anker 2011: 102). In practice, with periodic rebasing, the items that households require have remained stable over the past decade (Davis et al. 2018: 38).

Figure 1 presents annual changes to MIS budgets over time for selected household types. The chart shows that the value of the budgets increased by at least 4 per cent each year between 2009 and 2012. Following this, the increases have been lower, and even declined in some years.

In 2014, there was a rebase for households without children and a review for households with children. This may explain the fact that the annual change in MIS for single adults was negative whilst it remained positive for families with children. In that year, there was a fall in food costs for singles without children (-12.3 per cent), whereas food costs for a lone parent with 1 child increased (+1.2 per cent). This was despite food costs in general declining by about 10 per cent due to previous estimates being determined to have overestimated food costs by failing to accurately take account of the accessibility and prevalence of supermarket discounts. Similarly, in 2016 there was a rebase for households with children and a review for adults without children.

Figure 1: Annual change in MIS budgets



Note: Headline MIS budgets presented, which excludes rent and childcare costs. The significant fall MIS for single working age people in 2014 and Couples with two children in 2016 occurred in years where each of these household types had their MIS baskets rebased

Source: CRSP (2019b) *Latest MIS results*, Annual budgets spreadsheet <<https://www.lboro.ac.uk/research/crsp/mis/results/>>.

4.2 Ireland

Each year the Irish LPC examines and makes recommendations on the appropriate level of the national minimum wage and related matters. Under the *National Minimum Wage (Low Pay Commission) Act 2015*, which amended the *National Minimum Wage Act 2000* so that the Minister must include reference to the advisory role of the Irish LPC, the Irish Low Pay Commission makes recommendations to the Minister which aim to set a minimum wage that is fair and sustainable. It should do this by progressively increasing wages in a way that assists as many low-paid workers as is reasonably practicable, without creating significant employment effects or adverse consequences to competitiveness (Irish LPC 2019).

The Minimum Essential Standard of Living (MESL) is the MIS equivalent in Ireland, calculated by the Vincentian Partnership for Social Justice (VPSJ). The MESL represents a minimum needed to meet physical, psychological and social needs, and is a standard of living that everyone (not just those in poverty) should be expected to live above (Thornton 2019: 4).

The MESL is used to calculate the voluntary living wage. The MESL do not form part of the consideration of the setting of Ireland's legally enforceable NMW. The living wage is calculated by taking the weighted average of the total MESL budget for each of the four regions for single adults¹² (Republic of Ireland Living Wage 2019; para. 1.03.05). Increases to Ireland's voluntary living wage are restricted to no greater than the increase in private sector hourly earnings. This was implemented to provide employers 'some degree of certainty of the direction of labour costs when committing to paying their employees a living wage' (Republic of Ireland Living Wage 2019a: para. 1.12.01).

4.2.1 Minimum Essential Standard of Living methodology

The MESL methodology is broadly comparable to the UK MIS, and consistent with the normative approach that develops a consensus on what the public believes to be a minimum standard for individuals or households based on needs. The MESL research is grounded in lived experience, combining focus groups undertaking iterative in-depth discussions to negotiate consensus about a basket of items, supplemented with expert opinion where necessary (for example, in establishing nutrition and home heating benchmarks) (Mahon et al. 2019; Republic of Ireland Living Wage 2019 para. 1.05.05).

First developed in 2006, the MESL combined the CBS and FBU approach to calculate a standard of living in the same way the original MIS was later developed (Bradshaw et al. 2008). Participants from diverse social, economic, and geographical backgrounds negotiated a minimum standard over the course of three stages: 'orientation' (exploration of concepts and principles), 'task groups' (consideration of budget components), and 'checkback' (rechecking of items and costs).¹³ Three separate focus groups were assigned to undertake this process for six household types (forming 18 focus groups):

- two parents, two children (3 year old girl + 10 year old boy);
- two parents, two children (10 year old girl + 15 year old girl/boy);
- lone parent, two children (3 year old girl + 10 year old boy);

¹² The weighted average is derived from the proportion of the labour force residents in each region (based on Census data).

¹³ These phases are comparable to the UK process as outlined in Appendix A.

- pensioner couples (66–69 years);
- lone female pensioner (70+ years); and
- single adult male (25+ years) (Mahon et al. 2006: 3).

The baskets were priced by researchers who gathered data from 'low cost shops' that individuals might use on a regular basis and are easy to access (Mahon et al. 2006a: 39). In addition, baskets were further reviewed by an Expert Group and Research Advisory Committee who provided input on the methodology and costing. This included nutritionists from the FBU who provided nutritional analysis of the food budgets. These budgets were finalised following a final negotiation and recommendations from experts. Similar to the MIS, the MESL is consensual in that focus groups negotiate and come to an agreement at different stages in the process before finalisation. The items in the basket fall into 14 broad categories (Table 5).

Since its inception in 2006, MESL research has maintained a core expenditure basket containing over 2000 items for different household compositions across urban and rural regions of Ireland. The household scope has expanded to also consider couples without children, more than two children, and single adults rather than just males, increasing coverage to around 90 per cent of households across Ireland in 2019 (Mahon et al. 2019: 4). Four stages of 'child ages' are also considered.

Table 5: MESL households, child costs, and basket items

Basket items	Household types	Child ages
Food	Two Parent, with 1 to 4 children	Infant
Clothing	One Parent, with 1 to 4 children	Pre-school
Personal Care	Single Adults, of working age	Primary school
Health	Cohabiting Couple, of working age	Secondary school
Household Goods	Pensioner, living alone	
Household Services	Pensioner Couple	
Communications		
Social Inclusion & Participation		
Education		
Transport		
Household Energy		
Personal Costs		
Insurance		
Savings & Contingencies		

Source: Mahon et al. (2019).

4.2.2 Updating the MESL

The MESL is updated annually using relevant CPI sub-indexes to adjust for prices (Republic of Ireland Living Wage 2019: 1.09.02, 1.11.01). A more thorough review of the items contained in the basket is conducted periodically, where the public is consulted through focus groups (rebasings), allowing for items to be replaced or new items to be included (Mahon et al. 2019).

A summary of results from the 2018–19 review and rebase was published in 2019, the first since 2012 (Mahon et al. 2019a: 7). In 2018, households with children underwent a review, while in 2019 households without children were reviewed. Four different focus groups reviewed the contents of

all budget areas recommending and reaching consensus on changes, as well as considering rural perspectives.

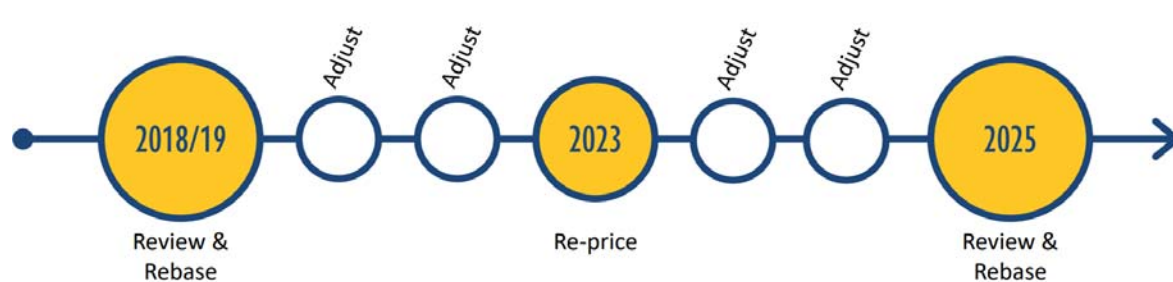
The overall process of the review was the following: Stage 1–focus groups recommending changes; Stage 2–development of new budgets; Stage 3–rebasings of prices; and Stage 4–analysis (which is ongoing). The rebasing process involves exploring a combination of methods (online, in-store visits, phone calls) to rebase prices, consider the differences in prices between urban and rural areas, and evaluate prices for qualitative differences (Mahon et al. 2019: 8–9).

The ‘review process’ has shown that there has been little change in the content of the baskets since 2012, however there has been change over time due to technology, which has affected how households make purchases.

One of the challenges emerging was the disparity between direct pricing and inflation adjustments. While annual CPI uprating occurs more frequently, the experience with rebasing has found that the cost of a MESL rises to a higher level using direct pricing (referred to as re-pricing in Figure 2) (Mahon et al. 2019a: 21).¹⁴ This was also the experience in the UK (Mahon et al. 2019a: 24; Hirsch 2015: Hirsch 2019: 1). As a result, it was recommended that direct pricing be implemented more frequently (every 2 to 3 years).

Figure 2 presents a proposed schedule for re-pricing (2 to 3 years) and review and rebase (4 to 6 years) moving forward.

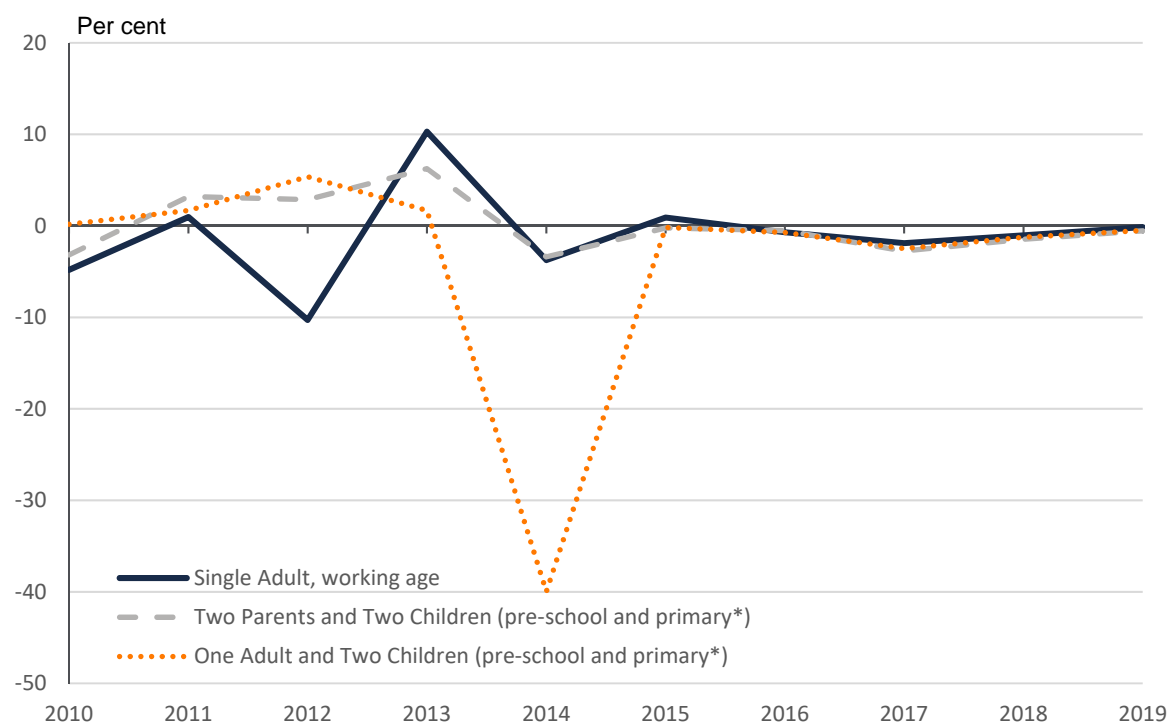
Figure 2: Updating MESL in the future



Source: Mahon et al. (2019a).

Figure 3 presents annual changes in the MESL over time for selected households. Over the last 5 years, the annual MESL budgets have declined for each selected household type. As explained, advancing technology and improved efficiency of budget items have impacted MESL costs (Mahon et al. 2019a: 11). The sharp decline in 2014 for the ‘One adult and Two Children’ household type reflects the removal of childcare costs from the calculation (retaining childcare costs, the decline in the budget would have been in line with other selected households).

¹⁴ Since 2012, the Reviewed and Rebased MESL (using direct pricing) was 1.3 per cent higher, compared to a cumulative increase in prices of 0.7 per cent according to the CPI.

Figure 3: Annual change in MESL (urban) budgets

Note: Budgets exclude housing, childcare, and effect of secondary benefits. In 2012, Single male was generalised to Single adult. * Pre-2012, households with children aged 3 and 10 years were considered.

Source: VPSJ, Weekly MESL Expenditure Budgets, *various*, Minimum Essential Budget Standards Research Centre, ., <https://www.budgeting.ie/urban-budgets/expenditure-budgets.html>.

4.3 Canada

Minimum wage rates in Canada are increased using different approaches across provinces. For example, the minimum wage in Saskatchewan is increased with the CPI (Government of Saskatchewan 2019), while British Columbia considers discrepancies between the minimum and living wage as part of its decision (Government of British Columbia 2019).

The Canadian Market Basket Measure (MBM) calculates a 'market basket' of goods similar to budgets standards calculations in other jurisdictions. More aligned with the approach in the Australian research, focus groups play a consultative role, rather than deterministic, with expert opinion playing a more central role. The MBM forms the basis for determining living wage rates, which are guided by Living Wage Canada and calculated at the provincial level. Regional minimum wage calculations are largely not based on the MBM.

4.3.1 Market Basket Measure

The MBM methodology is similar to the calculation of budget standards, however, they are used for additional purposes, such as measuring poverty, and are set more frugally than some other budget standards in order to meet only basic needs. The MBM was originally developed by a working group of Federal, Provincial and Territorial Officials led by Human Resources and Skills Development Canada (HRSDC) between 1997 and 1999 (Hatfield et al. 2010: 1).

The MBM applies the broad principles of budget standards in calculating a threshold 'based on the costs of a basket of goods and services that individuals and families require to meet their basic needs and achieve a modest standard of living' (Heisz 2019: 3). However, the MBM was originally developed as a measure of low income and, in 2018, was adopted as the basis for Canada's Official Poverty Line¹⁵ (Employment and Social Development Canada 2018: 11).

The methodological features of the current MBM (a top-down approach) include expert opinion, the use of secondary data sources, and focus group consultation primarily during review stages. Statistics Canada is responsible for the periodic review and maintenance of the MBM.

The focus groups comprise Canadians earning low incomes or living in poverty and addresses items needed to live 'a modest, basic standard of living' (Heisz 2019a). Focus groups play a consultative role in the calculation process, and generally feature during major review phases. The MBM focus groups differ to those undertaken during the calculation of the MIS, which specifically sets a standard above a basic level and draws on individuals from diverse socio-economic backgrounds. Statistics Canada also facilitated an online survey, where any Canadian could provide feedback as to whether they thought the 2008 MBM base thresholds aligned with their own families lived experience (Heisz 2019; Statistics Canada 2019).

The MBM is comprised of items including food, clothing, footwear, transportation and shelter for a reference household of two adults (aged between 25 and 49 years) and two children (aged 9 and 13 years). Table 6 outlines the data sources of components and the overall scope. Items contained within the basket range from expert/scientific opinion (food), secondary research (clothing), survey data (other expenses), or are directly calculated based on certain assumptions (shelter and transportation). Components are calculated for 50 regions.

Table 6: Components of Market Basket Measure

Component	Data source and scope
Food	<ul style="list-style-type: none"> Based on the 2008 National Nutritious Food Basket (NNFB), which describes the quantity (and purchase units) of around 60 foods representative for individuals in various age and gender groups. Prices are collected monthly by Statistics Canada for 38 cities.
Clothing	<ul style="list-style-type: none"> Based on Social Planning Council of Winnipeg and Winnipeg Harvest Acceptable Level of Living (ALL), which makes provisions for clothing and footwear for common work, school, and social occasions. Significant input from low-income persons (focus groups). Prices gathered by Statistics Canada.
Shelter	<ul style="list-style-type: none"> Based on 2006 Census data, updated using rental cost CPI. Assumes median rent for housing of 2–3 bedroom services units for each region (including utilities and amenities).
Transportation	<ul style="list-style-type: none"> Calculation dependent on region - if public transport available, assumes cost of transit passes and taxi trips, while areas without public transport assumes purchase, operation and maintenance of 5-year-old car (Ford Focus sedan).

¹⁵ A household is considered low-income or in poverty if it does not have the disposable income to afford the MBM threshold.

Component	Data source and scope
Other Expenses	<ul style="list-style-type: none"> Covers other goods and services not considered by initial set of components. Set at a fixed proportion of the Food and Clothing baskets based on data on spending for a list of expenditure categories from the Survey of Household Spending (fixed around 75 per cent since 2010).

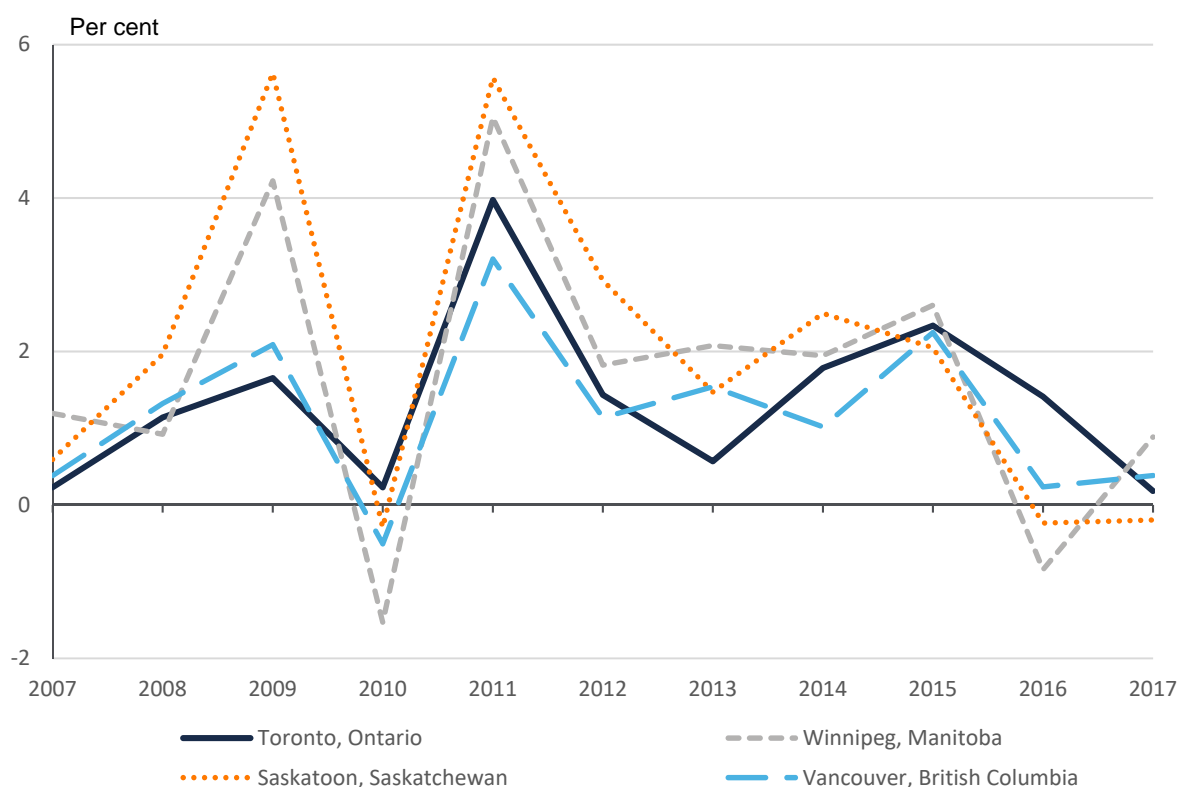
Source: Heisz (2019); Hatfield et al. (2010); Government of Canada (n.d.).

4.3.2 Updating the MBM

The MBM methodology is rebased on a regular basis. This process is largely informed by a review of the contents of the basket and the broader methodology (Heisz 2019: 8). Since initial development in the early 2000s (2000-base), the MBM underwent its ‘first review’ in 2008–10 (2008-base) and is currently undergoing a ‘second comprehensive review’ (2018-base, expected to be published in 2020). From the first review, food and clothing baskets were updated to more contemporary standards, while the transportation component was modified to allow for additional transit passes per family. An additional component ‘to place mortgage-free homeowners, who have lower shelter costs than other families, on a more-comparable footing’ (Heisz 2019a: 6). Throughout the review process, consultations are undertaken with people who have lived in poverty, the wider public, and other stakeholders (NGOs, academics and other public organisations) (Heisz 2019: 10).

Between major review years, the MBM is updated annually to reflect the availability of new data. Most prices are gathered by Statistics Canada on a regular basis (such as food and clothing, which are collected monthly), however, other costs are re-priced using the CPI. Shelter costs are updated using the rental CPI sub-index, while taxi costs within transportation are inflated annually by provincial CPIs for taxis and other local and commuter transportation (Hatfield et al. 2010; Heisz 2019).

Figure 4 presents the annual change in the MBM over time for various regions. Over the last 10 years, the MBM has increased at an average annual rate of 1.5 per cent in Toronto, 1.7 per cent in Winnipeg, 2.1 per cent in Saskatoon, and 1.3 per cent in Vancouver. The value of the baskets generally increases each year, although it declined in three of the four regions in 2010 and two regions in 2016. The value of baskets can also vary significantly between regions. In 2017, Toronto’s market basket (CAD\$41 362) was 13.1 per cent larger than the value of the Saskatoon basket (CAD\$37 957).

Figure 4: Annual change in MBM, current prices

Source: Statistics Canada, *Table 11-10-0066-01, Market Basket Measure (MBM) thresholds for the reference family by Market Basket Measure region, component and base year.*

4.4 United States of America

While the US has a federal minimum wage, 34 of the 56 states, federal districts and territories of the US have minimum wages exceeding the federal rate (NCLS 2019), while 50 cities and counties have specific minimum wage ordinances (University of California Berkeley Labor Centre 2019).¹⁶

To date in the US, there has not been budget standards research undertaken along the lines of the methodology in Australia or the UK. Instead, there is a greater focus on developing modest budgets for families akin to poverty thresholds.

Evidence and adequacy-based research has been conducted by the Massachusetts Institute of Technology (MIT) in developing a national Living Wage calculator (Glasmeieer & MIT 2019) and the Economic Policy Institute (EPI) with the Family Budget Calculator (Gould et al. 2018). Neither of these approaches incorporate focus groups.

4.4.1 MIT research

MIT research differs from other MIS research in that it attempts to directly measure a living wage rather than separately developing budget standards. Assumptions are made about family types, hours worked and the interaction of the tax-transfer system. However, it is similar to the Australian

¹⁶ See UC Berkeley Labor Center, [Inventory of US City and County Minimum Wage Ordinances](#) for a list of locality based minimum wages. The inventory only includes minimum wages set by local ordinances (excludes localities with separate minimum wages set by state law).

budget standards research that it aims for a basic or frugal standard of living and does not budget for things like entertainment or savings (Nadeau 2018: 1) and applying a ‘top-down’ approach.

Following the broad principles of budget standards research in establishing a basket of essential basic items, the MIT research takes a market-based approach by looking at geographically-specific expenditure data for different household compositions. The family compositions covered include:

- one adult (with 0–3 dependent children);¹⁷
- two adults (assumes one adult works full-time and the other is stays at home, with 0–3 dependent children); and
- two adults (both working full time, with 0–3 dependent children).

Data are gathered from a variety of sources and based on expert judgement (ranging from national food guidelines, published state-based statistics, Census data, expenditure survey data) rather than establishing public consensus. The major assumptions and data sources for basket items are summarised in Table 7. State and county-based data are also utilised where relevant to capture differences in costs, such as housing (estimated at a county level), food (adjusted by regional factors), and childcare (based on state-level estimates). In instances where survey data are not current, values are adjusted by the CPI (Nadeau 2018: 3–6).

Table 7: MIT budget components

Basket categories	Description
Food	<ul style="list-style-type: none"> • Sourced from <i>United States Department of Agriculture (USDA) Food Plans</i>, which serve as nutritious diet standards. • Utilises ‘Low-Cost Plan’ (second cheapest plan), which assumes most food is purchased at supermarkets and prepared at home.
Childcare	<ul style="list-style-type: none"> • Sourced from state-level estimates published by the <i>National Association of Child Care Resource and Referral Agencies</i> in 2016. • Calculation assumes families use lowest cost childcare options. Rates were inflated to reflect 2018 prices.
Health	<ul style="list-style-type: none"> • Incorporate health insurance costs for employer sponsored plans; medical services; drugs; medical supplies. • All costs excluding insurance were derived from the 2017 US Bureau of Labor Statistics (BLS) Consumer Expenditure Survey (CEX) adjusted for regional differences and inflated by CPI. • Health insurance calculated from <i>Medical Expenditure Panel Survey (MEPS)</i>, uprated by CPI to 2018 prices.
Housing	<ul style="list-style-type: none"> • Utilises US Department of Housing and Urban Development fair market rents (HUD FMRs) data for 2018 for different regions. • Assume different housing based on household types: single adults—zero-bedroom unit; two adult family—one-bedroom apartment; and a two-adult family with one or two children—two-bedroom apartment.
Transportation	<ul style="list-style-type: none"> • Incorporates cost of car/truck purchases used, gasoline and motor oil, other vehicle expenses, and public transport from the BLS’s CEX 2017. • Figures inflated to 2018 dollars.

¹⁷ Families with one child are assumed to have a ‘young child’ (4 years old). Families with two children are assumed to have a ‘young child’ and a ‘child’ (9 years old). Families with three children are assumed to have a ‘young child’, a ‘child’, and a ‘teenager’ (15 years old). Full-time adults assumed to be working 40 hours per week.

Basket categories	Description
Other necessities	<ul style="list-style-type: none"> Data gathered from BLS's 2017 CEX for expenditure items: apparel and services; housekeeping supplies; personal care products and services; reading; and miscellaneous. Estimates adjusted for regional differences and inflated to 2018 prices.

Source: Nadeau (2018) *Living Wage Calculator: User's Guide / Technical Notes, 2018 Update*, Department of Urban Studies and Planning (MIT).

4.4.2 EPI Family Budget Calculator

The EPI Family Budget Calculator (FBC) measures 'the monthly income a family needs in order to attain a modest yet adequate standard of living' (Gould et al. 2018). The EPI claim that their family budgets provide a more accurate and complete measure of economic security than other measures of poverty or needs (EPI 2018).

The budget is frugal, capturing the bare minimum, as seen in the selection of 'low-cost food plans', 'lowest-cost' healthcare plans, and excludes other items such as entertainment (Gould et al. 2018). This suggests the FBC pays less attention to social participation, unlike other budget standards research such as the UK. Like the MIT research, the FBC cost calculations are based on existing data for prices and the basket of goods is determined by experts rather than through focus groups.

The FBC estimates a set of budget items for 10 household types (1 to 2 adults, with 0 to 4 children) for over 3000 counties and 600 metropolitan areas. The FBC was most recently updated in 2018, reflecting 2017 data and prices. The FBC covers six components; 'Housing', 'Food', 'Child care', 'Transportation', 'Health care', and 'Other necessities'.

Table 8 presents a summary of the sources for these components and some of the basket assumptions. Data are gathered from a variety of sources ranging from federal departments, nutrition plans, secondary publications, and expenditure surveys. Given the availability of data, some estimates have been adjusted to 2017 dollars instead of more recent data (Gould et al. 2018).

Table 8: EPI budget components

Component	Description
Housing	<ul style="list-style-type: none"> Utilises US HUD FMR estimates of 40th percentile rental costs by region. Assume different housing based on household types, for example, single adults are assumed to live in a studio, while a family with one or two children occupy a two-bedroom unit.
Food	<ul style="list-style-type: none"> Similarly to MIT, costs sourced from <i>USDA Food Plans</i>. Utilises the 'Low-Cost Plan' which assumes most food is purchased at supermarkets and prepared at home (same as MIT).
Child Care	<ul style="list-style-type: none"> Based on Child Care Aware of America 2017 publication <i>Parents and the High Cost of Child Care</i>, which produces estimates for Centre based (2017) and Family based care (2016). Separate childcare costs estimated for infants, 4-year olds, and school-aged children (including before and after school, and summer care). Children in metro areas are assumed to be in Centre based care, while rural children in Family based (assumes more availability in rural areas).

Component	Description
Transportation	<ul style="list-style-type: none"> Data from the Center for Neighborhood Technology's <i>Housing and Transportation Affordability Index</i>, which estimates transportation costs based on Consumer Survey data, and transit data. Adults are assumed to be working and commuters. The first adult only travels for work and non-social trips, while the second adult only work trips (for couple households).
Health Care	<ul style="list-style-type: none"> Calculated as cost of premiums plus out of pocket expenses. Households assumed to have insurance through the Affordable Care Act. Premiums derived from the Health Insurance Marketplace Calculator with supplementary data from the US Department of Health and Human Services (HHS). Assumes lowest-cost bronze plan, adjusted for family size, age, and tobacco surcharge (budget assumes adults are 40-year-old and non-smokers). Out-of-pocket expenses taken from the HHS' MEPS from 2012 to 2014 adjusted to 2017 dollars.
Other necessities	<ul style="list-style-type: none"> Data gathered from US BLS CEX 2016, including expenditure items; apparel, personal care, household supplies (furnishings), reading materials and school supplies. Items are summed for families between the 20th and 40th percentile range and divided by the sum of food and housing from the CEX. This proportion (40.3 per cent in 2016) is applied to each respective family's budgeted food and housing costs to form an 'other necessities' estimate.

Note: Budget components are assumed to sum to post-tax income. A pre-tax income is estimated using the National Bureau of Economic Research's TAXSIM microsimulation model for the US.

Source: Gould et al. (2018).

While there are elements of overlap between the MIT and EPI calculations, particularly relating to the assumption of costs and use of data sources, there are variations in the approach to household selection. Researchers exercise an element of judgement in determining the most appropriate approach and data source, leading to different results.

4.5 New Zealand

Under legislation, the responsible Minister makes decisions on the minimum wage rates based on advice from the Ministry of Business, Innovation and Employment (MBIE) (MBIE 2019: 8). The core factors considered are inflation, wage growth and restraint on employment.

Budget standards research in New Zealand is undertaken with the intention of calculating a voluntary living wage. As in other jurisdictions, the determination of the living wage is undertaken completely separately from the legally enforceable minimum wage.

4.5.1 Income research

The Family Centre Social Policy Research Unit (FCSPRU) are a non-profit social policy research agency which were commissioned to define and calculate a living wage in 2012 (King & Waldegrave 2012).

The FCSPRU approach to calculating a living wage is based on income research which incorporate core elements of budget standards research. Like the UK MIS research, the New Zealand income research determined a basket of items and corresponding expenditure that is necessary for a reference household to meet their needs (in terms of adequate housing, sufficiently nutritious food,

clothing, education and social participation) (King et al. 2012: 7). This was based on both focus groups, expert knowledge and existing expenditure data, and was supposed to be set at a level above 'just survival and bare necessities' (Waldegrave et al. 2018).

The income research estimates a household comprising 2 adults and 2 children, with 1.5 adults working full time. The judgement of 1.5 incomes (60 hours per week) was chosen as it was comparable with the average of similar jurisdictions (such as the US, UK and Canada) as well as allowing one parent to stay at home with their children for half of the working week (Waldegrave et al. 2018: 5).

The expenditure items were initially estimated by five focus groups split between Wellington and Auckland. Unlike the UK MIS, focus groups were comprised of households from only low to medium income backgrounds (King & Waldegrave 2012: 17), rather than a broader selection of society. Participants estimated costs for a household of 2 adults and 2 children based on a list of items derived from the New Zealand Household Economic Survey (NZHES), a national survey which provides information on individual and household expenditure patterns, savings, and income (Statistics New Zealand 2019).¹⁸

Participants were instructed to undertake this process while considering the definition of a living wage as 'the income necessary to provide workers and their families with the basic necessities in life' and 'to enable workers to live with dignity and to participate as active citizens' (Waldegrave et al. 2018: 11). This was subject to conditions and parameters including, but not limited to, assuming a household with one teenage child and one child aged under 10 years; no expected change to households' financial circumstances; and that there are costs in relation to generating income (for example travel or work clothing) (King & Waldegrave 2012: 39).

The focus group results estimated weekly expenditure at close to what is reported by the 9th and 10th deciles in the NZHES. This suggested the aspirational 'budgets' formed by focus groups were comparable with households with the highest income levels. The FCSPRU concluded that the estimates reflected valid aspirations, but that participants had difficulty estimating the costs of irregular expenses and deemed the estimations to be higher than what might be agreed as defensible and achievable for the living wage (King & Waldegrave 2012: 7–8).

There were significant differences between focus group estimates and existing data on expenditure distributions, for example Clothing and footwear costs were more than double the NZHES average, while Childcare costs were over 7 times more than the average of the first 5 NZHES deciles. Household contents and services costs were more than two and a half times greater than the average of the NZHES and 80 per cent more than the bottom 5 NZHES deciles. As a result, estimated hourly living wage rates using focus groups were 64 per cent higher than the NZHES average, and 111 per cent higher than the average of the first 5 NZHES deciles. Due to these differences, the FCSPRU decided to moderate the estimates from the focus groups using various secondary sources (Scott 2014; King & Waldegrave 2012: 3–4, 8). While still originating from a bottom-up approach, this involved greater involvement from experts and other data sources eventuating in a more 'top-down' approach. The various secondary data sources are listed below:

- the NZHES 2010 (inflation adjusted for 2012);

¹⁸ These HES items include Food, Clothing and footwear, Actual rentals for housing, Household energy, Household contents and services, Health, Transport, Communication, Recreation and culture, Education, Miscellaneous goods and services, and Other expenditure. The NZHES is comparable to the ABS' *Household Expenditure Survey* (Catalogue No. 6530.0) which is released on a six-yearly basis rather than annual.

- estimated 'Food Costs' information calculated annually by the University of Otago;
- market rents information from the Tenancy Bond Database maintained by the Ministry of Business, Innovation and Employment; and
- Statistics New Zealand Household Labour Force Survey (2019) for information on household compositions.

Food costs were based on estimates from the University of Otago using national food guidelines that are aimed at meeting the nutritional needs of individuals. Estimates assume food is prepared at home utilising commonly used fruit and vegetables with the lowest price. The final figure is the average food cost of 14 different household compositions with different combinations of children in the family.¹⁹ Rental costs were estimated using data from the Tenancy Bond Database which tracks tenancy and rental rates at the district/suburb level. Rents for 3-bedroom houses priced in the lower quartile are used to estimate rent, based on the Canadian National Occupancy Standard measuring household crowding²⁰ (King & Waldegrave 2012: 23–29).

All other costs were taken from the 2010 NZHES, with costs updated to 2012 using the CPI. Rather than the overall average, the average of the bottom 5 deciles was used to estimate expenditure. The FCSPRU commented that averaging the lower deciles provides a larger sample than only one decile and is more relevant than the average of all New Zealand incomes (King & Waldegrave 2012: 10). Statistics New Zealand's Childcare Survey provided supplementary information on hours of childcare and indicative costs, while the Household Labour Force Survey confirmed that the majority (around 70 per cent) of two adult, two children households consisted of dual income earners (King & Waldegrave 2012: 29–30). Data sources for each basket items are summarised in Table 9.

Table 9: Income research basket items and data sources

Expenditure categories	Original sources	Sources used for review in 2018
Food	Food cost survey	• Food cost survey / NZHES
Clothing and footwear	NZHES	• NZHES
Actual rentals for housing	Rent Bond Database	• Rent Bond Database / NZHES
Household energy	NZHES	• BRANZ, HEEP & IPENZ Energy Use in NZ / NZHES
Household contents and services	NZHES	• Vero's Content valuation guide / NZHES
Health	NZHES	• Service Utilisation and GP fees data for 2016 from the Ministry of Health • Pharmacy reports of prescriptions • NZHES

¹⁹ Food costs are estimated individually for a man; woman; adolescent boy; adolescent girl; 10 year old; 5 year old; 4 year old; and 1 year old. Estimates are based on the national average of the 5 main regions.

²⁰ The Canadian standard assumes (1) no more than two people share a bedroom; (2) parents or couples share a bedroom; (3) children <5 years may reasonable share a bedroom; (4) children <18 years of the same sex may reasonable share a bedroom; (5) a child 5–17 years should not share a bedroom with one <5 years of the opposite sex; and (6) single adults 18 years+ and any unpaired children require a separate bedroom.

Expenditure categories	Original sources	Sources used for review in 2018
Transport	NZHES	<ul style="list-style-type: none"> • The Automobile Association Running Costs Report • Ministry of Transport's "How New Zealanders travel" report • Public transport monthly/weekly passes prices • NZHES
Communication	NZHES	<ul style="list-style-type: none"> • List of prices from main communication carriers • NZHES
Recreation and culture	NZHES	<ul style="list-style-type: none"> • NZHES
Education: Primary and Early Childhood Education	NZHES / advertised childcare costs	<ul style="list-style-type: none"> • New Zealand Council for Educational Research survey: School resources, culture and connections. Wellington. • ASG calculator • Early Childhood Education (ECE) Survey of Income, Expenditure and Fees • Annual ECE Data Summary Report • NZHES
Miscellaneous goods and services	NZHES	<ul style="list-style-type: none"> • NZHES
Other expenditure	NZHES	<ul style="list-style-type: none"> • NZHES

Source: Waldegrave et al. (2018), *Report of the Measurement Review for a New Zealand living wage*, FCSPRU, March.

When initially setting the living wage in 2013, the FCSPRU and a living wage research peer group also decided that the income research methodology would be reviewed every five years and incorporate new data and information sources if they would improve accuracy (Waldegrave et al. 2018: 5).

In the first measurement review in 2018, researchers were able to find and incorporate data which enabled them to estimate more items from a 'needs-based perspective' (as opposed to estimates from quantitative data from the NZHES) (Waldegrave et al. 2018: 6). While the income research methodology initially used needs-based estimates for food and rent costs, through the review needs-based estimates for health, household energy, communication and education were able to be incorporated.

The 2018 Measurement Review used various sources of data including the NZHES and other survey data based on a combination of sources, including the alternative data sources listed above; secondary government and non-government transport cost data, and GP, Department of Health and pharmacy reports on prescriptions data (for health costs) (Waldegrave et al. 2018: 13). The remaining six budget items continue to be estimated using data from the NZHES (Waldegrave et al. 2018: 7). Further focus groups have not been run since those informing the original income research.

5 Other budgets standards research around the world

The UK MIS research method has been applied in other countries, often supported by the CRSP team. Projects and pilots have been carried out in numerous places (CRSP 2019) such as in

France, Japan and Mexico. Research has also been undertaken in the European Union on budget standards to establish a consistent approach across countries.

5.1 Budget standards research based on the UK MIS research

5.1.1 France

MIS research has previously been conducted by the French National Observatory on Poverty and Social Exclusion (ONPES) (Gilles et al. 2014) in consultation and consistent with the methodology developed by the CRSP (CRSP 2019a).

Focus groups established a consensus definition for a minimum standard, discussed and established what goods and services formed a basket satisfying the standard across different groups, validated and priced expenditure items, before 'negotiating' a final standard. The focus groups defined a minimum income standard reference budget as:

'... to have sufficient resources, not just to satisfy the needs of everyday life (have somewhere to live, food, access to health, etc.), but also to be able to take part in social life' (Gilles et al. 2014: 37).

The specific case studies were defined by focus groups to be most representative of lived experiences, namely workers aged 35 or 40 years, and pensioners aged 70 years. From these two reference groups, 6 household types were considered, with the budgets considered for males and females separately in couple households:

- Working age:
 - single people
 - couples with no children
 - lone parent families (with a child aged 0–2 years or 3–10 years)
 - couples with children (with children aged 11–14 years and/or 15–17 years)
- Pensioners:
 - single pensioners
 - pensioners living as couple

The case studies were in the towns where group discussions were facilitated (Tours and Dijon). One of the features of the study was that, unlike other studies where a single housing assumption is made, it was decided that 'occupier status (owner-occupier or tenant) and being housed in the public or private sector would be left in abeyance' (Gilles et al. 2014: 73).

5.1.2 Japan

Japan first undertook MIS research in 2010 as part of an investigation into a national minimum standard of living by the Minister of Health, Labour and Welfare. The Japanese study utilised the budget standards approach of the CRSP methodology, with results published in 2012 (Iwanaga & Iwata 2012).²¹

The UK MIS formed the basis of the research, however, a number of adjustments were made to align with Japanese values (Davis et al. 2014: 89). While there were some minor departures in

²¹ The original paper was published in Japanese.

methodology, the following key principles of MIS research in establishing an adequate basket remained consistent:

- selected by social consensus as opposed to expert judgement, and
- that the group represented a cross-section of the population/society, rather than a subset of society (i.e., those on low incomes) (Davis et al. 2014: 91).

Two groups of interest were considered: single working-age adults and single pensioners located in Mitaka (a city west of Tokyo). Separate budgets were constructed for males and females, which were used to form a 'non-gender specific budget' (Davis et al. 2014: 93). The Japanese study was guided by the following definition of a socially acceptable minimum:

'In contemporary Japan, the basic standard of living required for everyone as a minimum means having a sanitary and healthy way of living backed by a sense of security and stability. It includes not only clothing, food and accommodation, but also an environment where necessary information, relationships, entertainment, appropriate ways of working, education and solid future prospects are available' (Davis et al. 2014: 91).

The element of social participation proved difficult to find a consensus, as groups struggled to reach an agreement on the appropriate amount of leisure to allocate. This was partly affected by the nature of the Japanese labour force (at the time, the unemployment rate was almost half of the UK's) and that all participants were employed. Given the culture of life revolving around work, participants were reported to have found it difficult to consider the amount of leisure to allocate to those not working or employed part time (Davis et al. 2014: 92).

5.1.3 Mexico

Development of a budget standard in Mexico involved a 2016 pilot study which used the methodology of the MIS to seek public consensus regarding the definition of minimum living standards and to detail the goods and services that are needed to achieve this standard.

The members of the public participating in the pilot study defined a standard of living for all citizens in the country as the following:

'A dignified life in Mexico today is about meeting basic needs, such as food, housing and clothing, as well as having the opportunity to work, access to healthcare, education and free time. It is also about living in a stable and secure environment that allows people to be connected and be part of society.' (Valadez–Martinez et al. 2017: 696).

Wellbeing lines, similar to poverty measures, already existed in Mexico and were based on advice from experts.²² However, this is different to the MIS approach which is based on what members of society agree is needed, as opposed to sourcing input from expert opinions, such as medical and nutritional experts. Another important difference is that MIS can be revised or rebased on what society agrees as necessary to live as it changes over time (Valadez–Martinez et al. 2017: 696).

In 2016, six focus groups in Mexico City and Monterey took part in an exploratory study based on families with children (as around 90 per cent of the Mexican population live in this family type). The

²² These wellbeing lines have been calculated by the National Council for the Evaluation of Social Development Policy (Consejo Nacional de Evaluación de la Política de Desarrollo Social) (CONEVAL) since 1992. CONEVAL assesses household income against a food and non-food basket, based on nutritional requirements defined by experts and adjusted for age and gender (Valadez-Martinez et al. 2017: 699; CONEVAL 2016).

MIS approach was followed by groups made up of people from a range of socio-economic groups and a mix of genders comprising working age parents (aged 19–55 years) with children aged between 0–16 years.

The first set of focus groups came to agreement about defining what a minimum living standard should be and agreed upon developing two case studies (two parents and two school-aged children, and a single parent with two school-aged children). These case studies were then used by the remaining groups to discuss the needs of these family types. These later groups also worked to turn the definition of a dignified standard of living into the goods and services needed to achieve this standard of living (Valadez-Martinez et al. 2017: 702). A full MIS study looking at the needs of households with children is currently underway in Mexico, with results scheduled to be published in July 2020.

5.2 The European Union

In 2015, researchers from the University of Antwerp (funded by the European Commission) engaged in a pilot project to develop a common methodology for creating Reference Budgets (RBs) in Europe (Godemé et al. 2015). The project was borne out of the European Union's (EU's) Social Investment Package in 2013, which sought member states to establish reference budgets in order to design more efficient and adequate income support measures that better identified social needs (European Commission 2013: 11).

The RBs are based on adequacy, aiming to achieve 'the minimum financial resources required for adequate social participation' (Godemé et al. 2015: 14) and do not inform living wages, which make them comparable to the aims of the MIS research.

The EU exercise is informative in how it attempted to develop a harmonised methodology applicable to multiple countries, exploring the types of challenges associated.

5.2.1 Methodology and calculation

Similar to other budget standards, RBs seek to develop a complete and detailed basket of goods and services based on needs, rather than assuming a fixed level of consumption expenditure. Items in the basket are:

'... goods and services that are considered necessary to reach an acceptable standard of living for an individual household within a given country, region or city... taking into account the household composition, the disposable income and other aspects, such as the housing situation and transport needs' (European Commission 2019).

Like the MIS framework, one of the key principles of RBs is to build consensus in society about adequacy. The main difference with the MIS approach is the confirmatory rather than deterministic role focus groups play. The EU developed a top-down approach—a basket was constructed based on literature, data, and expert opinion, which is then reviewed by focus groups. Placing more emphasis on data and literature, the public assesses acceptability and completeness, similar to Australia's approach.

The decision for focus groups to play a more secondary role was based in part on criticisms that 'focus group data are not representative for the population' (Penne & Parcerisas 2018: 8), and that outcomes are difficult to replicate:

'...if RBs are based on focus group discussions, the question arises what the outcome would be if other (randomly chosen) people would have participated in the focus group discussions. In this case, it could

be impracticable to replicate the focus group discussions a sufficient number of times to assess the statistical reliability' (Storms et al. 2014: 51).

The objective of developing a comparable budget across the EU is limited by the different national systems and availability of data. Describing the challenges of developing a comparable method, the authors commented, '[t]he absence of comparable data on such issues as food consumption, prices, and household expenditures in a context of large institutional heterogeneity, puts a severe constraint on the potential for developing and evaluating objective criteria for comparable reference budgets in Europe' (Godemé et al. 2015: 38). As a result, the threshold for assessing comparability of RBs was rather broad, defined where 'needs for social participation are fulfilled at a similar level across household types and countries' (Godemé et al. 2015: 15). As such, a very standardised approach to data gathering and focus group discussions were employed.²³ Substantial and meaningful budget comparability, while aspirational, 'remains elusive due to limitations of data availability and robustness' (Penne & Parcerisas 2018: 7).

The RB methodology followed a staged cross-national approach, where country teams collected 'relevant evidence on the local context in terms of actual consumption patterns, institutional context and well considered views of what is an acceptable standard (three focus groups)' (Godemé et al. 2015: 16).

In consultation with focus groups, detailed baskets of goods and services are produced, deliberated, and priced before being disseminated. Three household types were considered: a single person of active age; a single parent with two children; and a couple with two children. Hypothetical households were assumed to live in capital cities, be in good health, self-sufficient and self-reliant (Godemé et al. 2015: 16).

5.2.2 Updating

While no specific procedure for updating RBs is outlined, it was suggested that smaller surveys should be used in the short-run (Godemé et al. 2015: 266). However, regular updates to RBs would benefit from investment into 'new tools for collecting prices more efficiently (and with less errors)' (Godemé et al. 2015: 264). A number of innovations were noted at the time, including the use of scanner data, an online cost of living database, and pricing comparison websites as potentially more detailed price sources.

6 Conclusion

This report finds that whilst there is a degree of commonality in the research methodology used across countries, the approach taken to define and calculate budget standards depends on the purpose, use or available resources.

In considering the measures and approaches from the countries covered in this report, there appears to be variations in developing and updating budget standards. While different types of budget standards research broadly share comparable aims to set a minimum standard of living for different household types, differences exist in determining whether budget standards should provide a basic or decent standard of living, and what this represents.

²³ Sources for which baskets were constructed ranged from nutritionists, medical science literature, hygiene research, and international housing guidelines (Godemé et al., 2015: 72, 143, 171, 189) aimed at achieving consistency.

Research often involves stages such as focus groups, expert opinion, and quantitative data, there are differences in the order in which they are undertaken, with some acting as a review process for others. A 'top-down' approach, beginning with expert opinion, underpins the research in countries such as Australia, Canada, the US and New Zealand. The approach in the UK and Ireland is more 'bottom-up', starting with focus group to achieve public consensus on needs. The approaches are often dependent on the purpose of the research or available resources, and can provide different outcomes.

An important aspect of the broader process and methodology of calculating budget standards is the varying ways that these calculations can be updated to ensure that they remain relevant based on contemporary societal norms. Methods for updating budget standards also tend to vary dependent on the underlying budget standard methodology. Countries which emphasise focus groups often combine inflation uprating with more thorough reviews and rebasing. Methodologies based on quantitative data and expert opinion are periodically updated with the availability of new data and typically further adjusted to reflect current prices.

A further consideration is the type of households in which to determine budgets. The approach in the UK is to calculate at the individual level so that a standard can be derived for over one hundred household types. Others calculate budget standards for certain household types chosen based on specific country socioeconomic or cultural circumstances.

7 Reference List

Anker R (2011) *Estimating a living wage: A methodological review*, Conditions of Work and Employment Series No. 29, International Labour Organisation.

Bradshaw J, Middleton S, Davis A, Oldfield N, Smith N, Cusworth L & Williams J (2008), *A Minimum Income Standard for Britain: What People Think*, York: Joseph Rowntree Foundation.

Centre for Research in Social Policy (CRSP) (2019) *Minimum Income Standards*, <https://www.lboro.ac.uk/research/crsp/mis/>, accessed 18 November 2019

CRSP (2019a), *MIS in other countries*, https://www.lboro.ac.uk/research/crsp/mis/other_countries/, accessed 1 November 2019.

CRSP (2019b), *Latest MIS results*, Annual budgets spreadsheet <https://www.lboro.ac.uk/research/crsp/mis/results/>, accessed 9 January 2020

Citizens Information (2019), *Minimum rates of pay*, Citizens Information Board, https://www.citizensinformation.ie/en/employment/employment_rights_and_conditions/pay_and_employment/pay_inc_min_wage.html, last updated 2 April 2019, accessed 18 December 2019

Cominetti N (2019), *Calculating a Living Wage for London and the rest of the UK 2019–20*, The Resolution Foundation, November 2019, <https://www.livingwage.org.uk/sites/default/files/Living-wage-calculation-2019-20.pdf>, accessed 13/11/2019

Cominetti N (2019b), *The evidence backing a higher minimum wage is growing*, Resolution foundation, 4 November 2019, <https://www.resolutionfoundation.org/comment/minimum-wage-higher-evidence/>

- CONEVAL (2016), *Evolution of Poverty Lines Income*, Consejo Nacional de Evaluación de la Política de Desarrollo Social, <https://www.coneval.org.mx/Medicion/MP/Paginas/Lineas-de-bienestar-y-canasta-basica.aspx>, accessed 17 December 2019
- Davis A, Hirsch D, Iwanaga R, Iwata M, Shigekawa J, Uzuki Y & Yamada A (2014), *Comparing the Minimum Income Standard in the UK and Japan: Methodology and Outcome*, Social Policy and Society, 13, pp 89-101 doi:10.1017/S147474641300033X.
- Davis A, Hirsch D, Padley M & Marshall L (2015), *How much is enough? Reaching social consensus on minimum household needs*, Centre for Research in Social Policy, Loughborough University, December 2015
- Davis A, Hirsch D, Padley M & Shepherd C (2018), *A Minimum Income Standard for the UK 2008 – 2018: continuity and change*, Joseph Rowntree Foundation
- D’Arcy C & Finch D (2016), *Making the Living Wage: The Resolution Foundation review of the Living Wage*, Resolution Foundation Report, July 2016
- D’Arcy C & Finch D (2018), *Calculating a Living Wage for London and the Rest of the UK*, Resolution Foundation Report, commissioned by the Living Wage Foundation.
- Economic Policy Institute (2018), *Family Budget Fact Sheets*, March 2018, <https://www.epi.org/resources/budget/budget-factsheets/>, accessed 7 January 2020
- Employment and Social Development Canada (2019), *Federal Minimum Wage: Issue Paper*. January
- Employment New Zealand (2019), *Minimum wage to rise to \$18.90 per hour*, <https://www.employment.govt.nz/about/news-and-updates/minimum-wage-rise-18-90-per-hour/>, accessed 18 December 2019
- Eurofound (2018), *Concept and practice of a living wage*, Publications Office of the European Union, Luxembourg
- European Commission (2013), *Communication from The Commission to the European Parliament, The Council, The European Economic and Social Committee, and The Committee of the Regions: Towards Social Investment for Growth and Cohesion – including implementing the European Social Fund 2014-2020*, 20 February, Brussels.
- European Commission (2019), *Income support – Reference budgets*, Employment, Social Affairs & Inclusion, <https://ec.europa.eu/social/main.jsp?catId=1092&intPagId=2312&langId=en>, accessed 7 January 2020.
- Fair Work Commission (2019), *FWCFB 3500 ‘Annual Wage Review 2018 – 19 (C2019/1)*, Fair work Commission, 30 May 2019.
- Fair Work Commission (2019a), *Information Note – Budget Standards report*, additional material to the Annual Wage Review 2018–19, 8 May.
- Gilles L, Covolo C, Concialdi P & Math A (2014), *ONPES Reference Budgets: Study conducted at the request of the French National Observatory on Poverty and Social Exclusion (ONPES)*, July.
- Godemé T, Storms B, Penne T & Van den Bosch K (2015), *The development of a methodology for comparable reference budgets in Europe – Final report of the pilot project*, Pilot project for the

development of a common methodology on reference budgets in Europe, European Commission, October.

Gould E, Mokhiber Z & Bryant K (2018), *The Economic Policy Institute's Family Budget Calculator: Technical Documentation*, Economic Policy Institute, 13 March.

Government of British Columbia (2019) *Minimum Wage Home: What You Need To Know* <<https://www2.gov.bc.ca/gov/content/minimum-wage/what-you-need-to-know>>, accessed 18 December 2019

Government of Canada (n.d.), *National Nutritious Food Basket*, retrieved from <https://www.canada.ca/en/health-canada/services/food-nutrition/food-nutrition-surveillance/national-nutritious-food-basket.html>, accessed 31 December 2019.

Government of Canada (2019), *Hourly Minimum Wages in Canada for Adult Workers*, <<http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?GoCTemplateCulture=en-CA>, accessed 18 December 2019>.

Government of Saskatchewan (2019), *Minimum Wage and Reporting for Duty Pay*, October <<https://www.saskatchewan.ca/business/employment-standards/wages-and-pay/minimum-wage-and-minimum-call-out-pay>, accessed 18 December 2019.

Hatfield M, Pyper W & Gustajtis B (2010), *First Comprehensive Review of the Market Basket Measure of Low Income: Final Report*, Human Resources and Skills Development Canada, June.

Heisz A (2019), *Understanding Canada's New Poverty Line: The Market Basket Measure*, Statistics Canada, February.

Heisz A (2019a), *An update on the Market Basket Measure comprehensive review*, Statistics Canada Catalogue no. 75f0002m, Income Research Paper Series, 18 July.

Hill K, Davis A, Hirsch D, Padley M & Smith N (2015), *Disability and Minimum Living Standards: The additional costs of living for people who are sight impaired and people who are deaf*, Centre for Research in Social Policy, Loughborough University, Leicestershire

Hirsch D (2015), *Inflation and the Minimum Income Standard – Past and Future Measures*, Loughborough: Centre for Research on Social Policy, University of Loughborough.

Hirsch D (2019), *A Minimum Income Standard for the United Kingdom in 2019*, Joseph Rowntree Foundation, <https://www.jrf.org.uk/report/minimum-income-standard-uk-2019>, accessed 13 November 2019.

Hirsch D & Valadez–Martinez, L (2017), *The living wage*, Agenda Publishing Limited, Newcastle upon Tyne.

Irish Low Pay Commission (2019), *Welcome*, Department of Employment and Social Protection, <http://www.lowpaycommission.ie/>, accessed 18 December 2019

Ivanova I & Raithby T (2018), *Working for a Living Wage: Making Paid Work Meet Basic Family Needs in Metro Vancouver: Calculation Guide*, Canadian Centre for Policy Alternatives (BC Office), May.

Iwanaga R and Iwata M (2012), *Introduction to the special issue of a minimum income standard research in Japan*, Social Policy and Labor Studies, 4, 1, 58–60.

King P & Waldegrave C (2012), *Report of an investigation into defining a living wage for New Zealand*, Commissioned for the Living Wage Campaign, December 2012

Living Wage Aotearoa New Zealand (2015), *2015 Update*, retrieved from https://d3n8a8pro7vhm.cloudfront.net/nzlivingwage/pages/129/attachments/original/1434872214/Information_Sheet_Living_Wage_rate_update-1.pdf?1434872214, accessed 30 December 2019.

Living Wage Aotearoa New Zealand (2017), *2017 Living Wage Rate: \$20.20*, retrieved from https://d3n8a8pro7vhm.cloudfront.net/nzlivingwage/pages/263/attachments/original/1487586293/The_Living_Wage_Rate_Announcement_2017_alternativev2.pdf?1487586293, accessed 30 December 2019.

Living Wage Aotearoa New Zealand (2019), *A Living Wage: Where it all began*, https://d3n8a8pro7vhm.cloudfront.net/nzlivingwage/pages/263/attachments/original/1487586291/A_Living_Wage_Where_did_it_all_begin_final020217.pdf?1487586291, accessed 21/10/2019

Living Wage Aotearoa New Zealand (2019a), *What is the Living Wage?*, https://www.livingwage.org.nz/what_is_the_living_wage, accessed 21/10/2019

Living Wage Canada (2008), *Canadian Living Wage Framework*, http://livingwagecanada.ca/files/3913/8382/4524/Living_Wage_Full_Document_Nov.pdf, accessed 28/10/2019

Living Wage Canada (2019), *What is a Living Wage?*, Living Wage Canada, <http://livingwagecanada.ca/index.php/about-living-wage/what/>, accessed 25/10/

Living Wage Canada (2019a), *Living Wage Canada home page*, Living Wage Canada, <http://livingwagecanada.ca/> accessed 23/10/2019

Living Wage Commission (2016), *Closing the Gap: A Living Wage that Means Families Don't Go Short*, London: Living Wage Foundation

Living Wage Foundation (2019), *The calculation*, <https://www.livingwage.org.uk/calculation>, accessed 15 October 2019

Living Wage Foundation (2019a), *Living Wage Commission*, <https://www.livingwage.org.uk/living-wage-commission>, accessed 15 October 2019

Living Wage Foundation (2019b), *Who Pays the Living Wage?* <https://www.livingwage.org.uk/accredited-living-wage-employers>, accessed 18 November 2019

Low Pay Commission (2018), *National Minimum Wage: Low Pay Commission Report*, November 2018.

Low Pay Commission (2019), *What the Low Pay Commission does*, UK Government. <https://www.gov.uk/government/organisations/low-pay-commission/about>, accessed 16 October 2019

Low Pay Commission (2019a), *Business Plan 2019/20*, Low Pay Commission Secretariat, 1 May 2019, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/798363/LPC_Business_Plan_2019-20.docx

Low Pay Commission (2019b), Low Pay Commission (2019c) *The National Living Wage Beyond 2020*, November 2019

- Low Pay Commission (2019c), *National Living Wage to apply to 21 year olds*, September, <https://www.gov.uk/government/news/national-living-wage-to-apply-to-21-year-olds>, accessed 21 October 2019
- Low Pay Commission (2019d), *Letter from Bryan Sanderson, Chair Low Pay Commission to the Rt Hon Andrea Leadsom MP*, Department for Business, Energy and Industrial Strategy, 6 August 2019, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/835516/Letter_to_BEIS_SoS_-_NMW_Youth_Rates.pdf, accessed 17 October 2019
- Luce S (2017), *Living wages: a US perspective*, Employee Relations, Vol. 39 No. 6, pp. 864–865, <https://doi.org/10.1108/ER-07-2017-0153>, accessed 6 November 2019
- Mahon BM, Care J & Stokes A (2006), *Minimum Essential Budget Standard for Six Household Types (summary version)*, Vincentian Partnership for Social Justice, November.
- Mahon BM, Care J & Stokes A (2006a), *Minimum Essential Budget Standard for Six Household Types*, Vincentian Partnership for Social Justice, November.
- Mahon BM, Thornton R & McEvoy O (2019), *Minimum Essential Standard of Living 2019: Update Report*, Minimum Essential Budget Standards Research Centre
- Mahon BM, McEvoy E & Thornton R (2019a), *MESL: Review and Rebase (2018/19)*, Minimum Essential Budget Standards Research Centre, Vincentian Partnership for Social Justice
- Ministry of Business, Innovation & Employment (MBIE) (2019), *Minimum Wage Review 2019*, New Zealand Government, December 2019
- Morris JN, Donkin AJM, Wonderling D, Wilkinson P & Dowler EA (2000), *A minimum income for healthy living*, Journal of Epidemiology & Community Health, Volume 54, Issue 12, December 2000, pp. 885–889
- Morris JN, Wilkinson P, Dangour AD, Deeming C & Fletcher A (2007), *Defining a minimum income for healthy living (MIHL): older age, England*, International Journal of Epidemiology, Volume 36, Issue 6, December 2007, pp. 1300–1307
- Nadeau C (2018), *Living Wage Calculator: User's Guide / Technical Notes, 2018 Update*, Department of Urban Studies and Planning (MIT)
- Nadeau C & Glasmeier K (2019), *New Data Up: Calculation of the Living Wage*, MIT Living Wage Calculator.
- National Conference of State Legislatures (NCLS) (2019), *State Minimum Wages | 2019 Minimum Wage by State*, National Conference of State Legislatures, <http://www.ncsl.org/research/labor-and-employment/state-minimum-wage-chart.aspx>, accessed 21 November 2019.
- New Zealand Government (2019), *Minimum wage*, <https://www.govt.nz/browse/work/workers-rights/minimum-wage/>, accessed 17 December 2019
- OECD (2018), *The Federal Minimum Wage*, 20 August, 2018, <http://www.oecd.org/employment/emp/Minimum%20wages.pdf>, accessed 13 November 2019
- Padley M & Stone J (2020), *Households below a Minimum Income Standard: 2008/09 to 2017/18*, Joseph Rowntree Foundation, <https://www.jrf.org.uk/report/households-below-minimum-income-standard-2017-18>, accessed 29 January 2020.

Penne T & Parcerisas I (2018), *Report and Recommendations from the Peer Review on the Use of Reference Budgets for Policy Purposes*, European Minimum Income Network, November.

Republic of Ireland Living Wage (2019), *Living Wage Technical Document: Calculating a Living Wage for the Republic of Ireland*, Living Wage Technical Group

Republic of Ireland Living Wage (2019a), *Living Wage Update 2019*, p. 1, https://www.livingwage.ie/download/pdf/living_wage_2019_-_4_page_document.pdf, accessed 11 November 2019.

Richards T, Cohen M, Klein S & Littman D (2008), *Working for a Living Wage: Making Paid Work Meet Basic Family Needs in Vancouver and Victoria*, co-published by the Canadian Centre for Policy Alternatives, First Call: BC Child and Youth Advocacy Coalition, and the Community Social Planning Council of Greater Victoria, September.

Saunders P, Chalmers J, McHugh M, Murray C, Bittman M & Doran S (1998), *Development of Indicative Budget Standards for Australia*, Budget Standards Unit, Social Policy Research Centre, University of New South Wales, March 1998 (Commissioned by Department of Social Security).

Saunders P & Bedford M (2017), *New Minimum Income for Healthy Living Budget Standards for Low-Paid and Unemployed Australians*. (SPRC report 11/17). Sydney: Social Policy Research Centre. UNSW Sydney. <http://doi.org/10.4225/53/5994e0ca804a4>

Saunders P (2018), *Using a budget standards approach to assess the adequacy of newstart allowance*, Australian Journal of Social Issues, Vol. 53, pp. 4–17.

Scott B (2014), *A Review into the Basis for a Living Wage Rate in New Zealand (with additional material)*, New Zealand Centre for Political Research, retrieved from <https://www.nzcprr.com/wp-content/uploads/2014/03/A-Review-into-the-Basis-for-a-Living-Wage-Rate-in-New-Zealand-by-Brian-Scott.pdf>, accessed 11 November 2019

Statistics Canada (2019), *Methodological changes to the Market Basket Measure in 2019*, Statistics Canada – Catalogue No. 75F002M, Income Research Paper Series, 26 February.

Statistics New Zealand Tauranga Aotearoa (2019), *Household Economic Survey – information for participants*, retrieved from <http://archive.stats.govt.nz/survey-participants/a-z-of-our-surveys/household-economic-survey.aspx>, accessed 30 December 2019.

Storms B, Godemé T, Van den Bosch K, Schuerman N & Stockman S (2014), *Review of current state of play on reference budget practices at national, regional, and local level*, Pilot project for the development of a common methodology on reference budgets in Europe, European Commission.

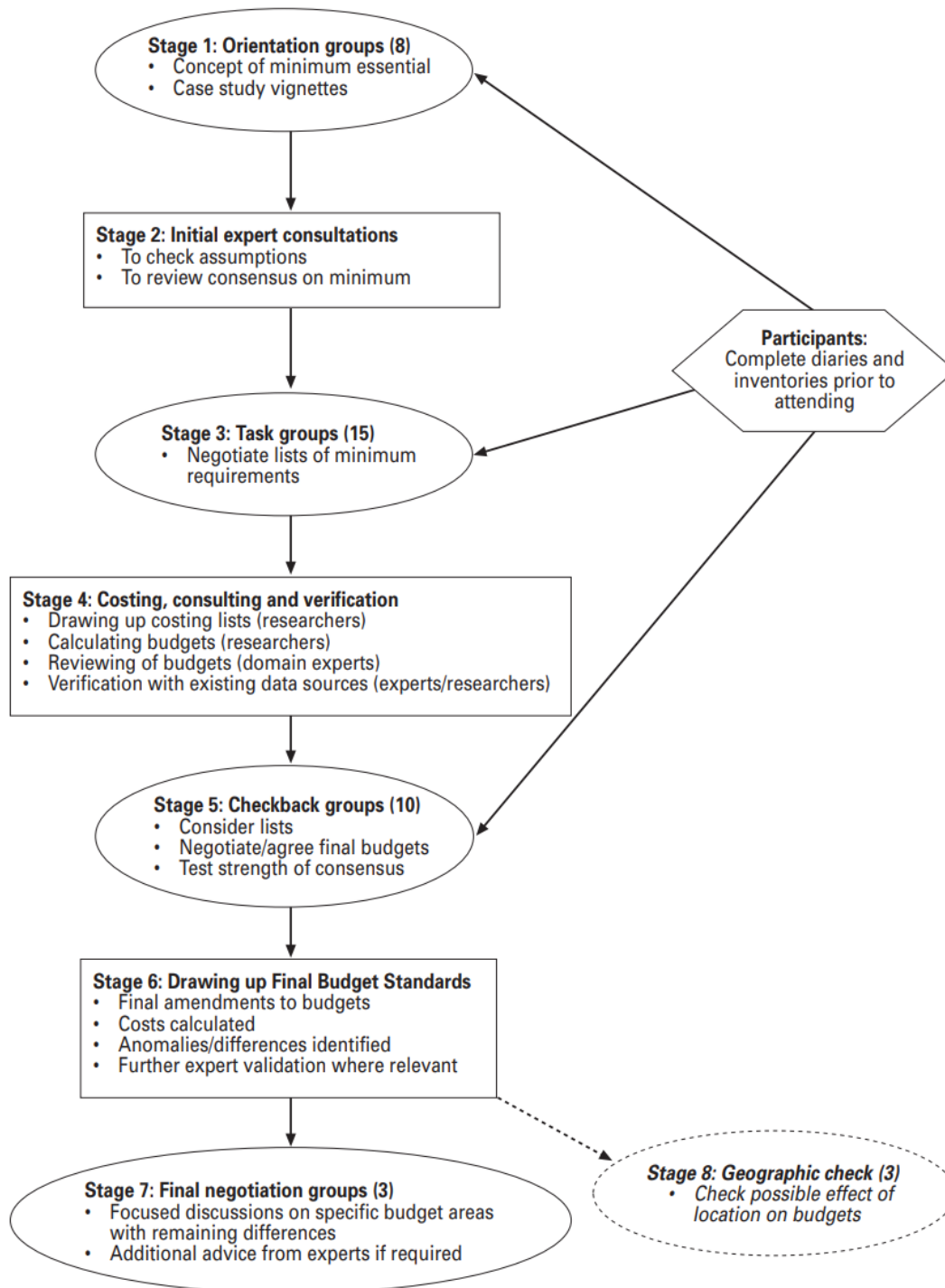
Thornton R (2019), *Minimum Essential Standard of Living: An Evidence Based Adequacy Benchmark*, Minimum Essential Budget Standards Research Centre, Vincentian Partnership for Social Justice, September.

University of California Berkeley Labor Center (2019), *Inventory of US City and County Minimum Wage Ordinances*, <http://laborcenter.berkeley.edu/minimum-wage-living-wage-resources/inventory-of-us-city-and-county-minimum-wage-ordinances/>, accessed 30 October 2019

Valadez-Martínez L, Padley M & Fernanda Torres Penagos M (2017), *A Dignified Standard of Living in Mexico: Results of a Pilot Study of the Minimum Income Standard Approach*, Social Indicators Research, 2018, 140 (2): p.696

Waldegrave C, King P & Urbanova M (2018), *Report of the Measurement Review for a New Zealand living wage*, Family Centre Social Policy Research Unit. March 2018

Appendix A: Minimum income standard research stages



Note: Numbers in brackets are the number of groups held in that stage.

Source: Bradshaw et al. (2008), *A minimum income standard for Britain: What people think*, York: Joseph Rowntree Foundation, p. 7.

Appendix B: UK voluntary living wage household types

Table 100: Household types and weights, 2019–20

Household type	Weights	
	UK excl. London	London
Single	32.4%	43.0%
Couple	33.9%	24.9%
Single parent with one child (age 3–4)	0.9%	0.9%
Single parent with one child (age 5-11)	3.6%	3.8%
Single parent with two children (age under 3 & 3-4)	0.2%	0.2%
Single parent with two children (age 3-4 & 5-11)	0.6%	0.6%
Single parent with two children (age 5-11 & 12-16)	1.7%	1.8%
Single parent with three children (age 3-4 & 5-11 & 12-16)	1.1%	1.5%
Couple parent with one child (age 3-4)	3.9%	4.0%
Couple parent with one child (age 5-11)	7.1%	5.4%
Couple parent with two children (age under 3 & 3-4)	1.6%	1.7%
Couple parent with two children (age 3-4 & 5-11)	2.7%	2.6%
Couple parent with two children (age 5-11 & 12-16)	6.3%	5.2%
Couple parent with three children (age under 3, 3-4 & 5-11)	0.5%	0.5%
Couple parent with three children (age 3-4 & 5-11 & 12-16)	0.9%	1.0%
Couple parent with three children (age 5-11, 5-11 & 12-16)	1.6%	1.7%
Couple parent with four children (age under 3, 3-4, 5-11 & 12-16)	1.0%	1.2%
Total	100.0	100.0

Note: The living wage is set for 17 household types, with the hourly rate calculated by taking a weighted average of the earnings needed for a range of family types in order to achieve that standard. These weights are presented in Table 1, separately for London and the rest of the UK. The UK Living Wage uses the Living Cost and Food Survey (LCFS) to weight family types based on the proportions of each household type (the LCFS is used more widely in the MIS calculations), whereas the London Living uses the Annual Population Survey (APS), which is the data source recommended by the UK Office for National Statistics (ONS) to assess the population of different family types (D'Arcy, C & Finch D, 2016, pp.26–27).

Source: Cominetti (2019), *Calculating a Living Wage for London and the rest of the UK*, Resolution Foundation: Briefing, November, Annex.