What Would Make a Difference for Scotland?

March 2018

Glen Bramley

Report produced for the Poverty and Inequality Commission

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Introduction and Highlights

This project adapts and uses an existing set of models[1] to provide an independent assessment of the potential impact of a range of policy interventions on poverty and inequality over the next decade or so.

The Models

A modelling framework was developed to enable the testing of a wide range of policy and contextual scenarios over a medium-to-longer term time horizon for the whole of the UK. This framework links a dynamic macro-simulation of demography, housing and labour markets at sub-regional scale with a micro-simulation to generate snapshots of poverty and related outcomes at household level. The main focus is on poverty outcomes for different groups, but the models also generate a wider set of outcomes, notably housing affordability, tenure and demographic change as well as inequality measures and some fiscal impacts. In other recent work the model has been used to

[1] These models were originally developed for the Joseph Rowntree Foundation to support its Anti Poverty Strategy, published as Solve UK Poverty in Autumn 2016. The author was commissioned to undertake modelling work for that exercise alongside other commissioned research. The description and results of that modelling work were published in the report Bramley et al (2016) What Would Make a Difference: Modelling Policy Scenarios for Tackling Poverty in the UK. Readers interested in the detailed description of the background, rationale and detailed evidence based underlying this modelling work should refer to that report. All that is provided here is a summation of the basic approach, highlighting its strengths and some limitations.

develop new forecasts and scenarios for homelessness. We report mainly on impacts on a medium-longer term time horizon (2031 in this case), although the model can be used to look at earlier stages in the trajectory (or forward to 2041).

For this specific application in Scotland, the model has been significantly adapted from that featuring in the 2016 report produced for Joseph Rowntree Foundation. The focus is mainly on Scotland and on the key child poverty targets at the time horizon of 2031. Each policy scenario is compared with a baseline representing 'carrying on as we are'. This baseline has been modified relative to the 2016 version, both to bring it up to date and to sharpen the focus on Scotland.

Scenarios were constructed that tested policy options under three main headings:

- Social security, including features of Universal Credit and general levels of benefit
- Work and wages, including minimum/living wage and interaction with taxes
- Housing costs, including acting on these directly through regulation or tenure change, or indirectly through increasing supply**.**

Outcome Measures

The philosophy behind this study is that outcomes are what matter. In Appendix 1 we list all the outcomes which the model is capable of producing. However, the main focus in this study is on the four key targets set in Scotland in relation to child poverty.

Low income relative poverty based on net equivalent income after housing costs (AHC) being less than 60% of UK median**.**

Low income absolute poverty based on net equivalent income after housing costs (AHC) being less than 60% of UK median in 2011 in real terms.

Persistent poverty based on having net equivalent income after housing costs (AHC) less than 60% of UK median in three of the last four years.

'**Combined poverty'** based on having net equivalent income AHC less than 70% of UK median*, and* having predicted risk of lacking 4+essentials greater than 0.5.

Therefore, when we consider different policy options and scenarios, we report especially on their impact on these key indicators, and we show how far that particular scenario would go to eliminating each of the above aspects of poverty in Scotland by 2031. We also comment on particular impacts of scenarios on a range of intermediate outcomes, especially in the housing field, as well as other aspects of poverty and inequality, particularly income inequality. In addition, partial estimates are made of the 'fiscal' impact of each policy scenario on the public finances (tax revenues and public spending).

The model shows outcomes across broad regions of England and countries of the UK. Within Scotland, patterns across different sub-regions are commented on as appropriate, but it is necessary to be cautious when drawing firm conclusions due to the small sample sizes in some of these areas.

Scenarios

Scenario 1: Higher Employment Rates

This scenario was generated by raising the general parameters governing the medium-longer term growth trend in GDP, reducing the extent of sub-regional variation in growth, and increasing the growth in Scotland specifically. The GDP growth averages 2.26% for Scotland between 2016 and 2041, and 2.33% for UK in this scenario, compared with 1.90%% and 2.05% in the baseline respectively. It should be noted that this was accompanied by no increase in international migration. Although usually these variables are related, in the context of Brexit there is less likely to be such an upward movement in migration in response. The results of the 'Stage 1 Model (i.e. SRHMM)' are summarised in Table 1.

Under this scenario real household income would be 4.5% higher by 2031, unemployment would be 30% lower and employment rates among working age adults would be 7.9% higher (5.5% points higher). House prices would be 4.1% higher, so affordability to buy would not have improved at 2031 although it would improve later (in this scenario, there is no general increase in housebuilding). Similarly rents would

be 4% higher, so there would not be much change in rental affordability. There would be a fall of 12% in backlog needs, and households in need would have a 22% higher chance of rehousing in the social sector.

Table 1: Summary of Intermediate Outcomes from Sub-regional housing market model – Higher Employment Rates

Scenario Outcomes	**Stage 1'**	**SRHMM**
Higher Employment Rate Proportional change from baseline, %	Scotland 2031	UK 2031
Total New Housebuilding	0.9%	-0.1%
New Social Housebuilding	0.0%	-0.4%
Number of Households	0.0%	-0.2%
Household Growth	-1.5%	-1.1%
Employment Rate wkg age	7.9%	3.3%
Unemployment Rate	-30.1%	-19.3%
Household Income	4.5%	2.0%
Real House Price (median)	4.1%	1.4%
Affordability to Buy	-1.0%	-0.2%
Real Market Rent	4.0%	2.8%
Affordability to Rent	0.2%	-1.0%
Share of Private Rented hhd	-1.4%	0.4%
Backlog Housing Need	-12.4%	-4.1%
Chance of Rehousing	22.0%	13.8%

Using new elements added to the model2, we can report that this scenario would reduce 'core homelessness'3 in Scotland by 2,300 cases (15%) in 2031, compared with 13,600 (6%) across UK. The greater proportionate impact in Scotland reflects the skewing of this scenario to give a greater economic improvement in Scotland. Core homelessness is quite a small group suffering extreme deprivation: of the poverty indicators reported below it relates most closely to 'severe poverty'.

[2] These new elements were added to the model as part of research for CRISIS on homelessness projections.

[3] 'Core homelessness' is a snapshot stock estimate of the number of households whose situation would be generally agreed to constitute homelessness, including rough sleeping and similar (e.g. cars, tents, public transport), unlicensed squatting, homeless hostels, unsuitable temporary accommodation (e.g. B&B), and 'sofa surfing' i.e. concealed households staying with other than immediate family on short term basis and overcrowded (excluding students).

Poverty reduction outcomes against key targets for families with children in Scotland by 2031 are summarised in Table 2. Taking the first key indicator, relative AHC poverty rate, this is forecast at 23.0% in 2031 in the baseline scenario, whereas this falls by 2.1% points to 20.9% under this higher employment scenario. This represents 'progress' which may be expressed as closing 16% of the gap between baseline forecast and target. Although the percentage point improvements are smaller for absolute poverty and combined poverty (income and material deprivation), these actually represent greater progress in closing these gaps. Put differently, for persistent poverty the numbers are smaller; but relative to the target, the improvement is larger.

Table 2: Outcomes against key child poverty targets in Scotland from higher employment scenario, 2031 (families with children in Scotland only)

Indicator	**Target**	**Achieved Level**	**Improvement**	**Progress**
Relative Poverty	10.0%	20.9%	-2.1%	16%
Absolute Poverty	5.0%	11.7%	-2.2%	25%
Combined Poverty & Material Deprivation	5.0%	10.0%	-2.0%	28%
Persistent poverty	5.0%	8.0%	-1.3%	31%

The figures in Table 2 show this scenario would have a reasonable impact on the headline relative poverty rates, although there would be bigger impacts on the 'fixed base' Minimum Income Standard measures (down 15-16%), on severe poverty (down 17%), and on children in workless households (down 13%). The poverty falls would be greater for families and other working age (down 9-11%) and slight for older households (down 2%). The decreases would be less in social renting than in other tenures. The largest proportionate poverty falls would appear to be in Aberdeen/shire, 'Central' (Stirling-Falkirk-Clackmannan) and in Edinburgh-Lothian-Fife, with relatively less reduction in Ayrshire, Tayside and Greater Glasgow.

For families in Scotland, the biggest absolute reductions in poverty would be for lone parent families, female-headed households, those living in social rented housing, and households with one worker. In terms of absolute and combined poverty, the biggest reductions would be for younger households (where the head of the household is aged

under 25), whereas for relative and persistent the biggest reductions would be for those aged 25-39.

There is an apparent net positive fiscal impact of £3bn for (or rather, 'in') Scotland from the items counted. There are some indications of a slight improvement in equality, for example a fall in 90/10 ratio. This is obviously a generally positive scenario, but we are not saying how it can be achieved.

Scenario 2: Full Living Wage

This scenario attempts to compare full implementation of the Living Wage[4] by 2020, plus a more generous approach to indexation thereafter: progressively raising the level (+1% per annum above median earnings). The scenario is compared to a base of the existing National Minimum Wage, not George Osborne's 'National Living Wage' announced in 2015. The scenario makes allowance for the slight displacement of employment resulting from these measures, which is likely based on the findings of our previous research. Although allowance is made in the Stage 1 Sub Regional Housing Market Model for net impacts on employment and incomes, these are very slight and we do not dwell on them.

Table 3 summarises the impact of this strategy on key child poverty targets. It can be seen that the impacts are rather small and, in one case, apparently perverse. The adverse impact on relative poverty implies that raising the minimum wage has a bigger impact on household incomes in the middle of the range (lifting the median) than it has on incomes of low income families with children. For example, many minimum wage workers are partners in two-worker households, while many others are single earners in small non-family households, including younger people. This is illustrated by the finding that relative poverty falls by 1.8% points for working age non-family households.

[4] Information about the Living Wage can be found here: http://scottishlivingwage.org/.

Table 3: Outcomes against key child poverty targets in Scotland from full living wage scenario, 2031 (families with children in Scotland only)

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	23.6%	0.6%	-5%
Absolute Poverty	5.0%	13.7%	-0.3%	3%
Combined Poverty & Material Deprivation	5.0%	11.5%	-0.5%	7%
Persistent poverty	5.0%	9.3%	0.0%	1%

In this respect Scotland is slightly less favoured than England, particularly the Midlands. There are slightly bigger impacts on fixed base Minimum Income Standard measures. The poverty reductions are concentrated in the renting tenures, with owner-occupiers worse off, partly perhaps because it is working age non-family households which mainly benefit, with older households losing out in relative poverty terms.

This scenario would appear to offer a massive fiscal boost of £15bn for UK by 2031, from reduced UC payouts and increased IT and NIC receipts, but only £500m of this would be in Scotland. The impacts on inequality appear slight.

Clearly, while we can simulate the changes between the pre-existing National Minimum Wage (NMW) and the 2015-announced 'National Living Wage', as well as separating the effects of post 2021 indexation, it is clear that all of these component effects on child poverty will be even smaller.

Scenario 3: Raise Tax Allowance

We test here the option of raising the personal tax allowance by 20% (£2,500 in 2013), while allowing the higher rate threshold to be knocked upwards by the same absolute amount. This appears to have negligible effects on poverty measures for Scotland, although slightly improving things for families and working age versus older households. The picture is a bit more favourable in England, but with still relatively small changes. This measure appears to have a high fiscal cost (£25bn in UK and £2.4bn in Scotland by 2031) for little benefit in terms of poverty or inequality.

There are some caveats attached to the testing of this scenario. Firstly, we may not have tested exactly the preferred version of that (e.g. leaving the upper rate threshold fixed, so narrowing the standard rate band), and we have not allowed for any behavioural responses, in terms of work participation, which may be unduly conservative. Furthermore, due to the limited time and resources available for this report, this model does not test the revised income tax rate structure introduced by the Scottish Government in its most recent budget.

However, from the testing of this scenario it can be seen that the changes will have a minimal direct impact on poverty. The maximum gain to a low paid (e.g. minimum wage) person working full time from the new lower rate starting band would be £20 per annum (40p per week), or 0.15% of their net income. The other changes to bands and rates could overall have some impact on wider measures of income distribution.

Scenario 4: Raise General Housing Supply

There are several ways to reduce housing costs. In this scenario, we get the planning system to release a lot more land for housing so stimulating a large increase in private housebuilding, and a moderate accompanying rise in social housing construction. The model allows for the consequent impact of housebuilding activity on employment levels (based on the findings of the Lyons Inquiry into Local Government in 2007[5]). Total new build is increased by up to a third across the UK, but the net increase in Scotland in the period to 2031 is less: 15%. This is intended to reduce housing costs, and the model indicates that median house prices would be 6% lower across the UK at 2031, although only 3.4% lower in Scotland. A UK-wide increase of this order would cause by far the biggest impact in London. With modest improvements in employment/incomes as well, affordability to buy would improve by 9% in the UK but only 4.1% in Scotland. Market rents would be 3% lower in UK and 2% lower in Scotland, with corresponding modest improvements in rental affordability. The share of private renting tenure would be little changed, implying no great recovery in homeownership rates.

[5] The full findings of the Lyons Inquiry into Local Government can be read here: http://www.lyonsinquiry.org.uk/.

Under this scenario core homelessness would fall by 1,100 (7%) in Scotland in 2031, compared with 22,000 (10%) across UK.

Table 4: Impact of increase in general housing supply across Scotland and England

Scenario outcomes	**Stage 1'**	**SRHMM**
Proportional change from baseline, %	Scotland 2031	UK 2031
Total New Housebuilding*	15.4%	26.7%
New Social Housebuilding*	5.9%	15.7%
Number of Households	1.6%	1.8%
Household Growth	18.3%	19.8%
Employment Rate wkg age	-0.1%	0.6%
Unemployment Rate	-0.4%	-3.7%
Household Income	0.3%	0.4%
Real House Price (median)	-3.4%	-6.0%
Affordability to Buy	4.1%	9.0%
Real Market Rent	-1.9%	-2.9%
Affordability to Rent	1.9%	3.1%
Share of Private Rented hhd	0.1%	1.0%
Backlog Housing Need	-2.8%	-5.0%
Chance of Rehousing	6.5%	17.5%

* this averaged over whole period to 2031

It is important to note that increased housebuilding on this scale would lead to more households forming, with household numbers up by 1.6% in Scotland at 2031 (1.8% UK, and household growth rates 18% higher (20% UK). The model includes endogenous econometric functions to predict household formation and internal gross migration flows by broad age groups. These were calibrated on data mainly from the 1990s and early 2000s (BHPS and ONS Local Migration statistics). The relationships within these models reflect a wider literature on the economic, housing and other influences on these 'demographic' processes, as reviewed in Bramley & Watkins (2016).

People in housing need would have a better chance of rehousing in the social sector in 2031, but only by 7% in Scotland compared with 18% across the UK. Core homelessness in Scotland would fall by around 1,000 households or 7% in 2026 and 2031 and by a

greater degree further into the future. The fall across Great Britain would be greater at 10% in 2031.

This scenario has small impacts on poverty, in particular on relative low income and particularly in Scotland (BHC -1.0%, AHC +0.8%). Table 5 shows that there would be only a very slight improvement in absolute, combined and persistent poverty for families in Scotland. There is a slightly more favourable impact on poverty measures across the UK, particularly in London, with relatively more impact on severe poverty and housing need. There is not much difference in the poverty impacts between household types.

Table 5: Outcomes against key child poverty targets in Scotland from increased general housing supply scenario, 2031 (families with children in Scotland only)

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	23.0%	0.0%	0%
Absolute Poverty	5.0%	13.8%	-0.2%	2%
Combined Poverty & Material Deprivation	5.0%	11.9%	-0.1%	1%
Persistent poverty	5.0%	9.3%	0.0%	1%

There is apparent a net fiscal benefit of £2bn across UK, mainly from reduced Universal Credit payouts, but this is only £130m for Scotland. This does not take account of possible public spending impacts associated with enabling additional land to be developed. Impacts on inequality appear slight.

Scenario 5: Reduce the scale of the private rented sector through regulation and taxation

This scenario is another approach to reducing housing costs, and may already be in train, particularly in Scotland with the new tenancy legislation combined with the effect of UK wide tax measures. It recognises the key role of having a much larger private rented sector with a wider spectrum of households having to use it, where the general level of rents is much higher and the coverage of Housing Benefit/ Local Housing

Allowance/ Universal Credit is less complete. Therefore this is another way of reducing housing costs, but it may also achieve other goals e.g. better standards, more home-ownership aspirations realised, and so on. The modelling implies and assumes a lower/flat level of buy-to-let investment in the future, and the application of European-style 'second generation' rent regulation within tenancies for existing tenants (but with rent rises limited below inflation).

The model suggests that this package could reduce house prices substantially, by around 17% by 2031[6], leading to a large improvement in affordability to buy of 43% in Scotland and 27% in the UK, with some improvement in affordability to rent (7%) and some reduction in the share of private renting (2.5% down in Scotland). Backlog needs would fall by 11% and the chances of rehousing for those in need would rise by 21% in Scotland (and UK) by 2031. Core homelessness would fall by 1,300 or 8% in Scotland in 2031 (9,000 or 4% across UK).

Table 6: Impact of Increase in re-regulation of private rented sector across Scotland and Great Britain

SUMMARY OUTCOMES ***PRS re-regulation***	Stage 1'	SRHMM
Proportional change from	Scotland	UK
baseline, %	2031	2031
Total New Housebuilding	0.9%	-0.4%
New Social Housebuilding	0.6%	0.1%
Number of Households	0.5%	0.5%
Household Growth	3.7%	4.0%
Employment Rate wkg age	-0.1%	0.0%
Unemployment Rate	0.5%	0.1%
Household Income	-0.2%	-0.1%
Real House Price (median)	-17.3%	-17.1%
Affordability to Buy	22.3%	26.7%
Real Market Rent	-0.9%	-0.4%
Affordability to Rent	5.6%	5.8%
Share of Private Rented hhd	-3.1%	-1.1%
Backlog Housing Need	-7.0%	-7.4%
Chance of Rehousing	13.6%	18.6%

[6] This impact does look quite high, and reflects fairly high sensitivity to the buy-to-let investment variable. We may wish to consider a somewhat modified assumption about this, having regard to any evidence of the effects of the tax and regulatory changes so far.

The effects of this scenario on poverty seem a bit perverse in one respect, with relative low income poverty AHC increasing slightly in Scotland, although it falls marginally across the UK. However, there are more favourable changes in Minimum Income Standard Gap and severe poverty measures, as well as in indicators of financial difficulty and housing needs. As with many strategies, poverty improves somewhat for families and working age while deteriorating somewhat for older households. Table 7 focuses on the impacts on core child poverty targets for families with children in Scotland. This indicates a bit of progress on absolute and persistent poverty.

Table 7. Impact of private renting re-regulation on child poverty target indicators for families in Scotland

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	23.0%	-0.1%	0%
Absolute Poverty	5.0%	13.0%	-1.0%	11%
Combined Poverty & Material Deprivation	5.0%	11.9%	-0.1%	1%
Persistent poverty	5.0%	9.2%	-0.2%	5%

There is a modest net fiscal benefit across UK of £0.9bn, but the change for Scotland is negligible. The distributional impacts seem negligible.

Scenario 6: Build significantly more social housing

This appears to be currently a popular suggestion in the policy world, as another route to reducing housing costs and as a more direct way of boosting overall housing supply as well as raising standards. However, there are clearly widely differing views on the future role of social housing and related issues like tenure security, rent levels and rights to buy. This scenario involves a substantial level of total enhancement to new build but with a much larger element of social housing in the mix[7]. The (revised) version

[7] The model determines social housing numbers based on two parameters, proportion of past completions and proportion of private sector new build. The latter linkage makes sense given the

of this strategy delivers 7,000 social housing units per year (and around 10,000 'affordable), which is 140% above the baseline level, in a context of 40% increased private housebuilding, and similar increases in England. The geographical profile of this extra social housing is slightly shifted towards areas with higher net needs for more social housing (but could be shifted further).

This scenario (like the general supply one) increases household numbers (by 1.7% in Scotland by 2031) and household growth (by 22% in Scotland and 29% in the UK). This effect is one of the reasons why the impacts on *household level* poverty measures are less positive than some might expect. However, it would lead to lower unemployment, and slightly higher incomes, as well as lower house prices (-8% in Scotland, -12% in the UK), improved access to home ownership (20% more younger households could buy in Scotland), lower market rents (-5%) and improved rental affordability (7% more could afford market rents). This scenario would achieve small fall in the share of the private rented sector in Scotland (-1%).

Backlog housing need would fall by 7%, while core homelessness would fall by around 15% (2,250). It is much easier to pre-empt or prevent homelessness, or nip it quickly in the bud, if you have a generous supply of social rented lettings. There would be a large increase in both relets and new lets, so that the chances of a household in need getting into social housing would rise by 61% in Scotland.

importance nowadays of s.106/75 planning agreements and 'inclusionary housing' policies. The housing supply econometric model also indicates positive effects from more social housing completions on private sector completions. Therefore you tend to have more private housing as well, if you want more social housing. These parameters are currently tuned to yield total social housebuilding of 7,000 pa in this scenario, which is the current Scottish Government target, and about 140% above baseline.

Table 8: Impact of Increase in social housing supply across Scotland and Great Britain on housing and labour markets

SUMMARY OUTCOMES ***consistent with SG targets***	Stage 1'	SRHMM
Proportional change from baseline, %	Scotland 2031	UK 2031
Total New Housebuilding*	35.1%	41.7%
New Social Housebuilding*	80.7%	110.9%
Number of Households	2.5%	2.8%
Household Growth	28.4%	27.8%
Employment Rate wkg age	-0.2%	0.6%
Unemployment Rate	-0.1%	-3.7%
Household Income	0.1%	0.5%
Real House Price (median)	-6.6%	-11.0%
Affordability to Buy	6.8%	15.5%
Real Market Rent	-3.7%	-5.4%
Affordability to Rent	2.9%	5.3%
Share of Private Rented hhd	-5.6%	-1.4%
Backlog Housing Need	-5.3%	-7.8%
Chance of Rehousing	20.0%	59.3%

* this averaged over whole period to 2031

Again, this scenario appears to have a slight perverse effect on some measures of poverty in Scotland, with relative low income AHC rising by 1.3%), although some measures (Minimum Income Standard, and housing needs) improve. The impacts on poverty are more favourable in England, especially in London. The impacts on the specific child poverty targets for families in Scotland are shown in Table 9.

Table 9: Impact of increase in social housing supply on child poverty target indicators for families in Scotland

Indicator	**Target**	**Achieved Level**	**Improvement**	**Progress**
Relative Poverty	10.0%	23.2%	0.2%	-1%
Absolute Poverty	5.0%	13.5%	-0.5%	5%
Combined Poverty & Material Deprivation	5.0%	12.2%	0.2%	-3%
Persistent poverty	5.0%	9.4%	0.1%	-1%

Only for one target, absolute poverty, is there progress, and even this is relatively small in magnitude.

Similar findings were reported and discussed in the Joseph Rowntree Foundation Anti-Poverty Strategy work. It is suggested that these apparently perverse findings reflect at least four factors: (1) reduced housing costs impact on a broad spectrum of households, particularly those around the median, while for the poorest households these changes are often offset by changes in UC entitlement; (2) the significant tendency of additional social housing supply to induce additional household formation by people who are economically marginal; (3) the possibility that in some regions, including significant parts of Scotland, there is 'enough' (social) housing and building a lot more may be counterproductive (unlike the situation in London); (4) a limitation of the model, whereby, although we attempt through simulating tenure-switching at individual level to change the mix of households within tenures, social renting is still essentially characterised as a tenure of the poor.

This scenario appears to entail a net fiscal cost, most obviously because of the additional capital grant costs of the social housing programme, but also because savings in Universal Credit housing payments are not sufficient to offset a loss of tax and NICs. Again, distributional effects do not appear to be large.

Scenario 7: Benefit Takeup

This scenario envisages a reduction in unclaimed benefits in the means tested sector, mainly Universal Credit and equivalent for older households. Baseline levels of non-takeup comparable to those associated with existing comparable benefits (see Department for Work and Pensions 2017) are applied randomly to groups at greater risk of non-takeup. In this scenario (TK) we halve the incidence of these.

The summary impacts on poverty measures appear to suggest that this scenario would make only a small difference to poverty overall, with a 1.7% reduction in relative low income AHC in Scotland compared with 0.7% reduction in the UK. Within that general picture, marginal beneficiary groups in Scotland would include: private renters (-4.7%)

and owners (-2.9%), rather than social renters; working age nonfamily households (-2.8%); and geographically in Ayrshire and the central belt.

The specific impacts on families with children are even more limited as shown in Table 10. Again, these positive impacts are mainly in private renting and for smaller, younger working families.

Table 10: Impact of halving in take-up of means tested benefits on child poverty target indicators for families in Scotland

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	22.8%	-0.2%	2%
Absolute Poverty	5.0%	13.8%	-0.1%	1%
Combined Poverty & Material Deprivation	5.0%	12.0%	0.0%	0%
Persistent poverty	5.0%	9.3%	0.0%	1%

There would however be a net fiscal cost of £2.3bn UK-wide or £170m in Scotland. This does not take account of any extra costs in grant aid to Citizens Advice Bureau, Money Advice etc. Again, the income distribution effects are negligible.

These rather muted findings suggest that non-takeup (as modelled, but based on evidence) is often correlated with not being below the thresholds of poverty. For example, many older people do not take up all of their entitlements, but nevertheless they tend not to be below the poverty threshold. People entitled to partial benefit are more likely not to claim, as are private renters. However, this approach has slightly more mileage in Scotland than UK-wide.

Scenario 8: Universal Credit personal allowances

The most basic and direct way to help the poor is to give them more money, and the main vehicle to do this now and in future is through Universal Credit, which subsumes most former means tested benefits, housing benefits and tax credits. Since our baseline includes the cuts announced by George Osborne in the 2015 Summer Budget, the first thing we can do is to reverse those. Secondly, we can increase the personal allowances

substantially (by 30%). Thirdly, we can remove the total benefit cap[8]. And finally we can index Universal Credit in future to average earnings rather than the baseline long run assumption of 1% under earnings. So this should be understood as something of a package rather than one very specific measure. The scenario as presented here does not assume significant resulting behavioural change, in either the housing or the labour markets. It should be noted that, while a lot of Universal Credit goes to households out of work, it is combined with the former 'tax credits' which were targeted at in work poverty – so this scenario does not exactly map on to the suggested topic of 'increase out of work benefits'.

Unsurprisingly this package makes quite a dent in poverty by 2031. The key headline indicator (relative low income AHC) falls by 7.3% in Scotland with an 11% fall for families with children. The impact is greater on the Minimum Income Standard Gap measure (16%), while 'severe poverty' would be reduced by 36%. The biggest poverty reductions are in the rental tenures, particularly private renting (-13% AHC), with owner occupation not reducing. While families see a larger reduction (11%) than other working age (8%), again older households see a marginal increase in poverty.

Table 11 sets out how this package would contribute substantially towards approaching the child poverty targets. It would close one-fifth of the gap on relative poverty, but approaching two-fifths in relation to persistent poverty, and a third in relation to absolute poverty.

[8] On reflection, and ideally, we would also remove the two-child limit in Universal Credit – currently this is hardwired rather than a controllable parameter so is deferred to a later test.

Table 11: Impact of reversing 2015 cuts in personal allowances in Universal Credit, raising rates by 30%, lifting benefit cap and indexing on earnings on child poverty target indicators for families in Scotland by 2031

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	20.5%	-2.6%	20%
Absolute Poverty	5.0%	10.7%	-3.2%	36%
Combined Poverty & Material Deprivation	5.0%	10.8%	-1.2%	18%
Persistent poverty	5.0%	7.9%	-1.4%	32%

Among families, the largest absolute gains would go to lone parent and larger families, the groups with higher incidence of poverty. Private renters would see the biggest reduction in relative poverty but social renters would see the larger reductions in absolute and combined poverty. Reductions would be greatest for non-working family households of working age, female headed families, and younger adults (under -25s). Geographically, the largest reductions in most indicators would be in Tayside, but absolute poverty would fall more in Clydeside and Central regions.

Also unsurprisingly, this package would come with quite a big fiscal price tag, around £21bn in net terms across UK, of which about £1.5bn falls in Scotland. All the indicators of inequality would improve under this scenario.

Scenario 9: Universal Credit work allowances

The Universal Credit work allowances are like the former earnings disregards in the Housing Benefit system, but as originally designed much more generous. Their aim was to encourage more people to participate more fully in the labour market, through the basic economic incentive of not seeing one's benefit income immediately taken away as one starts to work or increases hours of work. While that was the original billing, among the cuts announced in the 2015 Summer Budget were substantial reductions in the work allowances, weakening the claims of Universal Credit to be a system which made work worthwhile. The scenario tested here is, again, to reverse the 2015 cuts but then to increase the allowances substantially beyond that (by 30%, again).

It is assumed this time that there is a significant behavioural response. We made some attempts to model (a) the marginal effects of tax/benefit changes on 'work incentives', and (b) to estimate how much labour force participation might respond to this, using our UKHLS database. However, these attempts were not wholly successful and only scratch the surface of what has been a major focus of economic research. Essentially, the changes in work participation are plausible, and are based on some evidence, but cannot be said to be finely calibrated to particular features of the benefit change. In this instance we assume the effect is on people changing from non-working to working status, rather than existing workers increasing their hours.

Overall, with these caveats, this measure appears to have large positive effects in terms of reducing poverty, particularly for families in Scotland. As Table 12 shows, the headline relative poverty rate would fall by 3.9% points, which is a 17% fall and which takes it 30% of the way to the target level. This impact is bigger than that seen for families across the UK (an 8% fall). This may imply that there is more effective capacity for increased employment in Scotland, which also seemed to be reflected in our first scenario. This particular measure also achieves good progress towards the absolute poverty target, and goes some way towards the persistent poverty target, while having less impact on combined poverty. This particular policy measure seems to impact more on relative poverty.

Table 12: Impact of reversing 2015 cuts in work allowances in Universal Credit, and raising these by a further 30%, on child poverty target indicators for families in Scotland by 2031

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	19.2%	-3.9%	30%
Absolute Poverty	5.0%	11.2%	-2.7%	31%
Combined Poverty & Material Deprivation	5.0%	11.7%	-0.3%	4%
Persistent poverty	5.0%	8.6%	-0.7%	17%

All tenures benefit but social renters gain most in terms of the first two measures, with private renters doing relatively better on the other two measures. Families benefit more

than other household types, particularly lone parent families. Geographically, however, the largest gains seem to be in Ayrshire and Tayside.

Whereas the previous strategy would cost a lot in extra public spending, this one appears to be close to fiscally neutral, as extra employment (generating tax, NICs, and smaller UC claims) offsets the higher payouts to households whose status does not change. This strategy also offers moderate improvements in inequality measures.

The fiscal impacts in particular suggest that this strategy should be combined with the previous one, as well as with the first one, to make for a more balanced and affordable approach. There is also an argument that these levels of additional workforce participation would be more likely to be achieved, if improved (flexible and affordable) childcare arrangements were in place.

Scenario 10: Universal Credit taper

The test performed here is similar to that above, insofar as similar (but somewhat lesser) changes in employment participation are assumed to take place. However, the impacts on incomes and poverty levels still differ, and in general are rather smaller. Headline relative child poverty in Scotland is reduced by 1.4% points (7% reduction) which is slightly more than the UK. There is reasonable progress on both relative and absolute poverty towards the target levels, but combined and persistent poverty see little movement.

Table 13: Impact of reducing Universal Credit taper to 50% on child poverty target indicators for families in Scotland by 2031

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	21.5%	-1.5%	11%
Absolute Poverty	5.0%	12.6%	-1.4%	16%
Combined Poverty & Material Deprivation	5.0%	11.9%	0.0%	1%
Persistent poverty	5.0%	9.3%	0.0%	1%

Private renters gain most on relative poverty, but social renters gain more in terms of absolute poverty reduction. As in most of the other scenarios tested, families and working age households gain while older households see poverty rise slightly. The geographical pattern shows gains in relative child poverty in Ayrshire and Edinburgh/Fife/Lothian particularly, with more reduction in absolute poverty in Tayside.

The fiscal impacts appear slightly more favourable than the previous strategy, with a gain of £2.6bn across UK but a net cost of £250m in Scotland. The distributional effects are similar to the previous case, but slightly less good.

Scenario 11: Working hours

One of the ways in which household incomes can be enhanced and their distribution changed is if household members who currently work part-time were to increase their hours. Part of the structuring of Universal Credit and conditionality rules is to encourage people to work longer hours, and one of the criticisms of the current UK labour market is the large number of people who are working in jobs which are rather marginal in terms of hours as well as in terms of job security and employment conditions – terms such as underemployment, exclusionary employment and precarity have been variously used (Standing, 2011, Bailey, 2018).

This particular simulation is similar to that applied in relation to workforce participation, whereby a random selection of those categories of currently part-time workers see a substantial rise in their hours (extra 16 hours). No specific mechanisms are invoked to make this happen but it is assumed to follow from the structuring of the welfare system and a continued strong labour market demand. Figure 13 shows the impact on key child poverty target indicators for Scotland. It seems that this would make a consistently useful contribution in moving towards targets on all of these indicators, closing the gap by about 10% and reducing relative poverty by 5% (1.2% points).

Table 14: Impact of increasing working hours for part-time workers on child poverty target indicators for families in Scotland by 2031

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	21.8%	-1.2%	9%
Absolute Poverty	5.0%	13.5%	-0.4%	5%
Combined Poverty & Material Deprivation	5.0%	11.3%	-0.7%	10%
Persistent poverty	5.0%	8.9%	-0.5%	11%

Scotland seems to gain more from this strategy than the UK as a whole, particularly for families. Gains would be greater for couples with 1-2 children, for older households, and for households with one worker. Gains would be spread across the tenures but would be larger in absolute terms for social renters.

This scenario appears to offer a large fiscal boost, of the order of £21bn across UK or £1.8bn in Scotland. It has no overt costs and leads to falls in Universal Credit claims and rises in tax and National Insurance receipts. This seems almost too much of a free good, and it can be argued that such a scenario would be more likely to be realised, with less adverse social costs, if there was a substantial accompanying enhancement of childcare provision (including flexibility and quality as argued for in Butler and Rutter, 2016) as well as other support for carers/caring. Therefore we report another scenario below including these elements.

Scenario 12: Enhanced Childcare alongside Workforce Participation and Hours (CC)

Following on from the preceding scenarios, I have therefore re-run a scenario developed as part of the JRF 2016 study, entailing the implementation of a comprehensive, flexible child care package as recommended in the report to JRF by Butler & Rutter (2016) – see also Bramley et al (2016, pp.71-4) for further details. Within the latter report, this childcare package emerged as one of the most favourable overall scenarios for reducing poverty, and this point was picked up in some of the

media coverage, particularly in Scotland in later 2016. This scenario entails similar increases in workforce participation and working hours and is associated with a 0.25% increase in the GVA growth rate during the 2020s, which also thus gives some overlap with the 'regional growth'/higher employment scenario considered earlier.

We focus here on the impacts on child poverty, while recognising that this strategy offers considerable wider benefits to the economy and society in the longer term, for example through improved educational attainment. Table 15 presents the impacts on the key child poverty targets in standard form. This scenario is particularly impressive in terms of its achievements in reducing combined poverty and material deprivation and persistent poverty, as well as closing a third of the gap on absolute poverty and one-sixth of the gap in relative poverty.

Table 15: Impact of increasing working hours for part-time workers on child poverty target indicators for families in Scotland by 2031

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	20.9%	-2.1%	16%
Absolute Poverty	5.0%	11.0%	-3.0%	33%
Combined Poverty & Material Deprivation	5.0%	8.0%	-4.0%	57%
Persistent poverty	5.0%	6.6%	-2.8%	64%

Lone parents and larger families see some of the bigger gains, as do social renters, formerly workless households and younger family households. The largest absolute improvements appear to be in Ayrshire and in Edinburgh/Lothian/Fife.

We also calculate additional, more specific, indicators. In this scenario, poverty after housing and childcare costs would fall by 2.7% points (12%) for families in Scotland. The 'MISGap' (average shortfall in net income after housing and childcare costs relative to Minimum Income Standard) for families would fall by £9.62 per week (30%). The proportion of children in workless households would fall by 7.9% points (46%). These are clearly also impressive achievements.

Our estimates suggest that this scenario would have a net positive fiscal impact of £12bn across the UK but only £0.7bn in Scotland. The additional tax and NI, and reduced

Universal Credit claims, from higher employment participation and hours would outweigh the substantial cost of the additional childcare package. The income distribution effects are somewhat positive, and similar to those of the previous scenario.

Scenario 13: Local Housing Allowance Freeze (HA)

We were asked to consider options which would increase support with housing costs. Since support with housing costs are increasingly now merged into Universal Credit, in a sense the scenarios dealing with Universal Credit (already reported) are the main route to varying the generosity of such support. However, the issue of what housing costs 'count' for Universal Credit is important.

One of the welfare reform/austerity measures introduced since 2011 which has been causing increased concern, particularly in the housing field, is the reduction and then freezing of the Local Housing Allowance (LHA) rates for private rents eligible for subsidy through the Housing Benefit and now the Universal Credit system. The initial reduction was from the median to the thirtieth percentile of private market rents in each Broad Market Area across the UK. This was then indexed at a very low rate of increase (1% per annum) for a couple of years, and then subsequently frozen. Thus gradually over time with the effects of general inflation and upward movement in private market rents, there is a growing gap between what private renters actually pay and what the Housing Benefit/Universal Credit system will cover. This reduces after housing cost income and so increases the risk of poverty for private renters.

This policy also has created more pressing problems in the homelessness sector. It has been a key factor in the steeply rising number and proportion of households applying to local authorities as homeless due to the loss of an assured shorthold tenancy, or the inability to access such a tenancy. In addition it has frustrated local authority attempts to prevent homelessness or discharge their duties to homeless households by securing them a tenancy in the private rented sector, because of the increasingly unaffordable rent gap. Evidence for these problems is rehearsed in the regular Homelessness Monitor series (Fitzpatrick et al 2017) and in Bramley's (2017) work on forecasting and projecting homeless numbers. In addition the recent (2017) National Audit Office and Public Accounts Committee inquiries into homelessness highlighted this issue.

Because the Local Housing Allowance freeze is not included in the baseline scenario we model it as an additional policy variant, but this time it tends to increase poverty rather than reduce it. We initially tested the effects of the freeze lasting until 2021. At UK level this leads to a 1.7% increase in AHC relative poverty, a 3.1% increase in combined poverty and 5.8% increase in severe poverty (the greater sensitivity of severe poverty would chime with the sensitivity of homelessness already alluded to). These adverse changes are wholly concentrated in the private rented sector, where the AHC poverty increase is 5% across the UK. However, the effects of this policy in Scotland appear to be negligible, presumably due to the lower level of, and increase in, private rents, so we do not report this particular variant in more detail.

I then tested a stronger variant of this, where Local Housing Allowance is frozen for a further decade, which effectively knocks a further 21% off the level of rent subsidized by 2031. This raises the scale of the impacts UK-wide, with some modest effect in Scotland e.g. 4% higher AHC poverty among private renters. However, mostly these impacts seem to fall on non-family working age households, with the impacts on families still relatively slight. This can be seen in Table 16, where the negative impacts on progress towards key targets are relatively slight.

Table 16: Impact of extended LHA freeze on child poverty target indicators for families in Scotland by 2031

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	23.1%	0.1%	-1%
Absolute Poverty	5.0%	14.4%	0.4%	-5%
Combined Poverty & Material Deprivation	5.0%	11.9%	-0.1%	1%
Persistent poverty	5.0%	9.4%	0.0%	0%

This particular policy therefore seems not to have very much bite in Scotland, because of a combination of the less pressured housing market and the greater role of social renting rather than private renting for families.

The extended LHA freeze could have a substantial positive fiscal effect, worth £7.7bn across UK in 2031, although Scotland's share of this is small (£140m). These fiscal

savings are of course the reason why the UK government has been keen to freeze this allowance.

Scenario 14: Combined Favourable Scenario (CF)

The final scenario exemplified is one where we combine all of the elements which were shown separately above to make a significant contribution towards reducing child poverty in Scotland. These include: the higher and more regionally even levels of economic growth and employment; higher levels of total and especially social housing new build supply; greater regulation of private rented sector (curbing rent rises within tenancies, less tax breaks for buy to let); full living wage; indexation of living wage and benefits to 1% above earnings; restoration of 2015 cuts in Universal Credit; raising personal and work allowances in Universal Credit by 30%; reducing the Universal Credit taper to 50%; ending the Local Housing Allowance freeze; halving of non-takeup of means tested benefits; and a generous enhanced childcare package.

Table 17 summarises intermediate outcomes achieved by this combined scenario in the labour and housing markets of Scotland and the UK. Total new housebuilding rises by approaching 40% while social housebuilding nearly doubles. This scenario would see a significant increase in household growth (up more than a third), indicating that a lot more younger adults feel able to form separate households sooner. The employment rate of working age people in Scotland would rise by 10%, a much bigger gain than in England, while the unemployment rate would fall by 42%, and household incomes would be over 6% higher in 2031. At the same time house prices would be 22% lower and the proportion of younger households able to afford to buy would rise by more than a third. Rental affordability would improve more moderately (by 12%), but 13% less households would have to live in the private rented sector. Backlog housing needs would fall by 30% and the chances of a household in need getting access to social housing would double.

Table 17: Summary of Intermediate Outcomes from Sub-regional housing market model – Combined Favourable Scenario

SUMMARY OUTCOMES	**Stage 1'**	**SRHMM**
Proportional change from baseline, %	Scotland 2031	UK 2031
Total New Housebuilding*	37.5%	41.3%
New Social Housebuilding*	85.3%	107.9%
Number of Households	3.5%	3.4%
Household Growth	37.8%	34.2%
Employment Rate wkg age	10.8%	3.8%
Unemployment Rate	-41.6%	-21.4%
Household Income	6.4%	2.4%
Real House Price (median)	-22.2%	-25.3%
Affordability to Buy	35.8%	44.0%
Real Market Rent	-0.8%	-3.3%
Affordability to Rent	11.6%	10.7%
Share of Private Rented hhd	-12.5%	-2.5%
Backlog Housing Need	-29.5%	-17.9%
Chance of Rehousing	101.1%	115.4%

* this averaged over whole period to 2031

In addition, core homelessness in Scotland would fall by 6,700 in 2031, a fall of 42%.

When we turn to the key child poverty targets in Scotland, as summarised in Table 18, we find that there is strong improvement in all of these and great progress towards meeting these targets. In fact, our forecast of persistent poverty suggests that this package of policies and economic achievements would pretty well hit this target, while for both absolute and combined poverty the achievement would be to get 80% of the way to meeting the targets. The relative low income poverty target is always much more difficult to meet, as was shown in Bramley et al (2016), because many measures also help households in the median area of the income distribution. Thus to get 50% of the way to meeting this is quite an achievement.

Table 18: Impact of combined favourable scenario on child poverty target indicators for families in Scotland by 2031

Indicator	Target	Achieved Level	Improvement	Progress
Relative Poverty	10.0%	16.5%	-6.5%	50%
Absolute Poverty	5.0%	7.0%	-7.0%	78%
Combined Poverty & Material Deprivation	5.0%	6.3%	-5.7%	82%
Persistent poverty	5.0%	5.1%	-4.3%	98%

Looking at the wider pattern across indicators and groups, it is clear that families in Scotland would gain a lot against the Minimum Income Standard criteria and in terms of severe as well as combined poverty. The positive outcomes of this scenario are generally concentrated on working age households, and on quite a few indicators the non-family working age households gain (almost) as much as the families do. With the relative poverty indicators, a corollary of this strategy is that older retirement age households would see some increase in their incidence of relative poverty, while seeing relatively little change in those indicators that have a more absolute base. The gains are generally greatest for families in social renting, but almost as great for private renters (actually greater in certain instances, like the MISGap measure or poverty after housing and childcare costs). The absolute gains tend to be highest for working age households with no one currently working, for female headed households and younger households (under 25).

Some care is needed in reporting geographical outcomes, particularly for families in Scotland, as the sample numbers in UKHLS database are quite small for some regions. Nevertheless, it appears that the largest absolute gains in poverty reduction would be in Glasgow and Clyde Valley, whereas smaller gains characterise regions which are generally more affluent.

This scenario would have a substantial net fiscal cost, at least in the UK as a whole (£12.2bn), due to the substantial enhancement to the generosity of Universal Credit plus the childcare package, although the net cost in Scotland seems quite small (£300m), because of the much greater enhancement to employment.

The distributional outcomes under this combined favourable scenario would see significant improvements. So the Gini coefficient for AHC income in Scotland would fall by 4.2% (vs 8.1% UK wide), the ratio of the 10th decile to the median would rise by 13% and that of the 90th decile to the median would fall by 19%.

So, this scenario does provide something of a roadmap towards meeting Scotland's child poverty targets, showing that most of the key targets are within striking distance. However, this finding does depend on achieving (a) a significantly favourable change in the relative and absolute performance of the economy and (b) a significant change of direction in relation to welfare and public spending policies, which are predominantly determined under the current devolution settlement in Westminster.

Conclusions

The models originally developed to address housing and planning issues, and then subsequently to inform the JRF strategy to *Solve UK Poverty*, have been adapted in this exercise to address a range of options to help Scotland in trying to meet its re-affirmed Child Poverty reduction targets, focussed on the target year of 2030 (in this exercise, 2031). Some of the suggested policies have not been practical to test through this model in the short time available. Some of the suggested policies have been shown to have limited if any impact on the poverty targets, for example tax allowances and rates.

It is important to bear several caveats in mind. Our analysis shows indicative figures for fiscal impacts, but these are partial in terms of the range of expenditures and revenues counted. Nevertheless these do remind us that not all strategies are net negative (i.e. marginal extra spending exceeding marginal extra revenues) and there are considerable offsets, even before we get into more indirect social effects and associated cost offsets (e.g. health – see for example Bramley, Hirsch and Littlewood, 2016). A further complication here is that not all costs and revenues fall in the same jurisdiction under the devolution arrangements.

The policies and scenarios which appear to offer the biggest gains in reducing child poverty are:

- Raising economic growth and employment rates, allied to increases in workforce participation
- Reversing 2015 cuts in Universal Credit and raising personal allowances significantly
- Increasing work allowances in Universal Credit and reducing the taper
- A greatly enhanced, more flexible childcare offer
- Policies/scenarios which appear to achieve relatively smaller gains in terms of core child poverty targets for families in Scotland include:
- Enhanced general housing supply
- Enhanced social housing supply
- Private rent re-regulation
- Full living wage and positive indexation thereof
- Improved benefit take-up
- Ending Local Housing Allowance freeze

The reasons why some of these strategies appear to achieve less are various, but include some side effects which not everybody might have anticipated, as well as considerations of who the key beneficiaries are and what type of household they are situated in. The enhanced housing supply scenarios have less impact on household poverty measures, partly because there is significant induced extra household formation by adults who are relatively economically marginal. They still achieve a lot in improving affordability and access to housing, both owner occupation and social housing, and in reducing housing needs and homelessness and their adverse effects. The private rental strategy and ending the Local Housing Allowance freeze both have relatively marginal effects, particularly in Scotland where rents are not high and tending not to rise much. The living wage scenario has rather muted effects because many of the beneficiaries are second earners in households who are often not in poverty to start with. Improved benefit takeup tends to mainly arise in cases where the benefit entitlement was only partial, and the household was not in poverty (so less pressure to claim).

It is important to underline that government has more direct levers in relation to some of these scenarios than others. In particular, it cannot directly determine the growth in GDP or its regional distribution. There is increasing emphasis on 'industrial strategy'

and this includes a focus on regional development, particularly strengthening city regions, and this is clearly a good direction for policy. However, the nature, scale and magnitude of intervention required to achieve our first scenario, of higher and more regionally even economic growth is probably beyond what is currently contemplated in Westminster, as well as swimming somewhat against the uncertain tides of Brexit. The government can spend directly on improving the generosity of the Universal Credit system and publicly-supported childcare and the findings of this study suggest that, if it is serious in bearing down on child poverty, it should do so.

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APPENDIX 1

Outcome Measures Generated by the Model

The potentially relevant *housing and labour market outcomes* generated by the 'Stage 1' Sub=Regional Housing Market Model (SRHMM) include the following:

- Total *new housebuilding* completions, private and social
- *Household growth* [this is endogenous in the model]
- Social housing *relets* (turnover supply)
- Household *income*
- *Unemployment* rate (ILO basis)
- *Employment rate* as share of working age population
- Median *house prices*
- *Affordability* of market housing *to buy* (percent of younger under-40 households able to afford to buy, based on typical lending norms, lower quartile prices, estimated local income distributions)
- *Affordability* of market housing *to rent* (percent of younger under-40 households able to afford to rent, based on 25% of gross income and median private market rent levels by size)
- The share of households living in *private renting*
- Net new affordable *housing need,* annual flow
- Backlog of existing *unmet housing needs*, (affordability based on 25% of gross income and residual income relative to HB applicable amounts; crowding based on bedroom standard; concealed households who want/intend to move; sharing households; unsuitable dwellings for families with kids or with health condition/disability) as a proportion of households
- Social housing lettings (new+relet) as a percentage of backlog need, interpreted as the *chances of a household in need being rehoused* in the social sector.

- *Incremental affordability* of low cost home ownership (*LCHO)* schemes, in terms of extra percentage of younger households who could afford to buy LCHO but not market housing

We have created summary tables to present the key elements from this list in a succinct form for this project, contrasting Scotland and UK.

The key *poverty outcomes* modelled and profiled through the micro-simulation are as follows (*variablename* in italic and parentheses; '31' suffix means as forecast for 2031; 'u' suffix means assuming full implementation of Universal Credit): ***indicators shown in bold italic*** are the four key child poverty targets for Scotland; we focus particularly on these in the report below.

- Low income relative ('at risk of') poverty based on net equivalent household income being less than 60% of UK median 'before housing costs' (BHC) (the old child poverty target and EU AROP target) (*povbhc31u*)
- Low income relative poverty based on net equivalent income after housing costs (AHC) being less than 60% of UK median (povahc31u)
- Low income absolute poverty based on net equivalent income after housing costs (AHC) being less than 60% of UK median in 2011 in real terms, i.e. after adjusting for CPI inflation (povabs31)
- Persistent poverty based on having net equivalent income after housing costs (AHC) less than 60% of UK median in three of the last four years (prperspov31, predicted value from a logistic regression model fitted to UKHLS data over three waves)
- Household net income after housing costs falls below approx. estimated Minimum Income Standard level for household type (*failmis31*)
- MIS Gap: average shortfall between household net income and Minimum Income Standard level for household type, for those households with a shortfall (i.e where *failmis31=1)*, averaged over all households in group (this is a form of poverty gap measure) (*misgap31*)
- Predicted risk of material deprivation of 3+ essential items (out of 11 included in 2009-10 UKHLS) (*prmd331)*

- **'Combined poverty' based on having net equivalent income AHC less than 70% of UK median*, and* having predicted risk of lacking 4+essentials greater than 0.5 (*prpovcomb431 or altcombpov31*)**
- 'Severe poverty', based on having net equivalent income AHC less than 40% of UK median, *and* (either having predicted risk of lacking 3+ essentials greater than 0.5 *or* having housing needs relating to affordability, crowding or concealed households), *and* having self-reported difficulty with /falling behind with payments relating to housing rent/mortgage, utilities or Council Tax (*altsevpov31*)
- Predicted level of 'Financial difficulty', defined as having self-reported difficulty with /falling behind with payments relating to housing rent/mortgage, utilities or Council Tax (*prfindiff31*)
- Having selected housing needs relating to affordability, crowding or concealed households (*anyneed3*)
- Number of children in workless households per total household (a Government target) (*nkids_wrkless*)
- 'Core homelessness', based on ongoing Crisis research (Bramley 2017), predicted number of households sleeping rough or in similar situations, staying in homeless hostels, in unsuitable temporary accommodation, or 'sofa surfing'.