MINISTRY OF SOCIAL DEVELOPMENT
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Families Package changes to income support and financial incentives for model families – technical companion report

January 2022

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Disclaimer

The views and interpretations in this report are those of the author and are not the official position of the Ministry of Social Development. The results are based on the information produced by the Ministry of Social Development's Effective Marginal Tax Rate model at a specific point of time, and therefore may be subject to change in the future due to revisions to the model.

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Contents

Measures used in this report

This report presents measures that capture different dimensions of income and financial incentives to do paid work. These measures are technical terms that are used to explain what happened because of the Families Package changes.

Measures of income presented are net income and residual income.

- **Net income** is calculated by summing all sources of income (inclusive of earned income, benefits and tax credits) and deducting income tax.
- **Residual income** is calculated by deducting core costs from net income. In this report we calculate residual income after deducting housing costs (residual income after housing costs).[1]

Measures of financial incentives presented in this report are effective marginal tax rates (EMTRs), replacement rates, and participation tax rates, as defined by Figari, Paulis & Sutherland (2015).[2]

- **Effective Marginal Tax Rates (EMTRs)** are indicators of financial incentives for a person already in paid work to increase their work effort, through an increase in hours (the intensive labour supply margin). Here, they are calculated as the proportion of additional gross income that is taxed away, taking into account both income tax and the withdrawal of income support (both income-tested benefits and tax credits delivered through the tax system), with each additional hour worked. High EMTRs are generally a concern because they indicate situations where increasing hours worked will result in little or no change in the income received for a family.
- **Replacement rates** show the level of out-of-work net income (from zero hours of paid work) relative to the level of in-work net income. High replacement rates are a concern because they mean that working provides little or no additional income compared to not working.
- **Participation tax rates** give the proportion of gross earnings lost as taxes, reduced benefit, and tax credit withdrawal if a person moves from zero hours to a given number of hours of work. Along with replacement rates, they are indicators of financial incentives for the decision whether to be in paid work or not (the extensive labour supply margin). Here we calculate participation tax rates for working 20 and working 40 hours. High participation tax rates are a concern because they mean that working provides very little additional income compared to not working once taxes, benefit abatement, and tax credit withdrawal is considered.

A summary of measures we present, and their definitions is in Table 1 (overleaf).

[1] This is to provide a sense of a family’s available income for other expenditure after housing costs.
[2] See https://www.sciencedirect.com/topics/economics-econometrics-and-finance/tax-rate

Table 1: Measures used in this report and their definitions.

Measure	Definition (in all instances, 'work' refers to paid work)
Switching point (denoted by red outlined column in income composition graphs)	Either: the number of hours worked when net income while off a main benefit exceeds that received on a main benefit, or the point where earned income reduces the main benefit received to zero (unless otherwise stated).
Average EMTR	The EMTR is the proportion of additional income that is effectively taxed away with each additional hour worked. This is calculated by dividing the change in net income by the change in gross earnings, and then subtracting this from 1 to give the proportion. Average EMTRs over hours-of-work ranges are used here to help simplify the analysis and allow for comparisons across groups and time periods. For our sole parent with one child model family, average EMTRs are measured over: zero to 40 hours, zero to 19 hours (on main benefit), 19 to 20 hours (switching point), 20 to 40 hours (off main benefit). For our couple with two children model family, average EMTRs are measured over: zero to 80 combined hours, zero to 28 combined hours (on main benefit), 28 to 30 combined hours (switching point), 30 to 80 combined hours (off main benefit). For our single without children model cases, average EMTRs are measured over: zero to 40 hours, zero to 21 hours (on main benefit), 21 to 24 hours (switching point), 24 to 40 hours (off main benefit).
Replacement rate	The replacement rate is net income when out of work as a proportion of net income in-work for a given number of hours. This is calculated by dividing the net income at a given set of hours in work by the net income that would be received if the family was not in work. This is measured at 20 and 40 hours for our sole parent with one child and single without children model families. It is measured at 30, 40 and 80 hours combined for our couple with two children model family.
Participation tax rate	The participation tax rate is the proportion of gross earnings lost as taxes, reduced benefit, and tax credit withdrawal if a person moves from zero hours to a given number of hours of work. This is calculated by first subtracting the net income that would be received if not in work, from the net income received at a given hours of work. This is then divided by the total gross earnings at the given hours of work. Finally, this is subtracted from 1 to give the proportion. This is measured at 20 and 40 hours for our sole parent with one child and single without children model families. It is measured at 30, 40 and 80 hours combined for our couple with two children model family.
Net income	Net income at different hours is inclusive of earned income, benefits, and tax credits less income tax. This is measured at 0/20/40 hours for single adult model families, 0/40/80 for couple model families.
Residual income after housing costs (AHC)	Residual income after housing costs at different hours is net income less accommodation costs. This is measured at 0/20/40 hours for single adult model families, 0/40/80 for couple model families.
Change in income from the Families Package	This represents the net income post-Families Package minus the net income pre-Families Package. This is measured at 0/20/40 hours for single adult model families, 0/40/80 for couple model families, and minimum/maximum for all model families.

Key findings from this report

In this companion technical report, we use the same four model families, but expand the analysis undertaken in the main report *'Families Package changes to income support and financial incentives for model families'* to consider other possible scenarios within the income support system. This report also provides more detail about the individual components of a model family's income. The findings from this report serve to highlight the complexity of the income support system, and how the effects of the Families Package on income and financial incentives could vary depending on the circumstances of model families and their take-up of payments.

The following are key findings from this report.

Compared to before the Families Package changes:

- for all the model families we look at in the report, income gains from the Families Package were influenced by where they lived, how much they paid in rent, and whether they lived in an area which had a large change in the maximum Accommodation Supplement payment
- the largest net income gains for our sole parent with one child model family from the Families Package was while they were not on a main benefit compared to when they were on a main benefit. The income gain was due to the increased Minimum Family Tax Credit that they were able to receive while not receiving a main benefit
- the largest net income gains for our couple with two children model family from the Families Package was when they worked exactly 30 hours combined, due to the increased Minimum Family Tax Credit that they were able to receive at this point. Otherwise, their gains were largest while they received a main benefit, particularly during winter months due to the Winter Energy Payment
- the largest net income gains for our single people without children model cases from the Families Package was while on a main benefit as opposed to off a main benefit, particularly during winter months, due to the Winter Energy Payment.

Both before and after the Families Package changes:

- the broad structure of financial disincentives remained, with many of our model families effectively losing over 50 percent of their earnings in taxes, reduced benefit, and tax credit withdrawal when moving from zero to either part-time or full-time paid work
- non-take-up of supplementary assistance when leaving benefit (for example, through either a lack of understanding of entitlements or reluctance to make a claim) could lead to worse financial outcomes when off a main benefit for model families. This could result in families remaining on main benefit across a wider range of paid work hours even though they would increase their net income by moving off main benefit and taking up the supplementary assistance available
- adult family members in higher paying jobs typically face higher financial incentives to leave benefit, due to faster main benefit abatement because of their higher earnings, and the advantage of not needing to pay secondary tax on earned income once they had left main benefit.

Introduction

The purpose of this report

This report is a companion technical report to the main report *'Families Package changes to income support and financial incentives for model families'*. It provides the following extensions for the model families presented in that main report:

- a breakdown of income, by income source and payment type
- alternative assumptions about childcare (core scenarios one and two only)
- an alternative take-up scenario
- an alternative earnings scenario where adult family members earned $20 per hour (close to the recommended living wage in 2018)
- alternative area of residence and rent scenarios
- alternative times of year (for example, summer versus winter months, core scenarios only)
- alternative payment rates based on age groups (core scenario three only).

For consistency with the main report, unless otherwise stated, all written commentary discussing settings and changes in this report is based on the same assumptions used in the main report and policy settings during winter months, when the Winter Energy Payment (WEP) is available following the introduction of the Families Package.

The model families and core scenario

As in the main report, the model families examined are:

1: a sole parent with one five-year-old child

2: a couple with two children, one is three years old, one is eight years old

3: a single person without children

4: a single person without children and with substantially reduced work capacity due to a severe health condition or disability

The model families all lived in Central Auckland, paying a lower quartile rent for their dwelling type. They could be in work as well as on a main benefit. Adults in these families all earned the minimum wage as at June 2018 ($16.50 per hour) while working.

The circumstances faced by the model families in this report are simplified representations of reality in that they take no account of work-related costs or the impacts of inflation on costs (which could reduce a family's available income), and do not account for the effects of delays in establishing payments when moving on or off main benefit or benefit stand-downs, on actual income received.

The assumptions listed below form the "core scenario" presented for the model families. This report varies some of these assumptions for its alternative scenarios. These are indicated in italics. The assumptions are that:

- *the working family members were all at least 25 years old*
- families were in a stable private rental situation and could receive the Accommodation Supplement, but did not receive other available housing support from the Ministry of Social Development (MSD)[3,4]
- hardship assistance was not received, except for Temporary Additional Support[5]
- extra assistance, such as the Work Bonus or the Transition to Work Grant was not received[6]
- Working for Families entitlements, including Family Tax Credit, were received as a weekly or fortnightly entitlement rather than as an end-of-tax-year lump sum
- all benefit abatement was based on weekly income, rather than annual income (in practice, Sole Parent Support and Supported Living Payment recipients can elect to have their benefit abated based on annual rather than weekly income)
- all income tax calculations are based on weekly income, rather than as an average weekly share of the annual income
- no student loan repayments or Kiwisaver contributions were made
- child support was not paid or received
- *no childcare costs were incurred*
- *people took up all assistance they were entitled to*
- both partners in couples worked the same number of hours, and received the same wages
- for the pre-Families Package scenario, rates of payment were as at 1 April 2017
- for the post-Families Package scenario, rates of payment were as at 1 July 2018
- *people remained on a main benefit until it was more financially advantageous to be off a main benefit (for example, for a sole parent with one child, when the gain from accessing tax credits that could only be accessed while off a main benefit outweighed the loss of main benefit income they would give up in doing so)*
- people were able to flexibly adjust their hours of paid work.

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[3] For people not in a stable private rental situation, other supports are available. These include subsidisation of housing costs through provision of low-cost public housing, Income Related Rent, Emergency Housing, and Transitional Housing. The scenarios are simplified by not examining how these forms of support would alter income and financial incentives.

[4] As at the end of June 2018, there was 284,686 recipients of the Accommodation Supplement, of which 240,045 were aged 18 to 64 years old. Of these, 183,071 were receiving a main benefit, totalling 66 percent of the working age main benefit population.

[5] As at the end of June 2018, there was 58,763 recipients of Temporary Additional Support, of which 52,096 were aged 18 to 64 years old. Of these, 51,902 were receiving a main benefit, totalling 18 percent of the working age main benefit population.

[6] If a person is leaving benefit to go into employment, they may be entitled to bonus payments or grants to help support them into that employment. However, what they receive can be very dependent on their individual circumstances (such as the type of work, and the hours of work), and so isn't modelled here.

Extensions to the report

Addition of a breakdown by income source and payment type

In this report, total net income is broken down by income source (net earnings or financial assistance provided through the benefit and tax systems), and by type of financial assistance.[7] Table 2 below provides a legend for the breakdown.

Table 2: Legend for income source and payment types used in graphs in this report.

Payment	Colour	Notes
Net earnings		
Family Tax Credit		Only for model families one and two
In-Work Tax Credit		Only for model families one and two
Minimum Family Tax Credit		Only for model families one and two
Independent Earner Tax Credit		Only for model families three and four
Net Main Benefit		
Accommodation Supplement		
Disability Allowance		Only for model family four
Temporary Additional Support		
Winter Energy Payment		Only in post-Families Package plots

Alternative childcare assumptions for our model families with children

We also extend the main report by presenting residual income calculations under different assumptions about childcare. In the main report, our model families faced no childcare costs (for example because extended family provided care for the child when the parent(s) worked). The alternative assumptions presented here are that:

- childcare costs were incurred, and the family received a childcare subsidy
- childcare costs were incurred, and the family did not receive a childcare subsidy.

For families with childcare costs, these are assumed to have been $6 per hour if they required under 20 hours, and $5 per hour if they required more than 20 hours.[8] Assumptions about how much childcare was needed are varied depending on the model family type and are discussed in the sections below.

Table 3 (overleaf) provides more detail on the residual income definitions we present.

[7] For a description of the income support system and the different payments and eligibility requirements as at 2018, see http://www.weag.govt.nz/assets/documents/WEAG-report/background-documents/757c27caff/Income-support-system-040319.pdf

[8] Source: Information Analysis Platform, MSD. Assumptions were based on the median fee charged per hour by providers for different numbers of hours in care. This was approximately $6 an hour for up to and including 20 hours of care, and approximately $5 for more than 20 hours of care.

Table 3: Measures presented for alternative childcare assumptions.

Measure	Definition
Comparison of residual income after housing costs (AHC)	Residual income after housing costs (assumes no childcare costs). This is calculated by subtracting accommodation costs from net income Reflected in income graphs with an orange line.
Comparison of residual income after housing and childcare costs with subsidy (AH&CC with subsidy)	Residual income after housing and childcare costs. This is calculated by subtracting accommodation and childcare costs from net income. Reflected in income graphs with an orange dashed line.
Comparison of residual income after housing and childcare costs without subsidy (AH&CC without subsidy)	Residual income after housing and childcare costs. This is calculated by subtracting accommodation and childcare costs from net income without applying childcare subsidy entitlements. Reflected in income graphs with a blue dashed line.

Alternative take-up scenario

Our synthesis of client experience research from before the Families Package found that while awareness of some components of the social assistance system was high, studies suggest lower levels of awareness of payments such as the Accommodation Supplement and Childcare Assistance amongst eligible recipients. Additionally, research participants found it difficult to access the information they needed about their potential entitlements, and to apply for payments (Momsen, 2021). Similar themes were raised in consultations for the development of the Ministry of Social Development's Te Pae Tata and Pacific Prosperity strategies and action plans, and in consultations carried out by the Welfare Expert Advisory Group.

A recent study showed that take-up of Temporary Additional Support among those eligible could be as low as 68 percent. It also showed that it was possible to increase the rate of take-up of the payment through different forms of proactive engagement (Rea, Hyslop, & Smith, 2021).

This alternative scenario examines what happened if:

- people did not take up supplementary assistance from MSD once off a main benefit (because they did not know they were entitled, or did not wish to apply) (however those with children did take up Working for Families tax credits)
- people remained on a main benefit until it was fully abated and did not switch sooner even if it was financially advantageous to be off a main benefit.

This is an extension of the take-up scenario presented in the main report and includes how the components of the model families' incomes changed, and how their financial incentives to work changed.

There is also another alternative take-up scenario that can be explored in the data presented, where model families do not take up any Temporary Additional Support. This scenario can be approximated by ignoring the Temporary Additional Support parts of the income bars, as this payment abated last of all the payments presented here. The expected results of this is that without Temporary Additional Support, the model family generally faced:

- lower EMTR rates
- lower participation tax rates
- lower replacement rates
- a lower net and residual income than they otherwise would have had.

Alternative area of residence and rent scenarios

We examine several alternative scenarios for each model family to demonstrate the differences in income gains from the increase in Accommodation Supplement maximum payment amounts and the changes to Accommodation Supplement areas. Income gains from these changes depended on families' circumstances:

- Families already receiving the maximum Accommodation Supplement payment for their area and circumstances prior to the Families Package could receive income gains from the Accommodation Supplement changes. The size of the gains depended on several factors, including:
    - whether their area of residence became an Accommodation Supplement area with a higher maximum
    - whether their rent qualified them for the new maximum payment for their area or less than the new maximum
    - whether they received Temporary Additional Support (which could be withdrawn with increased Accommodation Supplement).
- Families not receiving the maximum payment for their area prior to the Families Package did not gain Accommodation Supplement income from the Families Package.

Other alternative scenarios

Other extensions involve the following:

- What if adult family members earned $20 per hour (close to the recommended living wage in 2018)?
- What did the changes look like for single people during non-Winter Energy Payment months (for example, during summer months instead of winter months)?
- What if adult family members were different ages (model family three only)?

Model family one: Sole parent with one child

Together with couples with children, sole parents were expected to benefit significantly from the Families Package changes, especially because of the increase to Family Tax Credit and other Working for Families entitlements, and increased Accommodation Supplement.

Our core scenario analysis demonstrates this, showing that our sole parent model family had:

- increased net income
- lower EMTRs while on main benefit, though higher EMTRs while off main benefit
- lower replacement rates for 20 hours of paid work, though slightly higher replacement rates for 40 hours of paid work
- lower participation tax rates when moving from zero to 20 hours of paid work.

Our alternative scenario analysis shows that:

- during summer months, the model family had lower income, a lower EMTR at the switching point and lower replacement rates and participation tax rates
- not taking up childcare assistance decreased the model family's residual income after housing and childcare costs at 40 hours of paid work
- not switching off main benefit until it fully abated meant that the sole parent would be on main benefit until 39 hours of paid work, resulting in lower net income from 20 hours of paid work than if they had made the switch, lower EMTRs between 20 and 39 hours of paid work, higher replacement rates for 20 hours of paid work, and higher participation tax rates when moving from zero to 20 hours of paid work
- not taking up supplementary assistance while off main benefit resulted in lower EMTR's while off main benefit, but higher replacement rates for 40 hours of paid work, and higher participation tax rates when moving from zero to 40 hours of paid work
- higher hourly wages led to increased net income when not in receipt of the Minimum Family Tax Credit, higher EMTRs, but lower replacement rates for 40 hours of paid work, and lower participation tax rates when moving from zero to 40 hours of paid work
- model families that experienced a change in their Accommodation Supplement areas experienced the largest income gains from the Families Package changes.

This model family rented a two-bedroom house in Auckland Central, at a cost of $380 per week. This was the median weekly rental cost for sole parents who received an Accommodation Supplement and lived in the area as of the end of March 2018.[9]

Before the Families Package the sole parent received the maximum Accommodation Supplement for their area. However, after the Families Package, they were no longer at the maximum Accommodation Supplement rate for their area.

[9] Source: Information Analysis Platform, MSD. Data was of rental costs in Area 1, which at the time was only Central Auckland.

Incomes and incentives pre- and post- the Families Package

Figure 1: Net and residual incomes for model family one, pre-Families Package, by income component and hours worked.

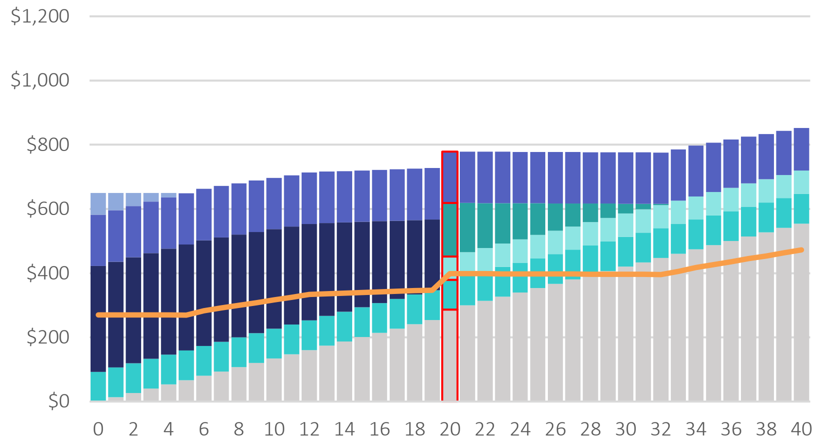


Figure 2: Net and residual incomes for this model family one, post-Families Package, by income component and hours worked.

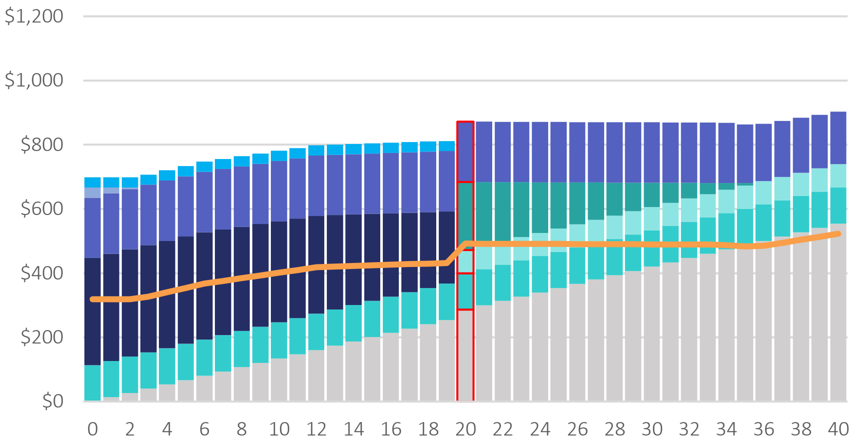


Figure 3: Comparison in the difference in residual incomes pre- and post-Families Package.

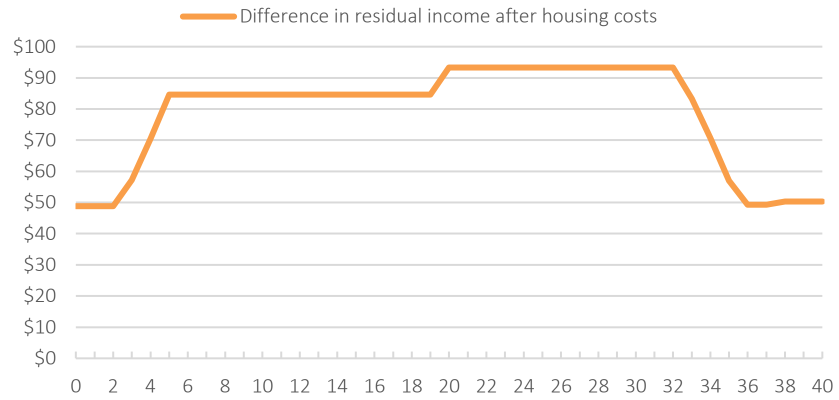


Figure 4: Comparison in EMTRs pre- and post-Families Package.

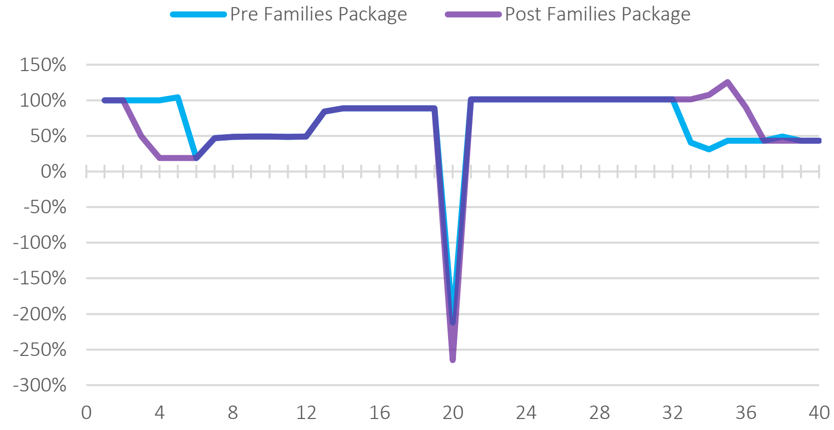


Table 4: Selected measures for model family one.

Measure	Pre-Families Package	Post-Families Package
Switching point	20 hours	All months: 20 hours
Average EMTR (0 to 40 hours)	69.3%	WEP months: 69.1% Non-WEP months: 64.3%
Average EMTR (0 to 19/19 to 20/20 to 40 hours)	75.4%/-212.2%/77.6%	WEP months: 64.0%/-264.9%/90.7% Non-WEP months: 64.0%/-457.8%/90.7%
Replacement rates (20/40 hours)	83.5%/76.2%	WEP months: 80.1%/77.4% Non-WEP months: 76.5%/73.9%
Participation tax rates (20/40 hours)	61.0%/69.3%	WEP months: 47.5%/69.1% Non-WEP months: 37.9%/64.3%
Net income (0/20/40 hours)	$649.91/$778.64/$852.41	WEP months: $698.73/$871.95/$902.72 Non-WEP months: $666.91/$871.95/$902.72
Residual income after housing costs (0/20/40 hours)	$269.91/$398.64/$472.41	WEP months: $318.73/$491.95/$522.72 Non-WEP months: $286.91/$491.95/$522.72
Change in income from Families Package: 0/20/40 hours *(percentage change)* & minimum/maximum *(hours of work)*	WEP months: +$48.82/+$93.31/+$50.31 *(+18.1%/+23.4%/+10.6%)* +48.82/+$93.31 *(hours 0 to 2/hours 20 to 32)* Non-WEP months: +$17.00/+$93.31/+$50.31 *(+6.3%/+23.4%/+10.6%)* +17.00/+$93.31 *(hours 0 to 2/hours 20 to 32)*	

Commentary

Pre-Families Package changes[10]

Income and Effective Marginal Tax Rates

Prior to the Families Package, this sole parent faced a net income cap just under $650 between zero and five hours of paid work. They also faced an EMTR of 100 percent over most of this range, which peaked at 104.2 percent at five hours of paid work. This was due to the withdrawal of Temporary Additional Support over this range and the income ceiling it created, as well as how it abated.[11,12]

With the abatement of Temporary Additional Support completed at five hours of paid work, the EMTR for the sole parent falls to 18.9 percent at 6 hours. From seven to 12 hours of paid work the sole parent faced an average EMTR of under 48.9 percent. At 13 hours of paid work the rate at which main benefit abated increased, meaning that this sole parent faced an average EMTR of 88.2 percent between 13 and 19 hours of paid work.

[10] Commentary here refers to Figures 1 to 4 and Table 4 unless otherwise stated in the text.
[11] When a person receives Temporary Additional Support, any additional earned income results in an equal decrease of their Temporary Additional Support payment.
[12] Once a recipient is only eligible for less than $1 of Temporary Additional Support, they lose the payment altogether. This can lead to EMTR rates above 100 percent.

At 20 hours of paid work, this sole parent was better off financially by not being on a main benefit. This was because the combined sum of the Minimum Family Tax Credit, the In-work Tax Credit, and the gain of income from no longer paying secondary tax on earned income were greater than what the sole parent would have received by staying on a main benefit.[13] The EMTR at this switching point was -212.2 percent.

Increasing work hours past 20 hours of paid work up to 32 hours of paid work did not increase this sole parent's after-tax or residual income. In fact, the sole parents' income decreased slightly through this range. This was because, firstly, the Minimum Family Tax Credit received by the sole parent created an income cap at approximately $780, where for every additional dollar earned, Minimum Family Tax Credit payments reduced until they reduced to zero. Secondly, as ACC earner contributions are not included in the Minimum Family Tax Credit calculations, this resulted in net income reducing by the increase of the ACC earner contributions as work hours increased. These factors resulted in an average EMTR of 101.4 percent through this range.

Once the sole parent's Minimum Family Tax Credit payment abates away, the sole parent faces an average EMTR of 42.0 percent between 33 and 40 hours of paid work.

Replacement rates and participation tax rates

Replacement rates for 20 hours of paid work were 83.5 percent, and for 40 hours of paid work these were 76.2 percent. Participation tax rates for the zero to 20 hours measure were 61.0 percent, and for the zero to 40 hours measure these were 69.3 percent.

Post-Families Package changes[14]

Change in income and Effective Marginal Tax Rates

This sole parent had an increase in income due to the increases in their Accommodation Supplement, Family Tax Credit, and Minimum Family Tax Credit payments as well as the introduction of the Winter Energy Payment.

The gain in residual income after housing costs was:

- $48.82 at zero hours of paid work (an 18.1 percent increase)
- $93.31 at 20 hours of paid work (a 23.4 percent increase)
- $50.31 at 40 hours of paid work (a 10.6 percent increase).

Additionally, after the Families Package this sole parent had a lower average EMTR while on a main benefit, but a higher one while off a main benefit. This was due to a shorter income cap due to Temporary Additional Support while on a main benefit, but a longer income cap due to the Minimum Family Tax Credit while off a main benefit.

Income and Effective Marginal Tax Rates

This sole parent now faced a net income cap just under $699 between zero and two hours of paid work. They also faced an EMTR of 100 percent over this range. This was due to the withdrawal of Temporary Additional Support over this range and the income ceiling it creates, as well as how it abates.[15] With the abatement of Temporary Additional Support completed at two hours of paid work, the EMTR for the sole parent falls to 18.9

[13] See page 19 for an alternative scenario that presents this.
[14] Commentary here refers to Figures 1 to 4 and Table 4 unless otherwise stated in the text.
[15] See footnotes 11 and 12 (page 14) for further explanation of how this works.

percent between four to six hours of paid work. From seven to 19 hours of paid work the sole parent's EMTRs were the same as they were before the Families Package.

At 20 hours of paid work, this sole parent switched from being on a main benefit, to not being on a main benefit. This was because the combined sum of the Minimum Family Tax Credit, the In-work Tax Credit, and the gain of income from no longer paying secondary tax on earned income were greater than what the sole parent would receive by staying on a main benefit.[16] The EMTR at this switching point was -264.9 percent.

Increasing paid work hours past 20 hours up to 35 hours did not increase this sole parent's after-tax or residual income. In fact, the sole parents' income decreased slightly through this range. While the Minimum Family Tax Credit created an income cap at approximately $872, as ACC earner contributions are not included in the Minimum Family Tax Credit calculations, this resulted in an average EMTR of 101.4 percent through most of this range, and therefore a reduction of income as hours of paid work increased.

From 34 hours, the sole parent's Accommodation Supplement begins to abate. This increases EMTRs to 107.5 percent at 34 hours and 125.6 percent at 35 hours of paid work. The sole parent's Minimum Family Tax Credit payment fully abates away at 36 hours of paid work. Following this the sole parent faces an average EMTR of 43.1 percent between 37 and 40 hours of paid work.

Replacement rates and participation tax rates

Replacement rates for 20 hours of paid work were 80.1 percent, and for 40 hours of paid work these were 77.4 percent. Participation tax rates for the zero to 20 hours measure were 47.5 percent, and for the zero to 40 hours measure these were 69.1 percent. The drivers of these changes were aligned with the factors driving changes in average EMTR's while on and off main benefit.

Differences between summer and winter months

During summer months when the Winter Energy Payment is unavailable, compared to winter months, this model family had:

- lower net and residual income while on a main benefit
- a lower EMTR at the switching point
- lower replacement rates and participation tax rates.

[16] See page 19 for an alternative scenario that presents this.

Alternative childcare assumptions

In Figures 5 and 6 below, residual income is plotted with an additional two alternative assumptions with respect to childcare hours and costs as described in Table 3 on page 10.

Figure 5: Net and residual incomes for model family one with additional childcare assumptions, pre- (left) and post-Families Package (right).

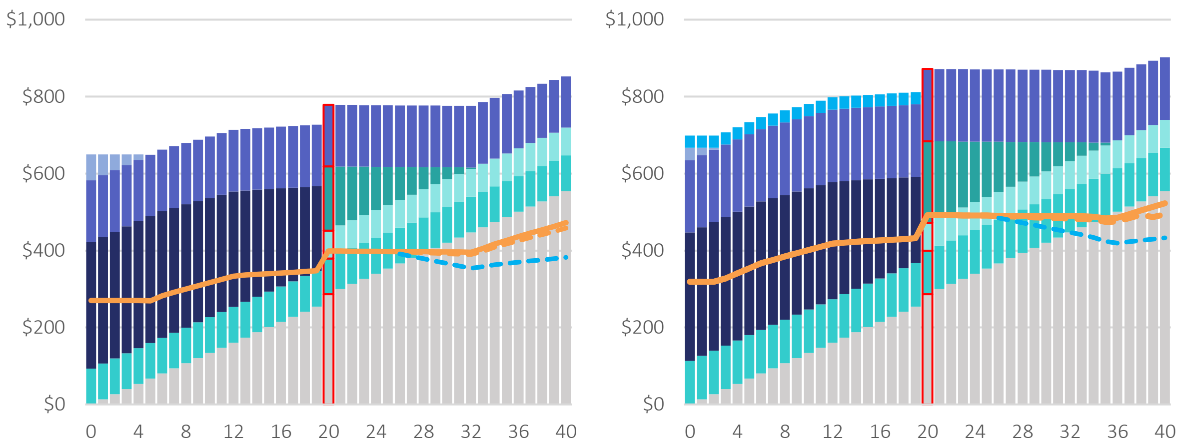
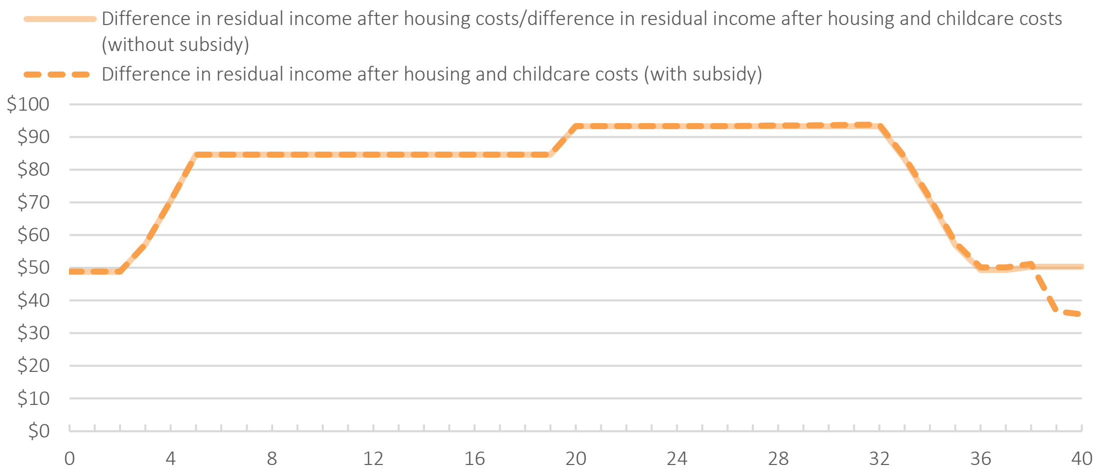


Figure 6: Comparison in the difference in residual incomes for model family one pre- and post-Families Package with additional childcare assumptions.



Note: Difference in residual income with childcare costs but with no subsidy is the same as the difference in residual income after housing costs. Therefore, this measure is excluded from the above graph.

Table 5: Additional measures for this assumption.

Measure	Pre-Families Package	Post-Families Package
40 hours residual income AHC&CC with/without subsidy	$458.31/$382.41	$497.07/$432.72

Commentary

The Families Package lifted residual income under all three sets of assumptions (Figures 5 and 6). The gain in residual income after housing and childcare costs (assuming childcare costs were incurred for each hour of work and use of subsidies) was:

- the same as in the core scenario above at zero and 20 hours of paid work
- lower than the core scenario at 40 hours of paid work ($35.76 here compared to $50.31 in the core scenario).

The lower gain in residual income after housing and childcare costs at 40 hours of paid work was due to increased income from the Families Package causing this sole parent to pass an income threshold for withdrawal of Out of School and Recreation Subsidy. At the time, childcare subsidies counted income from supplementary payments like the Accommodation Supplement in the assessment of income. The increases to the Accommodation Supplement as part of the Families Package could cause some families to pass income thresholds for the subsidies without earning more from paid work.

Both pre- and post-Families Package:

- if the sole parent incurred childcare costs for each hour worked and they did not take up childcare subsidies (blue dotted line in Figure 5) increasing their work hours above 25 hours of paid work left them worse off than working just 20 hours of paid work.
- while not presented here, incurring childcare costs, with or without a subsidy, increased the average EMTRs faced by the sole parent, as well as the zero to 40 hours participation tax rates and replacement rates when these measures were calculated to consider housing and childcare costs.

Alternative scenario: No take-up of supplementary assistance after leaving benefit and on main benefit until fully abated

Figure 7: Net and residual incomes for model family one pre- (left) and post-Families Package (right) for this alternative scenario.

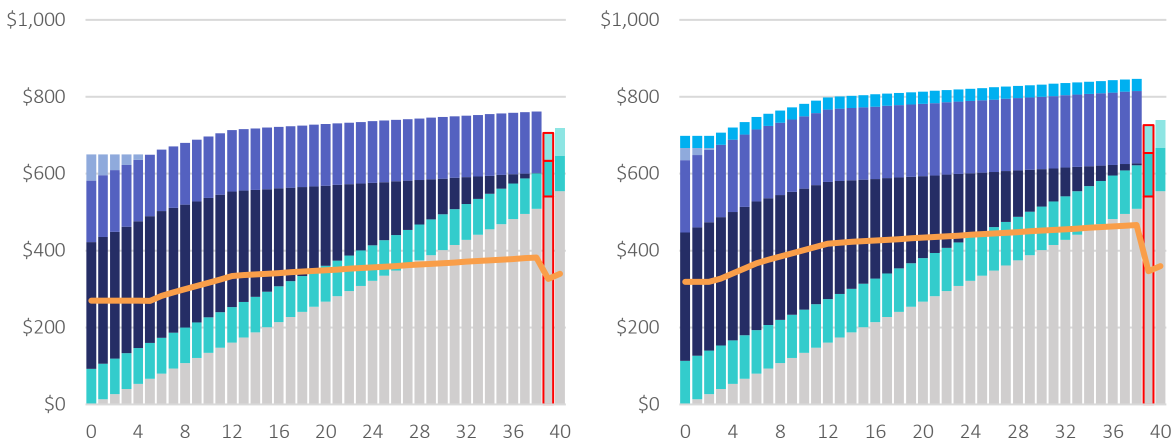


Figure 8: Difference in residual incomes (after housing costs) pre- and post-Families Package in the main scenario and this scenario (left), and comparison of EMTRs post-Families Package between main scenario and this scenario (right).

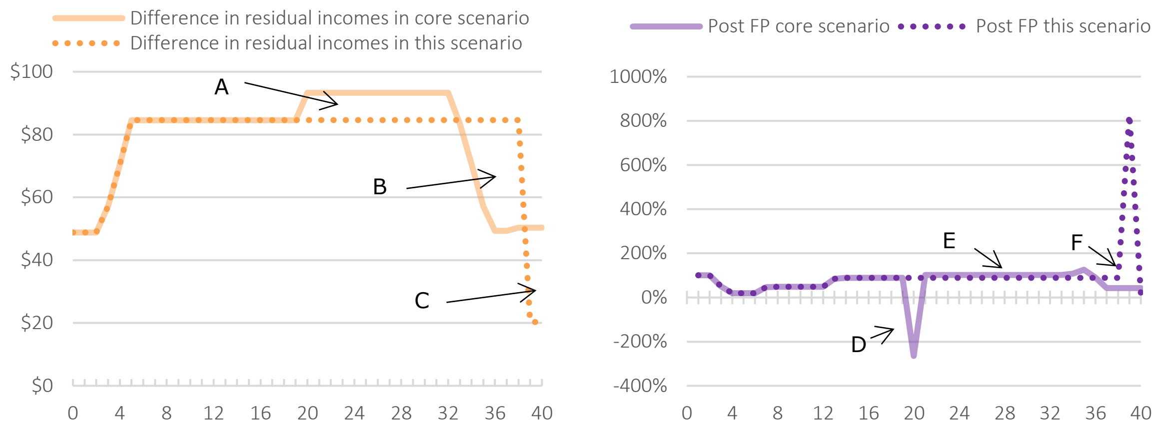


Table 6: Selected measures for this alternative scenario.

Measure	**Pre-Families Package**	**Post-Families Package**
Switching point in core scenario	20 hours	20 hours
Switching point in this scenario	44 hours	48 hours
Benefit abates at	39 hours	39 hours
Average EMTR (0 to 40 hours)	89.5%	93.8%
Replacement rates (20/40 hours)	89.2%/90.3%	85.9%/94.5%
Participation tax rates (20/40 hours)	76.0%/89.5%	65.2%/93.8%
Net income (0/20/40 hours)	$649.91/$728.96/$719.41	$698.73/$813.57/$739.72
Difference in net/residual income between core and this scenario (0/20/40 hours) & *minimum/maximum (hours)*	$0/$-58.38/$-133 *$-137/$0 (39/0 to 19)*	$0/$-58.38/$-163 *$-167/$0 (39/0 to 19)*

Commentary

Income

In this alternative scenario, with respect to income, at no point either pre- or post-Families Package was the sole parent better off than in the core scenario (Table 6).

From zero to 19 hours of paid work there was no change in how the sole parent experiences the Families Package changes when compared to the core scenario. However, from 20 hours of paid work, there are some differences as annotated on Figure 8 (left-hand graph) on the previous page. These are indicated by the following points.

A. From 20 to 32 hours of paid work, the gain in residual income is lower in the alternative scenario. This is because the gains from the Families Package Minimum Family Tax Credit changes and the In-work Tax Credit kicking in within the core scenario were larger than the gains from the Winter Energy Payment in the alternative scenario.

B. From 33 to 38 hours of paid work, the gain in residual income is higher in the alternative scenario. This is because the gain from the Winter Energy Payment while on benefit is greater than the gain from Minimum Family Tax Credit over part of the extended range over which Minimum Family Tax Credit abated.

C. At 39 and 40 hours of paid work, the gain in residual income is lower in the alternative scenario. This is because once off main benefit the only gains from the Families Package that they received were the increases to Working for Families tax credits, as opposed to both tax credits and the Accommodation Supplement.

Effective Marginal Tax Rates

Following the Families Package, the sole parent also faced a different EMTR profile when compared to the core scenario, as annotated on Figure 8 (right-hand graph) on the previous page. These are indicated by the following points.

D. In the core scenario, the sole parent faced a negative EMTR spike. This was due to the large income gain at 20 hours of paid work due to moving off main benefit and receiving the Minimum Family Tax Credit and In-work Tax Credit. In this alternative scenario this did not happen.

E. In this alternative scenario, the sole parent had a slightly lower EMTR between 21 and 36 hours of paid work as their income was not capped by the Minimum Family Tax Credit over this range.

F. At 39 hours of paid work, the sole parent had a large EMTR spike. This was due to no longer receiving the Accommodation Supplement or Winter Energy Payment (during winter months). While they gained the In-work Tax Credit, the income gain from this is not large enough to off-set the loss of other assistance. This did not happen in the core scenario.

Replacement rates and participation tax rates

Table 6 shows that the sole parent's replacement rates for 40 hours of paid work were higher than for 20 hours of paid work in this alternative scenario. The same was true for their participation tax rates. These rates for 40 hours of paid work were also higher than in the core scenario.

Alternative scenario: Sole parent earns $20 per hour

Figure 9: Net and residual incomes for model family one pre- (left) and post- Families Package (right) for this alternative scenario.

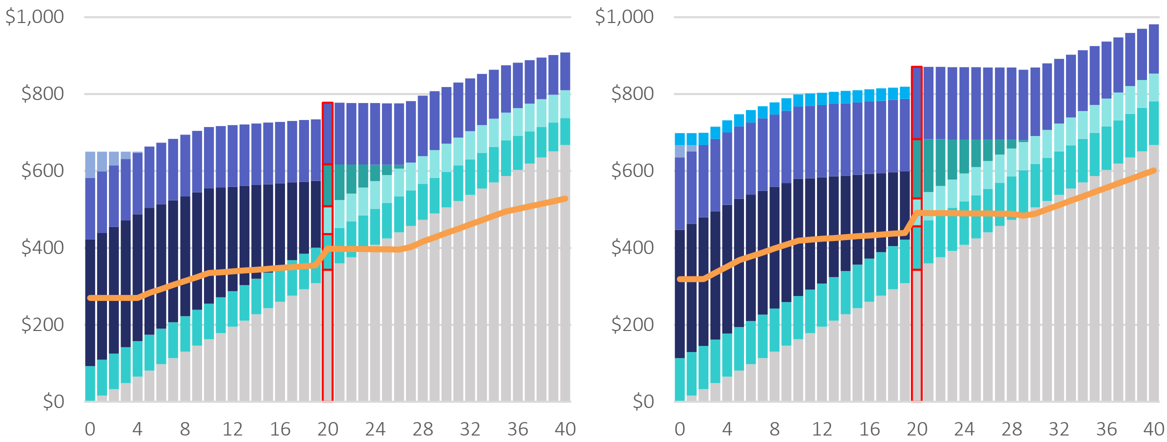


Figure 10: Difference in residual incomes (after housing costs) pre- and post-Families Package in the main scenario and this scenario (left), and comparison of EMTRs post-Families Package between main scenario and this scenario (right).

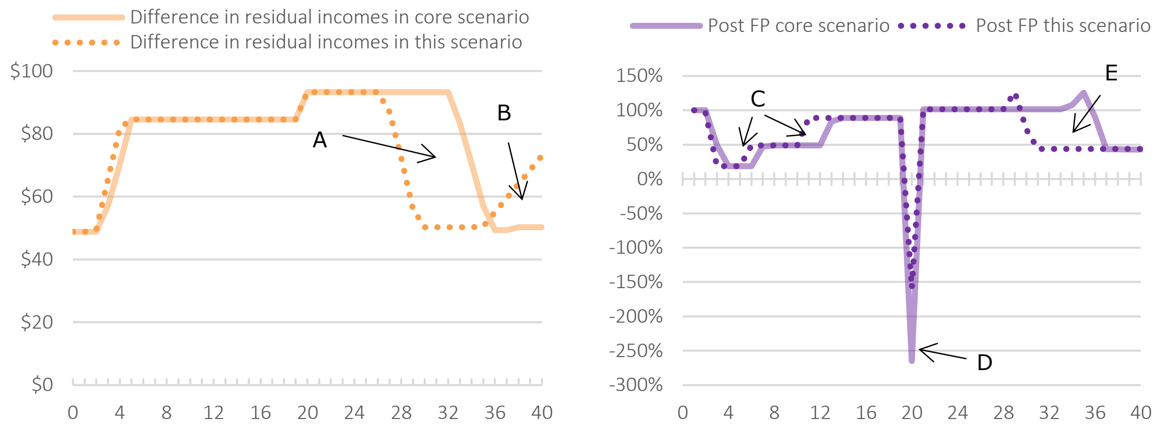


Table 7: Selected measures for this alternative scenario.

Measure	Pre-Families Package	Post-Families Package
Switching point in core scenario	20 hours	20 hours
Switching point in this scenario	20 hours	20 hours
Average EMTR (0 to 40 hours)	67.7%	64.7%
Replacement rates (20 hours/40 hours)	83.6%/71.6%	80.2%/71.2%
Participation tax rates (20 hours/40 hours)	68.1%/67.7%	56.9%/64.7%
Net income (0/20/40 hours)	$649.91/$777.67/$908.24	$698.73/$870.98/$981.27
Difference in net income between core and this scenario (0/20/40 hours) & *minimum/maximum (hours)*	$0/-$0.97/$55.83 *-$1.27/$68.15 (26/35)*	$0/-$0.97/$78.55 *-$6.41/$78.55 (29/40)*

Commentary

Income

For the most part, in this alternative scenario where the sole parent earns $20 an hour, the sole parent is better off than in the core scenario with respects to income. The exceptions to this are when they were receiving either Temporary Additional Support or the Minimum Family Tax Credit. Depending on their circumstances, during these hours of paid work ranges they could be slightly worse off than in the core scenario (Table 7).

From zero to 26 hours of paid work there was very little difference in the change in residual incomes from the core scenario (with a small exception from two to five hours of paid work which is related to the rate of Temporary Additional Support abatement). However, after 26 hours of paid work, there are two notable differences as annotated in Figure 10 (left-hand graph) on the previous page. These are indicated by the following points.

A. From 27 to 35 hours of paid work, the gain in residual income is lower in the alternative scenario. This is due to the full abatement of the Minimum Family Tax Credit happening earlier due to higher earned income.

B. From 36 to 40 hours of paid work, the gain in residual income is higher in the alternative scenario. This is due to the higher earned income causing Family Tax Credit to abate at 36 hours of paid work pre- but not post-Families Package. Family Tax Credit abatement for this sole parent happens after 40 hours of paid work post-Families Package here. For comparison, this point occurs after 40 hours of paid work both pre- and post-Families Package in the core scenario.

Effective Marginal Tax Rates

Following the Families Package, the sole parent also faces a different EMTR profile in this scenario when compared to the core scenario. The differences are annotated in Figure 10 (right-hand side) on the previous page. These are indicated by the following points.

C. The sole parent experiences earlier step increases in their EMTRs in this alternative scenario. This is due to their extra earned income resulting in their main benefit abating more with less hours worked.

D. The negative EMTR spike at 20 hours of paid work where they are assumed to move off main benefit and start receiving the Minimum Family Tax Credit and In-work Tax Credit is smaller in this alternative scenario. This is because their income is higher prior to the switch, so the change in income is smaller than in the core scenario.

E. The sole parent experiences an earlier spike and fall in their EMTRs in this alternative scenario, due to the full abatement of their Minimum Family Tax Credit taking place at a lower number of paid work hours (29 instead of 35).

Replacement rates and participation tax rates

Replacement rates for 40 hours of paid work, and participation tax rates for the zero to 40 hours measure are lower in this scenario than the core scenario. This is due to the increased levels of earned income (Tables 4 and 7).

Alternative scenario: Difference in incomes after housing costs in different locations

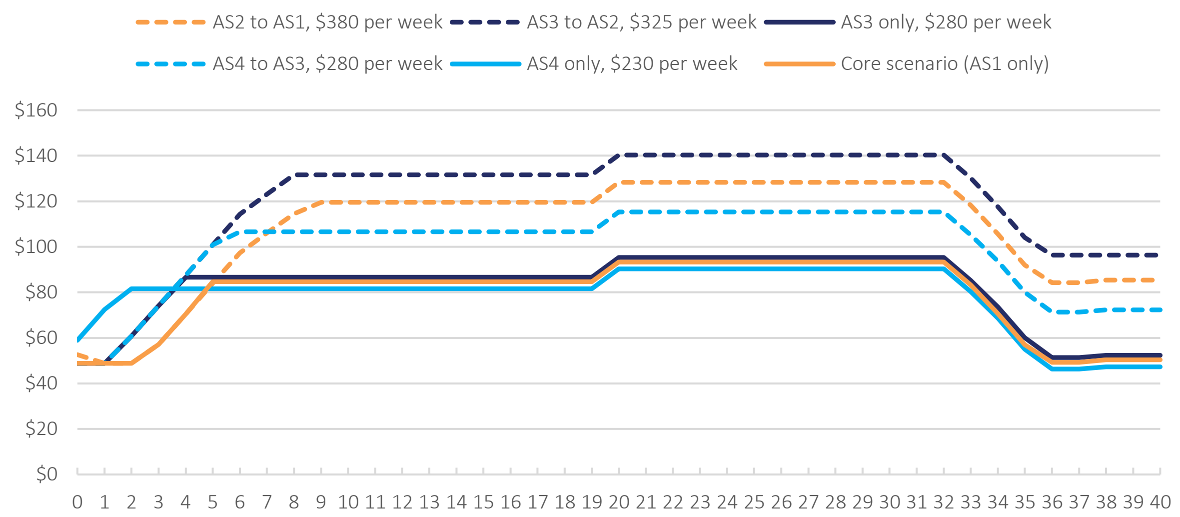
In this scenario we tested the impact of living in different Accommodation Supplement areas and different rent situations on residual incomes after housing costs. This is important as the changes made as part of the Families Package had different impacts depending on where people lived.[17] The details of the different location types we tested are listed in Table 8 below.

Table 8: Details of locations tested in this scenario for model family one.[18]

Accommodation Supplement areas pre- to post-Families Package	Rent paid[1]	At maximum pre-Families Package at zero hours of paid work?	At maximum post-Families Package at zero hours of paid work?	TAS received at zero hours of work pre-Families Package	TAS received at zero hours of work post-Families Package
Area 1 to Area 1 (core scenario)	$380	Yes	No - $47 under	$67.61	$31.82
Area 2 to Area 1	$380	Yes	No - $47 under	$98.87	$31.82
Area 3 to Area 2	$325	Yes	No - $5 under	$97.61	$14.82
Area 3 to Area 3	$280	Yes	Yes	$52.61	$14.82
Area 4 to Area 3	$280	Yes	Yes	$72.61	$14.82
Area 4 to Area 4	$230	Yes	Yes	$22.61	$0

Note 1: Rental figures based off both MSD data capturing claimed rental costs as at the end of March 2018, and a custom data set from the Ministry of Housing and Urban Development of lower quartile rents for different areas and housing types as of July 2018.

Figure 11: Comparison of the difference in residual incomes after housing costs for model family one, by Accommodation Supplement area and rent cost.



[17] See https://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/evaluation/family-packages/2020-monitoring-report.pdf for more details

[18] Rates for both pre- and post-Families Package can be found at https://www.workandincome.govt.nz/map/deskfile/extra-help-information/temporary-additional-support-tables/accommodation-supplement-maximum-rates-current.html and https://www.workandincome.govt.nz/map/deskfile/extra-help-information/temporary-additional-support-tables/at-1-april-2007-05.html

Table 9: Selected measures for this alternative scenario.

	Average EMTR (0 to 40 hours)		Replacement rates (20 hours/40 hours)		Participation tax rates (20 hours/40 hours)	
	Pre-FP	Post-FP	Pre-FP	Post-FP	Pre-FP	Post-FP
Area 1 to Area 1 (core scenario)	69.3%	69.1%	83.5%/76.2%	80.1%/77.4%	61.0%/69.3%	47.5%/69.1%
Area 2 to Area 1	74.1%	69.1%	86.9%/79.1%	80.1%/77.4%	70.5%/74.1%	47.5%/69.1%
Area 3 to Area 2	73.9%	66.7%	85.8%/77.5%	77.2%/74.5%	70.1%/73.9%	42.4%/66.7%
Area 3 to Area 3	67.1%	66.5%	79.3%/71.7%	75.9%/73.0%	56.5%/67.1%	42.4%/66.5%
Area 4 to Area 3	70.1%	66.5%	81.6%/73.6%	75.9%/73.0%	62.5%/70.1%	42.4%/66.5%
Area 4 to Area 4	62.5%	64.3%	74.2%/66.9%	73.2%/70.3%	47.4%/62.5%	37.9%/64.3%

Commentary

Entitlements

Table 8 shows that pre-Families Package all these scenarios meant the sole parent received the maximum amount of Accommodation Supplement they were entitled to. However, post-Families Package only those sole parents that lived in Area 3 or Area 4 following the changes were at the new increased maximums. Post-Families Package, all sole parents in this scenario saw a reduction of the Temporary Additional Support that they received at zero hours of paid work when compared to what they received pre-Families Package.

Income

In Figure 11 we can see that for a sole parent who lived in a town or city where the Accommodation Supplement areas changed, they experienced a larger overall increase of income compared to a sole parent who lived in an area where the area did not change.

Generally, the increases experienced were mostly dependent on what areas they were changing between, as well as their level of rent relative to the maximum amount of Accommodation Supplement they could receive and if they were receiving Temporary Additional Support.

Effective Marginal Tax Rates (EMTRs), replacement rates and participation tax rates

Generally, the changes in EMTRs, replacement rates and participation tax rates shown in Table 9, were influenced by the change in the Accommodation Supplement rates and areas. Additionally, the EMTRs, replacement rates and participation tax rates were also dependent on whether the sole parent was receiving Temporary Additional Support, how much of it they were receiving, and if the Families Package changes resulted in any significant changes in how much of it they received and how it abated.

Model family two: Couple with two children[19]

Along with sole parents, couples with children were expected to benefit significantly from the changes, especially through increased Working for Families tax credits and Accommodation Supplement.

Our analysis demonstrates this, showing that this family had:

- increased net income
- lower EMTR's while on main benefit, though higher EMTR's while off main benefit
- lower replacement rates for 30 hours of paid work, though slightly higher replacement rates for 40 and 80 hours of paid work
- lower participation tax rates when moving from zero to 30 hours of work, though slightly higher participation tax rates when moving from zero to 40 hours of work.

Our alternative scenario analysis shows compared to the core scenario:

- during summer months, the model family had lower income, a lower EMTR at the switching point and lower replacement rates and participation tax rates
- not taking up childcare assistance decreased the model family's residual income after housing and childcare costs from 68 hours of paid work
- not switching off main benefit until it fully abated meant that the model family would be on main benefit until 40 hours of paid work post-Families Package. This resulted in lower net income from 30 hours of paid work, higher replacement rates for 30 hours of paid work, and higher participation tax rates when moving from zero to 30 hours of paid work
- not taking up supplementary assistance while off main benefit resulted in lower EMTR's while off main benefit, but higher replacement rates for 80 hours of paid work, and higher participation tax rates when moving from zero to 80 hours of paid work
- higher hourly wages lead to increased net income when not in receipt of the Minimum Family Tax Credit, higher EMTRs, but lower replacement rates for 80 hours of paid work, and lower participation tax rates when moving from zero to 80 hours of paid work
- model families that experienced a change in their Accommodation Supplement areas experienced the largest income gains from the Families Package changes.

This model family rented a house in Auckland Central, at a cost of $460 per week. This was the median cost for Accommodation Supplement recipients that were couples with children in the area as at the end of March 2018.[20] Before the Families Package the family received the maximum Accommodation Supplement for their area. However, after the Families Package, they were no longer at the maximum Accommodation Supplement rate for their area. One child in the model family was pre-school aged (three years old), eligible for, and received, 20 hours of free Early Childhood Education (ECE). The other child was primary school age (eight years old).

[19] Through this section, the hours worked are the combined hours worked of both working adults in the model family. For simplicity, we refer to this as just "hours worked". As an example, where we say, "working 30 hours", this means that both adults are working 15 hours each for a combined total of 30 hours.
[20] Source: Information Analysis Platform, MSD. Data was of rental costs in Area 1 as at the end of March 2018, which at the time was only Central Auckland.

Incomes and incentives pre- and post- the Families Package

Figure 12: Net and residual incomes for model family two, pre-Families Package, by income component and hours worked.

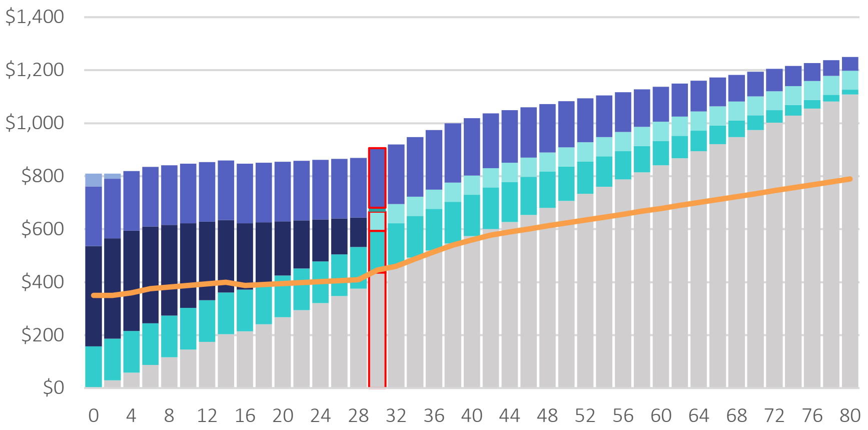


Figure 13: Net and residual incomes for model family two, post-Families Package, by income component and hours worked.

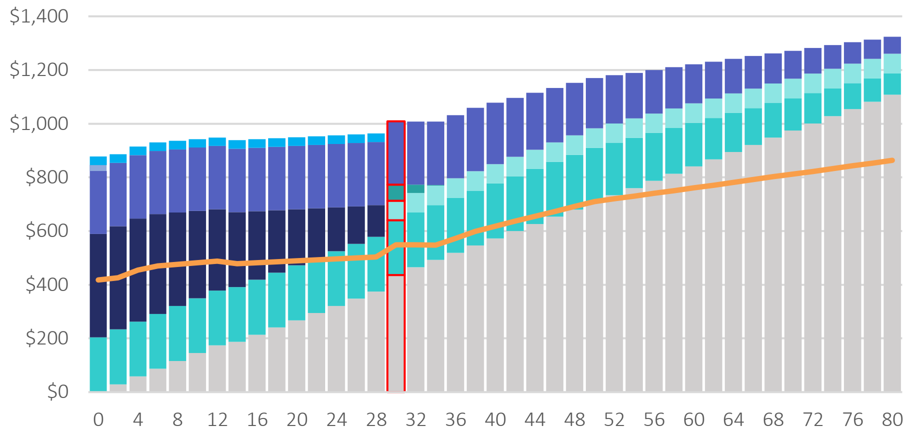


Figure 14: Comparison in the difference in residual incomes pre- and post-Families Package.

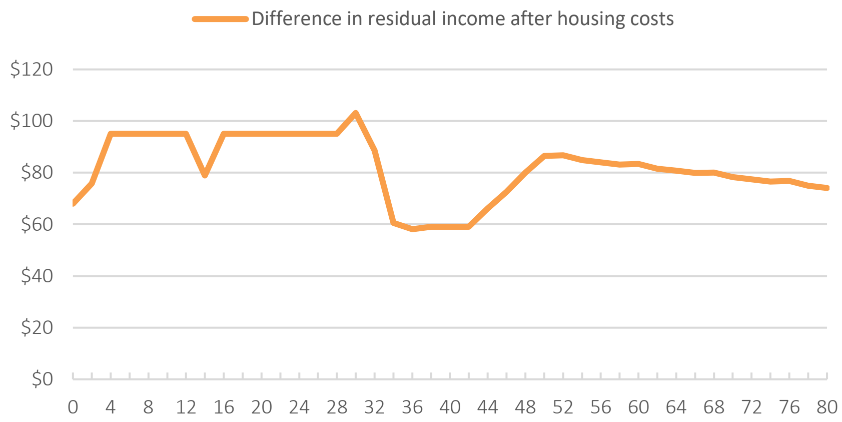


Figure 15: Comparison in EMTRs pre- and post-Families Package.

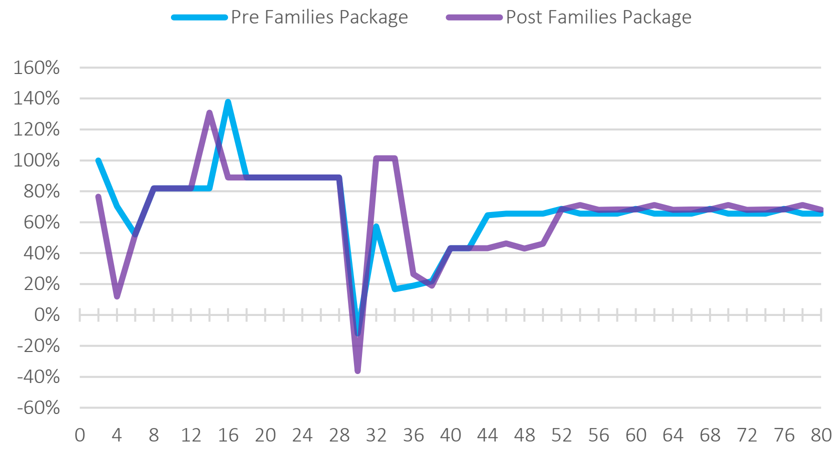


Table 10: Selected measures for model family two.

Measure	Pre-Families Package	Post-Families Package
Switching point	30 hours	All months: 30 hours
Average EMTR (0 to 80 hours)	66.7%	WEP months: 66.2% Non-WEP months: 63.8%
Average EMTR (0 to 28/28 to 30/30 to 80 hours)	87.2%/-12.0%/58.4%	WEP months: 81.4%/-36.3%/61.9% Non-WEP months: 81.4%/-132.7%/61.9%
Replacement rates (30/40/80 hours)	89.4%/79.5%/64.8%	WEP months: 87.0%/81.5%/66.3% Non-WEP months: 83.9%/78.5%/63.9%
Participation tax rates (30/40/80 hours)	80.6%/68.4%/66.7%	WEP months: 73.5%/69.7%/66.2% Non-WEP months: 67.1%/64.9%/63.8%
Net income (0/40/80 hours)	$809.86/$1,018.69/$1,249.31	WEP months: $877.92/$1,077.81/$1,323.44 Non-WEP months: $846.10/$1,077.81/$1,323.44
Residual income after housing costs (0/40/80 hours)	$349.86/$558.69/$789.31	WEP months: $417.92/$617.81/$863.44 Non-WEP months: $386.10/$617.81/$863.44
Change in income from Families Package: 0/40/80 hours *(percentage change)* & minimum/maximum *(hours of work)*	WEP months: +$68.06/+$59.12/+$74.13 *(+19.5%/+10.6%/+9.4%)* +$58.12/+$103.12 *(36 hours/30 hours)* Non-WEP months: +$36.24/+$59.12/+$74.13 *(+10.4%/+10.6%/+9.4%)* +$36.24/+$103.12 *(0 hours/30 hours)*	

Commentary

Pre-Families Package changes[21]

Income and Effective Marginal Tax Rates

Prior to the Families Package, this model family faced an income cap of $810 between zero and two hours of paid work. They also faced an EMTR of 100 percent over this range. This was due to the withdrawal of Temporary Additional Support over this range and the income ceiling it creates, as well as how it abates.[22]

With the abatement of Temporary Additional Support completed, the EMTR for the model family falls to 70.3 percent at four hours of paid work, and 52.2 percent at six hours of paid work. From eight to 14 hours the family faced an average EMTR of 81.9 percent, as a higher rate of benefit abatement kicks in through this range.

At 16 hours of paid work, the model family's earnt income pushes them into a higher secondary tax bracket. This results in an EMTR spike of 137.9 percent at this point. From 18 to 28 hours of paid work the family faces an average EMTR of 88.9 percent.

This all contributes to an average EMTR of 87.2 percent while on a main benefit.

[21] Commentary here refers to Figures 12 to 15 and Table 10 unless otherwise stated in the text.
[22] See footnotes 11 and 12 (page 14) for further explanation of how this works.

At 30 hours of paid work, this model family was better off financially off main benefit. This was because the combined sum of the Minimum Family Tax Credit, the In-work Tax Credit, and the gain of income from no longer paying secondary tax on earned income were greater than what the family would receive by staying on a main benefit.[23] The EMTR at this switching point was -12.0 percent.

This model family very briefly received a Minimum Family Tax Credit at 30 hours of paid work. This is abated away immediately if paid work hours were increased. At 34 and 36 hours of paid work there were no additional payment abatement effects, with the family facing an average EMTR of 17.8 percent here.

From 38 hours of paid work, the model family's Accommodation Supplement began to abate. This leads to an average EMTR of 36.1 percent between 38 and 44 hours of paid work. From 44 hours of paid work the Family Tax Credit began to abate, with the family facing an average EMTR of 66.2 percent between 44 and 80 hours of paid work as a result. This contributes to an average EMTR of 58.4 percent while off a main benefit.

Replacement rates and participation tax rates

Replacement rates for 30 hours of paid work were 89.4 percent, for 40 hours of paid work these were 79.5 percent, and for 80 hours of paid work these were 64.8 percent. Participation tax rates for the zero to 30 hours measure were 80.6 percent, for the zero to 40 hours measure these were 68.4 percent, and for the zero to 80 hours measure these were 66.7 percent.

Post-Families Package changes[24]

Change in income and Effective Marginal Tax Rates

This model family had a large boost in income due to the increases in their Accommodation Supplement, Family Tax Credit, Minimum Family Tax Credit payments as well as the introduction of the Winter Energy Payment.

The gain in residual income after housing costs was:

- $68.06 at zero hours of paid work (a 19.5 percent increase)
- maximised at 30 hours of paid work ($103.12 or a 23.1 percent increase)
- $59.12 at 40 hours of paid work (a 10.6 percent increase)
- $74.13 at 80 hours of paid work (a 9.4 percent increase).

Additionally, after the Families Package this model family had a lower average EMTR while on a main benefit, but a higher one while off a main benefit. This was due to not facing an income cap when working from Temporary Additional Support, a longer income cap from the Minimum Family Tax Credit, and a higher rate of abatement of the Family Tax Credit after 52 hours of paid work.

Income and Effective Marginal Tax Rates

This model family did not face an income cap following the Families Package, as the Temporary Additional Support received fully abated away upon any increase of paid work hours.

[23] See Page 32 for an alternative scenario that presents this.
[24] Commentary here refers to Figures 12 to 15 and Table 10 unless otherwise stated in the text.

From zero to six hours of paid work, the average EMTR for the model family is 53.8 percent. This increases to an average of 88.9 percent between eight to 28 hours of paid work, as a higher rate of benefit abatement kicks in through this range. This contributes to an average EMTR of 81.4 percent while on a main benefit.

After the Families Package changes, this model family was still better off financially not receiving a main benefit when adult members of the family had 30 hours of paid work. This was because the combined sum of the Minimum Family Tax Credit, the In-work Tax Credit, and the gain of income from no longer paying secondary tax on earned income were greater than what the family would receive by staying on a main benefit.[25] The EMTR at this switching point was -36.3 percent.

Increasing work hours from 30 up to 34 hours of paid work did not increase this model family's after-tax or residual income. In fact, the model family's income decreased slightly through this range. The Minimum Family Tax Credit created an income cap at approximately $1,009. As ACC earner contributions are not included in the Minimum Family Tax Credit calculations, this resulted in an average EMTR of 101.4 percent through this range, and therefore a reduction of income as paid work hours increased.

There were no payment abatement effects between 36 and 40 hours of paid work, leading to an EMTR through this range of 22.7 percent. From 40 to 50 hours of paid work, the average EMTR is 44.1 percent, as the abatement of Accommodation Supplement begins. From 50 hours of paid work the Family Tax Credit began to abate, resulting in an average EMTR of 68.9 percent between 52 and 80 hours of paid work. This contributes to an average EMTR of 61.9 percent while on a main benefit.

Replacement rates and participation tax rates

Replacement rates for 30 hours of paid work were 87.0 percent, for 40 hours of paid work these were 81.5 percent, and for 80 hours of paid work these were 66.3 percent. Participation tax rates for the zero to 30 hours measure were 73.5 percent, for the zero to 40 hours measure these were 69.7 percent, and for the zero to 80 hours measure these were 66.2 percent.

Differences between summer and winter months

During summer months when the Winter Energy Payment is unavailable, when compared to winter months this model family had:

- lower net and residual income while on a main benefit
- a lower EMTR at the switching point
- lower replacement rates and participation tax rates.

[25] See Page 32 for an alternative scenario that presents this.

Alternative childcare assumptions

For this model family we assume some work flexibility that lets them stagger their working hours to minimise the need for childcare (for example, by having one parent start early in the morning, and the other start later in the day so that where possible, one parent is available for childcare duties).[26,27] The assumed number of childcare hours (after subtracting the 20 hours of free ECE for the three-year-old) required for each child for calculation of residual income after housing and childcare costs is detailed below in Table 11.

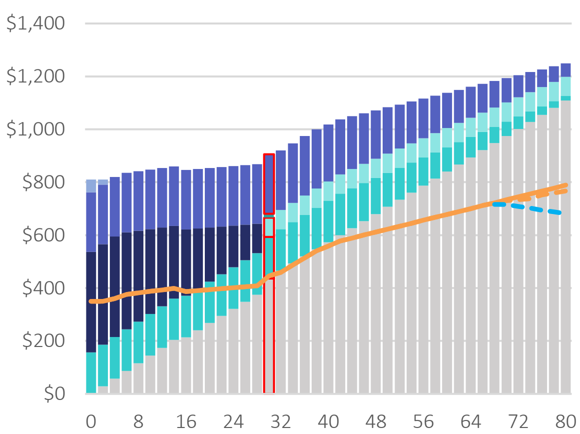
Table 11: Extra Childcare Subsidy and OSCAR Subsidy hours required at various worked hours points in this scenario for model family two.

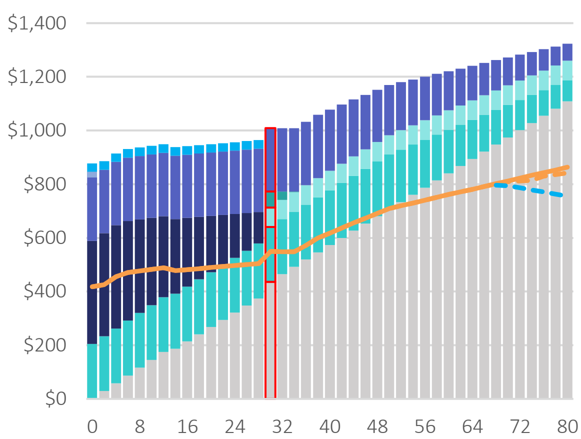
Hours worked	Extra Childcare Subsidy needed	OSCAR Subsidy needed
68	1 hour	0 hours
70	3 hours	0 hours
72	5 hours	1 hour (not entitled)
74	7 hours	2 hours (not entitled)
76	9 hours	3 hours
78	11 hours	4 hours
80	13 hours	5 hours

From 68 hours of paid work, this family is assumed to face childcare costs. This is due initially to their younger child being enrolled at a childcare centre for more than 20 hours. As paid work hours increase, they also need after school care for their older child.

In Figure 16 (below) and 17 (overleaf), residual income is plotted with an additional two assumptions with respect to childcare hours and costs as described in Table 3, page 10.

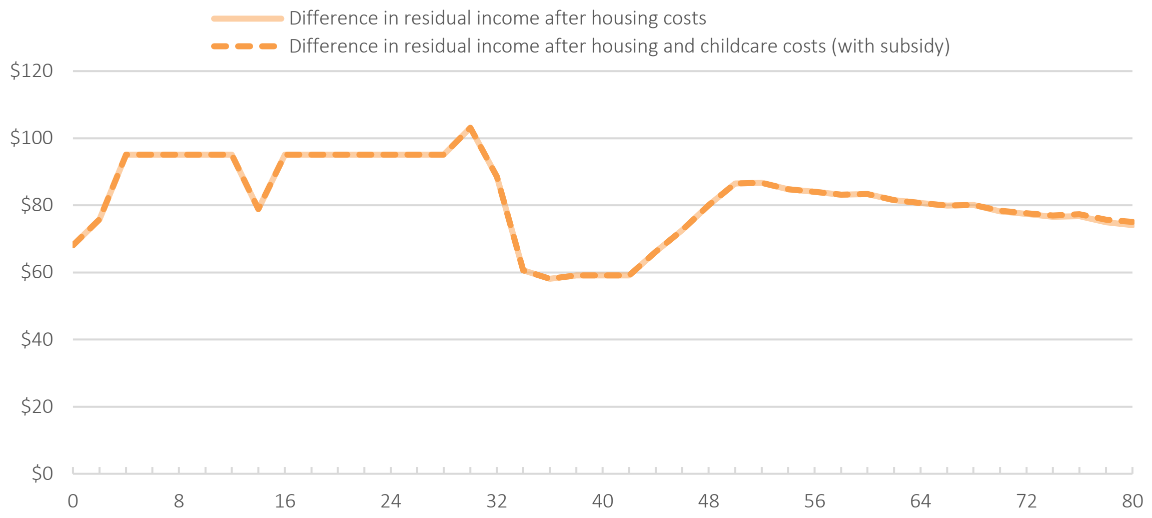
Figure 16: Net and residual incomes for this scenario for model family two with additional childcare assumptions, pre- (left) and post-Families Package (right).





[26] We assume here that no parent starts work before 7am or finishes work after 7pm. See the appendix for more information.
[27] We factor in one hour per day of travel time into the analysis. This is because a parent can claim travel time taken to get to the childcare centre for dropping off and picking up children so long as it's fair and reasonable. We also assume that the children attend childcare centres located in the vicinity of each other or near a parent's place of employment.

Figure 17: Comparison in the difference in residual incomes pre- and post-Families Package for model family two with additional childcare assumptions.



Note: Difference in residual income with childcare costs but with no subsidy is the same as the difference in residual income after housing costs. Therefore, this measure is excluded from the above graph.

Table 12: Additional measures for this assumption

Measure	Pre-Families Package	Post-Families Package
80 hours combined residual income AHC&CC with/without subsidy	$767.03/$681.31	$842.06/$755.44

Commentary

The Families Package lifted residual income for this family under all three childcare assumptions. Due to no childcare subsidy income thresholds being passed at different points both pre- and post-Families Package, there was little difference in the gain in residual income after housing and childcare costs (with a subsidy claimed).

The gains were the same as the gains in residual income after housing costs outlined in the section above, except for at 80 hours of paid work where for those families receiving a subsidy the gains were $75.03 or a 9.8 percent increase (AHC&CC with subsidy).

Both pre- and post-Families Package:

- if the family received subsidies from MSD, the effects of the childcare costs was relatively muted and extra hours of paid work still yielded a higher residual income (Figure 14, orange dotted line)
- if the family did not claim subsidies, more hours of paid work could leave the family worse off (Figure 14, blue dotted line) both pre- and post-Families Package
- While not included here, intuitively, incurring childcare costs, with or without a subsidy, increases the average EMTRs faced by the family, as well as the zero to 80 hours of paid work participation tax rates and replacement rates when these measures are calculated to consider housing and childcare costs.

Alternative scenario: No take-up of supplementary assistance after leaving benefit and on benefit until fully abated

Figure 18: Net and residual incomes for model family two pre- (left) and post-Families Package (right) for this alternative scenario.

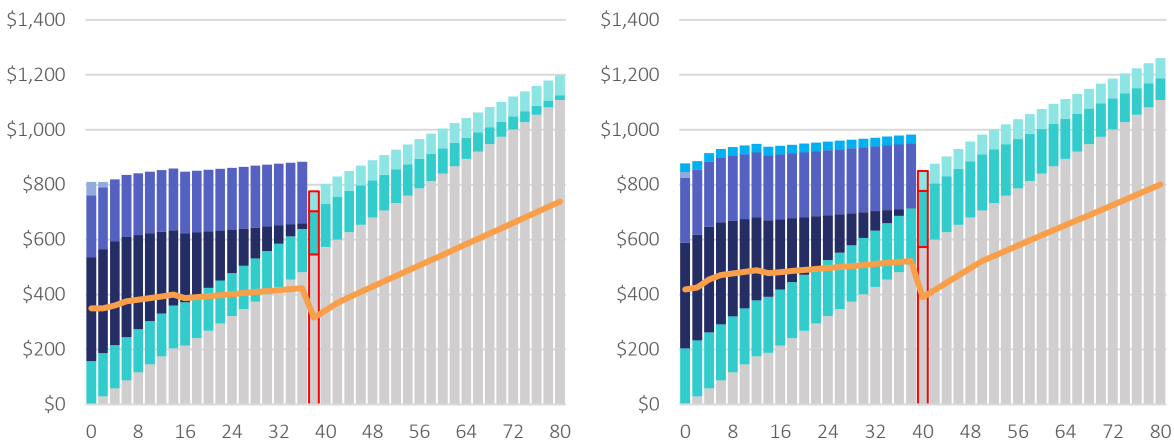


Figure 19: Difference in residual incomes (after housing costs) pre- and post-Families Package in the main scenario and this scenario (left), and comparison of EMTRs post - Families Package between main scenario and this scenario (right).

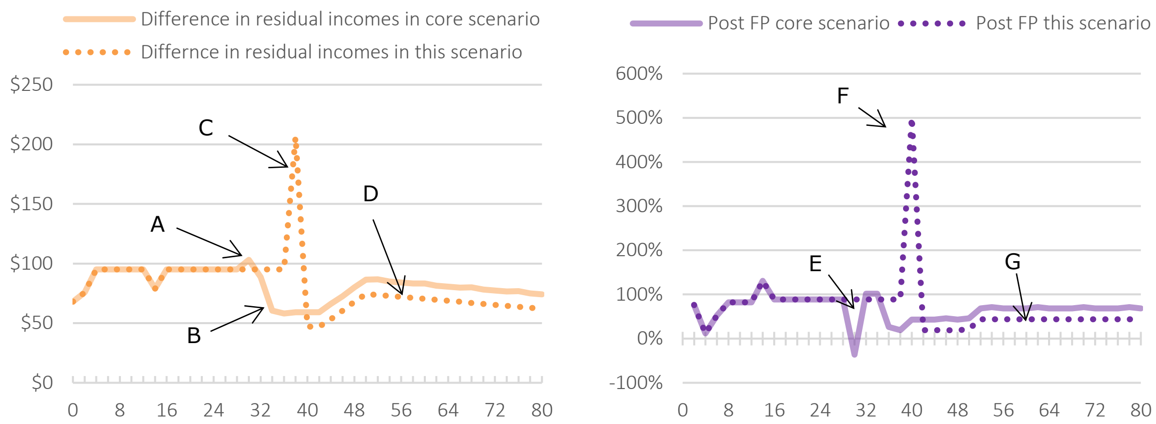


Table 13: Selected measures for this alternative scenario.

Measure	Pre-Families Package	Post-Families Package
Switching point in core scenario	30 hours	30 hours
Switching point in this scenario	48 hours	50 hours
Benefit abates at	38 hours	40 hours
Average EMTR (0 to 80 hours)	70.6%	71.0%
Replacement rates (30/40/80 hours)	92.8%/100.9%/67.6%	90.7%/103.3%/69.7%
Participation tax rates (30/40/80 hours)	87.3%/101.1%/70.6%	81.9%/104.3%/71.0%
Net income (0/40/80 hours)	$809.86/$802.69/$1,198.31	$877.92/$849.81/$1,260.44
Difference in income between core and this scenario (0/40/80 hours) & *minimum/maximum*	$0/-$216/-$51 *$-224/$0 (hour 38/hours 0 to 28)*	$0/-$228/-$63 *$-228/$0 (hour 40/hour 0 to 28)*

Commentary

Income

At no point either pre- or post-Families Package in this alternative scenario is the model family better off than in the core scenario.

In this alternative scenario, from zero to 28 hours of paid work there is no change in how the model family experiences the Families Package changes with respects to residual income when compared to the core scenario. However, from 28 hours of paid work, there are four distinctive differences as annotated on Figure 19 (left-hand graph) on the previous page. These are indicated by the following points.

A. At 30 hours of paid work, there is a slight bump in the gain in residual income in the core scenario, but not in the alternative scenario. This is due to the Minimum Family Tax Credit changes, which the model family does not benefit from in this alternative scenario.

B. From 32 to 36 hours of paid work, the gain in residual income is higher in the alternative scenario. This is because the gains from the Families Package Minimum Family Tax Credit changes and the receipt of the In-work tax credit in the core scenario were smaller than the gains from the Winter Energy Payment and Accommodation Supplement changes in the alternative scenario.

C. At 38 hours of paid work in the alternative scenario, there is a spike in the gain in residual income. This is because post-Families Package the main benefit received abates at 40 hours of paid work instead of at 38 hours of paid work pre-Families Package.

D. From 40 hours of paid work onwards, the gain in residual income is lower in the alternative scenario than the core scenario, as the family does not receive the additional benefits of the Accommodation Supplement changes following their move off main benefit.

Effective Marginal Tax Rates

Following the Families Package, the model family also faced a different EMTR profile in the alternative scenario compared to the core scenario, as annotated on Figure 19 (right-hand graph) on the previous page. These are indicated by the following points.

E. In the core scenario, the family faces a sharp fall in their EMTR associated with the large gain in income at 30 hours of paid work. This is due to moving off main benefit and receiving the Minimum Family Tax Credit and the In-work tax credit, whereas in this alternative scenario this does not happen.

F. In this alternative scenario, the family has a significantly higher EMTR at 40 hours of paid work post-Families Package (38 hours of paid work pre-Families Package) due to the fall in income experienced when they move off main benefit.

G. Following the move off main benefit, the family has a lower EMTR in this alternative scenario compared to the core scenario. This is because they are not faced with their Accommodation Supplement abating as they earn more. Therefore, as their income increases, they keep more of it after taxes and abatement.

Replacement rates and participation tax rates

Table 13 shows that the model family's replacement rates for 40 hours of paid work, and participation tax rates for the zero to 40 hours measure are over 100 percent in this scenario. Additionally, the family's replacement rates for 80 hours of paid work, and participation tax rates for the zero to 80 hours measure are higher than in the core scenario (Table 10 and 13).

Alternative scenario: Family members were earning $20 per hour

Figure 20: Net and residual incomes for model family two pre- (left) and post- (right) Families Package for this alternative scenario.

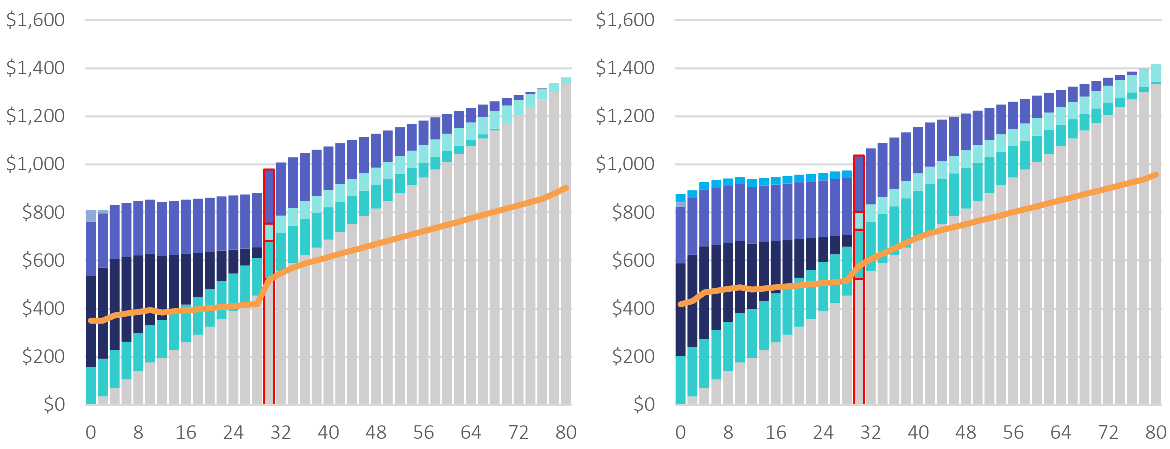


Figure 21: Difference in residual incomes (after housing costs) pre- and post-Families Package in the main scenario and this scenario (left), and comparison of EMTRs post-Families Package between main scenario and this scenario (right).

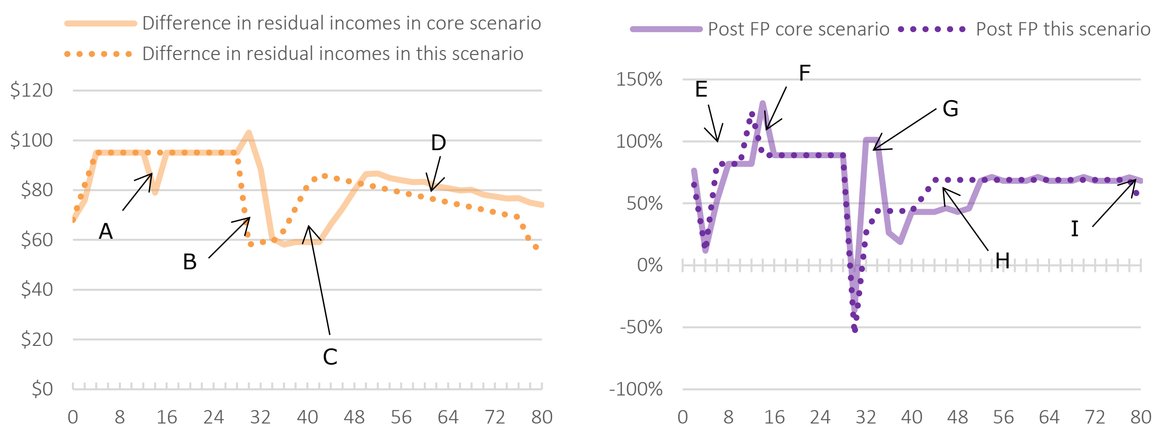


Table 14: Selected measures for this alternative scenario.

Measure	Pre-Families Package	Post-Families Package
Switching point in core scenario	30 hours	30 hours
Switching point in this scenario	30 hours	30 hours
Average EMTR (0 to 80 hours)	65.5%	66.3%
Replacement rates (30/40/80 hours):	82.7%/75.4%/59.4%	84.6%/75.9%/61.9%
Participation tax rates (30/40/80 hours):	71.8%/66.9%/65.5%	73.5%/65.2%/66.3%
Net income (0/40/80 hours)	$809.86/$1,074.53/$1,362.41	$877.92/$1,156.37/$1,417.54
Difference in net income between core and this scenario (0/40/80 hours) & Minimum/maximum difference *(hours of work)*	$0/$55.84/$113.10 *$0/$113.10 (hours 0 to 2/hour 80)*	$0/$78.56/$94.10 *$0/$94.10 (hour 0/hour 80)*

Commentary

Income

At no point in this alternative scenario is the model family worse off than in the core scenario with respect to income.

In this alternative scenario where the model family members earn $20 an hour, there are some notable differences as annotated in Figure 21 (left-hand graph) on the previous page. These are indicated by the following points.

A. At 14 hours of paid work, the gain in residual income is higher in the alternative scenario. This is because the increased secondary tax rate kicks in at the same time both pre- and post-Families Package here, whereas in the core scenario it kicks in earlier post-Families Package.

B. From 30 to 34 hours of paid work, the gain in residual income is lower in the alternative scenario. This is due to the model family’s income being too high to benefit from the Minimum Family Tax Credit.

C. From 36 to 48 hours of paid work, the gain in residual income is higher compared to the core scenario. In this range the Accommodation Supplement no longer abates following the Families Package, whereas previously it did. This mirrors what happens in the core scenario, but at an earlier point.

D. From 50 hours of paid work onwards, the gain in residual income is lower compared to the core scenario. This is mostly because the family’s Accommodation Supplement and Family Tax Credits begin to abate earlier in this alternative scenario due to their higher earned income.

Effective Marginal Tax Rates

Following the Families Package, the model family also faces a different EMTR profile in this scenario when compared to the core scenario. The differences are annotated in Figure 21 (right-hand graph) on the previous page. These are indicated by the following points.

E. The model family experiences earlier step increases in their EMTRs in this alternative scenario. This is due to their extra earned income earned resulting in their main benefit abating more with less hours of paid work.

F. The model family has an earlier spike in the EMTRs because their secondary tax rate increases at an earlier point in this alternative scenario (12 hours of paid work instead of 14).

G. The model family no longer has an EMTR of 100 percent or higher at any point post 30 hours of paid work. This is because the family's earned income is too high to receive a Minimum Family Tax Credit in this alternative scenario once they move off a main benefit.

H. Across 36 to 52 hours of paid work the model family has a higher average EMTR in the alternative scenario. This is because their Accommodation Supplement and Family Tax Credits begin to abate earlier in this alternative scenario due to their higher earned income.

I. The model family experiences a fall in their EMTR at 80 hours of paid work in this alternative scenario but not in the core scenario. This is because their Accommodation Supplement is fully abated at this point in the alternative scenario, whereas it has not in the core scenario.

Replacement rates and participation tax rates

The model family's replacement rates for 80 hours of paid work, and participation tax rates for the zero to 80 hours measure are lower in this alternative scenario than the core scenario. This is due to the family's increased levels of income (Tables 10 and 14).

Alternative scenario: Difference in incomes after housing costs in different locations

In this scenario we tested the impact of living in different Accommodation Supplement areas and different rent situations on residual incomes after housing costs. The details of the different location types we tested are listed in Table 15 below.

Table 15: Details of locations tested in this scenario for model family two.

Accommodation Supplement areas pre- to post-Families Package	Rent paid[1]	At maximum pre-Families Package at zero hours of paid work?	At maximum post-Families Package at zero hours of paid work?	TAS received at zero hours of work pre-Families Package	TAS received at zero hours of work post-Families Package
Area 1 to Area 1 (core scenario)	$460	Yes	No - $69 under	$22.57	$21.35
Area 2 to Area 1	$460	Yes	No - $69 under	$60.57	$21.35
Area 3 to Area 2	$380	Yes	No - $40 under	$45.57	$6.35
Area 3 to Area 3	$340	Yes	No - $8 under	$45.57	$29.35
Area 4 to Area 3	$340	Yes	No - $8 under	$40.57	$4.35
Area 4 to Area 4	$260	Yes	No - $24 under	$40.57	$14.35

Note 1: Rental figures based off both MSD data capturing claimed rental costs as at the end of March 2018, and a custom data set from the Ministry of Housing and Urban Development of lower quartile rents for different areas and housing types as of July 2018.

Figure 22: Comparison of the difference in residual incomes after housing costs for model family two, by Accommodation Supplement area and rent cost.

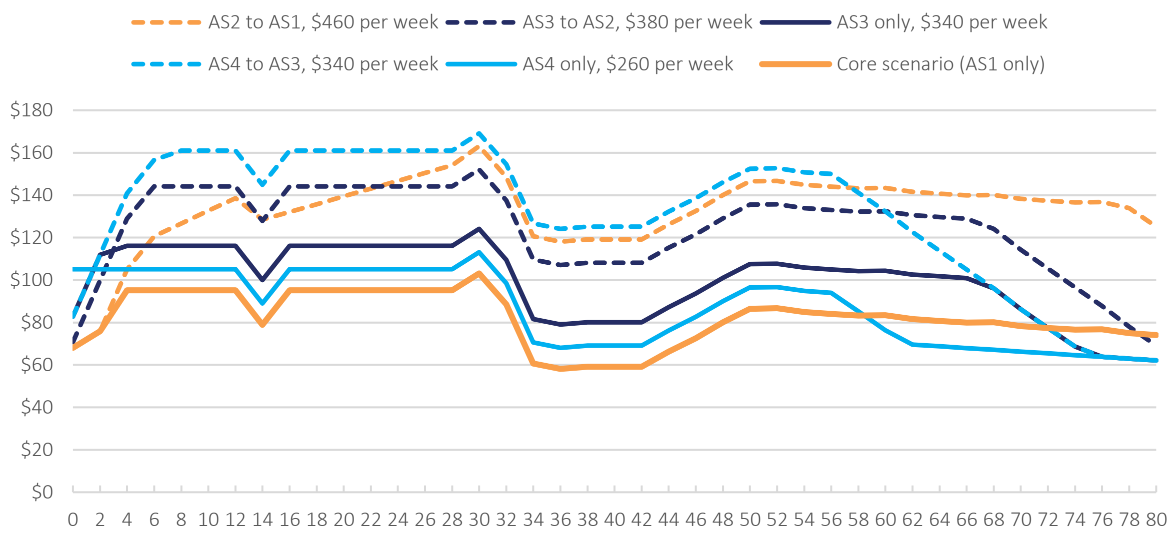


Table 16: Selected measures for this alternative scenario.

	Average EMTR (0 to 80 hours)		Replacement rates (40 hours/80 hours)		Participation tax rates (40 hours/80 hours)	
	Pre-FP	Post-FP	Pre-FP	Post-FP	Pre-FP	Post-FP
Area 1 to Area 1 (core scenario)	66.7%	66.2%	79.5%/64.8%	81.5%/66.3%	68.4%/66.7%	69.7%/66.2%
Area 2 to Area 1	70.6%	66.2%	84.5%/67.6%	81.5%/66.3%	77.5%/70.6%	69.7%/66.2%
Area 3 to Area 2	64.5%	64.6%	79.9%/60.9%	78.4%/63.2%	72.2%/64.5%	66.5%/64.6%
Area 3 to Area 3	61.5%	63.0%	75.5%/57.6%	77.7%/61.3%	66.1%/61.5%	66.5%/63.0%
Area 4 to Area 3	61.5%	63.0%	79.4%/57.6%	77.7%/61.3%	72.9%/61.5%	66.5%/63.0%
Area 4 to Area 4	55.6%	58.8%	70.4%/51.0%	76.4%/56.9%	61.0%/55.6%	66.5%/58.8%

Commentary

Entitlements

Table 15 shows that, before the Families Package, in these scenarios all the model families received the maximum amount of Accommodation Supplement that they were entitled to. However, after the Families Package none of the model families were at the new maximum limit, meaning that if their rental costs increased in the future they would be able to receive more Accommodation Supplement.

Income

Figure 22 shows that for a model family who lived in a town or city where the Accommodation Supplement areas changed, they experienced a larger overall increase of income compared to a family who lived in an area where the area did not change. The increase experienced was mostly dependent on what areas they were changing between, as well as their level of rent relative to the maximum amount of Accommodation Supplement they could receive and if they were receiving Temporary Additional Support.

Additionally, abatement rates for this group would have resulted in the difference between pre/post Families Package settings narrowing at differing times depending on their circumstances. For example, a model family in Area 4 prior to the Families Package would have seen full abatement of their Accommodation Supplement payment at 56 hours of paid work. For this model family in Area 3 after the Families Package, full abatement would have occurred at 76 hours of paid work. In this 20-hour range, the relative gains before/after the Families Package would have narrowed, as expressed in Figure 22 on the previous page.

Effective Marginal Tax Rates (EMTRs), replacement rates and participation tax rates

The changes in EMTRs, replacement rates and participation tax rates shown in Table 16, were influenced by the change in the Accommodation Supplement rates and areas. Additionally, the EMTRs, replacement rates and participation tax rates were also dependent on whether the sole parent was receiving Temporary Additional Support, how much of it they were receiving, and if the Families Package changes resulted in any significant changes in how much of it they received and how it abated.

Model family three: Single person without children

While single people without children (together with couples without children) benefitted from the Accommodation Supplement changes, and the introduction of the Winter Energy Payment, they did not benefit from the other Families Package changes which were directed at families with children.

Our core scenario analysis demonstrates this, showing that this person had increased net income during winter months due to the Winter Energy Payment.

However, our core scenario analysis also showed that this person had:

- no increase in their Accommodation Supplement due to their circumstances
- a later switching point for moving off main benefit
- higher replacement rates for 40 hours of paid work
- higher participation tax rates when moving from zero to 40 hours of paid work.

Our alternative scenario analysis shows that:

- during summer months, the person had lower net and residual income, a lower EMTR in the switching range and lower replacement rates and participation tax rates
- during summer months, the person switched off main benefit at the same time both pre- and post-Families Package
- people aged under 25 years old switch off main benefit earlier than people aged 25 and over
- not switching off main benefit until it fully abated made no difference post-Families Package during winter months as this was the switching point in the core scenario anyway
- not taking up supplementary assistance while off main benefit resulted in lower EMTR's while off main benefit, but higher replacement rates for 40 hours of paid work, and higher participation tax rates when moving from zero to 40 hours of paid work
- higher hourly wages led to increased net income, lower replacement rates for 40 hours of paid work, and lower participation tax rates when moving from zero to 40 hours of paid work
- model cases that experienced a change in their Accommodation Supplement areas experienced the largest income gains from the Families Package changes.

This person rented a room in a flat in Auckland Central, at a cost of $250 per week. Before the Families Package changes the person did not receive the maximum Accommodation Supplement for their area, and this continued to be the case after the Families Package changes.

The person was 26 years old, and thus eligible for the standard rate of Jobseeker Support. This means their benefit fully abated a few hours later compared to the lower rate of Jobseeker Support received by someone under 25 years old.[28]

[28] For a comparison of Jobseeker Support rates as at 1 April 2018, see: https://www.workandincome.govt.nz/map/deskfile/main-benefits-rates/at-1-april-2018-03.html

Incomes and incentives pre- and post- the Families Package

Figure 23: Net and residual incomes for model family three, pre-Families Package, by income component and hours worked during winter months.

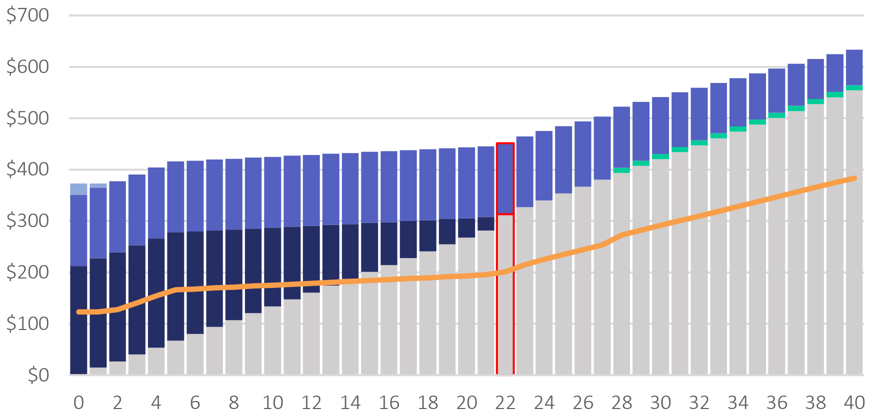


Figure 24: Net and residual incomes for model family three, post-Families Package, by income component and hours worked during winter months.

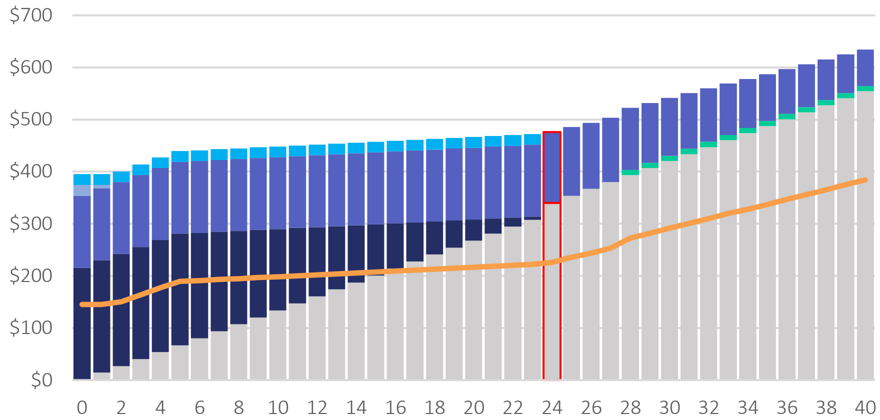


Figure 25: Comparison in the difference in residual incomes pre- and post-Families Package.

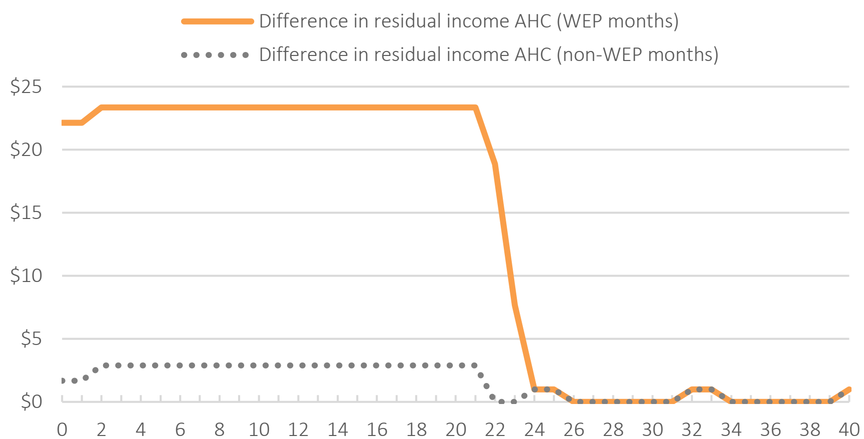


Figure 26: Comparison in EMTRs pre- and post-Families Package.

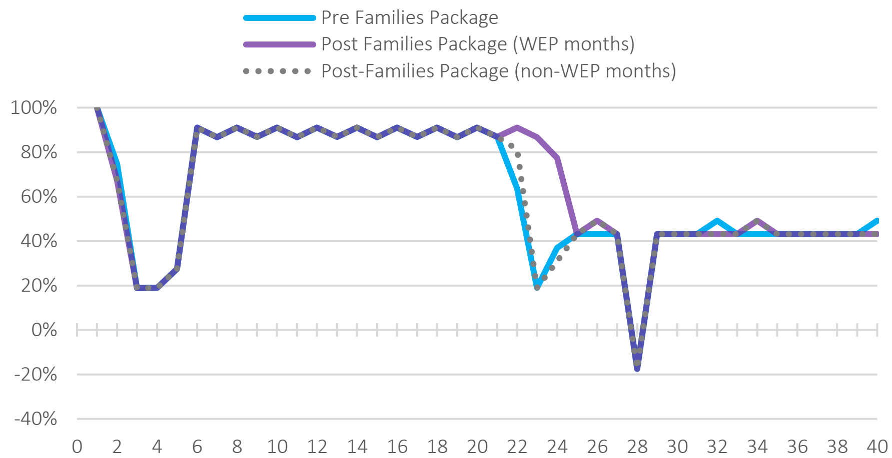


Table 17: Selected measures for this scenario.

Measure	Pre-Families Package	Post-Families Package
Switching point	22 hours	WEP months: 24 hours Non-WEP months: 22 hours
Average EMTR (0 to 40 hours)	60.6%	WEP months: 63.8% Non-WEP months: 60.7%
Average EMTR (0 to 21/22 to 24/25 to 40 hours)	79.1%/39.9%/40.1%	WEP months: 78.8%/85.0%/40.1% Non-WEP months: 78.8%/43.7%/40.1%
Replacement rates (20/40 hours)	84.2%/58.9%	WEP months: 84.7%/62.3% Non-WEP months 84.0%/59.1%
Participation tax rates (20/40 hours)	78.8%/60.6%	WEP months: 78.4%/63.8% Non-WEP months: 78.4%/60.7%
Net income (0/20/40 hours)	$373.02/$443.11/$633.18	WEP months: $395.15/$466.46/$634.18 Non-WEP months: $374.69/$446.00/$634.18
Residual income after housing costs (0/20/40 hours)	$123.02/$193.11/$383.18	WEP months: $145.15/$216.46/$384.18 Non-WEP months: $124.69/$196.00/$384.18
Change in residual income from Families Package: 0/20/40 hours *(percentage change)* & minimum/maximum *(hours of work)*	WEP months: +$22.13/+$23.35/+$1.00 *(+18.0%/+12.1%/+0.3%)* +$0/+$23.35 *(hours 26 to 31, 34 to 39/hours 2 to 21)* Non-WEP months: +$1.67/+$2.89/+$1.00 *(+1.4%/+1.5%/+0.3%)* +$0/+$2.89 *(hours 22, 23, 26 to 31, 34 to 39/hours 2 to 21)*	

Commentary

Pre-Families Package changes[29]

Income and Effective Marginal Tax Rates

Before the Families Package, this person faced an income cap of $373 between zero and one hour of paid work, with an associated EMTR of 100 percent. This was due to the withdrawal of Temporary Additional Support over this range. [30]

The EMTR for this person falls as the Temporary Additional Support is abated away, falling to 74.6 percent at two hours of paid work, and 18.8 percent at three hours of paid work.

From five hours of paid work, the persons main benefit payment begins to abate. Therefore, between six and 21 hours of paid work, net income increased slowly as the persons average EMTR was 88.9 percent. This contributes to an average EMTR of 79.1 percent between zero and 21 hours of paid work.

[29] Commentary here refers to Figures 23 to 26 and Table 17 unless otherwise stated in the text.
[30] See footnotes 11 and 12 (page 14) for further explanation of how this works

At the switching "range" of hours (21 to 24 hours of paid work), the person's average EMTR was 39.9 percent.[31] At 22 hours of paid work, this person was better off financially off main benefit. This was largely due to the gain of income from no longer paying secondary tax on earned income being greater than what the person would receive by staying on a main benefit. [32]

From 24 hours of paid work, the person's Accommodation Supplement begun to abate, which resulted in their average EMTR increasing to 43.2 percent between 25 and 27 hours of paid work.

At 28 hours of paid work, the person's earned income reached the qualifying threshold for the Independent Earners Tax Credit, which provided a small boost to income of $10 per week. Here they had a EMTR of -17.5 percent.

After this, between 29 to 40 hours of paid work, their average EMTR was 44.1 percent. This contributed to an average EMTR of 40.1 percent between 25 to 40 hours of paid work.

Replacement rates and participation tax rates

Replacement rates for 20 hours of paid work were 84.2 percent, and for 40 hours of paid work these were 58.9 percent. Participation tax rates for the zero to 20 hours measure were 78.8 percent, and for the zero to 40 hours measure these were 60.6 percent.

Post-Families Package changes[33]

Change in income and Effective Marginal Tax Rates

Following the Families Package changes, this person experienced an increase in both after-tax and residual income during winter months while on a main benefit because of the Families Package changes. However, the gains were small once we subtracted the Winter Energy Payment from the analysis and reflected other regular changes to main benefit payment rates. The gains were also small because they did not receive the maximum Accommodation Supplement prior to the reform, so were unaffected by the increases made to the maximum rate.

The gain in residual income after housing costs was:

- $22.13 at zero hours of paid work (an 18.0 percent increase)
- $23.35 at 20 hours of paid work (a 12.1 percent increase)
- $1.00 at 40 hours of paid work (a 0.3 percent increase).

The person's average EMTRs were broadly similar pre- and post-Families Package. However, the introduction of the Winter Energy Payment and its full abatement upon leaving benefit increased the EMTRs during winter months.

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[31] The switching "range" here represents the range of hours between when someone switches pre-Families Package and when someone switches post-Families Package during winter months. This is to allow ease of analysis.
[32] See page 46 for an alternative scenario that presents this.
[33] Commentary here refers to Figures 23 to 26 and Table 17 unless otherwise stated in the text.

Income and Effective Marginal Tax Rates

After the Families Package, this person faced an income cap of $396 at zero and one hour of paid work, with an associated EMTR of 100 percent. This was due to the withdrawal of Temporary Additional Support over this range.[34]

The EMTR for this person falls as the Temporary Additional Support is abated away, falling to 67.2 percent at two hours of paid work, and 18.8 percent at three hours of paid work.

From five hours of paid work, the person's main benefit payment begins to abate. Therefore, between six and 21 hours of paid work, net income increased slowly as the person's average EMTR was 88.9 percent. This contributed to an average EMTR of 78.8 percent between zero and 21 hours of paid work.

At the switching "range" (21 to 24 hours of paid work), the person's average EMTR was 85.0 percent. After the Families Package, the person was better off remaining on main benefit until it completely abated at 24 hours of paid work. Here, the fall in income from the Winter Energy Payment was offset by the gain in income from no longer paying secondary tax on earned income.[35]

From 24 hours of paid work, the person's income and EMTRs are similar to before the Families Package, with only minor differences that average out over the remaining hours.

Replacement rates and participation tax rates

Replacement rates for 20 hours of paid work were 84.7 percent, and for 40 hours of paid work these were 62.3 percent. Participation tax rates for the zero to 20 hours measure were 78.4 percent, and for the zero to 40 hours measure these were 63.8 percent.

The increases in the replacement rate for 40 hours of paid work and the participation tax rate for the zero to 40 hours measure can be attributed to the receipt of the Winter Energy Payment while on a main benefit during winter months.

Differences between summer and winter months

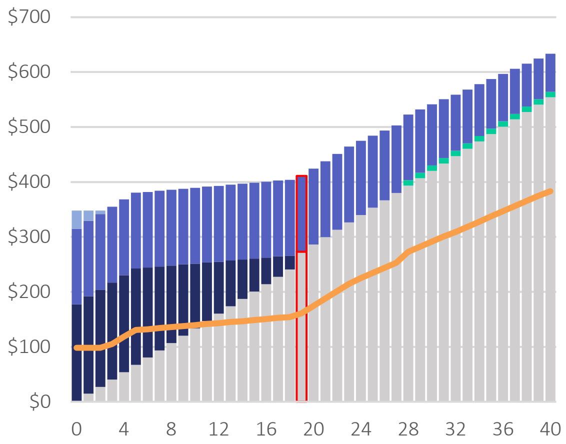
During summer months when the Winter Energy Payment is unavailable, when compared to winter months this model case had:

- an earlier switching point for moving off a main benefit
- lower net and residual income while on a main benefit
- lower EMTRs across 40 hours of paid work, due to the earlier switching point
- lower replacement rates and participation tax rates.

[34] See footnotes 11 and 12 (page 14) for further explanation of how this works
[35] See page 49 for an alternative scenario that presents this.

Alternative scenario: Person is aged between 18 and 24 years old

Figure 27: Net and residual incomes for model family three pre- (left) and post-Families Package (right) for this alternative scenario.



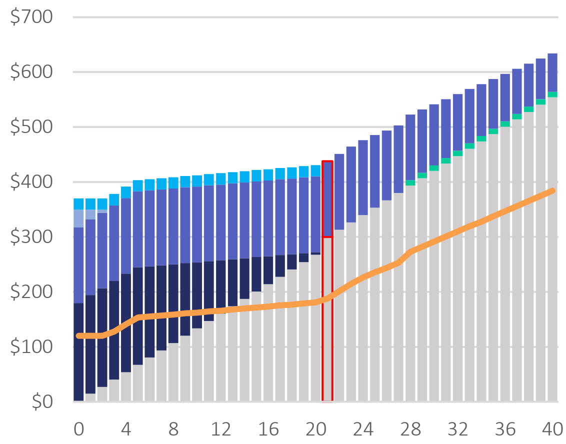
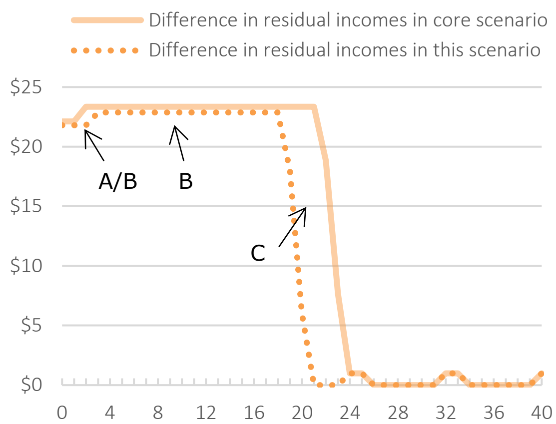


Figure 28: Difference in residual incomes (after housing costs) pre- and post-Families Package in the main scenario and this scenario (left), and comparison of EMTRs post-Families Package between main scenario and this scenario (right).



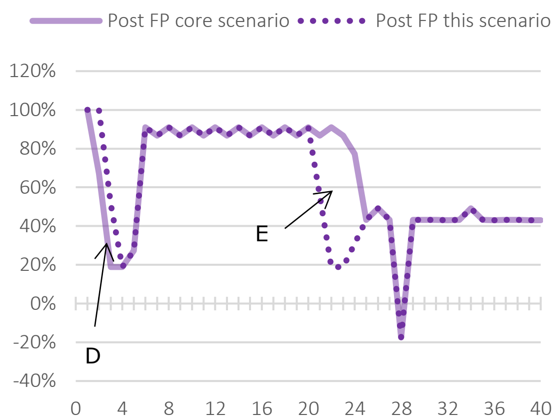


Table 18: Selected measures for this alternative scenario.

Measure	Pre-Families Package	Post-Families Package
Switching point in core scenario	22 hours	24 hours
Switching point in this scenario	18 hours	20 hours
Average EMTR on net income	56.8%	60.0%
Replacement rates (20 hours/40 hours)	82.0%/55.0%	85.9%/58.3%
Participation tax rates (20 hours/40 hours)	76.9%/56.8%	81.7%/60.0%
Net income (0/20/40 hours)	$348.22/$424.51/$633.18	$370.02/$430.56/$634.18
Difference in net income between core and this scenario (0/20/40 hours & *minimum/maximum*)	-$24.80/-$18.60/$0 *-$35.42/$0 (hours 3 to 18/hours 22 to 40)*	-$25.13/-$35.90/$0 *-$35.90/$0 (hours 3 to 20/hours 24 to 40)*

Commentary

Income

At no point in this alternative scenario either pre- or post-Families Package is this person better off than in the core scenario while on a main benefit.

There are two distinctive differences in how this person experiences the Families Package changes with respect to residual income when compared to the core scenario (not related to the difference in Jobseeker Support rates based on age). These are annotated on Figure 28 (left-hand graph) on the prior page:

A. From zero to two hours of paid work, the gain in residual income is lower in the alternative scenario. This is mainly due to the person facing a longer income cap due to their Temporary Additional Support entitlement in this alternative scenario.

B. While on main benefit, the gain in residual income is lower in the alternative scenario. This is because the rate of Jobseeker Support for 18- to 24-year-olds increased less than the rate for over 24-year-olds between years.

C. From 18 to 24 hours of paid work, the gain in residual income is lower in the alternative scenario. This is because the person moves off main benefit earlier in this alternative scenario, and so loses the gains from their Winter Energy Payment entitlement while on main benefit sooner than they do in the core scenario.

Effective Marginal Tax Rates

Following the Families Package, the person also faced a different EMTR profile when compared to the core scenario, as annotated on Figure 28 (right-hand graph) on the prior page. These are indicated by the following points:

D. From two to three hours of paid work, the person faces higher EMTRs as they have entitlement to Temporary Additional Support for longer than in the core scenario. This is because they have a lower income to begin with.

E. From 21 to 24 hours of paid work, the person has a lower EMTR, as they move off main benefit earlier in this alternative scenario than compared to the main scenario, and so do not continue to face abatement of their main benefit.

Replacement rates and participation tax rates

Compared to the core scenario, before the Families Package this person had lower replacement rates for both 20 and 40 hours of paid work, and lower participation tax rates for the zero to 20 hours and zero to 40 hours measures.

After the Families Package, this person had slightly higher replacement rates for 20 hours of paid work and participation tax rates for the zero to 20 hours measure. They however continued to have lower replacement rates for 20 hours of paid work and lower participation tax rates for the zero to 20 hours measure.

Alternative scenario: No take-up of supplementary assistance after leaving benefit and on benefit until fully abated

Figure 29: Net and residual incomes for model family three pre- (left) and post-Families Package (right) for this alternative scenario.

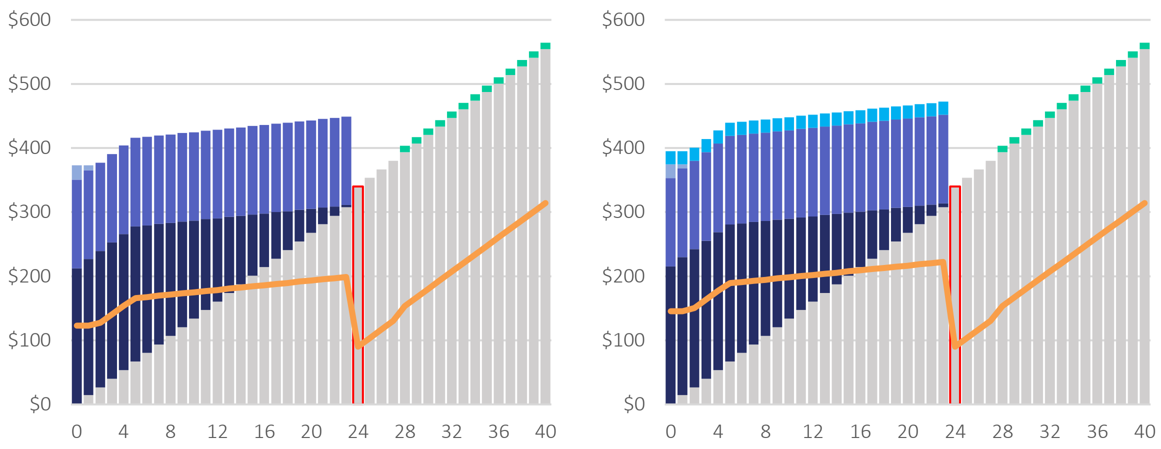


Figure 30: Difference in residual incomes (after housing costs) pre- and post-Families Package in the main scenario and this scenario (left), and comparison of EMTRs post-Families Package between main scenario and this scenario (right).

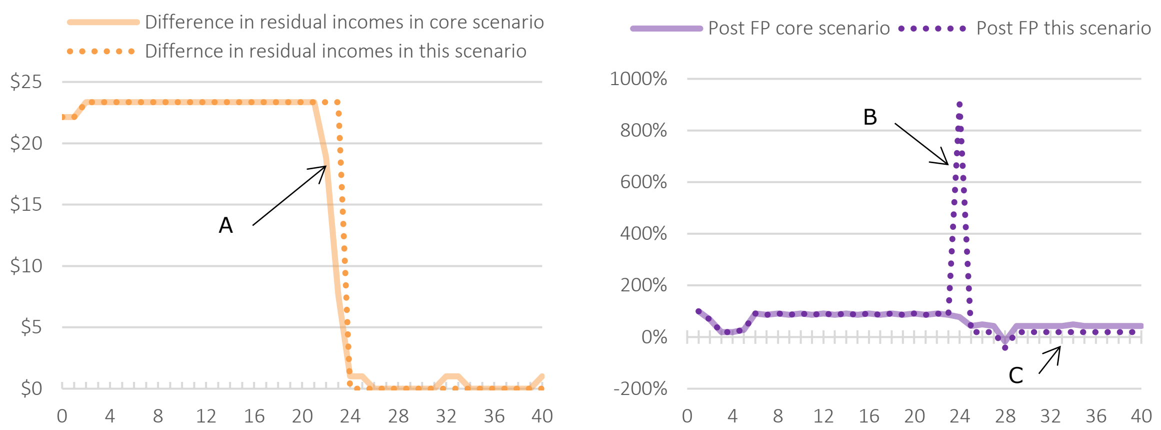


Table 19: Selected measures for this alternative scenario.

Measure	Pre-Families Package	Post-Families Package
Switching point in core scenario	22 hours	24 hours
Switching point in this scenario	32 hours	34 hours
Benefit abates at	24 hours	24 hours
Average EMTR (0 to 40 hours)	71.0%	74.4%
Replacement rates (20 hours/40 hours):	84.2%/66.1%	84.7%/70.0%
Participation tax rates (20 hours/40 hours):	78.8%/71.0%	78.4%/74.4%
Net income (0/20/40 hours)	$373.02/$443.11/$564.18	$395.15/$466.46/$564.18
Difference in net income between core and this scenario (0/20/40 hours & *minimum/maximum*)	$0/$0/-$69 *-$135/$0 (hour 24/hours 0 to 21)*	$0/$0/-$70 *-$136/$0 (hour 24/hours 0 to 23)*

Commentary

Income

At no point in this alternative scenario either pre- or post-Families Package is this person better off than in the core scenario.

From zero to 20 hours of paid work there is no change in how this person experiences the Families Package changes with respect to residual income when compared to the core scenario. However, from 21 hours of paid work, there is one distinctive difference as annotated on Figure 30 (left-hand graph) on the prior page:

A. From 21 to 23 hours of paid work, the gain in residual income is higher in the alternative scenario. This is due to the person staying on main benefit longer pre-Families Package in this alternative scenario.

Effective Marginal Tax Rates

Following the Families Package, the person also faced a different EMTR profile when compared to the core scenario, as annotated on Figure 30 (right-hand graph) on the prior page. These are indicated by the following points:

B. In this alternative scenario, the person has an EMTR spike at 24 hours of paid work post-Families Package, as their overall net income decreases due to no longer receiving either the Accommodation Supplement or Winter Energy Payment.[36]

C. In this alternative scenario, the person has a lower EMTR while off main benefit, as they are not receiving the Accommodation Supplement. In the core scenario, the Accommodation Supplement was abating by this point, resulting in a higher EMTR.

Replacement rates and participation tax rates

The person's replacement rates for 20 hours of paid work and participation tax rates for the zero to 20 hours measure are unchanged in this scenario compared to the core scenario. Their replacement rates for 40 hours of paid work and participation tax rates for the zero to 40 hours measure are higher than in the core scenario.

[36] This is also true pre-Families Package.

Alternative scenario: Person earned $20 per hour

Figure 31: Net and residual incomes for model family three pre- (left) and post-Families Package (right) for this alternative scenario.

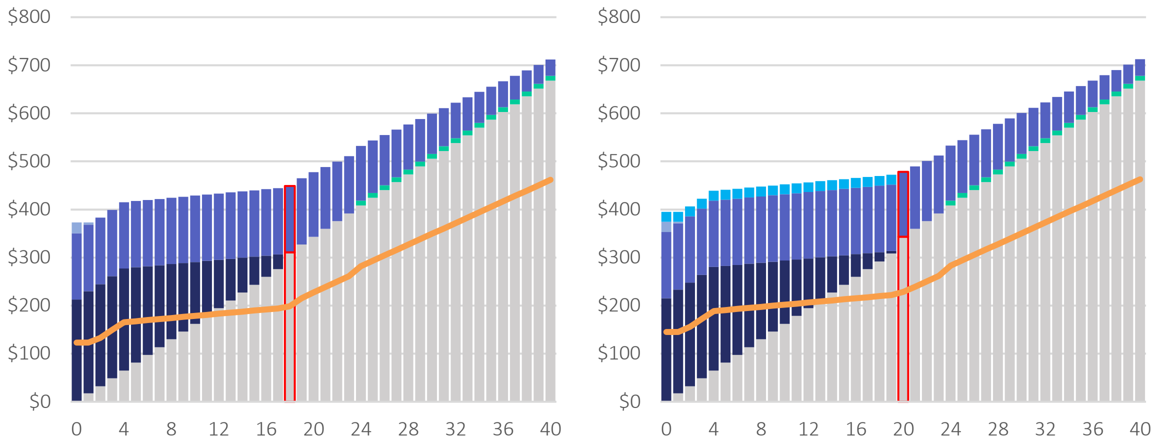


Figure 32: Difference in residual incomes (after housing costs) pre- and post-Families Package in the main scenario and this scenario (left), and comparison of EMTRs post-Families Package between main scenario and this scenario (right).

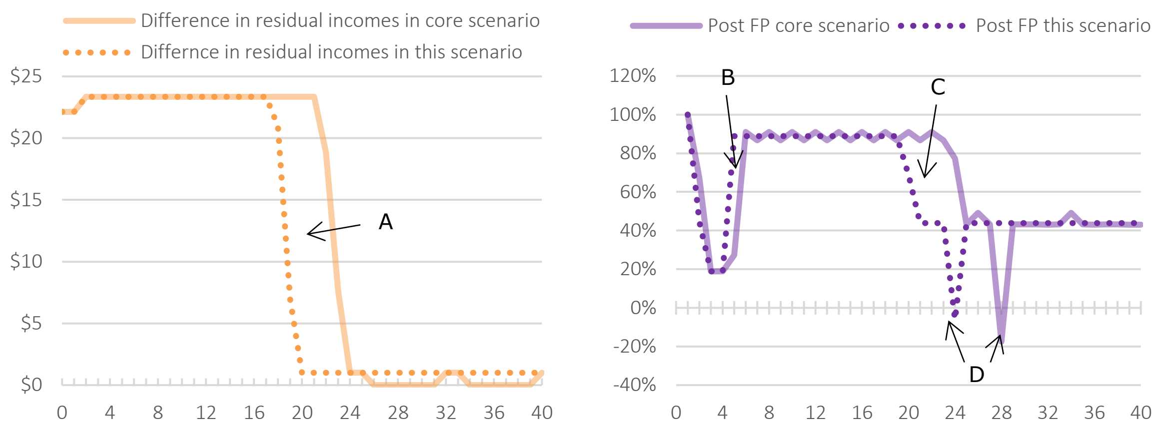


Table 20: Selected measures for this alternative scenario.

Measure	Pre-Families Package	Post-Families Package
Switching point in core scenario	22 hours	24 hours
Switching point in this scenario	18 hours	20 hours
Average EMTR on net income	57.7%	60.3%
Replacement rates (20 hours/40 hours)	78.2%/52.4%	82.6%/55.4%
Participation tax rates (20 hours/40 hours)	73.9%/57.7%	79.2%/60.3%
Net income (0/20/40 hours)	$373.02/$477.29/$711.73	$395.15/$478.29/$712.73
Difference in net income between core and this scenario (0/20/40 hours & *minimum/maximum*)	$0/$34.18/$78.55 *$0/$78.55 (hours 0 to 1/hour 40)*	$0/$11.83/$78.55 *$0/$78.55 (hours 0 to 1/hour 40)*

Commentary

Income

At no point in this alternative scenario, where the person earns $20 an hour either pre- or post-Families Package, is the person worse off than in the core scenario.

From zero to 17 hours of paid work there is no difference in the change in residual incomes from the core scenario. However, after 17 hours of paid work, there is one notable difference as annotated in Figure 32 (left-hand graph) on the previous page:

A. From 18 to 24 hours of paid work, the gain in residual income is lower in the alternative scenario. This is due to their benefit abating earlier due to their higher earned income in this alternative scenario, which means they lose the benefit of the Winter Energy Payment during winter months at an earlier point.

Effective Marginal Tax Rates

Following the Families Package, the person also faces a different EMTR profile in this alternative scenario when compared to the core scenario. The differences are annotated in Figure 32 (right-hand graph) on the previous page. These are indicated by the following points.

B. At five hours of paid work, the person faces a higher EMTR because their main benefit begins to abate earlier.

C. From 20 to 23 hours of paid work, the person faces lower EMTRs because their main benefit fully abates earlier meaning they leave main benefit earlier than in the core scenario.

D. Due to the person earning more, they experience a negative spike in their EMTR at 24 hours of paid work in this alternative scenario compared to 28 hours of paid work in the core scenario. This is because they reach the earnings threshold for the Independent Earners Tax Credit at an earlier point in this alternative scenario.

Replacement rates and participation tax rates

The person's replacement rates for 20 hours and 40 hours of paid work, and their participation tax rates for the zero to 20 hours measure and zero to 40 hours measure are lower in this alternative scenario than in the core scenario. This is due to the increased levels of earned income.

Alternative scenario: Difference in incomes after housing costs in different locations

In this scenario we tested the impact of living in different Accommodation Supplement areas and different rent situations on residual incomes after housing costs. The details of the different location types we test is listed in Table 21 below.

Table 21: Details of locations tested in this scenario for model family three.

Accommodation Supplement areas pre- to post-Families Package	Rent paid[1]	At maximum pre-Families Package at zero hours of paid work?	At maximum post-Families Package at zero hours of paid work?	TAS received at zero hours of work pre-Families Package	TAS received at zero hours of work post-Families Package
Area 1 to Area 1 (core scenario)	$250	No – $7 under	No - $27 under	$22.57	$21.35
Area 2 to Area 1	$250	Yes	No - $27 under	$60.57	$21.35
Area 3 to Area 2	$200	Yes	No - $2 under	$45.57	$6.35
Area 3 to Area 3	$200	Yes	Yes	$45.57	$29.35
Area 4 to Area 3	$175	Yes	Yes	$40.57	$4.35
Area 4 to Area 4	$175	Yes	Yes	$40.57	$14.35

Note 1: Rental figures based off both MSD data capturing claimed rental costs as at the end of March 2018, and a custom data set from the Ministry of Housing and Urban Development of lower quartile rents for different areas and housing types as of July 2018.

Figure 33: Comparison of the difference in residual incomes after housing costs for model family three, by Accommodation Supplement area and rent cost.

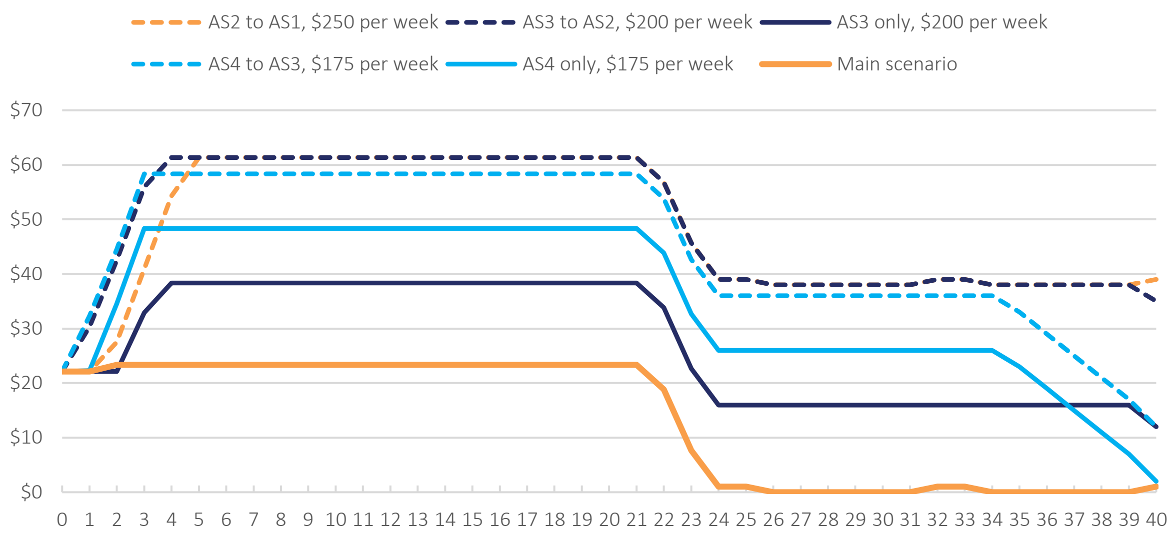


Table 22: Selected measures for this alternative scenario.

	Average EMTR (between 0 & 40 hrs)		Replacement rates (20 hours/40 hours)		Participation tax rates (20 hours/40 hours)	
	Pre-FP	Post-FP	Pre-FP	Post-FP	Pre-FP	Post-FP
Area 1 to Area 1 (core scenario)	60.6%	63.8%	84.2%/58.9%	84.7%/62.3%	78.8%/60.6%	78.4%/63.8%
Area 2 to Area 1	66.3%	63.8%	92.1%/62.7%	84.7%/62.3%	90.3%/66.3%	78.4%/63.8%
Area 3 to Area 2	63.5%	61.5%	87.3%/57.3%	80.0%/57.6%	85.7%/63.5%	73.9%/61.5%
Area 3 to Area 3	63.5%	65.0%	87.3%/57.3%	84.5%/59.9%	85.7%/63.5%	80.8%/65.0%
Area 4 to Area 3	59.7%	61.2%	85.1%/52.8%	78.4%/55.6%	84.2%/59.7%	73.2%/61.2%
Area 4 to Area 4	59.7%	62.7%	85.1%/52.8%	80.4%/56.6%	84.2%/59.7%	76.3%/62.7%

Commentary

Entitlements

Table 21 shows that prior to the Families Package, apart from our core scenario, all these alternative scenarios had rental situations that meant they received the maximum amount of Accommodation Supplement they were entitled to. However, post-Families Package, only those people that were living in Area 3 or Area 4 following the changes were at the new increased maximums.

Income

Figure 33 shows that for a person who lived in a town or city where the Accommodation Supplement areas changed, they generally experienced a larger overall increase of income compared to a person who lived in an area where the area did not change.

The increases experienced were mostly dependent on what areas the person was changing between, as well as their level of rent relative to the maximum amount of Accommodation Supplement they could receive and if they were receiving Temporary Additional Support.

In the main scenario there was very little difference between pre- and post-Families Package settings. This was because the person's rent was not high enough to benefit from the maximum rate changes. However, in some of our alternative scenarios, the person (depending on their circumstances) could have noticeably benefitted (see AS3 and AS4 only lines).

Effective Marginal Tax Rates, replacement rates and participation tax rates

The changes in EMTRs, replacement rates and participation tax rates shown in Table 22, were influenced by the change in the Accommodation Supplement rates and areas. Additionally, the EMTRs, replacement rates and participation tax rates were also dependent on whether the sole parent was receiving Temporary Additional Support, how much of it they were receiving, and if the Families Package changes resulted in any significant changes in how much of it they received and how it abated.

Model family four: Single person without children and with substantially reduced work capacity due to a severe health condition or disability

Here we look at a non-partnered (single) person with no children who had substantially reduced work capacity due to a severe health condition or disability and was potentially eligible to receive the Supported Living Payment. Single people with no children could benefit from the Families Package Accommodation Supplement changes and receive the Winter Energy Payment while on a main benefit. Our analysis demonstrates this, with similar findings to the previous model case across all the scenarios tested in this section.

People are entitled to the Supported Living Payment if they are permanently and severely restricted in their capacity for work because of health conditions, injuries, or disabilities, or are totally blind. Permanent is defined as 'expected to continue for at least two years'. Severely is defined as 'not being able to regularly work for 15 hours or more per week in open employment'. This is known as the '15-hour rule'. In reality, very few Supported Living Payment recipients move into work, especially into work that is 15 hours or more per week.

Due to the 15-hour rule, people receiving Supported Living Payment are generally only permitted to work up to 15 hours per week. Working more than this without prior approval from a specialised case management service would usually result in the client being transferred to Jobseeker Support, which results in a large fall in income. We assume that the person in this model case does not participate in the specialised case management service.

In this scenario, the person rented a room in a flat in Auckland Central, at a cost of $250 per week. Before the Families Package changes the person did not receive the maximum Accommodation Supplement for their area, and this remained the case after the Families Package changes.

The person was 26 years old, and thus eligible for the higher rate of Jobseeker Support if they worked over 14 hours a week.[37] They also were assumed to have $15 of costs per week relating to a health condition or disability, for which they were entitled to receive the Disability Allowance up until their gross income exceeded a given threshold.[38]

[37] For information on how the rate of Jobseeker Support changes this scenario, please refer to model family three.
[38] For this person, based on their age and circumstances, the thresholds were: $635.98 from 1 April 2017 and $648.92 from 1 April 2018.

Incomes and incentives pre- and post- the Families Package

Figure 34: Net and residual incomes for model family four, pre-Families Package, by income component and hours worked, during winter months.

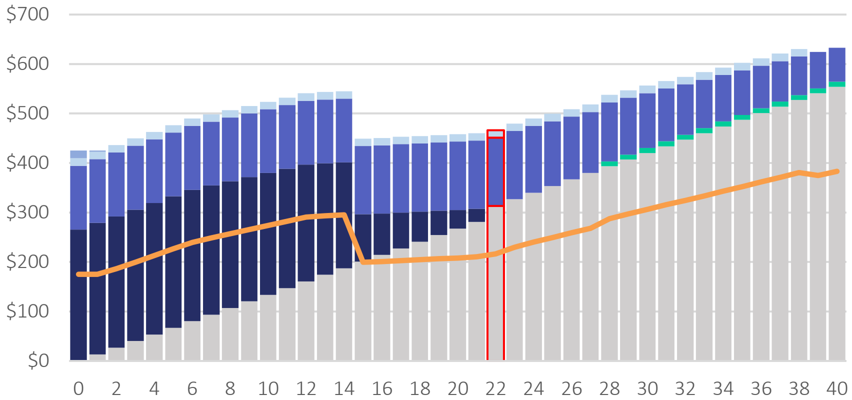


Figure 35: Net and residual incomes for model family four, post-Families Package, by income component and hours worked, during winter months.

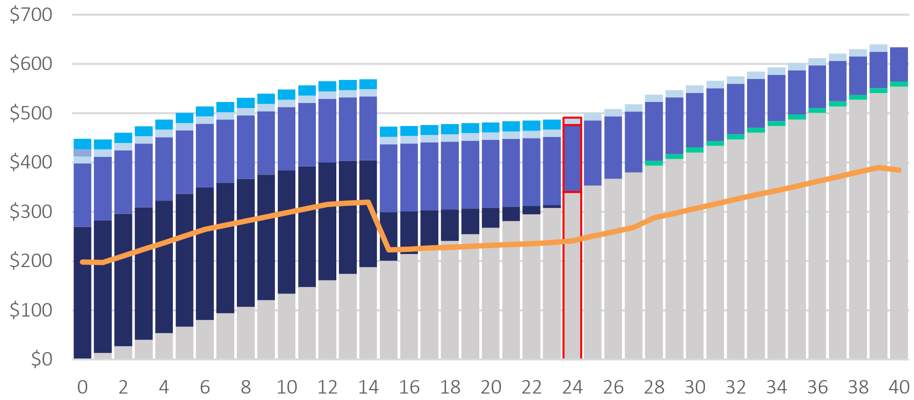


Figure 36: Comparison in the difference in residual incomes pre- and post-Families Package.

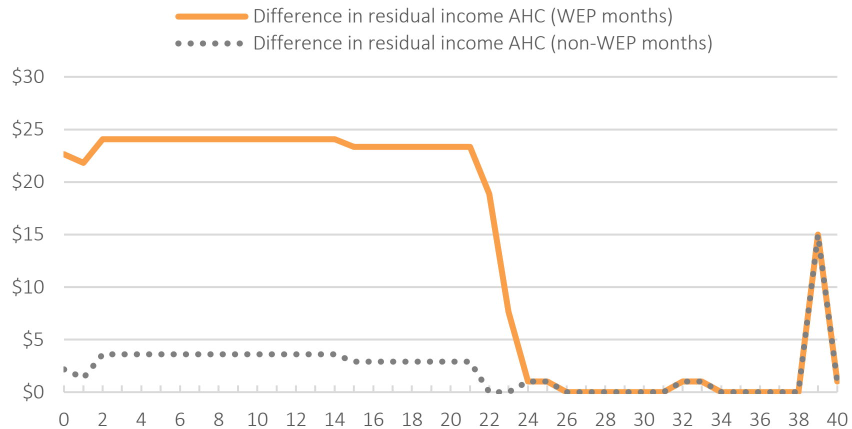


Figure 37: Comparison in EMTRs pre- and post-Families Package.

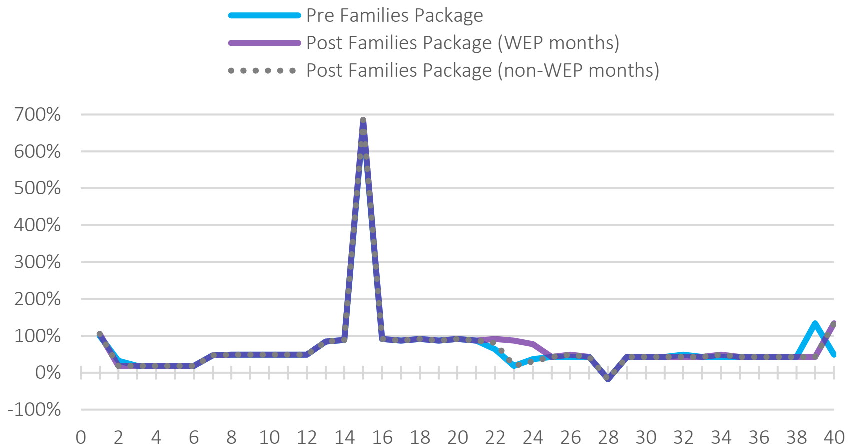


Table 23: Selected measures for this scenario.

Measure	Pre-Families Package	Post-Families Package
Switching point	22 hours	WEP months: 24 hours Non-WEP months: 22 hours
Average EMTR (0 to 40 hours)	68.5%	WEP months: 71.8% Non-WEP months: 68.7%
Average EMTR (0 to 21/22 to 24/25 to 40 hours)	89.9%/39.9%/45.8%	WEP months: 89.7%/85.0%/45.8% Non-WEP months: 89.8%/43.7%/45.8%
Replacement rates (20/40 hours)	92.8%/67.1%	WEP months: 93.0%/70.6% Non-WEP months 92.3%/67.4%
Participation tax rates (20/40 hours)	90.0%/68.5%	WEP months: 89.8%/71.8% Non-WEP months: 89.8%/68.7%
Net income (0/20/40 hours)	$425.18/$458.11/$633.18	WEP months: $447.82/$481.46/$634.18 Non-WEP months: $427.36/$461.00/$634.18
Residual income after housing costs (0/20/40 hours)	$175.18/$208.11/$383.18	WEP months: $197.82/$231.46/$384.18 Non-WEP months: $177.36/$211.00/$384.18
Change in residual income from Families Package: 0/20/40 hours *(percentage change)* & minimum/maximum *(hours of work)*	WEP months: +$22.64/+$23.35/+$1.00 *(+12.9%/+11.3%/+0.3%)* +$0/+$24.07 *(hours 26 to 31, 34 to 38/hours 2 to 14)* Non-WEP months: +$2.18/+$2.89/+$1.00 *(+1.2%/+1.4%/+0.3%)* +$0/+$15.00 *(hours 22, 23, 26 to 31, 34 to 38/hour 39)*	

Commentary

Pre-Families Package changes[39]

Income and Effective Marginal Tax Rates (EMTRs)

Before the Families Package, this person faced an income cap of $426 at zero and one hour of paid work, with an associated EMTR of 100 percent. This was due to the withdrawal of Temporary Additional Support over this range.[40]

The EMTR for this person falls as the Temporary Additional Support is abated away, falling to 32.6 percent at two hours of paid work, and 18.8 percent at three hours of paid work.

From seven hours of paid work, the person's main benefit payment begins to abate. Therefore, between eight and 12 hours of paid work, the person's average EMTR increases to 48.9 percent. The person's main benefit payment then begins to abate further from 13 hours of paid work, with the EMTR increasing to an average of 86.5 percent across 13 and 14 hours of paid work.

[39] Commentary here refers to Figures 34 to 37 and Table 23 unless otherwise stated in the text.
[40] See footnotes 11 and 12 (page 14) for further explanation of how this works.

At 15 hours of paid work, this person faces a sharp fall of income. This was due to losing eligibility to the Supported Living Payment, and having it replaced with the less generous Jobseeker Support. Here, the persons EMTR is 681.2 percent.

From 16 to 21 hours of paid work they face an average EMTR of 88.9 percent while on Jobseeker Support.

The above EMTRs contribute to an average EMTR of 89.9 percent between 0 and 21 hours of paid work.

At the switching "range" of hours (21 to 24 hours of paid work), the person's average EMTR is 39.9 percent.[41] This person switches off a main benefit at 22 hours of paid work, which leaves them financially better off, if they were already working more than 14 hours. This was because of the income gained from no longer paying secondary tax.[42]

However, if they were working 14 hours to begin with, they would need to work at least 29 hours of paid work to increase their income by working more due to the 15-hour rule.

From 24 to 38 hours of paid work, this person has the same EMTRs as our third model family, and a similar income except for the Disability Allowance that they receive. At 39 hours of paid work, due to the person's Disability Allowance fully abating as their total income exceeded the Disability Allowance income threshold ($635.99), they faced an EMTR of 134.0 percent.

Replacement rates and participation tax rates

Replacement rates for 20 hours of paid work were 92.8 percent, and for 40 hours of paid work these were 67.1 percent. Participation tax rates for the zero to 20 hours measure were 90.0 percent, and for the zero to 40 hours measure these were 68.5 percent.

Post-Families Package changes[43]

Change in income and Effective Marginal Tax Rates

Following the Families Package changes, this person experienced an increase in both after-tax and residual income while on a main benefit because of the Families Package changes. The gains were smaller than in other scenarios because they did not receive the maximum Accommodation Supplement prior to the reform, so were unaffected by the increases made to the maximum rate.

The gain in residual income after housing costs was:

- $22.64 at zero hours of paid work (a 12.9 percent increase)
- $23.35 at 20 hours of paid work (an 11.3 percent increase)
- $1.00 at 40 hours of paid work (a 0.3 percent increase).

The person's average EMTRs were broadly similar pre- and post-Families Package. However, the introduction of the Winter Energy Payment and its full abatement upon leaving main benefit increased the EMTRs around the switching point during winter months.

[41] The switching "range" here represents the range of hours between when someone switches pre-Families Package and when someone switches post-Families Package during winter months. This is to allow ease of analysis.
[42] See page 58 for an alternative scenario that presents this.
[43] Commentary here refers to Figures 34 to 37 and Table 23 unless otherwise stated in the text.

Income and Effective Marginal Tax Rates

After the Families Package, this person faced an income cap of $448 between zero and one hour of paid work, with an associated EMTR of 100 percent. This was due to the withdrawal of Temporary Additional Support over this range.[44]

The EMTR for this person falls as the Temporary Additional Support is abated away, falling to an average of 18.9 percent between two and six hours of paid work.

From seven hours of paid work, the person's main benefit payment begins to abate. Therefore, between seven and 12 hours of paid work their average EMTR increases to 48.6 percent. The person's main benefit payment then begins to abate further from 13 hours of paid work, with the EMTR increasing to an average of 86.5 percent across 13 and 14 hours of paid work.

At 15 hours of paid work, this person faces a sharp fall of income. This was due to losing eligibility to the Supported Living Payment, and having it replaced with the less generous Jobseeker Support. Here, the person's EMTR is 685.6 percent.

From 16 to 21 hours of paid work, the person faces an average EMTR of 88.9 percent while on Jobseeker Support. All this contributes to an average EMTR of 89.7 percent between 0 and 21 hours of paid work.

At the switching "range" of hours (21 to 24 hours of paid work), the person's average EMTR is 85.0 percent.[45] This person switches off a main benefit at 24 hours of paid work. If they were already working more than 14 hours, this leaves them financially better off. This was largely due to the gain of income from no longer paying secondary tax on earned income were greater than what the person would receive by staying on a main benefit.[46]

However, if they were working 14 hours to begin with, they would need to work at least 32 hours to increase their income due to the 15-hour rule.

From 24 to 39 hours of paid work, this person has the same EMTRs as our third model family, and a similar income except for the Disability Allowance that they receive. At 40 hours of paid work, due to the persons Disability Allowance fully abating as their total income exceeded the Disability Allowance income threshold (of $648.92), they faced an EMTR of 134.0 percent.

Replacement rates and participation tax rates

Replacement rates for 20 hours of paid work were 93.0 percent, and for 40 hours of paid work these were 70.6 percent. Participation tax rates for the zero to 20 hours measure were 89.8 percent, and for the zero to 40 hours measure these were 71.8 percent.

The increases in the replacement rate for 40 hours of paid work and the participation tax rate for the zero to 40 hours measure can be attributed to the receipt of the Winter Energy Payment while on a main benefit during winter months.

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[44] See footnotes 11 and 12 (page 14) for further explanation of how this works.
[45] The switching "range" here represents the range of hours between when someone switches pre-Families Package and when someone switches post-Families Package during winter months. This is to allow ease of analysis here.
[46] See page 58 for an alternative scenario that presents this.

Differences between summer and winter months

During summer months when the Winter Energy Payment is unavailable, when compared to winter months this model case had:

- an earlier switching point for moving off a main benefit
- lower net and residual income while on a main benefit
- lower EMTRs across 40 hours of paid work, due to the earlier switching point
- lower replacement rates and participation tax rates.

Alternative scenario: No take-up of supplementary assistance after leaving benefit and on benefit until fully abated

Figure 38: Net and residual incomes for model family four pre- (left) and post-Families Package (right) for this alternative scenario.

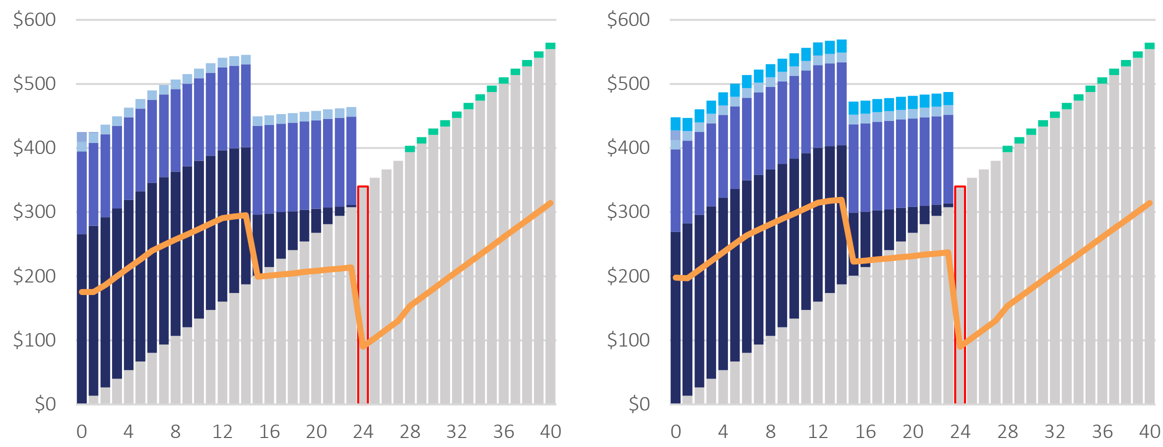


Figure 39: Difference in residual incomes (after housing costs) pre- and post-Families Package in the main scenario and this scenario (left), and comparison of EMTRs post-Families Package between main scenario and this scenario (right).

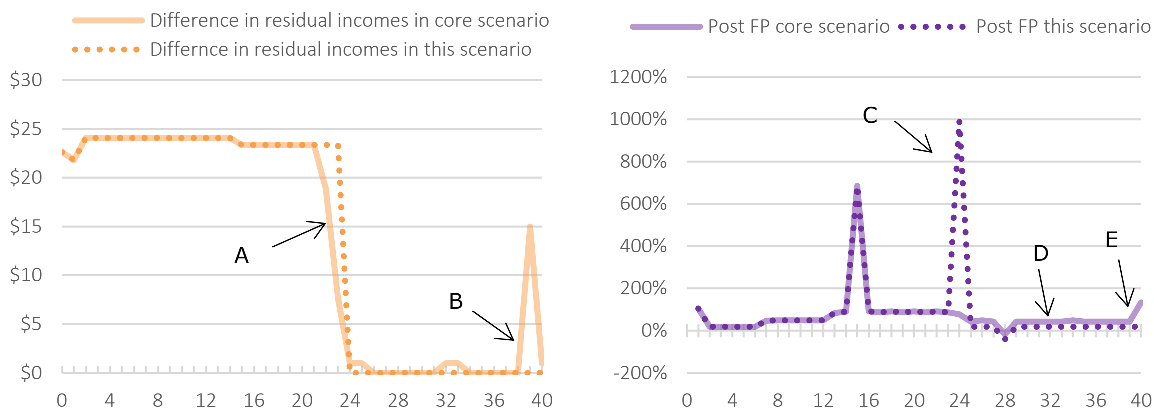


Table 24: Selected measures for this alternative scenario.

Measure	Pre-Families Package	Post-Families Package
Switching point in core scenario	22 hours	24 hours
Switching point in this scenario	33 hours if working over 14 hours, 39 hours if under	35 hours if working over 14 hours, 41 hours if under
Benefit abates at	24 hours	24 hours
Average EMTR (0 to 40 hours)	78.9%	82.4%
Replacement rates (20 hours/40 hours)	92.8%/75.4%	93.0%/79.4%
Participation tax rates (20 hours/40 hours)	90.0%/78.9%	89.8%/82.4%
Net income (0/20/40 hours)	$425.18/$458.11/$564.18	$447.82/$481.46/$564.18
Difference in net income between core and this scenario (0/40/80 hours & *minimum/maximum*)	$0/$0/-$69.00 *-$150.00/$0.00 (hour 24/hours 0 to 21)*	$0.00/$0.00/-$70.00 *-$151.00/$0.00 (hour 24/hours 0 to 23)*

Commentary

Income

In this alternative scenario neither pre- nor post-Families Package is this person better off with respect to income than in the core scenario at any point.

From zero to 21 hours of paid work there is no change in how this person experiences the Families Package changes with respects to residual income when compared to the core scenario. However, from 22 hours of paid work, there are two distinctive difference as annotated on Figure 39 (left-hand graph) on the previous page. These are indicated by the following points:

A. At 22 and 23 hours of paid work, the gain in residual income is higher in the alternative scenario. This is due to the person staying on main benefit longer in this alternative scenario, and therefore receiving the Winter Energy Payment for longer.

B. At 39 hours of paid work, the gain in residual income is lower in the alternative scenario. This is due to the person not receiving the Disability Allowance in the alternative scenario while off main benefit, and therefore not benefitting due to the income threshold of the Disability Allowance being adjusted post-Families Package.

Effective Marginal Tax Rates (EMTRs)

Following the Families Package, the person also faced a different EMTR profile when compared to the core scenario, as annotated on Figure 39 (right-hand graph) on the previous page. These are indicated by the following points:

C. The EMTR spike at 24 hours of paid work is related to the loss of supplementary assistance payments when the person moves off main benefit in this scenario.

D. Following the move off main benefit, the person has a lower EMTR, as they are not receiving Accommodation Supplement which would have otherwise been abating by this point.

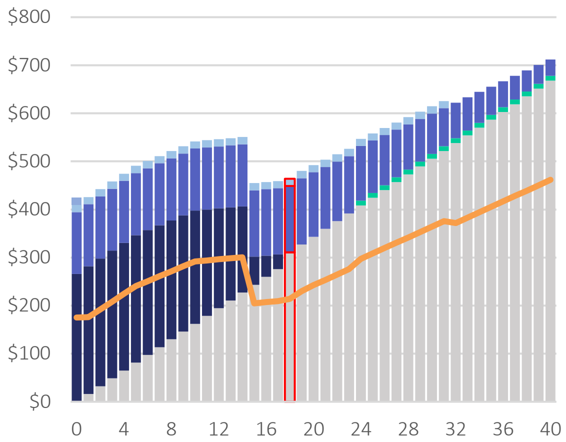
E. As the person is not receiving the Disability Allowance, they do not have the EMTR spike at 40 hours of paid work which is experienced in the core scenario.

Replacement rates and participation tax rates

The person’s replacement rates for 20 hours of paid work, and their participation tax rates for the zero to 20 hours measure are unchanged in this scenario compared to the core scenario. Their replacement rates for 40 hours of paid work and participation tax rates for the zero to 40 hours measure are higher than in the core scenario.

Alternative scenario: Person earned $20 per hour

Figure 40: Net and residual incomes for model family four pre- (left) and post-Families Package (right) for this alternative scenario.



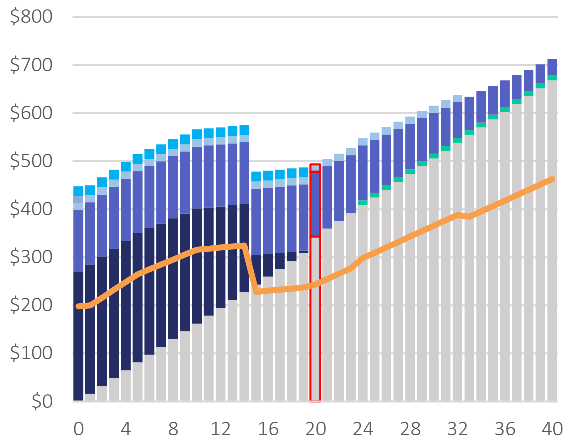
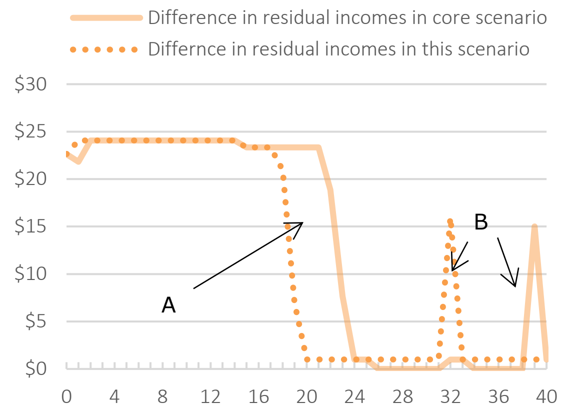


Figure 41: Difference in residual incomes (after housing costs) pre- and post-Families Package in the main scenario and this scenario (left), and comparison of EMTRs post-Families Package between main scenario and this scenario (right).



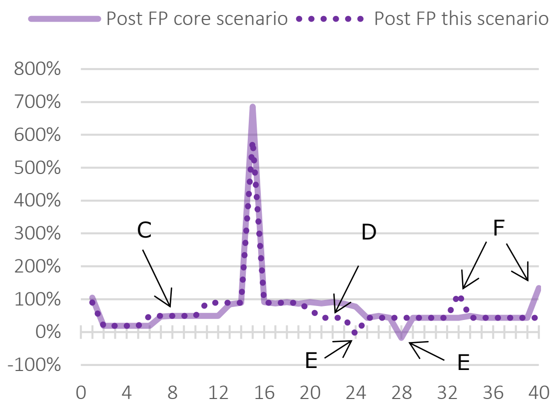


Table 25: Selected measures for this alternative scenario.

Measure	Pre-Families Package	Post-Families Package
Switching point in core scenario	22 hours	24 hours
Switching point in this scenario	18 hours	20 hours
Average EMTR on net income:	64.2%	66.9%
Replacement rates (20 hours/40 hours):	86.4%/59.7%	90.8%/62.8%
Participation tax rates (20 hours/40 hours):	83.2%/64.2%	88.6%/66.9%
Net income (0/20/40 hours)	$425.18/$492.29/$711.73	$447.82/$493.29/$712.73
Difference in net income between core and this scenario (0/40/80 hours & *minimum/maximum*)	$0/$34.18/$78.55 *$0/$78.55 (hour 0/hour 40)*	$0/$11.83/$78.55 *$0/$78.55 (hour 0/hour 40)*

Commentary

Income

In this alternative scenario where the person earns $20 an hour, at no point either pre- or post-Families Package is the person worse off than in the core scenario with respect to income.

From zero to 17 hours of paid work there is no difference in the change in residual incomes from the core scenario. However, after 17 hours of paid work, there are two notable differences as annotated in Figure 41 (left-hand graph) on the previous page. These are indicated by the following points:

A. From 18 to 23 hours of paid work, the gain in residual income is lower in the alternative scenario. This is due to their main benefit abating earlier due to their higher earned income in this scenario, which means they lose the benefit of the Winter Energy Payment during winter months at an earlier point.

B. At 32 hours of paid work in the alternative scenario, the person experiences the jump in residual income differences due to the Disability Allowance abatement threshold changing at an earlier point. This happens at 39 hours of paid work in the core scenario.

Effective Marginal Tax Rates (EMTRs)

Following the Families Package, the person also faced a different EMTR profile in this scenario when compared to the core scenario. The differences are annotated in Figure 41 (right-hand graph) on the previous page. These are indicated by the following points:

C. The person faces earlier increases in abatement rates while on main benefit in this alternative scenario, as their higher earned income means they hit the Supported Living Payment income abatement thresholds earlier than in the core scenario.

D. Due to the person having a higher earned income in this alternative scenario, they leave main benefit at less hours worked and so experience the accompanying fall in their EMTRs earlier than in the core scenario.

E. Due to the person earning more, they experience a negative spike in their EMTR at 24 hours of paid work in this alternative scenario compared to 28 hours of paid work in the core scenario. This is because they reach the earnings threshold for the Independent Earners Tax Credit at an earlier point in this alternative scenario.

F. Due to the person earning more, their Disability Allowance fully abates at 33 hours of paid work in this alternative scenario than compared to the core scenario (40 hours of paid work).

Replacement rates and participation tax rates

The persons replacement rates for 20 and 40 hours of paid work, and their participation tax rates for the zero to 20 and zero to 40-hour measures are lower in this scenario than the core scenario. This is due to the increased levels of earned income.

Alternative scenario: Difference in incomes after housing costs in different locations

In this scenario we tested the impact of living in different Accommodation Supplement areas and different rent situations on residual incomes after housing costs. The details of the different location types we test is listed in Table 26 below.

Table 26: Details of locations tested in this scenario for model family four.

Accommodation Supplement areas pre- to post-Families Package	Rent paid[1]	At maximum pre-Families Package at zero hours of work?	At maximum post-Families Package at zero hours of work?	TAS received at zero hours of work pre-Families Package	TAS received at zero hours of work post-Families Package
Area 1 to Area 1 (core scenario)	$250	No – $16 under	No - $36 under	$15.64	$14.21
Area 2 to Area 1	$250	Yes	No - $36 under	$44.64	$14.21
Area 3 to Area 2	$200	Yes	No - $11 under	$29.64	$0.00
Area 3 to Area 3	$200	Yes	Yes	$29.64	$13.21
Area 4 to Area 3	$175	Yes	No - $4 under	$24.64	$0.00
Area 4 to Area 4	$175	Yes	Yes	$24.64	$0.00

Note 1: Rental figures based off both MSD data capturing claimed rental costs as at the end of March 2018, and a custom data set from the Ministry of Housing and Urban Development of lower quartile rents for different areas and housing types as of July 2018.

Figure 42: Comparison of the difference in residual incomes after housing costs for model family four, by Accommodation Supplement area and rent cost.

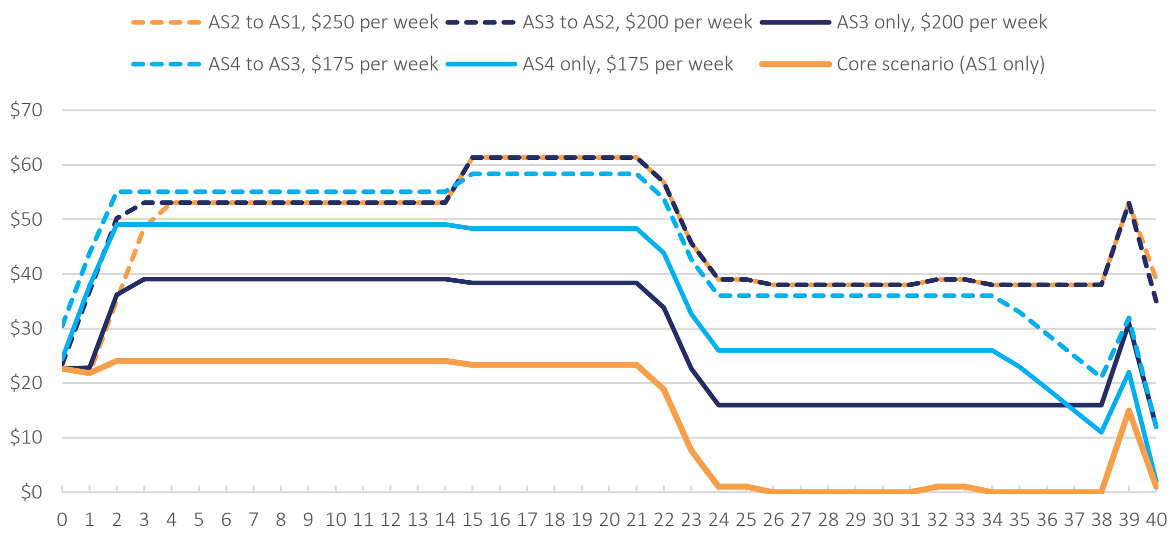


Table 27: Selected measures for this alternative scenario.

	Average EMTR (0 to 40 hours)		Replacement rates (20 hours/40 hours)		Participation tax rates (20 hours/40 hours)	
	Pre-FP	Post-FP	Pre-FP	Post-FP	Pre-FP	Post-FP
Area 1 to Area 1 (core scenario)	68.5%	71.8%	92.8%/67.1%	93.0%/70.6%	90.0%/68.5%	89.8%/71.8%
Area 2 to Area 1	74.2%	71.8%	101.2%/71.4%	93.0%/70.6%	101.5%/74.2%	89.8%/71.8%
Area 3 to Area 2	71.4%	69.6%	97.4%/66.5%	89.3%/66.5%	97.0%/71.4%	85.5%/69.6%
Area 3 to Area 3	71.4%	73.0%	97.4%/66.5%	94.0%/69.0%	97.0%/71.4%	92.2%/73.0%
Area 4 to Area 3	67.6%	70.4%	95.9%/62.1%	89.9%/66.1%	95.5%/67.6%	87.0%/70.4%
Area 4 to Area 4	67.6%	71.0%	95.9%/62.1%	90.6%/66.2%	95.5%/67.6%	88.2%/71.0%

Commentary

Entitlements

Table 26 shows that prior to the Families Package, apart from the person in our core scenario, all these people were in rental situations that meant they received the maximum amount of Accommodation Supplement they were entitled to. However, post-Families Package, only in cases where people were living in Area 3 or Area 4 pre-Families Package and did not change areas post-Families Package were they receiving the new increased maximums.

Income

Figure 42 shows that for a person who lived in a town or city where the Accommodation Supplement areas changed, they generally experienced a larger overall increase of income compared to a person who lived in an area where the area did not change.

The increases experienced were mostly dependent on what areas the person was changing between, as well as their level of rent relative to the maximum amount of Accommodation Supplement they could receive and if they were receiving Temporary Additional Support.

The latter point is especially relevant in this scenario, as in the main scenario there was very little difference between pre- and post-Families Package settings. This was because the person's rent was not high enough to benefit from the maximum rate changes. However, in other cases, the person (depending on their circumstances) could have noticeably benefitted (see AS3 and AS4 only lines).

Effective Marginal Tax Rates, replacement rates and participation tax rates

The changes in EMTRs, replacement rates and participation tax rates shown in Table 27, were influenced by the change in the Accommodation Supplement rates and areas. Additionally, the EMTRs, replacement rates and participation tax rates were also dependent on whether the sole parent was receiving Temporary Additional Support, how much of it they were receiving, and if the Families Package changes resulted in any significant changes in how much of it they received and how it abated.

Appendix: Work assumptions for model family two childcare extension

Table A1: Work assumptions for parents in model family two.

Hours worked	Parent 1 works	Parent 2 works	Extra Childcare Subsidy needed	OSCAR Subsidy needed
68	7am-1pm (1 day) 7am-2pm (4 days)	1pm-7pm (1 day) 12pm-7pm (days)	1 hour	0 hours
70	7am-2pm (5 days)	12pm-7pm (5 days)	3 hours	0 hours
72	7am-2pm (4 days) 7am-3pm (1 day)	12pm-7pm (4 days) 11am-7pm (1 day)	5 hours	1 hour (not entitled)
74	7am-2pm (3 days) 7am-3pm (2 days)	12pm-7pm (3 days) 11am-7pm (2 days)	7 hours	2 hours (not entitled)
76	7am-2pm (2 days) 7am-3pm (3 days)	12pm-7pm (2 days) 11am-7pm (3 days)	9 hours	3 hours
78	7am-2pm (1 days) 7am-3pm (4 days)	12pm-7pm (1 days) 11am-7pm (4 days)	11 hours	4 hours
80	7am-3pm (5 days)	11am-7pm (5 days)	13 hours	5 hours

Note: We assume here that parents receive paid meal breaks within their hours of work. This is not always reflected in real world work arrangements, for example, unpaid lunch breaks are a common feature of employment contracts.

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