MINISTRY OF SOCIAL DEVELOPMENT
TE MANATŪ WHAKAHIATO ORA

Estimates of Working for Families eligibility and take-up rates 2007 – 2020

December 2022

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Disclaimer

These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI) which is carefully managed by Stats NZ. For more information about the IDI please visit https://www.stats.govt.nz/integrated-data/.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

The views, opinions, findings, and recommendations expressed in this report are those of the authors. They do not necessarily reflect the views of the Ministry of Social Development, or people involved in the peer review process. Any errors or omissions are our own.

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Contents

Key findings

This study uses linked data held in the Stats NZ Integrated Data Infrastructure to **estimate families' eligibility for and take up of the main Working for Families tax credit payments**, Family Tax Credit and the In-work Tax Credit.

We estimate eligibility and take-up rates for samples of families who responded to the Household Labour Force Survey **over the period 2006/07 to 2019/2020**. The estimates use a combination of Household Labour Force Survey data for these families and linked administrative data on their incomes and other circumstances.

Estimating take up is challenging. In the case of Working for Families, not all family characteristics that determine eligibility criteria are visible in the available data. Those that are visible often provide a point-in-time view and do not capture changing circumstances over a tax year. In addition, factors such as sampling error in the Household Labour Force Survey and errors in its linkage with administrative data affect the estimates.

These **challenges mean our estimates should be considered approximations**, and indicative of differences over time and between population groups. We may be over- or under-estimating the true levels of eligibility and take up.

Based on our results:

- for the 2020 tax year, we estimate **49 percent of families were eligible** for the main Working for Families payments, **and 87 percent of eligible families took up the payments**
- sole parents, families with more children, families with younger children, families living in the most deprived areas, families supported by main benefits, and families with a Pacific or Māori parent or caregiver had the highest estimated eligibility and take-up rates, reflecting differences in the potential size of entitlements and inequalities in average parental income levels
- around two percent of families overall are estimated to have met income and work criteria but not residence requirements for Working for Families payments in 2020 – the proportion was six percent for families with an Asian parent or caregiver, and two percent for families with a Pacific parent or caregiver
- **the estimated eligibility rate declined over the decade to 2020** from 72 percent of families in the 2010 tax year to 49 percent in the 2020 tax year
- the decline in eligibility affected families with higher incomes – growth in incomes over a period when abatement and payment rates increasingly targeted payments to lower income families contributed to the decline, as did changes in treatment of losses in the calculation of income for assessing eligibility
- in the 2019 tax year **the introduction of the Families Package was associated with a temporary rebound in eligibility**
- **the take-up rate appears to have been relatively stable over time**, ranging between 83 and 90 percent overall, and higher in the early 2010s (when the proportion of families supported by benefit was relatively high following the Global Financial Crisis) than either earlier or more recently
- **take-up was close to 100 percent for eligible families with main benefit income**, and ranged between 75 and 85 percent for eligible families without main benefit income

- it appears that the 2018 **introduction of the Best Start tax credit as part of the Families Package increased take-up of the main Working for Families tax credits by families with very young children by around five percentage points** – this suggests that a portion of non-take-up for families with older children can be addressed by system changes that more proactively invite and streamline initial applications and subsequent re-applications for those with potential eligibility
- **families with one or more parent of Asian ethnicity had low estimated take-up in recent years** – possible drivers that could be investigated further include data linkage error, barriers to claiming, and some sources of income not being captured in administrative data.

Overall take-up rate estimates from this study are within the range found for comparable payments in other countries.

They are lower than previous Aotearoa New Zealand estimates for 2006 and 2007 prepared as part of the evaluation of the 2004-2007 Working for Families reform. However, the sample frame for the survey used for those estimates had a high representation of families with past or current Working for Families receipt, and as a result the estimates were too high.

Any estimation approach requires a number of assumptions and simplifications, and has a range of limitations and sources of potential error. This needs to be borne in mind when using take-up estimates for ongoing monitoring purposes.

We recommend trends be monitored by updating the study presented here every three or so years. Annual monitoring is not recommended given the long lag-time for data to become available in the Integrated Data Infrastructure, and the level of uncertainty about individual years' estimates.

Introduction

Background

Understanding trends in eligibility for and take-up of different income support payments is an important input into policy development and service delivery. If take-up of income support is low, for example, efforts to use income support payments to reduce child poverty and hardship and promote parent's employment may be less effective (WEAG, 2018; Momsen, 2021). Because poverty, hardship, and employment affect wellbeing, low take-up can undermine broader outcomes too (WEAG, 2018).

On that basis, one of the recommendations of the Welfare Expert Advisory Group (WEAG) was annual reporting on take-up rates for income support payments, among other measures (WEAG 2019, recommendation 5).

As part of the Ministry of Social Development (MSD) work to monitor and evaluate the 2018 Families Package and subsequent income support reforms, we are seeking to build evidence on eligibility for and take-up of different payments in the Aotearoa New Zealand income support system. A description of this system is provided by Graham (2022).

Study aims

The purpose of this study is to estimate eligibility and take-up rates for the main Working for Families (WFF) tax credit payments. The study addresses the following questions:

- What proportion of families are eligible to receive WFF payments?
- What proportion of families who are eligible to receive WFF payments actually receive them?
- How do eligibility and take-up rates differ for families with different characteristics, and how have they changed over time?

Scope

We look at the 14-year period from the 2007 tax year (April 2006 to March 2007) to the 2020 tax year (April 2019 to March 2020). There is at least an 18-month lag before WFF data is reliable, and 2021 tax year estimates will not be able to be produced until at least late 2022.

We focus on the main WFF tax credits – Family Tax Credit (FTC) and In-Work Tax Credit (IWTC). These payments accounted for between 97 and 99 percent of all WFF payments each year over our period of interest. For a description of these payments and trends in receipt, see Graham and Arnesen (2022).

A separate study estimates take-up of the Best Start tax credit that was newly introduced in July 2018 (McLeod and Wilson, 2022). Our estimation for Best Start follows a different approach, as eligibility is almost universal in the first year of a child's life, and family structure and family incomes are less important.

Outline

The following sections provide details of our estimation approach, results, and strengths and limitations. We then briefly compare our estimates with those from other countries and with previous estimates for Aotearoa New Zealand. Finally, we reflect on the implications of our estimation and results for responding to recommendation 5 of the WEAG.

Estimation approach

Steps and data sources

Our estimation approach is based on linked survey and administrative data held in the Stats NZ Integrated Data Infrastructure (IDI) (Milne et al., 2019) and proceeds as follows.

1. We **take samples of respondents** from the Household Labour Force Survey (HLFS) for the 2007 to 2020 tax years. The HLFS is a continuous national survey of households and has a rotating panel where households are surveyed in eight successive quarters. We take the most recent survey response for each household in each tax year. All respondents who were in the household at that time are selected. Households can appear in our estimates in three successive tax years. The definition of a family group used for our analysis is broadly analogous to that used in the tax and income support systems, being one or two parents (or caregivers in a parent role) with children under the age of 18. Each household can include more than one family group.
2. We **exclude households from our study** if there are no adults aged 15 years and over in the household able to be linked to the IDI spine, or where one or more adult links to the spine, but no adult in the household has any matching income data in the tax year being examined. This results in the exclusion of around 5-6 percent of respondents in each tax year from 2007 to 2015. The percentage of excluded records has dropped in more recent years, to a little over two percent in 2019 and 2020. Weights are adjusted to correct for this exclusion.
3. We **weight all adults aged 15 and over to total NZ population estimates** for the relevant year using an expanded set of Household Economic Survey (HES) individual and household benchmarks. The expanded set of HES benchmarks is used due to difficulties with using HLFS weights for the purpose of estimating the population of families, particularly those relating to difficulties estimating the number of families supported by benefits or tax credits. These difficulties and the expanded set of benchmarks are discussed in McLeod and Wilson (2021).
4. We next **restrict our sample to parents aged 18 or over who had a child aged 17 years or under** living with them at the time they were surveyed for the HLFS, or who had a child aged 18 living with them who had been aged 17 at some stage during the tax year. We exclude parents who have a WFF record showing they had no dependent children in that year, as well as those who were receiving a benefit but had no children included on that benefit. We also exclude families if neither parent has matching income data in the IDI. Finally, families with all parents overseas for more than three months of the tax year are excluded (based on NZ Customs Service data).
5. The next step is to **derive sub-groups of families for analysis** according to their characteristics using HLFS survey data (sub-groups allow results to be presented by whether the respondent is a sole versus partnered parent, age of youngest child, number of children, ethnic group(s) of parents or caregivers, disability status of parents or caregivers, and neighbourhood deprivation (NZDep)).
6. Next, linked data in the IDI are used to **derive parents' incomes**. Incomes are derived from Inland Revenue (IR) and MSD administrative data sources as described in Wilson and McLeod (2021). Income from WFF tax credits is assigned to the period in which the entitlement fell, regardless of when the payment was

made. We approximate the definition of parental income used for WFF assessment in the relevant year. Sub-groups according to whether the family was receiving income from a main benefit as at the end of the tax year are derived at this step.

7. An estimate of whether the parent (in the case of a sole parent family) or parents (in the case of a two-parent family) meet the **income criteria** for WFF tax credits is derived based on the number and ages of children (based on family structure at the time of their HLFS survey) and the parents' incomes (based on linked administrative data[1]). For those with incomes below the relevant WFF cut-out point, payment levels and abatement rules are applied to estimate the size of the potential entitlement. Families cannot receive FTC or IWTC for children if they receive a Foster Care Allowance, Orphan's Benefit or Unsupported Child's Benefit for them. If the family receives income from one of these payments at any stage in the tax year, we assume they have no FTC or IWTC entitlement.
8. An estimate of whether the family meets the **hours of work requirement** (which applied to In-Work Tax Credit for most of the study period) is derived using IR earnings and self-employment income data. Whether families meet these requirements cannot be accurately identified as comprehensive data on work hours are not available. Our estimation involves calculating earnings thresholds based on the required number of hours times the minimum wage. If a family earns above the threshold across the tax year, we assume they meet the requirement.
9. An estimate of whether the family meets **residence requirements** is derived using a combination of birth registration data, Census data, visa approvals data from the Ministry of Business, Innovation and Employment, and data from the NZ Customs Service. WFF payments are available to families who meet a residency requirement either through a parent or the child. The requirement can be met by the child if the child is ordinarily resident in New Zealand and is present in New Zealand for the period of entitlement. The requirement can be met by one or both parents if the parent is ordinarily resident in New Zealand and has been in New Zealand for 12 months continuously at any time.
10. Finally, **if a parent is observed to have received a WFF payment during a tax year, then they are assumed to have been eligible** for WFF on income and employment grounds, and on residence grounds. This is on the basis that IR and MSD have better information available to them to assess entitlements than we have with the data available in the IDI.

Key measures

Two key measures are then estimated as follows:

Eligibility rate: $\dfrac{\text{Number of families estimated to be eligible for WFF payments}}{\text{Estimated number of families with children}} \times 100$

Take-up rate: $\dfrac{\text{Number of families estimated to receive WFF payments}}{\text{Number of families estimated to be eligible for WFF payments}} \times 100$

[1] Note that 'family scheme income' for Working for Families tax purposes is different from the total income we calculate above. For example, apart from excluding WFF tax credits, family scheme income is also adjusted for the net of any child support or maintenance payments made or received, does not include any losses from rent or self-employment, or losses brought forward from earlier years (since 2012), and excludes non-taxable transfers like the Accommodation Supplement and Winter Energy Payment.

Those estimated to be eligible are those who, based on the calculations and assumptions set out above, appear to meet income, hours of work (where relevant), and residence requirements.

We do not present confidence intervals for the estimated eligibility and take-up rates as confidence intervals only reflect sampling error and could suggest more certainty about the true range than exists. It is important to emphasise that the estimated rates should be considered approximations. This is discussed in more detail in the 'Strengths and limitations' section below.

Eligibility rate estimates

Around half of families are estimated to have been eligible for WFF in the 2020 tax year.

Based on our re-weighted HLFS households, we initially estimated that there were 673,600 families with dependent children in the population in the 2020 tax year. After excluding families where administrative benefit or WFF records showed no child in the family, or where these records showed the presence of a child, but the HLFS did not identify a child in the family, we were left with 601,500 families. Once final exclusions of families with no record of income, or who were out of NZ for most of the tax year were applied, we were left with 572,200 families. Of these, 278,200 families (49 percent) were estimated to be eligible for WFF.

Differences in estimated eligibility rates across population sub-groups reflect differences in the potential size of entitlements and inequalities in average parental income levels.

Sole parents, families with more children, and families with a younger child were more likely to be eligible for WFF than other families (Figure 1). Almost all families with low incomes (as defined for WFF assessment) and all families supported by a main benefit were eligible for WFF. Those living in the most deprived small areas were more than twice as likely to be eligible as those living in the least deprived areas. Almost two-thirds of families with a disabled parent or parents were estimated to be eligible for WFF, compared to around a half of all families.[2]

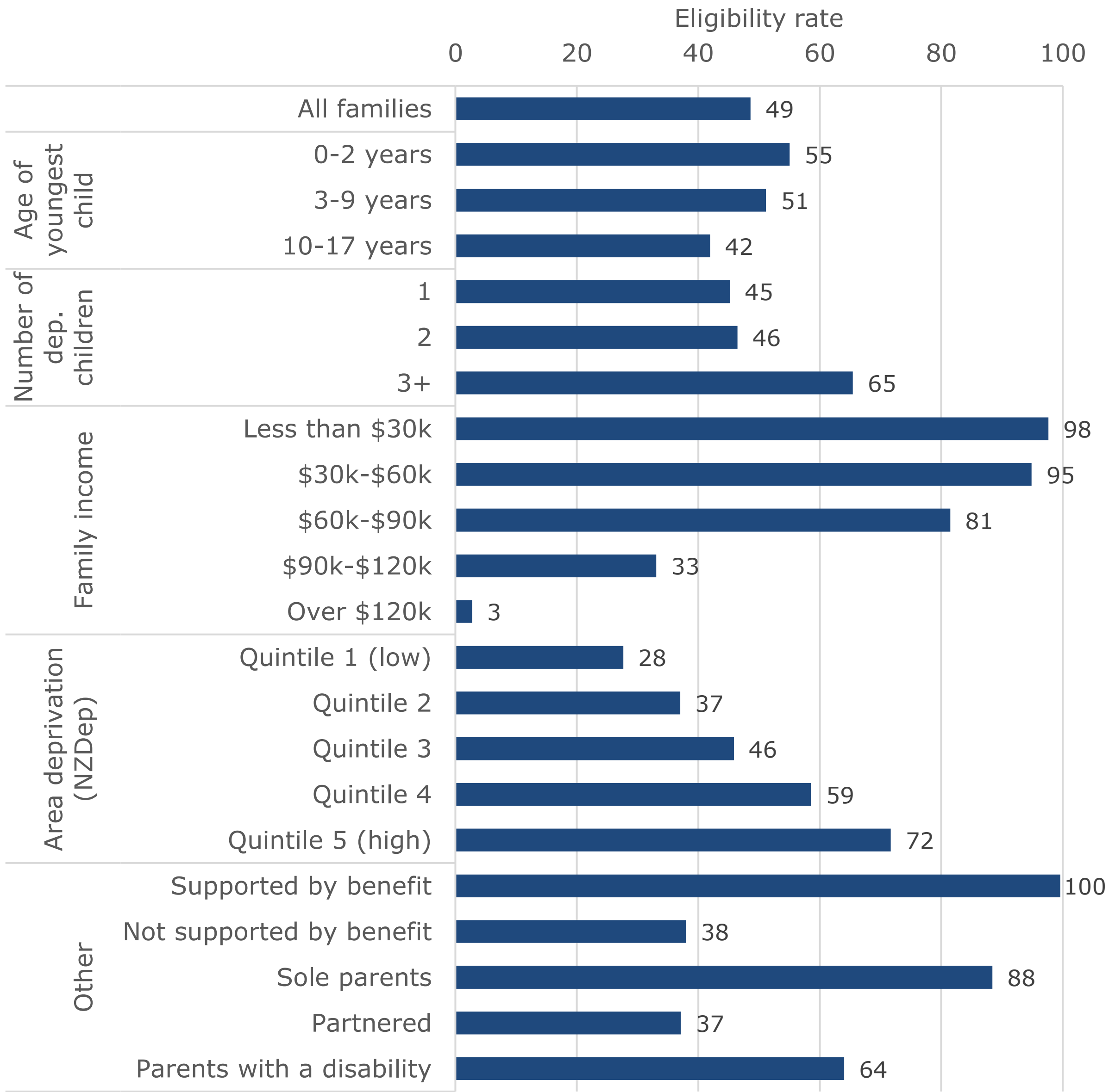
Across ethnic groups, eligibility rates were highest for families with a Pacific or Māori parent or caregiver.

We estimate that around 60 percent of families with a Pacific or Māori parent or caregiver were eligible in 2020 compared with around 40 percent of families with parents or caregivers in other ethnic groups (Figure 2).

Residence criteria were most likely to affect eligibility for families with an Asian and/or Pacific parent or caregiver. Six percent of families with an Asian parent or caregiver, and two percent of families with a Pacific parent or caregiver were estimated to meet income and work criteria but not residence requirements respectively.

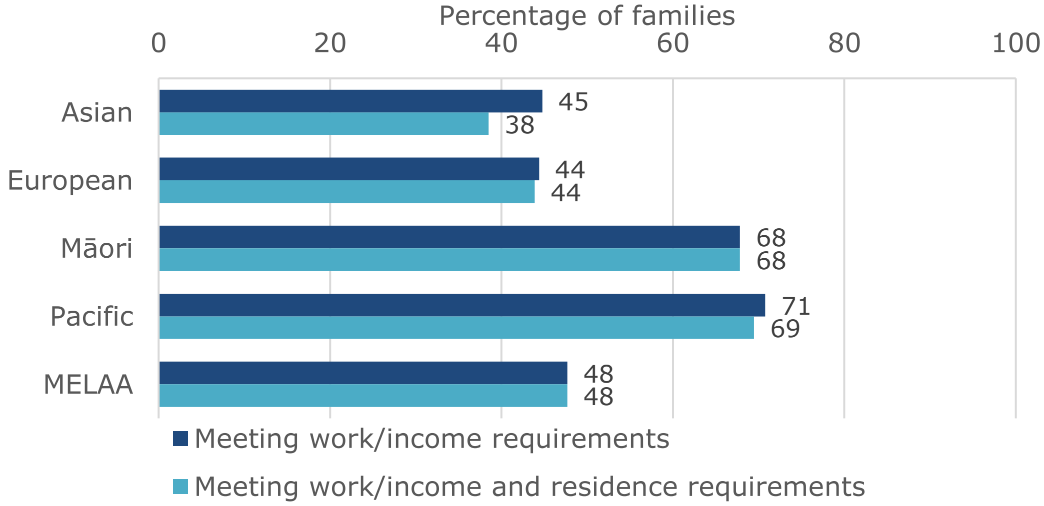
[2] Disability status is determined by the Washington Group Short Set of questions (http://www.washingtongroupdisability.com/washington-group-question-sets/short-set-of-disabilityquestions/) and has been collected in the HLFS since 2017. The questions are designed to identify people with functional limitations that have the potential to limit independent participation in society.

Figure 1: Estimated percentage of families eligible for the main WFF payments by family and neighbourhood characteristics, year to end March 2020



Notes: Main WFF payments are FTC and IWTC. Dollar values are inflation-adjusted and as at March 2020.

Figure 2: Estimated percentage of families meeting work and income requirements versus meeting work, income and residence requirements by ethnic group(s) of parents or caregivers, year to end March 2020



Looking at trends over time, the proportion of families estimated to be eligible for WFF peaked at almost three-quarters in the 2010 tax year.

The estimated eligibility rate increased from 63 percent in the 2007 tax year to 72 percent in the 2010 tax year (Figure 3). It then trended downwards.

Throughout the period, the eligibility rate for families supported by benefit was close to 100 percent. The drop in eligibility since the 2011 tax year affected those not supported by benefit. The drop in the overall eligibility rate over the decade to 2020 mainly reflected a drop in the proportion of families with incomes (as defined for WFF assessment) in the ranges $60k-$90k or $90k-$120k (in $2020) (Figure 4).

A number of factors will have contributed to the general pattern of eligibility rising and then falling between 2007 and 2020.

Between the 2008 and 2011 tax years, the overall eligibility rate will have in increased due to an increase in the proportion of families supported by a main benefit during the Global Financial Crisis (MSD, 2018). Estimated eligibility rates for those with higher incomes also increased over this period.

From the early 2010s, income from employment increased significantly, raising the proportion of families with incomes above WFF cut-out points. This reflected growth in both employment rates and average earnings. The proportion of sole parents in full-time employment increased (MSD, 2021). And in two-parent households with dependent children, partners were increasingly both in employment (MSD, 2018; Perry, 2019, p174). In October 2010, the top 39 percent personal income tax rate was removed, reducing the incentive to structure businesses and income to avoid paying tax at this rate. This may have contributed to growth in personal income over the period.

Between 2010 and 2018, WFF became more targeted to families on lower incomes. WFF abatement thresholds were reduced in 2012 and then left unchanged in nominal dollar terms until 2018. This further eroded the thresholds in real terms and meant families at lower real income levels had payments partly or fully abated away. In addition, two changes in payment and abatement rates were made. In April 2012, the abatement rate was increased at the same time as FTC payment rates were adjusted for inflation. In April 2016 the abatement rate was increased again alongside an increase in the IWTC payment rate (McKenzie, 2022). Alongside income growth over the period, this contributed to eligibility falling (see Appendix 1 for cut out points compared with mean and median household income over the period).

From the beginning of the 2012 tax year, families were no longer able to use investment losses, including losses from rental properties, to reduce their assessable income for WFF. Income now included income from family trusts, some fringe benefits in certain circumstances, income from a cash Portfolio Investment Entity that is not locked in and income from a spouse living overseas. Shareholders were no longer able to use Loss Attributing Qualifying Companies to claim losses against their personal income (McKenzie, 2022). Passive income of children also began to be included in the assessment. There was a six percentage point reduction in the estimated eligibility rate for those not supported by benefit in that tax year, which could have resulted from this change alongside the changes outlined above.

The exception to the downward trend was the 2019 tax year. In July 2018, the Families Package increased WFF payment levels and increased the WFF abatement threshold (and increased abatement rates). These changes increased the number of families eligible, and the estimated eligibility rate temporarily rebounded.

Figure 3: Estimated eligibility rate over time by income source and in total

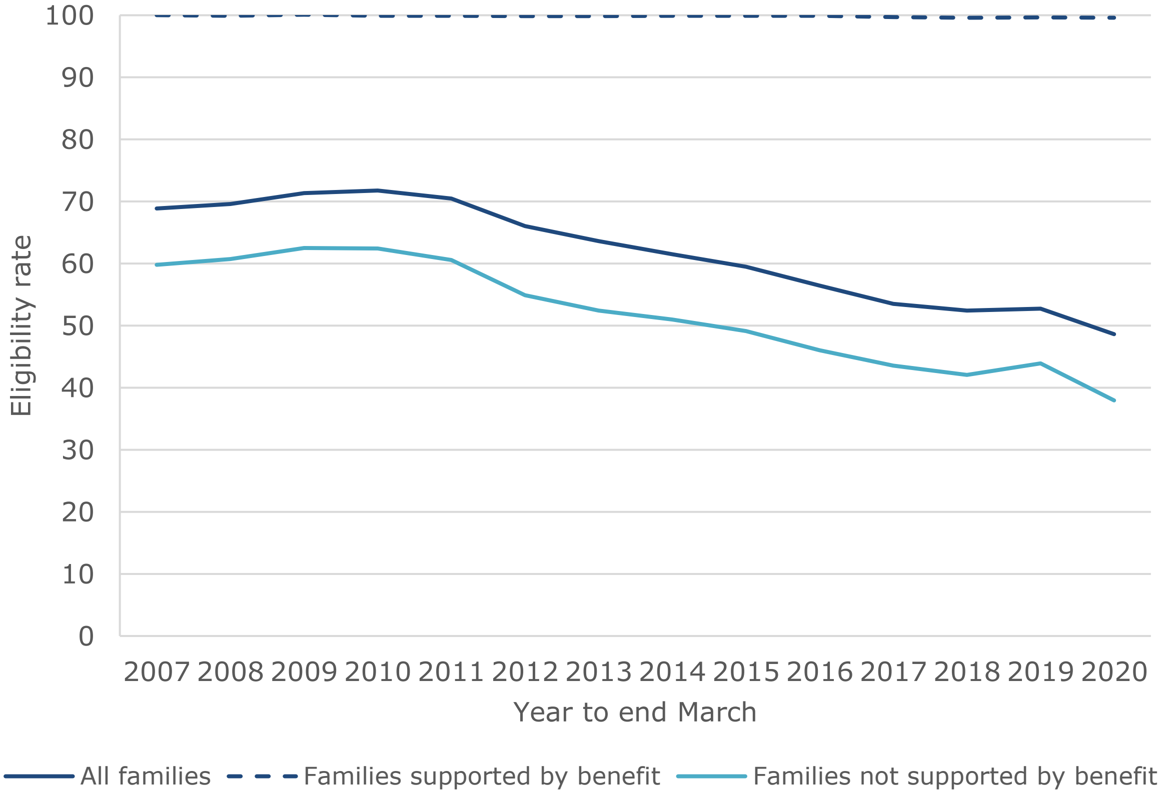
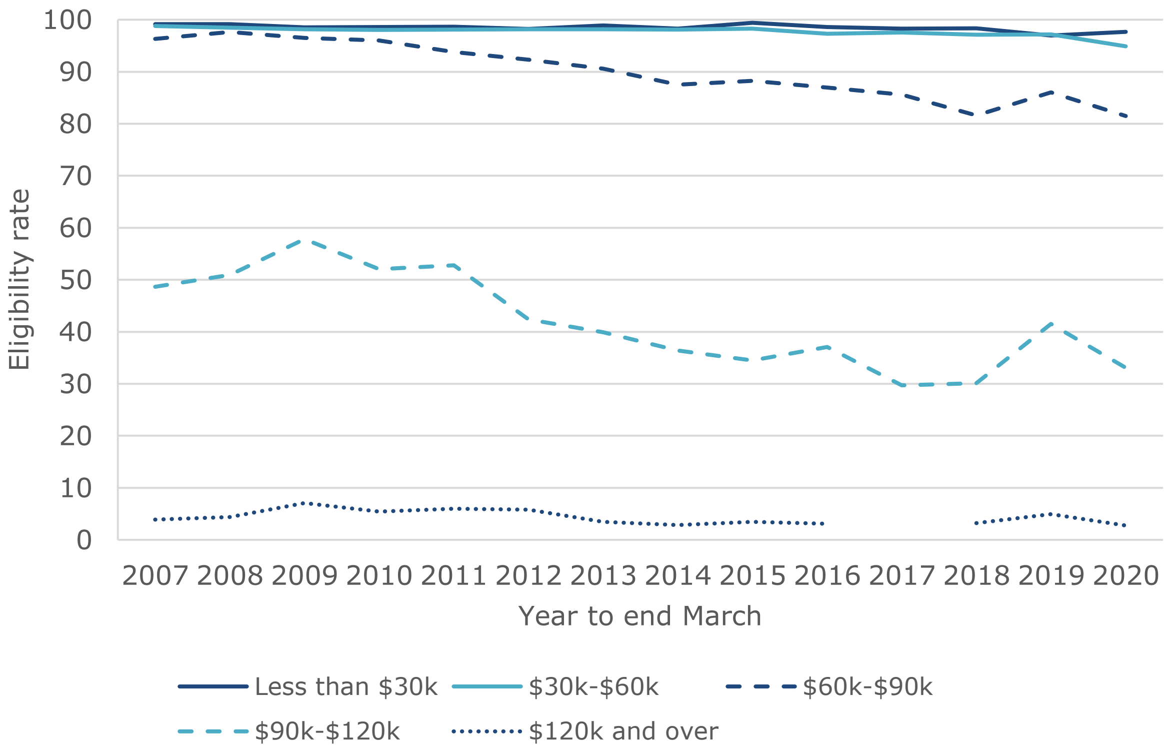


Figure 4: Estimated eligibility rate over time by parental income ($2020)



Notes: Parental income is as defined for WFF assessment in the relevant year and is estimated. 2017 data for families with parental income of $120k and over group was suppressed for confidentiality reasons.

A small number of families were estimated to be eligible on income and work grounds but to not meet residence requirements.

The overall proportion of families estimated to meet income and work requirements but not residence requirements was around one percent over most of the analysis period, but grew to almost two percent in 2019 and 2020 (Figure 5).

Had families who were estimated to not met residence requirements not been excluded on those grounds, they would have been somewhat more likely to be eligible for WFF than other families. Ie. they were more likely than average to have income under the relevant WFF cut-out point and meet relevant work requirements. This was the case throughout the period (Figure 6).

Figure 5: Estimated percentage of families meeting work and income requirements versus meeting work, income, and residence requirements over time

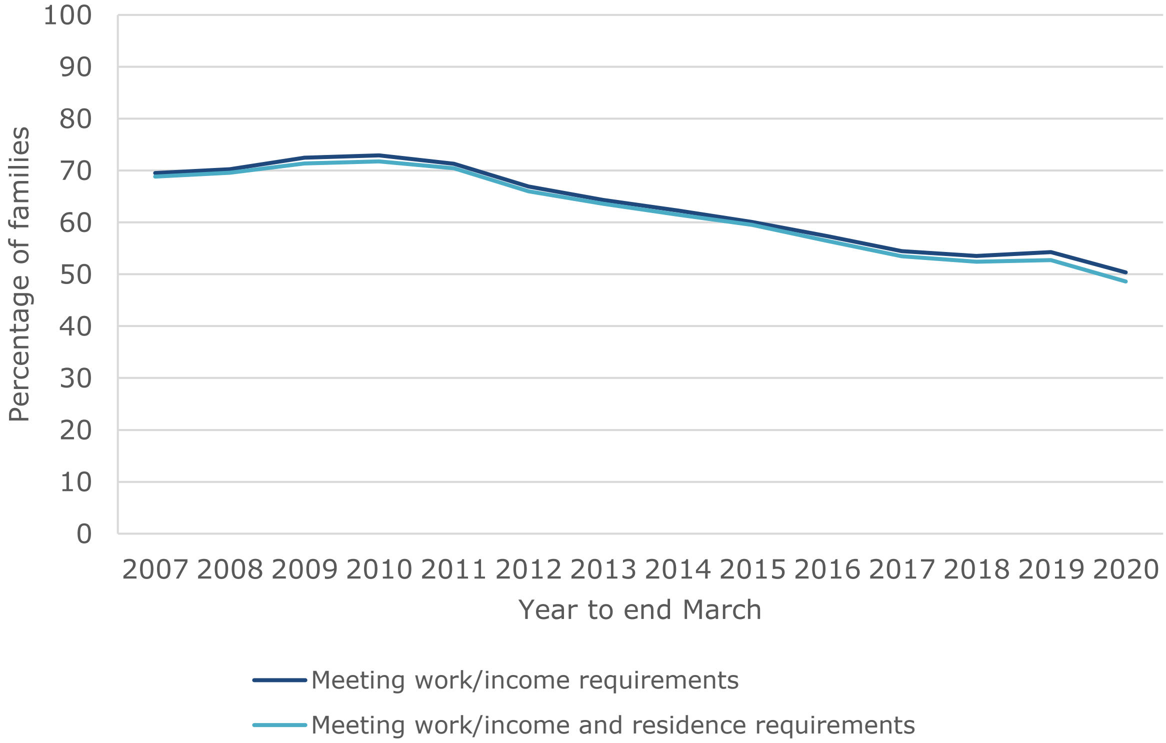
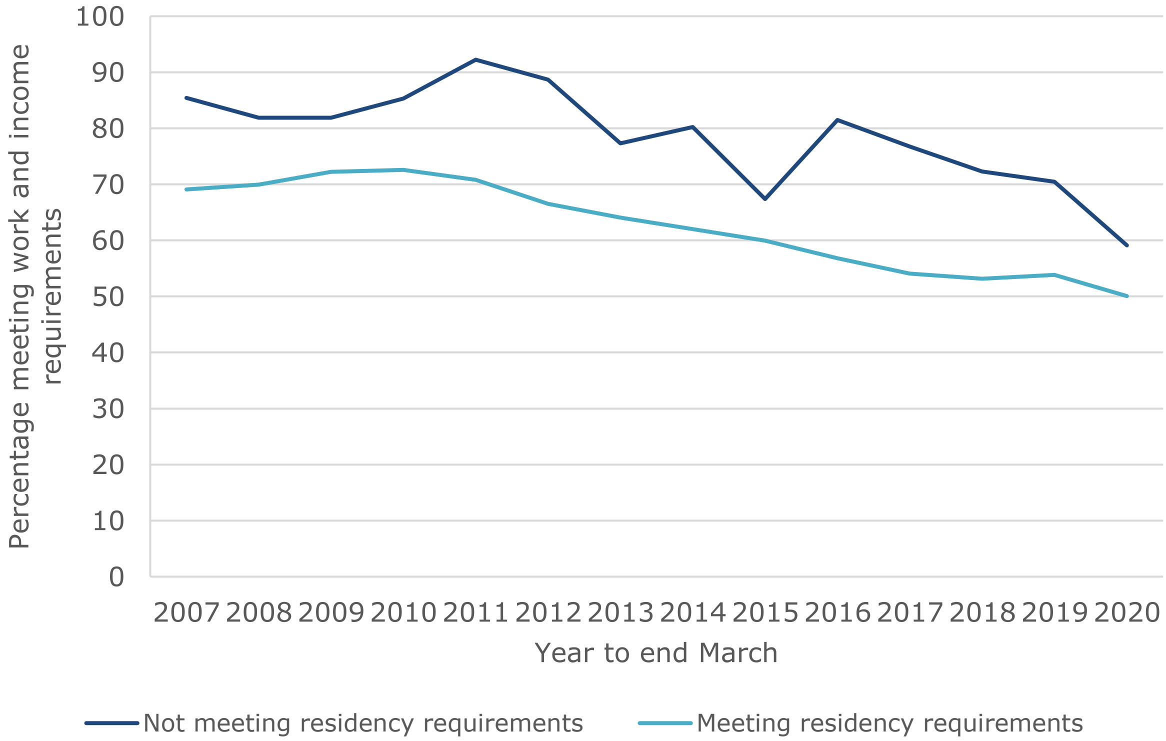


Figure 6: Estimated percentage of families meeting work and income requirements by whether they meet residence requirements



Take-up rate estimates

We estimate that just over 87 percent of eligible families took up WFF payments in the 2020 tax year.

Of 278,200 families in the study estimated to be eligible for WFF, 243,000 (87 percent) appeared to receive payments.[3]

Almost all families with income from a main benefit at the end of the 2020 tax year were estimated to receive WFF payments.

WFF tax credits for people receiving main benefits are generally paid together with their benefit payments through Work and Income. Since the WFF reform these payments have been protected (also known as ring-fencing) so that people cannot get into a situation of having been over-paid on an annual basis because of receiving WFF with a benefit payment for part of the year. Estimated take-up rates for families with income from main benefits are close to 100 percent as a result (Figure 7).

Take-up rates varied across other population sub-groups.

Estimated take-up rates were particularly high in the 2020 tax year for families:

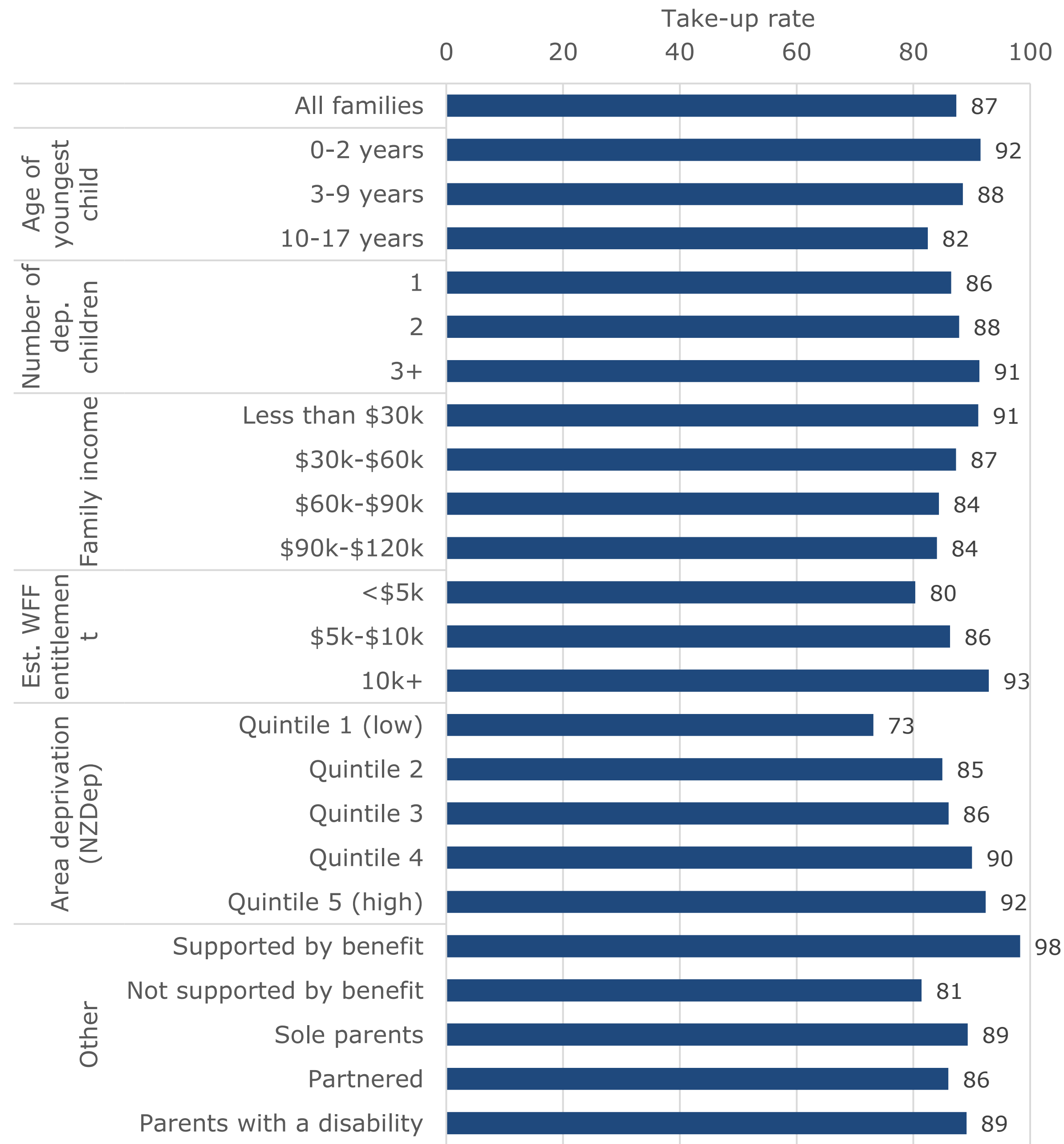
- with a child aged under three
- with three or more children
- with an estimated annual entitlement of over $10,000.
- with income (as defined for WFF assessment) of less than $30,000
- living in high deprivation areas (Figure 7).

These take-up rate patterns generally reflect the patterns of eligibility shown in Figure 1. Population groups that are more likely to be eligible for WFF are also generally more likely to take up WFF conditional on being eligible.

Across ethnic groups, take-up rates are highest for families with one or more parent or caregiver who is Māori or Pacific (Figure 8). These families are more likely than average to have lower income levels, three or more children, and a higher estimated annual entitlement.

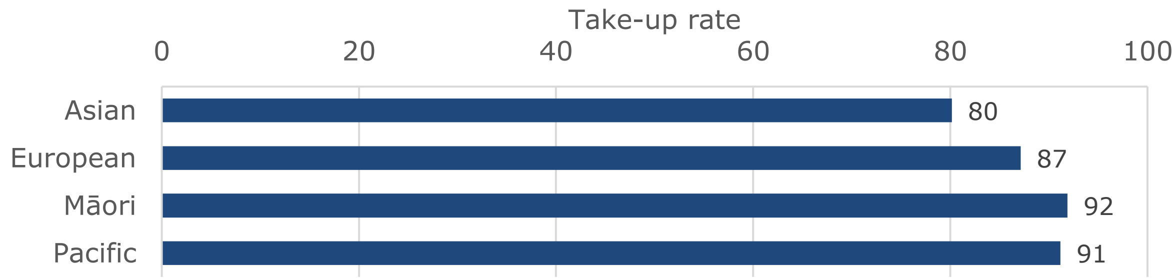
[3] Note, this is smaller than the actual number of families receiving Family Tax Credit or In-work Tax Credit according to administrative data (a little over 300,000 in the year to end March 2020). This results from the exclusion of HLFS families with certain disagreements between administrative and survey datasets as outlined in the 'Steps and data sources' section of this report.

Figure 7: Estimated percentage of eligible families receiving main WFF payments by family and neighbourhood characteristics, year to end March 2020



Notes: Main WFF payments are FTC and IWTC. Dollar values are inflation-adjusted and as at March 2020. Results are suppressed for the over $120k family income category for confidentiality reasons and are not included in the graph.

Figure 8: Estimated percentage of eligible families receiving main WFF payments by ethnic group(s) of parents and caregivers, year to end March 2020



Note: Results are suppressed for the 'Middle Eastern, Latin American and African' (MELAA) and 'Other' ethnic groups for confidentiality reasons and are not included in the graph.

Looking at trends over time, the estimated take-up rate has been relatively stable at between 83 and 90 percent overall and between 75 and 85 percent for those without main benefit income.

The estimated take-up rate increased in the late 2000s and early 2010s, from 83 percent in the 2007 tax year to 90 percent in the 2012 tax year, before dropping slightly to a little under 87 percent in the 2019 tax year. In 2020, it increased slightly to a little over 87 percent (Figure 9).

For families without income from main benefits, the estimate is around five to eight percentage points lower, and peaks at 85 percent in the 2012 tax year. Appendix 2 provides the series by sub-group presented in the remainder of this section after excluding families with income from main benefits. When these families are excluded, estimated take-up rates drop across all sub-groups and time periods.

Parents' incomes differentiated take-up more strongly between the 2007 and 2012 tax years than between the 2013 and 2020 tax years, with higher income families having particularly low take-up in the earlier period (Figure 10). WFF payments were less tightly targeted in that earlier period which would have meant more families in these income brackets had small entitlements (Appendix 1). For families with income under $30,000, estimated take-up rates are 12 to 21 percentage points lower when families with income from main benefits are excluded, depending on the year (Appendix 2).

While low-income families who are not supported by benefit have had lower estimated take-up than higher income families over recent years, these figures may not be accurate. This group may disproportionately include families for whom we are unable to reliably estimate income, for example due to IDI data linking errors, income sourced from overseas, or errors or blindspots (eg. with respect to shared care) in the way families are defined in the HLFS.

NZDep quintiles have shown a consistently strong differentiation in take-up (Figure 11).

Take-up rates were higher for sole than partnered parent families throughout the period (Figure 12). However, when families supported by benefit are excluded, the pattern is reversed – take-up rates were lower for sole parent families not supported by benefit than for partnered parent families not supported by benefit (Appendix 2). We are unable to say whether this is a real difference, or whether our estimation overstates eligibility among some sole parents because we are unable to exclude families who do not meet the share of care threshold required for WFF. Further investigation using [New Zealand Income Support Survey]() data when it becomes available will be useful.

Figure 9: Estimated take-up rate over time by income source and in total

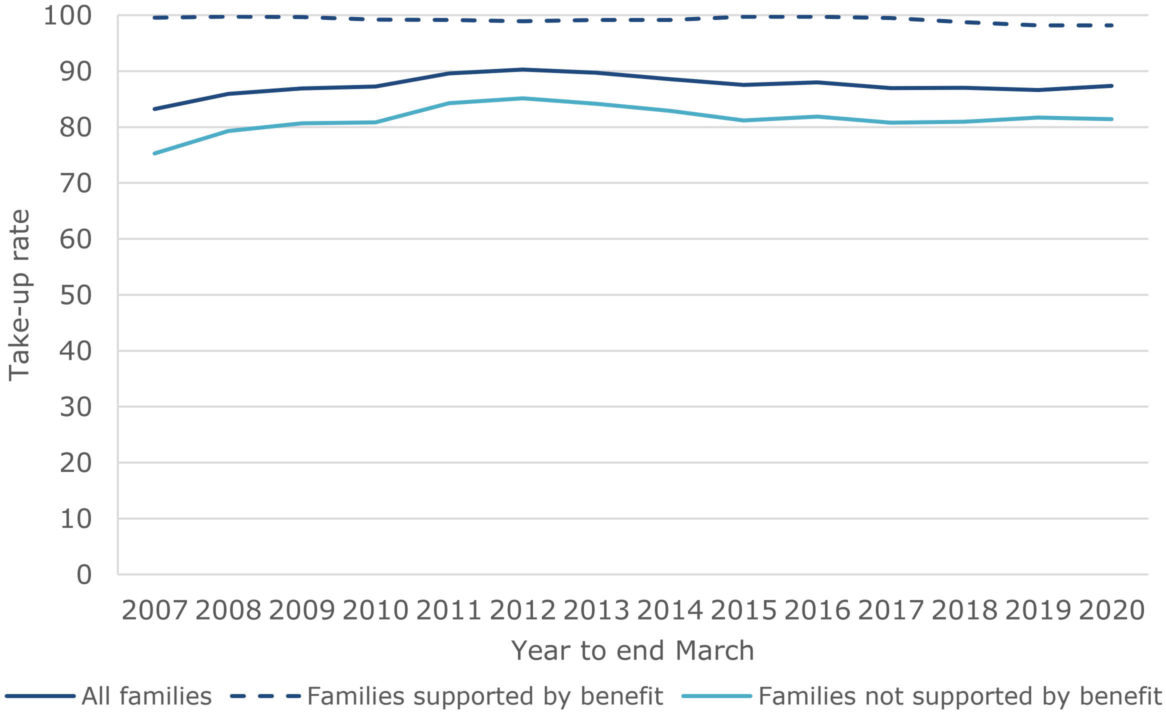


Figure 10: Estimated take-up rate over time by parental income ($2020)

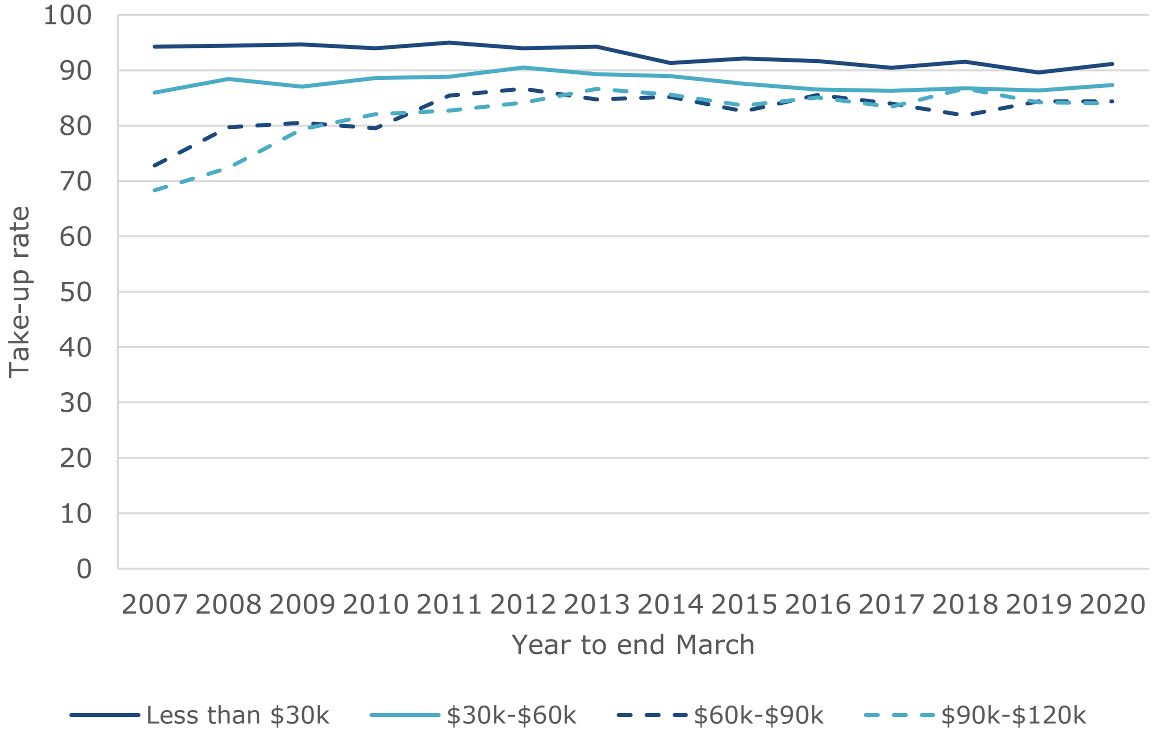


Figure 11: Estimated take-up over time by area deprivation (NZDep quintile)

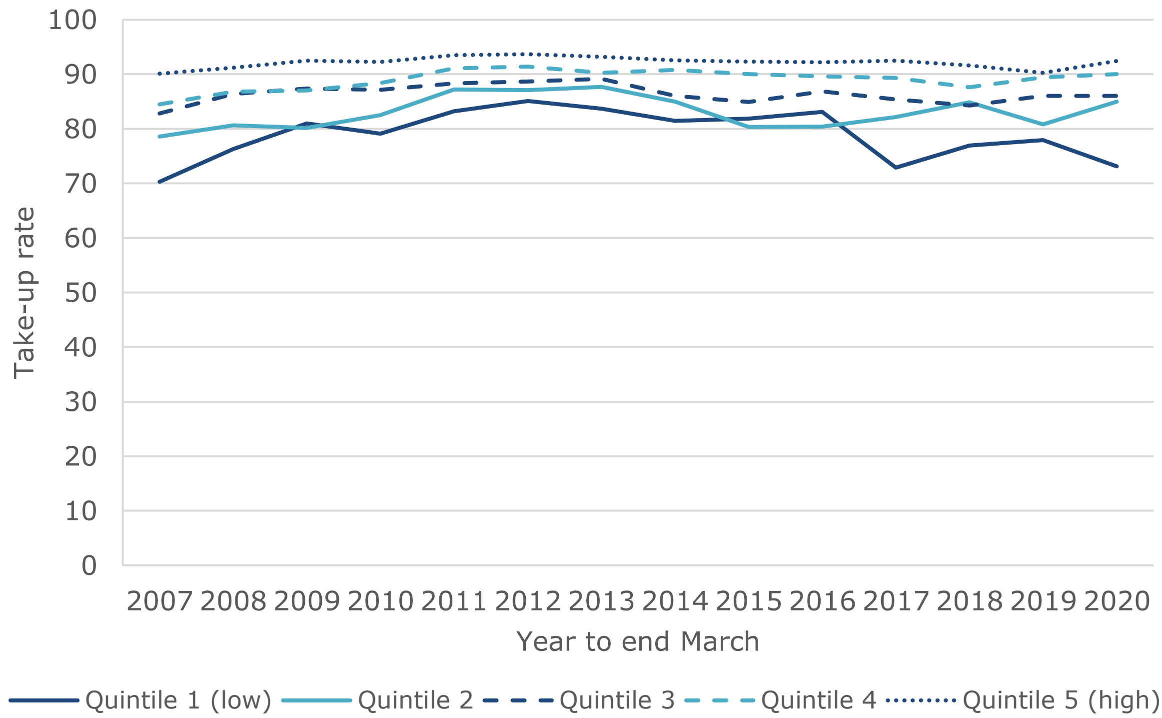
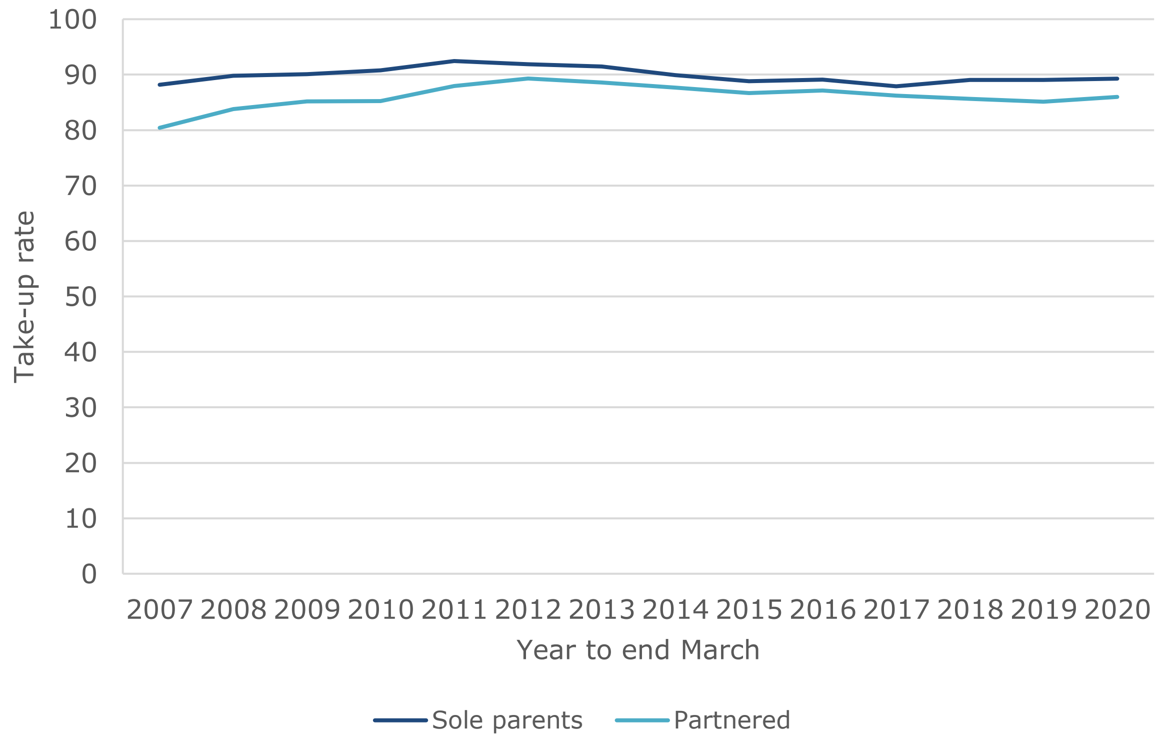


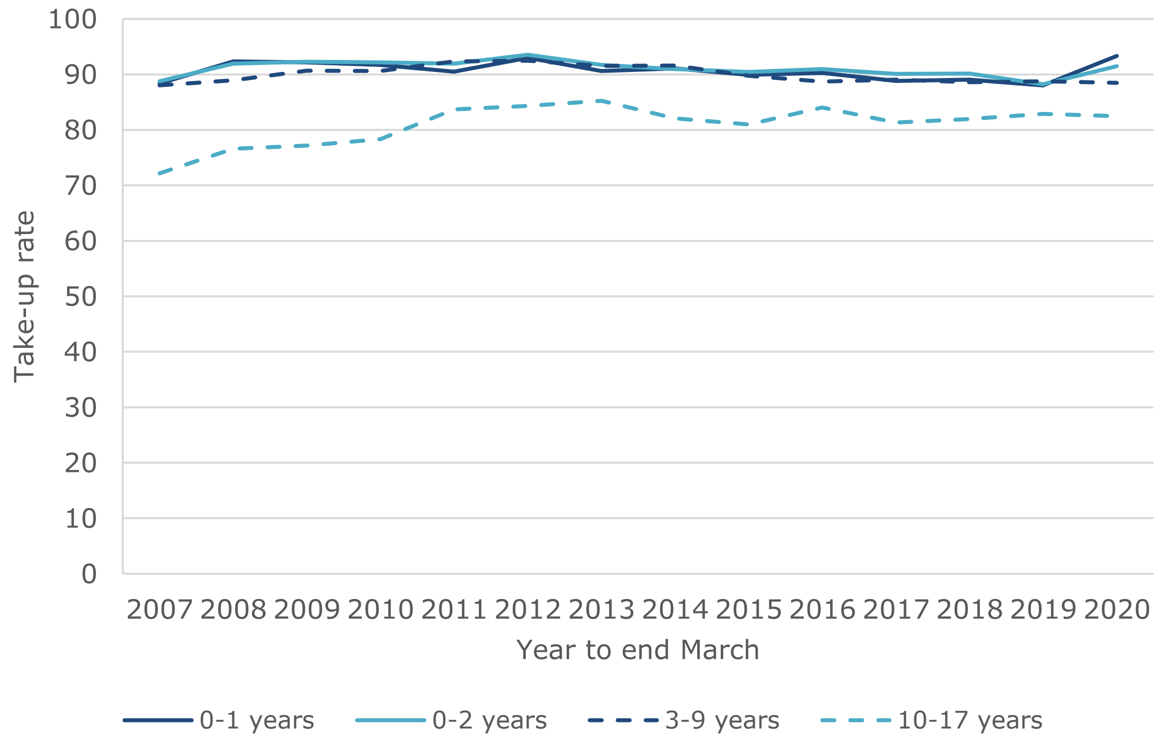
Figure 12: Estimated take-up over time by family type



Parents with children all aged 10 and over had particularly low take-up between 2007 and 2010.

This is consistent with the finding from the evaluation of the WFF reform that older parents and care givers had lower than average take-up around that time (MSD and IR, 2010). Part of the WFF reform was a joint campaign by Work and Income and IR to raise awareness of WFF and increase applications. The lasting effects of this campaign, and a younger cohort with higher take-up as a result of that campaign aging through the system, may explain some of the increase in take-up rates in the early 2010s.

Figure 13: Estimated take-up over time by age of youngest child



There was a strong increase in take-up rates for families with young children between the 2019 and 2020 tax years, consistent with Best Start having the effect of increasing take-up of the main WFF tax credits.

Take-up rates for families with children aged 0-1 years increased by around five percentage points in the 2020 tax year. This increase was not seen for families with older children (Figure 13).

The increase followed the introduction of the Families Package which included a new Best Start payment for children born, or due to be born, from 1 July 2018 onwards. In the first year of a child's life, Best Start is available to all families who meet residency requirements in weeks that they do not receive paid parental leave. In the child's second and third years, it is available on an income-tested basis.

After the introduction Best Start, parents and caregivers were invited to apply for Best Start as they registered the birth of their child through a new 'SmartStart' online tool. As part of this process, families gave consent for IR to use the information provided to determine their eligibility for other payments.

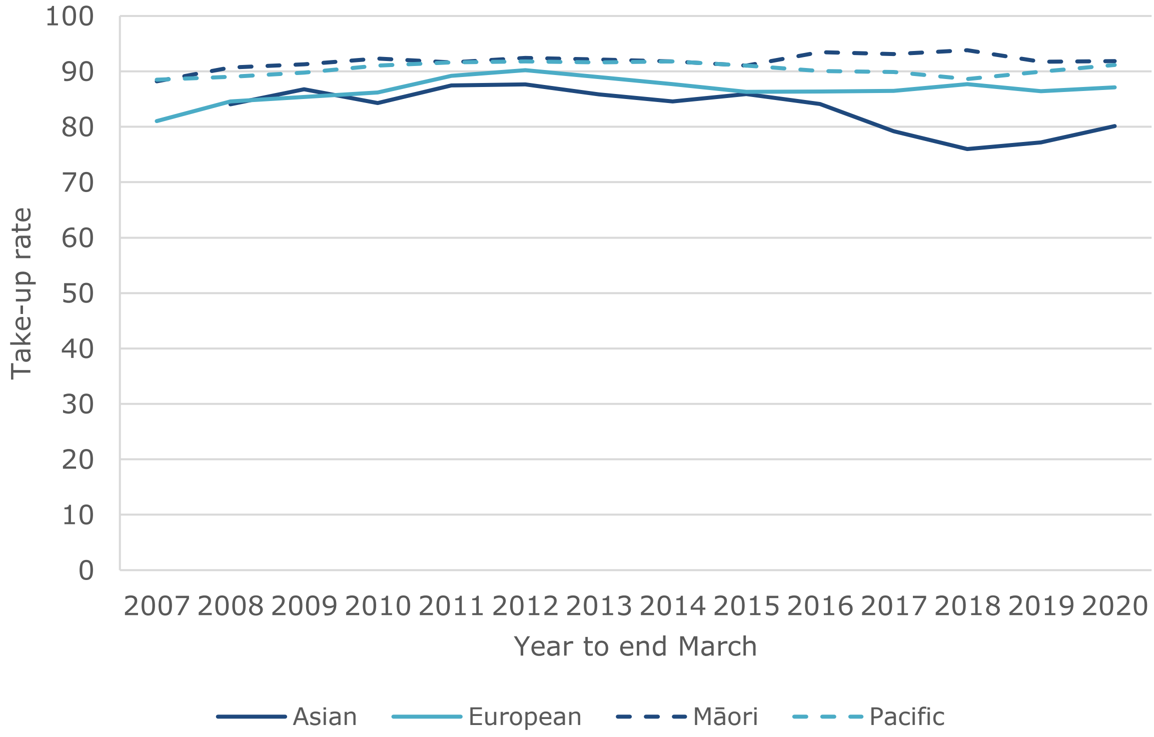
In a separate quasi-experimental impact evaluation we find that receipt of WFF payments other than Best Start was higher for the first cohort with births after 1 July 2018 than for earlier cohorts (Wilson and McLeod, forthcoming). The Best Start application process may have increased awareness of other WFF tax credits, and prompted parents who would not otherwise have received WFF to apply for those payments in their child's first year. Once registered, they would then be invited to reapply for payments in subsequent years as part of IR's annual renewal process.

These findings contribute to an evidence base showing that a portion of non-take-up can be addressed through system changes that more proactively invite and streamline initial applications and subsequent re-applications for those with potential eligibility (Ko and Moffitt, 2022).

Families with one or more parent of Asian ethnicity had low estimated take-up in recent years.

Figure 14 shows take-up trends by ethnic group(s) of parents and caregivers. Data for parents and caregivers who are MELAA or of 'Other' ethnicity are suppressed due to Stats NZ confidentiality protections, as are data for Asian in the year to end March 2007.

Figure 14: Estimated take-up over time by ethnic group(s) of parents and caregivers



Note: Results are suppressed for the MELAA and 'Other' ethnic groups for confidentiality reasons and are not included in the graph.

The late 2010's was a period of rapid growth in the Asian population of Aotearoa New Zealand. Low awareness of WFF, uncertainty about entitlements, administrative, personal and cultural barriers to claiming (including language barriers), or reluctance to claim payments among recent migrants may be factors explaining the trends in take-up rates.

It is notable that the increase in take up of main WFF payments for the first cohort eligible for Best Start was larger for Asian mothers than other ethnic groups (Wilson and McLeod, forthcoming). This suggests that some of the ethnic take-up gap can be addressed by policy and process changes that increase the ease of applying for and maintaining entitlements.

Linking errors in the IDI may also be a factor explaining take-up rate differences across ethnic groups. Stats NZ are investigating linkage rates for Chinese names and early results suggest higher than average linkage error rates.[4] Such errors would affect our ability to correctly link administrative data on WFF payment received from MSD or IR.

Another possibility is that income from overseas makes actual incomes higher than is apparent from linked administrative data for some families, or families are ineligible for WFF because they elect to have a temporary tax exemption on foreign-sourced income. We may overstate eligibility rates for recent migrants (and understate take-up rates) as a result of not being able to fully take these factors into account.

These possible drivers could be investigated further.

[4] Stats NZ Expert Data Users News - April 2022 email communication, received 8 April 2022.

Strengths and limitations

Linked survey and administrative data allow us to address an important evidence gap.

Linked data lets us:

- produce estimates of eligibility and take-up for nationally representative samples of families which, most crucially for our purpose, include families who do not receive WFF but could be eligible
- examine income using data from multiple administrative data sources
- examine receipt of WFF payments across two delivery agencies, IR and Work and Income
- examine residency status drawing on data from a range of relevant agencies
- produce estimates for a range of sub-groups, including by ethnic group.

By applying a consistent estimation approach, we are able to produce series indicative of changes over time and differences between population sub-groups.

But estimation of take up is challenging (Ko and Moffitt, 2022), and there are several limitations, simplifications, and assumptions that need to be borne in mind when interpreting the results of this study.

Family structure is difficult to determine over the period of entitlement.

A change in partner or in the number of and ages of children can trigger a change in WFF entitlement, and a new entitlement period against which parental income is assessed. We assume the family structure is fixed as at the HLFS survey date, and is as reported in the survey. This may not reflect the reality of people's situation, or changes in their situation during the tax year. In addition, we are unable to identify parent-dependent child relationships where children are not living with their parent at the HLFS survey date (this excludes, for example, 17- and 18-year-old tertiary students who may still qualify for FF but are living away from their parents).

We do not account for shared care and exclude very young parents.

Shared care arrangements that meet certain requirements result in shared WFF payments for most payment types. Shared care cannot be identified in Stats NZ household surveys, including the HLFS. Although it can be identified for those who do receive WFF, this coverage is not sufficient to allow us to account for shared care in our eligibility and take-up estimates.

In a small number of cases a person may be a member of two families if they are both a parent living with their young children, and themselves an under 18-year-old child living with their parents. We simplify the analysis and count such young people only once by examining families where the parent or parents are aged 18 or over.

Parental income is difficult to determine precisely.

We are only able to approximate the IR definition of parental income for assessing WFF eligibility.

- The IR definition includes net child support/maintenance income. We can only adjust for child support/maintenance paid/received if a person has a WFF assessment.
- Parental incomes are calculated separately by IR for different entitlement periods within tax years, for example as family structure changes, or there is a change in partner. As noted, we assume family structure is fixed as at the HLFS survey and treat the tax year as a single entitlement period.
- Overseas income is included in the income assessment, and new or returning residents with a temporary tax exemption on foreign sourced income are not eligible for WFF while the tax exemption is in place. Our estimation does not capture income from overseas that is not recorded on IR3 returns (eg. foreign-sourced income of non-resident spouses), or the restriction on eligibility for those with a temporary tax exemption, and may overstate eligibility for recent migrants as a result.
- We identify earned income via wages and salaries and self-employment from Employer Monthly Schedule data and IR3 returns. This excludes in-kind benefits such as lodging or housing provided by an employer that is included in the WFF income assessment.

These difficulties in accurately determining parental income are likely to contribute to the low estimated take-up rates for families on low incomes, after families supported by benefit are excluded, shown in Appendix 2.

Children's passive income is not included in our income estimation.

From the 2012 tax year, the amount of children's passive income (eg. interest, dividends, rent, and certain forms of beneficiary income from a trust) over $500 has been treated as income for WFF. Our estimation will over-state eligibility and potential entitlement for some families as a result.

Over the period of study, the IWTC was conditional on the number of hours worked by the parents. We cannot identify hours exactly.

As noted in the 'Estimation approach' section above, we calculate income thresholds based on the specified number of hours times the minimum wage. If a family earns above this threshold across the tax year we assume they meet the hours worked requirement. This can only approximate whether families meet the hours requirement.

We will be over-stating ineligibility due to receipt of other payments.

FTC is not available for a child if their caregiver is receiving Unsupported Child Benefit, Orphan's Benefit, or Foster Care Allowance for them. We assume that a family is ineligible if they received any income from one of the specified payments at any stage during the tax year. It is possible that families have part-year eligibility in months when they do not receive any of these other payments. It is also possible that they receive FTC for some children while receiving one of these other payments. Our approach will be overstating ineligibility in such cases.

Whether families meet residency requirements is approximated from available data.

To be eligible on residence grounds a caregiver must be a NZ resident and have been in NZ continuously for at least 12 months at any time while a NZ resident, or the child being claimed for must be a NZ resident and present in NZ (children born before 2006 or to resident parents are resident themselves).[5] We treat a family as eligible if one or both parents is observed to have been in NZ for 12 months, or there is no evidence of travel to or from NZ (implying the person has never left NZ) and either:

- they have travelled on an NZ or Australian passport, or
- they have been granted an NZ residence visa, or
- they were born in NZ, Australia, Cook Islands, Niue or Tokelau according to Census or NZ birth records.

Sample survey data is subject to sampling error and non-response bias.

In common with other household surveys, the HLFS has a low representation of families supported by benefit (McLeod and Wilson, 2021). Additional error is introduced from matching to administrative data. We seek to mitigate some of the effects of matching error by excluding cases where a link to the IDI cannot be established for an individual or family in the HLFS, or a link is established but no income data is identified for the parents.

We attempt to correct for remaining non-matching and non-response bias by re-weighting our sample to HES benchmarks, with new benchmarks added for benefit receipt and total WFF receipt. By re-weighting our samples to the number of families receiving a main benefit, we get a similar, but slightly smaller number of families supported by a main benefit compared to official figures (McLeod and Wilson, 2021).

A limitation of our recalibration approach is that excessive corrections could result in the introduction of additional bias, particularly if respondents in a group of interest (eg. families supported by a main benefit) have different characteristics than non-respondents in the group. More generally, post-stratification (the calibration of weights to population benchmarks) usually involves a trade-off between gains in accuracy and a loss of precision, as well as introducing the risk that the results may be overly impacted by outliers.

Linked administrative data is subject to several sources of error.

IDI data linking is generally probabilistic, meaning that some records may be incorrectly matched or not matched at all (Milne, et al., 2019). The IDI data used in this study also included information collected or generated in the process of administering tax credits, birth registrations and benefits, and will also incorporate any errors that occur in those processes.

We look only at broad ethnic groups.

We do not, for example, examine ethnic groups within the Pacific or Asian groupings. Data from the Youth19 survey of more than 7,000 secondary school students show that South Asian students are more likely to report that financial hardship affects their family than East Asian and European students (Peiris-John et al., 2021).[6] Future studies could usefully disaggregate data more fully to explore WFF eligibility and take-up rates for these groups, where sample sizes permit.

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[5] From 2020, parents and children who would otherwise be ineligible for WFF on residence grounds are eligible if they have been granted an Emergency Benefit on the grounds of hardship.
[6] The analysis used World Bank definitions of East and South Asia. East Asia comprises Brunei, Cambodia, China, Hong Kong, Indonesia, Japan, North Korea, South Korea, Laos, Macao, Malaysia, Mongolia, Myanmar, Philippines, Singapore, Taiwan, Thailand, and Vietnam. South Asia comprises Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

Comparison with other take-up estimates

Ko and Moffitt (2022) provide a survey of estimates of take-up of social benefits around the world. Our estimates for the main WFF tax credits are at the high end of those surveyed, but broadly comparable to those for programmes delivered through tax systems in high-income countries.

For example, estimated take up rates ranging between 75 and 85 percent for those without main benefit income from our study compare with estimates of 77 to 81 percent for the United States Earned Income Tax Credit, which offers a tax credit to those who file income taxes and have earnings. Our estimates are also broadly similar to recent take-up estimates for child benefit and tax credit programmes in Canada and the UK, and a 1999 take-up estimate for Family Income Supplements delivered through the tax system in Australia.

Take-up rates for WFF were last estimated as part of the Working for Families Evaluation (MSD and IR, 2010, p.33). Those estimates drew on responses to a 2006 - 2007 longitudinal survey of caregivers that were linked to IR administrative data for consenting survey respondents.

The sample frame for the longitudinal survey had a high representation of families with past or current WFF receipt. As a result, the estimates were high (95-97 percent) relative to our estimate for 2007 (81 percent). Notwithstanding the difference in level, the patterning of take-up rates across groups is similar in the two studies. Both find higher take-up rates for families with main benefit income, lower income, and higher entitlement amounts, and for families in younger age groups.

Ongoing monitoring of eligibility and take-up

The Welfare Expert Advisory Group (WEAG) recommended annual reporting on take-up rates for income support payments, among other measures (WEAG 2019).

This study demonstrates how estimation of WFF eligibility and take-up requires a number of assumptions and simplifications and has a range of limitations and sources of potential error. Given this, there is considerable uncertainty in the estimates for any particular year taken in isolation.

In addition, there is around an 18-month lag between the end of a tax year and comprehensive data becoming available in the IDI. This lack of timeliness further reduces the usefulness of producing estimates on an annual basis.

Nevertheless, patterns of receipt across longer time periods are likely to be indicative of real changes, as are sustained and large differences between different population groups. This means that there is likely to be value in updating this study every three or so years to identify emerging patterns or issues.

References

Graham, S. (2022). The New Zealand Income Support System as at 1 July 2022. Wellington, New Zealand: Ministry of Social Development. Retrieved from: https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/evaluation/families-package-reports/monitoring-reports.html

Graham, S., & Arnesen, L. (2022). *Monitoring the Families Package and changes to income support from 2018 to 2021.* Wellington: Ministry of Social Development. Retrieved from: https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/evaluation/families-package-reports/monitoring-reports.html#FamiliesPackagemonitoringreports7

Ko, W., & Moffitt, R. (2022). *Take-up of social benefits.* NBER Working Paper No. w30148, Retrieved from SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4134944

McKenzie, A. (2022). *Social assistance chronology 1844–2022.* Retrieved from: https://www.msd.govt.nz/about-msd-and-our-work/about-msd/history/social-assistance-chronology-programme-history.html

McLeod, K., & Wilson, M. (2021). *Estimates of the change in family incomes after the introduction of the Families Package.* Retrieved from: https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/evaluation/families-package-reports/impacts.html#MothersinthefirstcohorttoqualifyforBestStartandextendedpaidparentalleavegainedanadditional10percentincreaseinincomeasaresultinthefirstsixmonthsofthepolicy5

McLeod, K., & Wilson, M. (2022) *Estimating take-up of Best Start.* Retrieved from: https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/evaluation/families-package-reports/monitoring-reports.html#EstimatesoftakeupoftheBestStarttaxcredit4

Milne, B.J., Atkinson, J., Blakely, T., Day, H., Douwes, J., Gibb, S., Nicolson, M., Shackleton, N., Sporle, A., & Teng, A. (2019). Data resource profile: the New Zealand Integrated Data Infrastructure (IDI). *International Journal of Epidemiology*, 48(3), 677-677E. https://academic.oup.com/ije/article/48/3/677/5359491

Momsen, K. (2021). *Client experiences of the 2018-2020 social assistance changes - a baseline research synthesis*. Wellington: Ministry of Social Development. Retrieved from: https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/evaluation/families-package-reports/client-experience-research.html

MSD & IR. (2010). *Changing families' financial support and incentives for working: The summary report of the evaluation of the Working for Families package.* Retrieved from: https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/evaluation/receipt-working-for-families/index.html

MSD (2018). *Families and whānau and the benefit system – A high-level initial briefing. Paper prepared to inform the work of the Welfare Expert Advisory Group*. Retrieved from: https://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/information-releases/weag-report-release/families-and-whanau-and-the-benefit-system-a-high-level-initial-briefing.pdf

MSD (2021). *Factsheet: What's happening to the number of sole parents on benefit.* Retrieved from: https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/statistics/covid-19/whats-happening-to-the-number-of-sole-parents-on-benefit.html

Peiris-John, R., Kang, K., Bavin, L., Dizon, L., Singh, N., Clark, T., Fleming, T., & Ameratunga, S. (2021). *East Asian, South Asian, Chinese and Indian students in Aotearoa: A Youth19 report.* Auckland: The University of Auckland. Retrieved from: https://static1.squarespace.com/static/5bdbb75ccef37259122e59aa/t/60d3a4202b2d4a2ddd6b7708/1624482883718/Youth19+Report+on+South+Asian%2C+East+Asian

%2C+Chinese+and+Indian+student.pdf

Perry, B. (2019). *Household incomes in New Zealand: Trends in indicators of inequality and hardship 1982 to 2018*. Retrieved from: https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/monitoring/household-incomes/household-incomes-1982-to-2018.html

[WEAG] Welfare Expert Advisory Group. (2018). *The take-up of income support.* Retrieved from: https://www.weag.govt.nz/assets/documents/WEAG-report/background-documents/38f35441ff/Take-up-of-Income-Support-010419.pdf

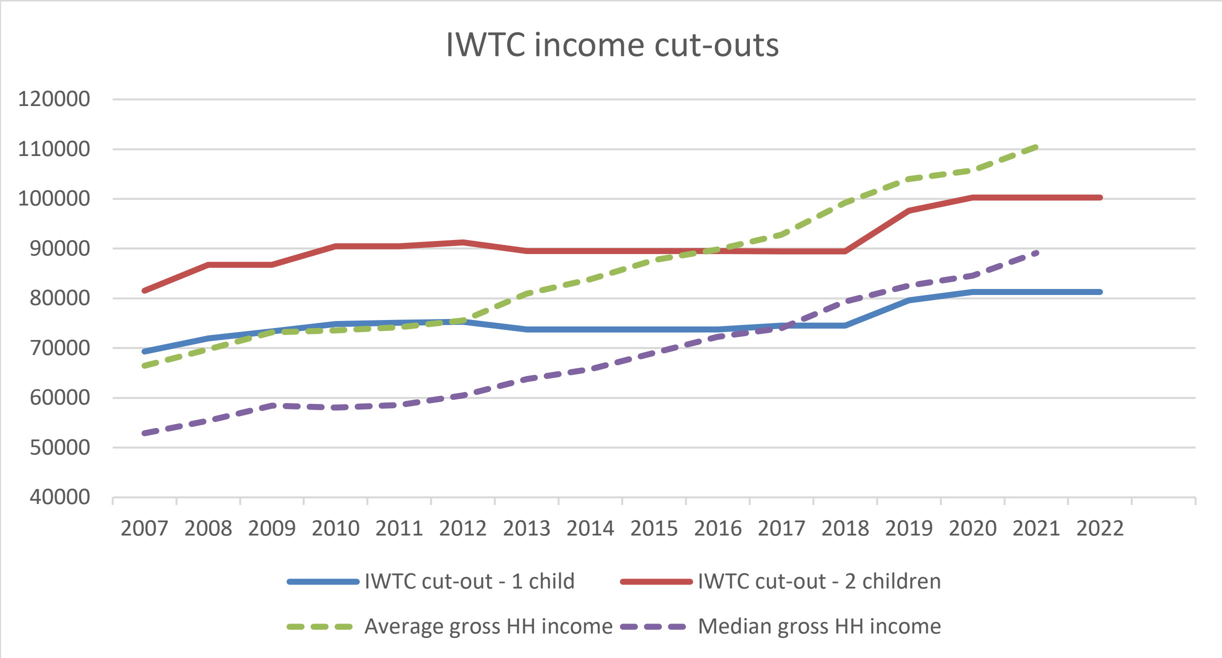
[WEAG] Welfare Expert Advisory Group. (2019). *Whakamana Tāngata – Restoring dignity to social security in New Zealand.* Retrieved from: https://www.weag.govt.nz/weag-report/

Wilson, M., & McLeod, K. (2021). *Estimating the impact of the introduction of the 2018 Families Package early-years changes – Technical report*. Retrieved from: https://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/evaluation/family-packages/early-years-impacts-full-report.pdf

Wilson M., & McLeod, K. (forthcoming). *How the 2018 Families Package increased financial assistance in children's early years and created new opportunities for research*. MSD working paper.

Appendix 1

Income level at which WFF eligibility ends and mean and median household income



Sources: IR: March year average cut-out points for families with children aged between three and 12; Stats NZ: HES mean and median household (HH) income.

Appendix 2

Figure A2.1: Estimated take-up rate over time by parental income, excluding families with income from benefit ($2020)

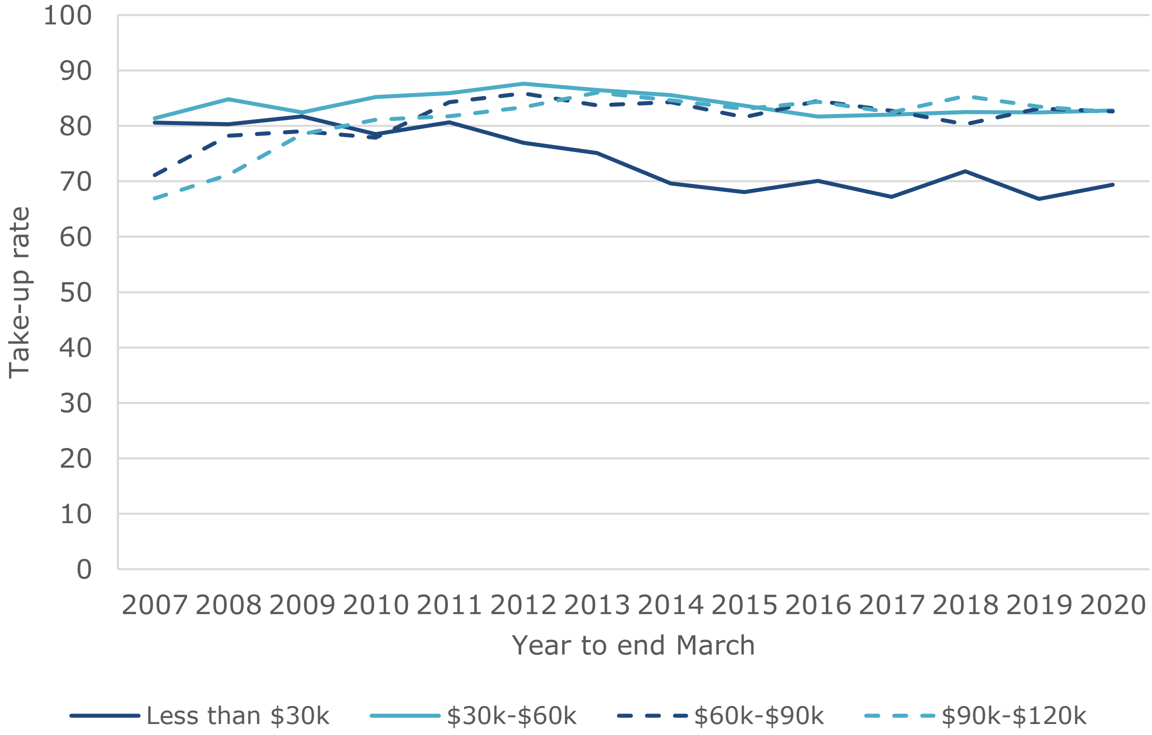


Figure A2.2: Estimated take-up over time by area deprivation (NZDep quintile) , excluding families with income from benefit

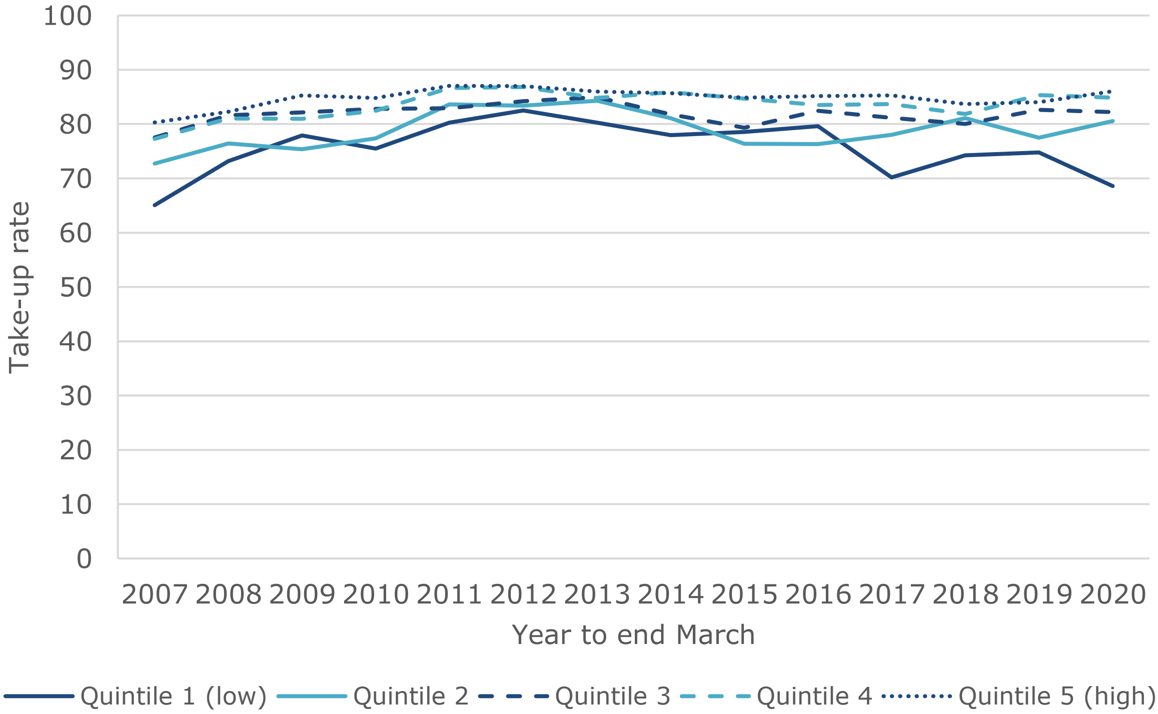


Figure A2.3: Estimated take-up over time by family type, excluding families with income from benefit

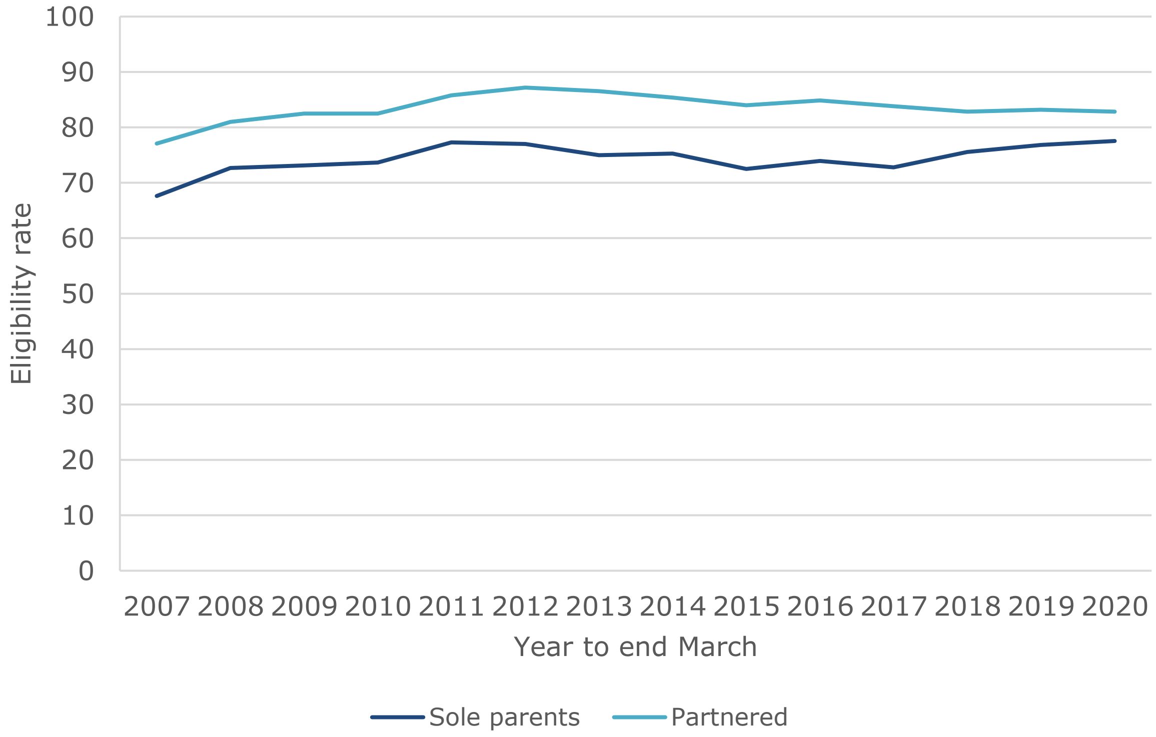


Figure A2.4: Estimated take-up over time by age of youngest child, excluding families with income from benefit

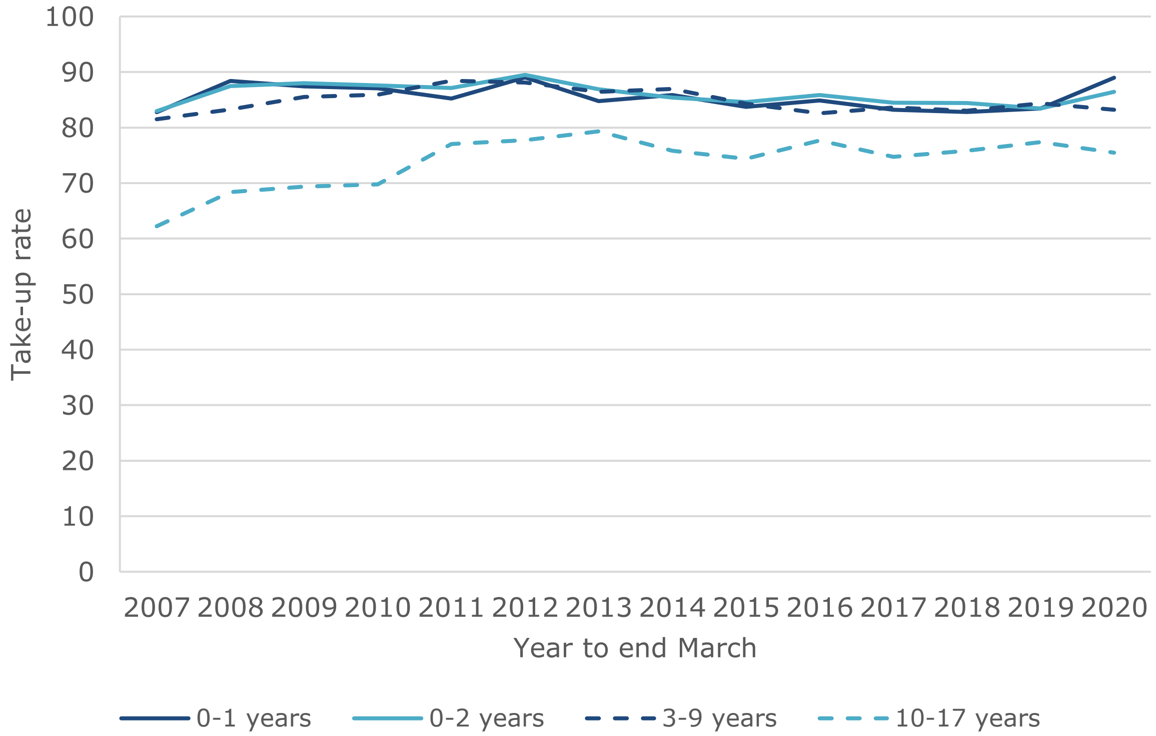
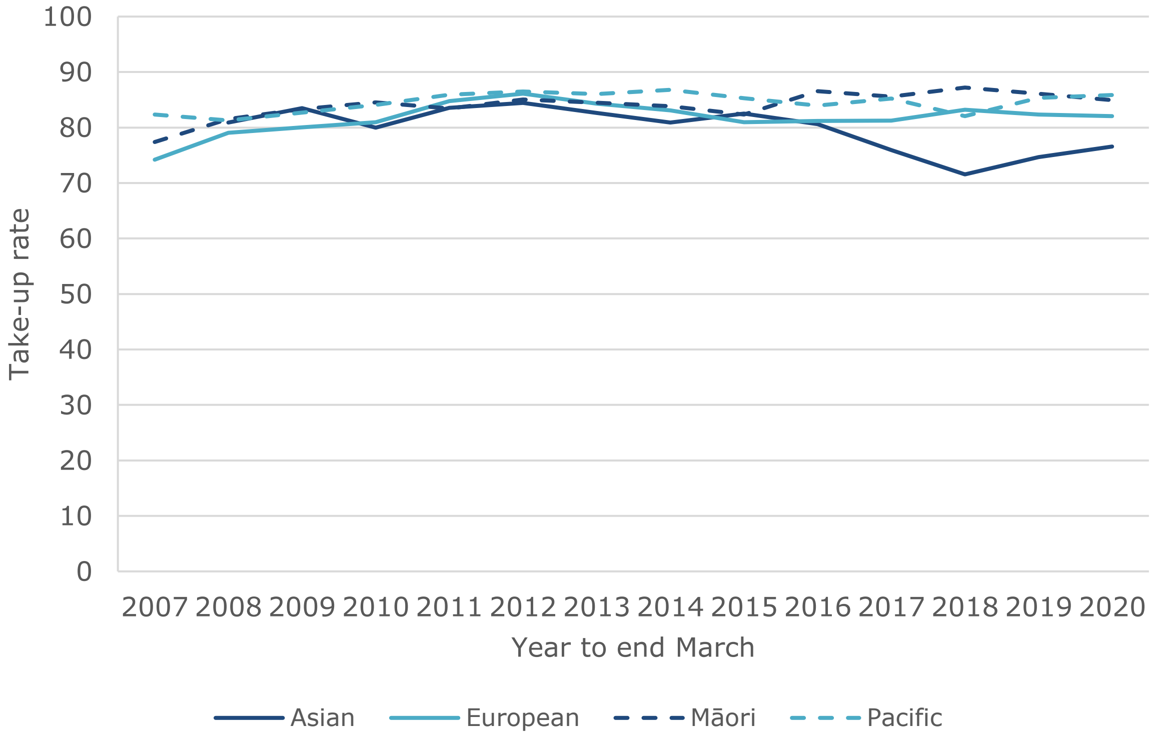


Figure A2.5: Estimated take-up over time by ethnic group(s) of parents and caregivers, excluding families with income from benefit



Note: Results are suppressed for the MELAA and 'Other' ethnic groups for confidentiality reasons and are not included in the graph.