Distributional Modelling of Proposed Childcare Reforms in Australia[1]

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Overview

The Federal Government provides child care subsidies to families undertaking formal child care. These subsidies are cash payments either paid directly to the child care provider or to the parents. The payments are designed to assist families with the cost of child care and to support parents in returning to work after having children. This paper provides a distributional analysis of a suggested new subsidy scheme devised by the Federal Government in the 2015–16 Budget. The paper considers the distributional impacts of the policy with regard to 'winners' and 'losers' and the reasons for these gains or losses.

Existing and proposed policy

The current system of payments is a combination of a means tested Child Care Benefit (CCB) and a non-means tested, but capped, Child Care Rebate (CCR). Both payments are provided on a per child basis.

The current rate of CCB provides up to $4.17 per hour for non-school aged children and 85 per cent of that rate for school aged children. Low income families and families receiving pensions or allowances receive the maximum benefit, but for families on higher incomes the payment tapers away and depending upon family circumstances, few families with income above approximately $160 000 per annum receive the payment for formal child care costs[2]. CCB also has a complex array of loadings depending on usage.

CCR is equal to 50 per cent of the out-of-pocket costs of child care for each child up to $7500 per annum—after CCB payments. Both CCB and CCR payments and income thresholds are indexed to the Consumer Price Index (CPI)[3].

The 2015–16 Federal Budget proposed that CCB/CCR payments be replaced with a single child care payment provided directly to the child care provider. This payment provides 85 per cent of the gross cost of childcare to families with incomes below an expected adjusted taxable income of $65 710 by 2017–18. This subsidy rate tapers to 50 per cent for families earning $170 700 and remains at 50 per cent up to $250 000. For incomes above $250 000 the subsidy rate tapers away to 20 per cent at $340 000 and remains at 20 per cent

[2] Some families with multiple children in child care will have access to small amounts of CCB on account of the income test including a loading for multiple children.
[3] The CCR cap was frozen at $7500 per year, per child but reverts to CPI indexation from 2017–18 under the existing policy.

for higher incomes. An annual subsidy cap of $10 000 also applies to families earning $185 710 or more.

1. The existing policy provides for up to 24 hours of CCB subsidy per week regardless of hours worked by both parents of a couple or a single parent, and 50 hours CCB subsidy for at least 15 hours work, training or studying. For a CCB subsidy of more than 24 hours, both parents must work at least 30 hours per fortnight each. To receive CCR, parents need to meet the Child Care Benefit Work, Training, Study test which requires work or other activity, but has no minimum number of hours of work each week.

Under the proposed policy a new activity test ensures that parents will only receive a subsidy where they undertake an approved activity such as work, study, training or volunteering for at least eight hours per fortnight each. To receive more than 36 hours per fortnight per child of care, both parents must work for more than 16 hours per fortnight. To receive more than 72 hours per fortnight per child, both parents must work greater than 48 hours per fortnight. Parents do not receive more than 100 hours of support for each child per fortnight. This new activity test is expected to be more constraining than the existing test.

The new policy only applies a family's calculated subsidy rate to child care prices up to $11.55 for long day care, $10.70 for family day care and $10.10 for outside school hours care in 2017–18. Child care prices beyond these rates will only be subsidised at these set maximum levels, not the actual child care price as is the case with CCR.

The existing policy provides some additional support to around 50 000 income support recipient families as a top-up to the CCB/CCR system. This program is called the Jobs, Education and Training Child Care Fee Assistance program (JETCCFA). In 2013–14, the Special Child Care Benefits supported 31 000 families where children were at risk of abuse or neglect with 100 per cent fee relief. The proposed package replaces these programs with the Additional Child Care Subsidy.

Modelling methodology

This modelling relies heavily upon the Australian Bureau of Statistics (ABS) Survey of Income and Housing 2013–14 unit record data. The ABS does provide actual CCB and CCR information for each income unit; however, for the purpose of policy comparison we

simulate these payments based on the detailed family and child information provided in the survey.

The ABS survey data provides, at the family level, the number of children in formal and informal care, the types of care used, ages of children, formal and informal child care costs (gross) and hours, and the income of each family. This data provides the best available detailed information on individual families' circumstances, and was the base dataset for the modelling used by the Productivity Commission in its recent inquiry. However, it does require some adjustment in order to undertake microsimulation modelling of the current and proposed child care systems. The data is provided at the family level whereas we require information on type, cost and hours at the child level. We also need adjusted family income rather than gross income.

For the vast majority of families with only one child in care, the data is in a form that matches up very closely to our needs. For families with multiple children in care, some imputations were required. The vast majority of childcare income units in the survey data were either single child families or multiple child families with relatively straightforward imputations.

The ABS survey's child care data has improved since earlier versions. In earlier versions there was a significant problem with respondents being unsure about gross or out-of-pocket (after subsidy) prices. Improved questionnaire design has removed this problem. The ABS survey still undercounts the number of families using formal care[4]. To overcome the undercount of child care families we have reweighted the child care records so that the correct number of families and the correct distribution of families are estimated using the data. We reweight to the following benchmarks:

1) Type of care (long day care, family day care, outside school hours care).
2) CCB recipient family income distribution.
3) CCR recipient family income distribution.
4) CCB and CCR maximum rate recipients[5].

The year of analysis in this report is for 2017–18—the same year the proposed scheme is to be introduced. We compare for 2017–18 the proposed subsidy scheme with the existing scheme. The modelling of the existing scheme updates all parameters in line with CPI adjustments as forecast in the 2015–16 Federal Budget. The benchmarks above are

[4] The HILDA data also suffers this same problem.
[5] These benchmarks are projections based on current trends extrapolated from the Department of Social Services administration data for 2012–13.

estimates for that year. Child care prices derived from the ABS survey have been adjusted in line with the expected distribution of prices in 2017–18 using www.mychild.gov.au price distribution data from 2014 and uprating those prices in line with expected price increases of around seven per cent on average to 2017–18, as projected in the 2015–16 Federal Budget. There were a number of outlier derived prices in the survey and these prices were removed and imputed based on the non-outlier distribution for each type of care.

CCB entitlement and entitlement under the proposed child care scheme are linked to adjusted family taxable income. The ABS survey data does not provide such information so this variable was constructed using the components of personal income in the person file of the ABS Survey of Income and Housing. This data does not have deductions information and these were imputed based on a two-step logistic regression methodology with estimated parameters using ATO 2012–13 taxation data.

The microsimulation method used in this paper estimates the child care subsidy under the existing rules and compares the subsidy under the proposed system. Families (income units) are split up between 'winners', 'losers' and 'no change'. We would expect the proposed system to provide more winners than losers, as for typical child care families the proposed system is more generous. For families in the 'loser' cohort we decompose these families into their respective reason for losing subsidies. The following points are the major reasons we identified:

1) Activity testing reducing claimable hours for each child.
2) The actual price paid being greater than the maximum allowable subsidy price.
3) Lower subsidy rates for families with incomes over $250 000 per year.
4) Families no longer receiving a subsidy (CCB) for informal care (generally a relatively small subsidy).

Results

We estimate that the proposed package provides an increased subsidy to 582 000 (56 per cent) families, while 330 000 (32 per cent) families will be worse off and 126 000 (12 per cent) income units will have the same subsidy[6]. This broadly equates to moderately less

[6] 'No-change' allowed for a margin of plus or minus 2.5 per cent around an exact zero result.

than one in three families being worse off and the rest either better off or unchanged (708 000)[7].

Table 1a provides a detailed description of the winners and losers from the proposed package for families. The table shows the breakdown of outcomes by income level (income thresholds for the new package) and whether the 'loser' income unit was impacted by the activity test or the maximum price cap applied to the proposed package. The activity test is split between those who were not impacted by the activity test and those that were impacted by the activity test for the different levels of activity testing[8]. The table also details the income units where at least one child's child care hourly rate was greater than the maximum price of the proposed package.

Table 1a. 'Winners' and 'losers' from proposed policy—families

	Worse off families								*Better off families*	
Family income level	Activity test Hours worked by parents < 8 hours	< 16 hours	< 48 hours	*Total*	Price reduction (Cap)	Lower subsidy Other	*Worse off total*	% Worse off	Better/ No change	% Better/ No change
< $65 000	29 281	4079	2030	*35 390*	2814	33 428	71 632	25.0%	214 793	75.0%
< $175 000	79 394	7479	1404	*88 278*	19 854	36 665	144 797	26.9%	393 359	73.1%
< $250 000	7013	2187	563	*9763*	21 369	7186	38 318	30.4%	87 591	69.6%
> $250 000	11 563	4009	0	*15 571*	18 610	41 113	75 294	85.6%	12 658	14.4%
Total	**127 250**	**17 754**	**3997**	***149 002***	**62 648**	**118 392**	**330 042**	**31.8%**	**708 401**	**68.2%**

We find that overall, of the 330 000 families that are worse off, around 149 000 are affected by the activity test—most of whom have both parents working less than eight hours per fortnight. Around 62 600 are impacted only by reaching the price cap. Around 118 400 income units are not impacted by the price reduction or the activity test but are still worse off. Around 41 100 of these are high income families with reduced subsidy rates (income greater than $250 000). The remaining 77 300 income units that are worse off and not impacted by the activity test or the price cap would be expected to be those families who will either no longer receive CCB for informal care or a small number of families who

[7] Note that our modelling projects around 10 per cent fewer families using child care by 2017–18 than recent projections by the Department of Education.

[8] A very small number of families are impacted by both the activity test and price cap. In our analysis all are counted towards the activity test. Around 6600 families are impacted by both in Table 1a.
We assume that all families receiving government benefits (pensions and allowances), except for parenting payment single and partnered families with children aged under six, will pass activity testing due to job search requirements.

receive very low cost formal care and have low enough incomes that their CCB and CCR subsidy is a little higher than the 85 per cent subsidy of the proposed package.

The results generally suggest that families who are worse off under the proposed package are more likely to be families with incomes above $65 000 per year, but families with incomes above $250 000 are substantially more likely to be worse off with nearly 86 per cent worse off compared to 25 per cent for families with an income below $65 000.

Of families who are either better off or no worse off we find that a further 14 000 families are impacted by the activity test and 97 000 by the price cap. The reduction in subsidy was not enough to leave these families worse off.

On a child basis (some families have multiple children attending child care) we find that the proposed policy lowers the subsidy for 32.9 per cent of children (390 191) and either increases the subsidy or the subsidy remains unchanged for the remaining 796 500 children. Around 157 400 children are impacted by the activity test and of these, 130 600 have parents who are working less than eight hours per fortnight.

Table 1b. 'Winners' and 'losers' from proposed policy—families by income quintile

	Worse off families								*Better off families*	
Family income level	Activity test Hours worked by parents < 8 hours	< 16 hours	< 48 hours	*Total*	Price reduction (Cap)	Lower subsidy Other	*Worse off total*	% Worse off	Better/ No change	% Better/ No change
Q1	21 876	0	1971	*23848*	0	13 788	37 636	31.6%	81 417	68.4%
Q2	40 214	5075	59	*45 348*	2189	25 232	72 769	39.0%	113 865	61.0%
Q3	37 845	4712	0	*42 556*	11 181	23 079	76 816	24.2%	240 025	75.8%
Q4	11 979	2972	563	*15 514*	20 821	8042	44 377	20.2%	175 785	79.8%
Q5	15 336	4995	1404	*21 736*	28 456	48 252	98 443	50.3%	97 309	49.7%
Total	**127 250**	**17 754**	**3997**	***149 002***	**62 648**	**118 392**	**330 042**	**31.8%**	**708 401**	**68.2%**

Table 1b provides the same information as Table 1a except the income variable is the income quintile for each family. On this basis we find that families belonging to Q3 (middle 20 per cent) and Q4 (upper middle 20 per cent) are the least likely to be worse off, while Q5 (upper 20 per cent) are the most likely to be worse off[9].

The results presented above show a significantly larger number of 'loser' families than those provided by the Commonwealth Education Department. The departmental figures

[9] Income quintiles were based on equivalised disposable income for each household. Household disposable income includes payments such as government benefits and deducts personal income tax. 'Family income' used in Table 1a and Table 1b is an adjusted form of taxable income for an income unit. There can be considerable difference between family income and household disposable income.

estimate that around 184 000 families would be worse off, and of these, 45 000 are impacted by the hourly fee cap, while 37 000 are worse off due to the activity test. The main driver of difference between the numbers presented in this report and those of the Education Department is the much lower activity test impact estimated by the government.

The government has provided only limited detail on their modelling apart from these broad outcome estimates. We expect however, that the likely driver of the difference would relate to either the use of administration data or an assumed pick up in female participation, particularly for those families impacted by the activity test. This implies that one or both partners are either increasing their hours or joining the labour force and becoming employed.

Table 2 provides the latest employment statistics for families who use formal child care. According to these estimates 22.4 per cent of couple families and 39.5 per cent of single parent families do not have both parents (one for single parents) working. This implies that out of the 919 000 families who use formal child care, 234 000 or 25.5 per cent could potentially not meet the first tier of the activity test.

Table 2. Parental employment, families with children in formal care

Couple family	*Both*	*One*	*None*	*Total*
number (000s)	575.6	155.8	15.4	761.9
%	75.5	20.4	2.0	100
Single parent				
number (000s)	0.0	95.8	62.8	159.1
%	0.0	60.2	39.5	100

Source: ABS Childhood Education and Care, 4402.0, June 2014.

The data underlying our modelling is the ABS Survey of Income and Housing from 2013–14 and provides a similar distribution of results by employment but also provides additional information on formal education which is also likely to enable a family to pass the activity testing. The data in the surveys however does not necessarily line up exactly with the legislated policy, as some people will be undertaking training or charity work that is not covered by the surveys.

Table 3 provides the same analysis as Table 1a but we model a more relaxed policy where we assume that all parents pass the first tier of the activity test.

Under this policy we find that the number of families worse off declines to 262 500 families or 25.3 per cent. Those impacted by the activity test declines to 66 600, 72 300 families

have children whose child care prices reach the price cap and a further 123 500 are worse off for other reasons. Around 74.7 per cent (776 000) families are better off, or no worse off on account of the proposed policy.

Table 3. 'Winners' and 'losers' from proposed policy—all families pass Tier 1 Activity Test—families

	Worse off families								*Better off families*	
Family income level	Activity test Hours worked by parents < 8 hours	< 16 hours	< 48 hours	*Total*	Price reduction (Cap)	Lower subsidy Other	*Worse off total*	% Worse off	Better/ No change	% Better/ No change
< $65 000	0	17 175	4079	*21 254*	5706	34 688	61 648	21.5%	224 777	78.5%
< $175 000	0	23 753	7479	*31 232*	22 233	36 962	90 428	16.8%	447 729	83.2%
< $250 000	0	3041	2187	*5228*	22 691	7186	35 105	27.9%	90 804	72.1%
> $250 000	0	4925	4009	*8934*	21 673	44 687	75 294	85.6%	12 658	14.4%
Total	**0**	**48 895**	**17 754**	***66 648***	**72 303**	**123 523**	**262 474**	**25.3%**	**775 968**	**74.7%**

For a number of children we find that around 321 800 would have a reduced subsidy which is 68 400 fewer than the Government's policy, as modelled. Of these children we find that around 74 200 are impacted by the activity test.

A concern around the government's modelling is that the administration data has only limited information on the hours worked by parents. To properly model the activity test, the employment data would need to be imputed using other sources such as the ABS survey data which has both hours worked and child care use data.

Alternative data sources such as the ABS *Childcare Education and Care, 2014* publication estimates that 25.5 per cent of families (234 000) in formal care don't have both parents employed, or one parent in the case of single parent families. This is up from 24 per cent in 2011. The raw ABS Survey of Income and Housing surveys in 2009–10, 2011–12 and 2013–14 all estimate similar shares of families where both parents are not working but are still using formal childcare. All of these families under the new child care package would be subject to no or reduced hours of subsidised child care.

An advantage of the administration data in modelling the impacts of the policy change is that they have the full population of over one million families who use childcare. The 2013–14 ABS survey used here only has around 1100 income units sampled with formal child care. The ABS data has improved on older versions of the survey but some issues appear to remain with an overall undercount of child care families and some price information that did require significant alteration through imputation methods.

The major advantage of the survey approach adopted here is that we do have detailed information on the hours worked for each parent, whereas the administration data does not have any information on hours worked, only a flag for passing the CCR work, training and study test. Passing this test does not require the family to enter their hours worked, only that they have worked, trained or studied, or undertaken voluntary work. The other information available only relates to families under the CCB income threshold and if their work activity is greater than 15 hours per week or 30 hours per fortnight.

Our modelling also suggests that for families with children in formal care, the secondary income earner for couples and the primary income earner for single parents pay around $9 billion in personal income taxation each year compared to the $8 billion each year of child care subsidies these families received in 2017–18 under the existing policy[10]. By working, these parents are also saving the government additional payments in family tax benefit and government pensions and allowances.

Conclusion

The analysis here clearly shows that the proposed policy will benefit most families who use formal child care. We estimate that around 56 per cent of families will be better off, 32 per cent will be worse off and the remainder will be largely unchanged.

The modelling estimates that the main reason for families receiving no, or less child care subsidies is the new activity test. Around 149 000 families are worse off due to the activity test.

A smaller number of families will be impacted by the price cap that applies to the proposed child care package. These families still receive an often significant subsidy but the subsidy rate applies only to a capped price which we estimate will mean around 62 600 families will be worse off.

Under a policy where we assume that all families will meet at least the first tier of the activity test we find that only 262 500 families are worse off and that the activity test only leads to around 66 600 families to be worse off.

There are a small number of families who will be worse off through a combination of the activity test and the price cap, but some further families are worse off due to the smaller

[10] We do not know the tax revenue these parents would have paid in the absence of child care payments so it would be simplistic to assume that all this revenue is the result of child care payments.

subsidies for very high income families (above $250 000), informal care no longer providing a CCB subsidy and some rare cases of very cheap child care where CCB and CCR can actually have a modestly larger subsidy than the proposed scheme.

There are major differences in the data between that used here and that we understand was used by the Commonwealth. The Commonwealth will have a superior data base with the full population of formal childcare families and exact price and hours information for child care use. A major drawback of the administration data is the lack of hours worked information for parents. The survey data does not have this issue and we believe this provides a more accurate picture of the impact of the activity test which arguably represents the most significant change proposed for the new subsidy.

Overall, we find that the proposed policy is for most families a moderately more generous and simpler subsidy. We also find that this policy will lead to about 262 000–330 000 families being worse off on account of a tighter activity test, price caps, less generous subsidies for very high income families and some families who use informal care no longer receiving a subsidy for their paid care. The new subsidy is more progressive with lower income families more likely to gain than high income families. On the basis of equivalised disposable income (a superior measure of relative living standards) middle and upper middle income families are more likely to gain from the proposed policy than low and low middle income families. The top 20 per cent are the least likely to gain an increased subsidy.

The modelling here does not attempt to model behaviour change. It may be the case that some parents will increase their hours worked and/or move their children into more affordable child care. It may also be the case that some parents will remove their children from child care where the proposed policy provides lower subsidies. We do not expect the behavioural change to be large in the short-run given the difficulties parents have in finding appropriate child care and a relatively benign labour market.

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