Australian Government **Department of Social Services**	RECEIVED 1 7 DEC 2018	**General Brief** MB18-001773

To: **Minister for Families and Social Services, the Hon Paul Fletcher MP** (for information)

Subject: Assessment of the ANU Centre for Social Research and Methods modelling of social security payments

Recommendation for Minister Fletcher: That you

1.	Note the information provided in this brief about the Centre for Social Research and Methods report *Optimal policy modelling: a microsimulation methodology for setting the Australian tax and transfer system.* s22	Noted / Please Discuss
Minister's Signature:......		**Date:**...7.../...1.../ ~~2018~~ 2019

Minister's Comments	**Quality Rating**
[handwritten comments]	1. Very Poor 2. Poor 3. Satisfactory 4. Good 5. Excellent

Key Issues:

1.   The Australian National University (ANU) Centre for Social Research and Methods (CSRM) released the report *Optimal policy modelling: a microsimulation methodology for setting the Australian tax and transfer system* on 11 December 2018. A copy of the report is provided at **Attachment A**.

2.   The report has a number of limitations:

    a)   It is primarily experimental, is a working paper and has not yet been peer reviewed.

    b)   It focuses on a reduction in the poverty gap but s47C
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    c)   Restructuring payment rates under a budget-neutral constraint would necessarily involve offsetting increased rates for some recipients (for example, increasing Newstart Allowance by over $200 per fortnight) by reducing rates for other recipients (for example, reducing Age Pension rates by over $40 per fortnight). In some cases, this will increase their poverty gap (such as Age Pension recipients who also receive Rent Assistance or families who receive Family Tax Benefit).

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    e)   Only five payments were modelled in the report – Newstart Allowance, Parenting Payment Single, Rent Assistance, Age Pension (and other pension rates) and Family Tax Benefit. These payments account for around 80 per cent of social security payments.

3.	The report outlines CSRM's initial attempt to use a new microsimulation methodology to adjust the payments system to achieve a set policy objective – minimising the poverty gap. The calculations involved cycling through iterations of five payments and associated rates in order to determine the rate settings at which the poverty gap could be minimised under a budget-neutral constraint. The report acknowledges that other factors such as incentives to work have not been factored into the model. For each payment type, rates retain existing relativities, the amount a payment can vary is limited, and the Newstart Allowance rate cannot exceed 90 per cent of the pension rate.

4.	The strong focus of media articles (such as the article appearing in *The Australian* at **Attachment B**) has been on the optimal payment rates outlined in the report. The report itself does not take a position on the rate settings presented by the model. It states that its primary purpose is to describe and test the efficiency of the new modelling methodology to achieve a specified policy outcome, with minimising the poverty gap used as an example. The report also highlights that the model could be used to produce other policy outcomes, such as optimising effective marginal tax rates. While the authors of the report were careful to state that the report was not prescriptive of payment rates policy, on 13 December 2018, the authors released a piece in *The Conversation* (see **Attachment C**) that advocates for the rate settings in the report.

5.	The rate settings and poverty gaps are determined at both the **household** and **income unit** level and using both **before-housing cost** and **after-housing cost** incomes, resulting in four poverty measure approaches.

6.	Using the after-housing income unit poverty gap approach:
   a)	Age Pension (single) would be **reduced** by around $40 per fortnight
   b)	Newstart Allowance (single) would be **increased** by around $223 per fortnight
   c)	Parenting Payment Single would be **increased** by around $126 per fortnight
   d)	Family Tax Benefit (Part A under 13 rate) would be **reduced** by around $23 per fortnight
   e)	Rent Assistance (single, non-sharer) would be **increased** by around $26 per fortnight.

7.	According to the report, these optimal payment rate settings would reduce the poverty gap by 11 per cent with no impact on social security expenditure. Using the after-housing household poverty gap approach, the related optimal payment rate settings reduce the poverty gap by 7.6 per cent. The report only includes average poverty gap impacts by payment type for the before-housing results (not the more appropriate after-housing results), but does not provide detailed cohort impacts.

8.	Further, the report notes that the Australian social security system is already tightly targeted towards low-income households and that this would be largely unchanged under the optimal policy settings.

9.	The report notes a number of limitations of the research:
   a)	Assumptions around behavioural changes have not been made (for example, a recipient's payment choice if the rate of Newstart Allowance becomes higher than the rate of Parenting Payment Single).
   b)	The report uses only one type of equivalence scale (the modified Organisation for Economic Cooperation and Development (OECD) scale) to equivalise incomes, though notes the lack of agreement about which scale is most appropriate.
   c)	The results are sensitive to the measure of poverty used – the before-housing and after-housing results are at odds with each other.
   d)	The report only focuses on one objective of the social security system – poverty reduction – without considering other objectives of the social security system, such as work incentives, costs of children and improving after-housing income for low-income private renters.

The report notes that these are important factors to be considered in future research.

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See **Additional Information** for further analysis of these issues.

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Sensitivity:
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Financial Implications: N/A

Regulatory Implications: N/A

Risk Management: N/A

Community Grants Hub: N/A

Consultation:
13. Policy Analysis and Reporting Branch.

Attachments:
Attachment A: ANU Centre for Social Research and Methods report *Optimal policy modelling: a microsimulation methodology for setting the Australian tax and transfer system*
Attachment B: *'Raise dole, pension to end poverty gap'* – article from *The Australian* (12 December 2018)
Attachment C: *'Cut the pension, boost Newstart. What our algorithm says is the best way to get value for our welfare dollars'* – article from *The Conversation* (13 December 2018)

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Additional Information:

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The authors note that the results from their analysis are only relevant to the poverty reduction objective of the tax and transfer system and therefore do not necessarily match up well with other objectives of the system. s47C
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Definition of poverty and poverty gap

The research has used an internationally common approach to estimating poverty lines. A household is defined as being in poverty if its income level is less than half of median equivalised household disposable income. Equivalisation adjusts household incomes to account for different household sizes and compositions.

From this broad approach, the poverty gap is defined as the summation of all the differences between all equivalised household disposable incomes below the poverty line and the poverty line itself.

In addition to analysis based on households, the report also includes estimates of poverty gaps based on 'income units' and includes estimates that deduct housing costs from disposable income. Therefore, the report includes analysis of four specific measures of poverty:
- Before-housing costs household poverty gap
- After-housing costs household poverty gap
- Before-housing costs income unit poverty gap
- After-housing costs income unit poverty gap.

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Equivalence scale

The report uses the modified OECD equivalence scale to calculate equivalised incomes. This scale ignores that the Australian social security system is more nuanced in its approach to equivalences/relativities and to targeting assistance based on need. The scale allocates the same value (0.3) for each child aged 0-14, with each older child allocated 0.5 (which is also the figure allocated for each adult after the first in the household). The rate for a 13-19 year old in the Family Tax Benefit Part A system is around 26 per cent higher than the 0-12 rate. Similarly Youth Allowance includes at home rates for youth aged 16 to 24 living at home, reflecting the lower costs faced by these youth compared to those living away from home.

The report states that "*A single-parent family with two young children on the maximum rate of the Parenting Payment, and maximum FTB Part A for each child, and also receiving FTB Part B is, by definition, above the poverty* line" (page 15). This outcome occurs in part because the equivalence scale allocates the same value (1) to a single person living alone as to a single parent with the care of children (1), while the Australian social security system provides a higher level of assistance to single parents in recognition that they face higher costs than other singles, particularly in relation to housing.

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Measures of income

The report uses two measures of income, 'before-housing cost' income and 'after-housing cost' income. The before-housing cost measure includes Rent Assistance as part of household income.

The analysis in the report focuses on the before-housing income results at the household level, with the rate settings suggesting Age Pension rates are mostly appropriate, Newstart Allowance rates should be increased, and Family Tax Benefit, Rent Assistance and Parenting Payment Single rates should be reduced.

These findings are at odds with the results found when the more appropriate after-housing income measure is used. The after-housing income measure suggested Family Tax Benefit rates were appropriate, Age Pension should be reduced, Parenting Payment Single and Rent Assistance should be increased, while continuing to support a lower increase for Newstart Allowance.

Population changes

It is unclear whether the modelling accounts for the increase in a payment's population when a maximum rate is increased. For example, increasing the Newstart Allowance max rate by $270 per fortnight would also increase the cut-off point of the payment, increasing the number of people on payment and therefore increasing the cost.

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