Appendices: Does JobSeeker target those who need it?

Appendix A: HILDA data description

The Household, Income and Labour Dynamics in Australia (HILDA) Survey collects information on a wide range of socio-economic aspects, with a focus on family and household characteristics, income, and employment. The HILDA survey began in 2001 with a representative sample of approximately 13,000 people across 7,500 Australian households. It is a panel survey, so those interviewed in wave one are followed indefinitely, as well as their children, subject to changes in household composition and refusal to conduct subsequent interviews. The sample was topped up in wave 11 with approximately 2,000 households added.

The HILDA survey was chosen for our analysis as it includes detailed observations regarding consumption, as well as labour market characteristics and outcomes for both individuals and households. Both annual and weekly consumption measures are collected, with weekly consumption observed for the week an individual or household is interviewed, and annual consumption measured for the previous year. The detail included in the survey data also allows us to identify important characteristics of individuals and households that determine eligibility for income support payments such as age, personal and household wealth, partnership status and partner income.

We can identify workers that are unemployed and whether they receive the JobSeeker[1] payment. We also observe their spending behaviour during and outside of unemployment spells. And we have information to assess their eligibility for the payment, such as their assets and partner income. Given the data are longitudinal we can follow workers through time and examine their spending patterns before, during and after a period of job displacement. In the HILDA Survey, consumption is measured at the household level. For consistency, we focus on the labour market outcomes for the heads of each household.[2]

[1] JobSeeker replaced NewStart in March 2020.

[2] Robustness checks for whole population are included in Appendix E.

Appendix B: Summary Statistics

Below we summarise the characteristics of individuals who face a job loss shock in HILDA, categorised by JobSeeker receipt.

Table B.1: Characteristics of individuals in HILDA who experience job loss, categorised by receipt of JobSeeker

	In receipt of JobSeeker	Not in receipt of JobSeeker	Single, in receipt of JobSeeker	Single, not in receipt of JobSeeker
Age	38.4 (9.6)	38.9 (9.5)	39.9 (9.5)	38.9 (9.7)
Proportion who are female	0.36	0.48	0.41	0.52
Previous weekly wage income (2011$)	696.4 (540.3)	1050.5 (1058.9)	662.1 (533.3)	972.3 (1113.0)
Assets (2011$)	55,027.9 (200,470.2) (n=426)	173,755.0 (516,044.3) (n=796)	54,595.3 (242982.5) (n=249)	95,323.1 (204,184.7) (n=318)
Proportion who own a home	0.38	0.58	0.11	0.15
Liquid Assets (2011$)	16,758.1 (74,374.0) (n=395)	34,376.8 (84,018.8) (n=758)	16,432.1 (83,423.0) (n=241)	24,117.3 (70,719.6) (n=304)
Proportion in relationship	0.36	0.58	--	--
Partners weekly wage income (2011$)	370.3 (481.5) (n=135)	978.4 (978.1) (n=418)	--	--
Total	N = 445	N = 827	N = 261	N = 330

Note: Standard deviations in parentheses. Characteristics and weighted sample means are only included for household heads aged 24-55 who experience a job loss shock (are observed as being unemployed and were employed in the previous period).

Appendix C: Measuring consumption, and sensitivity to spending types

The method applied to analyse consumption responses mirrors the displacement consumption response method applied in La Cava and Penrose (2021). This involves estimating an event study that uses individuals that were not displaced as a counterfactual.

The event study used in this note takes the form:

$$\ln(ND_{it}) = \beta_k\sqrt{n_{it}} + \alpha_i + \gamma_{tk} + \delta_k jobloss_{it-k} + \theta_k d_{it} + \varepsilon_{itk}, \forall\, k \in \{-3, -2, \dots, 4\}$$

Where ND_{it} is household i 's annual spending on non-durables in year t ; n_{it} is the number of members in household i in year t, $jobloss_{it-k}$ is an indicator for entry into unemployment (from employment in the previous period) of the household head i at the time of survey in year $t-k$, d_{it} is the number of weeks a displaced worker i has been unemployed at time of survey in year t, ε_{itk} is the error term, α_i is a household fixed effect and γ_{tk} is a time fixed effect.

The index t here refers to any year in which an individual is observed as having entered unemployment from employment in the previous year. The household fixed effects control for household characteristics that do not vary over time and may be correlated with either spending or the risk of unemployment. This could include factors like household preferences, risk aversion and worker ability.

The variable $jobloss$ is determined based on an individual's current and previous labour market status. We characterise an individual as having experienced job loss if we observe them as being unemployed in period t = 0, and as being employed in the previous year (period t = -1). We exclude individuals that are not in the labour force from the sample, as we are interested in the spending response to unemployment, relative to spending in employment. We have also only included individuals aged 24-55 years.

The coefficient of interest, δ_k, is the estimated log difference in spending in period t between those that lose their job in period $t-k$ and those that do not. This coefficient can be interpreted as the per cent change in spending due to unemployment (once we multiply by 100). By running separate regressions for all $k \in \{-3, -2, \dots, 4\}$, we produce and plot a series of estimated δ_k which show how spending evolves before, during, and after a job loss event.

This method estimates the effect of job loss in year t on spending in other years. We do not control for employment status in years $t-k$ where $k \neq 0$. That is, the estimates allow current unemployment to affect future consumption through a correlation with future unemployment.

Consumption items

Our measure of annual spending on non-durables is made up of 17 different spending variables from the HILDA dataset. These spending variables are each measured either at the annual level, or annualised from weekly (monthly) spending for the week (month) of survey. These spending measures are outlined in Table C.1 below.

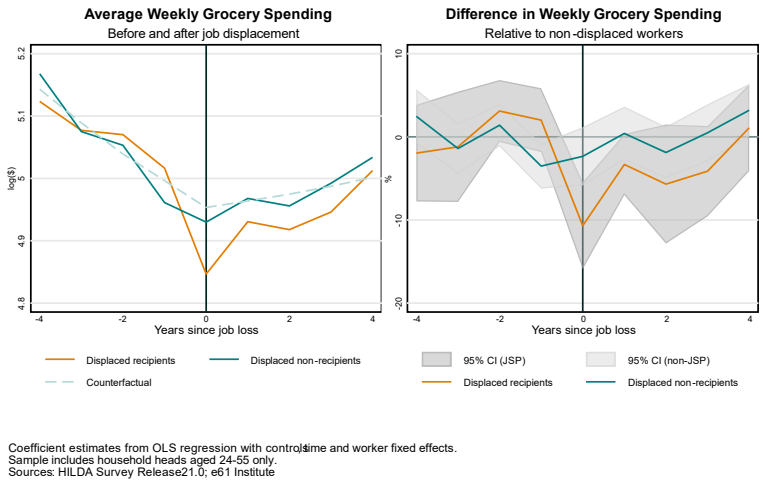
Table C.1: Variables used in the construction of non-durable expenditure

Measure of household expenditure	Variable name in HILDA	Timeframe
Groceries	hxygrci	Weekly (annualised)
Alcohol	hxyalci	Weekly (annualised)
Cigarettes and tobacco	hxycigi	Weekly (annualised)
Public transport and taxis	hxypbti	Weekly (annualised)
Meals eaten out	hxymli	Weekly (annualised)
Motor vehicle fuel	hxymvfi	Monthly (annualised)
Men's clothing and footwear	hxymcfi	Monthly (annualised)
Women's clothing and footwear	hxywcfi	Monthly (annualised)
Children's clothing and footwear	hxyccfi	Monthly (annualised)
Telephone rent and calls, internet charges	hxytlii	Monthly (annualised)
Private health insurance	hxyphii	Annual
Other insurances	hxyoii	Annual
Fees paid to health practitioner	hxyhlpi	Annual
Medicines, prescriptions and pharmaceuticals	hxyphmi	Annual
Electricity, gas bills and other heating fuel	hxyutli	Annual
Motor vehicle repairs and maintenance	hxymvri	Annual
Education fees	hxyedci	Annual

Note: For further details on the collection and construction of these variables, see Summerfield et al. (2021).

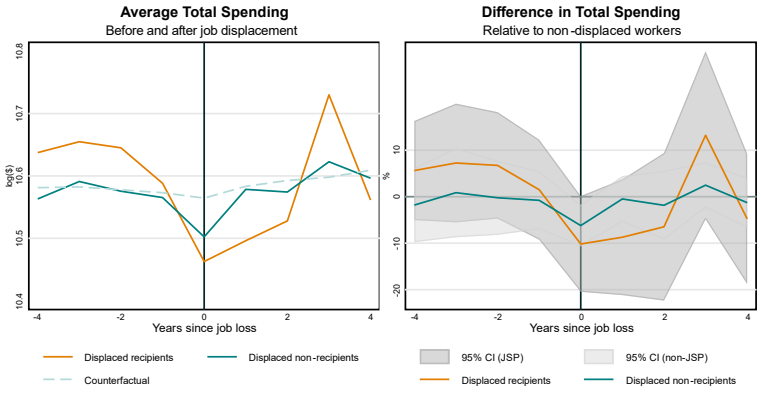
In this note, we use this constructed measure of non-durable consumer spending as the relevant benchmark rather than grocery spending (the measure of focus in La Cava and Penrose (2021)). Our analysis did give similar results when using grocery spending, but we were concerned about the pre-trends in the level of spending as shown in Figure C.1.

We also conducted the same analysis using total household spending (includes spending on both durables and non-durables), the results of which are shown in Figure C.2. Spending on durables was only measured during waves 6 to 10 in HILDA, and thus, given this limitation to the data, we decided against using total household spending as our measure of consumption in the main analysis. Despite this, we see similar results to those of the main analysis when we use total spending as our measure of consumption.



Coefficient estimates from OLS regression with controls, time and worker fixed effects.
Sample includes household heads aged 24-55 only.
Sources: HILDA Survey Release21.0; e61 Institute

Figure C.1



Coefficient estimates from OLS regression with controls, time and worker fixed effects.
Sample includes household heads aged 24-55 only.
Sources: HILDA Survey Release21.0; e61 Institute

Figure C.2

Appendix D: Comparing job loss groups, job finding expectations, and consumption loss

Explanation of lifetime income

If we observe a larger drop in spending during unemployment for recipients compared to non-recipients, this could be because:

- Recipients have expectations of lower lifetime income relative to non-recipients even with the additional payment (stronger lifetime income effect)
- Recipients are more liquidity constrained than non-recipients even with the additional payment (stronger liquidity effect)

We can test the lifetime income effect by examining whether job finding expectations of displaced workers are lower for recipients compared to non-recipients. We can test the liquidity effect by examining whether cash on hand prior to job displacement is lower for recipients compared to non-recipients.

The mechanism that explains the larger consumption losses for recipients is important from a policy perspective. Policy makers may only want to target the liquidity effect if they are concerned that higher payments create disincentives to work, or if they think the decline in lifetime income is an individual's own responsibility. In either case, the above evidence would overstate concerns about the quality of targeting.

We find that displaced workers have similar expectations about finding suitable work in the year ahead, regardless of whether they receive JobSeeker payments or not. This suggests that they have similar expectations about the effect of job displacement on lifetime income.

And, among displaced working households, recipients are much more likely than non-recipients to be liquidity constrained, even with the payment. About 1 in 2 displaced recipient households are estimated to be liquidity constrained (or `hand-to-mouth'), compared to about 1 in 3 displaced non-recipient households.

The difference in reemployment expectations

In this note the difference in the consumption decline for those who receive the JSP and for those that don't was taken as an estimate of the difference in their ability to maintain consumption following a job loss shock.

However, job loss is a significant event that – even with the provision of liquidity – may lead to individuals reducing their consumption. This comes from individuals believing that their risk adjusted future income is lower due to job loss. This can happen for three reasons:

1. The unemployment shock is expected to be persistent.
2. Facing unemployment is expected to generate a "wage scar" – or lower labour market earnings – when the individual returns to the labour market. (Andrews et al 2020, Borland 2020)
3. The individual has increased uncertainty about their future earnings. (Bloom 2014)

When comparing those who receive the JSP and those that don't we may expect JSP recipients to expect to be out of work for longer – especially since such individuals do tend to be out of work for nearly twice as long as non-recipients:

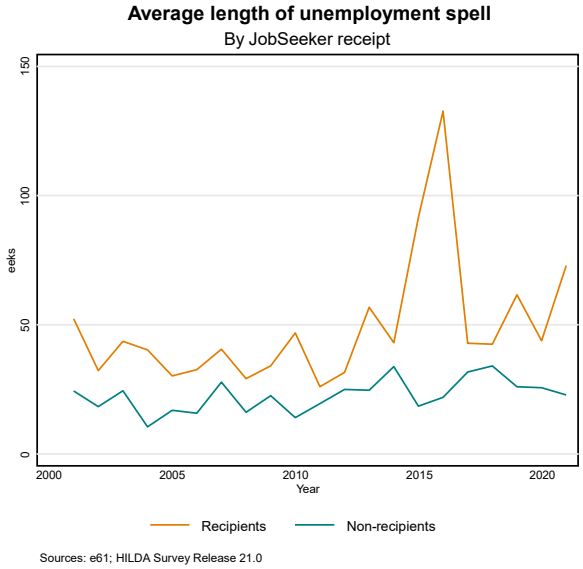


Figure D.1

HILDA collects information on expected job finding probabilities from respondents, which means we can ask if those who are on the benefit ex-ante have a lower expectation of finding work than non-recipients. Surprisingly this does not appear to be the case (Figure D.2).

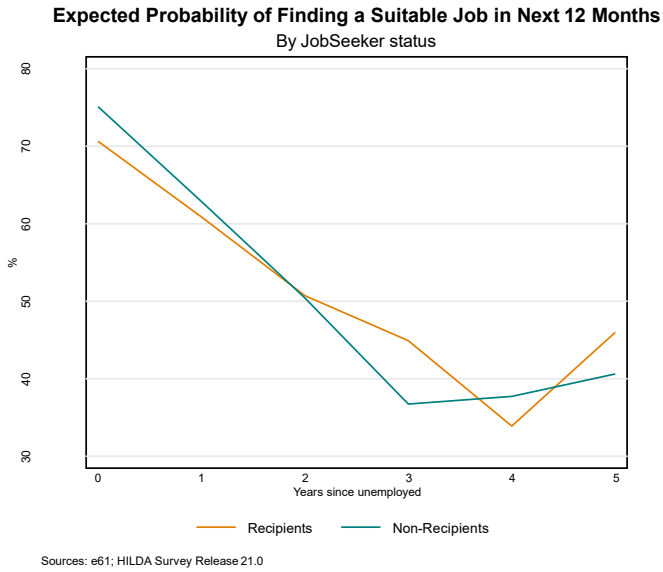


Figure D.2

The logic behind comparing the two groups.

As noted above, in terms of common indicators of liquidity constraints those receiving the benefit appear more liquidity constrained. However, selection into the program is based on many of the same criteria – as a result, we also want to look at a comparison of the consumption spending of the two groups to tease out whether targeting is supporting those who are liquidity constrained.

To account for this, we compare the consumption drop by recipients and non-recipients.

JobSeeker recipients differ from non-recipients in two specific ways – they receive the JobSeeker payment which adds to their income, and they "select" into receiving the payment. If people received the JSP at random then recipients would simply have higher income than non-recipients, and would thereby reduce their consumption by less following job loss.

However, people choose to take up the benefit because they need it, while the government sets targeting criteria to limit who can receive it. If this selection gives payments largely to people who are unable to maintain their consumption, and if the JSP is too low to fully insure recipients, then we may see non-recipients reduce their consumption by less than recipients.

If non-recipients are less liquidity constrained than recipients after they receive the payment, then we may view the targeting of the payment as appropriate – in that it targets individuals who need the liquidity relatively more than those that don't.

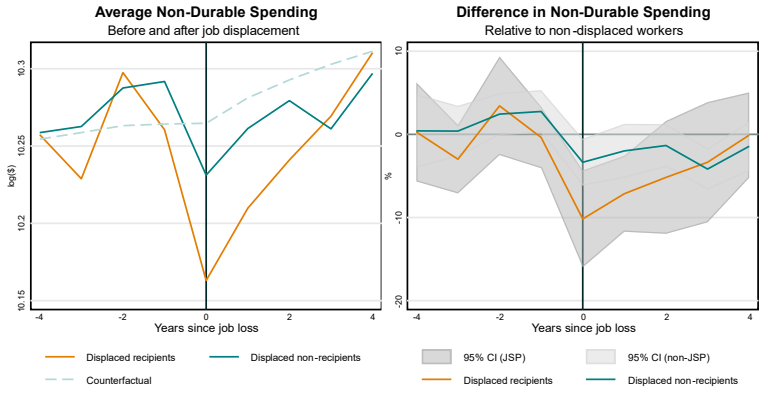
Implications for inferring liquidity.

The consumption losses associated with job displacement could be explained by three different mechanisms: an expectation of lower (risk-adjusted) lifetime income, individuals not having to incur work related expenses (Aguiar & Hurst 2013), or constrained access to liquid assets. As policy makers may only want to support household liquidity with unemployment insurance, it is important to distinguish between these mechanisms.

As discussed above it appears that many of the expected losses in lifetime income are similar between those who both receive and don't receive the JobSeeker Payment. As a result, we can look at the drop in consumption spending between the two groups to understand which group is more liquidity constrained – those that have received the benefit or those that have not received it.

If individuals who do not receive the payment reduce their expenditure by less than the recipient group, then we can infer that targeting includes a group of individuals that is relatively more liquidity constrained – achieving a key policy objective.

When comparing consumption in the year before an unemployment shock to that in the year an individual becomes unemployed, spending on non-durables drops by 11% for those who move onto JobSeeker, compared to 6% for those who do not (Figure D.3).



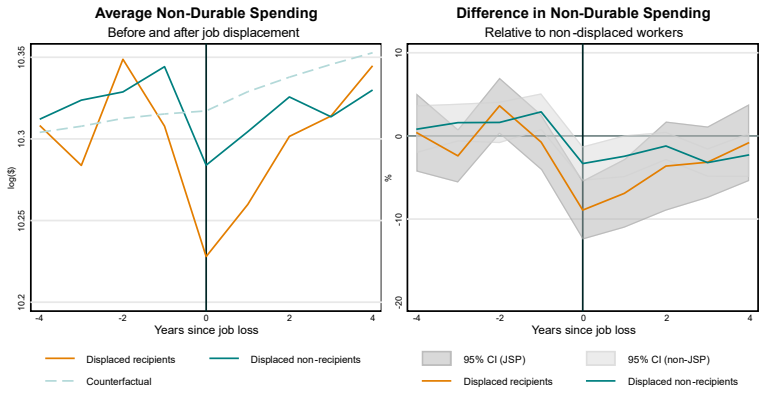
Coefficient estimates from OLS regression with controls, time and worker fixed effects.
Sample includes household heads aged 24-55 only.
Sources: HILDA Survey Release21.0; e61 Institute

Figure D.3

The policy purpose of targeting may be to not fully insure workers against unemployment but to only provide enough financial support, or `liquidity', to avoid undue hardship. As recipients and non-recipients have the same expectations about finding work on average, we can interpret this consumption gap as reflecting a difference in liquidity between the groups. As a result, we can view this as evidence that the payment is not enough to relax the liquidity constraint that recipients typically face – but that targeting is partially effective at providing a payment to those who are most liquidity constrained.

Appendix E: Sensitivity to head of household

To test the sensitivity of our results, we run the same event study including all individuals who experience job loss. By including all workers who experience job loss the estimates will reflect the consumption responses both of households where the primary earner loses their job, and those where a secondary earner loses their job. Given this, we might expect that the estimated drop in consumption to be smaller than that estimated in the main specification. When a household's secondary earner experiences a displacement event it is likely that the impact on total household income, and therefore total household liquidity, will be smaller than the case in which the primary earner experiences displacement.



Coefficient estimates from OLS regression with controls, time and worker fixed effects.
Sample includes displaced workers aged 24-55 only.
Sources: HILDA Survey Release21.0; e61 Institute

Figure E.1

Using this broader sample returns similar results to the main specification (see Figure E.1). The relative consumption drop for those who do not move onto JobSeeker is the same as that estimated for household heads only (6%). For those who are in receipt of JobSeeker in the year of job loss, the estimated relative consumption drop of 8% is slightly smaller for this sample than that estimated for household heads only (11%).

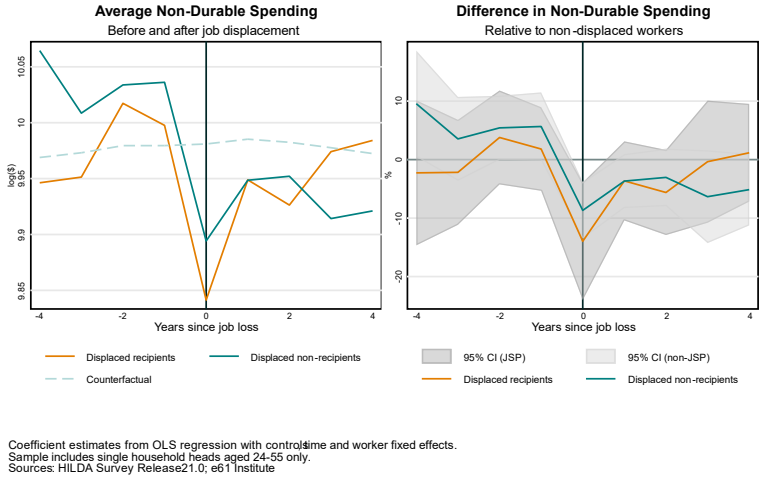
Given consumption is measured at the household level (and not per capita), this smaller drop in consumption for all displaced workers who move onto JobSeeker (relative to that of household heads only) could reflect a higher overall level of liquidity for households where a secondary earner experiences displacement, if the primary earner is still in employment.

This doesn't explain the fact that the consumption response stays the same when looking at all displaced non-recipients and displaced non-recipient household heads, although this similarity could also be due to higher overall levels of liquidity within these households.

- Households in which displaced workers don’t move onto JobSeeker tend to have higher asset levels, higher previous income levels (for displaced), and higher earning partners.
- Workers in higher income households tend to re-enter the labour market more quickly following job loss than those in lower income households.

- "Finding a new job after displacement is more difficult for some categories of [Australian] workers, with older, casual and part-time workers struggling the most" (OECD, 2016)

Appendix F: Consumption responses of single households



Coefficient estimates from OLS regression with controls time and worker fixed effects.
Sample includes single household heads aged 24-55 only.
Sources: HILDA Survey Release21.0; e61 Institute

Figure F.1

Is this self-insurance for all family types? To answer this question, we have conducted the same event study after stripping out individuals who are either i) partnered or ii) receiving any other first tier income support payment.[3] This leaves us with single individuals who do not have access to any other form of government support payment.

Being in a partnered household can be considered a form of private income insurance, even if the partner is earning below the partner income threshold. Furthermore, second earners in such households may have the option of earning extra income to make up for job loss. As a result, excluding partnered individuals allows us to focus on individuals who are less likely to have the means to insure themselves from an income shock[4] (Tin and Tran 2022).

Figure F.1 illustrates the consumption responses to job loss for those individuals.

Spending falls by 14.4% in the year of entry into unemployment for single individuals who don't move onto JobSeeker, compared with a fall of 15.8% for those who do.

When looking only at single individuals there is a sharp drop in spending for both groups. Specifically, the sharp drop in consumption for non-recipients does indicate that some single liquidity constrained individuals are missing out. Age is also an important determinant of these results, with young people who are not in receipt of JobSeeker more sharply cutting consumption than those who are on the payment.

Given that it is displaced single people who sharply reduce their consumption in the face of job loss, it is likely that there are issues with the rules specific to these individuals – such as the general income test, the liquid asset waiting period, and the single asset test.

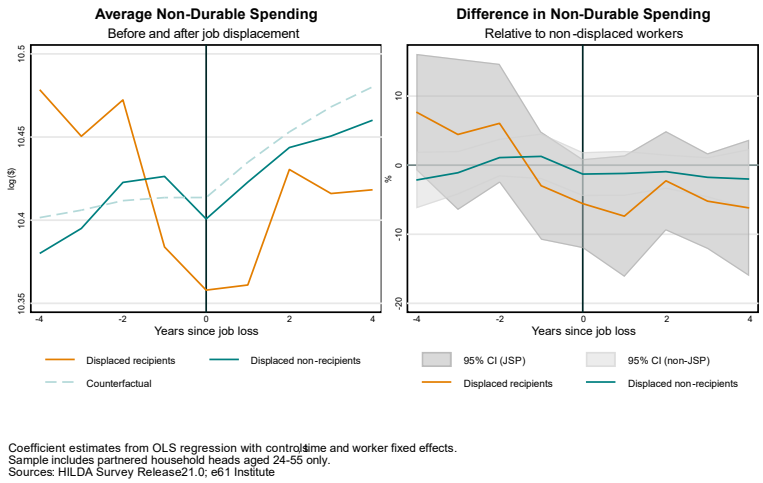
[3] Other income support payments include; Disability Support Pension, Parenting Payment, Carers Payment, and Youth Allowance. (Age Pension is not included as the analysis only includes people below the pension age.

[4] The results for couples are shown and discussed in Appendix F. There is a relatively small decline in consumption for this group, appearing to indicate that targeting of couples – through the relevant partner tests – is working well.

Appendix G: Consumption responses of partnered households

When an individual is faced with job loss, having a partner can be viewed as a form of private insurance. The other person in the relationship may already be in work and is thereby able to extend hours, they may be able to search for work increasing the chance someone in the household becomes employed, and they add an additional layer of family members who may provide support to the household.

As a result, we would expect couples to be more likely to maintain consumption without explicit government support than single individuals.



Coefficient estimates from OLS regression with controls time and worker fixed effects.
Sample includes partnered household heads aged 24-55 only.
Sources: HILDA Survey Release21.0; e61 Institute

Figure G.1

Figure G.1 confirms this is the case.

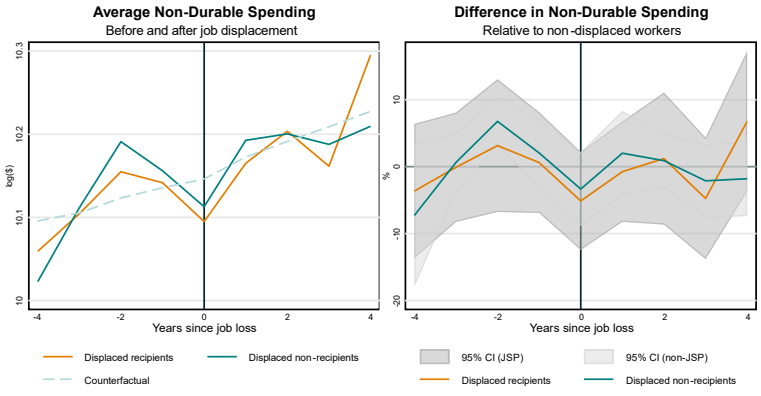
We see a drop in consumption of 2.6% in the year of job loss for displaced workers in partnered households who are not in receipt of JobSeeker. This group has similar consumption to that of the counterfactual non-displaced group, suggesting they have been able to smooth their consumption through the displacement event.

The same drop (2.6%) is observed for those partnered households who do move onto the JobSeeker payment (though the consumption drop from 2 years before job loss is much larger, at 11.6%). The recipient group, while keeping their spending at a consistent level from t=-1 through to t=4, have persistently lower consumption than the counterfactual group of non-displaced workers.

Appendix H: Results by age and family type

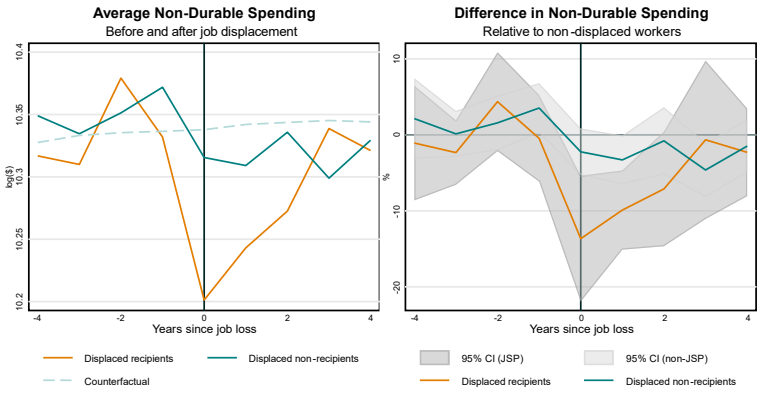
To further understand heterogeneity of responses for different demographics, we have conducted the same event study after grouping household heads first by age, then parenthood status.

Figure H.1 shows consumption responses for household heads aged 24-35. Compared to the main specification, we see a smaller drop in consumption for both those on JSP and not on JSP (5.7% and 5.4% respectively). Older workers (aged 36-55) drop their consumption by much more following job loss, with JSP recipients dropping consumption by 13% and non-recipients by 6% (Figure H.2).



Coefficient estimates from OLS regression with controls, time and worker fixed effects.
Sample includes household heads aged 24-35 only.
Sources: HILDA Survey Release21.0; e61 Institute

Figure H.1 [24-35]

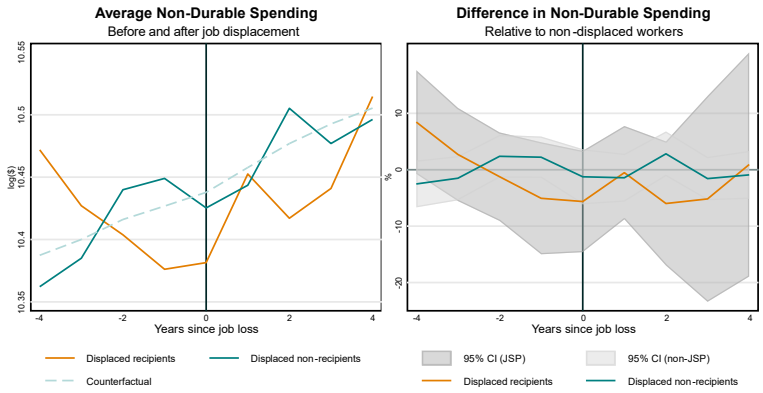


Coefficient estimates from OLS regression with controls, time and worker fixed effects.
Sample includes household heads aged 36-55 only.
Sources: HILDA Survey Release21.0; e61 Institute

Figure H.2 [36-55]

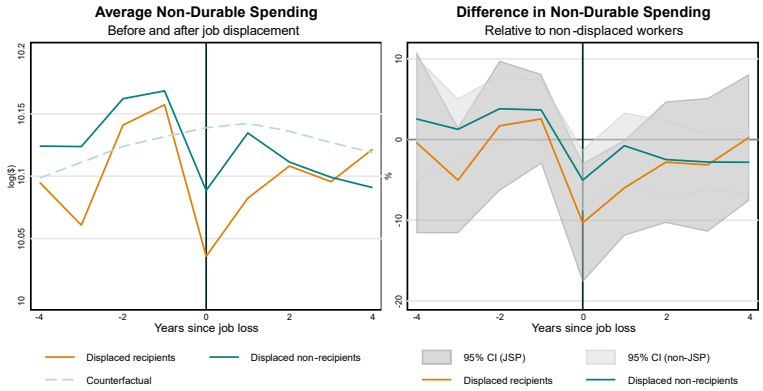
We find no consumption response to unemployment for parents who experience job loss (Figure H.3), and similar results to the main specification for non-parents who experience job loss (Figure H.4). This may indicate that Family Benefit A and B may, in conjunction with

the primary benefit, be sufficiently supporting families with children. However, we would want to understand any long-term scars to their consumption to make this claim – as the short term consumption of parents may simply be harder to adjust when faced with an income shock due to necessary expenditure on the child.



Coefficient estimates from OLS regression with controls, time and worker fixed effects.
Sample includes household heads with children, aged 24-55.
Sources: HILDA Survey Release21.0; e61 Institute

Figure H.3 [parents]



Coefficient estimates from OLS regression with controls, time and worker fixed effects.
Sample includes household heads without children, aged 24-55.
Sources: HILDA Survey Release21.0; e61 Institute

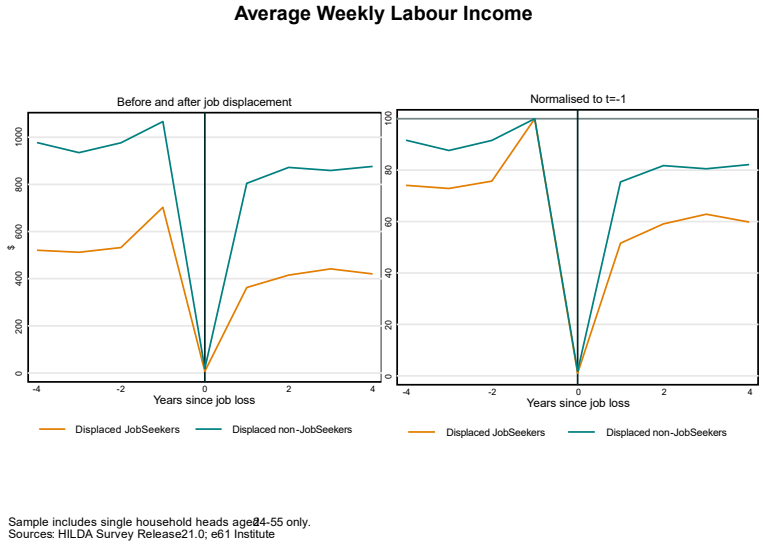
Figure H.4 [non-parents]

Appendix I: Income losses associated with job loss

The approach taken for evaluating consumption responses focuses on how much consumption drops after the individual loses their job. These consumption losses associated with job displacement could be explained by three different mechanisms: an expectation of lower (risk-adjusted) lifetime income, individuals not having to incur work related expenses (Aguiar & Hurst 2013), or constrained access to liquid assets. As policy makers may only want to support household liquidity with unemployment insurance, it is important to distinguish between these mechanisms.

One way to consider what matters is to look at what actually happened to people's incomes after job loss. If the income of these groups did not decline, then it is likely the drop in consumption will not be about liquidity – but instead will be due to expectations of lower future income, or a reduction in work related costs.

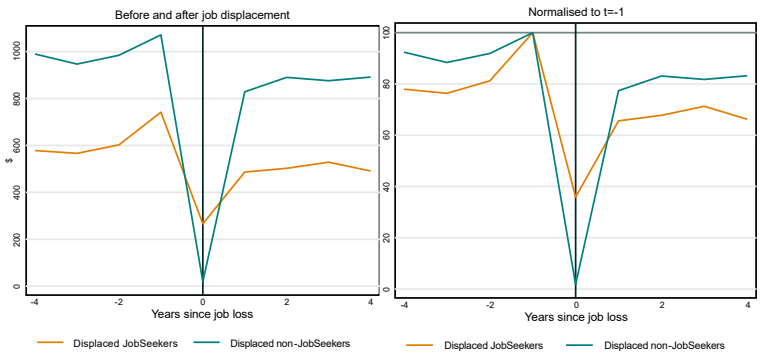
Figures I.1 and I.2 show the drop in current income for those who were displaced – with the first graph just looking at labour income and the second including benefits. This shows that both groups see their wage income fall to effectively zero, but that the relative income of recipients is held up by the receipt of the JobSeeker Payment.



Sample includes single household heads aged 24-55 only.
Sources: HILDA Survey Release21.0; e61 Institute

Figure I.1

Average Weekly Labour and Government Transfer Income



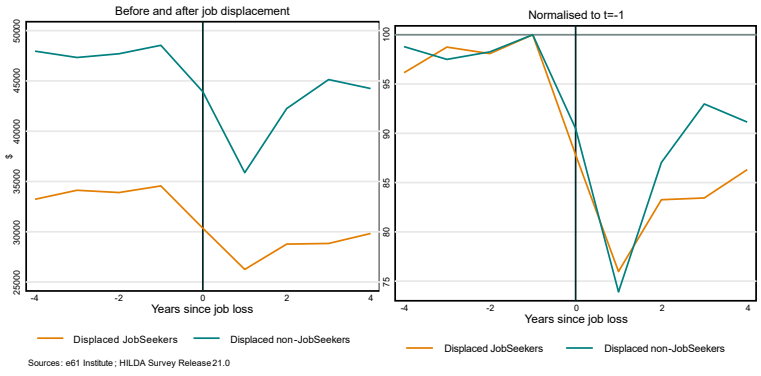
Sample includes household heads aged 24-55 only.
Sources: HILDA Survey Release 21.0; e61 Institute

Figure I.2

However, there are broader categories of income that may help to support varying groups. Figures I.3 shows the annual disposable income of these two groups. This measure falls less sharply in the year of displacement – as individuals will have receive job income during that year – and has its sharpest fall in the year following displacement.

Across both of those two years, the recipient and non-recipient group have a relatively similar decline in disposable income – indicating that the relative change in the income flows between groups is similar.

Average Annual Disposable Income



Sample includes household heads aged 24-55 only.
Sources: HILDA Survey Release 21.0; e61 Institute

Figure I.3

These sharp declines suggest that insufficient liquidity is a key driver of the sharper decline in consumption among recipients than non-recipients. However, these figures also highlight that income recovers more strongly in later years for non-recipients. As a result, if these groups expected different income profiles in the future than may explain some of the hesitancy to spend in the future. This is discussed further in Appendix D.

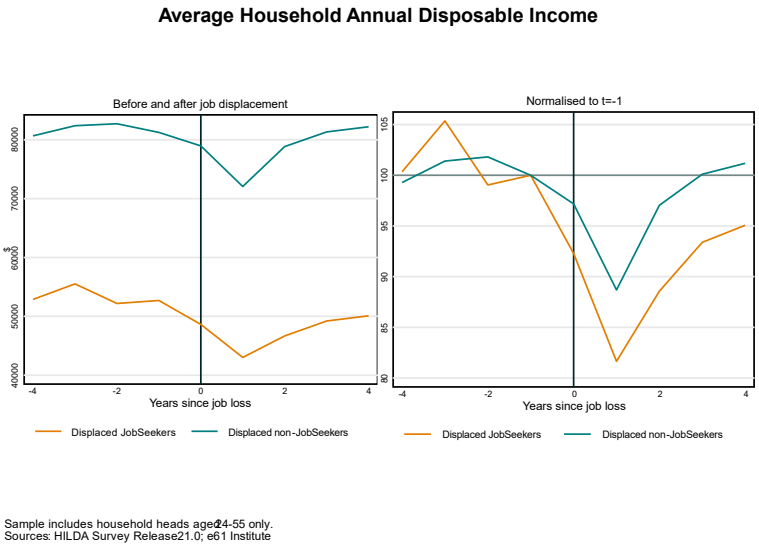


Figure I.4

Figure I.4 shows that, when looking at the household level, the annual income of coupled households who do not take up the benefit is greater than that of those that do. This is to be expected as selection into the benefit requires that partner income is below a certain threshold – and so individuals with high earning partners are more likely to be excluded.