

International Journal of Population Data Science

Journal Website: www.ijpds.org



Not in employment, education or training (NEET); more than a youth policy issue

Francis Mitrou^{1,*}, Michele Haynes², Francisco Perales³, Stephen R. Zubrick¹, and Janeen Baxter⁴

Submission History

Submitted:	12/04/2021
Accepted:	02/07/2021
Published:	21/09/2021

¹Telethon Kids Institute and the Centre for Child Health Research, The University of Western Australia. PO Box 855, West Perth, Western Australia 6872, Australia

²Institute for Learning Sciences and Teacher Education, Australian Catholic University. Level 4, 229 Elizabeth Street, Brisbane, Queensland 4000, Australia

³School of Social Science, The University of Queensland. Michie Building, St Lucia, Queensland, 4072, Australia

⁴Institute for Social Science Research, The University of Queensland. Cycad Building (1018), 80 Meiers Road, Indooroopilly Queensland 4068, Australia

Abstract

Introduction

Australians who are Not in Employment, Education or Training (NEET) and receive income support span a wide spectrum of working ages. Australian research has concentrated on NEETs aged 15–29 years, in line with international standards. This paper investigates extending the NEET concept to include all working age persons 15–64 years and the value added to welfare policy through analysis of a new linked dataset.

Methods

An observational study design was implemented with individuals aged 15–64 years recorded as receiving Department of Social Services (DSS) income support payments from September 2011 being linked with Australian Bureau of Statistics (ABS) Census data from August 2011 to create a linked dataset for analysis. Descriptive analyses were undertaken of NEET status by Census socio-demographic characteristics, and we modelled the adjusted likelihood of NEET status by Census demographics.

Results

Some 1.37 million or 45.2% of linked DSS payment recipients qualified as NEET. Of NEETs, more than twice as many were female, nearly half were aged 45–64 years, and under 1-in-5 were aged 15–29 years. Multivariate analyses showed that NEETs were more likely to be older, have low educational attainment, have a disability, and to be Indigenous.

Conclusions

Young NEETs aged 15–29 years represented less than 20% of linked DSS payment recipients classified as NEET, suggesting that standard NEETs reporting neglects information on around 80% of the working age NEET population in Australia. Combined with other demographic insights, these results have implications for welfare policy, and indicate a wider range of demographics should be considered under the NEET classification. This may also have implications for Organisation for Economic Co-operation and Development (OECD) reporting.

Keywords

NEET; youth unemployment; income support; welfare policy

*Corresponding Author:

Email Address: francis.mitrou@telethonkids.org.au (Francis Mitrou)



Introduction

Persons of working age who are Not in Employment, Education or Training (NEET) and who also receive income support payments from government welfare services are a diverse population of people which is an ongoing challenge to social and fiscal policy across the developed world. Some people categorised as NEET may suffer from a physical or mental disability that prevents them from either working or enrolling in any form of training. Others may have voluntarily exited the workforce for a period to raise children while others may be experiencing long-term involuntary unemployment and disengagement with education and training opportunities [1]. There is also a view that for many NEET cases disengagement is closely associated with long-term or multi-generational socio-economic deprivation [2, 3]. Whatever the reasons for any individual being classified NEET, one common factor in NEET analysis and policy development across OECD nations has been a focus on young populations [4]. Given the lasting influence of a young person's formative years in education on later joblessness and social exclusion, this focus on youth is critical, and important to retain as a key strategy to reducing long-term welfare dependency [4]. However, there may be an argument to consider older working age NEETs as an additional group requiring targeted support as part of an expanded NEET policy framework. This paper explores that premise through analyses of a unique linked administrative data set.

The term "NEET" came to prominence in the late 1990s when the British Government's Social Exclusion Unit published *Bridging the Gap – New Opportunities for 16–18 year olds not in Education, Employment or Training* [5]. The report observed that "...where life goes wrong, or continues to go wrong, for young people in this age group, social exclusion in later life is disproportionately the result. They are much more likely to be unemployed, dependent on benefits, to live in unstable family structures, and to be depressed about their lives" (p. 6). Hence, the motivation for focussing on young people who were NEET, as opposed to all working age persons, was to create targeted policies aimed at preventing the entrenchment of multiple forms of disadvantage amongst Britain's most educationally vulnerable youth. Britain had excluded young people aged 16–18 years from official unemployment figures following changes to their social security rules in 1988, leaving a knowledge gap in relation to young people disengaged from education and training services who were also unemployed. *Bridging the Gap* was designed to help address this information gap, and in doing so brought the concept of NEET status to public policy attention in Britain and latterly across the OECD. Thus, the original NEETs classification referred to persons aged 16–18 years, with this age range subsequently widened to 16–24 years for official statistics in the UK [6] and to 15–29 years in OECD publications examining the NEET phenomenon across developed nations [4]. As with *Bridging the Gap*, the overarching policy perspective has been focused on preventing the entrenchment of multiple forms of disadvantage amongst jobless and disengaged OECD youth.

In line with the established use of NEET status as a youth-centric concept, previous investigations of NEET populations

in Australia have also concentrated on young people aged 15–29 years. For example, a comprehensive 2016 OECD report estimated that as of 2015 Australia had 580,000 young people classified NEET, representing 11.8% of all young Australians aged 15–29 years, and lower than the OECD average NEET rate of 14.6% [1].

Almost two-thirds of young Australian NEETs were not searching for work and were subsequently described as *inactive* NEETs. Young females were twice as likely to be NEET as young males, and much of this was driven by early parenthood and resultant childcare responsibilities dovetailing with unaffordable childcare and inflexible employment opportunities for young parents with children. Young NEETs were also more likely to be Indigenous, disabled, and to have low educational attainment, and these characteristics were especially true for those who had been NEET for longer than 12 months [1].

The OECD report stopped short of describing NEETs across the broader working age population aged 15–64 years. This working age population makes up the majority income-tax base and the entire pre- Age Pension welfare recipient population in Australia and most other OECD nations. A youth focussed approach to studying NEETs has left Australia and other OECD nations with a narrower and less informed view of their NEET populations; an information gap that hinders development of evidence-based policy for NEETs who fall outside of the 15–29 years age band. For long-term younger NEETs who remain NEET into their 30s, and people who only become NEET between the ages of 30 and 64 years, governments, policy makers and service agencies have been operating with limited published research and commentary. However, the majority of individuals classified as NEET will require income support from their government. While the lifetime welfare cost of young people who are NEET and remain NEET across their life course will be high, there is also evidence from administrative data in Australia that the lifetime welfare cost of older people who become NEET at a later stage can be high and that the requirement for a transition to income support may be preventable if the characteristics of the individuals undergoing these transitions is better understood [7]. Prior to the current study there has been little awareness of the scale of NEET status for those aged 30–64 years and who are presently outside the bounds of NEET policy. Young NEETs attract more policy attention and the lifetime consequences of long-term NEET status at a young age may be particularly costly at the individual level. In aggregate terms, however, older NEETs may be costlier to the welfare system simply because there are many more of them. It is possible that some older NEETs are more amenable to employment-based interventions as they are less likely to have young dependent children and may already have relevant work experience. However, other older NEETs may be in poorer health or less adapted to modern technology-driven workplaces compared with younger NEETs. Therefore, young NEETs, mid-life NEETs and older NEETs each face different challenges and may require different policy responses. Effective policy is not necessarily easier or cheaper to implement for any of these groups; yet each group is worthy of policy attention for different reasons. Our study sheds light on these policy issues for the first time.

In 2015 the Australian Commonwealth Government made a commitment to implement the Australian Priority Investment

Approach (PIA) to welfare, designed to help reduce long-term dependency on welfare and improve the lifetime well-being of Australians [7]. The primary aim of the PIA was to estimate the lifetime costs of groups of individuals in receipt of welfare and to identify groups that would benefit from early intervention to prevent long-term dependence on income support payments, hence reducing the cost of the welfare burden. In addition to intervention for long-term income support recipients, which naturally includes young people less than 30 years of age classified as NEET, the framework for the PIA also included consideration of early intervention when individuals first received income support and intervention at critical stages that may otherwise lead to movement from one payment type to another. Several groups of older ages are identified in the report (p.113) as being of relatively high cost, in addition to young students, young carers and young parents, and should be investigated as potential respondents to early intervention. These include both males and females who enter into working age income support after age 55 years, parents transitioning to working age payments, working age to disability transitions and older people entering carer payments. These findings highlight the need to better understand the presence of NEET status in people of all ages, for the development of appropriate policy interventions at critical stages in an individual's life course.

There are plausible reasons why predictors of NEET status might differ by age-group across the working age spectrum, as different factors are likely to be more prominent at different life stages and require different policy responses. For example, age at first childbirth has risen steadily over the past few decades for women in developed countries [8, 9], creating the potential for periods of NEET status for many women that would be unobserved using a youth-oriented NEET measure that stops at 24 or 29 years. Some of these women may elect to stay out of education or the labour force until their children are school-aged, explaining some of the dip in labour force participation observed in recent statistics for women in their 30s [10, 11]. Older men or women from low-skilled employment backgrounds may be affected by globalisation and industry closure into their 40s and 50s, finding they are less able to compete for the remaining jobs in the modern economy, and perhaps disengaged from education and training opportunities primarily aimed at youth [9, 11]. Individuals may be more likely to develop health problems and disabilities with age and are more likely to transition onto carer payments if their partners, parents or other family members become ill [7].

Demographics such as gender, migrant status, Indigenous status and parenting status may all vary by age in relation to NEET status, as might levels of foundational skill, payment types and time on payment, number of NEET occurrences and total time spent NEET. Recognising differences in reasons behind NEET status for people of all working ages is important to deriving effective policies targeted at reducing periods of avoidable NEET status. Clearly policies aimed at addressing the reasons for NEET status of those aged less than 25 years for example, will necessarily be different to those aimed at addressing NEET status for older groups. While the younger group may respond best to programs designed to improve their baseline educational attainment, older NEETs may respond better to programs designed to match their existing skills with appropriate employment or job training/re-training

opportunities. In line with the Australian Government's Priority Investment Approach to welfare, reducing the lifetime cost of the welfare burden and improving the lifetime well-being of all Australians is something that policy is better able to achieve when NEET status is considered as a working age problem rather than a youth problem. While not all NEETs will be able to transition out of income support due to permanent or irredeemable barriers mentioned previously, those young NEETs, mid-life NEETs, and older NEETs with the potential to respond to tailored policy stand to deliver substantial cost savings to government over their remaining working life [7]. Our approach will investigate the relationship between different socio-demographic factors and NEET status by age and consider these as a proxy for the different reasons and critical life stages associated with a person's NEET status.

What are the characteristics of *all* working age NEETs who receive income support payments, and what does this mean for human services policy? Should older NEETs be more visible on the policy radar? How do younger, mid-life and older NEETs differ by demographics? Do these differences have implications for policy responses designed to assist NEETs to become economically active? Our research seeks to address these gaps by describing NEET status across the working age population and bringing a life course perspective to the issue.

We analyse data from a novel linked dataset to investigate these issues for the first time in Australia. National census information held by the Australian Bureau of Statistics (ABS) was linked to income support recipient information held by the Australian Government Department of Social Services (DSS). This unique linked population dataset permits new insights into Australia's NEET population by supporting investigation into the nature and pattern of NEET status among income support recipients of working age that was not previously possible.

Note that this investigation reflects the situation for NEETs in Australia as of 2011, per data availability for this project. Therefore, some observations made within may not reflect current circumstances. However, the issue of considering NEET status across all working ages remains just as relevant today.

Methods

The SSRI–census linked dataset

In December of 2014 DSS and ABS entered into a Memorandum of Understanding to conduct a three-year data-integration program with the overarching aim of showcasing the power of linked administrative data to inform public policy. The first outcome from this agreement was the linkage of ABS Census and DSS payment data, described below. In April 2015, researchers from the Australian Research Council Centre of Excellence for Children and Families over the Life Course (The Life Course Centre) were invited to assist DSS in delivering on its goal by leading a demonstration project on a topic of policy concern that new information from this dataset was able to address.

Access to these data were enabled by close partnerships between researchers in the Life Course Centre, DSS and ABS. The Life Course Centre has worked closely with a number of

Commonwealth agencies to facilitate improved access to linked government administrative data for Australian researchers. As part of this work, the Life Course Centre trialled a number of different proof-of-concept models for accessing and analysing linked administrative data. A DSS employee was seconded to ABS to undertake the data analyses, using de-identified analytical data in a secure ABS environment. Life Course Centre researchers worked closely with the DSS analyst to provide instructions, advice and feedback on the results, but did not have direct access to the research dataset due to ABS data access protocols. Following the analyses, confidentialised, tabular data was released to DSS for use in this research. Confidentialisation is the term used by the ABS to describe their statistical disclosure control process, which supports the publication of safe and reliable statistical outputs while minimising the risks to identification for individual persons or organisations represented within the data. This approach met legal, security and privacy obligations about access to the data, but at the same time, enabled social science researchers to obtain unique insights into important social policy questions that can assist policymakers to devise appropriately targeted programs to tackle barriers faced by the NEET population.

The Social Security and Related Information (SSRI) dataset, held by DSS and representing all recipients of the 22 most relevant DSS funded welfare payments in Australia, was linked to the Australian Census of Population and Housing (the Census) held by ABS, with linkage performed in-house at the ABS. ABS is an Accredited Data Integration Authority under the Commonwealth Data Integration Guidelines [12, 13].

While DSS has a wide range of payment classes that include such categories as natural disaster recovery and once-off emergency payments, we extracted for linkage only persons receiving payment types that relate to general and on-going income support and family support. A full list of the DSS payments extracted for linkage is available from the corresponding author. SSRI as linked for this project explicitly excluded Paid Parental Leave recipients, as this scheme is designed to provide up to 18 weeks of paid leave from an existing job for parents of newborn children. Parents are expected to return to this job, which they hold open whilst on parental leave.

Records for approximately 9 million individuals appearing in the September 2011 quarter of SSRI were matched to records on the August 2011 Census using a rules-based deterministic linkage methodology [14]. Linkage to the full Census occurred, resulting in a linkage rate of approximately 83% SSRI records matching a Census record. Only those record pairs meeting the linkage criteria were accepted as links, all other records being assigned 'non-link' status and not used for this analysis. Data cleaning methods at DSS and ABS were not disclosed to the authors, but as a national statistical agency ABS require data supplied for linkage to be of a high standard. Eligible records were complete for the purposes of this research, with no missingness reported on variables of interest. The September 2011 quarter was chosen for the SSRI data as it provided the closest time-alignment with the Census month of August 2011.

NEET status

NEET status was calculated from Census employment and education fields, and defined as: Labour Force status of 'Not

in the Labour Force'; 'Unemployed, looking for part-time work'; and 'Unemployed, looking for full-time work'; and Full-time/part-time student status of 'Not attending an education institution'.

DSS payment recipients on SSRI and who successfully linked to Census and met the NEET status criteria are referred to throughout as 'NEETs', and those who did not meet the above criteria for NEET status are referred to throughout as 'non-NEETs'.

Linked and non – linked records

Non-linked SSRI records are not included in the analysis presented here. We were unable to disaggregate 'people who *do not* receive DSS welfare payments' from those who were 'receiving DSS welfare payments, but not linked to the Census'. Therefore the 'Not Linked' category is confounded for the purpose of direct comparison with the 'Linked' population.

All results presented here comprise Linked SSRI-Census records for those persons classified as NEET and non-NEET by the NEET status criteria described above.

Data analysis

Data on 3,031,000 persons aged 15-64 years and receiving DSS payments were available for analysis via the linked SSRI-Census dataset. A further 11,321,000 Census records were not linked to SSRI. Most of the Not-Linked population were either non-NEET and/or not DSS payment recipients; however, as described above, we could not disaggregate this group. Note that a total of 1.29 million or 11.4% of these Not-Linked records met the criteria for NEET status. Not-Linked records were not included in any further analysis and are not represented here. De-identified information on individuals aged 15-64 years recorded in SSRI from September 2011 was extracted from the SSRI-Census Linked dataset.

Approximately 3 million additional records were excluded for people aged 65 years and over. Though the NEETs analysis is designed to place Age Pension recipients out of scope where possible, Age Pension was being received by a small proportion of the population aged less than 65 years due to two reasons. At the reference period for linkage (August – September 2011) women aged 64 years and six months were eligible for the Age Pension, and men who turned 65 years in the six-week period between the August 2011 Census and the September 2011 end-of-quarter SSRI cut-off would have become eligible for the Age Pension. These people represent less than 1% of the linked population and do not affect the outcomes observed in the data. Subsequent changes to Age Pension eligibility will raise the minimum age to receive this payment from 65 years and six months in 2017, to 67 years by 2023 for both men and women [15].

The Census variables that were included as population descriptors in the analysis are shown in Table 1. Further information about the construction and content of these Census variables is accessible via the ABS 2011 Census Dictionary [16].

Initial analysis derived a set of basic descriptive tables to describe the linked and not-linked populations and grouping of the linked population into NEET and non-NEET categories. Further analysis included development of a multi-variate,

Table 1: Census variables included as population descriptors

Census variable name	ABS mnemonics
Age Group	AGEP
Region of Birth	BPLP
Marital Status	MSTP, MDCP
Count of Dependent Children in Family	CDCF
Level of Highest Educational Attainment	HEAP
Proficiency in Spoken English	ENGP
Core Activity Need for Assistance	ASSNP
Family Household Composition (Dwelling)	HCFMD
Australian Citizenship	CITP
Indigenous Status	INGP
Migrant Status	BPLP, YARP
State	
Remoteness	
Unpaid Assistance to a Person with a Disability	UNCAREEP
Number of Usual Residents in dwelling	NPRD
Tenure and Landlord type	TENLLD

main-effect binary logistic regression model predicting the odds of NEET status among linked DSS payment recipients.

Statistical analyses were undertaken using SAS Enterprise Guide version 9.1. As noted above, an authorised DSS officer trained in population data analytics was seconded to ABS and accessed the linked data file via secure ABS servers under direct supervision of ABS officers. No detailed microdata was viewed outside secure ABS facilities.

Confidentiality of data and personal information

The data for this study were collected under the *Social Security Act 1991* and the *Census and Statistics Act 1905* [17, 18]. Personal information supplied to the agencies operating under each of these Acts becomes property of the Commonwealth of Australia. Each agency is subject to tight disclosure rules under their respective Acts, forbidding public release of information in a way that might identify an individual. As such these data custodians can only release aggregated and de-identified outputs to researchers. This is the basis under which this study has been undertaken.

As an Accredited Data Integration Authority, when undertaking linkage projects, the ABS is bound by strict data handling conditions and procedures to protect the integrity of the data and the privacy of individuals. These legal obligations, conditions and procedures are described in full elsewhere [12, 13].

To ensure that no individual person can be identified from the data and that privacy is maintained, statistical disclosure control techniques have been applied to the outputs. For example, all population numbers presented here are subject to variation due to rounding and perturbation. This means that sub-totals may not always add to the same grand total. This affects published outputs. Observed variations are very small relative to the size of the dataset and contribute no substantive impact with regard to interpretation of findings.

Results

All results refer to the population of linked records for persons aged 15–64 years from the SSRI-Census linked dataset described previously in Methods. Note that population numbers presented here are subject to variation due to rounding and perturbation to protect privacy of individuals in the datasets. Therefore, numbers appearing in tables may not add exactly to grand totals, but this has no bearing on conclusions drawn from the statistical results.

NEET population characteristics

Table 2 describes characteristics of the Linked NEET population by gender. Of particular interest are the characteristics by which males and females differ, such as in age distribution, care of dependent children, marital status, and population size. In a population of just over 3 million individuals aged 15–64 years who were receiving DSS payments and linked to Census, some 1.37 million (45.2%) were classified NEET. The first column of Table 2 is based on all 3 million DSS payment recipients. For all payment recipients aged 15–29 years some 32.6% were classified as NEET. For DSS payment recipients aged 30–44 years this figure was 8.6%, and for those aged 45–64 years 60.9% were classified NEET.

Columns 2–5 in Table 2 refer to the 1.37 million payment recipients classified as working age NEETs compared with the 1.66 million payment recipients who were non-NEET. Among NEETs, more than twice as many were female (910,200 persons or 66.5%) compared with male NEETs (459,400 persons or 33.5%). This pattern was evident regardless of age group. A similar pattern by gender was also observed among non-NEETs receiving DSS payment, possibly reflecting the dominant role of women in child-rearing activity in Australia, discussed further below.

In terms of age group representation among the 1.37 million persons classified as working age NEETs, those aged 15–29 years represented 18.5%, those aged 30–44 years represented 32.5%, and NEETs aged 45–64 years represented

Table 2: NEETs in Australia, by gender – characteristics of the DSS on-payment population aged 15–64 years who are not in employment, education or training (NEET)

Variable	All recipients:	Female recipients		Male recipients	
	% who are NEET	NEET %	Non-NEET %	NEET %	Non-NEET %
Total	45.2	910,200	1,158,900	459,400	502,200
Age Group					
15–29 years	32.6	19.0	27.2	17.4	41.3
30–44 years	8.6	36.6	46.8	24.5	33.1
45–64 years	60.9	44.4	26.1	58.0	25.5
Marital Status					
Never been married	41.9	29.4	35.5	48.5	53.3
Widowed	62.9	3.2	1.5	1.5	0.9
Divorced	50.0	12.7	12.4	13.9	7.4
Separated	45.9	6.0	6.5	5.1	3.5
Married	46.0	48.6	44.2	30.9	34.9
Region of Birth					
Australia	44.4	69.3	74.1	72.4	68.6
Other	47.0	30.7	25.9	27.6	31.4
Dependent children					
No children	63.3	12.0	6.1	22.7	10.6
One	33.6	18.5	27.1	10.4	22.5
Two	31.3	20.3	31.4	7.1	22.3
Three	36.8	10.9	13.2	3.5	9.0
Four or more	45.6	6.3	5.0	2.5	4.8
Not applicable (see footnote 1)	60.3	32.0	32.0	53.8	30.9
Educational attainment					
Not stated	43.8	7.1	7.2	8.0	9.3
No school	75.2	1.8	0.5	2.3	0.7
Year 10 or below	63.0	38.5	19.0	41.5	19.5
Cert I or II	57.5	0.3	0.2	0.2	0.1
Year 11	42.9	8.3	8.6	7.0	8.7
Year 12	38.2	18.1	22.4	14.6	23.0
Cert III, IV, or Diploma	38.2	17.0	25.0	21.3	23.5
Degree or Higher Degree	27.4	8.9	17.1	5.1	15.2
Core activity need for assistance					
Does not have need	17.9	87.3	95.5	76.1	90.6
Has need	72.3	11.4	2.4	22.6	5.9
Not stated	28.7	1.2	2.1	1.3	3.5
Household composition					
Lone person household	65.9	9.5	4.4	20.6	8.6
Couple family	43.6	60.2	60.0	46.5	57.5
One parent family	39.4	22.4	28.3	15.9	19.7
Other family	49.0	0.8	0.8	2.2	1.8
Not applicable (see footnote 1)	48.9	7.0	6.5	14.8	12.4
Family Blending					
Intact	38.4	39.5	47.1	25.1	42.8
Blended/Step/Other	39.9	6.0	7.3	5.2	6.7
Not applicable (see footnote 1)	51.1	54.4	45.5	69.7	50.5
Australian citizenship					
Australian	45.6	90.8	90.9	92.5	87.2
Not Australian	43.1	7.7	6.9	5.8	9.6
Not stated	34.1	1.5	2.1	1.5	3.3

Table 2: Continued

Variable	All recipients:	Female recipients		Male recipients	
	% who are NEET	NEET %	Non-NEET %	NEET %	Non-NEET %
Indigeneity					
Indigenous	59.2	5.3	3.1	4.6	3.4
Not identified as Indigenous	44.6	94.7	96.9	95.4	96.6
Migrant status					
Australian	44.5	69.3	74.1	72.4	68.6
Migrant, time unstated	48.0	1.0	0.8	1.0	1.0
Migrant, 0-1 year	32.7	0.6	0.6	0.4	1.4
Migrant, 2-5 years	31.4	2.7	3.1	1.1	5.8
Migrant, 6+ years	50.3	24.4	19.1	22.7	20.1
Not stated/not applicable (see footnote 1)	41.0	2.0	2.3	2.3	3.0
Remoteness					
Major Cities of Australia	43.5	65.2	67.1	61.5	71.6
Inner Regional	47.6	22.0	21.4	23.8	18.5
Outer Regional	49.6	10.5	9.7	12.3	8.4
Remote Australia	49.9	1.2	1.1	1.4	1.0
Very Remote Australia	56.8	0.9	0.6	1.0	0.6

1) For information on what is included in the Not Applicable category for relevant variables, see the ABS 2011 Census Dictionary [16] under the following variable codes: Dependent children – CDCF; Household composition – HCFMD; Family Blending – FBLF; Migrant Status – BPLP and YARP.

49.0%, or almost half the population of working age NEETs. These are aggregate proportions for males and females combined, whereas Table 2 displays these figures by gender.

Those aged 60–64 years represented 18.1% of working age NEETs, the highest proportion for any five-year age group. The lowest representation was for those aged 15–19 years at just 2.7%.

A higher proportion of NEET women were in the 30–44 years age category (36.6% vs. 24.5% for males), which may be a further indicator of women's greater role in child rearing, as this age-range represents the peak years for female fertility and care for young children in Australia [8]. A greater proportion of NEET men was aged 45–64 years, at 58.0%, compared with 44.4% of female NEETs.

Some 56.0% of NEET women were caring for dependent children, compared with 23.5% of NEET males. Caring for children is the number one reason given by women of working age for being "Not in the Labour Force" (NILF) in Australia [11]. Only 19.5% of NEET women had never been married compared with 39.0% of NEET men.

All NEETs had strikingly lower levels of educational attainment than non-NEET recipients of DSS payments. This may have implications for their future employment prospects in comparison to non-NEETs. Male NEETs were disadvantaged by a factor of three when compared to the proportion of non-NEET males having Degree or Higher Degree education. In terms of numbers of persons, this translates to just 23,500 (out of 459,400) male NEETs being degree qualified, compared to 76,300 (out of 502,200) non-NEET males. When you consider that 201,100 male NEETs had Year-10 or below education, the observation that fewer than 25,000 had a degree qualification gives some sense of the magnitude of the skew towards lower levels of education among male NEETs.

The discrepancy in Degree or Higher Degree education among females was less pronounced, but still very apparent at almost two-fold in favour of non-NEET females. This smaller difference than that observed among males may indicate that more degree qualified women are leaving the workforce during peak child rearing years. This requires further research. The 8.9% of female NEETs with a degree qualification represents about 80,600 women.

Around half the proportion of female NEETs (11.4%) required assistance with core activities (a proxy for disability) compared with male NEETs (22.6%), and regardless of gender NEETs required assistance with core activities at around four times the rate of non-NEETs. As with higher rates of low education, higher rates of disability may have implications for onward employment opportunities in comparison to non-NEETs.

Lastly, Indigenous persons were overrepresented in the NEET category by almost double compared with non-NEET recipients of DSS payments.

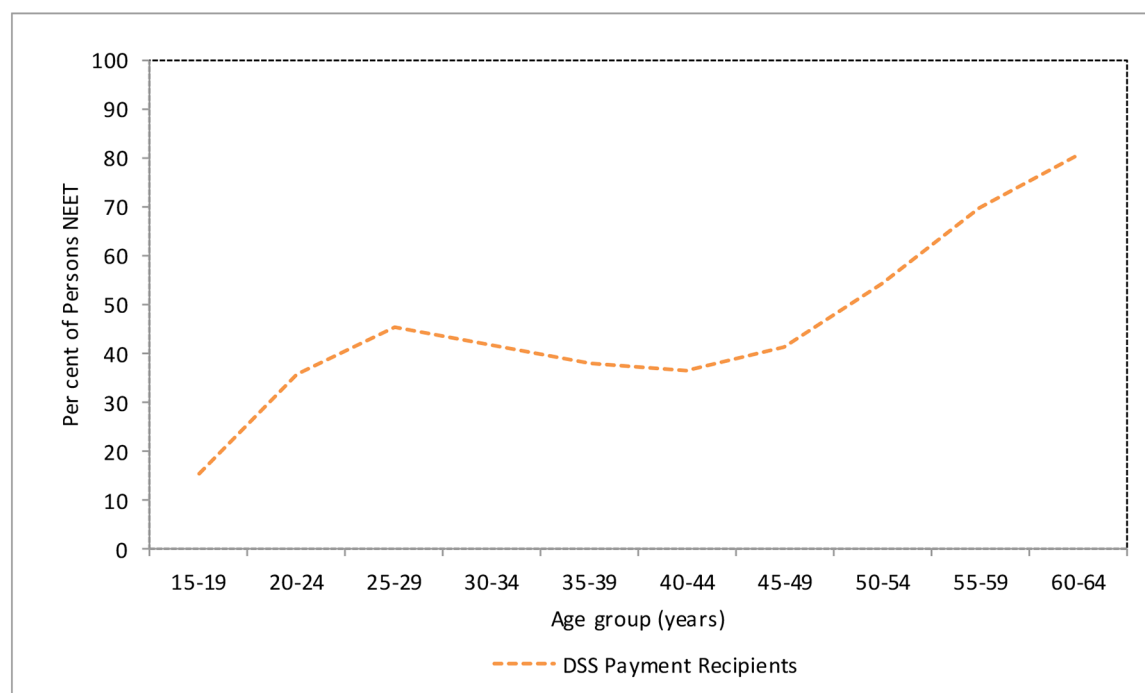
NEET status and age group

Figure 1 shows the relationship between NEET status and age group for recipients of DSS payments, and clearly demonstrates that NEET status is more than just a youth issue. The increased proportion of NEET status for DSS payment recipients aged from 45–49 years onwards is quite dramatic, and suggests further investigation is warranted.

Adjusted likelihood of NEET status

Table 3 shows that DSS payment recipients were more likely to be NEET if aged 30–64 years compared with those aged

Figure 1: NEETs in Australia – proportion of linked DSS payment recipients aged 15–64 years classified as NEET, by age group



15–29 years. Regardless of age group, NEETs were more likely to be female.

Overall, persons in need of assistance with core activities (i.e. disabled people) were almost six times more likely to be NEET, with older NEETs being twice as likely as younger NEETs to require such assistance. Compared to those holding degree level qualifications, persons holding any lower level of educational attainment were more likely to be NEET. Likelihood of NEET status showed no consistent pattern by educational attainment across the three age-groups.

Younger people were more likely to be NEET if they had young children in the family, compared with NEETs aged over 30 years. People of both age groups were equally more likely to be NEET if providing unpaid care to a family member, but younger people were more likely to be NEET if providing unpaid care for a child.

People were more likely to be NEET if renting their house from the government or a housing charity, and more so for younger people. People with more than four persons in their household were at greater odds of being NEET, with younger people at generally higher odds.

While Indigenous recipients of DSS payments were around twice the odds of being NEET, it was interesting to note that this was one of the few demographics where NEET status was more likely in the 15–29 years age group. We also observed this independently for the region “Very Remote Australia”, where a higher proportion of young people are Indigenous [19].

Lastly, linked SSRI – Census records were almost five times more likely to be NEET than unlinked records.

Discussion

Our findings highlight several critical issues for policy consideration with respect to Australians aged 15–64 who are

not in employment, education or training: the current focus on younger NEETs, while important, misses a potential fiscal “iceberg” in the form of NEETs aged over 30-years; two-thirds of NEETs are female, with those having dependent children being a major contributor; older NEETs are far more likely to have a disability, and a higher proportion of males are classified NEET once aged over 45-years.

As of September 2011 approximately 1.37 million working age direct recipients of Australian Government Department of Social Services income and family support payments, who also linked to the August 2011 Census, were classified as NEET. This represented 45% of all linked recipients of DSS payments aged 15–64 years. Those aged 15–29 years, which is the standard age range for OECD analysis of NEETs, numbered just over 250,000 persons. These younger NEETs represented less than 20% of the total linked DSS payment recipients classified as NEET, suggesting that standard NEETs reporting may neglect information on around 80% of the working age NEET population in Australia. Regardless of what age groups are used to compare NEET status, persons above the age of 30 but below Age Pension age who meet the criteria for NEET status are not assigned that term in official reporting. The NEET classification seems reserved for those aged 15–29 years only. We argue that all working-age welfare recipients meeting NEET criteria should be categorised and reported as NEET and placed into meaningful age-groups for analysis and targeted policy development.

Why is this important? Australia is entering a period of population aging, shrinking of the working-age tax base, an impending revolution in workplace automation, and planned elevation of the minimum age for Australian age-pension eligibility from 65 years to 67 years by 2023 [9, 15]. DSS presided over AUD \$72 billion in personal welfare benefit expenditure in 2015/16, a figure that excludes an additional \$43 billion in Age Pension expenses [20]. Our findings show

Table 3: Adjusted likelihood of NEET status, by age group, for DSS payment recipients aged 15–64 years linked to census

Variable	15–29 years	Age group 30–64 years	15–64 years
	OR	OR	OR
Female vs Male	1.21	1.72	1.59
Indigenous vs Not Identified Indigenous	1.81	1.31	1.48
Overseas born vs Australian born	1.13	1.33	1.48
Educational attainment			
Not stated/Inadequately described vs Degree	1.44	1.70	1.74
No school vs Degree	6.93	4.59	5.44
Year 8 or below vs Degree	3.75	4.28	4.53
Year 9 vs Degree	2.59	3.36	3.19
Year 10 vs Degree	2.53	2.36	2.52
Cert I and II vs Degree	3.60	1.89	2.33
Year 11 vs Degree	1.78	1.91	1.82
Year 12 vs Degree	1.34	1.83	1.51
Has need for assistance with core activities			
Yes vs No	3.17	6.72	5.89
Not stated vs No	0.67	0.62	0.64
Household structure			
Reference = Couple family, not applicable, not applicable			
Couple family, no dependent children, blended	1.98	0.66	0.87
Couple family, no dependent children, intact	1.63	0.79	0.89
Couple family, 1 dependent child, blended	0.38	0.49	0.40
Couple family, 1 dependent child, intact	0.32	0.50	0.38
Couple family, 2+ dependent children, blended	0.15	0.40	0.26
Couple family, 2+ dependent children, intact	0.16	0.47	0.30
One parent family, no dependent children	2.54*	0.82	1.01
One parent family, 1 dependent child	0.41	0.38	0.31
One parent family, 2+ dependent children	0.21	0.40	0.27
Other family	0.93	0.93	0.66
Not applicable (see footnote 3)	0.82	0.95	0.71
Age of youngest person in family			
2 years and under vs 15 years or over	6.51	1.68	2.70
3 to 5 years 15 years or over	3.59	1.21	1.82
6 to 9 years 15 years or over	1.94	0.82	1.19
10 to 14 years 15 years or over	1.51	0.69	0.91
Unpaid assistance to person with disability			
Provided unpaid assistance vs None	1.31	1.29	1.39
Not stated/applicable vs None (see footnote 3)	0.90	1.03	1.01
Unpaid child care provided			
Cared for child/ren vs No unpaid child care	1.82	1.17	1.46
Not stated/applicable vs No unpaid child care (see footnote 3)	0.61	0.58	0.59^
Citizenship			
Not Australian vs Australian	1.65	1.20	1.14
Not Stated vs Australian	0.99	0.72	0.74
Housing tenure			
Own, mortgage vs Own, outright	0.87	0.38	0.41
Rented, agent or private vs Own, outright	1.20	0.54	0.54
Rented, Government or charity vs Own, outright	2.26	1.29	1.26
Rented, other vs Own, outright	1.34	0.60	0.61
Other tenure type vs Own, outright	1.59	0.86	0.88
Not stated/applicable vs Own, outright (see footnote 3)	0.95	0.38	0.37

Table 3: Continued

Variable	15–29 years	Age group 30–64 years	15–64 years
	OR	OR	OR
Number of persons in household			
Three vs One or two	1.13	1.02*	0.92
Four vs One or two	1.57	1.04	1.01
Five vs One or two	1.74	1.20	1.12
Six vs One or two	1.87	1.42	1.26
Seven vs One or two	1.84	1.59	1.32
Eight vs One or two	1.85	1.80	1.40
Not applicable vs One or two (see footnote 3)	0.68	1.44	1.43
Remoteness			
Inner Regional vs Major Cities	1.10	1.03	1.08
Outer Regional vs Major Cities	1.16	0.94	1.02
Remote vs Major Cities	1.14	0.76	0.87
Very Remote vs Major Cities	1.79	1.06	1.29
Linked vs Not linked	4.36	4.97	4.92

1) Model adjusts for the following variables, some of which are not presented: Age Group; Gender; Region of Birth; Marital Status; Count of Dependent Children in Family; Age of Youngest Person in Family; Level of Highest Educational Attainment; Proficiency in Spoken English; Core Activity Need for Assistance; Family Household Composition (Dwelling); Australian Citizenship; Indigenous Status; Migrant Status; State; Remoteness; Unpaid Assistance to a Person with a Disability; Number of Usual Residents in dwelling; Tenure and Landlord type.

2) All results are significant at $p < .0001$, except where noted: $P < 0.01 = (*)$.

Not Significant at $P > 0.05 = (^)$

3) For information on what is included in the Not Applicable category for relevant variables, see the ABS 2011 Census Dictionary [16] under the following variable codes: Household structure – HCFMD; Unpaid assistance to person with disability – UNCAREP; Unpaid child care provided – CHCAREP; Housing tenure – TENLLD; Number of persons in household – NPRD.

almost half of working age DSS payment recipients may be classified as NEET, and almost half of these are aged 45–64 years, which is well outside the existing policy focus for those who are NEET. But older NEETs may represent a greater financial burden to the welfare budget for several reasons associated with their demographic characteristics. Recent policy initiatives from the Australian Government Department of Education, Skills and Employment (DESE) have sought to address the issue of unemployed welfare recipients aged over 45 years who want to work but face barriers in finding work due to their age, health, caring responsibilities and/or outdated skills. The range of schemes on offer can be accessed via the Mature Age Hub on the DESE website, which is set up to help mature-age job seekers with free and subsidised training and other career transition assistance. The Hub also assists employers with wage and training subsidies, to help tackle the issue from both sides [21]. Even with these new supports, our research shows the scale of this issue is large, and there is room for policy frameworks to be more proactive in understanding older NEETs and assisting them to reduce their welfare dependence where possible.

The current Australian and OECD focus on NEET status as a youth problem remains relevant, as effective support and diversion strategies at this life stage can prevent entrenchment of costly disadvantage across an entire adult life course. Many younger NEETs are not long-term NEET, and analysis shows most are NEET for less than one-year for reasons including travel, “gap” years, volunteering, and caring, and

most transition out of NEET status as their priorities change [22]. OECD calculations showed that about half of all Australians aged 15–29 years experienced a period of NEET status in the 48-month period from 2009–12. While this sounds high, most were NEET for short spells of less than 6-months, indicating NEET status is transient for most. When analysed further, only 16% of young Australians spent more than 12-months total classified as NEET across the 48-month period [1]. Australians aged 15–29 years who were long-term NEET (classified NEET for 7 consecutive months or longer) were more likely to have low education levels, have parents with low education levels, be female, and be Indigenous. Further, for females, they were far more likely to have at least one child under-5 years [1]. NEET welfare policy tends to focus on young people who are vulnerable to becoming NEET and staying NEET, and this group may represent a small number in comparison to those who transition to NEET status when aged over 30 years. The Australian Government identifies older age-groups as representing “areas for further investigation” as part of their Priority Investment Approach, including transition to working age income support for parents, disabled persons, adult carers, and over-55s. These policy areas are divided into issues for prevention, or intervention at critical stages, while early intervention approaches are flagged only for young carers and parents aged under 24 years [7]. Our study shows that older NEETs are far more numerous than younger NEETs and have a different disability profile. However, the data used in this study represent NEETs at a single point in time. We are thus

unable to determine the point at which each individual first acquired a NEET status, how many periods of NEET status they have endured, or when their longest continuous period of NEET status occurred. Therefore, describing the longitudinal welfare journey or cumulative financial burden associated with each NEET group is not possible from this study. While further research is required to ascertain whether older NEETs are more likely to be NEET for longer, the simple fact that people aged 30–64 years represent four-in-five working age NEETs suggests they also represent a large cost burden to the welfare system that would benefit from the “further investigation” that the Australian Government identifies in their Priority Investment Approach [7].

Our extension of the age-range for NEET status from the OECD standard of 15–29 years to a ‘working age’ perspective covering 15–64 years reflects the need to address several factors important in social and fiscal policy that can be missed or diminished in importance when viewing NEETs from the constrained perspective of 15–29 years, while still allowing us to look at younger age groups. For example, while formal education and training is generally seen as something young people are involved in, with shifts in economic conditions further training can be increasingly important for older NEETs who may have been victims of industry closure and do not possess the skills to transition to another industry. This may be evident in the higher proportion of older males we found to be NEET, compared with females in the 45–64 years age group. Other NEETs may not have completed their education due to parenting responsibilities and find themselves with limited employment options into their thirties and beyond or have caring responsibilities for ageing or sick family members, and these types of factors have been identified by DSS as requiring further investigation in relation to transitions to welfare [7]. Restructuring of modern OECD economies away from primary and manufacturing industries, and towards technology and knowledge-based work brings challenges for welfare systems dealing with younger NEETs who may not have completed their education to the point where they have a marketable skill, and older ‘refugees’ from shrinking sectors of the economy who also do not possess the skills to gain employment in new growth sectors of the economy [9]. This does not mean that governments should prioritise helping older NEETs at the expense of supporting younger NEETs; on the contrary, our findings demonstrate that a focus on young NEETs remains as important as ever. However, our results on the age distribution of NEETs also suggest that constructive policy responses are required for NEETs of older working ages, and that these policies should be tailored to each age group on the basis of their relevant demographic profiles.

Limitations

The SSRI–Census linked dataset used for this project was cross-sectional in nature. We were unable to ascertain how long each recipient had been receiving welfare payments, nor how long they had been continuously NEET up to the reference period, nor how many times they may have moved between NEET and non-NEET status over their lifetimes. This has made it impossible to view NEET status over time and to accurately gauge the long-term cost of NEET status to the

welfare system. Future linkages may overcome these issues, such as the longitudinal components of the Multi-Agency Data Integration Project (MADIP), a data partnership among six Australian Government agencies currently being curated by ABS [23]. Further, as stated in Methods, Not-Linked SSRI records are not included in the analysis. Lastly, these data are from 2011, so may not reflect current circumstances as well as newer data. However, the issue of extending NEET status classification to incorporate all working ages remains salient.

Conclusion

While NEET status is typically framed with a policy focus towards young people, we show here that it is relevant across a substantial portion of the life course. We suggest that any focus on persons disengaged from education, training and employment and supported by government welfare payments might usefully be expanded to include all persons of working age. This approach to the NEET concept continues to support an understanding of younger NEETs via age-group segmentation of data, whilst allowing a more complete overview of the wider NEET population, including those aged over 30 years who represent the vast majority of NEET cases. Further research seeks to inform policy around NEET payment demographics, NEETs disengaged from labour markets, and longitudinal pathways into and out of NEET status.

Results from our study clearly demonstrate that NEET status remains important beyond 15–29 years, and the sheer number of NEETs aged over-30 years may represent an even greater issue for policy makers than young NEETs. That around 80% of the Australian working age NEET population were aged 30–64 years should be reason enough to widen the scope of NEET classification to include older age groups. The reasons for being NEET, characteristics of persons who are NEET, and their welfare payment types are likely to differ by age and gender, and our investigation supports much of this. Extending the age-range to a practical definition of working age allows analysts to capture a complete picture of those who are NEET, describe the characteristics of NEET status for multiple age-groups, and to generate a quasi-life course perspective on NEET status that offers governments across the OECD an opportunity to view the NEET phenomenon in its entirety, and formulate appropriate responses for each age group. NEET classification appears valid across the entire working age range for people who are physically, mentally and circumstantially able to be engaged in education, training or work, but are instead disengaged from each whilst also being reliant on taxpayer funded welfare payments. Our research suggests it is both viable and desirable to generate policy relevant information for young NEETs (15–29 years), mid-life NEETs (30–44 years), and older NEETs (45–64 years) of working age and this can only occur if the concept of NEET status is expanded to encompass all working ages. This concept of a three-category NEET classification allows governments to retain and grow their important focus on young NEETs while also extending targeted support to older NEETs who may be facing different challenges and require different policy solutions.

Importantly, these analyses highlight the kinds of insights to be obtained from linked government administrative

datasets. The results reported here are only possible due to the linkage of SSRI and Census data and partnerships across agencies that support collaborative research to analyse these data. Effective evidence-based policy design requires strong evidence to support decision making about programs and policies. In addition to the important new insights on NEETs shown here, we hope that this paper also showcases the value of linking administrative data in collaborative partnerships between data custodians, policy makers and social researchers to unlock the value of these data for social policy design and development.

Acknowledgments

This research was supported by the Australian Research Council Centre of Excellence for Children and Families over the Life Course (project number CE140100027). The views expressed herein are those of the authors and are not necessarily those of the Australian Research Council. The ARC Life Course Centre acknowledges the roles and assistance of the Australian Government Department of Social Services and the Australian Bureau of Statistics in the implementation of the DSS-ABS Data Integration Initiative. The authors wish to acknowledge the valuable contribution of Waylon Nielsen from the Department of Social Services, who was in-posted to the Australian Bureau of Statistics to interrogate the linked data file under secure conditions. Information on how to access more information about the study protocol or data used for this research can be obtained by contacting the Australian Government Department of Social Services.

Ethics Statement

No institutional ethics clearance was required for this research to occur. At the time of this study the Department of Social Services did not require independent ethics approval to use service data collected under the *Social Security Act 1991* for research and planning purposes. The Australian Bureau of Statistics does not require independent ethics approval to use information collected under the *Census and Statistics Act 1905* to assist another Commonwealth agency by making Census data accessible in a confidential de-identified manner.

Statement of Conflicts of Interest

None declared.

References

1. OECD. Investing in Youth: Australia. Investing in Youth [Internet]. Paris: OECD Publishing; 2016. <https://doi.org/10.1787/9789264257498-en>.
2. Gracey S, Kelly S. Changing the NEET mindset: Achieving more effective transitions between education and work [Internet]. London, UK: Learning and Skills Network; 2010. <https://www.educationandemployers.org/wp-content/uploads/2014/06/changing-the-neet-mindset-lsn1.pdf>.
3. Perales F, Higginson A, Baxter J, Western M, Zubrick SR, Mitrou F. 'Intergenerational welfare dependency in Australia: A review of the literature', Life Course Centre Working Paper Series, 2014-09. Institute for Social Science Research, The University of Queensland. <https://www.lifecoursecentre.org.au/wp-content/uploads/2018/06/2014-09-LCC-Working-Paper-Perales-Higginson-Baxter-Western-Zubrick-Mitrou.pdf>.
4. OECD. The NEET Challenge: What can be done for jobless and disengaged youth? Society at a Glance 2016, OECD Indicators [Internet]. Paris: OECD Publishing; 2016. <https://doi.org/10.1787/9789264261488-en>.
5. Social Exclusion Unit. Bridging the gap: new opportunities for 16-18 year olds not in education, employment or training [Internet]. Great Britain: Cabinet Office; 1999. <https://dera.ioe.ac.uk/15119/2/bridging-the-gap.pdf>.
6. Office for National Statistics. Young people not in education, employment or training (NEET), UK: May 2017 [Internet]. London: Office for National Statistics; 2017. <https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/unemployment/bulletins/youngpeoplenotineducationemploymentortrainingneet/feb2017/pdf>.
7. PriceWaterhouseCoopers. Valuation Report, 30 June 2015, Baseline Valuation, Department of Social Services, Final Report 2016 [Internet]; 2016. https://www.dss.gov.au/sites/default/files/documents/09_2016/baseline_valuation_results_report_accessible_version_12_july_2016_2pwc_2.pdf.
8. Australian Bureau of Statistics. Births Australia 2011. Catalogue No. 3301.0 [Internet]. Canberra: ABS; 2012. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3301.0Main+Features12012?OpenDocument>
9. OECD. Moving Up the Value Chain: Staying Competitive in the Global Economy [Internet]. Paris: OECD Publishing; 2007. <https://www.oecd.org/sti/ind/38558080.pdf>.
10. Australian Bureau of Statistics. Gender Indicators, Australia. Catalogue No. 4125.0 [Internet]. Canberra: ABS; 2012. https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4125.0_Jan%202012_Main%20FeaturesContents1
11. Australian Bureau of Statistics. Persons Not in the Labour Force, Australia, September 2013. Catalogue No. 6220.0 [Internet]. Canberra: ABS; 2014. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6220.0Main+Features1September%202013?OpenDocument>
12. Australian Bureau of Statistics. ABS Integrating Authority Accreditation; 2013 [Internet]. <https://www.abs.gov.au/websitedbs/D3310114.nsf/home/Statistical+Data+Integration+-+ABS+Integrating+Authority+information>.
13. Australian Government National Statistical Service. A guide for data integration projects involving Commonwealth data for statistical and research purposes. Canberra: National

- Statistical Service; 2014. <https://statistical-data-integration.govspace.gov.au/roles-and-responsibilities/integrating-authorities/>.
14. Chipperfield J, Brown JJ, Watson S. The Australian Census Longitudinal Dataset: using record linkage to create a longitudinal sample from a series of cross-sections. *Australian & New Zealand Journal of Statistics*. 2017;59(1):1-16. <https://doi.org/10.1111/anzs.12177>.
 15. Australian Government. Social Security Guide, Version 1.263 [Internet]. Canberra: Australian Government; 2020. <https://guides.dss.gov.au/guide-social-security-law>.
 16. Australian Bureau of Statistics. Census Dictionary Australia 2011. Catalogue No. 2901.0 [Internet]. Canberra: ABS; 2011. [https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2901.0Main%20Features802011/\\$FILE/2011%20Census%20Dictionary%2027102011.pdf](https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2901.0Main%20Features802011/$FILE/2011%20Census%20Dictionary%2027102011.pdf)
 17. Australian Government. Census and Statistics Act 1905, No. 15, 1905, Compilation 9 [Internet]. Canberra: Australian Government; 2020. <https://www.legislation.gov.au/Details/C2020C00296/Download>.
 18. Australian Government. Social Security Act 1991, No. 46, Compilation No. 186 [Internet]. Canberra: Australian Government; 2021. <https://www.legislation.gov.au/Details/C2021C00126>.
 19. Australian Bureau of Statistics. Estimates of Aboriginal and Torres Strait Islander Australians, June 2011. Catalogue No. 3238.0.55.001 [Internet]. Canberra: ABS; 2013. <https://www.abs.gov.au/ausstats/abs@.nsf/lookup/3238.0.55.001Media%20Release1June%202011>
 20. Australian Government Department of Social Services. Annual Report 2015-2016 [Internet]. Canberra: Australian Government; 2016. <https://www.dss.gov.au/about-the-department/publications-articles/corporate-publications/annual-reports/dss-annual-report-2015-16-0>.
 21. Australian Government Department of Education, Skills and Employment. Mature Age Hub [Internet]. Canberra: Australian Government; 2020. <https://www.dese.gov.au/mature-age-hub>.
 22. Stanwick J, Forrest C, Skujins P. Who are the persistently NEET young people? Literature overview support document [Internet]. Adelaide: National Centre for Vocational Education Research; 2017. https://www.ncver.edu.au/___data/assets/pdf_file/0018/1073043/Who-are-the-persistently-NEET-young-people-literature-overview-support-document.pdf.
 23. Australian Bureau of Statistics. Microdata: Multi-Agency Data Integration Project, Australia. Catalogue No. 1700.0 [Internet]. Canberra: ABS; 2018. <https://www.abs.gov.au/ausstats/abs@.nsf/mf/1700.0>.

