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Major articles

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Deriving a measure of financial hardship from the HILDA survey[1]

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1. Introduction

While much research concerned with poverty assesses reported income, an alternative approach is to consider measures of financial hardship or deprivation. The use of hardship measures is an attempt to identify people who are 'excluded from minimally acceptable ways of life of the society in which they live because of a lack of resources' by directly assessing their privation (Whelan et al. 2001, p. 358). Such measures typically assess the extent to which, due to a lack of financial resources, individuals or households lack access to goods, facilities or services or are unable to engage in activities that are considered basic necessities (Whelan 1993).

Hardship measures have advantages over income-based poverty measures. They directly assess the impact of lack of resources; take account of the influence of wealth, assets, credit, debt and non-cash benefits; overcome concerns about the reliability and misreporting of income data; eliminate the need to make assumptions about resource sharing within households; and avoid calculation of poverty lines and equivalence scales (Nolan & Whelan 1996; Ouellette et al. 2004; Saunders & Adelman 2004). There are, however, weaknesses with hardship measures. There is no generally agreed definition of hardship; debate about the differentiation of related concepts (such as poverty, deprivation, material hardship, social exclusion); no consensus about how to measure hardship including the domains which should be included (food, housing, medical) or the type and form of individual items; and debate about whether analysis should focus on individual items or combine items to construct multi- or single-dimensional scales. There is also no agreement on the best way to construct scales—either a simple sum of items or to differentially weight items to reflect their relative importance. Another key concern with hardship measures is ensuring that the behaviour measured represents constraints due to a lack of financial resources (Beverly 2000; Ouellette et al. 2004; Saunders & Adelman 2004).

There are a variety of reasons apart from lack of financial resources why people may not access the types of activities or goods considered by many to be a necessity. It may reflect the different priorities or choices individuals make about how to use their financial resources or differences in taste. As well as individual differences, the significance attached to particular items may vary due to cultural or climatic differences, making cross-national comparisons of hardship difficult (Nolan & Whelan 1996; Saunders & Adelman 2004; Ouellette et al. 2004). To alleviate concerns about personal choice, perceived significance or perceived need contaminating the measurement of hardship, researchers use items which ask respondents to identify constraints that are due to a lack of financial resources. The use of multi-item scales also goes some way to addressing these concerns, as the range of items can identify hardship experienced by the individual while accounting for differences in choice or resource allocation (Beverly 2000). Nonetheless, concerns remain about the interpretation and universality of hardship measures.

Hardship and deprivation measures do not show a perfect relationship with income. Some individuals/households with low income do not report deprivation, while other households with income above poverty thresholds do experience financial hardship (for example, Whelan et al. 2001). There are a number of plausible reasons for this. There may be measurement error influencing both income and hardship measures. Deprivation also reflects lack of access to other resources, whether economic (wealth, the absence of debt) or non-economic (availability of people within the household to perform household tasks, attitudes and behaviours promoting efficient use of available resources). Thus, the experience of hardship may be more strongly associated with low-income for those with poorer social support and residing in more disadvantaged communities. It has also been hypothesised that the duration of time with a low-income may be associated with the experience of hardship, with the availability of other resources that moderate the impact of low-income (such as savings or offers of assistance from others) likely to decline over time (see Whelan et al. 2001). Rather than being a problem, many researchers argue that sophisticated analysis of poverty involves consideration of a range of outcomes including both hardship and income-based measures (Ouellette et al. 2004; Saunders & Adelman 2004; Whelan et al. 2001).

The specific items that we will consider as financial hardship have also been labelled enforced hardship (Saunders & Adelman 2004), financial stress (ABS 2002; Bray 2001) and negative financial events (Breunig et al. 2005). The items are similar to those used by Whelan and colleagues to measure basic lifestyle deprivation (Whelan 1993, 1994; Whelan et al. 2001; Nolan & Whelan 1996). We use the term financial hardship to emphasise the link between lack of financial resources and the experience of hardship. The items were developed by the Australian Bureau of Statistics (ABS), based on previous Australian research into living standards, piloted and included in the 1998–99 Household Expenditure Survey. They are unbiased, readily interpreted by respondents, and have face-validity (see important criteria for hardship items in Beverly 2000). The items cover what Beverly (2000) refers to as material hardship (limits on consumption) and financial hardship (not paying rent/mortgage or utilities). We do not consider items measuring social aspects of hardship or exclusion (see Saunders & Adelman 2004). The items selected also focus on objective aspects of material need rather than more subjective self-assessment and comparison, such as satisfaction and rated prosperity (see discussion by Beverly 2000 and Ouellette et al. 2004).

Consideration of hardship or deprivation is particularly relevant to our ongoing investigation of psychological wellbeing. Whelan (1994) found that basic deprivation was a significantly stronger predictor of psychological distress among a nationally representative sample of Irish households than secondary and housing deprivation (the latter was not significantly associated with psychological distress). Mirowsky and Ross (1999) also note the apparently fundamental effect of hardship on mental health and argue that financial hardship may be responsible for the socioeconomic gradient in mental health observed across a wide range of measures of social status.

Unemployment research has shown that the negative health impacts of unemployment are largely mediated through financial strain. However, psycho-social characteristics such as being integrated into social networks, the availability of a confidant, and cognitive strategies that avoid self-denigrating thoughts and feelings have been shown to buffer the adverse effects of financial strain (for example, Turner et al. 1991). Therefore, the development of a valid and reliable measure of financial hardship or deprivation is directly relevant to investigation of the psychological consequences of unemployment and social exclusion more broadly, as well as to research seeking to develop appropriate psycho-social interventions.

2. Current project

This paper reports analysis to develop a valid measure of financial hardship using data from the Household Income and Labour Dynamics in Australia (HILDA) survey. This will be a basis for our ongoing research using this dataset.

In addition to income and wealth measures, the HILDA survey includes measures of financial hardship. Seven items included in the self-completion questionnaire assess respondents' reported inability to afford basic goods, facilities and opportunities. The items were drawn from those included in the ABS 1998–99 Household Expenditure Survey. Whereas the ABS survey enquired about not paying car registration or insurance on time, the corresponding item in the HILDA survey enquired about paying rent or mortgage payments on time.

The seven items from the HILDA survey were:

Since January 2001, did any of the following happen to you because of a shortage of money?

a) Could not pay electricity, gas or telephone bills on time
b) Could not pay the mortgage or rent on time
c) Pawned or sold something
d) Went without meals
e) Was unable to heat home
f) Asked for financial help from friends or family
g) Asked for help from welfare/community organisations

In general, approaches used to develop a scale of hardship/financial strain from a set of individual items include simply summing items together or applying differential weights to items to reflect theoretical groupings and relative importance. However, some have adopted more refined statistical methods.

Bray (2001) conducted a factor analysis of the financial stress measures in the ABS Household Expenditure Survey to identify underlying factors. In his analysis, Bray considered the seven items similar to those included in the HILDA survey and another block of items (labelled measures of exclusion or restricted participation by Saunders & Adelman 2004) for assessing activities that household members may not have been able to undertake due to a shortage of money (holiday away from home at least once a year; night out once a fortnight; friends/family over for a meal once a month; special meal once a week; buying new rather than second-hand clothes most of the time; spending time on leisure or hobby activities).

Bray (2001) reported that a three-factor solution best fitted the data and that this solution was consistent with theory and other (international) evidence. The first factor, **missing out**, consisted of the six items not included in the HILDA survey, reflecting constraint on lifestyle. The second factor, labelled **cashflow problems**, comprised items that reflected inability to pay bills and registration on time and seeking financial help from family or friends. Bray considered this grouping of items reflected the process of managing the household budget rather than a specific measure of deprivation. The final factor, which Bray labelled **hardship**, comprised the other four items (going without meals or heating, having to sell possessions, or seeking assistance from community organisations). This was considered an obvious index of deprivation reflecting a significant impact of limited financial resources on household functioning.

In contrast to this solution, Whelan and colleagues (Whelan 1993, 1994; Nolan & Whelan 1996) considered 24 indicators and identified three underlying dimensions—basic lifestyle deprivation (lack of basic food, clothing and heating, and experience of household debt on routine expenses); secondary lifestyle deprivation (items considered less essential such as leisure activities, car, telephone and central heating); and housing deprivation (availability of bath or shower, indoor toilet, refrigerator, colour television and washing machine). Note that in the analysis of data from the European Community Household Panel Survey, Whelan et al. (2001) identified five components of deprivation. The items included in the HILDA survey (comprising Bray's cashflow and hardship factors) are similar to those included in the basic deprivation factor. Whelan has argued that basic lifestyle deprivation is the factor most relevant to poverty measurement and, as previously mentioned, individual psychological wellbeing (Nolan & Whelan 1996; Whelan 1994).

The aim of the present analysis, therefore, is to assess the factor structure of the financial hardship measures in the HILDA survey to facilitate the development of scale(s) of hardship for use in subsequent analysis. We assess whether the two factors evident in Bray's analysis are found in the HILDA survey data. In his analysis, Bray (2001) acknowledges the limitations of the factor analytic methods used. Traditional factor analytic techniques assume that item responses are continuously distributed, that items are linearly associated with one another, and the items are linearly associated with the underlying continuous factors (see Rodenbaugh et al. 2004;

Woods 2002). This is clearly not the case as the financial hardship measures are dichotomous variables. Nonetheless, as Bray (2001) notes, traditional factor analysis techniques are often used and some statistical advice supports their use in these circumstances.

To overcome these limitations, we use techniques based on tetrachoric rather than Pearson product correlations. This is analogous to using logistic regression rather than normal linear regression to analyse binary outcome measures. We use the robust weighted least squares estimation procedure in the Mplus software package (Muthen & Muthen 2004) to undertake an exploratory factor analysis. We consider results of both promax and varimax (orthogonal) factor rotation. We seek to identify the most appropriate solution based on presence of eigenvalues greater than one, the eigenvalue scree plot, and the relative fit of the models (using a range of criteria). In addition, we contrast models using confirmatory factor analytic techniques, assess model specification for different subgroups, and directly compare the results with those obtained by Bray (2001).

Data are drawn from Wave 1 (release 3.0) of the HILDA survey (see Watson & Wooden 2002). The analysis is based on 12,572 respondents who completed the hardship items. We also briefly consider data from the second and third waves of the HILDA survey.

3. Results

Descriptive statistics

The percentage of respondents endorsing each financial hardship item and the rank ordering of item frequency is presented in Table 1. It is evident that there is a relatively low frequency of hardship amongst respondents; however, 18.4 per cent of respondents endorse the item concerning not paying utilities on time due to a shortage of money and 16.3 per cent reported asking family or friends for financial assistance. Clearly, the items loading on Bray's **cashflow** factor (the previous two items and the item related to not paying mortgage or rent on time) are experienced more commonly than the **hardship** items, being the three items with highest endorsement rates.

The data also show that the overall frequency of hardship increases amongst socially disadvantaged subgroups in the population. We consider two groups—income support recipients, and those residing in areas of relative socioeconomic disadvantage, which are those living in areas in the lowest three deciles of the ABS socio-economic indexes for areas (SEIFA). The data from income support recipients provide some support for the differentiation of Bray's two factors, as the increased rate of endorsement for the hardship items in this group relative to the overall population is much greater (2.4 to 3.1 times greater) than the increase in the cashflow items (all endorsed 1.8 times more than the general population rates).

Table 1 Responses to individual items

	Percentage of endorsement (%)	Rank order	Income support receipt (%)	Relative disadvantage: area in lowest 30 per cent (%)
Not pay electricity/gas	18.4	1	32.7	22.9
Not pay mortgage/rent	8.8	3	15.5	12.0
Ask family/friends	16.3	2	30.1	18.7
Pawned possessions	6.4	4	15.1	8.4
Went without meals	4.5	6	11.3	5.9
Unable to heat home	3.5	7	8.8	4.9
Help from community organisations	5.1	5	15.8	7.0

Results of exploratory factor analysis

The eigenvalues associated with the categorical exploratory factor analysis are presented in Figure 1 (labelled categorical). This plot provides support for a one-factor solution for a variety of reasons—only one eigenvalue has a value greater than 1; the appearance of the scree plot demonstrates a distinct difference in the slope of line fitting the one-factor and two-factor solutions; and the ratio of the first and second eigenvalue is quite large (6.9). This ratio is much closer to one based on the two-factor solution (1.36).

Figure 1 Scree plot of eigenvalues and factors

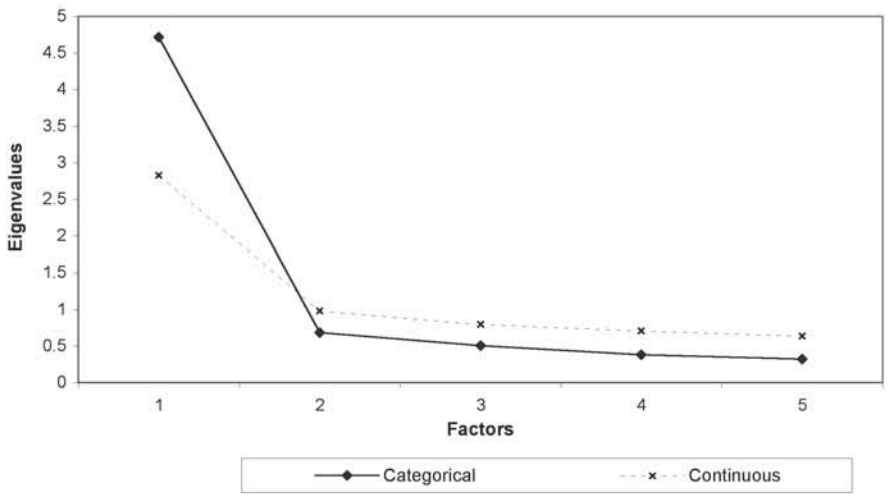

Table 2 presents the factor loadings for the single factor and varimax factor loadings for the two-factor solution. All items load uniformly high on the single factor (loadings from 0.72 to 0.90). There are considerable cross-factor loadings for most items in the two-factor solution. Unlike the solution reported by Bray (2001), the item related to seeking financial help from family and friends loads most heavily on the second factor (rather than grouping with the items assessing not paying bills on time). However, the cross-factor loading of this item is very high and Bray (2001) also reported that this item had the highest cross-factor loadings.

Table 2 Factor loadings for one- and two-factor solutions

	One-factor solution	Two-factor solution (varimax)	
Not pay electricity/gas	0.90	0.92	0.39
Not pay mortgage/rent	0.86	0.75	0.40
Ask family/friends	0.79	0.49	0.63
Pawned possessions	0.76	0.35	0.72
Went without meals	0.92	0.37	0.78
Unable to heat home	0.72	0.31	0.69
Help from community organisations	0.73	0.34	0.69

The measures of model fit (in this case the root mean square error of approximation [RMSEA]) for the one-factor solution (0.055) also indicates the adequacy of the single factor model. However, the measure of fit for the two-factor solution is also very good (RMSEA =0.027). The choice of models is therefore a decision about the relative benefits of the two-factor solution.

For a variety of reasons we support the single-factor solution. While we acknowledge that differentiating between cashflow problems and hardship is conceptually useful, it is not possible to argue that these factors are orthogonal (unrelated). Hardship is neither conceptually nor empirically independent of the cashflow measures. Critically, there is a strong correlation between the two factors when the exploratory factor analysis does not force the solution to be orthogonal. Thus, with highly correlated factors, one must question the benefit of proposing two distinct factors.

There are a number of possible explanations as to why we found a somewhat different factor structure to Bray. It may reflect measurement error. It may be due to the differences in the items (for example, the focus of the item on mortgage or rent payments in the HILDA survey in contrast to registration or insurance in the ABS survey analysed by Bray). It could reflect differences in the context in which the two survey instruments were presented. Alternatively, it may reflect the different techniques used. We observed earlier that the two factors were differentiated by item frequency. It may be that the procedures based on Pearson correlation are biased by this frequency difference.

To assess this possibility we conducted a final exploratory factor analysis using the maximum likelihood estimation procedures and assume that the financial strain items are continuous measures with a normal distribution. As is evident from Figure 1 (line labelled ‘continuous’), this solution is more consistent with a two-factor solution. The eigenvalue for the second factor is 0.98 and the ratio of the first two eigenvalues is closer to one. The model fit statistic indicates that the one-factor solution is inadequate (RMSEA =0.1) in contrast to the significance of the statistic for the two-factor solution (RMSEA =0.05). Further, in the two-factor model in which items are treated as continuous measures, the item related to seeking help from family and friends loads most heavily on the first (cashflow) factor, though again the cross-factor loadings are high. Therefore, the statistical support for the two-factor solution reported by Bray (2001) may be an artefact due to the differential rates of item endorsement and the use of Pearson correlation coefficients.

Confirmatory factor analysis

A final set of analyses contrasted the two-factor model as specified by Bray (2001) and the one-factor solution, treating the items as categorical and using the robust weighted least squares estimation procedure. Due to the estimation procedures, it is not appropriate to directly compare chi-square model fit statistics for nested models using this weighted least squares solution. Rather, it is necessary to contrast models using the difference testing procedures outlined in the Mplus technical appendices (see <www.statmodel.com>). We first fit a model based on Bray's two-factor solution and examine the fit statistics. We then constrain the model by fixing the correlation between the factors to be one. This is statistically identical to fitting a one-factor model. We examine the range of fit statistics and compare the models (see Table 3).

Table 3 Model fit statistics for one- and two-factor solutions

	Model fit x^2	Comparative Fit Index	Tucker Lewis Fit Index	Root Mean Square Error of Approximation	Correlation between factors
Two-factor solution *Cashflow problems and hardship*	$x^2 = 303$ $df = 12$ $p < 0.001$	0.984	0.984	0.044	0.862
One-factor solution	$x^2 = 507$ $df = 13$ $p < 0.001$	0.973	0.975	0.055	

As in the previous analysis the two-factor model seems to adequately fit the data. The chi-squared test of model fit is significant, reflective of a difference between the sample and the estimated population covariance. However, this statistic is influenced by sample size and therefore likely to be affected by the very large number of observations (n) in the current analysis (for example, Tabachnick & Fidell 2001). All of the fit indices indicate the adequacy of the model—the comparative fit index (CFI) and Tucker-Lewis fit index (TFI) are greater than 0.95, and the RMSEA is below 0.06. However, the correlation between the hardship and cashflow factors is 0.86, indicating an extremely strong association between the two factors. The fit indices also support the adequacy of the constrained model. While the chi-square test for the difference between models is significant ($x^2 = 141$, $df = 1$, $p < 0.001$), suggesting the two-factor solution is a better fit, this statistic also reflects sample size. Thus, apart from the chi-square statistics, all of the fit indices for both models are in the 'very good' region.

The same pattern of results is evident in analysis of the two subgroups previously mentioned. For those respondents receiving income support payments, the correlation between the two factors is 0.88. The chi-square test for the difference between models again indicates that the constrained, one-factor solution fits less well than the two-factor solution ($x^2 = 33.0$, $df = 1$, $p < 0.001$), though there are a large number of observations (n = 2,502) influencing the magnitude of this statistic. The fit statistics for the one-factor solution are adequate, though the RMSEA is 0.066 compared to 0.059 for the two-factor model. The model also holds for respondents living in areas of relative socioeconomic disadvantage. The correlation between factors in the two-factor model is 0.87. The test for model difference is again significant ($x^2 = 36.4$, $df = 1$, $p < 0.001$) with 3,531 observations. All fit statistics for the one-factor solution are adequate (CFI & TFI > 0.95; RMSEA < 0.06).

Analysis showed a similar pattern of results, supporting the adequacy of the one-factor solution, for models contrasting different groups based on age and gender. An identical pattern of results is evident when fitting the two-factor model based on the current exploratory analysis (that is, with the help from family and friends item loading on the hardship factor).

Replication using subsequent waves of data

We conducted the same set of analyses separately on Waves 2 and 3 of the HILDA survey data and replicated the pattern of results found with the Wave 1 data. In analysis of each of the three waves of data only one eigenvalue had a value greater than 1; the two-factor solution identified by exploratory factor analysis was consistent across the three waves, but somewhat different to that reported by Bray (2001); the model fit statistics for both the one- and two-factor solution were adequate; although the two-factor solution was consistently identified as statistically superior to the one factor, this reflects the very large sample size; and the two factors were highly correlated (0.81 and 0.82 in analysis of Waves 2 and 3).

Using hardship measures

For reasons of parsimony, the current results are interpreted as support for a single latent factor representing experience of financial hardship. It is evident from Table 1 that the factor loadings for all items are reasonably similar. Given that experience of no hardship is the norm (for example, 71.1 per cent of HILDA survey respondents), it is unlikely that the differences in factor loadings will substantially affect factor scores. To assess this, we use Wave 1 data and consider the correlation between factor scores based on the one-factor solution and a simple summary score representing the count of reported hardships (range from 0 to 7). The correlation between these two measures was very high (Pearsons correlation coefficient was 0.96, non-parametric Kendall's tau-b was 0.98). Given that this association may be inflated by the majority of respondents reporting no hardship, who are at the extreme of both scales, the analysis was repeated excluding such respondents. The revised correlation coefficients were still highly significant (Pearsons correlation coefficient was 0.98, non-parametric Kendall's tau-b was 0.88).

4. Conclusion

We have shown that a single dimensional model adequately fits the financial hardship data from the HILDA survey. Using techniques recognising that hardship items are categorical, the two-factor solution differs from that previously described by Bray (2001). Analysis shows the two factors are highly correlated, further weakening the rationale for imposing a two-factor solution on the data.

Our analysis has shown that the items have relatively similar loadings on the factor, with no item substantially more important than others. Therefore, a summary measure representing a simple count of financial hardship is an adequate method of calculating a measure of hardship. In advocating this solution, we do not dismiss the conceptual importance of differentiating between cashflow problems and hardship. The difference in relative frequency of endorsement suggests that cashflow problems are much more commonly experienced, and Bray (2001) notes the relevance of differentiating between the process of managing cashflow and experience of deprivation. Thus, it may make sense in some circumstances to differentiate between these two constructs. However, the analysis reported here suggests that a single dimension of financial hardship underlies the items included in the HILDA survey and, further, that a measure of this general financial hardship can be adequately constructed by summing all items. It is also worth noting that the inclusion of this range of different items into a single construct is consistent with the approach of Whelan et al. (2001), who label restrictions of food and clothing, household furnishings, and payment schedules as a reflection of basic lifestyle deprivation.

While this analysis demonstrates the adequacy of a single dimensional model of financial hardship within the HILDA survey, it does not address issues about the conceptual integrity of the measure. While hardship measures are growing in popularity, there are many unresolved issues and it is important to recognise that, similar to poverty measures, hardship measures are not neutral and involve arbitrary decisions about selection and analysis. It is also important to note that, while the HILDA survey collects hardship data from all household members, most surveys assessing financial hardship only collect data from a single representative household member. Thus, our consideration of hardship factors does not address findings from research showing different reported hardship among individuals within the same household (see Breunig et al. 2005). The relationship between income and hardship is not perfect. Layte et al. (2001, p. 447) argue that income and hardship/deprivation are 'key but distinct indicators, each containing information that can profitably be employed to enhance our understanding of poverty and indeed a range of other social phenomena'.

In future research, we plan to use the measure of financial hardship in analysis to understand factors associated with psychological wellbeing and distress. We plan to use structural equation modelling to examine the relationship between hardship and psychological wellbeing over time, while considering a range of other mediating, moderating and confounding factors.

Endnotes

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Understanding the factors associated with financial stress in Australian households

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1. Introduction

The objective of this project is to address the questions listed below.

- How do household characteristics—for example household size, the age structure of children, health status, and labour market activity—affect a household's propensity to report experiencing financial stress?
- How do these relationships change as one moves up the income scale (say from low to middle to high income)?
- How sensitive are these results to the way in which we measure financial stress? Answers to these questions are important in identifying vulnerable groups within Australian society and will be informative about any potential changes in payments within the social security system.

The outline of the report is as follows. In Section 2 we discuss the Household Income and Labour Dynamics in Australia (HILDA) data used in this project. Following that, the incidence of financial stress is compared across family types and income quintiles. Several different measures of financial stress will be considered. In Section 4 we use multivariate regression techniques to assess the way in which the incidence of financial stress varies across different household characteristics. Equivalence scales derived from our financial stress measures are discussed in Section 5, while Section 6 discusses some tentative policy conclusions.

2. The data issues

The data come from the second wave of HILDA survey.[1] The HILDA survey is a nationally representative panel survey of Australian households. After completing a personal questionnaire (PQ), household members over the age of 15 were also asked to fill out a self-completed questionnaire (SCQ) that asked about a range of stressful financial events. Specifically, individuals were asked 'Since January of 2002 did any of the following happen to you because of a shortage of money?' Possible responses included:

- an inability to pay utility bills on time
- an inability to pay the mortgage or rent on time
- pawning or selling something
- asking for financial help from family or friends
- asking for help from welfare or community organisations
- an inability to heat the home
- missing meals (HILDA Wave 2 Self-Completion Form 2001).

We use this information to create indicator (0,1) variables for each form of stress as well as indicators for experiencing at least one form of financial stress. Following Bray (2001) we also consider two summary measures of financial stress that essentially correspond to financial hardship (missing meals, pawning something, inability to heat the home, and applying for welfare) and cashflow problems (inability to pay rent/mortgage, inability to pay utilities, and borrowing from friends).

Our sample consists of individuals in single-family households who are living in nuclear families.[2] Approximately 92 per cent of individuals identified in HILDA live in such families. We classify these families into three types: couple-headed, lone-parent, and single individuals. Our estimation sample includes 3,290 couples, 515 lone-parent families, and 1,734 single individuals.[3]

3. The incidence of financial stress in Australian families

By family type

We begin by considering how the propensity to experience financial stress differs in couple-headed, lone-parent, and single-headed households.[4] Previous work demonstrates that partners in couple-headed households often disagree about whether or not the household has in fact experienced financial stress (Breunig et al. 2006). Consequently, we consider two alternative household-based methods for measuring financial stress. In one case, couple-headed families are considered to be financially stressed when one partner reports stress, and other couples are considered to be stressed only when both partners report stress. Both of these measures are household-based, that is, the family is the unit of analysis. We also consider a third individual-based measure of financial stress in which the individual is the unit of analysis.

The incidence of financial stress across family types is shown in Tables 1–3. These results show that household-based measures of financial stress (Tables 1 and 2) depend critically on the way in which financial stress amongst couples is measured.

Table 1 Incidence of financial stress by family type: Either partner reports stress

	Means and standard errors							
	Total		Couple		Lone parents		Singles	
Utilities	0.213	(0.409)	0.195	(0.397)	0.381	(0.486)	0.191	(0.393)
Rent/mortgage	0.106	(0.308)	0.096	(0.294)	0.170	(0.376)	0.106	(0.308)
Pawning	0.068	(0.252)	0.054	(0.227)	0.130	(0.336)	0.076	(0.266)
Missed meals	0.050	(0.218)	0.032	(0.176)	0.079	(0.270)	0.077	(0.266)
No heat	0.043	(0.203)	0.034	(0.182)	0.077	(0.266)	0.050	(0.218)
Friends loan	0.158	(0.365)	0.131	(0.337)	0.289	(0.454)	0.172	(0.377)
Welfare	0.046	(0.210)	0.032	(0.176)	0.113	(0.317)	0.053	(0.225)
Hardship	0.130	(0.337)	0.098	(0.297)	0.249	(0.433)	0.157	(0.364)
Cashflow	0.280	(0.448)	0.251	(0.433)	0.464	(0.499)	0.275	(0.447)
Any stress	0.306	(0.461)	0.273	(0.446)	0.502	(0.500)	0.308	(0.462)
Observations	**5,529**		**3,290**		**515**		**1,724**	

Source: HILDA Wave 2 survey data

Table 2 Incidence of financial stress by family type: Both partners report stress

	Means and standard errors							
	Total		Couple		Lone parents		Singles	
Utilities	0.143	(0.350)	0.081	(0.272)	0.381	(0.486)	0.191	(0.393)
Rent/mortgage	0.067	(0.251)	0.032	(0.176)	0.170	(0.376)	0.106	(0.308)
Pawning	0.044	(0.204)	0.013	(0.115)	0.130	(0.336)	0.076	(0.266)
Missed meals	0.035	(0.183)	0.007	(0.083)	0.079	(0.270)	0.077	(0.266)
No heat	0.028	(0.164)	0.009	(0.093)	0.077	(0.266)	0.050	(0.218)
Friends loan	0.109	(0.312)	0.050	(0.217)	0.289	(0.454)	0.172	(0.377)
Welfare	0.033	(0.177)	0.009	(0.096)	0.113	(0.317)	0.053	(0.225)
Hardship	0.089	(0.284)	0.029	(0.168)	0.249	(0.433)	0.157	(0.364)
Cashflow	0.193	(0.395)	0.109	(0.312)	0.464	(0.499)	0.275	(0.447)
Any stress	0.216	(0.411)	0.124	(0.303)	0.502	(0.500)	0.308	(0.462)
Observations	**5,529**		**3,290**		**515**		**1,724**	

Source: HILDA Wave 2 survey data

Fully 9.8 per cent of couples have experienced financial hardship and 25.1 per cent have experienced cashflow problems when stress is based on the report of either partner. The numbers fall to 2.9 per cent and 10.9 per cent respectively, when we require both partners to report the stress. As couple-headed households are a large fraction of the total population, these differences also have important implications for the measurement of the overall incidence of financial stress. In total, 30.6 per cent of Australian families are measured as having experienced some form of financial stress in the previous 12 months when we use the first definition, but only 21.6 per cent are estimated to have experienced stress when we apply the second definition. Moreover, the relative stress in couple-headed versus single-headed households depends on the method used to estimate financial stress in couples. Using the first method, it appears that couples and singles are approximately equally likely to experience financial stress. With method 2, couples are estimated to be much less likely to experience stress than their single counterparts. In short, the way in which we deal with disagreement between partners in reported financial stress has important implications for the measurement of financial stress at a family level (see Breunig et al. 2006 for more information).

Table 3 takes a different approach and defines financial stress to be an individual rather than family experience. Here, all those family members (including children over the age of 15) responding to the financial stress questions in HILDA's SCQ are included in the calculation.[5] Rather than one observation per family there are potentially many, and this will imply that the results are generally weighted towards the experiences of individuals in large families. The incidence of financial stress amongst individuals is estimated to be slightly higher than the household-based estimates derived using method 2 above.

Table 3 Incidence of financial stress by family type: Individual analysis

	Means and standard errors							
	Total		Couple		Lone parents		Singles	
Utilities	0.154	(0.361)	0.132	(0.338)	0.286	(0.452)	0.194	(0.396)
Rent/mortgage	0.075	(0.263)	0.063	(0.243)	0.122	(0.327)	0.108	(0.311)
Pawning	0.047	(0.212)	0.035	(0.183)	0.110	(0.313)	0.076	(0.266)
Missed meals	0.033	(0.179)	0.021	(0.145)	0.064	(0.245)	0.075	(0.264)
No heat	0.028	(0.164)	0.020	(0.141)	0.056	(0.230)	0.050	(0.217)
Friends loan	0.124	(0.330)	0.100	(0.300)	0.255	(0.436)	0.174	(0.379)
Welfare	0.035	(0.183)	0.024	(0.154)	0.098	(0.298)	0.054	(0.226)
Hardship	0.094	(0.292)	0.069	(0.254)	0.209	(0.407)	0.157	(0.364)
Cashflow	0.218	(0.413)	0.187	(0.390)	0.389	(0.488)	0.279	(0.449)
Any stress	0.236	(0.425)	0.202	(0.402)	0.428	(0.495)	0.302	(0.459)
Observations		**10,703**		**8,105**		**2,224**	**2,131**	

Source: HILDA Wave 2 survey data

Overall, these results are discussed below.

- Lone-parent families are substantially much more likely than other families to experience financial stress. Their incidence of financial stress is generally 2–3 times as high as that of couple-headed families.
- Couple-headed families are the least likely to experience all forms of financial stress, while single individuals have stress levels between those of couples and lone-parents. The exception is that single individuals are the most likely to report missing out on meals as a result of financial constraints.
- Across all family types, the inability to pay the utility bills is the most common individual form of financial stress suggesting that Australian families often delay paying their utility bills in an effort to make ends meet.
- An inability to heat the home is the least common form of financial stress.
- Finally, families are more likely to experience difficulties managing their cashflow than financial hardship. Overall, 28.0 per cent of families reported difficulties with cashflow, while 13.0 per cent reported experiencing financial hardship (see Table 1).

By income quintile

While the above analysis assesses how financial stress varies with family type, it is also interesting to consider how financial stress varies with household income. Here we calculate each household's equivalent income level using the Organisation for Economic Co-operation and Development (OECD) equivalence scale. These results are presented by income quintiles in Tables 4–6 using the same three methods described above.

Not surprisingly, financial stress is closely related to household income. On average, 40.3 per cent of the Australian families in the bottom income quintile (the poorest 20 per cent) experience some form of financial stress (see Table 4). Fully one in three (35.6 per cent) experienced cashflow problems in the previous 12 months, while one in five (22.8 per cent) experienced financial hardship. Financial stress is much less common in the upper income quintile, although despite having high-income levels 12.8 per cent of these households experienced cashflow problems, while 3.9 per cent experienced financial hardship.

Table 4 Incidence of financial stress by income quintile: Either partner reports stress

	Means and standard errors											
	Total		Quintile 1 (Bottom)		Quintile 2		Quintile 3		Quintile 4		Quintile 5 (Top)	
Utilities	0.213	(0.409)	0.274	(0.446)	0.293	(0.455)	0.237	(0.425)	0.171	(0.377)	0.089	(0.285)
Rent/mortgage	0.106	(0.308)	0.146	(0.353)	0.125	(0.331)	0.120	(0.325)	0.093	(0.291)	0.046	(0.210)
Pawning	0.068	(0.252)	0.113	(0.316)	0.098	(0.297)	0.071	(0.257)	0.033	(0.180)	0.028	(0.164)
Missed meals	0.050	(0.218)	0.096	(0.294)	0.068	(0.252)	0.052	(0.222)	0.025	(0.156)	0.009	(0.097)
No heat	0.043	(0.203)	0.090	(0.286)	0.051	(0.221)	0.041	(0.198)	0.026	(0.160)	0.008	(0.090)
Friends loan	0.158	(0.365)	0.223	(0.417)	0.203	(0.402)	0.181	(0.385)	0.125	(0.330)	0.061	(0.240)
Welfare	0.046	(0.210)	0.095	(0.293)	0.072	(0.258)	0.042	(0.201)	0.015	(0.124)	0.007	(0.086)
Hardship	0.130	(0.337)	0.228	(0.420)	0.187	(0.390)	0.132	(0.339)	0.068	(0.252)	0.039	(0.194)
Cashflow	0.280	(0.448)	0.356	(0.479)	0.366	(0.482)	0.311	(0.463)	0.234	(0.424)	0.128	(0.335)
Any stress	0.306	(0.461)	0.403	(0.491)	0.393	(0.489)	0.336	(0.473)	0.258	(0.438)	0.143	(0.350)
Observations	**5,529**		**1,164**		**1,147**		**1,096**		**1,057**		**1,065**	

It is interesting that while the incidence of financial hardship declines relatively quickly as income increases, cashflow problems continue to be pervasive even at relatively high-income levels. The incidence of cashflow problems (33.6 per cent) is only slightly lower in the middle-income quintile than in the bottom income quintile (35.6 per cent). Consequently, the ratio of cashflow problems to financial hardship is 1.6 in the bottom income quintile and 3.3 in the top income quintile.

As above, levels of financial stress are lower when we use method 2 to calculate household-based stress (see Table 5) or when we calculate individual-level financial stress (see Table 6). It remains the case, however, that financial hardship disappears more quickly as income increases, while cashflow difficulties are relatively more pervasive across the income distribution.

Table 5 Incidence of financial stress by income quintile: Both partners report stress

	Means and standard errors											
	Total		Quintile 1 (Bottom)		Quintile 2		Quintile 3		Quintile 4		Quintile 5 (Top)	
Utilities	0.143	(0.350)	0.226	(0.419)	0.207	(0.405)	0.150	(0.357)	0.096	(0.295)	0.038	(0.192)
Rent/mortgage	0.067	(0.251)	0.110	(0.313)	0.087	(0.282)	0.071	(0.258)	0.046	(0.210)	0.023	(0.149)
Pawning	0.044	(0.204)	0.092	(0.290)	0.059	(0.235)	0.038	(0.192)	0.018	(0.132)	0.011	(0.105)
Missed meals	0.035	(0.183)	0.082	(0.275)	0.046	(0.209)	0.033	(0.178)	0.010	(0.102)	0.003	(0.054)
No heat	0.028	(0.164)	0.071	(0.256)	0.032	(0.176)	0.024	(0.154)	0.011	(0.103)	0.001	(0.031)
Friends loan	0.109	(0.312)	0.191	(0.393)	0.146	(0.353)	0.112	(0.315)	0.070	(0.255)	0.029	(0.168)
Welfare	0.033	(0.177)	0.079	(0.269)	0.052	(0.222)	0.024	(0.152)	0.007	(0.082)	0.002	(0.049)
Hardship	0.089	(0.284)	0.194	(0.396)	0.123	(0.329)	0.081	(0.273)	0.030	(0.172)	0.017	(0.128)
Cashflow	0.193	(0.395)	0.302	(0.460)	0.265	(0.442)	0.197	(0.398)	0.141	(0.348)	0.063	(0.244)
Any stress	0.216	(0.411)	0.345	(0.476)	0.292	(0.455)	0.214	(0.410)	0.154	(0.361)	0.076	(0.264)
Observations	**5,529**		**1,164**		**1,147**		**1,096**		**1,057**		**1,065**	

Table 6 Incidence of financial stress by income quintile: Individual analysis

	Means and standard errors											
	Total		**Quintile 1 (Bottom)**		**Quintile 2**		**Quintile 3**		**Quintile 4**		**Quintile 5 (Top)**	
Utilities	0.154	(0.361)	0.233	(0.423)	0.202	(0.402)	0.161	(0.368)	0.115	(0.319)	0.058	(0.234)
Rent/mortgage	0.075	(0.263)	0.110	(0.313)	0.096	(0.294)	0.084	(0.278)	0.054	(0.226)	0.030	(0.172)
Pawning	0.047	(0.212)	0.082	(0.275)	0.063	(0.242)	0.049	(0.216)	0.026	(0.159)	0.017	(0.128)
Missed meals	0.033	(0.179)	0.064	(0.245)	0.039	(0.194)	0.037	(0.190)	0.018	(0.131)	0.007	(0.085)
No heat	0.028	(0.164)	0.066	(0.248)	0.029	(0.169)	0.024	(0.155)	0.015	(0.120)	0.005	(0.069)
Friends loan	0.124	(0.330)	0.178	(0.383)	0.157	(0.364)	0.136	(0.343)	0.093	(0.291)	0.056	(0.229)
Welfare	0.035	(0.183)	0.076	(0.265)	0.048	(0.215)	0.030	(0.170)	0.009	(0.094)	0.011	(0.105)
Hardship	0.094	(0.292)	0.177	(0.382)	0.123	(0.329)	0.092	(0.289)	0.048	(0.213)	0.032	(0.176)
Cashflow	0.218	(0.413)	0.309	(0.462)	0.277	(0.447)	0.233	(0.423)	0.168	(0.374)	0.101	(0.302)
Any stress	0.236	(0.425)	0.337	(0.473)	0.295	(0.456)	0.251	(0.434)	0.183	(0.387)	0.116	(0.320)
Observations	**10,703**		**2,231**		**2,224**		**2,131**		**2,042**		**2,075**	

4. The factors related to financial hardship and cashflow problems

In this section, we consider the way in which financial stress is related to both the needs and the resources of Australian families. To this end, we estimate a series of multivariate regression models which allow us to consider simultaneously a number of factors which are likely to be related to a family's propensity to report financial stress.[6] Our focus will be on two summary measures of financial stress, financial hardship and cashflow problems.[7] We estimate four alternative models. Model 1 controls only for equivalent income and family type. In addition to these factors, Model 2 also controls for the other financial resources of families, while Model 3 adds additional detail about the demographic composition of households. Finally, Model 4 considers all these factors along with information on families' health status, unemployment status, average age, geographic location, and so on. Family-level estimates of financial stress using method 1 are discussed in the body of the report, while estimates from the other two methods are given in the appendix (Table A1 to A7).

Financial hardship

Results from our four models of financial hardship are presented in Table 7. Families who report missing meals, being unable to heat their homes, applying for welfare or pawning household goods are considered to have experienced financial hardship.

Table 7 Determinants of hardship (either reports)

	Probit coefficients and t-statistics							
	Model 1		Model 2		Model 3		Model 4	
Equivalent income	-0.004	(6.39)	-0.003	(-5.60)	-0.004	(-6.85)	-0.003	(-5.20)
Lone parent	0.067	(4.04)	0.046	(2.93)	0.044	(2.74)	0.027	(1.78)
Couple	-0.033	(-3.21)	0.001	(0.15)	-0.071	(-5.88)	-0.048	(-1.33)
De facto					0.225	(10.37)	0.109	(5.67)
Home owners			-0.102	(-9.24)			-0.053	(-4.59)
Home buyers			-0.056	(-4.90)			-0.042	(-3.81)
Net worth			-0.006	(-7.61)			-0.004	(-5.22)
Non-resident children				-0.015	(-1.51)	0.038	(3.44)	
Children 0–4					0.010	(1.08)	-0.002	(-0.24)
Children 5–9					0.018	(1.99)	0.007	(0.87)
Children 10–14					0.007	(0.85)	0.006	(0.77)
Unemployed household member							0.084	(6.35)
Average age							0.000	(0.24)
Average age squared						0.000	(-1.91)	
Poor health							0.077	(7.51)
Aboriginal and Torres Strait Islander							-0.005	(-0.14)
Immigration status (English speaking background)							-0.015	(-1.35)
Immigration status (non-English speaking background)							0.016	(1.22)
Inner Regional Australia						0.001	(0.03)	
Outer Regional Australia						0.010	(0.54)	
Remote Australia							-0.019	(-0.66)
Melbourne							0.007	(0.45)
Other Victoria							0.015	(0.66)
Brisbane							0.016	(0.86)
Other Queensland							0.020	(0.92)
Perth							0.036	(1.76)
Other Western Australia						0.060	(1.77)	
Adelaide							0.022	(1.07)
Other South Australia						0.008	(0.29)	
Tasmania							0.014	(0.46)
Australian Capital Territory						0.006	(0.18)	
Northern Territory							-0.062	(-1.16)
Observations	**5,529**		**5,529**		**5,529**		**5,529**	

As before, the incidence of financial hardship declines as equivalent income levels increase.[8] In particular, an increase of $10,000 in a family's equivalent household income is associated with a reduction of between 3 to 4 per cent in the propensity to experience financial hardship.[9] This effect is relatively constant across the various models we consider. It is interesting that although we have controlled for equivalent income levels – rather than actual income levels—the demographic composition of the household is still associated with the propensity to experience financial stress. Although the equivalent income measure also takes into account family composition, it does not completely capture the variation in financial stress across different family types.

Specifically, relative to singles (the omitted category) lone-parents are 6.7 percentage points more likely to experience financial hardship (see Model 1, Table 7). This difference was 9.2 percentage points (see Table 1) when we did not control for equivalent income. Thus, income differences explain about one-third of the difference in the likelihood that lone-parents and single individuals will experience financial stress. Couples are 3.3 percentage points less likely to experience financial hardship than their single counterparts. This is in comparison to an unconditional difference of 5.9 percentage points (see Table 1).

Taking into account the other financial resources that Australian families alters the relative position of different types of families. Specifically in Model 2 we control for whether the household:

- owns its home
- is currently buying its home
- is renting (the omitted category).

Equity in the family home may provide a source of financial resources that families can draw on in cases of negative financial events thus reducing the propensity to experience financial hardship. Moreover, we also consider the family's overall net worth position since other financial assets may also protect the family from experiencing financial hardship.[10] These results indicate that families who own their homes outright or who are paying off mortgages are significantly less likely to experience financial hardship. Moreover, higher levels of net worth are also associated with less financial hardship. Not surprisingly, assets do appear to protect families from the difficulties associated with financial stress. Controlling for assets reduces the disparity between different family types.

Model 3 considers the composition of families in more detail. In particular, we differentiate between married and de facto couples and control for the age structure of children in the household as well as the presence of non-resident children attached to the household. De facto couples are much more likely than married couples (22.5 percentage points) to experience financial hardship.[11] At the same time, there is little effect of the age structure of children or the presence of non-resident children on families' propensity to experience financial hardship.[12]

Model 4 is a very detailed model that accounts for the demographic structure and assets of families as well as several other factors that are likely to be related to financial hardship. Overall findings from this detailed model are discussed below.

- Lone-parents are only slightly more likely than single individuals to experience financial hardship, though this effect is only significant at the 10 per cent level. There is no significant difference in the financial hardship of couples and single individuals. Taken together these results suggest that differences between the extent to which different types of families experience financial hardship can be completely explained by a detailed model of the characteristics of those families.

- Assets continue to have a substantial effect of the propensity to experience financial hardship.
- Although financial hardship is not significantly related to the age structure of resident children, non-resident children increase the probability that the household will experience financial hardship.
- Families in which at least one adult is unemployed or has poor health are significantly more likely to experience financial hardship.
- Financial hardship is not significantly related to either immigration status or geographic location once other factors are taken into account.

Cashflow problems

Similar estimates of the factors related to cashflow problems are reported in Table 8. Cashflow problems include an inability to pay the utilities or rent/mortgage on time or the need to borrow money from friends to make ends meet.

Table 8 Determinants of cashflow problems (either reports)

	Probit coefficients and t-statistics							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
Equivalent income	-0.005	(-8.90)	-0.004	(-7.30)	-0.005	(-8.66)	-0.005	(-7.18)
Lone parent	0.176	(7.00)	0.146	(5.64)	0.116	(4.52)	0.098	(3.61)
Couple	0.005	(0.36)	0.069	(4.39)	-0.070	(-3.95)	-0.023	(-0.39)
De facto					0.277	(10.35)	0.108	(4.09)
Home owners			-0.253	(-14.22)			-0.152	(-7.75)
Home buyers			-0.075	(-4.04)			-0.059	(-3.10)
Net worth			-0.015	(-9.19)			-0.012	(-6.89)
Non-resident children				-0.068	(-4.44)	0.100	(5.28)	
Children 0–4					0.074	(5.39)	0.024	(1.75)
Children 5–9					0.042	(3.20)	0.018	(1.36)
Children 10–14					0.023	(1.81)	0.015	(1.13)
Unemployed household member							0.075	(3.60)
Average age							-0.002	(-0.68)
Average age square							0.000	(-2.01)
Poor health							0.068	(4.20)
Aboriginal and Torres Strait Islander							-0.029	(-0.50)
Immigration status (English speaking background)							-0.035	(-1.92)
Immigration status (non-English speaking background)							-0.016	(-0.79)
Inner Regional Australia						-0.042	(-1.65)	
Outer Regional Australia						-0.027	(-0.88)	
Remote Australia							-0.033	(-0.64)
Other NSW							0.010	(0.31)
Melbourne							0.035	(1.42)
Other Victoria							0.037	(0.98)
Brisbane							-0.006	(-0.22)
Other Queensland							0.024	(0.68)
Perth							0.003	(0.09)
Other Western Australia						0.034	(0.70)	
Adelaide							0.013	(0.44)
Other South Australia						-0.021	(-0.45)	
Tasmania							0.032	(0.65)
Australian Capital Territory						0.003	(0.06)	
Northern Territory							-0.009	(-0.09)
Observations	**5,529**		**5,529**		**5,529**		**5,529**	

Families with higher income levels have fewer cashflow problems. Specifically, an increase of $10,000 in a family's equivalent income is associated with a reduction in the probability of experiencing cashflow problems by between 4 to 5 per cent. As before, the effect of increased income is relatively constant across the various models that we consider.

There is no difference in the extent to which couples and single individuals experience cashflow problems once we control for equivalent income. At the same time, lone-parents are much more likely to experience cashflow difficulties (see Model 1). Controlling for income, lone-parent families are 17.6 percentage points more likely than single individuals to experience difficulties with cashflow. When we do not control for income, this difference is 18.9 percentage points (see Table 1) suggesting that income itself plays little role in the difficulties (relative to other families) that lone-parents have in avoiding cashflow problems.

Home owners are substantially (25.3 percentage points) less likely to experience cashflow problems, while cashflow problems also occur less frequently among families that are currently in the process of buying their home. As with financial hardship, higher levels of net worth protect families from experiencing cashflow problems. Controlling for assets suggests that couples are more likely (6.9 percentage points) to experience their cashflow problems than are single individuals. In other words, the lack of a significant difference between couples and singles that was observed in Model 1 stems from the high asset levels of couples. Once couples are compared to single individuals with the same asset levels, it becomes apparent that couple-headed families are more likely to experience difficulties with cashflow.

The age structure of resident children and the presence of non-resident children are important in understanding a family's propensity to experience cashflow problems. Families with children between the ages of 0 and 4 are 7.4 percentage points more likely to have cashflow problems. Children between the ages of 5 and 9 increase the incidence of cashflow problems by 4.2 percentage points, while children between the ages of 10 and 14 are associated with 2.3 percentage points more cashflow problems.

In Model 4 we take into account both the demographic structure and assets of households along with several other factors that might logically be related to a family's cashflow difficulties. This model's findings are discussed below.

- Lone-parents are 9.8 percentage points more likely than single individuals to experience cash flow difficulties, although there is no significant difference between couples' and singles' propensity to have cashflow problems.
- De facto couples experience significantly more cashflow problems than married couples.
- Non-resident children increase a family's propensity to experience cashflow problems by 10.0 percentage points, although—as with financial hardship—the age structure of resident children is relatively unimportant in understanding the cashflow experiences of families.
- Equity in the family home or other forms of assets reduces the extent to which families experience difficulties with cashflow.
- Unemployed or family members with poor health increase the family's propensity to experience cashflow problems by 7.5 and 6.8 percentage points respectively.
- Finally, there is little effect of characteristics such as immigration status and geographic location on the propensity to experience cashflow difficulties.

5. Equivalence scales

Introduction

Equivalence scales indicate the amount of expenditure that a household with a given demographic composition needs to achieve the same 'welfare level' as a reference household with a specified demographic composition. In particular, equivalence scales answer questions like: 'how much would a couple with one child have to spend in order to achieve the same welfare level as a childless couple'? Answers to this (and similar questions) are important for a myriad of public policy decisions about social welfare programs—like income support, child benefits, Rent Assistance, progressive taxation, and so on—which seek to redistribute income from one segment of the population to another.[13]

If we have a model of utility for households (indexed by h) of size s with income y

(1) $$V_{hs} = g\,(\,y_h,\, s_h\,)$$

we can solve for the equivalence scales by first estimating the model on all households and then solving for average utility of a household of size r by

(2) $$\hat{\bar{V}}_{.r} = \hat{g}\,(\bar{y}_{.r},\, r\,)$$

The notation $\bar{y}$ indicates the average income over households of size r and $\hat{g}$ indicates the estimated function. The equivalence scale comes from solving the problem

(3) $$\hat{\bar{V}}_{.r} = \hat{g}\,(y^{(j)},\, r\,)$$

for $y^{(j)}$, the amount of income that a family of size j needs to be at the same utility level as a family of size r of average income level.

Equivalence scales, e_j, are generally expressed as the fraction of $y^{(j)}$ to $\bar{y}_{.r}$. Thus an equivalence scale of 2 indicates that a family of size j needs twice as much income as a family of size r to achieve an equivalent level of utility.

Utility can be replaced with some other measure of household welfare. Below we discuss several approaches to estimating equivalence scales, some of which are based upon utility and some of which are not. Our approach, using financial stress measures, addresses the question of how much income households need to have the same probability of experiencing financial stress.

What is household welfare?

Nelson (1993) provides a historical overview of the ways in which policy makers and academic researchers have conceived of the notion of 'household welfare'. There are two substantive questions: first, how is welfare to be defined and second, whose welfare is it? She points to an increasing divergence in the interests of policy makers and academic researchers. Most policy applications (and older economic theory) define 'household welfare' in terms of the material standard of living of all individuals (including children) in the household. The current academic literature, on the other hand, often equates 'welfare' with utility (or satisfaction) and focuses exclusively on parental welfare as the outcome of interest.[14]

The ordinalist revolution in the 1930s seems to have played a large role in this divergence (see Cooter & Rappoport 1984; Browning 1992; Nelson 1993). The term 'ordinalist revolution' refers to the rejection of cardinal utility and to the general acceptance amongst economists that utility is not comparable across individuals, that is, it is an ordinal concept only. Prior to the 1930s, economics was seen as the science of 'material welfare'. In this framework, goods yielded utility if they contributed to the individual's physical wellbeing—or almost equivalently to productive capacity (Cooter & Rappoport 1984, p. 509). Making interpersonal comparisons was not a problem because utility was based on physical or material needs—rather than preferences—and different individuals' physical and material needs were likely to be much the same. This led quite naturally to the idea of using proxies for material wellbeing (most commonly food expenditure, but also necessities and later 'adult' goods) to estimate equivalence scales.[15]

Utility based equivalence scales were first discussed in Muellbauer (1974) and – as Nelson (1993) argues—redefined the notion of 'welfare' from the material wellbeing to one of subjective utility (that is, happiness or satisfaction) and shifted the locus of welfare from all individuals to parents only.[16]

In particular, Pollak (1991) discusses some of the issues involved in moving from a theoretical concept of 'utility'–which is fundamentally individual-based–to the more practical issue of families and households. He proposes that one must either accept the notion of household (family) preferences or we must confront two distinct issues: first, conflicting adult preferences within the household and second, the treatment of children's needs and wants. Our approach will look directly at the occurrence of events leading to negative consequences for all members of the household (missing rent payments which could lead to eviction, missing utility payments which could lead to having electricity disconnected, and so on) including children. Irrespective of one's position on household preferences, sharing rules, or conflict between adult and child preferences, it is clear that such events will negatively affect children.

Why is what we are doing important?

This project will estimate equivalence scales from measures of financial stress. It is more in keeping with the material wellbeing notion of 'welfare' rather than a more utility- or satisfaction-based concept. We are also moving away from subject to somewhat more objective survey data as our foundation for the analysis. So some things to think about are discussed below.

Nelson (1993, p. 485) said:

> …as questions of the distribution of pure subjective happiness are rarely raised in practical situations, equivalence scales in the older, more materialistic, and more objective sense remain of great practical concern.

In her suggestions for future research, Nelson (1993, p. 487) argues for improving the theory and empirical comparison of material standards of living across households of different compositions, where the term 'household' is understood to encompass all members.

When discussing which concept of utility to use in addressing questions about the welfare system, Cooter and Rappoport (1984, p. 509) wrote '... may be fruitful to use material welfare notion in present-day welfare problems.' But they do not do it in their paper.

Colasanto et al. (1984, p. 128) make the point that objective definitions of poverty are often based on others' expert judgment (food-based expert) or the judgment of an expert group. Subjective definitions often (but not always) ask individuals to make an assessment of their own situation. We do something different – our measure is more objective and not reliant on expert advice.

Like the Dutch literature (see below) we will also be relying on the responses of the head to adequately represent the welfare of everyone in the household. However, this may be less of a problem in our case because we will be concerned with the head's (objective) reports of whether the household has missed a rent/mortgage payment as opposed to whether the head sees a particular income level as satisfactory.

Finally, it does not seem to be too hard to argue that we should have a special interest (for developmental reasons and social externalities if nothing else) in the resources available to children and their living standards. Piggou (in Cooter & Rappoport 1984) said that poverty (especially of children) represented a significant untapped resource. The dividends from investing in this resource would be greater than that from investing in machines.

Many policy applications are centred around providing a safety net at the bottom. Focusing on the factors related to financial stress seems very consistent with this.

Methodological issues

The academic equivalence scale literature (reviewed below) generally rests on a utility- or satisfaction-based notion of welfare. There are a number of methodological issues that have arisen over the years.

What can you do with demand data?

Pollak and Wales (1979) argued that the type of equivalence scale (which they refer to as 'unconditional') required for welfare analysis is logically distinct from those that emerge from demand analysis ('conditional' equivalence scales). This is because conditional equivalence scales compare preferences over consumption vectors holding household demographic composition fixed. Unconditional equivalence scales, on the other hand, instead define preferences over both demographic composition as well as consumption goods. Importantly, demand data alone are not sufficient to identify unconditional (welfare) equivalence scales. Intuitively, demand data identify the indifference curves (van Praag 1991) calls it the 'horizontal' dimension of utility) themselves, but cannot identify how far the indifference curve is from the origin (the 'vertical' dimension).

This then raises the question: what would it take to identify equivalence scales useful for welfare analysis? Literature has arisen addressing this question (see in particular, Blundell & Lewbel

1991; Kapteyn et al. 1994). Kapteyn et al. (1994) notes that when one faces such an identification problem – such as that posed above—there are generally three basic choices. First, simply accept the problem and try to live with it. Second, make additional assumptions adding structure to the problem. Third, invoke additional information.

Blundell and Lewbel (1991) offer one strategy for living with it. They demonstrate that although equivalence scales are themselves not identified in any given price regime, the evolution of equivalence scales as prices change is identified. Thus, we could give up on the idea of estimating equivalence scales directly and focus on changes in equivalence scales. Kapetyn et al. (1994) argues, however, that this is not particularly interesting.

The most common strategy for putting additional structure on the problem is to make the Independence of Base assumption. This says that the ratio of cost functions for two households is independent of the level of utility at which the cost functions are evaluated (for example, Kapetyn et al. 1994). This assumption is generally rejected when tested empirically (for example, Blundell & Lewbel 1991).

Finally, the use of additional information has been the focus of a very large (almost exclusively Dutch) literature attempting to use direct questions about utility levels to identify equivalence scales (see the review below).

Direct measurement of welfare using subjective survey questions

Two types of subjective questions have been widely used in the literature in an attempt to directly measure what van Pragg (1991) referred to as the 'vertical' dimension of utility.[17]

- The Individual Welfare Function of Income (WFI) or Income Evaluation Question (IEQ)[18] surveys individuals about how much family income they feel would be required to obtain a certain utility level (for example, very bad, bad, insufficient, …good, very good).

This question has been used in the literature primarily by van Praag (1971) – who initially proposed this question – and his subsequent students and colleagues. Van Praag (1991) reviews the history of utility theory and makes an interesting and strong case for cardinal versus ordinal utility. He then proposes that the Pollak and Wales (1979) dilemma can be solved with a combination of demand data (to measure the horizontal dimension of utility) and the IEQ (to measure the horizontal dimension).

Van Praag and van der Sar (1988) develop an ordinal (rather than cardinal) notion of the individual welfare function of income and compare estimates derived across a range of countries. They conclude that this method has a conventional economic interpretation, but by giving up on cardinal utility one cannot compare different welfare positions and cannot deal with normative issues in taxation and income policy.

- The Satisfaction with Actual Income question asks respondents about their satisfaction with their own actual income.

Melenberg and van Soest (1996) compare the estimated costs of children that result from the two questions above. They find that the using the first question to estimate the cost of children results in implausibly low estimates, while the second question results in much higher costs of children. The authors argue that they tend to have more confidence in the outcomes based on this latter question because the direct question about satisfaction with current income does not require that the respondent form views about hypothetical situations. Still, the standard errors in the satisfaction with current income models are very large and depend upon model specification.[19]

- The Minimum Income Requirement question asks respondents about the minimum income they would require.

This question (and variations of it) has most often been used in the context of settling the poverty line. Goedhard et al. (1977) proposed this as a new way of calculating the poverty line and compared it to alternative approaches (that is, political decisions or subsistence levels). The authors argued that any definition of poverty rests on the notion that an individual is poor when they experience a low level of welfare and in the context of the WFI a low level of welfare meant that the utility associated with one's income had fallen below a certain minimum level (Goedhard et al. 1977, p.511). The minimum income question was then used to get at this. (Note, however, that the welfare level associated with a respondent's minimum income is not independent of their actual income.)

This concept has motivated a number of related research projects on subjective poverty lines. The idea is quite straightforward. A family is considered to be poor when its income restricts consumption so severely that it feels that it cannot 'make ends meet' (van Praag et al. 1980; Colasanto et al. 1984; Danziger et al. 1984). Because the response to a minimum income question is likely to systematically vary with actual income, only respondents with just enough income 'to make ends meet' will on average give the 'correct or true' answer. In general, the resulting scale is relatively flat with respect to family size, suggesting that equivalence scales based only on food consumption underestimate the economies of scale associated with increasing family size. This is also consistent with van Praag et al. (1982) who compared a poverty line based on food consumption with the Leyden poverty line, which is based on the WFI.[20]

Finally, Bellemare et al. (2002) use semi-parametrics to estimate an ordered response model of the IEQ, while Charlier (2002) focuses on the estimation of equivalence scales in a panel data context.

Estimation

We estimate three different models for which we calculate equivalence scales. The first model uses only income and family size to build the equivalence scale. It does not control for family type (other than size), age of family members, or adult/child composition within the family. The second model separates out the effect of children and adults and controls for different ages of children. It also allows the effect of the first child to be different from that of subsequent children. The third model controls for those things and the difference between couple-headed households and single-headed households. Couple-headed households may be able to engage in complementary activities (at home or in the workplace or both) enabling them to avoid financial stress more easily than single-headed households even at the same income levels and with the same family size.

Basic model

Let p^* be the propensity to experience financial stress. We will build the equivalence scale from a simple model that relates this latent variable to family size (fs) and income (y).

(4) $$p^* = \beta_1 + \beta_2 \ln(y) + \beta_3 \ln(fs) + u$$

For this model, a general formulation for an equivalence scale for a reference family of size r can be derived as follows. Average propensity to experience financial stress for families of size r is given by

(5) $$p_{.r} = \beta_1 + \beta_2 \ln(\bar{y}_{.r}) + \beta_3 \ln(r)$$

We want to find the income level $y^{(j)}$ for which of family of size j has utility equivalent to $p_{.r}$. Thus we have

(6) $$p_{.r} = \beta_1 + \beta_2 \ln(y^{(j)}) + \beta_3 \ln(j)$$

Since (5) and (6) are equal, the equivalence scale is derived as

$$\beta_1 + \beta_2 \ln(\bar{y}_{.r}) + \beta_3 \ln(r) = \beta_1 + \beta_2 \ln(y^{(j)}) + \beta_3 \ln(j)$$

$$\beta_2 \ln(\bar{y}_{.r}) + \beta_3 \ln(r) = \beta_2 \ln(y^{(j)}) + \beta_3 \ln(j)$$

(7) $$\ln(y^{(j)}) = \ln(\bar{y}_{.r}) + \frac{\beta_3}{\beta_2} \ln\left(\frac{r}{j}\right)$$

$$\ln\left(\frac{y^{(j)}}{\bar{y}_{.r}}\right) = \frac{\beta_3}{\beta_2} \ln\left(\frac{r}{j}\right)$$

$$e_j \equiv \frac{y^{(j)}}{\bar{y}_{.r}} = \left(\frac{j}{r}\right)^{\frac{-\beta_3}{\beta_2}}$$

Data notes

We begin with the 5,539 household observations from HILDA described above. Some pre-exploration of the data convinced us that models where income entered in log form fit better than models where income entered in linear form, so we exclude 20 additional households which report zero income for sample consistency across the different models estimated.

Basic model: results

We present estimates for equivalence scales from the basic model in Table 9 for the seven individual financial stress measures considered in this paper, for the ‘cashflow’ and ‘hardship’ measures described above, for the ‘any stress’ measure described above and for a measure which is equal to one if both members of the household report experiencing at least one type of financial stress[21]. We also consider two measures used by Breunig et al. (2006)—public and private. These measures attempt to capture whether stress was experienced by one individual or the entire household. The public measure is defined as being one member of the household reporting failure to pay mortgage or utilities. The private measure is defined as pawning something or borrowing from friends.

We pool all family types and use only information on total household size, ignoring information about household composition such as the age of children and whether the household is single-headed or not. We consider the household to have experienced the financial stress measure if either adult in the household reports the measure. We compare these to the standard OECD scale (which does take into account some age composition effects—thus the numbers we present for the OECD equivalence scales in the tables are the averages over our sample for that size household.) The standard OECD scale is 1 for the first adult, 0.5 for each additional adult and 0.3 for each child.

Table 9 Equivalence scales estimated using financial hardship/cashflow measures, all households (=1 if either member of the couple reports)

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Utilities Incidence: 21.50%		**Mortgage Incidence: 10.33%**	
1	1.00	1.00	1.00	1.00
2	1.49	2.85	1.49	2.51
3	1.86	5.25	1.86	4.31
4	2.19	8.10	2.19	6.32
5	2.53	11.34	2.53	8.51
6	2.84	14.93	2.84	10.84
	Pawn Incidence: 7.10%		**Meals Incidence: 5.05%**	
1	1.00	1.00	1.00	1.00
2	1.49	1.85	1.49	1.01
3	1.86	2.66	1.86	1.02
4	2.19	3.43	2.19	1.02
5	2.53	4.19	2.53	1.02
6	2.84	4.92	2.84	1.03
	Friends Incidence: 15.98%		**Heat Incidence: 4.57%**	
1	1.00	1.00	1.00	1.00
2	1.49	2.02	1.49	1.59
3	1.86	3.05	1.86	2.09
4	2.19	4.08	2.19	2.53
5	2.53	5.11	2.53	2.94
6	2.84	6.15	2.84	3.32
	Welfare Incidence: 4.98%		**Public Incidence: 23.06%**	
1	1.00	1.00	1.00	1.00
2	1.49	1.76	1.49	2.80
3	1.86	2.44	1.86	5.12
4	2.19	3.08	2.19	7.83
5	2.53	3.70	2.53	10.93
6	2.84	4.29	2.84	14.33
	Private Incidence: 18.66%		**Two or more stresses Incidence: 18.66%**	
1	1.00	1.00	1.00	1.00
2	1.49	2.02	1.49	1.99
3	1.86	3.04	1.86	2.99
4	2.19	4.06	2.19	3.98
5	2.53	5.09	2.53	4.97
6	2.84	6.12	2.84	5.96

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Any stress Incidence: 30.62%		Hardship Incidence: 13.39%	
1	1.00	1.00	1.00	1.00
2	1.49	2.31	1.49	1.59
3	1.86	3.77	1.86	2.08
4	2.19	5.34	2.19	2.53
5	2.53	6.99	2.53	2.93
6	2.84	8.71	2.84	3.31

	Cashflow Incidence: 27.92%	
Household size	**OECD equivalence scale**	**Probit, model, equation (4)**
1	1.00	1.00
2	1.49	2.53
3	1.86	4.36
4	2.19	6.41
5	2.53	8.65
6	2.84	11.05

Note: Sample size is 5,520.

Table 10 summarizes the equivalence scales for each measure in order of the size of the equivalence scale generated. In all cases except meals, we find an equivalence scale that is larger than the standard OECD scale. (The coefficient on family size in the meals equation is insignificant and a quick look at the data reveals that it is mostly single-adult households who use skipping meals as a mechanism to cope with financial difficulty.) Utilities yields the largest equivalence scales, indicating that a family of size four would need 810 per cent more income than a single-adult household in order to have the same propensity to fail to pay their utility bills because of financial difficulty. Cashflow (utilities, mortgage, and friends) results lie between mortgage and utilities. Interestingly, this set of measures gives larger equivalence scales than the hardship measure (meals, heat, welfare, pawn). Friends indicates that a four-person household would need 408 per cent more income than a one-person household to achieve the same-level of wellbeing. The hardship measures range from a completely flat equivalence scale for meals to 343 per cent for pawn. The overall hardship measure gives an equivalence scale of 2.53 for a family of four indicating that their needs are 253 per cent greater than a single adult.

Table 10 Equivalence scales estimated using financial hardship/cashflow measures, all households (=1 if either member of the couple reports)

	Household size		
Measure	**2**	**3**	**4**
Meals	1.01	1.02	1.02
OECD	1.49	1.86	2.19
Heat	1.59	2.09	2.53
Hardship	1.59	2.09	2.53
Welfare	1.76	2.44	3.08
Pawn	1.85	2.66	3.43
Two or more stresses	1.99	2.99	3.98
Private	2.02	3.04	4.06
Friends	2.02	3.05	4.08
Any stress	2.31	3.77	5.34
Mortgage	2.51	4.31	6.32
Cashflow	2.53	4.36	6.41
Public	2.80	5.12	7.85
Utilities	2.85	5.25	8.10

Note: Sample size is 5,520.

Probit estimates ordered by size of the equivalence scales generated.

Table 11 differs from Table 9 in that instead of using the measure 'did either member of the couple' report financial stress, we use the measure 'did both members of the couple' report financial stress. This produces results that at first glance seem odd. (The coefficient on household size for many of the measures is negative, implying that larger households need less income than smaller households to avoid financial stress.) In fact this change in measure has the following consequence: we leave all observations on single-headed households as they were. For couple-headed households, we reduce the number who report financial stress roughly by half. The consequence is that we introduce a large negative correlation between household size and experiencing financial stress (confirmed by running a simple model with a dummy variable for couple-households.) Couple-headed households have a great advantage over single-headed households in that the two adults can engage in complementary home production and market production activities (at the same time) and can substitute for one another in either of these activities depending upon the demands upon the household. The simple model cannot capture the fundamental differences between these two types of households. A preliminary hypothesis from this table is that single-adult households are suffering particularly from financial stress. We will explore this further below.

Table 11 Equivalence scales estimated using financial hardship/cashflow measures, all households (=1 if both members of the couple report)

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Utilities Incidence: 14.40%		**Mortgage Incidence: 6.47%**	
1	1.00	1.00	1.00	1.00
2	1.49	1.44	1.49	0.94
3	1.86	1.79	1.86	0.91
4	2.19	2.08	2.19	0.88
5	2.53	2.34	2.53	0.87
6	2.84	2.58	2.84	0.85
	Pawn Incidence: 4.40%		**Meals Incidence: 3.41%**	
1	1.00	1.00	1.00	1.00
2	1.49	0.86	1.49	0.42
3	1.86	0.79	1.86	0.25
4	2.19	0.74	2.19	0.18
5	2.53	0.71	2.53	0.13
6	2.84	0.68	2.84	0.12
	Friends Incidence: 10.94%		**Heat Incidence: 2.95%**	
1	1.00	1.00	1.00	1.00
2	1.49	1.09	1.49	0.93
3	1.86	1.14	1.86	0.90
4	2.19	1.18	2.19	0.87
5	2.53	1.22	2.53	0.85
6	2.84	1.24	2.84	0.84
	Welfare Incidence: 3.37%		**Public Incidence: 15.76%**	
1	1.00	1.00	1.00	1.00
2	1.49	1.07	1.49	1.42
3	1.86	1.11	1.86	1.74
4	2.19	1.14	2.19	2.01
5	2.53	1.17	2.53	2.25
6	2.84	1.19	2.84	2.47
	Private Incidence: 12.79%		**Two or more stresses Incidence: 12.81%**	
1	1.00	1.00	1.00	1.00
2	1.49	1.12	1.49	1.18
3	1.86	1.20	1.86	1.31
4	2.19	1.26	2.19	1.40
5	2.53	1.31	2.53	1.48
6	2.84	1.35	2.84	1.55

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Any stress Incidence: 21.52%		Hardship Incidence: 9.09%	
1	1.00	1.00	1.00	1.00
2	1.49	1.24	1.49	0.94
3	1.86	1.41	1.86	0.91
4	2.19	1.54	2.19	0.89
5	2.53	1.66	2.53	0.87
6	2.84	1.75	2.84	0.86

Cashflow
Incidence: 27.92%

Household size	OECD equivalence scale	Probit, model, equation (4)
1	1.00	1.00
2	1.49	1.26
3	1.86	1.45
4	2.19	1.60
5	2.53	1.72
6	2.84	1.83

Note: Sample size is 5,520.

We estimate the basic model separately on these two subsets of data (couple households and non-couple households). Tables 12 and 13 address the same questions as Tables 9 and 11, using only couple households. We find larger equivalence scales than in Table 9 for both the hardship and the non-hardship measures and we find that the results from using 'either member of the couple reports' are almost the same as using the 'both members of the couple report'. For hardship, the former gives an equivalence scale of 4.84 for a four-person household relative to a one-person household, while the latter gives 6.19. For cashflow, the direction is different but again similar results: 22.27 when we use the 'either' measure and 19.74 when we use the 'both' measure.

This is evidence that both measures (either couple reports or both couple reports) are reflecting the presence of financial stress in the household. In other work (Breunig et al. 2006), we show that there is evidence consistent with a hypothesis that both members reporting is evidence of severity of the experience of financial stress. The results here are also consistent with that hypothesis.

What we do find is that severity does not have any effect on the ratio of the marginal effects of household size and income. It is this ratio that determines the equivalence scale.

Table 12 Equivalence scales estimated using financial hardship/cashflow measures, couples only (=1 if either member of the couple reports)

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Utilities Incidence: 20.35%		**Mortgage Incidence: 9.80%**	
1	1.00	1.00	1.00	1.00
2	1.49	4.90	1.49	4.52
3	1.86	12.41	1.86	10.91
4	2.19	24.00	2.19	20.40
5	2.53	40.03	2.53	33.15
6	2.84	60.80	2.84	49.29
	Pawn Incidence: 5.90%		**Meals Incidence: 3.53%**	
1	1.00	1.00	1.00	1.00
2	1.49	2.87	1.49	1.56
3	1.86	5.32	1.86	2.02
4	2.19	8.24	2.19	2.43
5	2.53	11.57	2.53	2.81
6	2.84	15.27	2.84	3.15
	Friends Incidence: 13.87%		**Heat Incidence: 3.62%**	
1	1.00	1.00	1.00	1.00
2	1.49	3.64	1.49	1.72
3	1.86	7.74	1.86	2.37
4	2.19	13.22	2.19	2.97
5	2.53	20.03	2.53	3.54
6	2.84	28.13	2.84	4.09
	Welfare Incidence: 3.71%		**Public Incidence: 21.66%**	
1	1.00	1.00	1.00	1.00
2	1.49	2.30	1.49	5.21
3	1.86	3.74	1.86	13.69
4	2.19	5.28	2.19	27.18
5	2.53	6.89	2.53	46.24
6	2.84	8.58	2.84	71.39
	Private Incidence: 16.37%		**Two or more stresses Incidence: 16.25%**	
1	1.00	1.00	1.00	1.00
2	1.49	3.38	1.49	3.20
3	1.86	6.89	1.86	6.33
4	2.19	11.42	2.19	10.26
5	2.53	16.90	2.53	14.93
6	2.84	23.28	2.84	20.28

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Any stress Incidence: 28.23%		Hardship Incidence: 10.40%	
1	1.00	1.00	1.00	1.00
2	1.49	3.83	1.49	2.20
3	1.86	8.39	1.86	3.49
4	2.19	14.65	2.19	4.84
5	2.53	22.58	2.53	6.24
6	2.84	32.14	2.84	7.68

	Cashflow Incidence: 27.92%	
Household size	OECD equivalence scale	Probit, model, equation (4)
1	1.00	1.00
2	1.49	4.72
3	1.86	11.70
4	2.19	22.27
5	2.53	36.70
6	2.84	55.19

Note: Sample size is 3,287.

Table 13 Equivalence scales estimated using financial hardship/cashflow measures, couples only (=1 if both members of the couple reports)

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Utilities Incidence: 8.43%		Mortgage Incidence: 3.32%	
1	1.00	1.00	1.00	1.00
2	1.49	4.53	1.49	3.79
3	1.86	10.97	1.86	8.27
4	2.19	20.54	2.19	14.38
5	2.53	33.42	2.53	22.08
6	2.84	49.73	2.84	31.35
	Pawn Incidence: 1.52%		Meals Incidence: 0.76%	
1	1.00	1.00	1.00	1.00
2	1.49	2.86	1.49	1.19
3	1.86	5.28	1.86	1.32
4	2.19	8.16	2.19	1.41
5	2.53	11.44	2.53	1.50
6	2.84	15.07	2.84	1.56
	Friends Incidence: 5.42%		Heat Incidence: 0.91%	
1	1.00	1.00	1.00	1.00
2	1.49	3.58	1.49	2.21
3	1.86	7.54	1.86	3.52
4	2.19	12.80	2.19	4.90
5	2.53	19.29	2.53	6.32
6	2.84	26.97	2.84	7.79
	Welfare Incidence: 1.00%		Public Incidence: 9.40%	
1	1.00	1.00	1.00	1.00
2	1.49	2.54	1.49	4.86
3	1.86	4.39	1.86	12.25
4	2.19	6.47	2.19	23.62
5	2.53	8.74	2.53	39.30
6	2.84	11.18	2.84	59.56
	Private Incidence: 6.51%		Two or more stresses Incidence: 6.42%	
1	1.00	1.00	1.00	1.00
2	1.49	3.63	1.49	3.60
3	1.86	7.73	1.86	7.61
4	2.19	13.20	2.19	12.95
5	2.53	20.00	2.53	19.57
6	2.84	28.08	2.84	27.40

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Any stress Incidence: 12.96%		Hardship Incidence: 3.19%	
1	1.00	1.00	1.00	1.00
2	1.49	3.68	1.49	2.49
3	1.86	7.89	1.86	4.24
4	2.19	13.56	2.19	6.19
5	2.53	20.62	2.53	8.30
6	2.84	29.06	2.84	10.54

Household size	OECD equivalence scale	Probit, model, equation (4)
	Cashflow Incidence: 27.92%	
1	1.00	1.00
2	1.49	4.44
3	1.86	10.63
4	2.19	19.74
5	2.53	31.91
6	2.84	47.24

Note: Sample size is 3,287.

Comparing Tables 12 and 13 to Tables 9 and 11, we see that the effect on the probability of reporting financial stress of additional family members is larger in the couple-only models. In the models that combine all household types, the effect of additional household members is a combined effect of children and adults. In the couple-only households, the effect of additional family members is coming almost exclusively from children. This is evidence that additional children in the household are more expensive (or more likely to lead to financial stress) than additional adults in the household. We explore this more below.

In Table 14, we provide the estimated equivalence scales for single-headed households. (Less than 1 per cent of these households have more than four members so we only report for household sizes up to four.) These generate unrealistically large equivalence scales. Only about 500 of these 2,233 observations have more than one person in the household. All of the variation in household size is driven by the presence of children in relatively worse off single-parent families. Many of these families are at very low-income levels and small increases in income at these income levels generates large changes in financial stress. These two things in combination generate the large equivalence scales. It would be inappropriate to apply these to the population at large, but they do provide a stark vision of how much low-income, single-headed (lone-parent) households suffer from financial stress relative to single-adult households.

Table 14 Equivalence scales estimated using financial hardship/cashflow measures, single-adult households only

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Utilities Incidence: 23.20%		**Mortgage Incidence: 11.11%**	
1	1.00	1.00	1.00	1.00
2	1.49	10.47	1.49	5.31
3	1.86	41.35	1.86	14.10
4	2.19	109.59	2.19	28.19
	Pawn Incidence: 8.64%		**Meals Incidence: 7.30%**	
1	1.00	1.00	1.00	1.00
2	1.49	4.35	1.49	1.52
3	1.86	10.27	1.86	1.95
4	2.19	18.90	2.19	2.32
	Friends Incidence: 19.08%		**Heat Incidence: 5.96%**	
1	1.00	1.00	1.00	1.00
2	1.49	5.82	1.49	3.29
3	1.86	16.29	1.86	6.59
4	2.19	33.82	2.19	10.81
	Welfare Incidence: 6.85%		**Public Incidence: 25.12%**	
1	1.00	1.00	1.00	1.00
2	1.49	4.13	1.49	10.60
3	1.86	9.47	1.86	42.15
4	2.19	17.07	2.19	112.28
	Private Incidence: 22.03%		**Two or more stresses Incidence: 22.21%**	
1	1.00	1.00	1.00	1.00
2	1.49	6.12	1.49	4.56
3	1.86	17.64	1.86	11.09
4	2.19	37.40	2.19	20.82
	Any stress Incidence: 34.12%		**Hardship Incidence: 17.78%**	
1	1.00	1.00	1.00	1.00
2	1.49	7.56	1.49	3.71
3	1.86	24.71	1.86	7.99
4	2.19	57.22	2.19	13.78
	Cashflow Incidence: 30.77%			
1	1.00	1.00		
2	1.49	8.82		
3	1.86	31.50		
4	2.19	77.75		

Note: Sample size is 2,233.

Tables 15 and 16 are the last set of estimates from the simple model. Here we restrict the sample to only those households with children under the age of 15. In this case, rather surprisingly given the previous results, we get equivalence scales for most measures that are similar to the OECD equivalence scales.

Table 15 Equivalence scales estimated using financial hardship/cashflow measures, only households with children under 15 (=1 if any member of the couple reports)

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Utilities Incidence: 32.79%		Mortgage Incidence: 14.57%	
1	1.00	1.00	1.00	1.00
2	1.49	1.34	1.49	1.27
3	1.86	1.59	1.86	1.45
4	2.19	1.80	2.19	1.60
5	2.53	1.97	2.53	1.73
6	2.84	2.13	2.84	1.84
	Pawn Incidence: 9.77%		Meals Incidence: 4.68%	
1	1.00	1.00	1.00	1.00
2	1.49	1.21	1.49	1.25
3	1.86	1.35	1.86	1.43
4	2.19	1.46	2.19	1.57
5	2.53	1.55	2.53	1.69
6	2.84	1.63	2.84	1.79
	Friends Incidence: 23.02%		Heat Incidence: 5.04%	
1	1.00	1.00	1.00	1.00
2	1.49	1.02	1.49	1.49
3	1.86	1.03	1.86	1.88
4	2.19	1.04	2.19	2.22
5	2.53	1.05	2.53	2.52
6	2.84	1.06	2.84	2.80
	Welfare Incidence: 7.13%		Public Incidence: 35.01%	
1	1.00	1.00	1.00	1.00
2	1.49	1.16	1.49	1.31
3	1.86	1.27	1.86	1.54
4	2.19	1.35	2.19	1.72
5	2.53	1.42	2.53	1.88
6	2.84	1.47	2.84	2.02

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Private Incidence: 26.44%		Two or more stresses Incidence: 26.20%	
1	1.00	1.00	1.00	1.00
2	1.49	1.00	1.49	1.16
3	1.86	1.00	1.86	1.27
4	2.19	1.00	2.19	1.35
5	2.53	1.00	2.53	1.41
6	2.84	1.00	2.84	1.47
	Any stress Incidence: 42.39%		Hardship Incidence: 17.09%	
1	1.00	1.00	1.00	1.00
2	1.49	1.15	1.49	1.18
3	1.86	1.26	1.86	1.30
4	2.19	1.33	2.19	1.39
5	2.53	1.40	2.53	1.47
6	2.84	1.45	2.84	1.53

	Cashflow Incidence: 27.92%	
Household size	OECD equivalence scale	Probit, model, equation (4)
1	1.00	1.00
2	1.49	1.22
3	1.86	1.37
4	2.19	1.48
5	2.53	1.58
6	2.84	1.66

Note: Sample size is 1,668.

If we add a dummy variable for the single-headed households in the above regression, it is not significant. This would seem to indicate that it is not so much the single-headed nature of households that matters, but the presence of children. It would seem that children really are expensive.

In Table 16, we estimate the equivalence scales from the basic model for households without children under 14. (Again we only report for households of size four or less which make up over 99 per cent of the sample.) We find a negative coefficient on household size (more individuals makes household less likely to experience stress) on most measures. However, the household size variable was almost never significant in any of these regressions. (The confidence interval on the equivalence scales in this case would contain unity.) The coefficient on household size was significant, and in all of these cases it was negative, for meals, friends, and private measures only.

Table 16 Equivalence scales estimated using financial hardship/cashflow measures, only households without children under 15 (=1 if any member of the couple reports)

Household size	OECD equivalence scale	Probit, model, equation (4)	OECD equivalence scale	Probit model, equation (4)
	Utilities Incidence: 16.61%		**Mortgage Incidence: 8.49%**	
1	1.00	1.00	1.00	1.00
2	1.49	1.19	1.49	1.24
3	1.86	1.31	1.86	1.41
4	2.19	1.41	2.19	1.55
	Pawn Incidence: 5.82%		**Meals Incidence: 5.22%**	
1	1.00	1.00	1.00	1.00
2	1.49	0.63	1.49	0.56
3	1.86	0.49	1.86	0.40
4	2.19	0.40	2.19	0.32
	Friends Incidence: 12.93%		**Heat Incidence: 4.36%**	
1	1.00	1.00	1.00	1.00
2	1.49	0.45	1.49	1.37
3	1.86	0.28	1.86	1.64
4	2.19	0.20	2.19	1.86
	Welfare Incidence: 4.05%		**Public Incidence: 17.89%**	
1	1.00	1.00	1.00	1.00
2	1.49	0.96	1.49	1.09
3	1.86	0.93	1.86	1.14
4	2.19	0.92	2.19	1.18
	Private Incidence: 15.29%		**Two or more stresses Incidence: 15.39%**	
1	1.00	1.00	1.00	1.00
2	1.49	0.47	1.49	0.87
3	1.86	0.30	1.86	0.81
4	2.19	0.22	2.19	0.76
	Any stress Incidence: 25.52%		**Hardship Incidence: 11.79%**	
1	1.00	1.00	1.00	1.00
2	1.49	0.95	1.49	0.81
3	1.86	0.93	1.86	0.71
4	2.19	0.91	2.19	0.65
	Cashflow Incidence: 22.69%			
1	1.00	1.00		
2	1.49	0.91		
3	1.86	0.86		
4	2.19	0.83		

Note: Sample size is 3,852.

What is interesting about Tables 15 and 16 viewed together is the large difference made by the presence of children in the household. Once we separate out the two samples (with and without children) we see that the effect of increasing household size is in fact quite modest. In many cases it is even smaller than that implied by the OECD equivalence scales. So the real issue seems to be how can equivalence scales be used to equalise households with and without children?

The response to financial stress for families with children

The above investigation led us to try and address the question: 'is the response of financial stress to income and household size different for families with and without children?' The results above seem to indicate that it is. A more direct test can be conducted by estimating:

(8)
$$p^* = \beta_1 + \delta_1 D_{anykids} + \beta_2 \ln(y) + \delta_2 \ln(y) * D_{anykids} + \beta_3 \ln(fs) + \delta_3 \ln(fs) * D_{anykids} + u$$

and testing whether the three δ_l coefficients are significant. $D_{anykids}$ is a dummy variable that takes value 1 if there are any kids in the household.

δ_1 and δ_2 were positive and significant for every measure of financial stress.

The interpretation is:

- the very presence of children, irrespective of household size, makes families more likely to experience financial stress
- extra income is less effective at preventing financial stress in families that have children than in families that do not.

δ_3 was significant for the overall measures of hardship and cashflow. It was also significant for utilities, pawn, meals, public, and the two or more stress measures.

The response to financial stress for couple-headed households

The estimates reported above for different family types are motivated by the question 'is the response of financial stress to income and household size different for lone-parent and couple-headed families?' The results above seem to indicate that they are not. A more direct test can be conducted by estimating:

(9)
$$p^* = \beta_1 + \gamma_1 D_{couple} + \beta_2 \ln(y) + \gamma_2 \ln(y) * D_{couple} + \beta_3 \ln(fs) + \gamma_3 \ln(fs) * D_{couple} + u$$

and testing whether the three γ_l coefficients are significant. D_{couple} is a dummy variable that takes value 1 if the household is a couple-headed household.

γ_1 and γ_3 were never significant for any measure of financial stress. γ_2 was significant, but only at the 10 per cent level, for utilities, welfare, public, any stress, hardship, and cashflow.

Thus, there is some evidence that the response of financial stress to income is different for couple-headed households. Couple-headed households appear to use their income more effectively to avoid financial stress.

Clearly, a richer model is needed to deal with equivalence scales across family types—singles, lone-parents, couples, and families with children cannot be lumped into one simple model.

Extended model

The basic model ignores the details of family composition. In particular, conditional on income, it treats individuals in all age ranges as making the same resource demands on a household. This need not be true. For example, two adults may need less or more income to have the same propensity to fall into financial difficulty as one adult with a child.

Given this point and the above results, we began with a much more flexible extended model.[22] This model is a much more flexible specification which allows us to control for household demographic composition in a much richer fashion than the basic model (4). We allow for the effects of children and adults to be different. Both the effect on the level of financial stress and the marginal effects of income and household size on the propensity to report financial stress are allowed to differ for adults and children. We allow for the effect of children to be different depending upon whether they fall into the 0–4, 5–9, or 10–14 age ranges.

We then proceeded to test down to a simpler specification.[23] We find that for all measures that the interaction between family size and dummy variables for different age ranges are insignificant. In this richer model, a simple interaction between family size and the presence of children (as in (8) above) is also insignificant. Thus, we drop all of the variables relating to family size with the exception of the log of family size.

For all of the hardship measures, and the combined hardship measure, we find no difference in the dummy variables and the interactive terms for children in different age ranges. Therefore, the model is simplified to the following:

(10)
$$p^* = \beta_1 + \beta_2 \ln(y) + \beta_3 \ln(fs) + \gamma_2 \ln(y) * D_{couple} + \delta_1 D_{anykids} + \delta_2 \ln(y) D_{anykids} + u$$

For the cashflow measures, individually and as a group, we find that there is a difference in the effect of young children (0–4 years of age) and older children (5–14) years of age. Thus for the cashflow measures, our preferred model is:

(11)
$$p^* = \beta_1 + \beta_2 \ln(y) + \beta_3 \ln(fs) + \gamma_2 \ln(y) * D_{couple} + \delta_1 D_{kids04} + \delta_2 \ln(y) D_{kids04} + \delta_4 D_{kids514} + \delta_5 \ln(y) D_{kids514} + u$$

Table 17 Model estimates for hardship and cashflow equations (10) and (11)

	Measure	
	Hardship	Cashflow
ln (income)	-0.255	-0.153
	0.033	0.029
ln (household size)	0.235	0.252
	0.089	0.076
ln (income)*$D_{couples}$	-0.028	-0.025
	0.007	0.006
D_{kids}	6.21	
	0.86	
D_{kids04}		6.23
		0.98
$D_{kids514}$		6.77
		0.96
ln (income)*D_{kids}	-0.566	
	0.082	
ln (income)^1*D_{kids04}		-0.521
		0.091
ln (income)^2*$D_{kids514}$		-0.602
		0.089

Note: Standard errors in parentheses. All coefficients are significant.

1. D_{kids04} equals one if the household has a child between the ages of 0 and 4.

2. $D_{kids514}$ equals one if the household has no children between the ages of 0 and 4 but does have children between the ages of 5 and 14.

Table 17 presents the coefficient estimates for equations 10 and 11. These are difficult to interpret, and are best viewed through the equivalence scales which they imply. Tables 18 and 19 present equivalence scales for the two composite measures—cashflow and hardship. There are several points worth noting.

- The equivalence scales using the hardship measure are much flatter with respect to family size than those using the cashflow measure. In other words, the amount of income required to keep families at the same propensity of reporting financial stress as family size grows is much smaller for the hardship measures than for the cashflow measures. This accords with our preliminary results.
- Couple-headed households are much less likely to lone-parents report financial stress than single-headed households. (This latter category combines lone parents and single-adult households.) It is striking that a couple-headed household with a third adult member is about as likely to report financial stress as a single-headed household.
- The cost of children in terms of the propensity to report financial stress is very high. Using the hardship measure, a single household with one child needs 169 per cent more income to remain at the same level of reporting financial stress as a single adult. Likewise, a couple-headed household with a child needs 310 per cent more income to remain at the same level of reporting financial stress as a two-adult, couple household. The cashflow measures show an even larger cost of children.

- For the cashflow measure, where the effect of children age 0–4 is different than that of children age 5–14, we find that a child added to a household requires the household to have 150 per cent more income if the child is younger than age five relative to the case where the child is over age four.

Table 18 Equivalence scales using hardship measure

Household type	OECD	
Single-headed households without children		
1 adult	1.00	1.00
2 adults	1.50	1.90
3 adults	2.00	2.76
4 adults	2.50	3.59
Multiple-headed households without children		
2 adults	1.50	0.68
3 adults	2.00	0.95
4 adults	2.50	1.20
Single-headed households with children		
1 adult and 1 child	1.30	2.69
1 adult and 2 children	1.60	3.02
1 adult and 3 children	1.90	3.27
1 adult and 4 children	2.20	3.49
2 adults and 1 child	1.80	3.02
2 adults and 2 children	2.10	3.27
Multiple-headed households with children		
2 adults and 1 child	1.80	2.11
2 adults and 2 children	2.10	2.28
2 adults and 3 children	2.40	2.43
2 adults and 4 children	2.70	2.55

Note: Reference household is a single adult.

Table 19 Equivalence scales using cashflow measure

Household type	OECD	
Single-headed households without children		
1 adult	1.00	1.00
2 adults	1.50	3.14
3 adults	2.00	6.12
4 adults	2.50	9.83
Multiple-headed households without children		
2 adults	1.50	0.66
3 adults	2.00	1.17
4 adults	2.50	1.76
Single-headed households with children under age 5		
1 adult and 1 child	1.30	5.53
1 adult and 2 children	1.60	6.43
1 adult and 3 children	1.90	7.16
1 adult and 4 children	2.20	7.78
2 adults and 1 child	1.80	6.43
2 adults and 2 children	2.10	7.16
Multiple-headed households with children under age 5		
2 adults and 1 child	1.80	4.22
2 adults and 2 children	2.10	4.68
2 adults and 3 children	2.40	5.07
2 adults and 4 children	2.70	5.41
Single-headed households with children over age 4		
1 adult and 1 child	1.30	3.87
1 adult and 2 children	1.60	4.43
1 adult and 3 children	1.90	4.88
1 adult and 4 children	2.20	5.25
2 adults and 1 child	1.80	6.43
2 adults and 2 children	2.10	7.16
Multiple-headed households with children over age 4		
2 adults and 1 child	1.80	3.07
2 adults and 2 children	2.10	3.37
2 adults and 3 children	2.40	3.62
2 adults and 4 children	2.70	6.84

6. Conclusions and policy implications

This study leads to several conclusions regarding the factors associated with financial stress for families living in Australia. It also raises some questions for future research. We discuss both.

The first conclusion is that there is a high incidence of financial stress. Even if we think that the cashflow questions are picking up money mismanagement in addition to true financial difficulty, there are a high percentage of people—14 per cent of households – who report serious hardship. The high percentage of people with cashflow problems—28 per cent of households—might be an indication of the fragility of people's financial situations. If a household's budget is so tight that they are periodically forced to miss utility or rent payments, then the household may be only a few missed pay cheques, a layoff, or a serious illness away from disaster. In combination with the warnings in the international press about Australia's property boom and high levels of household debt, this possibility should be a serious policy concern.

The second conclusion, which should be troubling for policy makers, is the concentration of financial stress in households with children. If children are a primary target of income support policy and if these measures are in fact warning signs of bad events to come, then these results raise the question of the adequacy of the tax and benefit system in protecting children from negative financial events.

Households with children are much more likely than households without children to suffer from hardship (17 per cent compared to 12 per cent) and cashflow (40 per cent to 23 per cent) difficulties. Once we correct for income this becomes even more exaggerated, as evidenced by the equivalence scales from Tables 18 and 19. The presence of children causes a large increase in the propensity to experience financial stress. It is worth noting that additional children cause only small increases in the propensity to experience financial stress. In all of our estimates the difference between households with and without children is quite striking.

The third conclusion is that couple-headed households are much more efficient in using their income to avoid financial stress. This is perhaps not surprising as couples can substitute for and complement one another in the labour market, home production and child care. The degree to which they are able to do this is quite striking—a couple-headed household with one adult child needs the same level of income as a single-adult household based upon our estimates.

It is likely that the couple-headed household variable is also picking up the effect of other characteristics. Perhaps people who are able to form and remain in couple relationships also have better time and money management skills that help them to avoid financial stress. People in couple relationships may also have access to a wider support network.

In addition to these conclusions, there are several questions which remain for future research. Two of these deserve mentioning. The first is: are these measures related to bad outcomes in the future? What we know from the first two waves of HILDA is that both the cashflow and hardship measures are fairly persistent. About half of the households who reported a problem in Waves 1 and 2. So these measures do not appear to be random occurrences, but are instead concentrated within certain households. In future waves of HILDA it will be possible to assess whether or not these financial stress measures are good predictors of negative outcomes such as such as frequent change of residence (known to be a negative event for children) or early school leaving.

The most intriguing question is: what is the source of the large ‘cost’ of children observed in the equivalence scale measures? There are several possible explanations for the results that we find here. Perhaps having children makes people remember bad events better and they are thus more likely to report one of the financial stress measures. Perhaps the probability of unexpected expenditure increases with the presence of children. It may be that all households are spending nearly all of their income—there are few possibilities for unexpected expenditure increases for households without children, while these events occur more frequently for households with children. It may be that the presence of children exacerbates money management problems. One of the biggest challenges facing families with children is finding enough time for all of the things they would like to do. It could be that people spend less time on money management when they have children and this explains the result we find.

It may also be that families with children cope with a lack of money in different ways than families without children and that these measures are picking up that difference. One might imagine that families with children would prefer to skip paying the utility bill instead of economising on the food budget. Children can often exert strong pressure for expensive food and clothing brand names and parents prefer to cater to their children’s taste in these areas while cutting corners on some of the measures examined here. Poor children (or ‘poor-looking’ children) potentially face ostracism at school so parents may do everything in their power to keep buying clothing and paying for school excursions and clubs. In that case, households might try to make ends meet by missing rent payments (not observed by the children’s peers). It may be that families without children are able to alter their consumption expenditure to make ends meet in ways that are not picked up by these particular questions.

Appendix

Table A1 Determinants of hardship (both report)

	Probit coefficients and t-statistics							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
Equivalent income	-0.003	(-9.11)	-0.002	(-7.76)	-0.003	(-8.92)	-0.002	(-6.89)
Lone parent	0.037	(3.96)	0.021	(2.57)	0.022	(2.37)	0.008	(1.10)
Couple	-0.094	(-12.34)	-0.071	(-10.13)	-0.118	(-12.43)	-0.051	(-2.52)
De facto					0.107	(6.08)	0.034	(2.73)
Home owners			-0.054	(-8.43)			-0.025	(-4.21)
Home buyers			-0.020	(-3.04)			-0.015	(-2.56)
Net worth			-0.003	(-6.32)			-0.002	(-4.10)
Non-resident children				-0.009	(-1.48)	0.021	(3.48)	
Children 0–4					0.007	(1.19)	0.000	(0.08)
Children 5–9					0.007	(1.18)	0.000	(-0.04)
Children 10–14					0.007	(1.14)	0.003	(0.61)
Unemployed household member							0.034	(4.63)
Average age							0.001	(1.39)
Average age square							0.000	(-3.34)
Poor health							0.043	(7.45)
Aboriginal and Torres Strait Islander							0.032	(1.76)
Immigration status (English speaking background)							0.003	(0.41)
Immigration status (non-English speaking background)						0.003	(0.47)	
Inner Regional Australia						0.011	(1.19)	
Outer Regional Australia						0.022	(1.86)	
Remote Australia							0.001	(0.08)
Other New South Wales						-0.015	(-1.66)	
Melbourne							0.000	(-0.02)
Other Victoria							-0.010	(-0.99)
Brisbane							0.001	(0.14)
Other Queensland							-0.010	(-1.03)
Perth							0.005	(0.49)
Other Western Australia						0.005	(0.33)	
Adelaide							-0.002	(-0.22)
Other South Australia						-0.014	(-1.11)	
Tasmania							-0.012	(-1.00)
Australian Capital Territory						-0.001	(-0.05)	
Northern Territory					-		0.026	(-1.19)
Observations	**5,529**		**5,529**		**5,529**		**5,529**	

Table A2 Determinants of hardship (individual)

	Probit coefficients and t-statistics							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
Equivalent income	-0.003	-(7.38)	-0.002	-(6.30)	-0.003	-(7.81)	-0.002	-(5.96)
Lone parent	0.033	(2.89)	0.028	(2.50)	0.023	(2.05)	0.010	(1.00)
Couple	-0.064	-(7.46)	-0.032	-(4.06)	-0.090	-(9.29)	-0.054	-(6.00)
De facto					0.143	(10.30)	0.069	(5.99)
Home owners			-0.074	-(9.53)			-0.042	-(5.43)
Home buyers			-0.046	-(5.91)			-0.033	-(4.67)
Net worth			-0.004	-(7.03)			-0.003	-(5.29)
Non-resident children				-0.016	-(2.47)	0.019	(2.49)	
Children 0–4					0.007	(1.24)	0.002	(0.35)
Children 5–9					0.007	(1.15)	0.001	(0.27)
Children 10–14					-0.001	-(0.27)	-0.002	-(0.49)
Unemployed household member							0.061	(7.02)
Average age							0.002	(2.54)
Average age square							0.000	-(4.52)
Poor Health							0.069	(9.61)
Aboriginal and Torres Strait Islander						0.019	(0.99)	
Immigration status (English speaking background)							0.000	-(0.02)
Immigration status (non-English speaking background)						0.006	(0.64)	
Inner Regional Australia						0.000	(0.04)	
Outer Regional Australia						0.013	(0.94)	
Remote Australia							-0.025	-(1.39)
Other New South Wales						-0.008	-(0.64)	
Melbourne							-0.001	-(0.13)
Other Victoria							0.003	(0.19)
Brisbane							0.005	(0.38)
Other Queensland							0.019	(1.26)
Perth							0.013	(1.07)
Other Western Australia						0.063	(2.59)	
Adelaide							0.001	(0.07)
Other South Australia						0.009	(0.47)	
Tasmania							0.005	(0.24)
Australian Capital Territory						-0.012	-(0.68)	
Northern Territory							-0.055	-(1.97)
Observations	**10,703**		**10,703**		**10,703**		**10,703**	

Table A3 Determinants of cashflow problems (both report)

	Probit coefficients and t-statistics							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
Equivalent income	-0.004	(-7.31)	-0.003	(-6.21)	-0.004	(-7.28)	-0.004	(-5.75)
Lone parent	0.142	(6.96)	0.108	(5.50)	0.086	(4.26)	0.064	(3.24)
Couple	-0.145	(-11.16)	-0.102	(-8.04)	-0.210	(-13.09)	-0.175	(-3.44)
De facto					0.195	(7.95)	0.049	(2.35)
Home owners			-0.182	(-13.45)			-0.102	(-7.02)
Home buyers			-0.046	(-3.24)			-0.036	(-2.54)
Net worth			-0.010	(-8.75)			-0.007	(-6.51)
Non-resident children				-0.061	(-4.93)	0.061	(4.27)	
Children 0–4					0.055	(5.26)	0.020	(2.01)
Children 5–9					0.027	(2.56)	0.009	(0.89)
Children 10–14					0.022	(2.07)	0.013	(1.24)
Unemployed household member							0.049	(3.07)
Average age							0.000	(-0.16)
Average age square							0.000	(-2.44)
Poor health							0.060	(4.58)
Aboriginal and Torres Strait Islander						-0.018	(-0.39)	
Immigration status (English-speaking background)							-0.035	(-2.48)
Immigration status (non-English speaking background)							0.000	(0.00)
Inner Regional Australia						-0.026	(-1.39)	
Outer Regional Australia						-0.008	(-0.36)	
Remote Australia							-0.003	(-0.06)
Other New South Wales						0.007	(0.31)	
Melbourne							0.027	(1.44)
Other Victoria							0.020	(0.72)
Brisbane							-0.013	(-0.60)
Other Queensland							0.004	(0.15)
Perth							-0.006	(-0.27)
Other Western Australia						0.042	(1.05)	
Adelaide							-0.020	(-0.91)
Other South Australia						0.014	(0.38)	
Tasmania							-0.001	(-0.02)
Australian Capital Territory						-0.034	(-1.04)	
Northern Territory							-0.030	(-0.43)
Observations	**5,529**		**5,529**		**5,529**		**5,529**	

Table A4 Determinants of cashflow problems (individual)

	Probit coefficients and t-statistics							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
Equivalent income	-0.004	-(8.43)	-0.003	-(6.99)	-0.004	-(8.58)	-0.003	-(6.84)
Lone parent	0.096	(4.95)	0.087	(4.38)	0.054	(2.86)	0.038	(1.95)
Couple	-0.068	-(5.14)	-0.012	-(0.90)	-0.131	-(8.83)	-0.059	-(3.98)
De facto					0.204	(10.42)	0.084	(4.71)
Home owners			-0.200	-(14.61)			-0.142	-(9.99)
Home buyers			-0.077	-(5.51)			-0.071	-(5.17)
Net worth			-0.012	-(9.55)			-0.010	-(8.94)
Non-resident children				-0.062	-(5.60)	0.045	(3.15)	
Children 0–4					0.054	(5.41)	0.028	(2.84)
Children 5–9					0.030	(3.10)	0.014	(1.48)
Children 10–14					0.005	(0.54)	-0.004	-(0.42)
Unemployed household member							0.070	(4.79)
Average age							0.007	(4.94)
Average age square							0.000	-(7.20)
Poor health							0.063	(5.19)
Aboriginal and Torres Strait Islander							-0.016	-(0.50)
Immigration status (English speaking background)							-0.038	-(2.76)
Immigration status (non-English speaking background)						-0.022	-(1.48)	
Inner Regional Australia						-0.025	-(1.32)	
Outer Regional Australia						-0.020	-(0.86)	
Remote Australia							-0.049	-(1.35)
Other New South Wales						0.028	(1.17)	
Melbourne							0.033	(1.82)
Other Victoria							0.033	(1.19)
Brisbane							-0.004	-(0.20)
Other Queensland							0.046	(1.71)
Perth							0.015	(0.68)
Other Western Australia						0.064	(1.62)	
Adelaide							0.005	(0.22)
Other South Australia						0.013	(0.37)	
Tasmania							0.027	(0.77)
Australian Capital Territory						-0.027	-(0.74)	
Northern Territory							0.025	(0.26)
Observations	**10,703**		**10,703**		**10,703**		**10,703**	

Table A5 Determinants of any stress (either reports)

	Probit coefficients and t-statistics							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
Equivalent income	-0.005	(-9.55)	-0.005	(-7.94)	-0.006	(-9.41)	-0.005	(-7.67)
Lone parent	0.182	(7.06)	0.155	(5.79)	0.128	(4.82)	0.113	(4.00)
Couple	-0.001	(-0.08)	0.066	(4.04)	-0.076	(-4.20)	-0.047	(-0.74)
De facto					0.289	(10.67)	0.124	(4.45)
Home owners			-0.257	(-13.88)			-0.155	(-7.46)
Home buyers			-0.087	(-4.45)			-0.068	(-3.38)
Net worth			-0.016	(-8.86)			-0.012	(-6.50)
Non-resident children				-0.063	(-4.00)	0.104	(5.35)	
Children 0–4					0.076	(5.37)	0.029	(1.94)
Children 5–9					0.044	(3.24)	0.020	(1.45)
Children 10–14					0.015	(1.08)	0.008	(0.61)
Unemployed household member							0.112	(5.15)
Average age							-0.003	(-1.03)
Average age square							0.000	(-1.66)
Poor health							0.101	(6.01)
Aboriginal and Torres Strait Islander							-0.041	(-0.66)
Immigration status (English speaking background)							-0.041	(-2.17)
Immigration status (non-English speaking background)							-0.007	(-0.31)
Inner Regional Australia						-0.048	(-1.80)	
Outer Regional Australia						-0.045	(-1.40)	
Remote Australia							-0.061	(-1.14)
Other New South Wales						0.027	(0.82)	
Melbourne							0.027	(1.05)
Other Victoria							0.046	(1.18)
Brisbane							0.020	(0.66)
Other Queensland							0.052	(1.41)
Perth							0.015	(0.47)
Other Western Australia						0.044	(0.85)	
Adelaide							0.028	(0.90)
Other South Australia						-0.004	(-0.08)	
Tasmania							0.047	(0.91)
Australian Capital Territory						-0.003	(-0.07)	
Northern Territory							0.035	(0.33)
Observations	**5,529**		**5,529**		**5,529**		**5,529**	

Table A6 Determinants of any stress (both report)

	Probit coefficients and t-statistics							
	Model 1		Model 2		Model 3		Model 4	
Equivalent income	-0.005	(-7.95)	-0.004	(-6.84)	-0.005	(-8.06)	-0.004	(-6.43)
Lone parent	0.151	(7.02)	0.120	(5.63)	0.098	(4.53)	0.077	(3.55)
Couple	-0.160	(-11.81)	-0.115	(-8.56)	-0.226	(-13.71)	-0.216	(-3.89)
De facto					0.225	(8.75)	0.074	(3.14)
Home owners			-0.193	(-13.32)			-0.108	(-6.86)
Home buyers			-0.053	(-3.46)			-0.041	(-2.64)
Net worth			-0.012	(-8.89)			-0.008	(-6.56)
Non-resident children				-0.063	(-4.79)	0.063	(4.14)	
Children 0–4					0.051	(4.49)	0.016	(1.40)
Children 5–9					0.032	(2.86)	0.014	(1.25)
Children 10–14					0.019	(1.71)	0.011	(0.94)
Unemployed household member							0.068	(3.90)
Average age							0.000	(0.07)
Average age square							0.000	(-2.75)
Poor health							0.090	(6.38)
Aboriginal and Torres Strait Islander							-0.033	(-0.66)
Immigration status (English speaking background)							-0.035	(-2.30)
Immigration status (non-English speaking background)							0.002	(0.09)
Inner Regional Australia						-0.030	(-1.51)	
Outer Regional Australia						0.003	(0.12)	
Remote Australia							-0.007	(-0.17)
Other New South Wales						0.013	(0.51)	
Melbourne							0.026	(1.27)
Other Victoria							0.012	(0.40)
Brisbane							0.001	(0.06)
Other Queensland							0.006	(0.21)
Perth							0.002	(0.09)
Other Western Australia						0.062	(1.41)	
Adelaide							-0.010	(-0.42)
Other South Australia						0.006	(0.16)	
Tasmania							0.005	(0.14)
Australian Capital Territory						-0.052	(-1.47)	
Northern Territory							-0.019	(-0.25)
Observations	**5,529**		**5,529**		**5,529**		**5,529**	

Table A7 Determinants of any financial stress (individual)

	Probit coefficients and t-statistics							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
Equivalent income	-0.004	-(8.82)	-0.003	-(7.34)	-0.004	-(9.11)	-0.003	-(7.25)
Lone parent	0.111	(5.49)	0.105	(5.00)	0.072	(3.59)	0.054	(2.61)
Couple	-0.074	-(5.50)	-0.016	-(1.18)	-0.136	-(8.99)	-0.066	-(4.29)
De facto					0.216	(10.76)	0.096	(5.07)
Home owners			-0.204	-(14.21)			-0.142	-(9.52)
Home buyers			-0.085	-(5.76)			-0.077	-(5.32)
Net worth			-0.013	-(9.24)			-0.011	-(8.52)
Non-resident children				-0.065	-(5.77)	0.044	(3.01)	
Children 0–4					0.051	(4.97)	0.026	(2.49)
Children 5–9					0.029	(2.92)	0.014	(1.39)
Children 10–14					0.000	-(0.05)	-0.009	-(0.94)
Unemployed household member							0.087	(5.65)
Average age							0.007	(4.70)
Average age square							0.000	-(7.23)
Poor health							0.087	(6.95)
Aboriginal and Torres Strait Islander							-0.031	-(0.93)
Immigration status (English speaking background)							-0.037	-(2.47)
Immigration status (non-English speaking background)							-0.023	-(1.45)
Inner Regional Australia						-0.025	-(1.31)	
Outer Regional Australia						-0.018	-(0.76)	
Remote Australia							-0.066	-(1.74)
Other New South Wales						0.031	(1.27)	
Melbourne							0.029	(1.56)
Other Victoria							0.035	(1.21)
Brisbane							0.012	(0.54)
Other Queensland							0.057	(2.09)
Perth							0.017	(0.75)
Other Western Australia						0.091	(2.14)	
Adelaide							0.009	(0.41)
Other South Australia						0.023	(0.61)	
Tasmania							0.043	(1.15)
Australian Capital Territory						-0.035	-(0.92)	
Northern Territory							0.029	(0.29)
Observations	**10,703**		**10,703**		**10,703**		**10,703**	

Equation A1

$$p^* = \beta_1 + \beta_2 \ln(y) + \beta_3 \ln(fs) + y_2 \ln(y) * D_{couple}$$
$$+ y_1 D_{kids04} + y_2 \ln(y) * D_{kids04} + y_3 \ln(fs) * D_{kids04}$$
$$+ y_4 D_{kids59} + y_5 \ln(y) * D_{kids59} + y_6 \ln(fs) * D_{kids59}$$
$$+ y_7 D_{kids1014} + y_8 \ln(y) * D_{kids1014} + y_9 \ln(fs) * D_{kids1014}$$

Endnotes

1 See Watson and Wooden (2002) for more details.

2 In other words, families that include other non-related or related individuals have been excluded. Thus, the families in the sample include parents and children. The vast majority of Australian families are nuclear families.

3 There are 6,779 nuclear families living in single-family households identified in HILDA. We eliminated 36 lone-parent families in which the parent could not be identified and a further 25 where the parent did not respond to the survey. We also eliminated couples in which the partner could not be identified (41 observations) and in which both partners did not respond to the survey (391 observations). Same sex couples (27 observations) were also eliminated. We eliminated a further 700 families in which at least one partner did not respond to the SCQ containing the financial stress questions. A further 30 households were deleted because they:
- reported negative income (14 observations)
- were of the wrong family type (6 observations)
- had household weight equal to zero (10 observations).

4 All estimates are weighted using the sample weights provided in HILDA.

5 The previous calculations are based on one response per household.

6 In particular, given the discrete (0,1) nature of our dependent variable, we use a probit regression model.

7 Results for any form of financial stress—which is a combination of both financial hardship and cashflow problems—are presented in the appendix.

8 See also appendix Tables A1 and A2.

9 Equivalent household income is measured in thousands ($000). Therefore, to calculate the effect of a $10,000 increase in income, multiply the estimated coefficient by 10.

10 Net worth is highly skewed and often negative, leading us to use an inverse hyperbolic sine transformation of net worth. The consequence is that it is not possible to interpret the coefficient on this factor, although the significance level of this factor is of interest.

11 This variable is an interaction term (couple family*de facto) and provides a test of whether or not there are significant differences between married and de facto couples.

12 Only children in the 5–9 year-old category are associated with significantly higher levels of financial hardship though the effect (1.8 percentage points) is relatively small.

13 Equivalence scales can be derived from either 'expert advice' or economic and econometric modelling (see Charlier 2002). Equivalence scales are also important in the analysis of income inequality (see Jenkins 1991).

14 The distinction is between having resources to finance a certain consumption level as opposed to the satisfaction or happiness associated with it.

15 Nelson (1993) discusses the development of the Engle method and other food-based equivalence scales.

16 Sen (1987) discusses the difference between the utility or satisfaction-based notion of welfare and welfare in the sense of standard of living.

17 See Hartog (1988) for a review of the Leyden approach of measuring the individual function of welfare. Vaughan (1984) also contains a large number of references to this literature.

18 See, in particular, van Praag (1971; 1991) and Kapetyn et al. (1994) and the references therein. Further, Melenberg and van Soest (1996) provide a review of the recent literature including a discussion of the various methodological issues in using this scale. Hartog (1988) provides a non-technical review of this literature.

19 See also Vaughan (1984) who provides a overview of the use of what he calls direct subjective measurement of welfare.

20 Kapteyn et al. (1988) show that selection problems associated with not responding to the IEQ and mis-measurement of income can be quite important in the calculation of this type of poverty line.

21 We report equivalence scales based upon estimation of a probit model of equation (4). A linear probability model gives almost exactly the same equivalence scales.

22 See equation A1 in the appendix.

23 The results from this full model are available from the authors upon request.

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Australian intrastate migration—the story of Age Pensioners

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1. Introduction

For many Australian seniors, the idea of packing up and moving from the hustle and bustle of the big city to a smaller, quieter place on the coast or in the country is their 'sea-change' or 'tree-change' idyll. For some, the experience is a dream come true, living out their golden years in a small town and experiencing a very different lifestyle. This idyllic scenario assumes a level of unconstrained choice on the part of those who move. A segment of the elderly appears, however, to move less out of preference and more because high metropolitan housing costs, crime and other urban ills push them. Whatever their motivation, some find their new communities rewarding and spend the rest of their days there. Others are disappointed and move back to the cities to be closer to family and friends and health care facilities.

The movement of older people away from the cities is a long-term phenomenon with the first Australian studies being published on the topic 25 years ago (for example, Murphy 1977, 1981; Murphy & Zehner 1988). While initially viewed as a discrete phenomenon, retirement migration came to be seen as a major driver of the so-called 'population turnaround'. National censuses in Australia, the United States and Europe in the mid-1970s showed that large cities had lost shares of national population and that non-metropolitan areas were taking up the slack. In the 1980s the turnaround contracted and the element of low-income migration (including income support recipients) became prominent[1]. Extensive studies have been conducted internationally and in Australia on low-income migration (reviewed below) but there has been little recent work on retirement migration specifically. Moreover, Australian studies of retirement migration have not usually been couched in terms of welfare migration and yet for low-income retirees this is an essential perspective. In any assessment of the scale, motivations and welfare outcomes of inter-regional migration of the elderly, movements from non-metropolitan to metropolitan areas also need to be considered. While many such moves are retirees returning to the cities, in many cases they involve people who have lived in non-metropolitan areas for many years, if not all of their lives. Their motivations and the welfare outcomes of moves must also be considered.

This paper has two aims. First, it provides an up-to-date description of the motivations driving Age Pensioners who relocate from cities to non-metropolitan areas, and vice versa. Second, it assesses the welfare outcomes of this relocation for retirees. The paper comprises two main parts after a methodology section. The first part examines relocation decisions and outcomes for Age Pensioners who moved from metropolitan Sydney and Adelaide to the non-metropolitan areas of New South Wales and South Australia, respectively[2]. The second part deals with pensioners who moved in the opposite direction. Each part has three sub-sections. The first summarises key insights from the literature. The second presents aggregate data on inter-regional migration flows of income support recipients, including Age Pensioners. The third reports results from the two major social surveys that were conducted between 2001 and 2003. This is enhanced with quotes from survey respondents, which add rich qualitative perspectives to the statistics. The concluding section of the paper compares and contrasts the motivations and welfare outcomes for the two sets of migrants and discusses issues arising from the findings.

2. Methodology

The paper draws on two studies of the movement of income support recipients (youth unemployed, unemployed, disabled, single parents and Age Pensioners) who moved from Sydney and Adelaide to the non-metropolitan parts of New South Wales and South Australia, respectively, and in the reverse direction. Sample frames for the social survey respondents were drawn from the current Centrelink client database (that is, for the period December 1999 to December 2000). In consultation with the researchers, officers from the Department of Family Community Services (FaCS) drew random samples of 7,000 movers in each direction. Samples were stratified to ensure responses were large enough to be handled statistically. Sample and survey returns were compared with 2001 Census internal migration data and were found to be broadly matched. The response rate for people moving from the city to a non-metropolitan area was 23 per cent. The survey response rate for people moving from a regional area to the city was 21 per cent.

New South Wales and South Australia were chosen for two reasons. First, Sydney's high housing prices were thought likely to be more of an influence on movers to and from Sydney than would be the case with Adelaide. Second, while Sydney has experienced net migration losses for decades, inflows to and outflows from Adelaide have been evenly balanced. The two cities are, to an extent, normatively placed at the poles of urbanisation and migration processes in Australia. As such, they are likely to provide insight into migration motivations and outcomes that would be more broadly applicable in Australia. For more details on the methods used for the studies, refer to endnote 3.

3. Movement from the cities

Studies of metropolitan to non-metropolitan migration

Frey (1994a, 1994b, 1995a, 1995b, 1995c, 1997), Frey and Liaw (1998), Frey et al. (1998) and Frey et al. (1995) have closely analysed the migration of the poor between states in the United States and show that there is a significant out-migration of the 'poverty-class' population from states which are experiencing high levels of immigration. Unlike Australia, America's welfare system varies between states. Hanson and Hartman (1994) found no evidence to support a 'welfare-magnet' hypothesis. They conclude that in the United States poor people do not move from one state to another to receive more public assistance but are in fact unlikely to move out of their home state. This is in contrast to studies completed in the 1960s and 1970s, which suggested that there was a positive influence of welfare benefits levels or generous eligibility criteria on migration of the disadvantaged. Rives et al. (1983) believed that the low cost of living at the destination location is the more important factor that shapes migration, especially for the older population.

In Australia there has been limited examination of migration and income effects. One of the most clearly documented components of counter-urbanisation/population turnaround is the movement of former metropolitan residents in their 50s and 60s to non-metropolitan locations upon retirement, semi- or pre-retirement (Drysdale 1991; Murphy & Zehner 1988; Murphy 1981; Neyland & Kendig 1996; Pollard 1996; Burnley 1996). In the late 1980s, Hugo (1989a, 1989b) put forward the 'welfare-led' hypothesis to assist in the explanation of counter-urbanisation in Australia. This suggested that a significant component of population growth in Australian non-metropolitan areas is due to the in-migration, and retention, of low-income groups. An important element in this movement is that benefit payments from government are equally available across the nation and generally portable, although there are exceptions. For example, when a person on an unemployment benefit (for example, Newstart Allowance) moves to a new area without sufficient reason, and that move lowers their unemployment prospects, that person may be excluded from payments for 26 weeks (Centrelink 2003).

Hugo and Bell (1998) also demonstrated that low-income earners have played a major role in the process of counter-urbanisation in Australia—in Sydney there were net migration gains of high-income earners but net migration losses of all lower-income groups. There is also true of low-income migration to non-metropolitan areas of New Zealand documented by Waldegrave and Stuart (1997). Wulff and Bell (1997) also examined the migration patterns of low-income groups. They found that spatial patterns of net migration gains and losses differed markedly between the employed and those not in the workforce, including Age Pensioners. They found (1997) there were net out-movements of low-income groups from Sydney and Melbourne and net gains in many non-metropolitan regions.

The poverty/welfare-led hypothesis should not be seen purely in terms of 'economic-push', since there is undoubtedly a contingent of people on low incomes or reliant upon transfer payments who decide to relocate to a congenial environment in non-metropolitan areas for amenity reasons. Both Flood (1992) and Morrow (2000a, 2000b) note that theories of migration that emphasise labour market aspects are of limited use in explaining the migration of welfare recipients, especially Age Pensioners or those nearing retirement age.

Age Pensioners are not moving out of cities because of any broader 'regional restructuring' or any other employment theories. Most often, for them, it can be explained by personal choice (for example, moving for the environmental amenity of coastal areas or for a retirement lifestyle). Speculative migration—that is perhaps less-informed Age Pensioners seeking the 'sea-change' dream—can result in poor decisions being made, as the information gathered from a distance is not always reliable or comprehensive (Bell 1996).

Aggregate flows

Table 1 shows movements of income support recipients based on FaCS Longitudinal Data Set for the period December 1999 to December 2000, the latest period for which published data were available at the time of the study. The compilation of Tables 1 and 2 required operational definitions of metropolitan and non-metropolitan postcodes for each of the Australian states and territories. This was undertaken by the Australian Key Centre for Social Applications of Geographical Information Systems, University of Adelaide, with assistance from FaCS. Caution should be used when reviewing the Australian Capital Territory figures which are slightly skewed because Queanbeyan, a town on the edge of Canberra, is delineated by Australia Post to be partly in New South Wales and partly in the territory. It should also be noted that a minority of the movement in New South Wales was from Sydney proper to Gosford–Wyong that is defined by the Australian Bureau of Statistics as part of the Sydney Statistical Division.

Table 1 Metropolitan to non-metropolitan moves by income support type for all states and territories, December 1999 to December 2000

Income support type	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Unemployed	4,866	4,805	5,030	3,039	1,864	680	96	700
Youth unemployed	1,000	1,009	1,422	811	485	233	16	122
Single parents	3,336	3,134	3,075	1,903	1,201	356	112	252
Disabled	2,866	2,729	2,525	1,369	1,131	294	52	166
Age Pensioners	**4,060**	**3,566**	**2,341**	**1,531**	**999**	**195**	**78**	**86**
Total	16,128	15,243	14,393	8,653	5,680	1,758	354	1,326

Source: FaCS 2001.

Data for the other four categories of income support recipients studied are included to place the movement of retirees in context of other low-income migration. Of the income support recipients who moved over the 12 months from Sydney to non-metropolitan New South Wales, 25 per cent were Age Pensioners. This is the highest percentage of all states/territories, followed by Victoria at 23 per cent. In comparison, just 6 per cent of all movers from Darwin to other parts of the Northern Territory were Age Pensioners (FaCS 2001).

Relocation factors

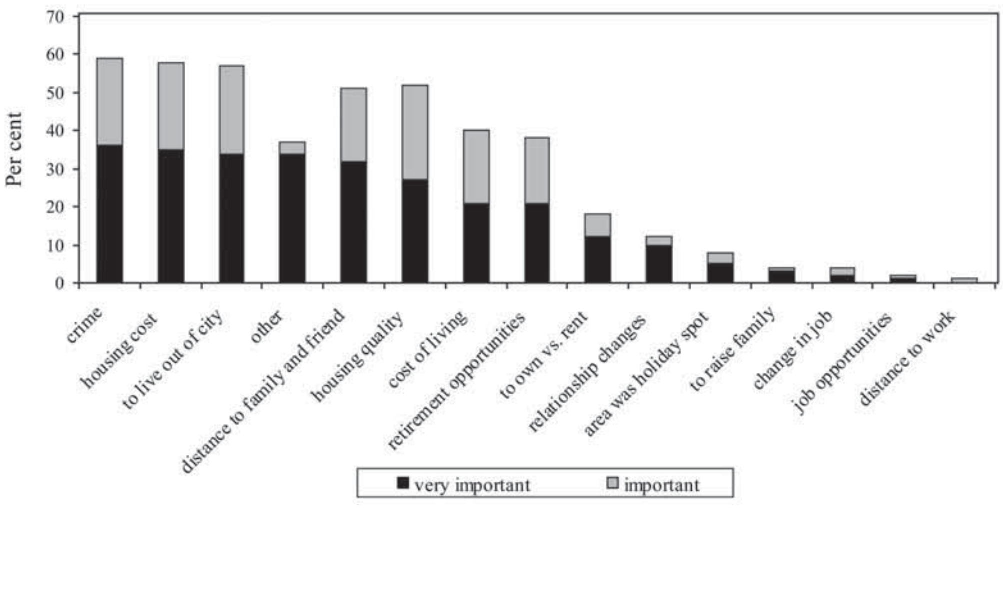
In deciding to move away from the cities, pensioners were primarily driven by perceptions of crime, housing costs and lifestyle. Crime levels and the worry of their homes being broken into were repeatedly noted by respondents. Although it was suggested more than 30 years ago (Murphy 1977, 1981), easier-going lifestyles and a greater sense of community are still substantial 'pull factors' for seniors moving to country and coastal areas. 'Retirement is impractical unless you leave the big city to relax and enjoy the rest of your life' (Respondent 29).

Figure 1 summarises ratings of a set of relocation influences. Survey respondents rated each as being 'very important,' 'important,' 'somewhat important,' 'not important' or 'not applicable.' The 'other' category most often included personal or health reasons, lifestyle choices and a desire for access to particular amenities and services. Crime was important to 59 per cent of pensioners, housing to 58 per cent and a broad desire to live away from the city to 57 per cent.

> …we were forced to move because of financial circumstance and cost of living. We are now 'coasties' and would not go back to Sydney if we could afford to (which of course we can't) (Respondent 183).

Less than 20 per cent of retirees moved in order to own houses instead of renting, although proportions varied between South Australian (lower) and New South Wales (higher). This suggests that, because housing cost was a major consideration in moving, many were moving more in the search of cheaper rents as opposed to purchasing a home. Employment factors were predictably not a significant consideration for this group.

Figure 1 Reasons for moving from the cities

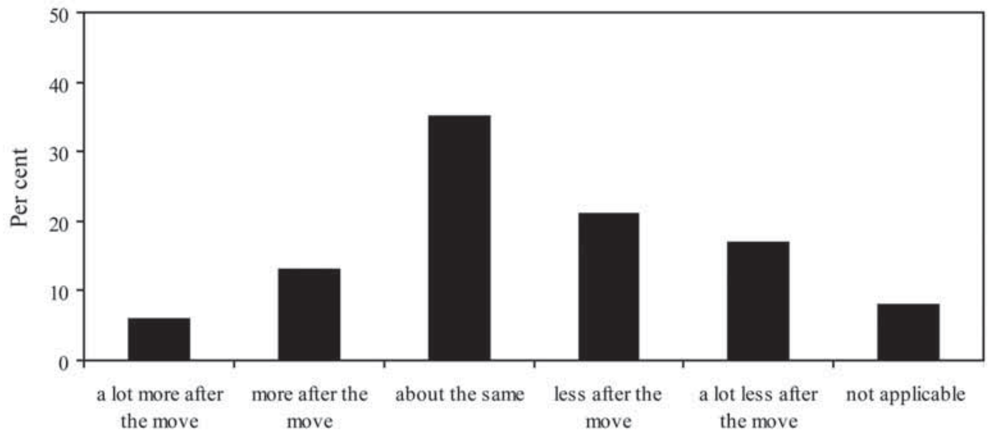


Variations by state were noted in reasons for moving out of the city. Not surprisingly, given the relative cost of housing in Sydney as compared to Adelaide, housing-related matters were more of a concern for New South Wales movers than their South Australian counterparts. The top three most important considerations were the same for both states but they were differently ranked. New South Wales' pensioners rated housing costs as their most important factor, followed by crime levels and a simple desire to live away from the city. In contrast, South Australian movers listed crime levels as their most important consideration, followed by wanting to live away from Adelaide and then housing costs.

The data support the **a priori** expectation that housing affordability is a major factor in relocating out of the city. Affordability was more of an issue for renters compared to those who owned their own homes, prior to moving. Nevertheless, housing arrangements such as expenditure and non-price aspects of housing explain the extent to which moving produced greater housing affordability and satisfaction levels of quality, size, dwelling type and tenure post-relocation. These are discussed further below.

Generally, movers were quite satisfied with the affordability of housing in non-metropolitan areas. Housing cost was not a relevant factor at all for 20 per cent of pensioners. Reasons such as people moving into cost-controlled housing (public housing, hostels or retirement villages) or to live with families where they were not responsible for covering the cost of their own housing, may account for this. These pensioners may also have sold their family homes in high-priced city markets for the capital, so affordability was not an issue now in a more affordable non-metropolitan market.

Figure 2 Housing costs after moving to the country areas



Just over one-fifth of survey respondents actually paid more for their housing after moving. Combined, around 55 per cent paid a lot more, more, or about the same. This finding is consistent with a lesser emphasis on affordability as a relocation driver and a greater emphasis on social and personal factors. Of course this group may well have achieved superior housing outcomes related to size, quality and location than they had experienced in the cities. Around 40 per cent of movers spent less on housing after relocating, thereby making them better off financially. Housing affordability was perceived to be better especially in non-metropolitan New South Wales. Nearly two-thirds (61 per cent) of pensioners owned their homes outright when living in Sydney and Adelaide but this figure dropped slightly after moving to 56 per cent. Relatively few were 'purchasing or renting their housing before or after moving'. Housing tenure status for New South Wales' pensioners did not change much after relocating, except for those renting plus receiving Centrelink (government) assistance. A somewhat greater shift was noted in South Australia. Fewer owned their homes outright after moving away from Adelaide, while almost double were purchasing. More were renting and receiving government assistance, and double the number were in some 'other' situation such as boarding/lodging, and living with family members.

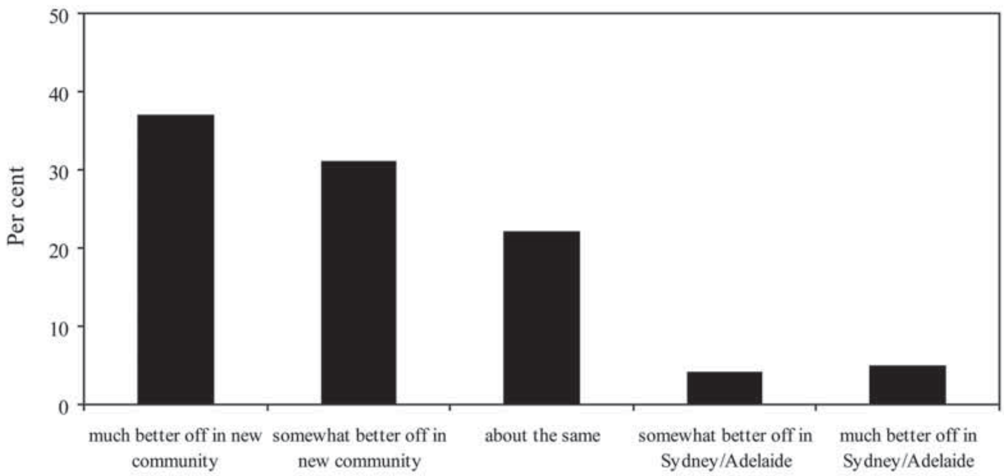
Most pensioners lived in houses in the city. Seniors in Sydney tended to move out of houses and flats and into townhouses/villa units and retirement villages in the country. There was a substantial drop (22 per cent), in the number of South Australian seniors who lived in houses after leaving Adelaide. Coinciding with this was a 23 per cent increase moving into retirement villages. A similar pattern was observed in New South Wales, although the shifts in tenure were not as marked. Less than 1 per cent of pensioners, in both states, lived in retirement villages in Adelaide and Sydney before moving.

Two-thirds of respondents indicated that they were better off after moving out of Sydney and Adelaide with respect to the quality of their housing. Comparing the cities, housing size was seen to have been much better in Adelaide than Sydney. Just over half (53 per cent) felt the size of their new housing was better.

Welfare implications of moving away from the cities

The study's approach to overall welfare eschewed complex measurements. Respondents were initially asked to rate the degree to which they felt 'better off' after moving. They were then questioned on their relative satisfaction with aspects of community, place, and lifestyle adjustments—all of which constitute important dimensions of personal welfare. Nearly three-quarters (70 per cent) of New South Wales movers and two-thirds (65 per cent) of South Australian movers believed they were better off after relocating from Sydney and Adelaide. 'As we get older, city life from all aspects is less attractive' (Respondent 233). Approximately 10 per cent in each state believed, however, that they were better off in cities from which they moved. Reasons behind this assessment are unpacked further. In interpreting these data, it should be recalled that these movers had lived less than a year in their new locations. It is quite conceivable that their assessments would vary over time as the relative merits of city and country became more sharply grasped though experience.

Figure 3 Perceptions of being better off after moving to the country



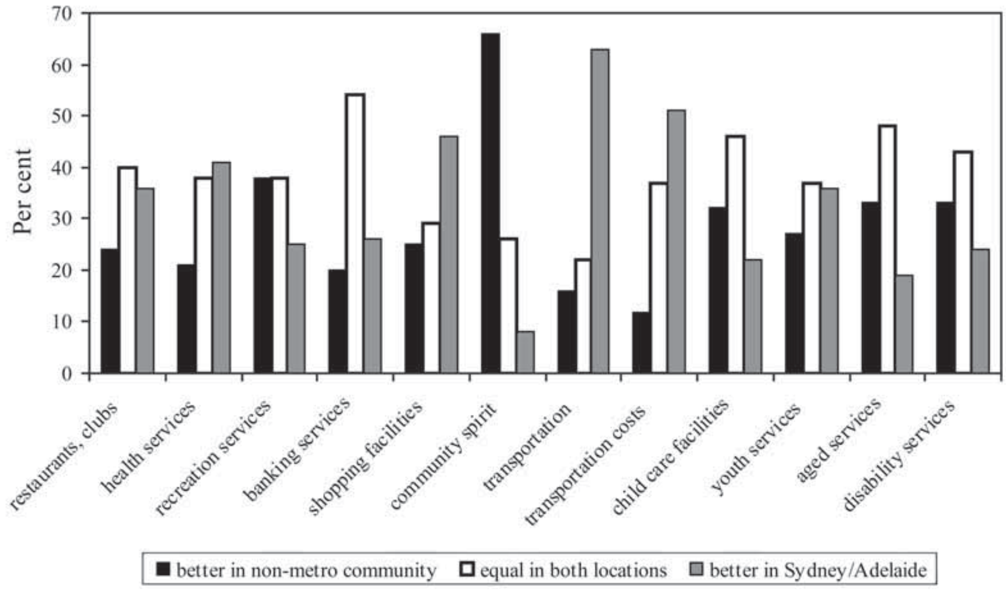
Respondents did not rate the cities poorly, (58 per cent of Sydney movers and 70 per cent of Adelaide movers rated their respective cities as good locations in which to live). However, they did rate their new non-metropolitan settings even higher. An overwhelming 90 per cent rated their new communities positively. A mere 1 per cent rated their new communities as 'poor' or 'very poor' places to live. 'I would never live in Sydney again. It's becoming a rat race. Nothing for older people as far as I'm concerned' (Respondent 985). Compared to the regional communities, and with much poorer ratings, 21 per cent rated Sydney negatively and 8 per cent rated Adelaide negatively.

Although non-metropolitan communities were rated very positively, services were regarded as being much better in the cities. Figure 4 shows the extent to which a range of services was seen to be better in non-metropolitan areas versus Sydney/Adelaide. Services decidedly better in Sydney and Adelaide were transportation availability and costs, shopping facilities, health services and restaurants and clubs.

> ...while I really enjoy living here, I do miss all the shops in Sydney, plus the fact that ... I do have to rely on my family to take me around, as I do not drive (Respondent 751).

Services generally seen the same in city and country included banking, child care, and age and disability services. The only factor seen to be better in non-metropolitan communities was 'community spirit', noted by two-thirds of respondents.

Figure 4 Place satisfaction indicators in moving from the city to the country



New South Wales' non-metropolitan recreation facilities, shopping, and restaurants/clubs were regarded as being superior to those in South Australia. In contrast, South Australian seniors were slightly more satisfied with their health and disability services than were their New South Wales counterparts. Pensioners, across the board, rated non-metropolitan services and facilities more positively than other income support groups—that is, the unemployed, sole parents and the disabled, although still relatively poorly: 'The lack of facilities is offset with a country lifestyle' (Respondent 3,075). Trade-offs were clearly being made.

Pensioners were very positive and consistent in their adjustment to their non-metropolitan places. 'Totally different lifestyle [here]—feel very much retired' (Respondent 311). Almost 90 per cent of respondents, in both states, were satisfied with their new lifestyles. They were also very satisfied with making new friends and maintaining family ties. This is consistent with the finding that nearly two-thirds of respondents suggested that they relocated because they simply wanted to live away from the cities to have a different lifestyle.

When asked what the likelihood was of their moving back to Sydney or Adelaide within the year following the survey, 85 per cent of New South Wales and 80 per cent of South Australian pensioners thought it was unlikely to happen. 'Life is good, quiet, peaceful, good people, heaven on earth' (Respondent 242). Less than 5 per cent from both states felt that it was 'very likely' or even 'somewhat likely' that they would move back to Sydney or Adelaide.

4. Movement to the cities

Studies of non-metropolitan to metropolitan migration

Traditionally, the role of labour markets has been central in explaining migration to cities. This is still the case for people of employment age and who are work-ready. For Age Pensioners however, alternative motivations must be considered. It is no surprise that age and life cycle factors influence the mobility of all ages. Many scholars (Nugent 1998; McKenzie 1996; Bell & Hugo 2000; Culpin et al. 2000; Morrow 2000a) have studied the influence of 'stage in life cycle' whereby young people 'leave the parental home' and chase the bright lights and education opportunities in the city. The other age group that sees significant migration flows to the cities is the elderly. Whilst the 'young-old', including early retirees, often move out of cities to amenity and coastal areas, the 'old-old' (those aged 75+ years) often move in the other direction (Vintila 2001; Rowland 1979).

One of the biggest issues faced by the elderly or those with a disability living in a rural, coastal or other non-metropolitan area is access to social, health and other personal support services. As Gething (1997) showed, people with disabilities living in more remote and rural areas experience 'double disadvantage' in access to services. While experiencing disadvantages similar to other non-metropolitan residents, those experienced by the disabled and elderly are compounded by living in an environment that does not cater for specialised needs. As a result, they find themselves moving to the city when more specialised health services are required as the ageing process progresses, when a partner dies, or when they simply want to be closer to family and other support networks as they require assistance with daily living.

As was noted above, many non-metropolitan areas lack some commercial and personal services. The National Housing Strategy (1992, p. xii), through the Housing and Location Choice survey found that:

> …the access difficulties of older single people, sole parents and couples with young children were more than for the population as a whole, and were exacerbated by location, gender and means of transport.

Wulff and Bell (1997) also researched this situation and came to similar conclusions. The elderly are not as mobile as others in conducting day-to-day social practices, such as shopping and banking. Many seniors, especially women, are still of an era where they have never driven a vehicle, while others of both genders, become increasingly reliant on public transport. Commercial facilities, social services and public transport are far more accessible for pensioners living in cities.

Wulff and Newton (1996) noted that private renters move more often than those who own their own homes and this can lead to 'social justice' issues. While many movers relocate voluntarily, private renters, particularly those on low-incomes, are more vulnerable to forced moves because of the cost and suitability of housing. In the case of the aged or more infirm requiring housing with special accommodation or care requirements, such as nursing homes or hostels, the availability of appropriate housing often forces the elderly into the metropolitan areas (Gething 1997).

Aggregate flows

The FaCS Longitudinal Data Set again provides a context for considering factors influencing the decisions of Age Pensioners who moved to Sydney and Adelaide from the non-metropolitan areas of New South Wales and South Australia. Table 2 shows numbers of income support recipients, including Age Pensioners, who moved to Australian state/territory capital cities between December 1999 and December 2000. Around 8,000 pensioners, Australia-wide, moved to their capital cities. (Table 1, interpreted above, shows that some 13,000 pensioners moved out of the cities over the same period, resulting in a net annual gain to non-metropolitan areas of about 5,000). As per Table 1, caution should be used when reviewing the Australian Capital Territory figures, which are slightly skewed by the fact that the locality of Queanbeyan is delineated by Australia Post to be partly in New South Wales and the territory.

Table 2 Non-metropolitan to metropolitan moves by income support type for all states and territories, December 1999 to December 2000

Income support type	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Unemployed	4,011	4,439	4,592	2,986	2,151	649	156	519
Youth unemployed	874	1,173	1,409	830	717	228	47	107
Single parents	2,660	2,826	2,744	1,787	1,337	394	102	226
Disabled	2,061	2,036	2,042	1,126	992	358	69	167
Age Pensioners	**1,932**	**2,330**	**1,525**	**1,079**	**937**	**236**	**69**	**67**
Total	11,538	12,804	12,312	7,808	6,134	1,865	443	1,086

Source: FaCS 2001.

As a percentage of all income support recipients, Age Pensioners in the Northern Territory were much less likely to move to Darwin—just 6 per cent do move in—than were their counterparts in the southern states. Pensioners most likely to move to their state capital were from non-metropolitan Victoria (18 per cent) and New South Wales (17 per cent).

Relocation factors

The most important relocation factor for Age Pensioners moving to Sydney and Adelaide was the desire/need to be closer to family and friends. Nearly three-quarters (72 per cent) of respondents moved to be closer to their social support network. A change in their relationship status (most likely the death of a spouse) and a respondent's health, or the health of a family member (likely their spouse), were the other two key factors they considered in relocating to the city. Figure 5 supports the **a priori** hypothesis that seniors move to the city for pragmatic, often health- and family-related reasons, rather than for 'retirement opportunities'. 'Sorry to leave quiet and slow lifestyle but happy to move to the city to be with family and friends' (Respondent 6,228).

Figure 5 Reasons for moving to the cities

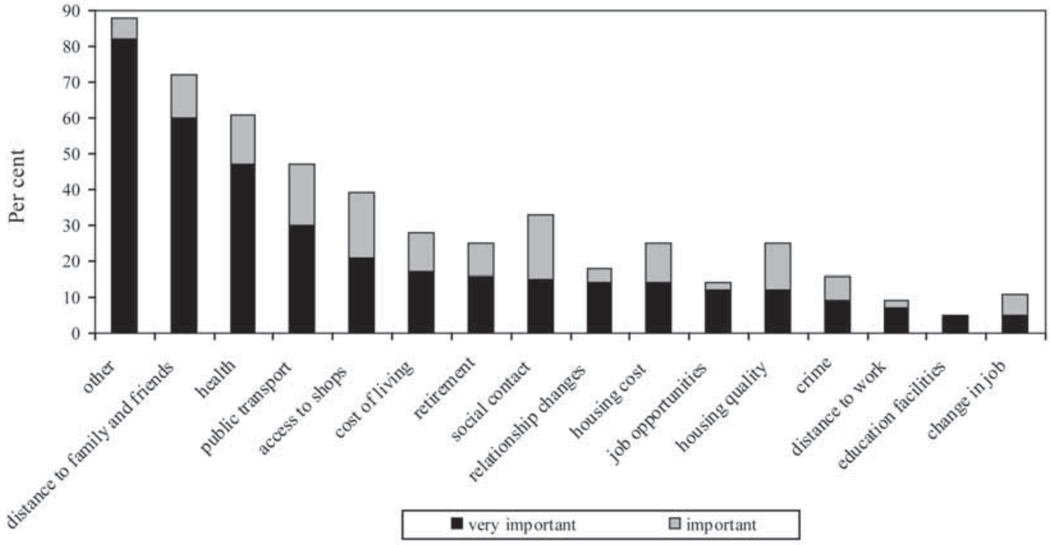
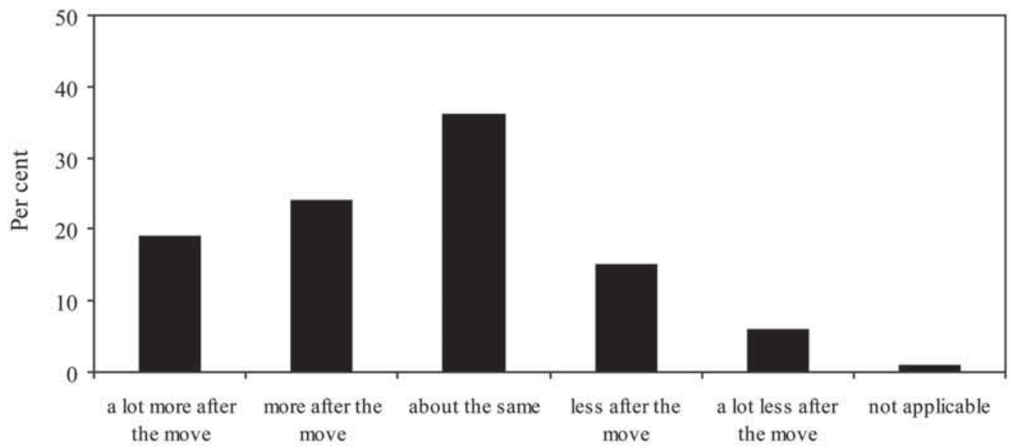


Figure 5 charts the importance of decision factors for moves to Sydney and Adelaide combined. Each was rated by respondents as being 'very important,' 'important,' 'somewhat important,' 'not important' or 'not applicable.' 'Other' considerations, noted by respondents included: 'had no choice', 'access to social activities and facilities' and 'access to specialised medical facilities.' Surprisingly (because it might have been assumed that pensioners would not be looking for paid work), 14 per cent indicated that 'job opportunities' were an important relocation consideration.

Housing cost was not a significant factor with just 14 per cent of respondents indicating it was a 'very important' consideration for them. Given the differential between city and country prices this could suggest that many were moving into 'cost controlled' housing (public housing, hostels or retirement villages), or to family homes where they were not expected to contribute to costs. Not quite half (43 per cent) of respondents paid more for their housing after moving.

Figure 6 Housing costs after moving to the cities



One in five (21 per cent) pensioners actually paid less for their housing after moving to the city. That is, these respondents were financially better off with regard to housing costs than when they lived in a non-metropolitan area. This could be tied to the change in household make-up, as suggested above. Generally however, and not unexpectedly, housing affordability had worsened for most after moving to Sydney and Adelaide.

As a result of moving, patterns of housing tenure changed significantly. Not surprisingly, significantly more respondents owned their homes outright in the country compared to when they moved to Sydney or Adelaide. Nearly two-thirds (63 per cent) of respondents owned their homes outright prior to moving, which dropped to just over one-third (37 per cent) after relocation. Some indicated that, because of the housing price differential between country and the city, that they were not able to purchase housing in the inflated urban market. In Sydney and Adelaide, compared to the country areas, more were renting and receiving Centrelink assistance and boarding with family or friends. They traded-off space and independence (and perhaps loneliness) for family support and access to services and care. '[I am] living with my daughter as I can't look after myself—before I was able to cope on my own' (Respondent 445). A very small percentage of pensioners were renting privately in both cities.

Generally, pensioners moved out of detached houses in country areas into flats and retirement homes in the city. '[I have] down-sized, more suitable for my independence' (Respondent 6,091). Respondents were evenly split in their opinions as to whether their housing quality was better in metropolitan or non-metropolitan settings. Housing size, however, was better in the country as compared to the city.

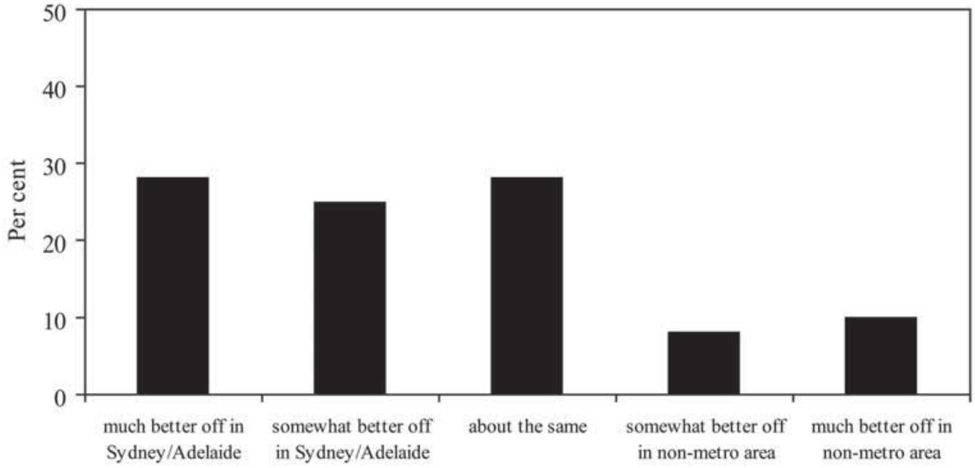
Welfare implications of moving to the cities

Age Pensioners were asked to assess the degree to which they felt that they were 'better off' or 'worse off' as a result of moving. Sets of questions were also devised to gauge their relative satisfaction with aspects of community, place, and lifestyle adjustments as key elements in personal welfare. Satisfaction levels after relocation to the cities were not overwhelming. Approximately half (53 per cent) of the pensioners believed they were better off in Sydney or Adelaide than they were in regional areas. Eighteen per cent believed they were better off in the regional areas.

> ...I miss the peace, the clean air, and the sense of belonging. Because of our age, and medical reasons it was not practical for my husband to move to the country (Respondent 4,723).

Most movers seemed reconciled to their moves.

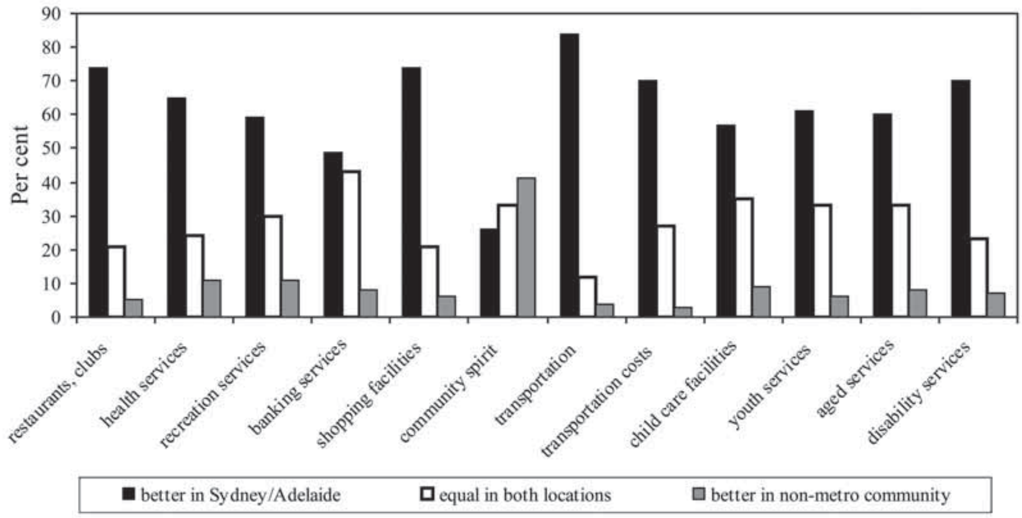
Figure 7 Relative welfare levels in the cities versus non-metropolitan areas



Pensioners, compared with the other income support recipients who were surveyed, rated non-metropolitan areas most positively (84 per cent had been very satisfied living in the country). Having said this, the cities were not really seen as negative places in which to reside either. 'Everything is the same when you are not working and you are old' (Respondent 4,619). Sydney and Adelaide were rated positively by 76 per cent of respondents. The cities were rated poorly by just 8 per cent and the country areas by just 5 per cent of pensioners.

Facilities and services were seen to be much better in the cities when compared to those in the non-metropolitan areas. Not surprisingly, transportation services and costs, shopping facilities, banking/commercial services, restaurants/clubs and health services were particularly noted as being better in Sydney and Adelaide. 'Variety of health and general facilities are far more readily available with less travel' (Respondent 6,178). However, one place satisfaction indicator was seen to be better in the non-metropolitan areas—community spirit. Forty-one per cent of all respondents suggested community spirit was better than it was in Sydney or Adelaide, although another one-quarter (26 per cent) disagreed and believed it was, in fact, better in the cities.

Figure 8 Place satisfaction indicators



Collectively these figures support the presumption that most services and facilities in the cities are better than those in the country. Many believe that the social and physical infrastructure has been reduced in some country areas and while these inconveniences and fewer opportunities may not, in themselves, drive a person out of a country area, they are generally identified when making urban and rural comparisons and are a key factor in an Age Pensioner's sense of wellbeing.

When Age Pensioners and self-funded retirees first move to new localities, others also move to service the ageing population's goods and services requirements. However, it is well known that governments, in recent times of economic rationalism, have cut back services and facilities. Private businesses have also rationalised and consolidated, both resulting in contracted services in rural or country areas. After an initial reduction occurs, the negative multiplier effect sees the further reduction of support services and facilities as people leave. The effects 'snowball' and fewer shops, restaurants, entertainment facilities and commercial ventures survive the population loss. It is well documented in the literature that beyond the human loss, overall, the social infrastructure and social capital is reduced. These inconveniences and fewer opportunities are definitely a migration factor for the elderly (Marshall et al. 2003). Nevertheless, most pensioners believe they are better off in these locations as opposed to living in the city.

Pensioners were consistently positive in their adjustment to the cities. Ninety-five per cent were satisfied with the degree to which they maintained their family ties in the city and 93 per cent were satisfied with access to community services. Figure 5 showed that 'distance to family and friends' was the most important factor for pensioners in their decision to move to the city, which was obviously satisfied by their moving. Although still very positive, the least satisfying adjustments for the elderly were getting involved in the community and making new friends. More than three-quarters of the respondents believed the likelihood of them moving back to non-metropolitan areas in the next 12 months was unlikely. 'Family ties govern your place of living' (Respondent 6,199). This was very likely their last inter-regional move.

5. Conclusions

In summary, factors influencing the location decisions of Age Pensioners and the consequences of those moves can be summarised as:

Moving away from the city—Urban ills (high crime levels, pollution, traffic, and the fast pace of city life), the simple desire for a different lifestyle, and the desire to live in a high amenity environment were the major push and pull factors that pensioners considered before moving. Housing affordability was a secondary factor for most. This is consistent with a lesser emphasis on affordability as a relocation driver (bearing in mind that many were home owners before moving—unlike other welfare migrants) and a greater emphasis on social and other personal considerations. This was a new move for most of them, as only one-quarter had lived in their new location previously. Pensioners are clearly making decisions to move based on lifestyle factors and personal circumstances, often in pursuit of the 'sea-change' or 'tree-change' dream. This is not to say that there were not financial advantages associated with moving. Despite recent price inflation on the coast, most parts of non-metropolitan Australia, even on the coast, are significantly cheaper than the cities (especially Sydney). For home owning pensioners—the majority of movers—trading down to cheaper housing provides a financial nest egg to compensate for the low-incomes conferred by a pension.

Moving to the city—The most important factor influencing pensioners who moved to the cities was the desire to be closer to family and friends. Three-quarters of these movers could be labelled as 'churners' because they had lived in the city previously and were returning. Retirement lifestyle opportunities were relatively unimportant to this group. This supports a conclusion that seniors moved for essentially pragmatic, often health and family-related reasons, rather than for 'opportunities' in the more positive sense of the term. Another important relocation factor for pensioners was relationship changes (most likely the death of a spouse) that drastically influenced living choices. Relatively few respondents indicated that housing costs were a consideration in their decision to move to Sydney or Adelaide, although this would certainly be a factor affecting where in the city they would move to and the type of dwelling in which they would live—in many cases with family and friends. Of course, the fact that people were not moving to the city for lifestyle reasons does not mean that they were not improving their welfare.

Welfare implications

Migration is invariably the outcome of people seeking to improve their welfare (otherwise why would they move – unless compelled to by 'force'). Nevertheless, the net gains in moving are usually brought about by trade-offs that people may prefer not to have had to make. Welfare is a multi-dimensional concept that incorporates all factors that influence an individual's sense of wellbeing. It includes economic capacity (income and assets), health, social opportunities, and environmental context.

Moving away from the city – Pensioners rated non-metropolitan communities very positively, despite the fact that all but two 'place-based' factors – community spirit and aged services – were seen to be better in the cities. Transportation, commercial and retail services were, unsurprisingly, rated especially poorly in non-metropolitan places. The most satisfying adjustment after relocation was simply 'living a different lifestyle.' In sum, an overwhelming percentage of movers believed they were better off in their non-metropolitan communities than they were in Sydney or Adelaide and when asked what their likelihood was of their moving within the next 12 months to the city, only a handful suggested it was likely.

Moving to the city – Approximately half of the pensioners surveyed believed they were better off in Sydney or Adelaide. Their life cycle and circumstances required them to trade-off a better lifestyle, higher amenity and more affordable housing for the support of family and friends, access to health care, retail and commercial services and facilities. When asked what their likelihood was of moving back to non-metropolitan New South Wales or South Australia, within the next 12 months, most indicated that they were very unlikely to return.

Policy issues

Policy makers must assess if public interest issues arise from Age Pensioners' migration. If the overall welfare of migrating pensioners is not drastically reduced by moving, at least in the opinion of the movers themselves, is there an issue at all? This study has shown that pensioners, regardless of which direction they are moving, are moving to improve their wellbeing and tend to be satisfied as a result. If, however, there are significant numbers of seniors whose net wellbeing is reduced due to relocation then there may be an argument for government intervention—depending on the extent to which that migration is 'forced'.

This is a complex issue. Older retirees who move out of a city are likely to become 'churners', with many eventually moving back to the cities from where they came. Perhaps improved education of the 'sea-change' and 'tree-change' realities would help potential city-to-country movers make more informed choices and alter their expectations of services and facilities in non-metropolitan areas. In the meantime, they are separating themselves from family and friends in the city just when they are heading into the stage of the life cycle when they are most likely to need support. A problem for some poorer pensioners is the gentrification of some country areas. Other, pre-existing, low-income earners are often displaced by pensioners who have traded in their city homes, got a reasonable price for them in a sellers' market, and then moved to the non-metropolitan area, pushing up housing and other costs of living there. A further concern about the shift of pensioners out of the city means that the demographics in smaller, non-metropolitan areas are changing and often local government, state/territory and private welfare agencies are unable to meet the demands of the incoming, aged population. This is accentuated because there is also ageing **in situ** in country areas. Coastal and inland areas are feeling all of the positive and negative, social, environmental and economic aspects of in- and out-migration flows.

Improved social and commercial infrastructure and services would likely retain many potential country-to-city movers. To allow for more residential choice for pensioners, (and other low-income earners for that matter) appropriate services, infrastructure and social systems could be encouraged in both the cities and country areas. Housing affordability is also an issue, especially in the cities. The extent to which elderly movers to the city will in fact experience housing stress is uncertain. There may be other constraints because of recent declines in the provision of dual occupancy housing. Government support could be offered in the form of more affordable, suitable and better-located housing. For most seniors moving to the city, that is their last major inter-regional move.

As Australia's aged population grows the volume and impacts of their migrating between the city and non-metropolitan areas will likely intensify. Governments will have to decide if elderly migration and all its effects is a public policy issue.

Endnotes

1 Age Pensioner—is receiving an Age Pension and who meets required age and Australian residency status criteria.
Single parent—is receiving Parenting Payment (Single) and who is a sole parent (Australian resident) who has a qualifying child under 16 years of age.
Disabled – is receiving a Disability Support Pension and is a person with an assessed physical, intellectual or psychiatric impairment and who is unable to work for at least the next two years as a result of impairment and is unable to undertake educational or vocational training.
Unemployed—is receiving Newstart Allowance (over 21-years old), Youth Allowance (under 21-years old) or Mature Age Allowance (60+ years old but not on the Age Pension) and who is unemployed and capable of undertaking and available for employment.
For a more detailed description of the different categories of Centrelink payment types, refer to Centrelink 2003.

2 Sydney is defined as the area within the boundaries of Penrith, Campbelltown, Sutherland and Hornsby. Adelaide is defined as the area within the boundaries of Gawler, Mount Barker and Noarlunga. The Sydney and Adelaide metropolitan regions were specifically defined for purposes of this research. The definitions generally represent the outer limits of contiguous urban development within the respective cities. While they are not technical definitions, they do articulate the boundaries in order to give the questionnaire respondent more than an 'intuitive sense' of the city region. The non-metropolitan areas of New South Wales excluded Newcastle (north of Sydney) and Wollongong (south of Sydney) postcodes, which were viewed to be part of the Newcastle–Sydney–Wollongong metropolitan conurbation.

3 The two mirror-image social survey processes were conducted in 2001 and 2003. The samples were stratified to include individuals receiving an Age Pension, Parenting Payment (Single), Disability Support Pension, or an unemployment payment (Newstart Allowance and Youth Allowance, excluding full-time students, and Mature Age Allowance recipients). Operational definitions of these income support recipients are included in endnote 1.

Centrelink was able to identify (name and address) for each income support type, how many clients moved within a 12-month period from a non-metropolitan postcode to a metropolitan postcode and vice-versa. Although FaCS is responsible for payments made by Centrelink, it is Centrelink's database that provided the names and addresses of the survey sample. To ensure people's anonymity, FaCS directed staff at Centrelink to sample its client base (as noted above) and organise the mailing process to potential respondents with a contracted, bonded firm. Hence, the research team did not see the names or addresses of potential respondents. Participation in the survey process was completely voluntary. The completed, deidentified questionnaires were processed for entry into a computer statistical program SPSS for data manipulation. All questionnaires were destroyed at the completion of the research program as required for University of New South Wales' ethics clearance.

The questionnaires enquired about respondent demographics and personal details, residential location history, social and economic relocation considerations, housing indicators, and lifestyle and place satisfaction post-relocation. The data was processed by whole count tables, comparative frequencies, selected cross-tabulations and Pearson Chi-Square tests. The interpretive strategy for this paper focuses on comparative frequencies. All percentages within the paper have been rounded to the nearest whole per cent.

The research team believes that the survey results accurately depict the situations encountered by all income support recipient movers in New South Wales and South Australia. There is no reason to believe unsurveyed income support recipients would have circumstances that are significantly different from those who responded to the survey; nor is there reason to conjecture different relocation factors when deciding to move to non-metropolitan or city areas. This research surveyed a substantial percentage of all Age Pension movers in New South Wales and South Australia. Hence it is realistic to assume that the survey results are representative of income support recipient migrants. For a more detailed account of the survey methodology, refer to Marshall et al. (2003, 2004).

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Australia's fertility: a HILDA survey based analysis

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1. Introduction

Australia has experienced a sustained fertility decline over the past four decades, with the total fertility rate (TFR) having fallen to below replacement fertility level[2] from 1976. However, from 1998 onwards fertility has stabilised, with a TFR of about 1.75 children per woman.

The combined trends of low and declining fertility and mortality are increasing population ageing leading to public concerns and debate about the impact of demographic changes on society, the economy and the environment. Some commentators are concerned about the fiscal and labour force implications of an ageing population and see a need to stabilise or reverse the fertility trend. They propose policies and programs that support work and family life and encourage mothers' employment participation with the aim of increasing fertility and the size of the labour force (McDonald 2000, 2001a and 2001b; Barnes 2001; Stanton 2002; de Vaus 2002; Castles 2002; Weston & Parker 2002; Kippen 2003; Gilbert & van Voorhis 2003; Tesfaghiorghis 2004). Other commentators do not share their concerns, arguing that increased population growth would adversely affect environmental sustainability (Foran 2004; Hamilton 2002), that falling fertility would not affect future living standards (Guest & McDonald 2002a), and that growing old-age dependency ratios will have little negative impact on productivity growth (Day & Dowrick 2004).

Despite these counter arguments, the issues of fertility, family support, and balancing family and work responsibilities are important, as demonstrated by the May 2004 and 2005 Australian Government Budgets. The 2004 Budget increased assistance to families to help them with the costs of raising children and balance work and family responsibilities. The assistance to families with dependent children included an increase of $600 per child per year in Family Tax Benefit Part A, a universal Maternity Payment of $3,000 paid to mothers following the birth or adoption of a child, an additional 40,000 outside school hours child care places, and an extra 4,000 family day care places. The issue of raising fertility was given prominence by Costello (2004, p. 6) in his 2004 Budget press conference, when he encouraged people to have three children, one for your husband, one for your wife and one for your country.

Concerns about fertility are focused on period (cross-sectional) fertility, which is the fertility experience of different cohorts of women who gave birth in a particular year/period. Period fertility is usually measured by age-specific fertility rates and summarised by the period TFR[3]. The TFR[4] measures the number of children that a hypothetical/synthetic cohort of women would bear by the end of their reproductive life if they gave birth at each age according to the age-specific fertility rates prevailing in the particular year/period. Thus, the TFR is a period fertility measure of synthetic cohorts rather than any real cohorts of women on the assumption that the age-specific fertility rates would remain constant throughout the reproductive period.

This paper, however, examines cohort fertility, as measured by the completed fertility rate (CFR). The CFR is measured by the average number of children that a cohort of women has had over their reproductive lifetime. The mean number of children ever born (MCEB) to women aged less than 40 years represents incomplete fertility, while that for women aged 40 years and over is assumed to represent completed fertility. Other fertility measures used in this paper are the MCEB by age and parity progression ratios (PPRs)[5].

This paper aims to establish, through an analysis of the completed fertility trend, whether completed cohort fertility is below replacement, as is period fertility. This is important for the current debate on fertility, as the TFR is a misleading measure of current fertility when fertility is changing due to changes in the timing of childbirth (McDonald 1998; Kohler & Ortega 2004). The TFR is misleading if fertility is temporarily high when successive groups of women have their childbearing at younger and younger ages, as it happened in Australia in the 1950s and 1960s. It is temporarily low when successive groups of women have their children at increasingly older ages, as has been happening in Australia since the 1970s (McDonald 1998, p. 5), and as a result underestimates current fertility. Other aims of the paper are discussed below.

- Examine what is happening to completed cohort fertility and the extent of childlessness through analyses of CFRs, proportion of childless women, and PPRs according to birth cohorts.
- Estimate the expected CFR and the extent of childlessness for women who have yet to complete their reproduction by combining information on the number of children ever born and the number of additional children women intend to have by the age of women.

This study is based on primary analysis of the 2001 Household, Income and Labour Dynamics in Australia (HILDA) survey, Wave 1, Release 2.0. This unit record dataset collected information on number of children ever born. Given that the 1996 Census was the last to collect this information, the HILDA survey dataset, with its rich demographic and socioeconomic data, provides a good opportunity to analyse cohort fertility and childlessness trends. The HILDA survey also collected information on fertility intentions, which is used to estimate the expected CFR.

The HILDA survey asked the question 'How many children in total have you ever had? That is, ever (fathered/given birth to) or adopted?'. In comparison, the 1996 Census question for women aged 15 years and over was 'How many babies has she ever had?'. Although analysis of female fertility is conventionally based on biological children, it is not possible to do this using the HILDA survey data, as the question did not distinguish between adopted and biological children. However, for the lack of any alternative, this analysis assumes all children ever born are biological children of women in that cohort. It is worth noting that the number of adoptions was comparatively larger 30 years ago than it is today. The number of adopted children in Australia has declined from a peak of about 10,000 children in 1971–72 to 472 in 2002–03 and then rose to 502 in 2003–04 (AIHW 2004, p. 5).

2. Historical levels of cohort fertility

What does the Australian literature say about cohort fertility? Jain and McDonald (1997, pp. 35–6), using MCEB data from the 1976, 1981 and 1986 censuses and the 1992 Family survey, showed 'that recent generations have a lower number of children ever born by a given age than older generations'. This is also true for completed fertility. Kippen's (2003, pp. 2–3) analysis of completed fertility for cohorts born between 1924 and 1960 found that completed cohort fertility has declined from the high of 3.14 children for the 1932 cohort to 2.15 children for the 1960 cohort. This decline is due to cohort fertility falling at age 30 or younger and is associated with a delay in the first birth. Further Kippen's (2003, p. 4) analysis of the 1950, 1960 and 1970 birth cohorts found that successive birth cohorts had lower fertility at age 30 or younger and that the increasing fertility above 30 years of age does not compensate for the falls at younger ages.

What does the HILDA survey data say about cohort fertility? Figure 1 presents trends in completed cohort fertility for women aged 40 years and over in 2001. With respect to completed cohort fertility, there are a number of salient points.

- Looking at the historical trends, the CFR rose from slightly less than three children per woman for cohorts born in 1926 or earlier to a peak of about 3.2 children for cohorts born in 1927–31 and 1932–36. These were cohorts of women who entered their prime reproductive ages in the 1951–61 and 1956–66 periods, respectively, when the family size norm was three children.
- It is clear that the CFR has been declining for successive birth cohorts since the late 1930s, from the peak of 3.2 children for those born in 1927–36 to 2.2 children for those born in 1957–61 (see Table 1 and Figure 1).

Table 1 Women by number of children ever born (%), total women and MCEB according to age group and birth cohort—2001 HILDA survey

Age group	Birth cohort	Women by number of children ever born (%)					Total women[a]	MCEB[b]
		0	1	2	3	4+		
15–19	1982–86	97.6	2.2	0.1	0.1	0.0	681,683	0.03
20–24	1977–81	83.2	9.6	5.8	1.1	0.0	664,949	0.26
25–29	1972–76	58.1	18.8	13.6	5.3	0.3	702,557	0.81
30–34	1967–71	33.2	22.2	25.1	13.5	4.2	733,712	1.42
35–39	1962–66	15.9	13.4	36.1	22.0	6.0	723,660	2.10
40–44	1957–61	14.0	12.4	36.2	22.4	12.6	752,762	2.22
45–49	1952–56	10.7	14.2	36.3	25.2	15.0	685,847	2.26
50–54	1947–51	8.1	9.4	40.2	26.1	13.6	631,634	2.43
55–59	1942–46	6.6	6.7	37.2	27.5	16.2	477,363	2.71
60–64	1937–41	7.5	6.7	29.0	24.4	22.0	403,799	2.99
65–69	1932–36	5.4	8.4	20.9	27.7	37.6	342,991	3.17
70–74	1927–31	5.8	8.9	26.1	25.5	31.6	301,416	3.15
75–79	1922–26	8.4	10.4	30.0	20.3	30.9	301,624	2.82
80–84	1917–21	5.0	11.5	30.6	17.3	35.6	134,756	2.97
85–89[c]	1912–16	13.4	8.6	27.5	23.7	26.7	68,139	2.79
90–94[c]	1907–11	3.7	4.9	31.4	36.2	23.8	22,706	2.92
15+		30.9	11.6	25.7	17.3	14.5	7,629,601	1.85
15–64		35.3	12.1	25.6	16.1	10.9	6,457,967	1.63
15–49		43.8	13.4	22.3	13.0	7.5	4,945,171	1.32

Note:

(a) Weighted sample.

(b) MCEB to women in a given age group.

(c) Weighted results based on a sample of 62 women for the 85–89 years and 22 women for the 90–94 year age groups.

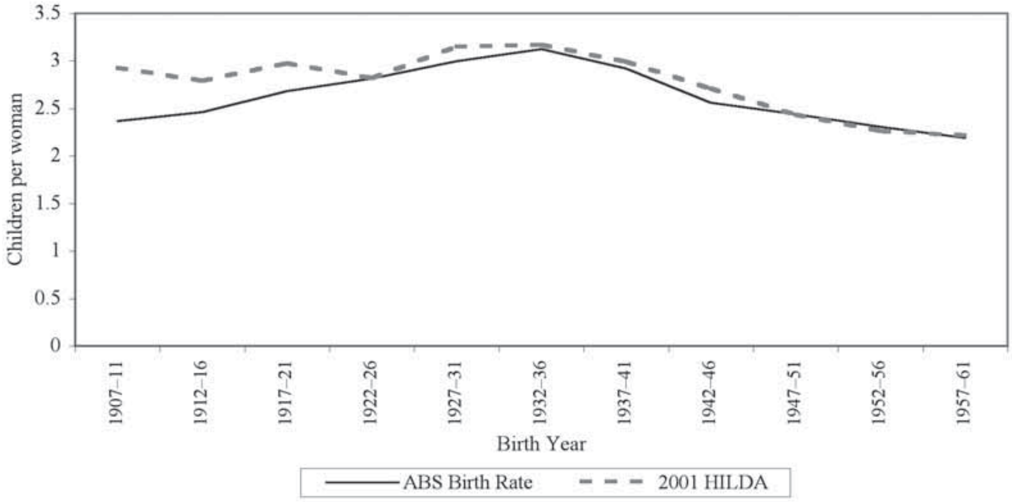
Source: Primary analysis of the 2001 HILDA survey Wave 1 dataset, Release 2.0.

These results, though population weighted, are subject to sampling and non-sampling errors. How do these estimates of completed cohort fertility compare with estimates from other independent sources? The author calculated CFR for birth cohorts as those in Table 1 from the Australian Bureau of Statistics (ABS) birth registration based cross-sectional series of age-specific fertility rates (ABS 2003) by summing their respective fertility rates at different age groups as the cohort moves through their reproductive life[6].

As shown in Figure 1, HILDA survey estimates were consistent with the ABS birth registration based estimates except for the oldest birth cohorts. The HILDA estimates were higher than the ABS birth registration based estimates for cohorts born before 1922. The HILDA survey estimates for the oldest cohorts were also much higher than that of Jain and McDonald (1997) estimates based on the 1982 Family survey.

The higher HILDA survey estimates for the oldest cohorts could be due to a higher survival of women with high cohort fertility and the omission from the HILDA survey of older women living in institutions who may have lower fertility than those living in private households. It could also be due to ABS data covering births that take place in Australia, whereas the HILDA survey data are about births of people who now live in Australia which include migrants. It appears likely that the fertility rates of those migrating in the post-World War II period (southern Europeans, and so on) would have been relatively high (and many of them would have been born in the 1920s or even earlier). In addition, it is worth noting that the estimates for the oldest cohorts born in 1916 or earlier were based on a small number of cases.

Figure 1 Comparison of historical trends in completed fertility by birth year of cohorts —2001 HILDA survey and ABS birth registration data



How does Australia's CFR trend compare with countries that have undergone substantial fertility change? Table 2 presents trends in CFR for birth cohorts by selected countries, including estimates for the youngest birth cohort (1965). Table 2 shows that completed fertility for all countries has declined from the highs of the 1935 birth cohort, with completed fertility falling to below replacement for Japan and West Germany starting with the 1940 birth cohort and for several countries starting with the 1950 birth cohort. Though Australia's completed fertility has been declining for cohorts born since 1935 it has remained above replacement level. The estimates for the 1965 birth cohort shows that Australia is among the few countries such as the United States, New Zealand, France, Ireland and Norway with replacement fertility or above.

Table 2 **Trends in completed fertility (MCEB per woman) in female birth cohorts by birth year – selected countries**

Country	Birth cohorts				
	1935	1940	1950	1960	1965
Australia[a]	3.25	2.99	2.49	2.18	2.14
Denmark	2.38	2.24	1.90	1.90	1.92
France	2.57	2.41	2.11	2.11	2.02
Ireland	3.52	3.23	3.04	2.41	2.18
West Germany	2.17	1.97	1.69	1.60	1.48
Netherlands	2.49	2.22	1.89	1.85	1.77
Norway	2.57	2.45	2.09	2.09	2.06
Sweden	2.14	2.05	2.00	2.04	1.98
England & Wales	2.41	2.35	2.06	1.97	1.89
Italy	2.28	2.14	1.89	1.66	1.49
Portugal	2.88	2.66	2.08	1.89	1.82
Canada	3.07	2.68	1.93	1.83	1.72
New Zealand	3.45	3.10	2.55	2.36	2.27
United States	3.14	2.73	2.03	2.02	2.07
Japan	2.02	1.99	2.02	1.82	–

Note:

(a) Australian figures calculated from the 2001 HILDA survey.

Source: Sardon, JP 2004, Table 4, p. 294.

Trends in the extent of childlessness

Table 1 provides data on the percentage of women with no children, that is, those with zero parity. The proportion with zero parity declined from almost all women aged 15–19 years to very low levels at older ages. The proportion of women aged 45–49 years that are childless usually measures the extent of childlessness in the population—in 2001 this was 10.7 per cent.

The data appear to suggest that childlessness has been increasing over time from around 5–6 per cent for cohorts born in the late 1920s to early 1930s to 11 per cent for those born in 1952–56 (Table 1). While the figures from the 2001 HILDA survey for the post-1926 cohorts are consistent with the ABS (1998, pp. 42–52) estimates, those for 1926 cohorts or earlier are the lower. The ABS estimates suggest that the extent of childlessness for the oldest cohorts were higher, which declined from around 30 per cent for cohorts born in the year of the Federation (1901) to about 9–10 per cent for cohorts born in the early to the late 1930s, before rising again. The lower 2001 HILDA survey results for cohorts born in 1926 or earlier are presumably due to sampling errors, misreporting of children ever born and the survey omission of women in non-private households, and also because the HILDA survey included migrants in these oldest cohorts that are less likely to be of zero parity.

However, despite the discrepancies for the oldest cohorts, both the 1996 Census (ABS 1998, pp. 51–2) and the 2001 HILDA survey estimate the extent of childlessness among women aged 45–49 years in 1996–2001 as 11 per cent. This paper returns to this issue after consideration of the estimates of the expected extent of childlessness for cohorts with incomplete fertility.

With respect to marital status, the extent of childlessness was 4.9 per cent among the legally married, 6.7 per cent among the separated, 9.2 per cent among the divorced/widowed, 13.4 per cent among the de facto, and 74.5 per cent among the never married compared to 10.7 per cent overall. The extent of childlessness in the population was largely due to the childlessness among the never married, as 46.7 per cent of the total childless women aged 45–49 years were never married women.

Comparison of mean number of children ever born

A comparison of the MCEB for different cohorts of women at comparable ages is useful for detecting changes in fertility over time (see Table 3) but there are often data quality problems. Comparisons of census or survey data on the MCEB are fraught with problems of missing data, that is, 'parity not stated'—women not reporting the number of children they had ever borne. Prior to 1996, a significant proportion of women did not state their parity in the Australian census (ABS 2001, pp. 27–8). However, in the 1996 Census, the proportion of women in the childbearing ages with 'parity not stated' was small, around 4 per cent (ABS 2001, p. 27; McDonald 1998, p. 7). The HILDA survey does not suffer from the problems of 'parity not stated'. The reporting of children ever born data in the HILDA survey is complete, because it used face-to-face interviews to obtain the information rather than self-completion questionnaires such as those used in the census.

Thus the MCEB data from both the 1996 Census and the 2001 HILDA survey data can be compared, as they do not suffer from 'parity not stated'. However, care needs to be taken in interpreting trends using the earlier censuses, as the ABS practice of excluding women with 'parity not stated' from the denominator (ABS 2001, pp. 27–8) may overestimate fertility, as women of zero parity may be overrepresented among women with 'parity not stated'.

Although the MCEB for different cohorts at comparable ages fell consistently between the 1981, 1986 and 1996 censuses (comparing cross-sectionally), they remained constant between the 1996 Census and the 2001 HILDA survey (see Table 3). A caveat is that we would expect that the MCEB for women aged 20–24 and 25–29 years to be lower (2001 HILDA survey) than in 1996 (census) because of delayed childbearing. However, young women without children are usually underrepresented in surveys, as is also the case in the HILDA survey (compared to ABS benchmark population data, these age groups were underrepresented in the HILDA survey). The 2001 National Health survey also collected the number of children ever born data, which are consistent with the 1996 Census and 2001 HILDA survey results (ABS 2001).

Table 3 Comparison of MCEB to women by age group—1981–1996 censuses and 2001 HILDA survey

Age group	1981 Census	1986 Census	1996 Census	2001 HILDA survey
20–24	0.46	0.37	0.28	0.26
25–29	1.29	1.10	0.79	0.81
30–34	2.03	1.85	1.54	1.42
35–39	2.45	2.24	2.02	2.10
40–44	2.80	2.49	2.20	2.22
45–49[(a)]		2.76	2.30	2.26

Note:

(a) Figures for the age group 45 — 49 are from the 1986 and 1996 are from the ABS household sample census files.

Source: Census figures (ABS 2001, Table 6.1).

McDonald (1998, pp. 7–9) interpreted the decline in the MCEB for the 25–29 and 30–34 age groups between the 1986 and 1996 Censuses as partly reflecting fertility postponement and partly reflecting an overall decline in fertility with each successive age cohort. A salient result of Table 2, however, is that once different cohorts of women reached the 35–39 years of age, they had already attained replacement level fertility.

Parity progression ratios

Analysis of PPRs for women who had completed their fertility is useful to understand whether the decline in cohort fertility is generally occurring at all parities in general and more so at specific parities. The declining trend in cohort fertility for successive cohorts is also supported by analysis of PPRs. Table 4 presents PPRs, which is the probability of progressing from already having a given number of children to at least having one more child. PPR is interpreted as follows. For example, PPR^1 is the probability of women of a given age group progressing to having a first birth. For example, of all women aged 45–49 years in 2001, 89 per cent of them had borne one or more children. PPR^4 is the probability of progressing to have at least four children, having already had three children. For example, 35 per cent of women aged 45–49 years progressed to have at least four children, having already had three children.

Table 4 Parity progression ratios (%) by age group—2001 HILDA survey

Age group	Total women	PPR_1	PPR_2	PPR_3	PPR_4
15–19	681,683	2.4	8.2	50.4	–
20–24	664,949	16.8	42.8	19.7	20.2
25–29	702,557	41.9	55.2	41.3	44.1
30–34	733,712	66.8	66.8	43.8	30.9
35–39	723,660	84.1	84.1	48.9	36.5
40–44	752,762	86.0	85.6	50.9	40.3
45–49	685,847	89.3	84.1	51.6	35.0
50–54	631,634	91.9	89.8	51.2	38.3
55–59	477,363	93.4	92.9	57.1	44.4
60–64	403,799	92.6	92.8	66.2	57.1
65–69	342,991	95.0	91.1	75.8	57.6
70–74	301,416	94.2	90.6	69.4	56.9
75+	527,225	92.0	88.9	63.5	60.2
Total	7,629,601	69.1	83.2	55.4	45.6

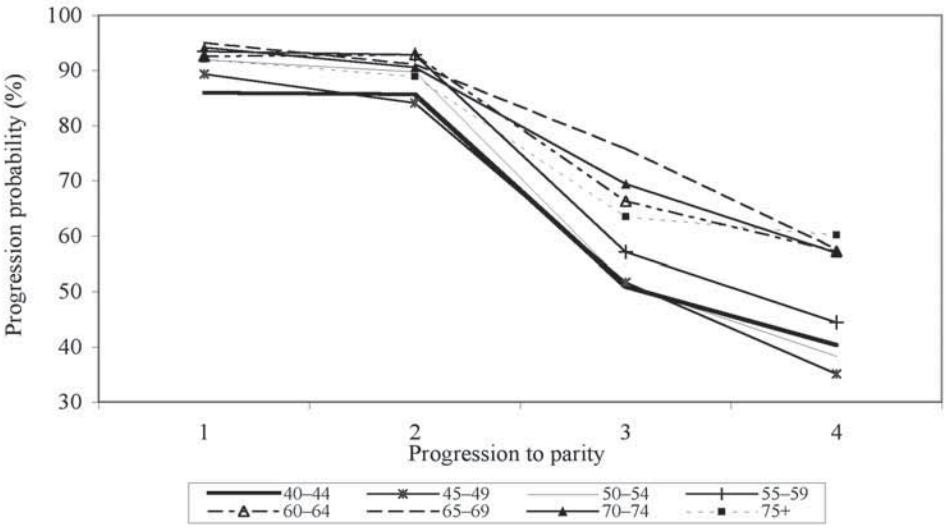
Source: Primary analysis of the 2001 HILDA survey Wave 1 dataset, Release 2.0.

The PPRs for women under 40 years of age are not analysed here, as these women have not yet completed their fertility. The ratios for these age groups are useful when compared to similar ratios relating to different periods for different cohorts at these age groups. Because these ratios are incomplete the analysis that follows focuses on PPRs for women who had completed their fertility, that is, those aged 40 years and over.

Figure 2 shows trends in PPRs for women aged 40 years and over in the 2001 HILDA survey. It is clear from Figure 2 that all PPRs have been declining over time. The results for specific parity progressions vary.

- The probability of having at least one child has declined from a high level of 92–95 per cent for cohorts aged 50 years and over to 86 per cent for those aged 40–44 years.
- The probability of having at least two children, having had one child, has declined from the peak of about 91–93 per cent for the 55–74 age groups to about 85 per cent for the younger cohorts. These results demonstrate that despite a decline, a very high proportion of younger cohorts still had a first birth (86 per cent) and a similarly high proportion of these women went on to have at least two children (85 per cent).
- The high fertility observed for the 60–74 age groups (3.0–3.2 children) is because a high proportion of them progressed to have large number of children. Two-thirds to three-quarters of women in these age groups who had two children went on to have at least three children compared with about half of women in the younger cohorts. Of women aged 60–74 years, 57 per cent of those who had three children went on to have at least four children compared with 35–40 per cent for women aged 40–49 years.
- As well, Figure 2 shows that while the magnitude of the fall in parity progressions between the older and younger cohorts is similar and relatively small at lower parities (1 and 2), it is much larger at higher parities.

Figure 2 Trends in parity progression ratios for women with completed fertility by age group—2001 HILDA survey



Expected completed fertility and lifetime childlessness

This analysis is based on two sets of fertility responses—women's responses to questions on number of children ever born and questions on whether they intend to have more children, and if 'yes', how many additional children they intend to have. The analysis is restricted to women with incomplete fertility, that is, 39 years and younger. While 1.7 per cent of women aged 40–44 years intend to have more children, this cohort is omitted from the analysis, as they are generally regarded as having completed their fertility. There were no women aged 45–49 years who intended to have more children, although we know that some in this age group do have children.

By combining information on number of children ever born and number of children women intend to have, according to age group of women, this analysis attempts to answer three questions.

- First, if women have the additional children they say they intend to have, will women who were aged 20–39 years in 2001 achieve replacement fertility?
- Second, what proportion of those women in each age group who currently had no children intend to have children?
- Third, what proportion of those currently childless by age group would end up being childless and what would be the extent of lifetime childlessness?

However, it should be recognised that fertility intentions may not be consistent with fertility behaviour. It is also possible that those women who said they intend not to have any children or any more children may decide to have a child or to have more children. McDonald (2001b, pp. 19–21) cautions to be wary about the value of attitudinal questions. Van de Kaa (1998, pp. 28–31) found that young women in most European countries have high expectations about the number of children they will have but suggested that their beliefs and expectations about numbers of children may become more realistic with age, as the expectations of older women are tempered by experience and knowledge. He also found that in North America and Europe ideal family sizes exceed observed fertility levels (van de Kaa, 1998).

Australian evidence from the Australian National University's Negotiating the Life Course survey showed that young women expect to have an average of more than two children but fall short of this expectation, and that the mismatch is higher among highly educated women (McDonald 1998, pp. 5–6).

McDonald (1998, p. 6) is of the view:

> …that achieved fertility will remain below early expected fertility as expectations are modified by the reality of institutional constraints. That is, if women are to achieve the number of children they would prefer to have, there must be changes in social institutions; it will not happen of its own accord.

There is also problem with the HILDA survey question on number of children intended. Only women who had scores of 6 to 10 on the question of 'how likely are you to have a child/more children in the future?' were then asked a follow-up question about the number of children they intended to have[7]. Thus those whose responses were five or lower were not asked this question.

Given these caveats, however, it is still worthwhile to consider what level of completed fertility would result for young women from combining their achieved fertility with intended fertility as a possible fertility outcome. Table 5 sets out the number of women who intend to have any children or more children, the mean number of intended children, the percentage of total women that intend to have any children or any more children, the expected mean number of children, and the expected cohort fertility classified according to women's age group and number of children ever had. The expected extent of childlessness for each age group is also given (last column). These figures are estimated on the assumption that those women who intend to have more children would achieve their intended number of children in their remaining reproductive life.

The expected CFR for women of a given age group is calculated as the MCEB by the group plus the mean number of additional children intended for the age group times the proportion of women in the age group who intended to have children (column 4 of Table 5). Using the same method, the estimated CFR is also calculated according to number of children ever born. The estimated extent of childlessness among women of a given age group is the ratio of the number of women currently with no children and who do not intend to have children to the total number of women in the age group.

Table 5 Women who intend to have more children, estimated CFR and childless, classified according to age group of women and number of children intended

Age group (birth year)/ mean number of children ever born	Women intending to have more children		Completed fertility rate	Childlessness (%)
	Per cent of total women	Mean number of children intended		
20–24 (1977–81)				
MCEB=0.26				
None	78.2	2.61	2.04	
One child	64.3	1.88	2.42	
Two or more children	40.7	1.30	2.77	
Total	**74.2**	**2.49**	**2.11**	**18.1**
25–29 (1972–76)				
MCEB=0.81				
None	72.5	2.35	1.70	
One child	66.1	1.48	1.98	
Two children	22.6	1.35	2.31	
Three or more children	14.0	1.33	3.83	
Total	**59.8**	**2.08**	**2.05**	**16.0**
30–34 (1967–71)				
MCEB=1.42				
None	54.8	2.13	1.17	
One child	54.4	1.36	1.74	
Two children	16.7	1.20	2.20	
Three or more children	13.8	1.36	3.68	
Total	**37.1**	**1.72**	**2.05**	**15.0**
35–39 (1962–66)				
MCEB=2.10				
None	21.0	1.76	0.37	
One child	32.6	1.24	1.40	
Two children	5.4	1.12	2.06	
Three or more children	6.6	1.14	3.60	
Total	**11.9**	**1.35**	**2.26**	**12.6**

Source: Primary analysis of the 2001 HILDA survey Wave 1 dataset, Release 2.0.

Table 5 suggests that all different age cohorts with incomplete fertility could, on average, achieve replacement fertility (see bolded figures in column 3). However, a caveat is needed. Women's intentions may not materialise as some may revise down their intentions due to life experiences and constraints, as they grow older. It is also possible that the materialisation of their intentions depends also on the intentions of their partners.

When the estimates of this paper are compared with the ABS projections[8] this paper's findings for older cohorts are comparable, while those for the youngest cohorts are higher than the ABS (2003, 2004). Even these ABS projection based estimates for younger cohorts are only moderately lower than replacement fertility and are higher than the current TFR of 1.75 children.

Table 5 also suggests that a majority of the women who intend to have more children are concentrated among the young cohorts and are predominantly those with no children or one child at the moment. Table 5 includes other salient results.

- The mean number of intended children is higher for women with no children or one child, and declines with age of women (column 2 of Table 5). For those without children, it declines from an average of 2.6 children for women aged 20–24 years to 2.4 for those aged 25–29 years, 2.1 for those aged 30–34 years and 1.8 for those aged 35–39 years. For those with one child, the mean number of intended children declines from 1.9 children for women aged 20–24 years to 1.2 for those aged 35–39 years.
- The extent of intended childlessness is expected to increase with successive younger cohorts. It increases from 13 per cent of those currently aged 35–39 years to 15 per cent of those aged 30–34 years, and 18 per cent of those aged 20–24 years.
- These estimates of expected lifetime childlessness, based on children ever born and intentions to have children, are lower than the ABS synthetic estimate of 24 per cent in 2000. The ABS (2001, p. 6), using 2000 midwives collection data, estimates[9] that 24 per cent of women aged 15 in 2000 would remain childless if they experienced the age-specific first-birth rates prevailing in 2000 throughout their reproductive life. This estimate is likely to be wrong because the assumption of constant age and birth-order specific rates could not hold as the timing of first birth is being delayed and because the ABS method does not exclude women who were not at-risk of first birth (because they had already borne a child) from the denominator (Merlo & Rowland 2000, pp. 26–7).

It is possible that these estimates of completed fertility may materialise, as the achieved fertility levels of the 1952–56, 1957–61 and 1962–66 birth cohorts in 2001 (see Table 1) are higher than Jain and McDonald (1997, p. 36) predicted. Jain and McDonald (1997, p. 36) concluded on the basis of the fertility achieved by the 1952–56 and 1958–62 birth cohorts in 1992 that these and later birth cohorts would probably not achieve replacement level fertility of 2.1 children in their lifetime. Jain and McDonald (1997, p. 45) argued that for Australian cohort fertility to rise or even to remain constant 'incentives and infrastructure support to parents will have to be provided such that they could combine childbearing and rearing with their already modified lifestyle and working arrangements'.

However, there has been a quite marked positive change in this area between 1991 and 2001. For instance, there were large increases in Commonwealth supported child care provisions in the

1990s. The number of Commonwealth supported child care services increased from 3,972 in 1991 to 10,050 in 2001, while the number of Commonwealth supported child care places increased from 168,276 to 500,034 over the same period (AIHW 2003, pp. 235–36). Long day care places more than doubled over the period from 118,762 to 264,649 (AIHW 2003).

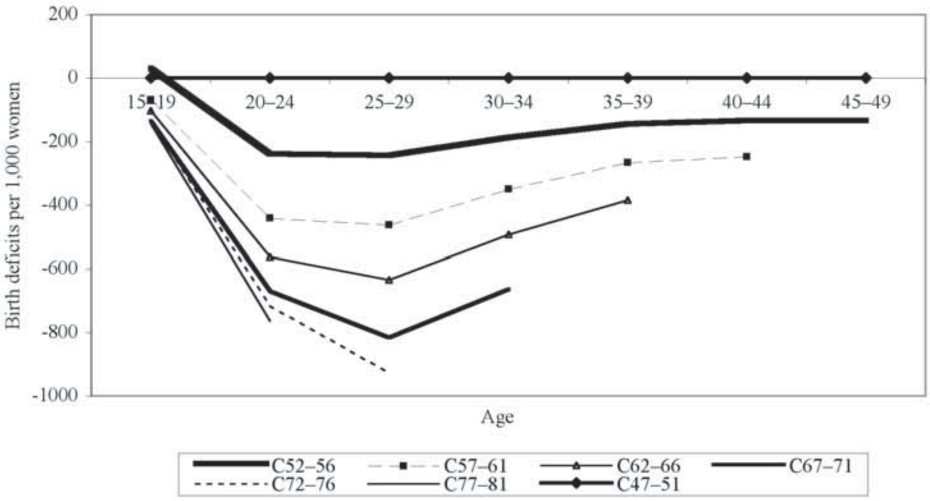
It is also possible that these estimates of completed fertility will be achieved if the Netherlands experience is any guide. In the Netherlands, a number of birth cohorts were asked on three occasions (1982, 1988 and 1993 surveys) about the number of children respondents ultimately expected to have and the number of children ever born. Women born in 1950–54 for instance were rather stable in their expectations, although as time went on their expectations were slightly reduced from 2.02 children in 1982 to 1.97 in 1993. However, their actual average number of children reported in 1993, 1.89 children, was moderately lower than their expectation in 1982 and 1993 (van de Kaa 1998, pp.28–9).

Another argument for the possibility of achieving these estimates of completed fertility is that countries that now have higher fertility, for example France and the Netherlands, have shown postponement of cohort fertility at younger ages, usually ages 20–24 and 25–29 years, followed by a strong catch up at later ages (Lesthaeghe & Surkyn 2004). The countries that have experienced strong catch up of cohort fertility at later ages are those that experienced early what Lesthaeghe and Surkyn (2004) called the 'second demographic transition'. The features of the transition include a marked degree of fertility postponement, efficient contraception, later marriage, rising cohabitation and extra-marital fertility, higher childlessness, stronger gender equality, higher labour force participation and earlier weakening of the breadwinner model. Australia is among the countries that have experienced these trends since the 1960s. Although one needs to follow cohort fertility over time to prove it, it is likely that Australia is also currently experiencing fertility postponement followed by a strong catch up at later ages.

The Australian evidence, derived from the ABS (2003) cross-sectional series of age-specific fertility rates, is examined in Figure 3 to see if what Lesthaeghe and Surkyn (2004) categorised as 'postponement with strong catch up' is also taking place in Australia. The reference cohort used by Lesthaeghe and Surkyn (2004) for comparisons of cohort fertility in France was the 1942–46 cohort (CFR=2.226) and the 1943–47 cohort (CFR=1.96) for the Netherlands. The 1942–46 Australian cohort had a much higher completed fertility rate (CFR=2.558) than similar birth cohorts in France and the Netherlands. Thus for the purpose of comparing Australian cohort fertility the 1947–51 cohort (CFR= 2.438, the zero horizontal line in Figure 3) is chosen. Cumulated cohort fertility rates by age group were calculated for each cohort from the ABS cross-sectional series of age-specific fertility rates. Then cumulated fertility deficits of cohorts were calculated by comparing with the 1947–51 cohort, as shown in Figure 3.

As is seen from Figure 3, there has been increasing fertility postponement by successive cohorts at ages younger than 30 years and catch up at older ages starting when cohorts turn 30–34 years. Though there is a need for a further follow up of cohort fertility, the Australian evidence appears to indicate that strong catch up is taking place.

Figure 3 Cumulated fertility deficits of cohorts compared to cohort of 1947–51 cohort (CFR=2.438)



Analysis of trends in cross-sectional fertility rates (number of births per 1,000 women) between 1983 and 2003 lends support to fertility postponement at younger ages and recuperation at older ages. Fertility rates have consistently fallen for women aged less than 30 years and increased for women aged 30 years and over, with peak fertility shifting from 25–29 to 30–34 years (ABS 2004, p. 8, 15). In 2002 women aged 30–34 and 35–39 years reattained the peak fertility rates achieved by comparable age groups in 1964 and 1965 (ABS 2004, p. 8).

3. Conclusion

The 2001 HILDA survey data-based estimates showed that Australia's CFR has declined from a peak of 3.2 children for cohorts born in 1927–36 to 2.2 children for cohorts born in 1957–61. The decline in completed cohort fertility slowed down for those born between 1952 and 1961. Despite Australia's TFR, measured by period fertility rates, falling to below replacement level, this paper's estimates of completed fertility of real cohorts show that Australia's CFR has not so far fallen to below replacement level. In contrast to Australia, the CFR in many western countries has fallen to below replacement.

It is worth noting that the decline of both the CFR and the period TFR have slowed down recently. It appears that even a small reversal of the TFR is possible.

This paper's estimates of CFRs for cohorts born since 1922 are consistent with that of the ABS birth registration based estimates. There has not been any change in the MCEB across comparable age groups between the 1996 Census and the 2001 HILDA survey, despite consistent declines from 1981 to 1996.

The analysis of PPRs for women who completed reproduction shows that the probability of progressing to having another child has been falling for all parities over time. However, the fall in PPRs over time has been greater at higher parities, particularly the probability of progressing from having two children to at least three children and from three to at least four children.

The extent of childlessness in the population, measured by the proportion of women aged 45–49 years that are childless, has remained at 11 per cent both in the 1996 Census and the 2001 HILDA survey. The analysis has shown that the extent of childlessness is increasing with successive younger cohorts.

What are the prospects for completed cohort fertility and lifetime childlessness? The estimation for young women, based on their fertility intentions and children ever born, indicate that they could all achieve replacement fertility level if they achieved their fertility intentions. This paper's estimates of the extent of lifetime childlessness for cohorts who have yet to complete their reproduction increases with successive younger cohorts from 13 per cent for those currently aged 35–39 years to 18 per cent for those aged 20–24 years.

In conclusion, it is hard to tell whether these results will materialise or not as the international and Australian evidence suggests that fertility behaviour falls short of intentions. The period fertility (TFR) is likely to stabilise at about its current level of 1.75 children per woman or even rise in the future, as fertility catch up takes place. It is difficult to know exactly at what level the TFR will settle.

Increasing Commonwealth supported child care places, increasing financial assistance to families with dependent children and the Government's policy focus on supporting families to balance family and work responsibilities may result in CFR of future cohorts remaining at near replacement fertility levels.

Endnotes

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2 Replacement fertility level is the number of births a woman would have during her reproductive life if she experiences at each age the age-specific fertility prevailing in a particular year or period and survives to the end of her reproductive life. For Australia, it is now 2.06 children per woman.

3 Age-specific fertility (birth) rate—number of births occurring to women of a specified age in a given year divided by the mid-year population of women that age, usually expressed as number of births per 1,000 women.

4 Total fertility rate is calculated by summing the age-specific fertility rates.

5 The MCEB to women of a given age group is calculated by dividing the total number of children ever born to women in a given age group by the total number of women in that age group. Parity progression ratios are the proportion of women who have at least some specified number of births who go on to have one more birth.

6 For example, the completed fertility for the 1927–31 birth cohort was calculated by summing their fertility rates when they were aged 15–19 in 1946 (0.0261), 20–24 in 1951 (0.1772), 25–29 in 1956 (0.203), 30–34 in 1961 (0.1311), 35–39 in 1966 (0.0506), 40–44 in 1971 (0.0113) and 45–49 in 1976 (0.0004). Summing fertility rates in the brackets above and multiplying by 5 results in completed fertility of 3.0 children per woman for the 1927–31 birth cohort.

7 Responses ranged between 0, 'definitely not likely', to 10, 'definitely likely'.

8 The author averaged the ABS single birth cohort estimates to be comparable with these estimates.

9 The ABS method is first to calculate the total first-birth rate by summing up the age-specific first birth rates and then calculating the proportion that would be ultimately childless by subtracting from one the proportion of women that would have a first birth.

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Stronger Families and Communities Strategy—Communities for Children

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1. Introduction

The Australian Government's Stronger Families and Communities Strategy (the strategy) aims to strengthen young children, their families and communities by investing in locally developed, whole-of-community projects that build resilience and the ability to deal with problems before they develop.

Originally funded in 2000[1], the strategy was a new approach in building community strength and capacity to bring about better outcomes for communities and their members. It recognised that effective support for communities required 'bottom-up' development and delivery, and that partnership approaches were critical to achieving sustainable outcomes. It also recognised that strong communities required strong leadership, skills and knowledge; partnerships between the public and private sectors; and a core of committed volunteers. (For more information about the approach of the strategy 2000–2004 see the appendix.)

Government policy has traditionally been determined at a national level and delivered in a national framework that has at times been unable to take into account local circumstances and needs. Under the strategy however, the Australian Government is breaking new and innovative ground in policy development and service delivery by providing a national framework focused on sustainability and capacity building which allows for individual approaches at the local level. This approach recognises that families and communities have differing needs and strengths that can be built on. It also recognises that effective support for families and communities requires partnerships and governance arrangements that involve all levels of government, the community sector, non-government organisations (NGOs) and business, and that the level of support will differ from community to community.

Under the strategy's Communities for Children initiative[2], the Australian Government articulates high-level policy outcomes and provides communities with the opportunity to implement this policy in flexible and innovative ways that best reflect their circumstances. It is an approach grounded in community development, although not based on a purist community development model. It is focused on building strong partnerships and collaborative action and making use of the evidence of what works in early intervention. The initiative has redefined the role of NGOs from that of traditional service delivery to facilitator or enabler.

2. Context for the Stronger Families and Communities Strategy

Families and communities are inter-related—strong communities provide the foundations for strong families and vice versa. For families to thrive and achieve their potential, they need communities that can provide them with services, infrastructure and opportunities for both social and economic participation. Similarly, communities can only be strong when they have members who have the capacity to be leaders, to build on the community's strengths and who have the interests of the community as a collective, at heart. In general, communities that are strong are characterised by a high degree of social cohesion combined with a low degree of social problems. Strong families care and support each other and nurture their children.

Rapidly changing economic and social environments over recent years have impacted adversely on family and community strength and the capacity to deal with issues. Some commentators have referred to a '...perceived decline in social cohesion which has placed stress on family and social functioning' (Zubrick et al. 2000). These economic and social changes can partly be attributed to the factors discussed below.

- Labour market changes, associated with growth in technology and service industries
- Population movements, associated with most Australians living in or moving to urban settings
- Changing family structures, characterised by increased family breakdown and less reliance on the extended family
- Decreasing engagement in community life.

Zubrick et al. (2000) note that rapid economic and social changes can manifest as serious problems in the developmental health and wellbeing of children, young people and families. This can include increased child abuse, early school failure, mental health problems, increased rates of teenage pregnancy, and relationship and family breakdown. The burden and cost of these problems are high and increase over time. Evidence suggests that the most effective way to address these problems is before they become entrenched, or to prevent them happening in the first place. In implementing the Stronger Families and Communities Strategy, the Australian Government has recognised that strong families and communities create an environment where the incidence of these problems is lessened and where they can be more effectively supported and resolved.

3. Stronger Families and Communities Strategy 2004–2008

The key focus of the $489.8 million strategy (2004–2008) is to positively impact on early childhood development. In seeking to achieve better outcomes for young children aged 0–5 and their families, the strategy is based on the principles of early intervention and prevention. It recognises that families and communities all have some degree of strength that can be built on, including the range of services available to support children and families, the existing infrastructure, or a strong volunteering base. The strategy builds on the principles of community engagement and ownership by giving communities a mandate to identify and resolve their own issues by facilitating partnerships between service providers, community members, NGOs, business and all levels of government.

The strategy's focus on early childhood development has been guided by research and consultation undertaken in the development of the Australian Government's National Agenda for Early Childhood. The agenda recognises that effective early childhood intervention is not only about supporting children in the early years, but also supporting their parents, neighbourhoods and the wider community.

4. National Agenda for Early Childhood

The National Agenda for Early Childhood responded to evidence that the seeds for poor outcomes like drug dependency, school failure, welfare dependency, poor health and criminal behaviour, are usually planted in a child's early years, and that adverse conditions in early childhood establish risks. These risks can be grouped as child characteristics (poor attachment or poor social skills); parents and parenting style (single parentage or lack of warmth or affection); family factors and life events (poverty or marital disharmony); and community factors (socioeconomic disadvantage or lack of support services). However, these risks can be offset by good antenatal and maternal nutrition, positive attention from parents, family harmony and participation in social networks (Commonwealth Taskforce on Child Development, Health and Wellbeing 2003).

Consultation with early childhood and other community experts resulted in the identification of the following key action areas for the national agenda—healthy families with young children; early learning and care; child-friendly communities; and supporting families and parenting. The strategy's Communities for Children initiative is already making a significant contribution to these key action areas and is considered by the Australian Government to be an important vehicle for delivering the National Agenda for Early Childhood.

5. Learning from the strategy 2000–2004

The strategy over 2004–2008 has been guided by learnings from the strategy 2000–2004. The Royal Melbourne Institute of Technology (RMIT), in a report to the Australian Government Department of Family and Community Services (FaCS), noted that overall the strategy 2000–2004 showed the importance of:

- targeting resources to areas of particular disadvantage
- building on existing relationships and community trust in auspice organisations
- supporting projects with sufficient critical mass and duration
- providing support for project planning and implementation, including accessing and using evidence about good practice
- flexible and responsive planning and project management to take account of unexpected opportunities or difficulties (RMIT 2004a).

According to RMIT:

> … projects that demonstrated these characteristics were more able to achieve significant outcomes for families and children through building effective partnerships and networks among local service providers, striving for service integration and coordination and working at the same time with individuals, families and communities (RMIT 2004a).

These key themes are strongly reflected in the strategy 2004–2008.

The strategy continues to target disadvantage, recognising that disadvantaged families and communities have most to benefit from strategy investments. Disadvantaged communities have been identified on the basis of their ratings against Australian Bureau of Statistics' socio-economic indexes for areas (SEIFA), consultations with state and territory governments and local level data including the number of young children, number of families receiving Family Tax Benefit, unemployment rates and levels of income. Sites selected under the strategy's Communities for Children initiative also have an existing level of capacity that can be further built on, such as infrastructure, services and strong community networks.

This approach reflects the Australian Government's interest in 'place-based' responses to policy development, program management and service delivery. A place-based response considers local issues, circumstances and characteristics and tailors interventions to suit them. This approach has been adopted by the strategy because it uses community expertise and ensures local ownership and bottom-up responses. It also recognises that a whole-of-community approach provides stronger and more sustainable outcomes for children and families and that children need to be viewed in the context of their family and broader community. Strong international evidence also indicates that intensive, place-based approaches work well—a key example is the Sure Start program in the United Kingdom.

The strategy also recognises the need to support projects with critical mass and duration, as effective interventions take time, require follow-up and need sufficient resources to achieve positive outcomes. Sustainability is also a key component of the strategy and organisations are required to demonstrate sustainability in outcomes, processes and, where possible, funding.

6. Communities for Children

The strategy's Communities for Children initiative aims to assist children aged 0–5 to have the best possible start in life and to influence the contexts within which they live—their family and community, and the broader social, economic and cultural environments. The initiative provides funding of $142.4 million over four years to up to 45 disadvantaged communities around Australia. It is a new and innovative model that funds NGOs to facilitate a strategic and sustainable approach to early childhood development, in consultation with community stakeholders. NGOs are selected in a competitive tender process and work in collaboration with the community to develop and implement a strategic plan tailored to community needs.

While the Government sets the broad policy framework for what NGOs are expected to achieve, the approaches for reaching Communities for Children outcomes are at the discretion of the NGO, in consultation with the local community. In what has traditionally been a government role, NGOs are responsible for identifying local early childhood issues and the strengths in the community to address these issues. They then work with community stakeholders to develop and implement local solutions. The Government, for example, has identified healthy young families with improved ante and postnatal health and improved child physical health and development as key outcomes for Communities for Children. The NGO develops strategies and approaches, based on evidence, to meet the identified outcomes.

Communities for Children is about solving problems and developing policy at the local level, undertaken within a broad national framework. This means that policy advice to the Government is informed by local experts who are best placed to understand local issues for families with young children, know the existing strengths of the community that can be built on, and can facilitate local partnerships between service providers, government and business to address issues.

Traditionally, FaCS has managed funding agreements with individual service providers. Under Communities for Children, NGOs undertake this role on behalf of the Australian Government. This leaves FaCS free to undertake the broader policy role, including the development of policy frameworks; providing policy advice; undertaking an advisory role; and maintaining ongoing liaison with NGOs. FaCS also approves the approaches identified by NGOs in their strategic plans and monitors progress through quarterly reports. FaCS takes a new advisory and monitoring role in the Communities for Children initiative, rather than directly managing the projects undertaken in each community. This also provides the non-government sector with the opportunity to draw on and further develop its expertise.

During the implementation of the initial seven sites, a strong, collaborative, iterative relationship formed between the seven NGOs and FaCS to develop micro-policy and processes that will guide future implementations.

Social coalition

Another innovative feature and key component of the first strategy was to engage a social coalition to provide the Australian Government with strategic and operational advice on the implementation of the strategy. The Stronger Families and Communities Partnership (SFC Partnership), consisting of leaders from the community, business and research sectors, continues to provide high level oversight of all elements of the strategy and act as an advisory body to the Minister for Family and Community Services. They advise the minister and FaCS on emerging issues and needs, gaps in service delivery and improvements that could be made to the strategy.

Our experience to this point is that partnership members are committed and passionate about the strategy and are bringing expertise to partnership discussions. This contributes significantly to the capacity of the strategy to deliver positive outcomes for families and communities.

Risk management

There are risks associated with any new model of service delivery. Under Communities for Children, identified risks have been offset by a range of policy and administrative processes.

While NGOs might have many years of experience in service delivery, they might be less experienced in community development and undertaking the role of enabler, broker and networker. They might be less experienced in administering a program of this size and covering such a broad range of early childhood interventions. They might be unaccustomed to responding to the shorter lead times required to ensure funding is available to communities as soon as possible.

NGOs have been selected on the basis of a range of criteria including their experience in delivering large and complex programs; their ability to draw on existing organisational infrastructure and resources; their connections to the community and to community experts; and their understanding of early childhood issues and interventions, including a strong knowledge of early childhood evidence. This puts them in a strong position to deliver a program of the size and scope of Communities for Children.

As well, the innovative approach of Communities for Children means that it is evolving in a dynamic policy–program environment. FaCS, NGOs and experts on the SFC Partnership work together to address issues as they arise through a range of fora including face-to-face meetings, teleconferences, workshops, policy circulars and access to researchers and academics through the Australian Research Alliance for Children and Youth.

Another identified risk is that strategy projects may duplicate or overlap services already funded by state, territory or local governments and that the Australian Government might be perceived as ‘taking over’ the traditional responsibilities of these other levels of government.

Communities for Children funding is not intended to duplicate or replace existing state, territory or local government services. Rather, Communities for Children services are in addition to, or an expansion of, services that currently exist. State and territory governments have been involved in the Communities for Children site selection process and consulted in the development of strategic plans[3]. The service mapping component of the strategic plans also helps to minimise the possibility of duplicating services. The experience so far is that NGOs have made strong links with state, territory and local governments around the initiative, particularly around opportunities to build on existing community strengths by connecting with existing services and identifying community needs and service gaps. In addition, FaCS is continuing consultations with state and territory governments during 2005 to discuss further opportunities for collaborative action around early childhood issues.

To further ensure an integrated approach to achieving better outcomes for young children and their families, community services Ministers at the state/territory and national levels have agreed to collaborate on a national approach to providing children's services. This will be effected through consultations between senior officials from both jurisdictions over 2005.

Occasionally projects do not function as intended; the reasons can range from problems in recruiting appropriate staff, difficulties in finding office space or simply that the project does not attain the outcomes it set out to achieve. At the same time, some projects have unintended outcomes for participants and/or the organisation. Communities for Children addresses this issue by encouraging flexible and responsive planning and project management to take account of unexpected opportunities or difficulties. Strategic plans are required to identify potential risks around proposed activities and outline strategies to address these risks. Strategic plans can also include 'contingency funding' to ensure that money is available to respond to unintended problems or developing needs in the community. Funding NGOs supports this approach, as they are generally more likely to have the experience, capacity and resources to be flexible and responsive in their planning and project management.

Progress to date

Since its announcement in April 2004, significant progress has been made in implementing the Communities for Children initiative. NGOs have been selected to implement early childhood projects in 33 sites across Australia. The sites are in urban, regional and remote areas and are guaranteed funding for four years. A tender process is currently under way to select appropriate NGOs for an additional 10 sites.

The NGOs already selected have consulted extensively with local service providers, other levels of governments and families within their communities. They have mapped existing services, identified gaps, implemented administrative and governance structures, and are in the process of implementing and developing strategic plans.

7. Conclusion

This paper has provided an outline of the Stronger Families and Communities Strategy and its new and innovative approach to Government policy development and service delivery. It has also demonstrated how learnings from the strategy 2000–2004 have influenced the further development of the strategy to the early childhood focused strategy announced in April 2004.

The strategy has broken new ground in policy development and implementation by articulating high-level outcomes in a framework focused on sustainability and capacity building. The strategy is also covering new ground in innovative service delivery by providing a national framework for services and working with NGOs to define specific outcomes for specific communities.

The strategy is continuing to evolve in a dynamic, policy–program environment with input from a range of stakeholders, most significantly NGOs. NGOs are a critical component of the strategy because it is in partnership with these organisations that the Australian Government is driving its early childhood agenda. It has provided NGOs with a new leadership role as community facilitators and implemented governance arrangements and consultation mechanisms that involve three levels of government, and the business and community sectors.

The strategy is a new experience for NGOs—instead of receiving government funding for providing services, they are undertaking the roles of facilitators, enablers, brokers and networkers to develop and deliver whole-of-community approaches to early childhood issues. They are administering funds to other agencies on behalf of the Australian Government. It is a new and innovative approach that recognises that NGOs are best placed to understand local issues for families with young children. They know the environment and the existing strengths of the community that can be built on and have the capacity and networks to facilitate local partnerships between service providers, different levels of government, and business to address local issues.

The Stronger Families and Communities Strategy 2004–2008 is still in its infancy and new issues are continuing to emerge. These issues are being responded to in genuinely collaborative ways between different areas of FaCS and in consultation with NGOs and the SFC Partnership. Because of these factors, and its innovative approach to service delivery, the Stronger Families and Communities Strategy is emerging as a new model for public policy development and delivery at a national level. It is a model that has attracted overseas interest through the Organisation for Economic Co-operation and Development (Patterson & Andrews 2005).

Appendix: Stronger Families and Communities Strategy 2000–2004

The Stronger Families and Communities Strategy 2000–2004 moved away from the traditional government approach of developing and implementing national services for families and communities by funding locally developed projects that aimed to help build family and community capacity to deal with challenges and take advantage of opportunities that arose. It supported an early intervention and prevention approach, recognising the need to help families and communities deal with issues before they became serious problems. It encouraged building partnerships between all levels of government, community organisations, individuals and business.

The evidence base

The strategy was based on national and international evidence about interventions and approaches that make families and communities strong. Evidence for families is presented below.

- Family strength, parenting effectiveness and child outcomes are strongly related.
- Families have strengths that can be built on.
- Risk factors (such as low birth weight, single parenting, family instability and socioeconomic disadvantage) and protective factors (such as breastfeeding, competent parenting, positive family relationships and community participation) affect child outcomes.
- The quality of parental relationships has a signifi cant impact on family functioning and wellbeing.
- Community strength and family's social connectedness impact on family functioning.
- Interventions can be effective, with the most effective often occurring at points of transition like having a child, starting school, and so on, involving parents as well as children.
- For lasting effect, interventions need to be followed up (Centre for Community Child Health 2000; FaCS 2001; Halford 2000; Russell & Bowman 2000).

Evidence for communities is presented below.

- Informed local leadership has a central role in bringing together diverse interests around a common issue.
- There is no single model or design for strengthening communities so the best approaches are those which arise from local circumstances or are tailored to suit them.
- Partnerships are critical to community responsiveness and sustainability.
- Involving local communities in policy and program design and implementation fosters community engagement and ownership.
- Building community strength and capacity requires long-term effort and commitment (Burchell 1992; Funnell 1998; Herbert & Smith 1997; Kingsley et al. 1997; McGregor & MacLennan 1992; National Community Development Policy Analysis Network 1999; Putnam 1996, 1998).

Strategy principles

The strategy was a departure from the traditional government approach of top-down service delivery. It focused on families and communities, fostered partnerships, and built on the strength and capacity of communities, rather than using a one-size-fits-all approach.

The strategy was underpinned by principles that reflected the evidence of what strengthened families and communities. These principles influenced how projects were developed, implemented and managed by:

- working together in partnerships
- encouraging a preventative and early intervention approach
- supporting people through life transitions
- developing better integrated and coordinated services
- developing local solutions to local problems
- building capacity
- using the evidence and looking to the future
- making the investment count.

Based on these principles, the strategy funded community organisations to develop and deliver projects under a range of themes discussed below.

- **Leadership** opportunities were provided by developing skills, opportunities and support for existing and future community leaders, including young people and non-traditional leaders.

  The Great Mates Mentoring Program conducted in the Hunter Valley and Mount Druitt matched young people with an adult role model from the sporting, media, business or general community. A committee was established in each location to help develop local support and networks, assist with activities and link young people with their mentors. In total, 257 young people were linked with mentors and involved in activities ranging from sports to developing communication skills. Mentors helped young people stay at school, make better educational choices, decide on future careers, find meaningful employment, and address personal development issues.

- **Local solutions** were provided by helping communities respond to local issues and increasing their ability to deal with issues that might arise in the future.

  The Hunter Housing Maintenance Employment Training Project provided accredited training to unemployed public housing tenants on income support. It aimed to provide the most disadvantaged with the skills to take advantage of employment opportunities. Training focused on areas with identified skill shortages, establishing a business, and mentoring. Participants established a community based employment cooperative that seeks community employment opportunities and tendered for maintenance contracts with the New South Wales Department of Housing.

- The development of **skilled volunteers** to support their communities and build individual capacities.

A series of pilot projects trained over 1,600 volunteers in 109 locations. The Creative Volunteering Project provided 137 workshops to 1,528 people across Australia. A National Volunteer Skills Centre, which opened in December 2002, develops and provides training resources for volunteers and managers.

- **Coordinated and integrated service delivery** which focused on early childhood and effective parenting.

  The Children and Families Everywhere Project provided flexible services to families near the Enfield Primary School in Adelaide. Services included playgroups, a wide range of short-term information and education programs for families, a crèche with part-time workers employed through the Jobs Education and Training scheme, a toy library and an Indigenous early literacy worker. The project was a collaboration between FaCS, the South Australian Departments of Education and Children's Services and Child and Youth Health, Enfield Primary School and local community organisations.

- **Early intervention** was provided by supporting families through activities such as playgroups, parenting support, relationship education and family counselling.

  The Ramingining Women's Centre Project in a remote community in Arnhem Land, helped build community capacity by increasing resources and opportunities for local women, encouraging the development of practical parenting skills and increasing social and cultural engagement by employing a coordinator for the community women's centre. A range of programs were delivered through the centre including a crèche, meals on wheels, education for young mothers around nutrition and hygiene, and a Strong Women Strong Babies program.

The strategy also funded **national projects** that were innovative programs designed to contribute to the Australian evidence about what strengthened families and communities.

> The Family Income Management Project in Cape York aimed to test strategies that would contribute to the financial literacy of Indigenous people in isolated communities. It worked with local family, household or clan groups to stabilise financial management issues and raise living standards by building on the traditional practice of resource sharing and the cultural value accorded to family obligations. Improved financial management enabled the purchase of beds, mattresses, fridges, freezers and washing machines, which, in conjunction with the establishment of nutrition and pharmacy accounts, are contributing to improved health.

Achievements

The strategy provided funding to 643 projects across Australia, including early childhood and parenting programs, relationship skills, mentoring and leadership, community building and volunteering. Projects were undertaken in urban and regional areas and in remote communities. While the projects varied in size, range of activities and achievements, they were all focused on building the strength and capacity of families and communities at risk of social, economic or geographic isolation and drew on evidence about the factors that made families and communities stronger (RMIT 2004b).

Though some projects have yet to finish and others are still to provide final reports, achievements and learnings from the strategy are already evident. The RMIT (2004b), as the lead agency of the evaluation consortium, has noted that overall the projects have been very successful. A summary of available data from 225 projects is provided below.

- Ninety-two per cent reported having achieved most of what they had expected through the project, or more; 34 per cent reported exceeding their expectations.
- Seventy per cent reported they had successfully contributed to enhanced skills, confidence and capacity for action among participating individuals, families or communities.
- Sixty-five per cent reported that they had assisted individuals, families and communities to apply capacity that they already had (strengths-based approach), or that they had developed through participation in the project.
- Fifty-two per cent reported they had helped individuals, families and communities to become more adaptable and resilient, more trusting of each other and more willing to cooperate.
- Seventy-one per cent of reported that as a result of strategy funding, their organisation had a better ability to meet the needs of the target population.
- Sixty per cent of organisations improved their ability to find and work with partner organisations.

The Community Foundation (2001) notes that in a sustainable community, families exercise responsibility for themselves, neighbours share a commitment to their common home, citizens influence events affecting the quality of their lives, and the community as a whole values and cares for its children. Ensuring the sustainability of outcomes from projects has been a key feature of the strategy. The strategy has provided ongoing outcomes for participants, including increased knowledge and skills, and improvements in emotional wellbeing and mental health, material wellbeing and productivity. It has also increased community involvement and economic participation. This means that individuals, families and communities will continue to benefit from their experiences with the strategy when the project has ended.

Sustainability can also include the continuation of a project after strategy funding has ceased. RMIT (2004b) report that 77 per cent of projects thought it likely the project would continue in some form after funding ceased. This suggests that projects have been strongly supported in the local community, are clearly meeting an identified need and have accessed funding from other sources to continue to address this need. As well, many projects, especially early intervention parenting and family relationship support projects, were expecting to expand to work with new target groups or communities.

The strategy has also provided sustained outcomes for community organisations. This can range from being better placed to meet the needs of clients; an improved ability to source and work collaboratively with partner organisations; improved systems and processes; and improved infrastructure and facilities.

A range of resources produced through the strategy will continue to be used by families, communities and community organisations. These include videos, training guides, manuals, websites and booklets—for example, 20,000 copies of a comic directed to young Indigenous people in rural New South Wales suffering depression was distributed to 1,625 organisations.

In addition to the external evaluation conducted by RMIT, an internal review of the strategy was conducted in 2003. The review found there was strong evidence that the strategy was contributing to the overarching goal of strengthening families and communities. It found the strategy had contributed significantly to building partnerships and networks—a key factor in family and community strengthening—and that the strategy was helping to bring about important changes in increasing participation and trust for families and communities (FaCS 2003).

Learnings for FaCS

In terms of developing and implementing a program of the size and scope of the strategy, there have been a number of learnings for FaCS that have influenced policy and program design and the implementation of the strategy 2004–2008.

While the internal review of the strategy in 2003 found that overall the strategy's community based early intervention approach to strengthening families and communities yielded beneficial results, some areas could be improved.

- The focus of the program covered a broad range of family and community strengthening approaches. While this flexibility provided a range of funding opportunities, it created difficulties in the application process for organisations and administration for FaCS. The review recommended that the focus of the strategy should be sharpened.
- The 'outcomes hierarchy' and performance information requirements, while reflecting the flexibility of the strategy, were consequently quite complex. The review recommended that a future strategy should have simple and specific performance indicators, which are adequately tested among those responsible for generating reports and agreements.
- While the strategy generally complemented other FaCS programs, the review found there was scope to explore further synergies with these programs and to more clearly articulate the relationship between the strategy and, in particular, family relationships programs.
- The strategy had a complex application process and a lengthy approval process, which was exacerbated by the longer than expected time required to work with disadvantaged communities. The review recommended that a future strategy should use a simpler process with more certainty for applicants about when funding decisions could be expected.
- While the social coalition[4] played a significant and valuable role in implementing the strategy and advising on individual project applications, a more strategic role would be appropriate (FaCS 2003).

These learnings were critical in influencing the design of the strategy for 2004–2008. The final report from the evaluation of the strategy 2000–2004 is due in August 2005.

Endnotes

1 See appendix for a detailed description of the strategy from 2000–2004, and how learnings from this period informed the development and delivery of the current strategy.

2 While the Volunteer Small Equipment Grants program, Choice and Flexibility in Child Care, Longitudinal Study of Australian Children, Local Answers program and Invest to Grow are also funded under the strategy, they are not discussed in this paper. Information on these initiatives can be found on the Australian Government Department of Families, Community Services and Indigenous Affairs website at <www.facsia.gov.au>.

3 The strategic plan is the document that sets out the long-term goals for the community over the life of the initiative. This includes broad strategies for achieving outcomes within the community and the amount of funding required. The community strategic plan is the overarching document that provides a broad framework for the more specific service delivery plan.

4 In this instance 'social coalition' includes the SFC Partnership and State and Territory Advisory Groups (STAGs). There was a STAG in each state and territory that provided advice to the Minister on individual project applications.

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Interagency collaboration to support young people and build community partnerships: findings from an evaluation of the Innovative and Collaborative Youth Servicing pilots and related evaluations

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1. Introduction

In recent years, the Australian Government has become increasingly committed to developing a more collaborative or 'whole-of-government' approach to both the formulation of policy and the delivery of services.

This paper aims to contribute to the broader discussion of service delivery collaboration by describing key findings of a recent evaluation of the Innovative and Collaborative Youth Servicing (ICYS) pilots conducted by the Australian Government Department of Family and Community Services (FaCS). Where appropriate, the ICYS evaluation findings have been compared with related evaluations of the Career and Transition (CAT) pilots and the Partnership Outreach Education Model (POEM) pilots conducted by the Australian Government Department of Education, Science and Training (DEST), as well as research undertaken by the Social Policy Research Centre (SPRC) at the University of New South Wales.

2. Taking a collaborative and 'whole-of-government' approach

The *Connecting Government: Whole of government responses to Australia's priority challenges* report notes that:

> ... a vital issue for the Australian Public Service (APS) in delivering quality advice, programs and services is ensuring work is effective across organisational boundaries. Making whole of government approaches work better for ministers and government is now a key priority for the APS. There is a need to achieve more effective policy coordination and more timely and effective implementation

> of government policy decisions … Ministers and government expect the APS to work across organisational boundaries to develop well informed, comprehensive policy advice and implement government policies in an integrated way (Australian Public Service Commission 2004, p. 2)

The *Connecting Government* report identifies key drivers for a whole-of-government approach, including rising community expectations for easier access to government by integrating service delivery (Australian Public Service Commission 2004).

There has also been interest in service delivery collaboration in overseas countries. FaCS commissioned the SPRC to undertake research on overseas collaborative initiatives to improve service outcomes for young people (Rawsthorne & Eardley 2004). The objectives of the SPRC research are outlined below.

- Document international policy and service delivery initiatives aimed at facilitating collaboration and integration, with a particular focus on learnings from the United States, the United Kingdom and Canada.
- Document the success or otherwise of these initiatives.
- Discuss and test the applicability of these initiatives to the Australian context through focus groups with service providers in Sydney, Melbourne and Dubbo.

While the SPRC research documented different types of overseas collaborative approaches, its overall conclusion was that only tentative steps have been made to date in the provision of comprehensive, coordinated services to young people (Rawsthorne & Eardley 2004). The United Kingdom, through its focus on partnerships and regeneration, currently leads the way on collaboration, but even there youth needs appear to be of secondary concern.

In Australia, the need for a more collaborative, whole-of-government approach has specifically been identified in the context of services supporting young people, many of which are non-government organisations funded by government departments. The 2001 Prime Minister's Youth Pathways Action Plan Taskforce report, *Footprints to the Future,* indicated that government agencies needed to more effectively link services for young people and ensure that young people are able to access the help that they need (Prime Minister's Youth Pathways Action Plan Taskforce 2001).

In its examination of youth transition services, the *Footprints to the Future* report noted that there were more than 500 different programs in Australia. The report commented that services were often 'so fragmented that conflicting objectives are being pursued, resources are being wasted and … many young people are receiving only partial support and some are slipping through the cracks altogether' (Prime Minister's Youth Pathways Action Plan Taskforce 2001, p. 8).

3. Innovative and Collaborative Youth Servicing pilots

As part of the Australian Government's response to the *Footprints to the Future* report, the Department of Education, Training and Youth Affairs developed a youth initiative called the ICYS pilot projects. The ICYS initiative was transferred to FaCS following the 2001 federal election.

The ICYS pilot projects were intended to promote more effective collaboration among service providers at the local community level, and encourage ownership and accountability in communities for initiatives designed to assist young people between the ages of 12 and 25. Twenty-six projects of 12-months duration were developed under the ICYS initiative. This was in addition to four prototype projects of two-years duration called 'Collaborative Youth Services trials', which had already been developed prior to the *Footprints to the Future* report.

The ICYS projects, which were finalised in 2004, aimed to test avenues of cooperation between Australian, state/territory and local government policies and programs and community initiatives to deliver more effective services and improved outcomes for young people. Initiatives ranged from testing models of collaborative case management and 'one-stop shop' service delivery to needs analyses, client profiling and building community development networks. In some cases, where projects were conducted on a regional basis, such as the Wide Bay Burnett Collaborative Youth Services trial in Queensland, sub-regional projects were developed responding to local community needs within the region.

ICYS projects were selected for funding based on evidence of local community-level partnerships/coalitions, or capacity to develop such partnerships, as well as on the best balance against the following criteria.

- Evidence of the need or rationale for the project, including evidence on target group needs.
- Evidence that the project was innovative and involved collaboration to develop the community level partnerships referred to above.
- Scope for the process, service delivery strategies and outcomes to be used in other contexts and settings.
- Scope for the monitoring and reporting approaches adopted by funding recipients to assess the effectiveness of their project and to report these results to the Australian Government, to be used in other contexts and settings.
- Evidence of the applicant's understanding of the issues and service delivery techniques involved.
- Demonstrated ability of the applicant(s) to manage the project in relation to meeting specified deadlines, reporting arrangements, liaison with appropriate individuals and production of agreed outcomes.
- Evidence of the ability to undertake appropriate learning strategies and to review processes in the light of those learnings.
- Whether the proposed project represented value for money (Department of Education, Training and Youth Affairs 2001).

A summary description of individual ICYS projects is provided in the appendix to this paper. ICYS projects were conducted in all states and territories except the Australian Capital Territory.

4. Evaluation of the Innovative and Collaborative Youth Servicing initiative

ARTD Pty Ltd consultants were commissioned by FaCS to conduct an evaluation of both the ICYS projects and the earlier Collaborative Youth Service trials. The purpose of the evaluation was to document good practice in building community capacity, and effective and sustainable partnerships as demonstrated by the ICYS projects and the communities in which they operated. As such, the evaluation identified the overall learnings from these projects rather than the performance of the individual projects.

A range of methodologies was used to conduct the ICYS evaluation. These included interviews, workshops, self-evaluation reports completed by ICYS projects and an examination of existing literature on building community partnerships.

The task laid out for the agencies involved in the ICYS pilot projects was significant. Agencies were expected not only to achieve effectively coordinated service delivery, but also to build community capacity and develop sustainable, collaborative partnerships. As the ICYS evaluation has noted (ARTD 2005), building community capacity is a complex undertaking involving a range of activities, including:

- building infrastructure to deliver programs
- building partnerships and organisational environments to help sustain programs and the positive outcomes that programs deliver
- building problem-solving capacity in communities and systems to ensure appropriate responses to new problems in unfamiliar contexts.

5. Career and Transition pilots and Partnership Outreach Education Model pilots

Like the ICYS projects, the CAT and POEM pilots were developed by the Australian Government in response to findings from the *Footprints to the Future* report.

The CAT pilot projects employed dedicated CAT Advisers to explore methods for facilitating career and transition support to all young people aged 13–19 years. Projects built partnerships to support young people's transitions, and tested ways of tracking the transitions of young people after they left school.

The POEM pilot projects trialed new ways of engaging young people (who had become disconnected from mainstream education, and possibly their families and communities as well), in community learning environments. All POEM projects focused on providing education, training and support in settings where vulnerable young people felt comfortable; using approaches that were developed in consultation with young people and their families and that took into account their preferred learning styles and cultural, social and physical needs. A variety of approaches to re-engaging young people on a learning pathway in more mainstream settings were also trialed.

In all, 23 CAT projects and 21 POEM projects were established around Australia in 2002.

6. Comparison of the Innovative and Collaborative Youth Servicing, Career and Transition and Partnership Outreach Education Model initiatives

The ICYS, CAT and POEM pilots share some broad similarities, as they were all initiatives targeting young people developed in response to the *Footprints to the Future* report. They also shared the common characteristic of being service delivery pilots, rather than programs as such.

However, there were also important differences between the ICYS, CAT and POEM pilots. The CAT and POEM initiatives had a specific focus on, respectively, career and transition support and education issues, unlike the ICYS pilots, which had a broader youth servicing focus. However, in practice, education providers were also key stakeholders in some ICYS projects.

Initially, the ICYS, CAT and POEM pilots were all to be implemented by the Department of Education, Training and Youth Affairs. However, following machinery of government changes implemented after the 2001 federal election, responsibility for youth affairs, including the ICYS pilots, was transferred to the FaCS portfolio.

Given their career and transition support and education focus, implementation of the CAT and POEM pilots was undertaken by the restructured DEST. DEST has completed evaluations of both the CAT and POEM pilots.

While the ICYS, CAT and POEM pilots were not, as originally envisaged, conducted by the same government department, FaCS and DEST continued to demonstrate a commitment to collaboration in keeping with whole-of-government objectives. For example, DEST was represented on the FaCS steering committee that selected the ICYS projects, while FaCS took part in the DEST steering committee overseeing the CAT and POEM evaluations.

The remaining sections of this paper describe some of the key findings of the ICYS evaluation. Where appropriate, these findings are compared with those from the CAT and POEM evaluations, as well as the SPRC research referred to in the paper's introduction.

7. Diversity of collaborative approaches

The ICYS pilot evaluation revealed a range of different approaches within quite diverse contexts, which were responsive to local community needs. For example, ICYS pilots ranged from a one-stop shop operating in Goulburn, to an Adelaide project engaging Indigenous young people at risk of disconnection from education through the building of an Indigenous medicinal garden (ARTD 2005).

In building community capacity, ICYS projects concentrated on improving the skills of community agencies and individuals to work with young people. Several projects worked with Indigenous communities using a variety of different approaches including introducing the Internet to remote communities.

CAT projects used a variety of strategies to make career information more accessible to young people, for example, through career expos, industry days, career shops and mobile facilities (DEST 2004a). The POEM projects also varied significantly in the type of service delivery model that was employed. For example, some adopted a classroom-based approach to educational delivery, while others used models across multiple sites (DEST 2004b).

The differing needs of client groups also impacted upon the form of service delivery offered by the POEM projects and the types of partnerships that were developed. For example, projects in rural and remote areas were often mindful of local labour market and industry needs, and partnered with local industry so that realistic pathways could be created for young people.

As might be expected, the SPRC research identified a range of overseas collaborative initiatives (Rawsthorne & Eardley 2004). The objectives of these initiatives varied significantly, with some centred on comprehensive youth services. For example, comprehensive youth services in Canada draw on the skills of a wide range of professionals and organisations, including school teachers, counsellors, health workers, employment trainers, non-government youth services and drug and alcohol workers.

Other overseas collaborative initiatives focussed on specific areas such as education, employment, training and housing. For example in the United Kingdom, 'holistic' schools are a collaborative initiative of schools, health, social services, the voluntary sector, families and communities. The object of the initiative is to build links with families in ways that recognise that children's learning works best as a partnership between parents and teachers.

While the concept of providing diverse service delivery responses to different local community needs may initially appear at odds with the need for a coordinated approach advocated by the *Connecting Government* and *Footprints to the Future reports*, this is not necessarily the case. The *Connecting Government* report notes that there is no one-size-fits all approach for whole-of-government. The report states that:

> … there needs to be a range of organisational options available to deliver policies, programs and services across organisational boundaries successfully. The structure should be matched to the task (Australian Public Service Commission 2004, p. 12).

Informal versus formal collaboration

The evaluation of the ICYS pilots identified an important distinction between informal collaboration, such as information sharing and attending interagency forums, and more formalised collaboration, such as the development of a memorandum of understanding or written protocols for referral processes.

While service delivery agencies undertake informal collaboration as part of their core business, the research points to the need for government to support services in formal collaboration. The ICYS evaluation noted that government support may be needed in terms of both personnel and infrastructure (ARTD 2005).

The POEM evaluation indicated that formal partnerships tended to be more sustainable than more informal partnerships based on goodwill between key people. When partnerships were formed between organisations, rather than people, the bond that is created can withstand changes like staff turnover or staff availability (DEST 2004b).

While formalisation of partnerships has an important role in relation to collaboration, the ICYS evaluation (ARTD 2005) and SPRC research (Rawsthorne & Eardley 2004) demonstrated that the process must be implemented carefully.

- Skilled facilitators are needed to progress formal partnerships.
- Although formal partnerships may be necessary to ensure collaboration is not undermined by staff turnover, they also risk stifling creativity and flexibility.
- It would be counterproductive for government to force services into partnerships.

In developing collaborations, most ICYS projects created informal relationships rather than formal partnerships shaped by terms of reference, contracts and mandated resource sharing. The lack of formal partnerships was in part due to the short-term nature of the pilots, the sometimes unrealistic time frames and the varying levels of knowledge, skill and experience amongst project workers and their auspice agencies of capacity building and working collaboratively with other agencies (ARTD 2005).

Success factors in working collaboratively

As might be expected, appropriate coordination was a key success factor. The CAT evaluation demonstrated that the coordination and service delivery roles of the CAT Advisers were crucial to a successful career and transition system for young people (DEST 2004a). Similarly, one of the successful elements of the POEM pilots was dedicated project coordination that allowed teaching and youth support staff to focus on young people’s needs (DEST 2004b). The ICYS evaluation also noted that neutrality of the coordination role was important in some contexts where the worker did not carry ‘baggage’ and did not represent one agency over another (ARTD 2005).

However, coordination arrangements are not in themselves sufficient to ensure effective collaboration. Reports also found that attitudes of key stakeholders such as openness, equality, trust, respect and a perception of ownership by all stakeholders were important variables.

A practical commitment to working collaboratively was demonstrated by:
- sharing resources and technology
- exchanging information, where this does not breach privacy requirements
- joint training and skilling
- good communication and networking.

In addition to interagency collaboration, several ICYS projects were also successful in facilitating the involvement and participation of young people themselves. ICYS projects used a range of strategies, including employing young people to undertake research, setting up youth advisory groups and training young people to participate on steering committees. Projects worked with young people to build their leadership skills and provide better access to services including counselling, education, training and recreation. For many projects, the involvement of young people added considerable value as a fresh voice for other stakeholders to listen to and be reinvigorated (ARTD 2005).

Other key success factors identified by the reports are outlined below.
- A focus on outcomes rather than just processes.
- The leadership role of individual agencies in communities.
- A high level commitment by all levels of government and non-government agencies.
- Flexibility in funding guidelines and reporting requirements (no unnecessary 'red tape').
- A recognition that some of the benefits of collaboration are long-term.
- Tender processes and ongoing performance appraisals by government agencies that rewarded collaborative work (ARTD 2005; DEST 2004a, 2004b).

FaCS support was particularly important for short-term projects like the ICYS because they needed to become operational quickly. FaCS State and Territory Offices were informed and genuinely interested in the project and the support, engagement and reinforcement gave a feeling of value to the projects. FaCS staff were also well placed to inform projects about the big picture, advise on best practice models and to assist in facilitating access to resources.

Barriers to working collaboratively

A range of barriers to working collaboratively was also identified by the reports (ARTD 2005; Rawsthorne & Eardley 2004). Some barriers resulted from attitudes and characteristics of funded agencies, are listed below.
- Resistance to change, holding back information and patch protection.
- Unskilled staff and recruitment problems.
- Professional demarcation issues, for example, some mental health workers not accepting the assessments of youth workers.
- Staff turnover, resulting in loss of valuable corporate memory.

In other cases, local community capacity was often insufficient to sustain collaborative partnerships. The ICYS evaluation noted that this finding was particularly applicable to pilots in rural and remote communities (ARTD 2005). While POEM projects attracted funding from other sources including state/territory governments, most projects considered that ongoing funding from the Australian Government is needed to continue providing a core community focal point for the delivery of education and training to young people needing a supportive community-learning environment (DEST 2004b).

Other barriers have resulted from government agency policy guidelines and program management. For example, both the ICYS and POEM evaluations, as well as the SPRC research, noted that competitive tendering was perceived by some services as a barrier to working collaboratively. The competitive tendering process was identified as having created conflict and a lack of trust amongst agencies and several projects identified this as a barrier to partnership building.

In some cases, difficulties in collaboration can be exacerbated by the interaction of identified barriers. For example, lack of longer-term secure funding can lead to problems in developing and retaining staff, leading in turn to greater risk of staff turnover (Rawsthorne & Eardley 2004).

ICYS projects that attempted to build more integrated service systems through developing one-stop service delivery and improved case management had mixed success. The absence of success was in part because the task was much more complex than anticipated and the available resources too limited (ARTD 2005).

While government departments may reasonably expect their funded agencies to work collaboratively, the findings have identified a need for flexibility in program guidelines to achieve collaborative objectives. As one example, the POEM pilots required each project to have a steering committee. There were mixed views about this requirement, as some projects which already had an extensive partnership network perceived the requirement to be the imposition of an additional layer of 'bureaucracy' over an already efficient and effective system of community collaboration (DEST 2004b).

The commitment of time to developing collaborative partnerships was important. The ICYS evaluation concluded that the 12-month pilot duration was in many cases insufficient to develop sustainable partnerships (ARTD 2005). It is worth noting that the CAT and POEM pilots, which were funded to operate during 2002–03, have had their funding extended by DEST until the end of 2005.

Other barriers identified by the ICYS evaluation (ARTD 2005) included:

- privacy requirements restricting information about young people which can be shared between agencies
- programs that were perceived as reacting to events rather than being proactive.

'Silo' approaches and different institutional cultures can create significant barriers. For example, the ICYS evaluation report noted that projects involving alliances between the education and community sectors were not always straightforward. A key factor determining the success of ICYS projects in working with schools was to straddle the two systems of welfare and education, and to achieve adequate collaboration with key stakeholders by providing enough incentive for them to participate. It also involved articulating in a ‘language’ that each sector understood, hence, ‘learning outcomes’ for the education sector and ‘community benefit’ for the community sector (ARTD 2005).

While ICYS projects worked successfully with individual schools, several experienced difficulties in forming partnerships with state/territory government departments of education, which made it harder to obtain the level of support required and to achieve more systemic change. Further research may be required to work through some of the barriers that impede the development of more effective partnerships with education departments (ARTD 2005).

Although the evaluation and research findings have identified specific barriers, addressing these barriers may not in itself be sufficient to promote effective collaboration. The SPRC research, for example, also pointed to the broader need for cultural change in government agencies (Rawsthorne & Eardley 2004).

8. Success of the Innovative and Collaborative Youth Servicing, Career and Transition and Partnership Outreach Education Model projects

The majority of ICYS pilots were successful in implementing their projects and the experiences of these provided a rich body of ideas, including some useful and innovative approaches to building community capacity and effective strategies for developing collaborative partnerships. The ICYS initiative also demonstrated effective partnerships between ICYS projects and the FaCS State and Territory Office network. Projects valued support from FaCS at crucial times during the life of the project, such as staff turnover, and not merely contact at times mandated by reporting requirements.

It is too early to judge the longer-term sustainability of the ICYS projects. However, most fell short of attaining ongoing funding and resources within the 12-month pilot timeframe, as they had not had time to develop a platform of community capacity and more structured collaborations. There is an issue of whether expectations for ongoing sustainability were realistic, since, as previously noted, the ICYS evaluation found that the 12-month limit on funding for pilots was often insufficient to develop sustainable partnerships (ARTD 2005).

On the positive side, the ICYS projects that achieved sustainability built community capacity and developed reasonably structured collaborative relationships, and through these found other sources of support to continue for a time. However, as previously noted, community capacity alone in rural and regional locations appears to be rarely sufficient to achieve sustainability. Collaborative youth servicing initiatives usually needed some level of ongoing funding, and for many ICYS projects there was little evidence of other sources of funding beyond the Australian Government (ARTD 2005).

The CAT and POEM pilots appeared to be successfully meeting their objectives (DEST 2004a, 2004b). The CAT pilots have had a significant and immediate impact on large numbers of students, on several school communities, and on many parents keen to support their children’s career development. Large numbers of young people participated in the pilots and benefited from the assistance provided by the CAT Advisers as they moved along their career pathways. In total, the CAT pilots provided a career and transition service to over 37,000 young people. In total, 24,000 learning pathways plans were implemented, approximately 12,000 with assistance provided directly by a CAT Adviser and 12,000 with assistance from a teacher.

The POEM evaluation found that the POEM projects have in the main been highly successful, with the support of community partners in re-engaging disconnected young people in education, enhancing social and life skills, and in preparing them for positive post-POEM pathways. The POEM evaluation supported the provision of ongoing funding for POEM-like models; but also envisaged a more comprehensive national coverage by the POEM model, based on partnerships in funding and recognition of areas of greater need (DEST 2004b).

9. Discussion—learnings for policy

While many ICYS projects were innovative in their own communities, the strategies used and the lessons learnt tended to reflect established good practice in community development and project management. The projects offer only limited new insights into how communities can develop their capacity to support young people.

However, in the context of the youth sector, the projects did validate established good practice in building community partnerships. The ICYS, CAT and POEM evaluations and the SPRC research have also provided potentially valuable policy learnings for government agencies.

A flexible approach to youth service collaboration

The diversity in collaborative approaches described in the ICYS, CAT and POEM evaluations and the SPRC research indicate that there is a need for governments to avoid a 'one-size-fits-all' approach. Youth service collaboration should be responsive to the needs and circumstances of local communities and this should be acknowledged and reflected in government program funding guidelines.

Limitations of seed funding

Seed funding to establish collaborative projects needs to be provided for a realistic duration. While some ICYS pilots were able to demonstrate sustainability beyond the 12-month seed funding period, the evaluation demonstrated that in other cases, 12 months was insufficient to establish viable collaborative partnerships, particularly in rural communities.

Supporting non-government agencies to develop formalised partnerships

While non-government organisation can reasonably be expected to work collaboratively on an informal basis, and frequently do, more formalised approaches to collaboration, such as memoranda of understanding, may need to be supported.

Involvement of young people

One particularly interesting aspect of the ICYS evaluation is that the concept of collaborative partnerships involved not only government and non-government agencies working together, but was extended to young people themselves. This is an important consideration for governments in any programs or policies relating to youth service collaboration.

Barriers to effective collaboration

The findings from the ICYS, CAT and POEM evaluations have identified a range of factors that can hinder effective collaboration and warrant consideration from governments, such as:

- inflexible program guidelines
- patch protection by service delivery agencies
- the potential for interagency tensions generated by competitive tendering processes.

Role of government

Perhaps one of the most important findings from the ICYS evaluation concerned the role of government agencies. Apart from providing the funding to establish the ICYS pilots, the role of FaCS continued to be important throughout the course of the pilots. This role was not merely one of monitoring and ensuring that ICYS projects complied with contractual requirements, although this aspect will always be critical in funding non-government agencies. As previously noted, ICYS projects also appreciated the facilitating support role of FaCS staff who were informed and genuinely interested in the projects and provided support such as advice on best practice models.

Appendix: The Innovative and Collaborative Youth Service projects

Name of project, organisation and location	Project aims
New South Wales ***'Project 360'*** *Young Shire Council* *Young-Cootamundra* **(Trial: 2-year funded)**	This trial funded youth development workers across the two sites to encourage collaboration and resource sharing. The workers were to forge links with and involve relevant youth and community groups (including schools, council, health and social services, the business community) to ensure collaboration and effective use of resources to implement youth service strategies. The first stage was to employ the two youth project workers and implement initiatives defined through the project, including establishing a youth council in Young and a youth forum in Cootamundra to involve young people in decision-making on projects, as well as a Youth Interagency Team to help develop networks between service providers.
Goulburn Integrated Case Management Project *Southern Area Health Service* *Queanbeyan (project located in Goulburn)*	This project involved the establishment and evaluation of a co-located youth service and integrated service system in Goulburn. The centre provided and coordinated a range of recreational, vocational, community, education and health and support services in a friendly setting, based on a 'co-location model' of service delivery.
Supporting Youth at Risk *Hunter Star Foundation Incorporated* *Cessnock, Newcastle, Lake Macquarie*	Young people participating in alternative education programs are often from families that lack support and coping strategies for dealing with challenging behaviours. Predominantly, their communities are ill-equipped or unwilling to deal with their needs. The purpose of this project was to provide early intervention assistance to these young people while they were still attending an education setting, at the same time improving local communities' understanding of the needs of their young people who are disadvantaged or at-risk.
Integrated Youth Service System *Regional Extended Family Services Incorporated* *Tamworth, Moree, Armidale and surrounds*	This proposal sought to establish a region-wide Integrated Youth Service System covering 19 Local Government Areas in the New England/North West region of New South Wales.

Name of project, organisation and location	Project aims
Collaboration and Action Project for Youth *Southern Youth and Family Services Association Incorporated* *Wollongong, Shellharbour, Kiama Local Government Areas*	This project worked across agencies and a variety of funded programs in the Illawarra region. The aim was to improve the transitional process in which young people move through the education system and beyond that to further education, training, employment and other community participation options.
Victoria ***Maribyrnong Gateway Project*** *Melbourne City Mission* *Maribyrnong* **(Trial: 2-year funded)**	This trial focused on establishing interagency cooperation and linking services such as those provided through Job Placement, Employment and Training, Reconnect and Centrelink as key linkage points, to achieve a seamless and integrated service system, including intensive tracking and case management of shared clients and pooling of resources. The specific target group was young people aged 12–24 years at-risk of homelessness and/or long-term unemployment.
Kingston ICYS project *City of Kingston* *Clayton South, Clarinda and Oakleigh South*	This project aimed to facilitate the provision of a range of services to meet the needs of young people at risk who live in these communities. It was to build on the concept of the implementation of a youth service platform that will serve as a one-stop shop. This involved a number of agencies developing a formal partnership to work together to support this platform.
Youth Moving Ahead *Benalla Rural City Council* *Benalla and Mansfield*	The Youth Moving Ahead initiative was designed to provide young people with support and resources to create new education and employment pathways, which were identified during their participation as leaders, change makers and social entrepreneurs in their community.
Queensland ***Wide Bay/Burnett Youth Response*** *Wide Bay Burnett Area Consultative Committee* *Wide Bay/Burnett* **(Trial: 2-year funded)**	The project funded a Collaborative Services Unit to develop the capacity of workers, agencies and communities to effectively design projects, attract resources and implement services for young people across the region. Capacity was to be developed through a combination of seed funding and the employment of a project officer to assist with networking, information mapping, worker training and enhancement of fund raising capacity.

Name of project, organisation and location	Project aims
Border Rivers Transport Service *Mission Australia, Goondiwindi* *Boggabilla and Toomelah*	This project aimed to provide a safe, regular, reliable and supported transport service from Toomelah and Boggabilla to Goondiwindi through the provision of youth support workers and appropriate transport. This was to allow young people in Toomelah and Boggabilla to access employment services, recreational activities, government services, commercial businesses, and so on, in Goondiwindi.
Collaborative, Innovative Responses for Youth at Risk *Wahroonga Family Counselling Centre (a part of Queensland Baptist Care)* *Rockhampton*	This project aimed to establish a service that provides professional support to young people and their families with complex mental health and/or social isolation issues or support needs. This was to be complemented by the development of a collaborative and cooperative case management environment supported across government and non-government sectors and community groups.
Needs Analysis and Profiling of Young Indigenous People *Darumbal Community Youth Services* *Five communities in Central Queensland (Woorabinda, Rockhampton, Capricorn Coast and Central Highlands)*	This proposal conducted a Needs Identification Analysis and Profiling of young Aboriginal and Torres Strait Islander people and their associates (who may be non-Indigenous) in central Queensland.
Aim High: Sandgate and Districts Indigenous Youth Action Project *Sandgate Indigenous Community Network* *Sandgate and surrounding districts*	The aim of this project was to establish a local developmental network for Indigenous young people to assist young people build their self-esteem, develop leadership skills and access the training, supports and employment needed.

Name of project, organisation and location	Project aims
Gold Coast Youth Commitment *South Coast Industry Schools Coordinating Organisation* *Gold Coast*	This project focussed on achieving a joined up government and community response to youth transition to independence with four initiatives. ◗ Resource Pool trial—to develop a spirit of cooperation and a collaborative and integrated response to the availability of resources in the region. A school survey in September 2001 identified 27 per cent of students were at risk of leaving school early. Also, little concrete data exist on those who have already left early. ◗ Seamless Transition trial—to address these issues, an environmental scan identified that young people are often overwhelmed with the uncoordinated mass of youth agencies and program. ◗ Youthlink trial—to research this issue and to see how to improve services and produce an integrated service. ◗ Plan it Youth trial— to find a way to reconnect those who left school early and who were at-risk of or have become disconnected from their community. The trial was to encourage support for these young people in their community.
South Australia ***Choosing to Learn—Learning to Live*** *City of Playford and service delivered by Northern Area Community Youth Services* *Northern Adelaide* **(Trial: 2-year funded)**	This project aimed to establish an alternative education service, incorporating a cluster of schools, for both early school leavers and students at-risk of leaving school. It involved the development of innovative and collaborative approaches to service delivery for disconnected young people aged 12–16 years, including recent school leavers aged 15–16 years and young people between 12–14 years in transition from primary to secondary school. Seed funding was to enhance the development of a multi-modal early intervention program. The funding was also to employ a youth worker to undertake case management coordination, one-to-one support, group work, brokering other supports and/or service types, and/or advocacy.

Name of project, organisation and location	Project aims
Indigenous Medicinal Garden *Southern Futures Incorporated* *C/o Southern Vocational College, City of Onkaparinga*	The project built a community garden using Indigenous plants with medicinal qualities. It was envisioned that the garden would use the Tjilbruke Dreaming Trail as an outline and incorporate Kuarna cultural teachings. Upon maturation of plants, the project team hoped to produce natural medicinal products. The aim was to increase retention rates of Indigenous and other disadvantaged students by offering a flexible and educational experience with the opportunity to gain certification, for example, in horticulture. The project also hoped to increase the cultural knowledge of the whole community and the pride of the Indigenous students and their families.
Collaborative and Responsive Regional Youth Support Project *ASK Employment and Training Services* *Whyalla and surrounds*	The project trialed the provision of an integrated youth service in the Whyalla region. Agencies who otherwise independently supported young people in their transitions to independence, collaboratively case managed a number of clients using a multi-disciplinary team approach.
Youth Web/Wraparound Pilot Project *South Australian Department of Education and Children's Services, with services delivered by Centacare* *Inner south of Adelaide*	This project assisted in facilitating young people at-risk of becoming disconnected from schooling to recognise and build on their existing individual strengths to access the services they need and to be motivated to contribute to community capacity building. Schools were supported in developing new ways of working with at-risk young people through building on policies, protocols and practices that promote early recognition and intervention.
Linking Young People and Community *Lutheran Community Care* *Millicent and Mount Gambier*	This project aimed to further strengthen collaborative work in the Millicent and Mount Gambier areas by identifying and addressing local solutions for young people who had become disengaged from services and supports in their community.

Name of project, organisation and location	Project aims
The Domain Youth Centre *Clare and Gilbert Valleys Council* *Clare and Gilbert Valleys*	This project developed a café/meeting place as a youth enterprise taking the classroom into the community to meet new standards in education and equip young people with important life skills in a changing society. A crucial part of the project was the employment of a facilitator, who helped young people achieve their aspirations by providing an assets based franework. It aimed to build community capacity through this approach and build the capacity of local government to effectively service young people through youth participation, by providing a 'live' opportunity for young people and the community to meet recreation, learning and employment needs of young people in the area.
Spreading the Word *RivSkills Incorporated* *Riverland region*	This project employed a Youth Services Information Officer to research services in the region, establish a database and disseminate the information via manual and email broadcasting systems for use by services. A peer support program encouraging young people to become peer supporters was also a component.
Western Australia ***Rural Reach*** *Wheatbelt Area Consultative Committee Incorporated* *Central Wheatbelt Area*	This project involved a two-stage process—an audit of young people of the Central Wheatbelt to determine the number, age, location and needs of youth, and three project officers to develop systems to overcome a range of problems and to address the issues of employment, education and training using integrated service delivery, partnerships, resource sharing and early intervention and prevention.
Laverton Natural Intelligence Project *Shire of Laverton* *Laverton, Mulga Queen, Mount Margaret and Cosmo Newberry*	This project sought to undertake core research, consultancy and design work to develop a facility for engaging young people in the post-compulsory years in to promote their personal development, social linkage, cultural integrity and economic sustainability. It was the intention that the Laverton post-compulsory facility would be implemented outside the ICYS pilot project, based on the information and recommendations of this project.

Name of project, organisation and location	Project aims
Northern Territory ***Purrukuturmi, a place of learning*** *Tiwi Island Health Board* *Timrambu, Melville Island*	This project involved building a bush training camp by the people who were to be using it. This was to increase the ownership by the Tiwi people. The venue was to become known as a place of respect and learning by the whole community. The camp was to be the first of many training projects taking place at this venue. Training courses were to include men's health, independent living, suicide prevention, first aid, work, health and safety, leadership and traditional skills taught by Tiwi elders. The training and venue provided the young men with an opportunity to learn valuable, life-enhancing skills, in line with traditional teaching practices, while under the guidance of their peers, respected community members and community leaders.
Strong Language, Strong Learning *Ngaanyatjarra Health* *Central Australia*	The project focused on sexual health and sexually transmitted infection education. It was developed in consultation between Ngaanyatjarra Health, the Northern Territory Department of Health and Community Services and the Northern Territory Department of Education, Employment and Training. The project developed existing visual materials and resources on interactive CD-ROM for translation into language for the Pitjantjatjara and Ngaanyatjarra people. This developed a literacy path from Indigenous language to English. Learning English as a second language was to be strengthened through storytelling and theatre.
Deadly Treadlies *Alice Springs Youth Accommodation and Support Service* *Alice Springs and surrounds*	The Deadly Treadlies project was a bike recycling and maintenance project that was driven by young people. In the process of bike renewal, Deadly Treadlies trained young people in a variety of skills such as bike maintenance and rebuilding, personal development and enterprise development. The project included a range of activities responsive to a number of needs such as: transport, recreation, social development, training and employment. It was envisaged that through effective management and commitment, young people would develop Deadly Treadlies into a business enterprise.

Name of project, organisation and location	**Project aims**
Land and Learning *Tangentyere Council Incorporated* *Central Australia*	The Tangentyere Landcare project was based on a previous project whereby resources were created by biologists for teachers to use in the natural science area. This project aimed to have the subject mainstreamed into the school curriculum. Three schools were targeted as pilots for this project. The money from this grant was used to support the project as well as to complete a critical evaluation.
Deadly Mob Out Bush *The Gap Youth Centre Aboriginal Corporation* *Remote communities in Central Australia*	The Deadly Mob Goes Bush project expanded the existing Deadly Mob mentoring program, with an emphasis on information technology to reach rural and remote young people. This project linked into the Year of the Outback and the Reach Out Rural and Remote Tour and the town component provided online career counselling. The project worked with the Northern Territory Department of Health and Community Services to meet competency-accredited training.
Tasmania ***Community Links Barrington*** *Don College* *North West Tasmania*	This project assisted in the formation of stronger partnerships between young people, government and non-government agencies, service providers, industry and education and training institutions. Young people were linked to education, training, employment and recreational and social activities to assist with school retention rates and transition from school to training and beyond.
Northern Suburbs One Stop Youth Shop *Brooks High School* *Northern suburbs Launceston*	This project aimed to establish a youth referral centre to provide services encompassing drug and alcohol, housing and accommodation, support to young Indigenous people, employment and education, social development programs, health, access to information technology and legal services.

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Social policy notes

Australian Social Policy 2005

My experiences in the APS, changes in social policy and emerging issues

Presentation to FaCSIA by Wayne Jackson on the occasion of his retirement as Deputy Secretary
16 February 2006

This is a very broad remit when you stop and think about it. In a short space of time, just what do you cover? So I won't try to be too detailed here. I'll make some comments of a fairly broad-brush, general nature, which means I can do justice to nothing and can't develop themes beyond a certain point. Nevertheless, what I can try to do is draw together a few threads of the way policy has evolved over the time I've been around in social policy, which is most of the 34 years I've been in the Public Service.

I started in the Public Service as a Stats cadet in 1971 but I thought I'd throw in another five years for free. And I think it's quite significant just to reflect on how very far we've come on some very basic things. It was in 1966 that if you were a female working in the Australian Public Service and you got married, you had to resign. It was also in 1966, I think, that the referendum was passed that meant for the first time we counted Indigenous people as Australians. Those two things represent quite seismic shifts.

On the first one of these, it means, for example, that with respect to the group of women who retired from FaCSIA and other places over about the last five years, you could think of them as the first cohort to have moved through their entire Public Service career getting married without having to resign. So that's how recent the impact of some of these changes is. It's a generation, of course, but it serves us well to remember just how far we've come on some of those basics.

As another marker of how things have changed, in 1971 the maximum rate of Age Pension was \$16 a week. It's now around \$244 a week. And expenditure on Age and Invalid Pensions was about \$700 million a year. It's currently \$29 billion a year. So, again, on expenditure we've come a long way.

On childcare, back in the early 1970s it was only just at the beginning of the Commonwealth starting to expand childcare provision. Most of the Commonwealth dollars at that stage were still going to preschools before we handed them over to the States in 1977. That was probably another example of where we might like to have our time over again, I suspect.

So perhaps if I just start with some of the headlines to sum up the shifts in the social policy environment and the way the Government plays its role in that environment, as I've seen them. You can think of them, if you like, as policy tides – none of which have reached the high water mark but are the direction that internationally policy is going. You could classify these different ways; they all flow into one another.

The first one I'd identify is us having moved **from** a focus on individuals, dealing with each person as they present to a service, **towards** a focus on people in their family and community settings, including the interpersonal relations they give rise to.

Secondly, moving away **from** a focus on discrete assistance, meeting discrete needs at a point in time, for example, housing or income support – an input focus, if you like – **towards** more of an outcomes focus, seeing income and services as part of an integrated package to help develop people's capacity to make successful transitions over the life course.

Thirdly, **from** a passive social safety net **toward** an active social safety net, focusing on economic and social participation, which has been both a driver and a product of the convergence of social and economic policy. This has been particularly noticeable in the last 10 years and even more so in the last five years in policy, as employment considerations have become more central, particularly driven by a concern with structural ageing.

Fourthly, **from** seeing equity in access to income or services as being delivered through uniform one-size-fits-all provision (this is the way we used to define equity: it was fair to everybody that they all got the same), **towards** increasing tailoring of assistance to individual circumstances, focusing on what will make a difference in particular circumstances.

Fifthly, **from** Government playing its role by intervening with top-down approaches to solve problems. That was the way we used to think. Now we are moving **towards** playing more of a catalytic role, influencing and facilitating the activities of actors at the local level to encourage more organic responses from communities.

Then, sixthly, a rebalancing of rights to assistance with people's responsibility to play their part in helping themselves.

And finally, an increase in arms-length separation of the Government's policy, financing and delivery roles, with more of a role for those working outside Government in all three of those areas.

So, as I explained, I can't do justice to any of these. I can't even address some of them. But what I want to do is try to bring alive some of those themes and the interconnection between them so that at least I can capture the direction of movement and the character of some of these changes.

So when you take all of those things together, what do they tell us?

Well, they tell us that social policy is becoming increasingly sophisticated and active. The whole reference frame, the whole way we think about the objectives of social policy, has been broadened over recent decades. While there are always some exceptions and some developments that are in front of others, the common characteristic of income support and services had historically been that each addressed a problem that was discrete and somewhat static. So in the case of homelessness, it was lack of a roof over your head that night; in the case of income support, it was lack of income this fortnight, and that was about the way people thought of things. We tended, therefore, to focus more on the symptom rather than the cause and each service only tended to focus on what it alone provided. We didn't recognise the central nature of employment to people's development of their capacity and their lifetime trajectory.

Now, this came home to us in the late 1990s and early part of this decade in the homelessness area where there was a concern that there was a constant churning of people through homelessness services – the same people needing those sorts of services each night – and an argument about whether we were providing sufficient of those services. But that was a very narrow way of looking at it. The CEO of one of the major homeless services providers wrote to the Secretary of this Department early in this decade to say that he felt there was little evidence that the Supported Accommodation Assistance Program (SAAP) intervention does anything significant to change the employment status of people:

> ...there is evidence that the culture within some SAAP-funded services doesn't recognise their client's aspirations for employment and places little importance on engaging them in employment preparation related activities...This is despite evidence from a number of initiatives trialed in the mid-1990s that demonstrated how employment, when packaged with housing, health and welfare assistance, can be a great catalyst to motivating people and moving them out of situations of homelessness (unpublished information).

So there was a service provider making the point that too narrow a focus by his service sector on simply providing the single service wasn't helping people avoid the need for that service in the first place, or avoiding it becoming entrenched over time. That was one of the major statements that brought to life for us some of those themes I was indicating.

Similarly in the income support area, the focus had traditionally been on individual client groups and their needs at a particular point in time so that if, for example, a sole parent came into Centrelink, then the only real issue was: are they eligible, what are they eligible for this fortnight and that they continue to get what they are eligible for, for as long as they continue to be eligible. That really was essentially what the system was designed to do. The Jobs, Education and Training (JET) programme, was available for those people so inclined, but it was an optional extra and wasn't the centrepiece of policy in the way it was prescribed and implemented.

The frightening thing is that it was only about five years ago that in this Department we thought that the average spell on Parenting Payment Single was only 3.5 years so it was clear that this was a temporary situation and this payment was meeting people's needs.

What we didn't realise until we got our longitudinal data out and asked the right questions was that a spell on Parenting Payment Single was only one of a series of spells over time and actually the average time in the welfare system for people on that benefit was around 12 years. Then we also discovered, following that through, that for many of those people – and this isn't a sentence, it's only an average – but for many of their children, particularly given the high degrees of joblessness in those families, their lifetime trajectories and their lifetime experiences were also affected.

Now, for me, therefore, the speech that our Minister gave in September 1999 called 'The Future of Welfare in the 21st Century' is one of the most seminal moments in taking a system that's been built up over many decades and saying that it needed to be refocused (Newman 1999).

The guiding principles put forward by that speech guided the work of the McClure Committee.

- Establishing better incentives for people receiving social security payments so that work, education and training are rewarded.
- Creating greater opportunities for people to increase self-reliance and capacity building, rather than merely providing a passive safety net.
- Expecting people on income support to help themselves and contribute to society through increased social and economic participation.
- Providing choices and support for individuals and families with more tailored assistance that focuses on prevention and early intervention.

So you can see coming through in the speech many of these themes of fundamental shifts in the way we think about social policy. And make no mistake how profound that reframing of what the issues were and the way we needed to think about them was. This was the moment where for the first time the concept of joblessness, reflected in the work of the McClure committee, was actually put at the centre of policy. Previously it had been about specific client groups. Now it was about the joblessness of working age people, and policy hadn't been framed around these people as a group. The realisation here was that the number of working-age who had no job was many times the number of the unemployed, which had been the only focus of active policy.

The history in this area had been that there were plenty of workers coming into the workforce, that people with family responsibilities or with degrees of disability weren't as needed as they are now, and that the system where we 'parked' them didn't see them as a good investment. Investing in them was seen as a distraction from the main aim of getting prime-age working males, in particular, into employment.

This is a somewhat simplistic description, but essentially that was the character of the system and you can see how profound a change this made to the way we thought about those things and how it broadened the agenda. This wasn't simply happening in Australia but, in fact, while we were leading some of the thinking internationally, we were also reflecting the thinking internationally.

When I first came to this Department, at the beginning, in 1998, I guess I was a bit shocked to find the following statement and realised that it was made in 1988 by the Organisation for Economic Co-operation and Development (OECD):

> …the objective of social protection must be to ensure each member of society has the possibility of an active role in that society. For most people most of the time, this would be achieved through their own work and social activities. The role of public policy in the 1990s must be to design interventions so as to maximise both the number of people who have opportunities for active social roles and the durations of their lives over which they can experience such activity (OECD 1988).

That for me was a very seminal statement that really did capture where policy needed to go. It was only last year, at the Ministerial Conference that the OECD convened, that they reaffirmed the need for further movement in this direction:

> …while the specifics of active social policies vary according to the life course of individuals and specific country circumstances, their common thrust is the need to go beyond ensuring individuals against the risks of life towards a greater focus on investing in people's capabilities and enabling them to realise their full potential throughout their lives (OECD 2005).

Again, this issue of active social policy, prevention and early intervention, employment and life course dynamics, rather than simply addressing a need at a point in time, was very much the way policy was being framed and you will then recognise the origins of the FaCS Purpose Statement, **Improving the lives of Australians by helping to build the capacity and wellbeing of individuals, families and communities**, which very well captures the conjunction of these issues.

One of the important implications of these themes and developments is that programmes and services on the ground, whether or not they're government funded, can't any longer be considered as ends in themselves. We must acknowledge that they're part of a broader behavioural system if we're really concerned with outcomes for people and their wellbeing over the life course.

In 2001 there were two external review mechanisms, both of which I participated in but which were externally led. One of those was the Youth Pathways taskforce, which made this statement:

> …the failure of services to cooperate as a cohesive system is at the core of the weakness. Schools, businesses, community groups, governments and families will be required to think and act collaboratively and work cooperatively with young people around the planning and delivery of transition arrangements (Prime Minister's Youth Pathways Action Plan Taskforce 2001).

Similarly, the Family Law Pathways report made this observation in the same year:

> …the family law system was not designed as a system and does not always operate coherently. It's a loosely constituted group of institutions and services. Many do not see themselves as part of a system and, therefore, do not link effectively with other parts. While families link income support, child support, property and residence decisions, services are focused on only one decision-making area. They do not focus on the total experience of a family or the impact of that experience in the longer term. This may contribute to unintended

or undesirable outcomes (Family Law Pathways Advisory Group 2001).

So, again, here you are having this confirmation from independently constituted review bodies that we need to reframe the way in which we think about policy, as do all of the actors on the ground in the service community, whether or not they're government funded. That, of course, then places the emphasis on the importance of developing a social coalition as a group working in partnership at the local level, rather than government's more historic role of imposing, from above, one-size-fits-all approaches.

Some of the developments I've been sharing here, were well reflected in the original principles of the Stronger Families and Community Strategy when the Government launched it.

- Working together in partnerships.
- Prevention and early intervention, that is, helping and supporting families and communities early on before problems become entrenched.
- Transitions through life.
- More integrated and coordinated services.
- Local solutions to local problems, based on the understanding that local communities are often the best at identifying and responding to local problems rather than government directly.
- Capacity building, about increasing the personal and collective resources of individuals and communities to develop the skills and capacities they need to respond to challenges and to seize opportunities when they come their way.
- Using the evidence and looking to the future and making the investment count, by encouraging families and communities to tell government what works and doesn't work for them in their particular locations or circumstances. It will also provide more flexibility for Government to respond to local concerns (Australian Government Department of Family and Community Services 2002).

One of the points I've made to people is that, as a national government wanting to have national impact and make a difference to outcomes, the national impact on outcomes is very much the aggregation of the local impacts and we need to be much more sensitive to how they vary and why they might vary from area to area. It also highlights, as I've been emphasising, the shift in government role from this concept of previously solving for society to helping society solve for itself.

When you think about it, it's embarrassing that it's taken so long, as one of these quotes reminds us, to recognise that all of these things are actually joined up in people's lives. Government just segmented these issues. Governments internationally have segmented these issues. That then brings the challenge of working across those segments – the sectoral segments of education and health and income support and employment. They're all in different portfolios, and governments work in a way that reflects that. So, if we are to give effect to these broader policy visions, it places a premium on whole-of-government and cross-government approaches, and I guess you'd say that early childhood was one of the early and most significant examples of that.

I remember many years ago now when we chaired the first of the early childhood development interdepartmental committees, I made the opening comment to people that, unlike any other such meeting they'd been to, this wasn't about coordinating our activities; this was about actually blending our activities, and I think that's a very important distinction and very relevant to where FaCSIA is at the moment. That national agenda, though, was an example where there was tremendous support across the spectrum—bipartisan support. It was launched by our Minister and six others, with State Ministers cooperating through their various ministerial councils, and, in the end, we've had about 40 Ministers at the Commonwealth and State level working on these issues over time.

What does all of this mean for FaCSIA in terms of the future? Well, I think the first thing is obviously further developing and applying these shifts in practice. That has two dimensions for us. Firstly, our direct functional responsibilities, but also the leadership role as arguably the lead social policy agency, certainly clearly in a few areas, but I think more generally. So that would be the first example. Of course, one of our primary opportunities now to develop and evidence this approach is in the Indigenous area, which is surely the most challenging but presents enormous opportunities of identifying new ways of working to achieve outcomes.

I won't say much about that here, recognising that most of you probably know a lot more about it, but obviously it involves departments working flexibly in a more pooled and integrated way, focusing more on the longer term. I just make the point that the Longitudinal Study on Indigenous Children will provide an early opportunity to monitor progress on what seems to be working over time; so that is something that this portfolio has a direct responsibility for. I think it's also an opportunity in the work we do in the Indigenous area, to help develop broader thinking about our communities agenda.

Childcare is another area at a turning point. The history of childcare starts really from the early 1970s. It used to be very contested, particularly by central agencies. Now, of course, central agencies play a leading role in explaining it as the linchpin of our economic future as well as our social future. So that's been very pleasing to see. Of course, while their thinking has been about participation, it's also increasingly about acknowledging the potential contribution it has to make to early childhood development with an eye to the future.

I think one of the most pleasing developments over the last few decades has been the fact that the Treasurer put out a document looking ahead 40 years (Australian Government Department of Treasury 2002). That is a huge step forward in a time when I think there's increasing short-termism in all sorts of other respects, and I think that, of itself, is a huge paradigm shift, if you like. I won't go into any of the further details here, but really childcare is at a turning point. There are major new dynamics in a sector where the policy and funding settings still reflect, to a considerable extent, its origins as a cottage industry. So there are challenges there. And whereas government's role in the past has always been more about facilitating supply and demand meeting up, following Welfare to Work people now seem to expect government will ensure places are available in the right place at the right time at a price people feel comfortable with paying, so there's some interesting issues on our plate there.

To be a little more general in what might these themes and developments mean to us, clearly we have to be thinking about what does it mean for the way in which we work, and I guess there's three key thoughts I'd want to leave with you on that.

Firstly, we as an organisation need to do even more partnering and collaborating. We've been pretty good at that compared with most others. We need to show the way by doing even more of it and becoming better at it. Developing shared objectives with other departments – they sometimes make that difficult, but if you hang in there, as with joblessness, it suddenly becomes their idea, and that's ultimate success. Then creating new shared agendas between the government and non-government sectors, importantly both to learn from their perspectives and to leverage their activities, and I think the learning from their perspective is something we need to become better at. Also, clearly, partnering with States, particularly given that with GST revenue-flowing and so on, our financial leverage in the years ahead is likely to decline. Finally, expanding our partnerships with the academic communities, which are good compared with most other departments, and those sectors see us as a model of how to do it. But we need to go further because we need to help them develop the capacity and unlock their potential to help guide evidence-based policy.

Secondly, as the public sector role in policy advising becomes more contestable, it's important that we recognise that our advice must withstand greater scrutiny and be supported by the facts, and knowledge management is our greatest comparative advantage if we go about it the right way. When we talk about 'knowledge', we mean knowledge from outside the organisation, from stakeholders informally, as I was indicating earlier, from contracted relationships with academics and service providers; and from within the organisation. We collect an awful lot of information in various places but having it in the right place at the right time we're not so good at. We do collect an enormous amount of data. We've been a leading player in the overdue movement to develop longitudinal data, to the point where it was in sorrow and not in anger that we found ourselves doing more of that than we wanted. We wanted the Australian Bureau of Statistics (ABS) to provide a lead. They now have, and that's been one of the ways we've leveraged the role that they can play to help inform policy.

But just to identify a challenge there, this Department fought hard to get funding for the Household Income and Labour Dynamics in Australia (HILDA) data collection. It's into its fourth wave now. But how many of you could say you know what that could do for you? Have you asked? Have you sought that out and have the people who are managing it presented you with the opportunity to do that?

The key for me here is that, as policy advisers, we need to start by asking the right questions. How to best illustrate this became clear to me in, of all places, Florence in the museum which houses the Statue of David. There are a number of other statues there half-completed by Michelangelo. It caused me to think about our data as blocks of marble when the comment was made that what distinguished Michelangelo from other sculptors was that, whereas other sculptors would see a block of marble that they needed to chip into a shape, Michelangelo saw a shape trapped in the marble and that it was his job to liberate it. And if you see some of the half-finished sculptures that he's done, it very much speaks to you in that way.

The challenge from me to all of you – if there was one thing that you left with today and went and did tomorrow, it would be really to think about what are the shapes we should be looking for in each of our areas and, more broadly, what should we be testing for with the blocks of data we've got, and what's the knowledge and understandings we should be looking to liberate. We've got a long way to go on that and you'd be surprised how quickly you can come across pieces of information which fundamentally change, as we found in welfare reform, the very way you think of the whole issue. But we need to go about that systematically.

Thirdly, in terms of what it means for us, it's about getting the basics right because if we don't get the basics right, everything else I've been talking about and that we aspire to do is built on sand. It's going about things in a business-like way. Core business processes and business process engineering are fundamental to that; working and speaking in a One FaCSIA way clearly as well. It's about sound contract and financial management – and you'd be aware that Australian National Audit Office (ANAO) is riding us harder on that. And basic record-keeping, which we know is not all that it could be made to be, and we don't need ANAO to tell us that. So these things are fundamental to whether we are an effective, credible social policy organisation, and I see this to be one of our fundamental priorities for 2006.

Finally, as the way we need to play our role in this changing social policy environment continues to evolve, we need to ask ourselves: are we continually reviewing how we can best help our people develop the capacities to work in this new environment, and to adapt to the changing environment that we need to not only work in but to help manage and give guidance to? Each one of us as individuals needs to question our own, or our own areas, entrenched ways of working. Are we inward-looking and self-justifying or outward-looking, making connections? Various parts of this organisation would probably respond to that differently. Are we searching out the knowledge and understandings we need? Are we partnering and collaborating to develop shared agendas? Are these the way we think about the way we need to make a difference, to give effect to our purpose statement and our objectives? Are we managing along sound business lines?

When you think about it, all of this comes back to us, now, right here. It's one thing for to us develop the broad perspectives, and we need to continue to do it. But really it comes back to each one of us and the way we see the need to go about our work and the leadership we need to give to how to do that differently in this rapidly changing policy environment. And if we don't get that right, there's plenty of external parties out there who government is prepared to turn to more than ever before – not just in Australia but internationally – to get their views. So if we play our hand right, we have a tremendous comparative advantage because we can be at the pivot of all of these information and intelligence systems, but if we don't, well, we won't be credible, we won't be effective, and that describes a different future which none of us would want.

On that note I pass my baton to all of you to take these things forward to make FaCSIA and social policy all that it can be. I'll be watching with interest. Thank you.

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