

# NATSEM

National Centre for Social and Economic Modelling  
• University of Canberra •

## **The Costs of Children in Australia Today**

**Richard Percival and Ann Harding**

**Paper presented at the Australian Institute of Family  
Studies Conference, Melbourne  
13 February 2003**



# AMP•NATSEM Income and Wealth Report

ISSUE 3 • OCTOBER 2002

## All they need is love... and around \$450,000



The idea that buying a house is the biggest investment most people are likely to make does not take into account the investment Australian parents make in raising their children. In addition to the finances, it is also an investment in love and emotion.

Regardless of how sophisticated economists have become, no economic model has yet put a figure on love and emotion. However, we can estimate the financial aspects of bringing up a baby and this report reinforces what most parents already know: raising children in Australia is not cheap.

In fact, the report shows, the total cost in today's dollars is \$448,000 for the average family to raise two children from birth to age 20. For the average couple with two children today, those children cost around \$310 a week, or 23 per cent of average gross household income of \$1,324 a week.

This figure takes into account most of the costs involved in parenting, including housing, transport, recreation, food, clothing and education.

The financial pressures that come with raising kids are a constant undercurrent to all of the highs and lows – the joys and the irritations – of being a parent.

There is no way to avoid spending on your children – people from all walks of life have to do it and those that do it best are the ones that stick to a simple financial strategy: a budget.



cont...

Budgeting as a good financial habit can be as crude as a back of the envelope list or it can take quite a sophisticated form. Either way, it is about allocating what you have in earnings for what you need now and what you might need in the future.

Take education, for instance. The report estimates that parents on average spend around \$50,000 on education and child care. This includes costs in both public and private education and the costs of child care.

According to the Australian Bureau of Statistics, enrolments at non-government schools increased by almost 19 per cent over the 10 years from 1991 to 2001, compared with an increase of around one and a half per cent for government schools. In the year between 2000 and 2001 alone, enrolments at non-government schools increased by more than two per cent while government schools' enrolments remained static<sup>1</sup>.

AMP's Cost of Education calculator (visit [www.amp.com.au](http://www.amp.com.au)) estimates the cost of sending two children to a moderately priced secondary school – with annual fees of \$3,000 and another \$2,000 to cover the costs of uniforms, books, musical instruments and excursions – is around \$65,500 for the full six years for each child<sup>2</sup>.

Given the marked increase in preference among many Australians for their children to be educated outside the government system, the question that more parents must ask themselves is how will they pay for that choice? The answer is through budgeting, saving and good financial planning.

This third AMP-NATSEM Income and Wealth Report continues to inform Australians about some of the issues facing Australians in managing their income and wealth. Informed people are able to make informed choices. AMP and NATSEM will continue to publish income and wealth reports, with another three due in 2003.

**Craig Dunn**

Managing Director

AMP Australian Financial Services



<sup>1</sup> Australia Bureau of Statistics 2002, Schools Australia, Cat no 4221.0, ABS Canberra.

<sup>2</sup> Assumes the first child starts secondary school next year and the second child starts two years after that. Assumes inflation rate of 2.5 per cent. Assumes school fees are paid at the start of the year. This is a general guide only.

# The cost of raising children in Australia

What does it cost to raise a child in Australia today? This question is of vital importance to both existing and prospective parents! It is also significant for courts considering child support rules and for governments setting payments to help families with children.

But unfortunately, as in so many other areas of economics, there is no single 'right' answer to this question. How much children are estimated to cost is in part a function of the method used to estimate those costs.

A number of methods have been used internationally and in Australia to measure the private costs of children to families. This report uses one method, which is described in detail in the Technical Notes at the end of this report.

For the average Australian couple with two children today, those children are estimated to cost \$310 a week. This amounts to 23 per cent of their estimated average gross income of \$1,324 a week.

It is estimated to cost about \$448,000 (in today's dollars) for an average Australian couple to raise two children from birth to age 20.

## COSTS BY AGE

The costs of children vary greatly with family income and the age of the child. Table 1 looks at couples with only one child.

Low income families are defined here as the bottom one-fifth of all couples with children, after being ranked by the gross (or total) cash income of their families. Middle income families are defined as the middle one-fifth of all couples with children, while high income families are the top one-fifth of all couples with children. Low income families have an average estimated income of \$567 a week, while high income families have an average income of \$2,426 a week.

As expected, the direct costs of children increase with the age of the child and with the level of family income. The lowest direct costs of \$55 a week were estimated for children aged between zero and four years living in low income families. The highest costs of \$466 a week were estimated for 18 to 24 year old students still living with their parents in high income families. Wealthier families were found to spend a greater amount on their children, whatever their ages. High income families spent more than twice as much on their children as low income families (Figure 1).

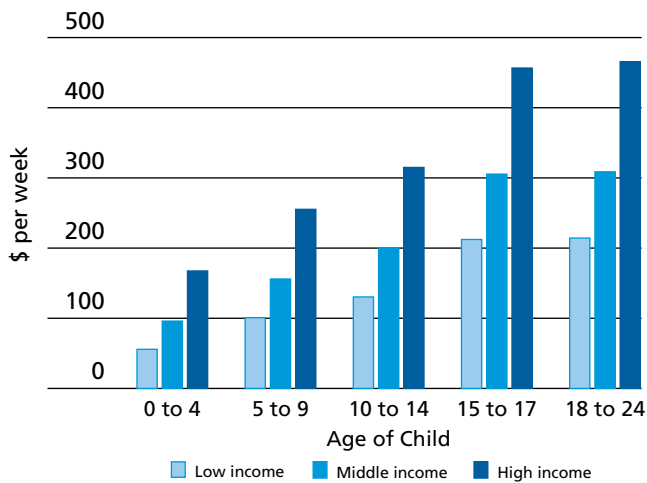
Older children are more expensive than younger children, with costs generally increasing steadily with the age of the child. Older teenagers appear to cost at least twice as much as very young children, irrespective of the income of the family. For example, looking at middle income families, with an average income of just under \$1200 a week, an average of \$309 a week was spent on 18 to 24 year old students still living at home, compared with only \$95 a week for zero to four year old children (Figure 1).

The results suggest that 18 to 24 year olds cost about the same each week as 15 to 17 year olds, which may seem an odd result to those parents struggling with the financial burdens of older children who won't leave home! But this seems to be due to a lifecycle effect. Detailed expenditures on children are examined more fully below, but they suggest that the recreation, transport and food costs of 18 to 24 year old students are all significantly higher than the comparable costs for 15 to 17 year old children. But spending on housing and on household furnishings is significantly lower in families where 18 to 24 year old children are present than in households where 15 to 17 year old children are present – perhaps because of the additional pressures that older students place on the family budget.

**Table 1:** Estimated average costs of a single child, by age of child and family income, March 2002

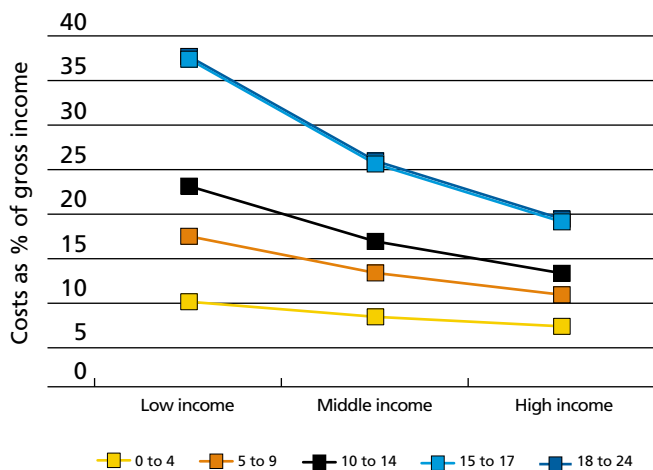
| Level of income | Average income | Age of Child |        |          |          |          |
|-----------------|----------------|--------------|--------|----------|----------|----------|
|                 |                | 0 to 4       | 5 to 9 | 10 to 14 | 15 to 17 | 18 to 24 |
|                 | \$pw           | \$pw         | \$pw   | \$pw     | \$pw     | \$pw     |
| Low income      | \$567          | 55           | 98     | 130      | 213      | 215      |
| Middle income   | \$1,195        | 95           | 156    | 199      | 305      | 309      |
| High income     | \$2,426        | 167          | 255    | 315      | 458      | 466      |
| Average         | \$1,324        | \$102        | \$164  | \$209    | \$318    | \$322    |

**Figure 1:** Estimated average weekly costs of one child, by age of child and family income, March 2002



Although the dollar amount spent on children increases sharply as income increases, the picture looks very different when total costs are considered as a proportion of family income (Figure 2).

**Figure 2:** Estimated average costs of children as a proportion of total family income, by age of child and family income, March 2002



For families with one child, the costs of a child as a proportion of their total combined income range between seven per cent (for a child aged 0 to 4 years in a high income family with a gross income of \$2426) to 38 per cent (for a child aged 15 to 24 years in a low income family with an income of \$567 per week).

Interestingly, as Figure 2 illustrates, there is much less variation in the direct costs of children by income for older children which, in

turn, means that the proportion of family income devoted to spending on older children falls sharply as family income increases.

High income families with a child aged 15 to 17 spend only a little more than twice as much as low income families on comparable children. As a result, expenditure on older children aged 15 to 17 years falls sharply from 38 per cent of gross family income for low income families to 19 per cent of income for high income families.

In contrast, high income families with a young child aged 0-4 spend about two and a half times as much on their child as low income families (Table 1). As a result, expenditure on younger children as a percentage of income shows relatively little variation between the families at different income levels, ranging from 7 to 10 per cent of gross income.

Older children place a particularly heavy financial burden upon low income families. As noted above, a single child aged between 15 and 24 years takes about two-fifths of the total family income of low income families. Even a child aged 10 to 14 years takes about one-quarter of the gross income of low income families. In contrast, a single child belonging to a high income family absorbs only between one-fifteenth and one-fifth of gross family income.

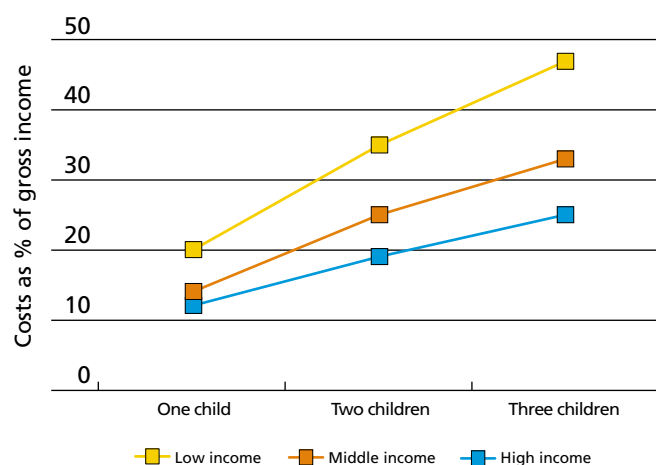
#### ADDITIONAL CHILDREN COST LESS

What if we look at the costs of children by the number of children in the family, rather than the age of the children? Again the cost of each child rises with family income. Low income families with one child spend \$111 a week on that child, while high income families with one child spend \$281 a week (Table 2). Similarly, for couples with three children, low income families spend under half as much each week as high income families - \$266 vs \$606 a week.

**Table 2:** Estimated average costs of children, by number of children and family income, March 2002

| Level of income | Average income | Number of Children |            |            |
|-----------------|----------------|--------------------|------------|------------|
|                 |                | 1 child            | 2 children | 3 children |
|                 | \$pw           | \$pw               | \$pw       | \$pw       |
| Low income      | \$567          | 111                | 196        | 266        |
| Middle income   | \$1,195        | 173                | 295        | 390        |
| High income     | \$2,426        | 281                | 467        | 606        |
| <b>Average</b>  | <b>\$1,324</b> | <b>183</b>         | <b>310</b> | <b>410</b> |

**Figure 3:** Estimated average costs of children as a proportion of income, by number of children and family income, March 2002



As Figure 3 shows, the cost of a single child amounts on average to between 12 and 20 per cent of family income, for two children 19 to 35 per cent of family income and, for three children, about 25 to 47 per cent.

Our results suggest that the marginal cost of a child decreases as the number of children increases. There are ‘economies of scale’ associated with more children, as a third child can – at least in theory – wear the clothes and play with the toys that older siblings have discarded. In addition, and probably more importantly, parents simply cannot afford to spend as much on those additional children as couples with one child, because of the extra pressures on the family budget. Thus, as Table 3 shows, while the average cost of the first child to Australian couples is \$183, this falls sharply to an additional \$127 for the second child and only \$99 for the third.

**Table 3:** Estimated average marginal costs of children, by number of children and family income, March 2002

| Level of income | Average income<br>\$pw | Number of Children |                    |                    |
|-----------------|------------------------|--------------------|--------------------|--------------------|
|                 |                        | 1 child<br>\$pw    | 2 children<br>\$pw | 3 children<br>\$pw |
| Low income      | \$567                  | 111                | 84                 | 71                 |
| Middle income   | \$1,195                | 173                | 122                | 96                 |
| High income     | \$2,426                | 281                | 186                | 139                |
| <b>Average</b>  | <b>\$1,324</b>         | <b>183</b>         | <b>127</b>         | <b>99</b>          |

Once again, the results vary greatly by income, although it appears that by the time the third child arrives even high income families are feeling the pinch! When there is only one child, high income couples spend much more than twice as much as low income families, clearly indulging the new addition to their family (\$281 a week vs \$111 a week). But by the time the third child arrives, high income couples are spending less than twice as much on that child as low income couples - \$139 vs \$71 a week.

## Detailed costs

When thinking about the costs of children, the extra food and clothing costs immediately spring to mind. But the costs of a child extend far beyond this, to additional recreation, housing and transport costs.

Total estimated average expenditure on children of different ages is shown in Table 4, along with some more details of the types of expenditure embraced within the total. As one might expect, spending on recreation, food and clothing increases steadily as the age of the child increases. For example, food costs for a zero to four year old are only \$12 a week, a small fraction of the average \$58 a week spent on 15 to 17 year olds, whose capacity to raid the refrigerator is legendary. Similarly, the weekly recreation and entertainment costs of 15 to 17 year olds are almost double those of 5 to 9 year olds.

There are some exceptions to the rule that costs increase with the age of the child. Education and child care costs are higher for very young children than for 10 to 14 year olds, reflecting the high cost of child care relative to public schools. Education costs are also lower for 18 to 24 year olds than for younger teenagers. However, most of the latter group are university students and their costs would have been higher if HECS debts were included.

The residual ‘other’ expenditure category also fluctuates with the age of the child, being higher for very young children than for five to nine year olds. This appears to be due to the high household furnishings and equipment expenses involved with very young children, such as cots and high chairs.

Finally, the remaining category is the ‘housing’ category, where average costs are unusual in being highest for very young children and lowest for the oldest children. Again, the common lifecycle of many families sees homes purchased when children are very young and mortgages being paid down as they become older.

**Table 4:** Estimated expenditure by category, by age of child, March 2002

| Expenditure category     | 0 to 4       | 5 to 9       | Age of Child<br>10 to 14 | 15 to 17     | 18 to 24     |
|--------------------------|--------------|--------------|--------------------------|--------------|--------------|
| Housing                  | \$45         | \$25         | \$9                      | \$14         | -\$9         |
| Transport                | -\$3         | \$35         | \$40                     | \$65         | \$95         |
| Recreation               | -\$3         | \$23         | \$40                     | \$41         | \$54         |
| Education and child care | \$25         | \$23         | \$23                     | \$37         | \$27         |
| Food                     | \$12         | \$41         | \$46                     | \$58         | \$68         |
| Clothing                 | \$11         | \$12         | \$6                      | \$23         | \$18         |
| Other                    | \$14         | \$5          | \$45                     | \$79         | \$69         |
| <b>TOTAL</b>             | <b>\$102</b> | <b>\$164</b> | <b>\$209</b>             | <b>\$318</b> | <b>\$322</b> |

In fact, average housing costs are negative for 18 to 24 year olds, implying that couples with an 18 to 24 year old child spend less on housing than other couples at the same standard of living but without a child. This may be a product of the greater demands placed upon the incomes of couples with older children, who may give greater priority to the purchase of a second family car or an additional TV, rather than to better housing.

**Figure 4:** Estimated distribution of the costs of a typical child in a couple family, March 2002

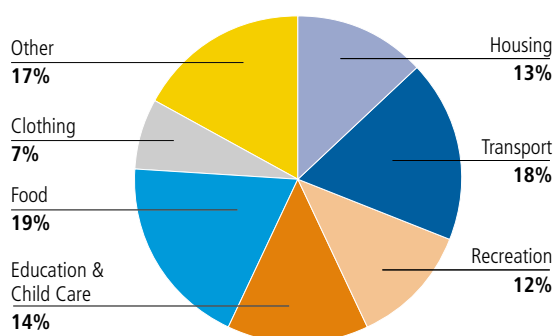


Figure 4 shows how important each of the various spending categories is in the weekly costs of a child in an Australian family today. Food, transport and 'other' expenses each make up roughly one-fifth of the weekly cost of a child. Education and child care, recreation and housing each make up more than ten percent of the weekly budget. This shows the average profile for children of all ages and living in families at all income levels.

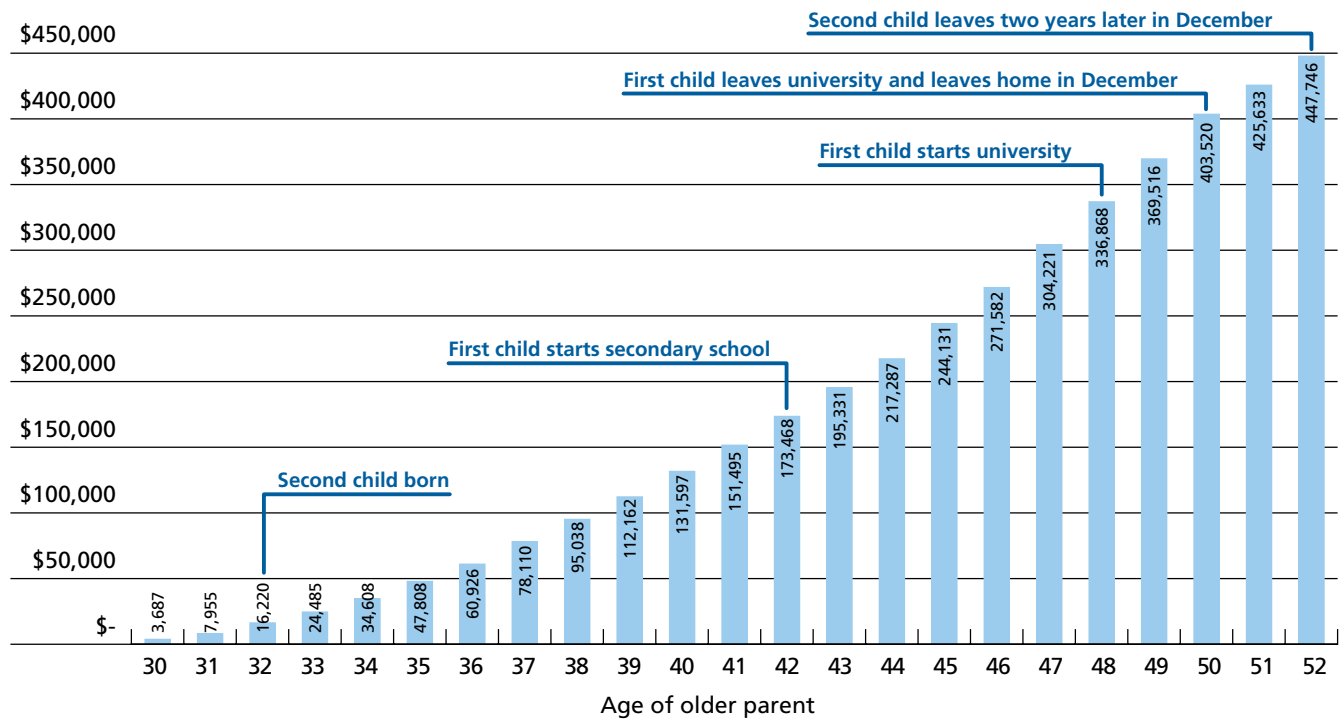
### Lifetime costs

What does it cost a typical family to raise a child from birth until they have left home? To look at this we have constructed a hypothetical family, where a 28 year old woman marries a 29 year old man. They have their first child one year later, and their second child two years after that. The mother drops out of the labour force with the birth of the first child, returns to part-time work when the youngest child is aged two, and then full-time work when the youngest child is aged five. Both parents then work full-time until each of the children finish university and leave home shortly before turning 21 years of age.

The income profile during each year in the lifetime of the couple is calculated by looking at the real incomes of couples in the 1998-99 Household Expenditure Survey from the Australian Bureau of Statistics.

Overall, the results suggest that it will cost the average Australian couple about \$448,000 (in today's dollars) to raise two children from birth until the end of their 20th year (Figure 5). By the time the elder child is a little over eight years, total family spending on the two children is estimated at just over \$100,000. The costs accelerate more rapidly after this with the advancing age of the children, so that the cumulative bill reaches about \$200,000 by the time the elder child reaches about 13 1/2 years; about \$300,000 by the time the elder child turns 17, \$400,000 by the time the elder child is about to celebrate their 21st birthday, graduates from their three year university course and leaves home; and a little under \$450,000 by the time both children have finished their education and left home.

**Figure 5:** Estimated cumulative costs of raising two children from birth until they leave home at the end of their 20th year



Note: For details of the assumptions underlying this hypothetical family, see Technical Notes. Note that these costs are the undiscounted costs of the children.

During most of those years when the couple has children, the cost of the children ranges between about one-tenth and one-quarter of their earnings. The two children place a particularly heavy strain on the family's resources during the period when they are both late teenagers, with the estimated cost of the children reaching about one-third of total family earnings when the elder child is aged 17 to 20 years. After this the pressure eases, as the older child is assumed to leave home after completing their university course and then the family has only one child to help through university. By the time the younger child has also left home, the cumulative costs of the children are estimated to have reached about 23 per cent of the almost \$2.0 million earned by this couple during these years.



As the box below shows, more than one-fifth of the \$448,000 is for food, with this typical family estimated to spend some \$83,000 on feeding their two children from birth until the end of their 20th year. Transport takes another huge slice, with about another \$75,000 of spending attributable to the cost of larger cars allied with higher petrol and public transport bills. Almost \$70,000 is expected to be spent on entertaining the two children, along with another \$50,000 on education and child care. (And this, of course, represents the average Australian costing for those with children in both public and private schools. Those parents intending to send their children to private schools could expect to spend substantially more than shown here.)

All of the above figures are based on the assumption that children leave home after completing three years of tertiary education. As many baby boomer parents report, children are sometimes reluctant to leave the parental home at the end of their 20th year! If both of the children remain at home for a further year – perhaps because they failed a year of their university course or are completing a four year degree – then the total lifetime costs rise to \$482,000.



## Technical notes

### OVERVIEW

In this study we have estimated the direct costs of children in Australian two parent families, with the costs of children being defined as parental expenditures on dependent children up to 24 years of age. (Dependent children comprise those aged less than 15 years and 15 to 24 year olds who are full time students and still living at home with their parents.) The level of expenditure was determined by comparing the expenditures of couple families with and without children at the same ‘material standard of living’. The measure of the ‘material standard of living’ was the proportion of total expenditure spent upon a basket of goods that included food consumed at home and fuel and power. It is important to note that no account was taken of the indirect costs of children (eg. the forgone earnings due to mothers working part-time rather than full-time). Such costs can be very substantial (see Chapman et al., 1999).

The lifetime costs of children from birth to the end of their 20th year were calculated by constructing a hypothetical family to represent the most typical Australian family. The partners in the family marry in their late twenties and their first child is born when the wife is 29 years—based on the most recent data for the median age of first time married mothers in Australia (ABS 2000, p. 65). The second child is born two years later, in the third year of the marriage. Both children are born in January, and complete kindergarten and 12 years of schooling, followed by three years at university. They both leave home at the end of December just before their 21st birthday party celebrations.

## The lifetime shopping bill

FOR TWO CHILDREN FROM BIRTH TILL THE END OF THEIR 20<sup>TH</sup> YEAR, IN MARCH 2002 DOLLARS

|                         | 1st child | 2nd child | Both      |
|-------------------------|-----------|-----------|-----------|
| Housing                 | \$20,900  | \$15,900  | \$36,800  |
| Transport               | \$50,100  | \$25,300  | \$75,400  |
| Recreation              | \$40,400  | \$28,300  | \$68,700  |
| Education & child care  | \$30,000  | \$19,600  | \$49,600  |
| Fuel & power            | \$5,900   | \$4,100   | \$10,000  |
| Food                    | \$48,700  | \$34,600  | \$83,300  |
| Clothing                | \$15,400  | \$14,700  | \$30,100  |
| Furnishings & equipment | \$12,400  | \$8,000   | \$20,400  |
| Services & operations   | \$10,100  | \$7,500   | \$17,600  |
| Health                  | \$10,100  | \$8,000   | \$18,100  |
| Other                   | \$20,000  | \$17,800  | \$37,800  |
| All                     | \$264,000 | \$184,000 | \$448,000 |

\* All figures rounded to the nearest \$100. See Technical Notes for more details of the methodology and a description of the type of family.

As the family progresses through their lifetime together, the cost of the children is calculated each year using the method described in the first paragraph, but for each year re-estimating what the family income would have been. This estimate used an equation that considered the age of each parent and their labour force status to predict their total family income, using data from the Australian Bureau of Statistics 1998-99 Household Expenditure Survey. In simulating the family's lifetime, it was assumed that the mother was out of the labour force from the birth of her first child until that child turned four years old. She then was assumed to work part time until the second child was aged five years and then to work full-time thereafter. The father was assumed to work full time for the entire period.

All costs are expressed in March 2002 dollars, with the estimated costs shown in the 1998-99 Household Expenditure Survey being inflated by movements in the Consumer Price Index to March 2002. In the lifetime calculations the child costs are in undiscounted dollars (which means that a dollar spent when the children are in their late teens is worth the same as a dollar spent when they are very young).



### CALCULATING THE COSTS OF CHILDREN

Why is it so difficult to work out how much children cost? It seems easy to compare the weekly spending of a couple with one child and a couple without children and assume that the difference between their total spending represents the costs of the child.

But there are at least two problems here. First, what proportion of the spending of the couple with a child on 'indivisible' goods – housing, cars, refrigerators – should actually be attributed to the

child? And, second, the total spending of the couple with a child doesn't tell us about the financial sacrifices that the couple are making for their child – and thus about what the child is really costing them.

For example, before they had their first child, a couple might have been spending a significant amount each week on fine wines and restaurant meals. Now that they have a baby, the same couple are likely to have reluctantly abandoned their wine cellar for disposable nappies and baby foods, while leisurely restaurant meals have become a faint memory! So if we simply compare the total spending of this couple before and after they had their baby, we will reach entirely the wrong conclusions about how much the child is actually costing them each week.

Economists have devoted many hours to trying to get around these problems. One ingenious method, a variant of which is used in this study, is to compare the total spending of two couples that are believed to have the same standard of living but differ because one couple has a child and the other does not. So how then does one measure 'standard of living'?

Many studies of the costs of children have used the Engel estimator to gauge 'standard of living', as first proposed by Ernst Engel more than one hundred years ago. The central concept is simple: as family income falls, a family devotes a greater proportion of its total weekly spending to food. So Engel suggested that the proportion of a family's total spending that was devoted to food could be considered a reliable proxy for a family's standard of living. Thus, suppose we had a couple without children who were spending \$500 a week and devoting 30 per cent of this to food. And then we found an otherwise similar couple who had one child and were also spending 30 per cent of their total weekly expenditure upon food, but whose total weekly spending was \$600 a week. Then Engel suggested that this would mean that the cost of the child was \$100 a week (\$600 minus \$500).

This method has an intuitive appeal. In the real world around us it seems clear that richer families spend less of their budget on food than poorer families, so that the proportion of total spending devoted to food might appear a reasonable and practical way of working out a family's standard of living.

But the method has been extensively criticised for over-stating the real costs of children, because there are fewer economies of scale in food consumption than in many of the other goods and services

that children consume. For example, it is not possible to feed to a second child a hamburger already consumed by a first child! But it is possible for a second child to ride a bicycle that a first child has outgrown.

As a result, subsequent studies have often extended beyond food and used a wider basket of goods and services as a proxy for the standard of living of a family. And that is what we have done here. So our indicator of the standard of living of a family is the proportion of total expenditure devoted to:

- food at home;
- fuel and power;
- household non-durables for use inside the home (eg. cleaning products) ;
- postal, telephone and telegram charges; and
- personal care products and services (eg. shampoo).

To estimate the total expenditure and standard of living in different households we used a sample of 2341 households from the 1998-99 Household Expenditure Survey unit record tape issued by the Australian Bureau of Statistics. To improve the comparability of the results for couples with and without children, we removed couples where the wife was not aged between 20 and 59 years. Thus, we did not compare the spending of an age pensioner couple with a working age couple with a young child. And we also excluded other couples whose income would have been difficult to have captured accurately (eg. the self-employed). The intent was thus to leave within the sample couples with and without children who were broadly comparable. It should be noted that the costs of children within sole parent families have not been estimated.

#### **OTHER WAYS OF ESTIMATING THE COSTS OF CHILDREN**

A number of other ways of estimating the costs of children have been developed by economists. One alternative method is the budget standards approach. A budget standard is calculated by specifying what is needed (in terms of the goods and services that contribute to material consumption) by particular households living in a particular place at a particular time in order to achieve a specified standard of living. After each item has been identified, it is then costed and summed to arrive at the total budget required to reach the given standard.

This method thus involves experts trying to identify what children need, rather than what parents actually spend on their children. Generally, the budget standards method appears to result in higher

estimated costs of children than many other methods. A recent Australian study using the budget standards approach is Saunders (1999).

A second approach is a method called the Extended Linear Expenditure System (ELES) – sometimes also known as the Barten-Gorman method. This method involves estimating a utility function and demand equations from a sample survey that contains details of the expenditures of families – such as the Household Expenditure Survey conducted by the Australian Bureau of Statistics. The equations attempt to estimate how much parents actually spend on their children, and families with the same level of utility are assumed to be equally well-off.

International research suggests that the estimates of the costs of children produced by this method tend to be relatively low, especially for third and subsequent children. For example, some overseas studies using this method have found that four children cost their parents less than three children (Merz et.al 1993, p.30). In a recent Australian study using this method, Valenzuela also found that the marginal costs of the second and third child were quite low (1999). She also concluded that parents devoted the same proportion of their income to their children, irrespective of whether they were rich or poor.

The results in this paper use a third method, often termed the Iso-Prop method. Like the ELES method, this method also involves using the Household Expenditure Survey and econometrics to estimate how much children cost their parents. But instead of assuming that families with the same estimated level of utility have the same standard of living, this method assumes that families that devote the same proportion of their total expenditure to a specified basket of basic goods and services have the same standard of living.

Earlier comparisons suggest that this method appears to produce estimates of the costs of children that are lower than the budget standards estimates but higher than the ELES estimates (Harding and Percival, 1999, p. 86). The methodology used in this study is described in more detail in Percival and Harding (2000).



## References

Australian Bureau of Statistics 2002, Schools Australia, Cat no 4221.0, ABS Canberra.

Australian Bureau of Statistics (ABS 2000), Births Australia: 2000, ABS Catalogue No. 3301.0, Australian Bureau of Statistics, Canberra.

Chapman, B., Dunlop, Y., Gray, M., Liu, A. and Mitchell, D., (1999), 'Children and Their Mother's Earnings', paper presented to the Conference on Labour Market Trends and Family Policies: Implications for Children, 14-15 July.

Harding, A. and Percival, R. (1999), 'The Private Costs of Children in 1993-94', Family Matters, No 54, Spring/Summer, pp. 82-87.

Merz, J, T. Garner, T. Smeeding, J. Faik and D. Johnson (1993), 'Two Scales, One Methodology—Expenditure Equivalence Scales for the United States and Germany', All-University Gerontology Center, Syracuse University, Syracuse, New York.

Percival, R and Harding, A (2000), 'The Public and Private Costs of Children in Australia, 1993-94', Discussion Paper No 48, National Centre for Social and Economic Modelling, University of Canberra, April.

Saunders, P. (1999), 'Budget Standards and the Costs of Children', Family Matters, No 53, Winter, pp. 62-70.

Valenzuela, M.R. (1999), 'Costs of Children in Australian Households', Family Matters, No 53, Winter, pp. 71-76.

## Endnote

This report was written by Richard Percival and Ann Harding from NATSEM at the University of Canberra.

The AMP-NATSEM Income and Wealth Report, "All they need is love... and around \$450,000", is the third in a series of reports analysing the income and wealth of Australians. The first two AMP-NATSEM Income and Wealth Reports were "Trends in taxable income by postcode" (released in February 2002) and "Live long and prosper? – the income and wealth of those about to retire" (released in May 2002). Each report is accompanied by a range of innovative, web-based calculators for people to compare their income and wealth both by postcode and against similar Australians nationally. The web-based calculators are available from [www.amp.com.au/natsem](http://www.amp.com.au/natsem).

This report was written by Richard Percival and Ann Harding from the National Centre for Social Economic Modelling Pty Ltd ('NATSEM') and published by AMP. This report contains general information only and although the information was obtained from sources considered to be reliable, the authors, NATSEM and AMP do not guarantee that it is accurate or complete. Therefore, readers should not rely upon this information for any purpose including when making any investment decision.

Except where liability under any statute cannot be excluded, NATSEM, AMP and their advisers, employees and officers do not accept any liability (where under contract, tort or otherwise) for any resulting loss or damage suffered by the reader or by any other person.