

Cost of



The cost of raising children in Australia

Contents

Foreword	2
Introduction	3
Our changing families	4
What Australian children cost in 2012	5
Older children cost more	5
How the government assists	6
Cost of kids by age	8
Additional children cost less	9
The work decision	10
Adding it up: A lifetime of costs	15
Where it all goes	16
Are children costing more?	19
Conclusion	21
Technical Notes	22
Overview	22
Calculating the costs of children	23
Other ways of estimating the costs of children	24
Acknowledgements	25
References	26

Foreword

As parents, there are lots of things we want for our children. We have dreams for them from the moment they are born. We hope they will have a happy life, a fulfilling job and plenty of opportunities - eventually, perhaps a family of their own.

But what's the cost to achieve this?

While it's true that money doesn't buy happiness, as parents it doesn't always feel that way. Parents want the best for their children, and often what we regard as "the best" can mean a jolting hit to the hip pocket.

The 33rd AMP.NATSEM report *Cost of Kids* looks at the cost of raising children in Australia today.

Not surprisingly it finds we're paying more than ever, with the cost of bringing up two children for a typical middle-income family rising to \$812,000, up from \$537,000 in 2007 when we last looked at the topic, and almost double that of our first report on the cost of kids in 2002 when it cost \$448,000.

So the cost of kids for a typical middle income family has risen by around 50% since 2007 but household incomes over the same period have only grown 25%, which means the growth in the cost of raising children is double that of income growth.

If the proportion of income devoted to raising children is steadily increasing, as has proven to be the case so far, what will the picture look like in the future? Will we get to a point when the cost of raising children is actually more than we're earning?

And what does a scenario like this mean for other areas of our life, such as our retirement?

It highlights the importance of having a sensible budget and savings plan in place. That way you're ensuring the best for both your kids and yourself.

It seems there is rarely a place you look where people aren't feeling the pinch on costs. And as is often the case, the more money we have to spend on kids, the more we're likely to spend on them.

Where we are seeing big increases is in child care and education. As the report shows, child care takes up a fair chunk of the family income, and it's easy to see why when you consider a full day of child care can be up to \$140 a day. Governments have acknowledged this and responded with policy settings to make child care more affordable.

Of course some parents can choose whether they want their children to be educated in the public or private system. But for many parents it's not a choice, with the high cost of private education putting it out of reach. Regardless it is a significant contributor to costs, with the wealthiest families allocating up to a quarter of their dollars to education for their children.

Child care and education aside, we're also spending a lot on food and transport. As most parents will attest, running the kids to after-school piano lessons and Saturday sports such as soccer, netball and footy can account for a sizeable portion of the weekly fuel budget.

For those who are not parents you may be asking yourself, "would I really want to get myself into all this?"

It's true that having children changes life significantly and in Australia today family units come in all different shapes and sizes.

Whether you make the choice to have children or not, for most of us it will be the biggest economic decision we'll ever make. It's challenging, but also rewarding and enlightening.

And remember it's often the simplest things, not the most expensive, where we and our children can find the most enjoyment.



Craig Meller
Managing Director
AMP Financial Services

Introduction

In terms of love, hope, time and effort, raising children can be the greatest investment people make. But what about money? What does it cost a family to raise children in Australia today?

The answer to this question is important not only for existing and prospective parents, but also for governments, as they design policies and payments to assist families with children.

Over the last decade family payments have been expanded, partly as a push to boost Australia's low fertility rates and partly to help with cost of living pressures. As Australia's population ages and our fertility rate remains below replacement level, this issue is particularly pertinent.

This is the third time AMP.NATSEM has looked at the costs of raising Australian children. In our first report back in 2002 we found that it cost a typical family \$448,000 to raise two children from birth until they left home (Percival and Harding, 2002). In our 2007 report we found that this cost had increased to \$537,000 (Percival et al, 2007).

In this report, we find that the cost of raising a family has increased to \$812,000 in December 2012. Due to methodological and data differences these numbers are not strictly comparable, however, the costs remain a significant drain on family budgets.

Again, we consider three different families, chosen to represent low, middle and high income families in 2012. We find it costs our middle income family \$812,000 to raise their two children, while the costs are \$474,000 for lower income families and \$1,097,000 for higher income families.

Since our last report in 2007, the economy has navigated well through a global financial crisis with household income growing by a healthy 25 per cent. For many families, however, certain child related costs such as child care and education have increased substantially since 2007 and the perception is that the cost of living has also grown significantly.^{1,2} In this report we evaluate what parents are spending on their children and where the biggest expenses occur across a number of family types.

Child care and education have increased substantially since 2007

1 Cost of living pressures were covered in the AMP.NATSEM Income and Wealth report *Prices These Days!* 2012.

2 ABS household disposable Income, Australian National Accounts, 5206.0 December 2012.

Our changing families

Australian family life has changed significantly over recent decades – and this has continued in recent years. The picture of family life often associated with the Baby Boom of the 1950s and 1960s – where three children were supported by a breadwinner dad and a stay-at-home mum – is in sharp contrast to the way most families are characterised today.

Family sizes are now smaller on average, with one or two children ruling the roost within most homes. Family structures have changed and become far more complex, with the emergence of more one-parent families and blended families and both parents often combining paid work with child rearing. Children are also staying in the parental home for much longer. The number of dual income families has steadily increased and thanks to the growth in employment, families with children are likely to have higher incomes.

Family sizes are now smaller on average, with one or two children ruling the roost within most homes.

What Australian children cost in 2012

The amount that parents spend on their children varies with the age of the child and the family's income. Children cost more as they get older and families with higher incomes tend to spend more on their children. Table 1 compares the average weekly costs of a single dependent child for low, middle and high income families, by the age of the child from birth to the age of 24.

Table 1 – Estimated average costs of a single child per week, by age of child and family income, December 2012

Gross income quintile	Average income (\$ pw)	Age of child				
		0 to 4 (\$ pw)	5 to 9 (\$ pw)	10 to 14 (\$ pw)	15 to 17 (\$ pw)	18 to 24 (\$ pw)
Low income	1,160	86	132	153	285	483
Quintile 2	1,755	112	168	194	356	590
Middle income	2,274	133	198	228	414	678
Quintile 4	2,886	158	232	267	479	776
High income	4,984	231	331	380	668	1,059
Average	2,612	144	212	244	440	717

The results in this report are based on what parents actually spend on their children (rather than an estimate of what would need to be spent on a child), which means the costs differ substantially with the income of the children's parents. For this reason, results are shown for families on different levels of income.

Low income families are defined here as the bottom fifth of all couples with children, after being ranked by their gross (or total) cash income and excluding those who might have biased the results (see Technical Notes). High income families have incomes in the highest fifth of all couples with children, while middle income families fall in between the two. The estimated average weekly gross income in December 2012 of couples with children in the lowest income group is \$1,160. The average income for families in the middle income group is nearly double this, at \$2,274, and that of families in the high income group more than double the middle income families, at \$4,984 weekly. The average gross weekly income of all families with children works out at \$2,612 weekly.

Older children cost more

While the expenses associated with welcoming a new baby into the household may seem endless, they are outweighed by other costs as the child grows up. As children get older their parents spend more and more on them. For each of the income groups, the amount spent on a single child increases steadily as the child ages from 0-4 years to 18-24 years. As parents who have made it to the 21st birthday party can testify, the most expensive children are also the oldest, those aged 18-24 years – and, for more and more parents, these children are still living at home (Cassells and Harding, 2007).

For low and middle income families, the weekly cost of supporting an 18-24 year old is more than five times that of a 0-4 year old and for the high income family more than four times. This increase is attributable not only to the increased food and energy budget required as a child grows, but also the introduction of education, transport and recreation costs. An offsetting factor for the older aged children is that many of these children have part-time jobs that assist in covering these higher costs.

How the government assists

The costs in Table 1 are substantial. For a young family with no other income outside of government benefits such as the unemployment benefit or parenting payments these costs would be unbearable. To ensure that parents are able to provide adequately for their children's needs the government provides additional assistance in the form of family payments. Families with low and middle income levels may also be eligible for these family payments. The main payment, Family Tax Benefit, is provided at a maximum rate up to family incomes of around \$48,000 and the payment is reduced as a family income moves beyond that amount. The other family payments such as the School Kids Bonus, Baby Bonus and clean energy payments are generally paid at the full amount for low and middle income families.³

Table 2 shows the extent of government assistance by the age of the child, with maximum family benefits provided for each age group. The main payment is the Family Tax Benefit (FTB). The payments are highest for young children (0-4 years) and those still at high school aged 15 plus. The payments compare generously with the average cost of younger children but appear less generous compared to the cost of older children. The government payments more than cover the cost of children for the first child aged less than 15. The Family Tax Benefit (Part B) is paid on a per family basis rather than per child, so subsequent children are not as strongly assisted.

Table 2 – Low income family child costs and government payments, December 2012

Gross income quintile	Average income (\$ pw)	Age of child				
		0 to 4 (\$ pw)	5 to 9 (\$ pw)	10 to 14 (\$ pw)	15 to 17 (\$ pw)	18 to 24 (\$ pw)
Low income	1,160	86	132	153	285	483
Maximum family benefits		199	166	180	200	200
Second child maximum benefits		120	109	123	142	142

Source: NATSEM, STINMOD12

Note:

Family payments include Family Tax Benefit Part A and B, Baby Bonus, School Kids Bonus, clean energy payments. Parents are assumed to receive the Baby Bonus, not the more generous Paid Parent Leave. Some categories are averaged where age groups don't line up with actual payment age categories.

The costs displayed in Table 1 and Table 2 are substantial, however, government assistance is also quite substantial, particularly for low income families. Table 3 averages these costs over the different age groups and uses Australian Bureau of Statistics (ABS) data relating to the number of children in households to calculate the average cost of children to families totalled over all years of raising children. These costs can then be compared with the average benefits that are received by families over these same years. The results are provided for low, middle and high income families.

³ Clean energy payments for families without allowances or pensions are paid at a lower rate for higher income families, however, these amounts are quite small.

The average low income family spends \$320 per week on children while the average government benefit received is \$274 per week leaving a net cost of \$46 per week and a lifelong cost of \$55,392. Middle income families spend a great deal more on their children and receive vastly less government assistance with a net cost of \$375 per week and a lifelong cost of \$449,513. The high income family spends \$734 per week and receives, on average, just \$1 per week in assistance. The high income family spends \$878,862 over the life course of their children.⁴

Table 3 – Average costs of kids and government support

Gross income quintile	Average cost (\$ pw)	Subsidy (\$ pw)	Net cost (\$ pw)	Lifelong (\$)
Low income	320	274	46	55,392
Middle income	458	83	375	449,513
High income	734	1	733	878,862
Average	488	111	377	452,388

Source: NATSEM, STINMOD12

Across all incomes the average cost of raising children is \$488 per week and the government chips in around \$111 per week, leaving out of pocket expenses of \$377 per week. Over the full course of raising children a net cost, on average, of \$452,388 is arrived at.

Government assistance to couple families is designed to support the cost of children for very low income families. Table 3 indicates that government assistance does cover the costs of low income families with young children, but not older children.

When viewed over the full term of raising children, government payments do appear adequate. Government assistance is substantially reduced for high income families; however, their higher incomes imply significantly greater ability to provide a high standard of living for their children.

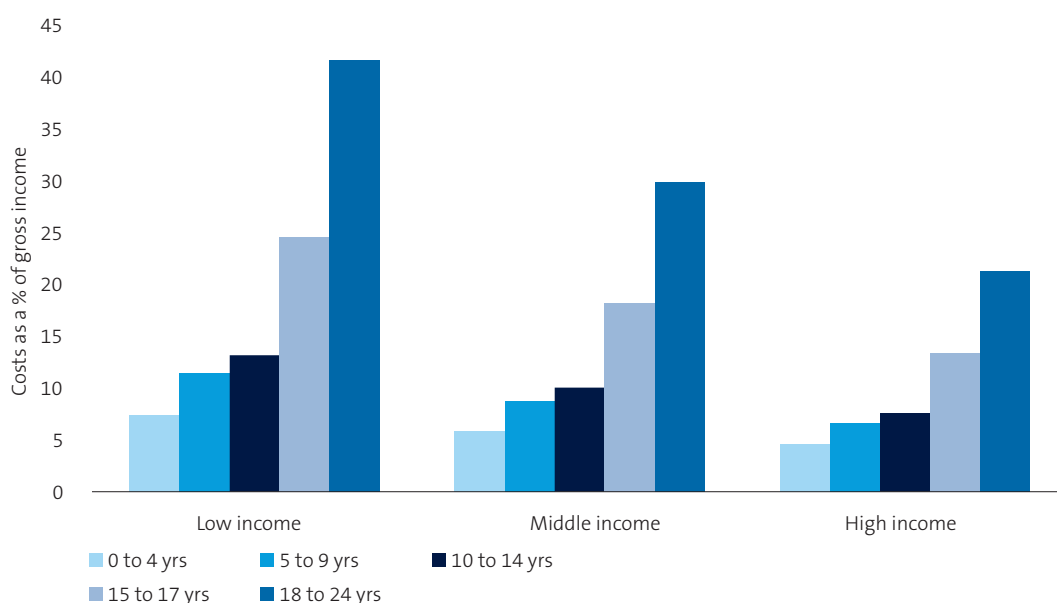
To ensure that parents are able to provide adequately for their children's needs the government provides additional assistance in the form of family payments. Families with low and middle income levels may also be eligible for these family payments.

⁴ These costs are somewhat lower than the 'hypothetical' families described later as these families have higher assumed usage and costs of education and child care and the average number of children is slightly less than two as assumed in the hypotheticals.

Cost of kids by age

Figure 1 puts the estimated costs of children into perspective by showing the proportion of total family income that is spent by families in each income group. When the costs of children are expressed in this way, the financial sacrifices made by parents, especially those on low incomes, become apparent. The lower a family's income, the greater proportion of it is taken up by the costs of a child. At every income level, the proportion of income spent on a child increases with the age of the child.

Figure 1 – Estimated average weekly costs of one child as a proportion of total family income, by age of child and gross family income quintile



The increase in the proportion of family income taken up by the costs of a child as he or she ages is steepest for low income families. The proportion of income spent on a 0-4 year old is surprisingly similar for low, middle and high income families.

On average, low and middle income families devote 7 and 6 per cent of their income to their children aged 0-4 respectively, compared to 5 per cent for high income families. For a child aged 5-9, high income families begin to spend around 7 per cent of their total income on child related costs, while low income families begin to spend around 11 per cent of their total income. By the time the child is 15-17, low income families are spending a quarter of their total income on their child and middle income families 18 per cent – while high income families spend around 13 per cent.

The pressure on low income families is especially pronounced when their child is aged 18-24, due to the costs of tertiary education as well as increased recreation and transport costs, with families devoting about 42 per cent of their incomes to their child. Middle income families spend an average of 30 per cent and high income families around 21 per cent of their incomes on children in this age group.

Income taxation is an important determinant in the amount of disposable income families have to spend on their children. As described in AMP.NATSEM Report No 14 *'Trends in effective marginal tax rates'*, Australia has a progressive income tax, where higher income families pay a higher average tax rate than lower income families. One of the reasons why higher income families spend a lower proportion of their gross income on their children is because they pay more tax than lower income families.

Additional children cost less

So far we have only examined what a family spends when they have one child. Additional children do not cost as much as the first child, as shown in Table 4 below. Just as when a business expands its output it benefits from ‘economies of scale’, so too does the expanding family – with additional ‘units’ costing less.

One reason for this is that for their first baby, families provide many new items for the child – baby clothes, toys, cots, prams, strollers and eventually bikes, trampolines, cricket bats and computers, to name just a few. Usually, as second and third babies grow, they can benefit from some goods already purchased for older siblings, so parents often do not need to spend quite as much for each additional child. In addition to this, as families get larger, parents simply have less to spend on each child.

Table 4 – Estimated average marginal costs of children, by number of children and gross family income quintile, December 2012

Gross income quintile	Average income (\$ pw)	Number of children		
		1 child (\$ pw)	2 children (\$ pw)	3 children (\$ pw)
Low income	1,160	177	159	140
Middle income	2,274	263	220	184
High income	4,984	435	340	270
Average	2,612	281	232	193

As shown in Table 4, on average families spend \$281 a week on one child, \$232 on the second child and \$193 on the third child. This is not to say however that the costs of larger families are not substantial. On average, high income families with three children spend around \$1045 a week on them. Low and middle income families with three children also face substantial costs, spending \$476 and \$667, on average each week respectively.

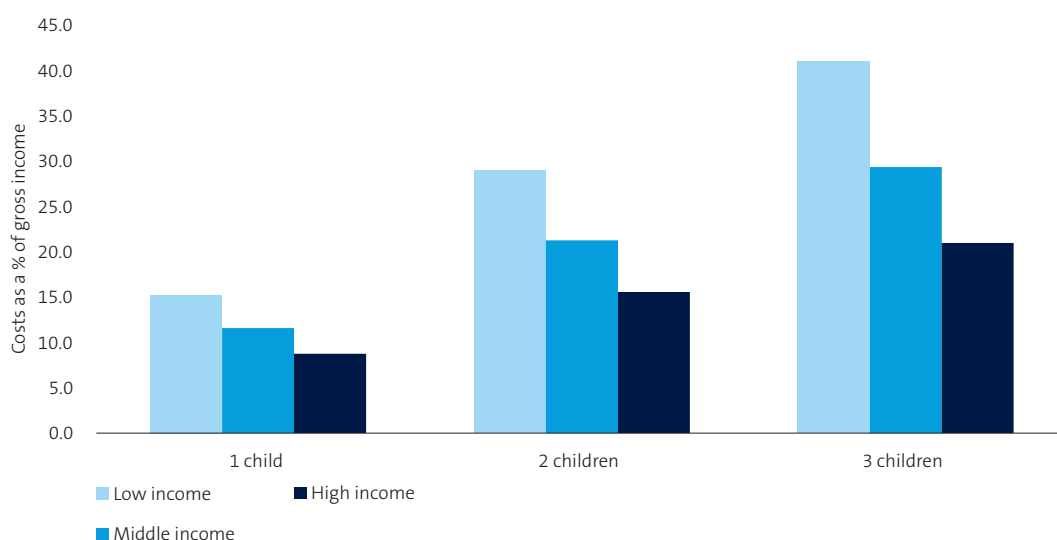
A better understanding of the extent of these costs to families is gained by again looking at the proportion of total income that these figures represent. Figure 2 shows that as the size of the family increases, families at all income levels increase the proportion of income devoted to their children. Interestingly, while the dollar amount spent on second and third children is less than that spent on the first child, the additional proportion of income spent on each additional child is still significant for families at each income level with the proportion of income spent on three children about 2.5 times that spent on one child.⁵

This is especially pronounced for low income families, who spend around 41 per cent of their total income on their children if they have three. In comparison, middle income families with three children spend about 29 per cent of their income on their children, and high income families with three children around 21 per cent.

⁵ The methodology assumed that incomes are constant across families with different numbers of children. Relaxing this assumption may be appropriate, however, small sample sizes prevent this.

A difficult decision for couples with kids is whether the secondary earner will work in the early years of raising children

Figure 2 – Estimated average costs of children as a proportion of income, by number of children and gross family income quintile



The work decision

Balancing raising children with work can be difficult for families with young children. Australia remains a fairly traditional nation and for most couples this decision comes down to whether the mother works in paid employment and if so, how much work she takes on.

A difficult decision for couples with kids is whether the secondary earner will work in the early years of raising children and if so how many hours per week. Child care, particularly formal child care, is notoriously expensive. It is not uncommon for the cost of child care to be in the order of \$8-\$10 per hour and sometimes even higher in cities such as Sydney and Melbourne. For a full day of child care this can amount to upwards of \$140 per day per child before government assistance. This can act as a significant disincentive for a secondary earner to work.

For relatively low paid workers the cost of child care will likely mean that their take-home pay per hour will be exceptionally low once child care costs are taken into account. The government does provide generous child care payments to help offset these costs.

The first payment, which targets lower income families, is the Child Care Benefit. This payment currently provides up to \$3.90 per hour towards the cost of formal child care.⁶ A second payment, the Child Care Rebate, provides a 50 per cent rebate of parent's out-of-pocket expenses up to \$7,500 per child. The 'benefit' is means tested while the 'rebate' is not.

The work decision is further complicated by the removal of a number of payments for the secondary earner as they increase their hours and therefore their income. For very low income families the loss of the parenting payment or the New Start Allowance can be quite sudden. With every dollar earned, up to 60 cents in the dollar of government benefit is removed. For moderately higher income families the main impact of lost benefits are through the removal of family payments and the introduction of personal income tax.

6 The benefit is reduced to 85 per cent of this maximum amount for school aged children.

Figure 3 – Take-home pay of secondary earner with child care, two children, primary earner \$70,000 per annum, secondary earner up to \$70,000 per annum

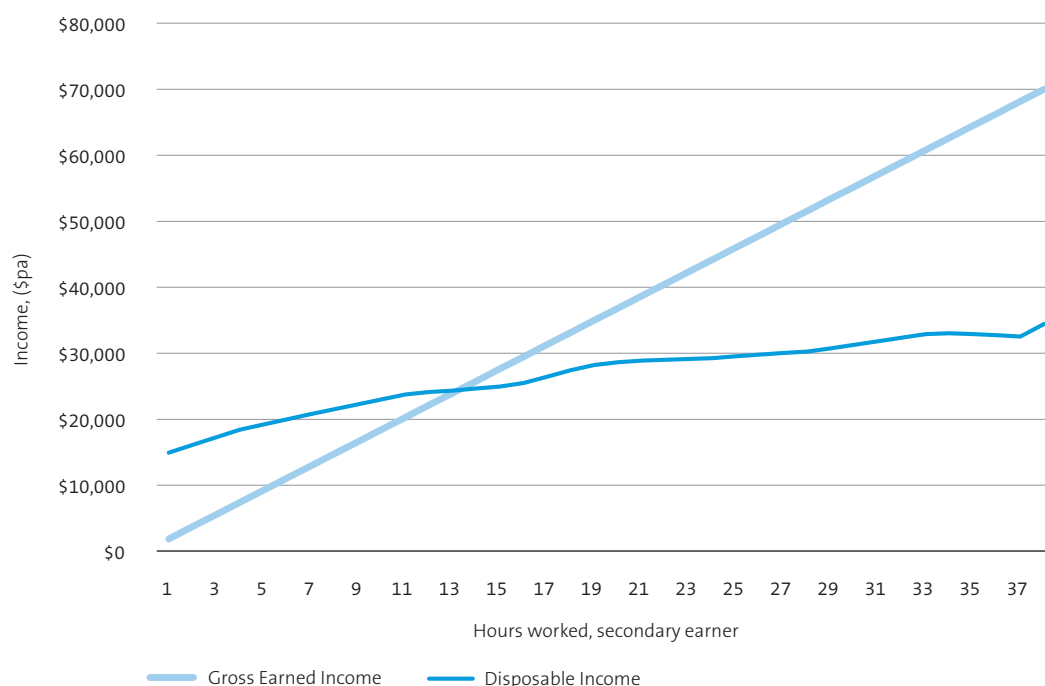


Figure 3 shows the net impact on the take-home pay (or disposable income) of the secondary earner, in our example a woman, as she increases her hours from 0 to 38 hours per week. The higher income from more hours is balanced out against higher child care fees, loss of government benefits and increased personal income taxation.

The secondary earner initially has a disposable income comprised entirely of government benefits totalling just under \$15,000. In working a part-time position at 19 hours per week the spouse's disposable income increases to around \$28,000 – an average hourly rate of \$14.20. This equates to an effective average tax rate of 60 per cent. The make-up of this high tax rate is the inclusion of the loss of government benefits, income tax and the cost of child care, net government child care benefits and rebates. The equation gets much worse for the spouse in transitioning from part-time to full-time work. In moving to 38 hours paid work, the spouse's disposable income increases to only \$32,345 per annum. The effective hourly rate in the transition to full-time from part-time work is very low at \$3.74 per hour. In this example the gross income would be \$70,000 and the effective tax rate is 75 per cent. The last five hours of work hardly changes the woman's take-home pay.

While the take-home pay scenario offers only limited incentive to work, particularly for a secondary earner moving from part-time to full-time work, some perspective is required. The reality is that child care is a difficult policy space. Child care by its very nature is expensive. The necessary staff to child ratios and the often long hours and supply shortages guarantee high costs per child. In the hypothetical example above where the mother is working full-time with two young children the gross cost of child care per year is nearly \$40,000 per annum. The government provides a substantial subsidy to the tune of nearly \$17,000 for this hypothetical family. For lower income families with two young children in formal child care this subsidy can be up to around \$30,000 per annum.

Child care payments by the government have increased from \$1.7 billion to \$4.4 billion over the past decade (Australian Government, 2012). Adding to the policy difficulty is that most of these subsidies go to higher income households. In 2009-10 the ABS estimates that roughly one third of subsidies go to the top 20 per cent of households ranked by gross income.⁷ Making such subsidies more generous has the impact of adding to income inequality and, potentially, increasing the price charged by child care outlets. A clear positive from higher subsidies is that the out-of-pocket expenses to families are reduced and female labour force participation increases (other things being equal). Regardless of the price of child care, the likely benefits of maintaining links to the workforce from both a social and economic perspective are large, particularly over the longer term. Long spells away from the workforce can be a career killer, particularly for those working in high-skill occupations.

Given these disincentives to work for the secondary earners (usually women) it is interesting to consider the employment rates of females in Australia. Table 5 provides an insight into the employment rates of males and females in different family types by the age of the youngest child.

Table 5 – Hours worked by family type by age of youngest child. All persons aged 21 to 54 years, December 2012.

Hours worked	Age of youngest child			
Couples	0 to 4	5 to 14	15 to 24	No children
Male				
None	5.8%	4.5%	8.1%	11.5%
1 to 19	1.1%	1.0%	0.1%	2.7%
20 to 34	2.7%	3.2%	2.8%	6.5%
35+	90.4%	91.4%	89.0%	79.2%
Emp rate	94.2%	95.5%	91.9%	88.5%
Female				
None	42.0%	15.4%	22.7%	22.1%
1 to 19	16.8%	15.2%	10.8%	8.6%
20 to 34	17.4%	28.5%	22.1%	15.8%
35+	23.7%	40.9%	44.3%	53.5%
Emp rate	58.0%	84.6%	77.3%	77.9%
Single parents				Single, no children
None	70.1%	39.1%	25.5%	23.6%
1 to 19	10.1%	14.4%	6.3%	5.5%
20 to 34	7.1%	15.7%	19.8%	9.7%
35+	12.7%	30.7%	48.4%	61.2%
Emp rate	29.9%	60.9%	74.5%	76.4%

Source: STINMOD12, NATSEM

7 The regressive nature of this payment is reduced when viewed by equivalised disposable income however the payment remains regressive.

Single parents have even lower employment rates. Only 12.7 per cent of single parents of children aged less than 4 years are employed full-time.

Not surprisingly, regardless of the age of the youngest child, male employment rates at full-time hours are very high for couples – around 90 per cent. For females with children younger than 5 years of age the full-time rates are much lower (23 per cent) and rising to only 44 per cent when the youngest child is at least 15. An interesting artefact of this table is that roughly only 1 in 2 females in a couple relationship without dependent children are employed full-time. A likely explanation here is that after many years of raising children many women are not returning to the workforce, at least not at full-time hours. To some extent this could be a generational impact as these women tended to have less attachment to the labour market through their parenting years than the current generation of women. Other potential explanations are that the income of the bread winner is considered 'enough' for the family or that mothers may have difficulty in finding suitable full-time work having worked part-time for long periods.

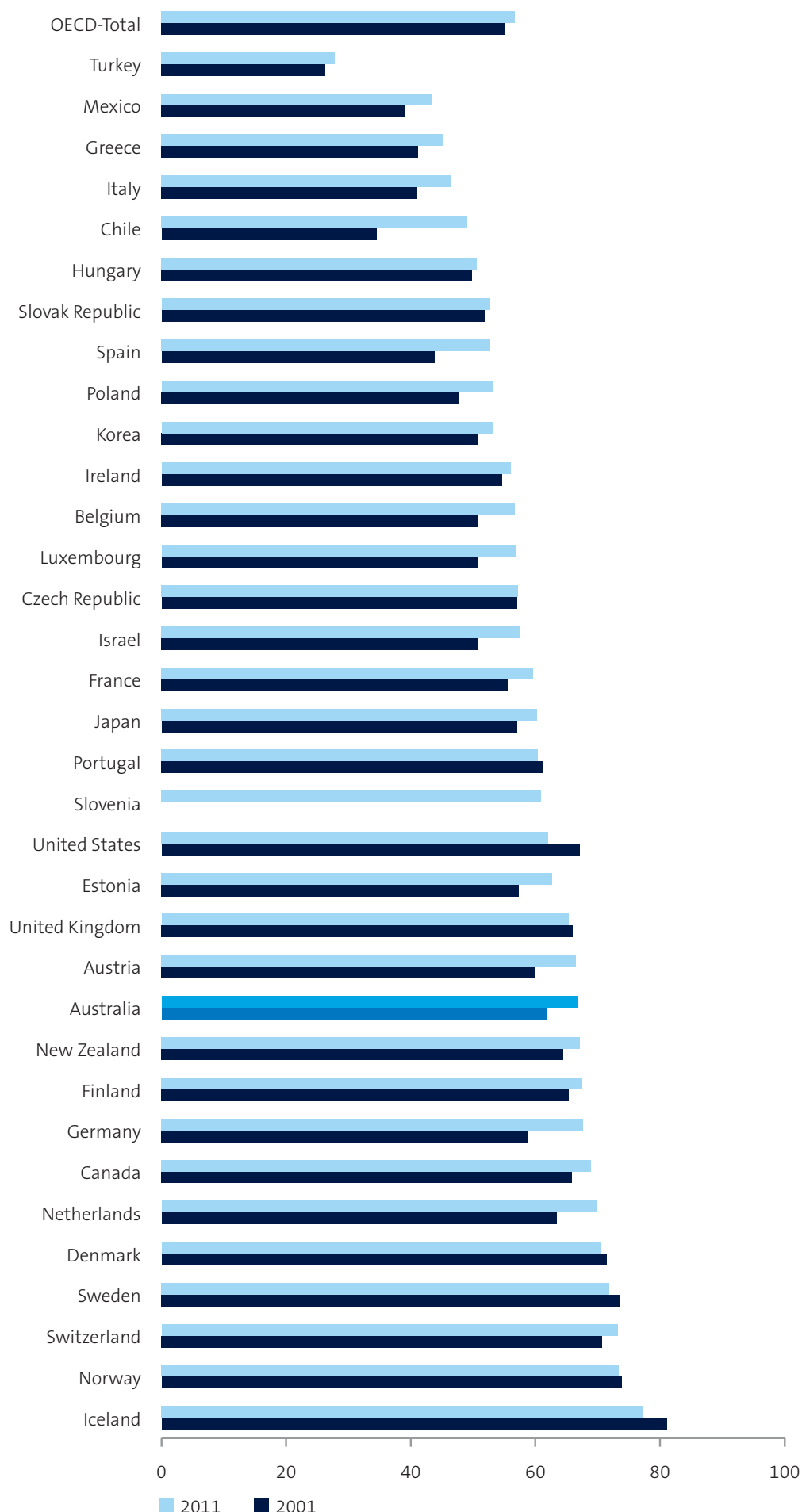
Women in couple relationships with children do tend to work part-time hours for longer than 19 hours per week in spite of the barriers discussed in the earlier section. This preference for longer hours continues for mothers of older children.

While not the focus of this report, single parents have even lower employment rates. Only 12.7 per cent of single parents of children aged less than 4 years are employed full-time. This rate increases beyond that of coupled parents once the child turns 5.

On an international comparison Australia has higher female labour force participation rates than most other OECD nations. Figure 4 shows that the nations that have higher rates are mostly the Scandinavian countries which for many years have supported women in the labour force through generous child care support and a progressive attitude towards female labour force participation.

On an international comparison Australia has higher female labour force participation rates than most other OECD nations.

Figure 4 – Participation rates of females aged 15 to 64 – International comparison



Adding it up: A lifetime of costs

To determine the cost of raising children from birth until they finally leave the family home, we have constructed three typical families. In these hypothetical but typical families, all the parents are of similar ages and each family has two children, two years apart. All have their first child when the father is 31 years and the mother is 30.

The families differ, however, in the assumed education levels and earnings of the fathers; in the education levels and workforce participation of the mothers; and in the families' use of education and child care services as their children grow up.

In essence, Family A portrays a typical 'Aussie battler' family, where both parents did not go past Year 12 of school; where the mother works part-time after the youngest child reaches the age of six, and where both children attend government schools and do not go on to university.

Family C portrays a family at the other end of the education and work spectrum, with both parents having a university degree and working full-time and both children attending private schools and then university.

Family B fits in between the other two, with both parents working; the mother part-time once the youngest is in primary school and full-time once high school is reached. The children attend government schools and then go on to university. Family income and the costs of the children are very different for these three families. Full details about the assumptions made about each family can be found in the Technical Notes at the end of the report.

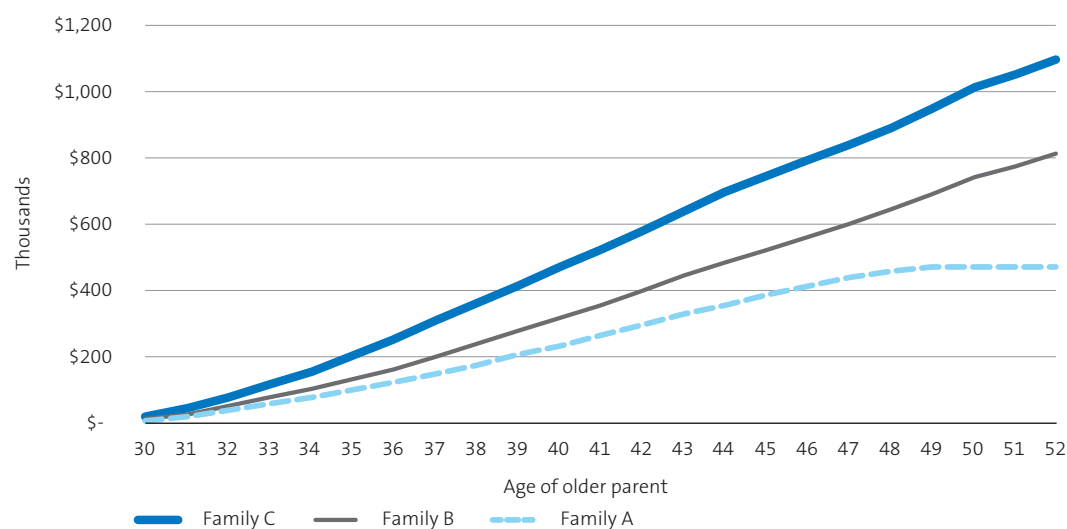
Parents' income profiles for each year they spend raising children have been calculated from the incomes of similar households in the 2009-10 Housing Expenditure Survey collected by the ABS.

When the costs of raising children were added up across the years, we found that they will cost our typical families between \$474,000 and \$1,097,000 (Figure 5).

By the time all the children finish primary school they will have cost between \$327,000 and \$641,000, and this will grow to between \$474,000 and \$948,000 when they reach the end of secondary school.

For Family A this is the point where their child costs journey ends, as their children finish their education with Year 12 and join the workforce. For the other two families, the children continue on to university where they spend a further three years – and, as a result, the costs swell to \$812,000 and around \$1,097,000.

Figure 5 – Estimated cumulative costs of raising two children from birth until leaving home



Source: NATSEM calculations

Note: Figures are in 2011-12 dollars

Where it all goes

So what are parents spending this money on? While many of the costs associated with children are obvious – food, toys and education – others such as additional energy and transport costs might be less apparent. Table 6 breaks down the costs of children from birth to leaving home into detailed items. The estimates are for families with two children.

Table 6 – The lifetime shopping bill for two children, from birth until they finish their education, in 2011-12 dollars

Expenditure item	Low income	Middle income	High income
Transport	97,184	158,955	184,731
Food	88,995	143,148	167,856
Recreation	53,865	100,982	102,046
Housing	59,898	77,996	102,103
Other	27,472	55,700	49,891
Child care	6,700	53,656	91,483
Furnishings & equipment	29,812	50,425	37,922
Clothing	33,933	45,604	61,272
Education	22,076	44,644	191,608
Health	25,440	44,560	74,709
Services & operations	15,092	18,960	14,377
Fuel and Power	13,813	17,413	19,280
Total	474,280	812,043	1,097,278

Source: NATSEM calculation from 2009-10 Survey of Income and Housing Basic Confidentialised Unit Record File.

Note:

Values are in 2011-12 dollars. Lifetime earnings estimates are derived from all employees, including those working part-time.

Low income households spend approximately \$89,000 on food for their two children from birth until they leave home. Middle income households spend \$143,000 on food for their children; high income households spend \$167,000.

Although low income households spend much less on food than higher income households, it takes up a much larger proportion of the total household child-related expenditure. Food makes up 19 per cent of Family A's overall spending on their children, but only 15 per cent of Family C's expenditure.

Generally, low income households will spend a higher proportion of their income on necessities than high income households, and the same is true when it comes to spending on children. Thirteen per cent of Family A's budget goes towards housing, an essential item, compared with 10 per cent of Family B's budget and only 9 per cent of Family C's budget.

Transport is the biggest contributor to the costs of children for Family A, who spend \$97,200 or 20 per cent of their income on transport. Family B also spends 20 per cent of their income on transport, or \$159,000. For high income households, the costs of upgrading to a bigger car that takes child seats, tickets for the school bus and running the kids to sport takes \$184,000 or 17 per cent of the budget.⁸

⁸ Changes to the ABS Household Expenditure Survey used in this report mean that comparisons for transport costs can't be made with our previous child cost reports. The ABS has included a greater 'scope' for this item which has significantly increased the child costs related to transport.

Any parent will tell you that children seem to grow at an astonishing rate, and seem to need new clothes and shoes often. Family A spends \$33,900 on clothing over their children's lives at home, Family B spends \$45,600 and Family C spends \$61,300. For each household, this works out at roughly 6-7 per cent of the total household budget.

Perhaps surprisingly, Family B spends a higher proportion of their budget on recreation (12 per cent) than either Family C (9 per cent) or Family A (11 per cent). Family B spends \$101,000 on movie tickets, toys, dance lessons and zoo trips, only \$1000 less than Family C, but almost twice as much as Family A, which spends only \$53,900.

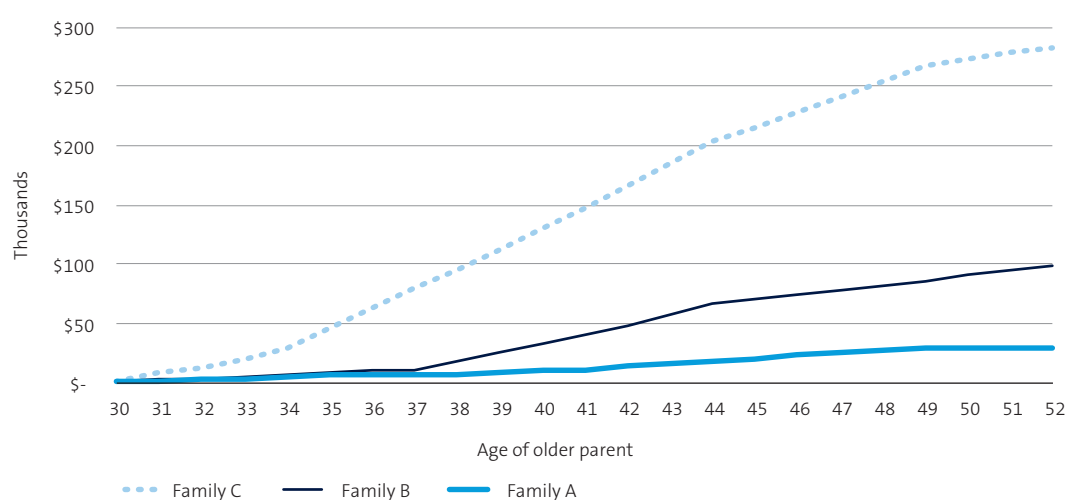
Family C spends a lower share of its income on transport than Family B or Family A, less on clothing (6 per cent) than Family A (7 per cent) and less on recreation, housing and food. So what is Family C spending all its money on?

The answer is child care, education and health care. Family C spends 7 per cent of its budget on health care, compared to 5 per cent for Families A and B; which equates to Family C spending one and a half times more on health care in dollar terms than Family B, and nearly three times as much as Family A. This may be due to greater use of private health care among higher income households, or low income households' access to a Health Care Card.

High income Family C spends a whopping 26 per cent of its budget on child care and education, compared to Family A that spends 6 per cent and Family B that spends 12 per cent. In dollar terms, high income families spend almost ten times as much on their child's education and child care than a low income family. These parents tend to require more child care as both parents are likely to work while the children are young and return to full-time work sooner, and the children are more likely to attend private schools.

The assumption that Family C's children attend private schools, while Family A and B attend public schools, and then attend university, is driving the large education costs of Family C.

Figure 6 – Cumulative education and child care costs of two children



Source: NATSEM calculations

Education expenditure is an exception to the rule of expenditure decreasing as a proportion of total income as income increases.

Education expenditure is an exception to the rule of expenditure decreasing as a proportion of total income as income increases. Expenditure on education takes up 21 per cent of Family C's child costs, while it makes up 9 per cent of Family B's and just 6 per cent of Family A's.

This is due to the assumption that the children in Family C attend private schools, and then go on to university. Using the latest Household Expenditure Survey and inflating for known consumer price increases for education parents of children attending independent (private) schools spent an average of \$216 per week on fees, compared to an average of \$12 a week for government schools and \$81 for Catholic schools. With fees of this level it is unsurprising that education fees add up to be very substantial for parents over the years. This can be clearly seen in Figure 6.

To some extent the costs to parents of sending their children to university are reduced by the Higher Education Contribution Scheme (HECS). While there are substantial costs associated with attending university other than fees (for example text books, travel and possibly accommodation fees and the income foregone while participating in full-time study), HECS allows students to defer payment of their fees until after they graduate and begin to earn an income over \$49,096 (ATO, 2012).

Thus while many parents will face substantial and unavoidable costs in supporting their children while they study, for those that choose or are not able to further help by paying their children's university fees up-front, part of the costs will eventually be paid by the children themselves, after they graduate and join the labour force.

Are children costing more?

Overall, the data suggests that the cost of raising children has increased considerably since the previous AMP.NATSEM reports on the subject, although some differences in assumptions and methodology do make such comparisons harder to make. Most of the major costs involved with raising children have increased since the previous two reports.

Also, in the five years to 2012, average household incomes increased by 25 per cent.⁹ This increase in income, as well as government policy centred around allowing households to meet the increasing costs of children, also allowed them to spend more on their kids – private education, more child care, nicer clothes, some extra toys or piano lessons. In part, parents are spending more on their kids because they can.

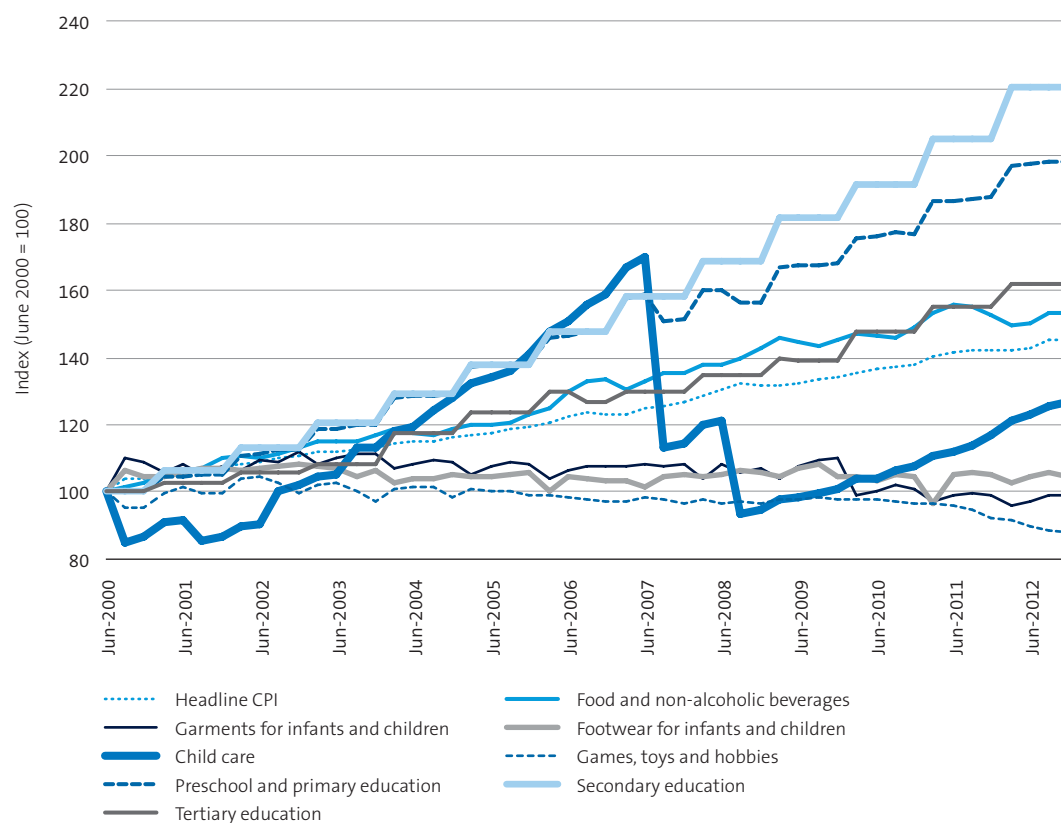
The growth in wages does not explain all the increase in the costs of raising children. Figure 7 shows the increase (or decrease) in the cost of child-related goods compared to the overall Consumer Price Index (CPI) from June 2000 to December 2012. The cost of education has increased sharply and food has increased steadily since 2000, while the cost of children's clothes and footwear, along with games, toys and hobbies, grew at a slower rate or declined. The dotted blue line through the middle represents the CPI.

One odd-looking observation in Figure 7 is child care, represented by the thickest dark blue line. The cost of child care increased at a faster rate than any other good from 2000 to 2007 due, in part, to more mothers working, leading to strong demand for child care (Payne et al 2007), then drops sharply, then continues its rapid ascent. This sharp drop is due to changes in the Child Care Benefit and rebate, which increased the benefit available and allowed parents to receive their child care rebates sooner (see http://www.budget.gov.au/2007-08/at_a_glance/html/at_a_glance.htm), resulting in a fall in the cost of child care.

The cost of education has increased sharply and food has increased steadily since 2000

⁹ Using per capital household income from the ABS Household income account, 5206.0.

Figure 7 – Comparing price growth in child related goods, ABS CPI 2000-2012



Source: NATSEM calculations from ABS 2013, Consumer Price Index, 6401.0

Note: June 2000=100

Both primary and secondary education costs have increased enormously, with preschool and primary education almost doubling in cost, and secondary education more than doubling in cost – no wonder the richest families spend over a quarter of their budget on schooling. The costs of tertiary education, however, have increased at a slower rate, although faster than the CPI.

To some extent, the burden on families has been reduced by the costs of some goods staying the same or falling. The high Australian dollar has meant that imported goods have become cheaper. Most clothing, footwear, games and toys sold in Australia are made overseas. The cost of children's clothing has fallen since 2007, as has the cost of games, toys and hobbies, while the cost of children's shoes has remained roughly the same. A large component of the cost of raising children is feeding them. The costs of food have increased broadly in line with the CPI.

Conclusion

From birth to leaving home, the greatest costs associated with raising children are transport and food.

While children bring enormous joy to families they certainly leave a dent in the family budget. It is estimated that from birth to leaving home, raising two children in a typical, middle income family, will cost around \$812,000. Lower income families are expected to spend around \$473,000 raising their children, while a high income family will outlay close to \$1.1 million dollars.

The government chips in significantly for the low income family providing, on average, \$274 per week in assistance while the financial assistance offered to a middle income family is much less at just \$83 per week. For a high income family the assistance drops to virtually nothing.

Compared to our previous report in 2007 the main drivers of the escalation in the cost of raising children have been increases in child care and education, recreation and transport costs. Education costs have risen significantly with parents paying much higher prices for private education and choosing private education over public education in greater numbers.

With a growing number of couples choosing to juggle their work commitments around child care the decision on just how many hours to work is important. Usually this decision is whether or not the mother works and if so how many hours. Our analysis of the expected take-home pay for a secondary earner on average hourly wages is that the rewards are very small financially once lost government benefits, tax and child care costs are accounted for. A secondary earner in a typical middle income household has been shown to keep only around 45 cents in the dollar for full-time work on average wages. The transition from part-time to full-time is particularly taxing with an effective pay rate of around \$3.74 per hour. By increasing their hours from 33 to 38 hours the spouse actually loses money.

This report analyses what parents are actually spending on their children. The expenditure of families with higher incomes on their children is higher in dollar terms. However, as income decreases the proportion of gross income that families devote to their children is substantially greater. After a first baby, the 'marginal' costs of each younger sibling generally decrease in dollar terms. A low income family with three children spends around 41 per cent of their total income on their children. The report also finds that the cost of older children are significantly more expensive than younger children. A child aged 15 to 17 is about three times more expensive than a child aged 0-4. Older children are more expensive, however, they often have part-time jobs to help offset some of these additional costs.

From birth to leaving home, the greatest costs associated with raising children are transport and food. Middle income couples add an additional \$143,000 to their grocery bill and an extra \$159,000 on transport as they raise two children. Another major cost of children is education, however, this very much depends on the choice parents make on whether they send their children to private or public schools.

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 children up until they finish their education – at which point we have assumed they leave home. 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 on 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 (for example, the forgone earnings due to mothers working part-time rather than full-time). Such costs can be very substantial (see Breusch and Gray, 2004).

The lifetime costs of children were calculated by constructing three hypothetical families to represent typical Australian families. The partners in all families marry in their late

twenties and their first child is born when the wife is 30 years – based on the data for the median age of first time married mothers in Australia (ABS, 2005, p. 13). 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 which is then, for two of the three families, followed by three years at university.

As the families progress through their lifetimes 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 their incomes would have been. This estimate used an equation that considered the age of each parent, their qualifications and their labour force status to predict their total family income, using data from the Australian Bureau of Statistics 2009-10 Household Expenditure Survey. In simulating the families’ lifetimes, we made different assumptions about the parents’ labour force participation and other key aspects of their family lives. These are set out in table A1.

Table A1 – Key assumptions in the hypothetical families

	Parents’ highest qualification	Parents’ labour force participation	Paid child care usage	Children’s education
Family A			None	Government schools to Year 12
Father	Year 12	Full-time, all years		
Mother	Year 12	Not working until youngest child is 6 years, then works part-time		
Family B			Some used when children aged between 6 and 12 years	Government schools to Year 12 and then 3 years of university
Father	University	Full-time, all years		
Mother	Diploma	Not working until youngest child is 5 years, then works part-time until youngest is 11 years then works full-time		
Family C			Used in all years to age 12, except when children are under 1 year	Private schools to Year 12 and then 3 years of university
Father	University	Full-time, all years		
Mother	University	Full-time, except when children are under one year		

Source: NATSEM calculation from 2009-10 Survey of Income and Housing Basic Confidentialised Unit Record File.

Note: In 2007, Issue 18 of the AMP.NATSEM Income and Wealth Series estimated the average cost of raising two children from birth to 20 years in Australia to be about \$537,000 for a ‘hypothetical’ family where both children attended standard schools; dad worked full-time; and mum stayed at home from the birth of the first child until that child turned four years old, worked part-time from then until the second child was aged five years, and then worked full-time thereafter. This typical family does not have exactly the same characteristics as any of the three families outlined above.

All costs are expressed in December 2012 dollars, with the estimated costs shown in the 2009-10 Household Expenditure Survey being inflated by movements in the Consumer Price Index, as projected by NATSEM to December 2012. 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 therefore 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.

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.

Economists have devoted many hours 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 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 2214 households from the 2003-04 Household Expenditure Survey unit record file 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 aged pensioner couple with a working age couple with a young child. And we also excluded other couples whose incomes would have been difficult to be captured accurately (eg. the self-employed). The intent was 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. We have previously made attempts to estimate such costs for sole parent families but find the methodology cannot predict the costs of sole parents with sufficient accuracy, because of the lack of sole parent families in the middle and upper ends of the income spectrum.

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 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 standard approach is (Henman 2005) (also see 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 an earlier 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).

Acknowledgements

The author would like to thank Richard Percival (NATSEM PhD student and joint author of earlier versions of the cost of kids AMP Report) for his valuable assistance in developing the computer code and evaluating the results. We would also like to thank Marcia Keegan, Rebecca Cassells and Matthew Toohey for their assistance with the paper. Any remaining errors and omissions are my own.

References

- Australian Government 2012, *Australian Government Budget 2012-13: Budget Paper number 1*, Canberra.
- ABS, 2011, Household Income and Income Distribution, Catalogue No. 6523.0, Canberra.
<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6523.02009-10?OpenDocument>
- ABS, 2012, Australian National Accounts, Catalogue No. 5206.0, Trend Time Series, Canberra.
- ABS, 2012b, Consumer Price Index Australia, Catalogue No. 6401.0, Tables 7a to 7l, Canberra.
- Australian Taxation Office (ATO), 2012, 'Higher Education Loan Programme (HELP) and HECS repayment thresholds and rates' <http://www.ato.gov.au/individuals/content.asp?doc=/content/8356.htm>
- Breusch, T. and Gray, E., 2004, 'New Estimates of Mothers' Forgone Earnings using HILDA data', *Australian Journal of Labour Economics*, Vol. 7, No. 2, June, pp 125-150.
- Cassells, R. and Harding, A., 2007, 'Generation whY', AMP.NATSEM Income and Wealth Report Issue 17, July.
<http://www.amp.com.au/group/3column/0,2449,CH5268%255FNI74069%255FSI3,00.html>
- 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.
- Department of Family and Community Services (FACS), 2005, 2004 Australian Government Census of Child Care Services, Canberra, as cited in Lymer et al 2006.
- Harding, A., Vu, QN., Payne, A. and Percival, R., 2006a, 'Trends in Effective Marginal Tax Rates 1996-97 to 2006-07', AMP. NATSEM Income and Wealth Report Issue 14, September.
<http://www.amp.com.au/group/3column/0,2449,CH5268%255FNI74069%255FSI3,00.html>
- Harding, A., Payne, A. and Vu, QN., 2006, 'Tomorrow's Consumers', AMP.NATSEM Income and Wealth Report Issue 15, December.
<http://www.amp.com.au/group/3column/0,2449,CH5268%255FNI74069%255FSI3,00.html>
- Harding, A. and Percival, R. (1999), 'The Private Costs of Children in 1993-94', *Family Matters*, No 54, Spring/Summer, pp. 82-87.
- Henman, P., 2005, Updated Costs of Children using Australian Budget Standards, Department of Families, Community Services and Indigenous Affairs report,
[http://www.facs.gov.au/internet/facsinternet.nsf/via/child_care/\\$File/costs_of_children.pdf](http://www.facs.gov.au/internet/facsinternet.nsf/via/child_care/$File/costs_of_children.pdf).
- 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.
- Payne, A., Harding, A., Vu, QN. and Percival, R., 2007, 'Another day, another dollar? The effective marginal tax rates and labour force participation of partnered mothers in Australia', Paper presented to the 36th Australian conference of economists, Hobart, September.
- Percival, R. and Harding, A., 2002, 'All they need is love... and around \$450,000: the Costs of Children in Australia Today', AMP.NATSEM Income and Wealth Report Issue 3, October.
<http://www.amp.com.au/group/3column/0,2449,CH5268%255FNI74069%255FSI3,00.html>
- Percival, R. and Payne, A, Harding, A, Abello, A, 2007, 'Honey I Calculated the Kids... it's \$537,000', AMP.NATSEM Income and Wealth Report Issue 18, December 2007.
<https://www.amp.com.au/wps/amp/au/FileProxy?vigurl=%2Fvgn-ext-templating%2FfileMetadataInteface%3Fids%3D42c7c158dd8c2210VgnVCM10000083d20d0aRCRD>
- 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.

Recent AMP.NATSEM Income and Wealth Reports

- Baby Boomers - Doing it for themselves (March 2007)
- Generation whY? (July 2007)
- Honey I calculated the kids... it's \$537,000 - Australian child costs in 2007 (December 2007)
- Wherever I lay my debt, that's my home - Trends in housing affordability and housing stress 1995–1996 to 2005–2006 (March 2008)
- Advance Australia Fair? - Trends in small area socio-economic inequality 2001–2006 (July 2008)
- What price the clever country? The cost of tertiary education in Australia (November 2008)
- She works hard for the money - Australian women and the gender divide (April 2009)
- Healthy, wealthy and wise? - The relationship between health, employment and earnings in Australia (July 2009)
- Don't stop thinking about tomorrow - The changing face of retirement – the past, the present and the future (November 2009)
- Saving Tomorrow – The saving and spending patterns of Australians (April 2010)
- The Pursuit of Happiness (July 2010)
- Calling Australia Home (November 2010)
- Little Australians. Differences in Early Childhood Development (April 2011)
- The Great Australian Dream - Just a Dream? (July 2011)
- Race against time: How Australians spend their time (November 2011)
- Prices These Days! The Cost of Living in Australia (May 2012)
- Smart Australians - Education and Innovation in Australia (October 2012).

All the above reports are available from
www.amp.com.au/ampnatsemreports

This report was written by Ben Phillips from the National Centre for Social and Economic Modelling (NATSEM) at the University of Canberra and published by AMP. This report contains general information only and although the information was obtained from sources considered to be reliable, the author, 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.

Suggested citation: Phillips B, Li, J, Taylor, M (2013), Cost of Kids: The Cost of Raising Children in Australia.
AMP.NATSEM Income and Wealth Report, Issue 33, May 2013, Sydney, AMP



This document has been printed by Blue Star Print (an FSC® certified printer) using FSC® certified paper which is made from elemental chlorine free pulp derived from well-managed forests and other controlled sources, and is manufactured by an EMAS and ISO 14001 certified mill.

