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Could a Universal Family Payment improve gender equity and reduce child poverty in Australia? A microsimulation analysis

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Abstract

The Australian income tax and transfer system has undergone considerable reform since the mid 1980s. As a number of commentators have pointed out, one impact of reforms to cash transfers for families, as well as of some reforms to direct taxes, has been the evolution of a defacto system of family taxation, with negative consequences, in terms of incentives to earn (and consequent 'deadweight loss'), for parents, and especially for secondary earners in couple families with children. In this paper, we use a new Australian microsimulation model, ATM, built on the EUROMOD platform to examine the extent to which policies to support families with children through the tax and transfer system have been achieved at the expense

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[1] This paper uses the Australian Tax-Transfer Model (ATM) which has been constructed using the EUROMOD platform (4.9). EUROMOD is continually being improved and updated and the results presented here represent the best available at the time of writing. Any remaining errors, results produced, interpretations or views presented are the authors' responsibility.

of gender equity, and how the system could be better designed to achieve child poverty reduction with gender equity. Our analysis suggests that the institution of a universal family payment that would both improve incentives and reduce child poverty is potentially affordable, even before reduction of 'deadweight loss' under the current system is taken in to account. However, such reforms as are modelled here would be politically difficult, since the main gainers would be families with children in the top half of the income distribution, and the main losers would be taxpayers who do not have dependent children.

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1. Introduction

In 2012, the Grattan Institute published an influential report on 'game changers' for increasing rates of economic growth in Australia (Daley, 2012). The report focuses on just three issues which it estimates could together contribute more than $70 bn. to the Australian economy: tax reform, in particular broadening the GST base and reducing rates of income tax and corporate tax; increasing labour force participation among older Australians, and increasing labour force participation among mothers with dependent children. The report states

> Removing disincentives for women to enter the paid workforce would increase the size of the Australian economy by about $25 billion per year. The most important policy change is to alter access to Family Tax Benefit and Childcare Benefit and Rebate so that the second income earner in a family — usually, but not always, a mother — takes home more income after tax, welfare and childcare costs. (Daley, 2012, p.38)

The Grattan institute's recommendation is supported by the OECD (2012), which also argues that reducing the disincentives faced by second earners is an important step in ensuring strong, sustainable and balanced economic growth in the future. The work of Patricia Apps and Ray Rees (Apps, 2006; Apps and Rees, 2010), cited extensively in the Grattan Institute report, points to a number of anomalies from equity, efficiency and optimal tax theory perspectives, in the current system of taxes and transfers as it applies to first and second earners in couples with dependent children; these flow from the high effective marginal tax rates (EMTRs) that families in the middle of the income distribution face as means tested family payments are withdrawn while they face increasing income tax rates. Recent reforms announced in the 2012 and 2013 budgets that have tinkered with family payments have not changed the fundamental aspects of the tax and transfer system as they impact on families with children, and therefore the criticisms aired above are as relevant now as they were when they were made.

Neither Apps and Rees, nor the Grattan Institute, deal extensively with possible tax and transfer system configurations that would promote greater equity and efficiency for middle income couples with children. However, one possible solution hinted at by Apps and Rees (2010) is to return to a system of universal child payments and individual taxation as existed in Australia in the early 1980s. While a consultation paper for the review of 'Australia's Future Tax System' (the Henry Tax Review) expresses concerns about the high cost of returning to a universal system of family allowances, Apps and Rees (2010) argue that the impact of tax structures should be measured as the trade off between the fairness of the

distribution of tax burdens across families against the deadweight welfare losses associated with work incentives and not just the costs associated with implementing these structures. Their analysis suggests that a second earner in full-time employment in a two-earner family could contribute nearly twice as much in tax revenue as a second earner in part-time employment in a two-earner family.

Our analysis begins where Apps and Rees, and the Grattan Institute, leave off. In this paper, we use a static microsimulation model to simulate the immediate fiscal, distributional and incentive effects of developing a tax-transfer system for Australian families with children where family payments are universal and tax structures are individual. We do not propose returning to the tax-transfer system that existed in the early 1980s, but instead propose a more contemporary version that does not tinker greatly with existing income tax thresholds and rates, and maintains family payments at roughly the same levels as families can receive under the current means-tested system.

However, our focus is not only on incentives for couple families in the middle of the income distribution, but also on income adequacy for lone parent and couple families on low incomes. Our question therefore is: can the Australian tax-transfer system as it impacts on families with dependent children be reformed with the introduction of a universal child payment in such a way that incentives are improved and income adequacy maintained (or indeed improved) for families on low incomes?

Our answer is a qualified 'yes'. First, even before the reduction in deadweight losses is taken into account, a fairly generous universal child payment could be seen as affordable. Second, such a scheme would greatly reduce EMTRs faced by second earners in couples. Third, income poverty would not necessarily increase with a universal scheme; indeed, poverty among children in lone parent families could be substantially reduced. However, the biggest 'morning after' gainers from the introduction of a universal scheme would be families in the middle and upper middle of the income distribution, and the biggest losers (if the reform were confined to income taxes and transfers) would be single people and couples without dependent children who would in most circumstances have to pay increased income taxes, but who would receive no benefit from the reform.

Our analysis is organised as follows. Section 2 describes Australia's current tax and transfer system as it impacts on families with children. Section 3 goes on to describe the impact of the current system on EMTRs, focusing in particular on those faced by second earners in families with children. The microsimulation model used in this analysis, the Australian Tax-Transfer Model (ATM), and associated microdata, are discussed in Section 4, while alternative tax and transfer systems incorporating universal child payments are considered in Section 5. Section

6 concludes with a discussion of the implications of moving towards a system of universal child payments in Australia.

2. Description of the Current System

Family Payments

Up until 1987 family allowances in Australia were universal for children under the age of 16, although rates of payment were modest. Following Prime Minister Bob Hawke's pledge in 1987 to eliminate child poverty by 1990, family allowances underwent a series of reforms. Payments for children became much more targeted, where assistance to high-income families was reduced, and assistance to low-income families was made more generous. Following the introduction of means testing in 1987 and tighter income and assets tests from 1994, coverage of family allowances declined from nearly 100 per cent to around 79 per cent of all children by the late 1990s (Whiteford et al, 2011).

Expansion of family payments continued through the late 1990s and early 2000s under the stewardship of the Liberal-National Party coalition under John Howard. Family Tax Benefit Part A (for all families, subject to a means test) and Part B (for single earner families, subject to a means test only on the income of the second earner) were introduced in July 2000 as part of the A New Tax System initiative, which also saw the introduction of a Goods and Services Tax (with family payments increased to compensate for this). Child Care Benefit was also introduced to assist with the costs of child care. Part of the reforms involved giving families the choice of whether assistance was received through cash payments or through the tax system. Not only were rates of payment increased under the reforms, but the rates at which payments were withdrawn under the means tests as incomes increased were reduced. By 2003, the Australian system of family allowances was among the most generous in the OECD, with the value of payments equating to 2.5 per cent of GDP, against an OECD average of less than two per cent (Whiteford et al., 2011).

By 2012, the family allowances system introduced under A New Tax System in 2000 was still largely in place. From 2008, however, the generosity of the system was gradually wound back – through the non-indexation of annual lump-sum additions, the freezing of some income thresholds that further reduced eligibility to FTB Part A at the middle as well as at the top of the income distribution, a switch in uprating all other family payments from an earnings to a prices index, and the restriction of eligibility to FTB Part B to families where the main earner's income was $150,000 per year or less (this resulted in about 3 per cent of families losing entitlement to FTB-B). In 2012, however, the government appeared to have a volte face – it introduced a Schoolkids Bonus for FTB-A recipients to replace an education tax rebate, benefitting mostly low income families, and locked in an exceptional increase in

FTB-A from July 2013. The SchoolKids Bonus survived the Budget of May 2013, but the exceptional increased in FTB-A was scrapped.

Income Tax

Since the 1980s there have been a series of income tax cuts through changes in the tax schedule. However, these cuts have been infrequent, and because income tax thresholds and allowances are not automatically indexed, average taxes have tended to increase over time. Proclaimed cuts in income tax rates and increases in thresholds have therefore tended to only partly offset the earlier less visible tax increases. The top income tax rate was 60 per cent in 1983-84, 47 per cent in 1995-96, and 45 per cent in 2012-13. In July 2012 the government introduced a carbon tax – in effect a tax on a limited number of large companies (especially energy companies) with a high carbon footprint. To offset the expected impact of the carbon tax on prices of necessities, the low tax threshold was increased from $6,000 to $18,200. Income tax rates at the lower end of the schedule were increased from 15% to 19% for taxable income between $18,201 and $37,000 and from 30% to 32.5% on taxable income between $37,001 and $80,000. The upper end of the tax schedule remained unchanged. In effect, these changes resulted in modest gains for people earning up to $80,000, but were mostly neutral for higher income earners.

There are also a range of tax offsets available for some pensioners and low wage earners. In particular (and most relevant for the present analysis) the Low Income Tax Offset (LITO) reduces the tax burden faced by individuals on low income. In 2012-13, the LITO effectively raises the lower income tax threshold from $18,200 to $20,542 for those who are eligible for the rebate, which is withdrawn at a rate of 1.5 cents in the dollar on earnings over $37,000.

3. Impact of the current tax and transfer system on EMTRs

The tax-transfer system in Australia needs to be seen as an integrated whole. Eligibility to payments and liability for taxes depends on a wide range of factors, for example, a person's age, whether they are partnered, their partner's income, number and ages of dependent children, use of child care, housing tenure, labour force status and earnings, and disability status. As a person's income or circumstances change, her eligibility for payments and liability for taxes can change. This raises a number of important issues that are well understood in economic theory. For every change that a person has control over (for example, whether to increase their hours of work), they have to make a fairly complex calculation about how many cents in that dollar they will lose in tax liabilities or in reductions in means-tested transfers – their *effective marginal tax rate* (EMTR). In systems where liability for taxes and eligibility for benefits depends on family income, this calculation can be further

complicated by the possibility that the EMTR faced by a woman who is thinking of increasing her hours worked could be different to the EMTR faced by her partner. And in systems where EMTRs are derived from both changes in eligibility to means tested payments and changes in liability for income taxes, the commonly understood principle of progressive taxation, where EMTRs as well as total taxes increase with income, can be inverted, so that people on low incomes can face high EMTRs.

This is what Apps (2006) and Apps and Rees (2010) find in their analysis of the Australian tax and transfer system as it applies to couples with dependent children. In her analysis of the 2006-07 system (essentially the same as the system in 2012-13) Apps (2006) argues that two earner couples earning $35,000 each per year pay close to the same amount of net tax (taking into account FTB received) as a family where only one parent works and earns $70,000, while the other works full time in the home. She argues further that families with dependent children located at the middle of the distribution face the highest EMTRs, and that second earners can face even higher EMTRs than their partners. Apps and Rees (2010) argue that it is in effect a false dichotomy to distinguish an income tax system from a benefits system; they are both part of a tax system that comprises a series of lump sums and marginal tax rates, where benefits paid can be withdrawn at a particular rate as other income increases, and income earned is taxed at a particular rate as it increases. They state that the tax-transfer system in operation in Australia in the early 1980s was largely individual, with a small universal family allowance and fully individual taxation; and progressive, with EMTRs generally increasing with income. In contrast, they suggest that the system in place the early 2000s is really a system of family taxation, since both partners in a couple have to take into account not only their own circumstances, but also those of their partner, when they consider the net gain from extra hours worked. Echoing the arguments of others (Brennan and Cass, 2003), they claim that this is a gendered system that discriminates in particular against women, who comprise the majority of second earners. Apps and Rees argue moreover that the current system is regressive, leading to high disincentives for (predominantly) women with dependent children to earn more, leading to deadweight losses – lower income overall and lower taxes to government; a lose-lose situation, in other words.

Figure 1 shows how EMTRs change as taxable income increases in the case of a couple with two school going children aged under 13 years and one primary earner in 2012-13. Note that FTB is not included in taxable income, but it adds $10,300 to the family's income when their taxable income is below $47,815. As noted above, the first $18,200 income is untaxed. The Low Income Tax Offset (LITO) effectively extends the income tax free area to $20,543. Income above this level and up to $37,000 is taxed at 19 per cent. From $37,000 income is taxed at 32.5 per cent, and the LITO is withdrawn at a rate of 1.5 per cent, giving a total EMTR of 34 per cent. The family becomes liable for medicare payments (partially means

tested on the basis of family income) when the main earner's taxable income reaches $44,268, adding a further 1.5 per cent to EMTRs on income earned above this level. On reaching $47,815, withdrawal of FTB-A from its maximum amount kicks in, bringing the EMTR to 55 per cent. This falls slightly when the withdrawal of the LITO ceases at $66,667, but increases to 58.5 per cent from $80,000, as the higher income tax rate kicks in. The EMTR falls rather dramatically on income earned between $91,177 and $98,112. Over this income range, the family receives 'Base Rate' FTB-A, which only begins to be withdrawn, at 30 per cent, when taxable income rises above the latter amount. This pushes up the EMTR to 68.5 per cent until entitlement to FTB-A (and the SchoolKids Bonus) is exhausted when taxable income reaches about $112,000. Income between about $112,000 and $113,000 has an implicit EMTR of over 130 per cent as the family is no longer entitled to the $820 SchoolKids Bonus when it loses entitlement to FTB-A. Similarly, income between $150,000 and $153,330 is subject to an EMTR of above 130 per cent when the family loses entitlement to FTB-B. Thenceforth, taxes are withdrawn only at the marginal income tax rate (37 per cent plus the medicare levy, rising to 45 per cent on income above $180,000).

Figure 1   EMTR for couple with two schoolgoing children aged under 13 years and one earner, 2012-13
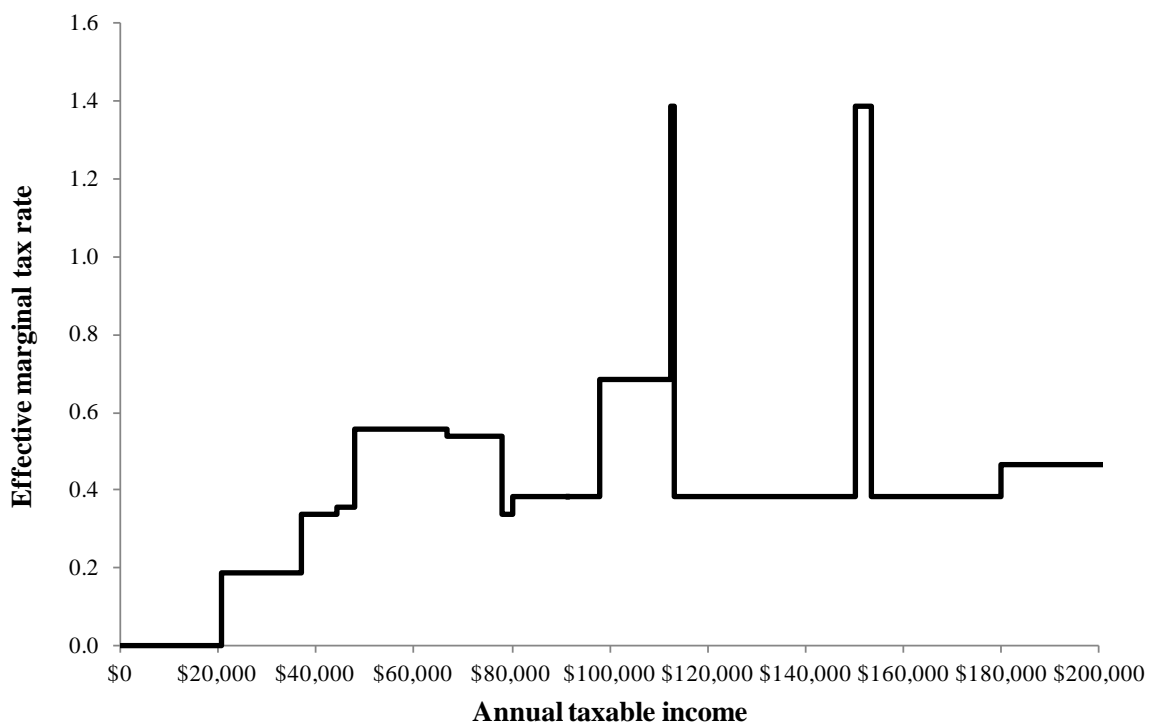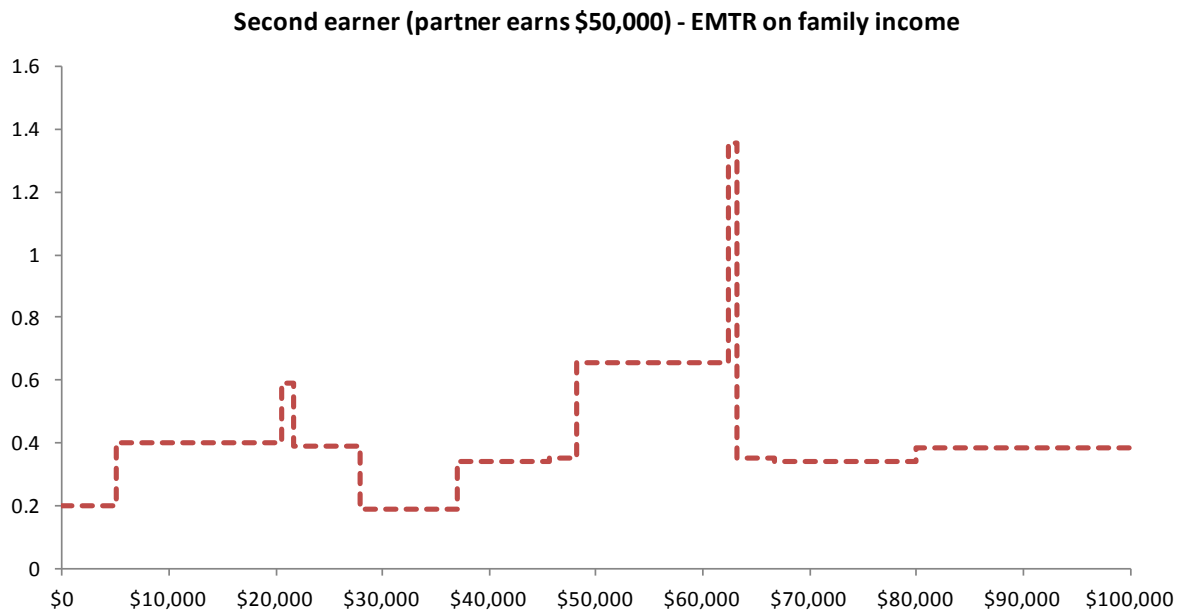

Source: authors' calculation.

Two features are worth highlighting in this configuration of EMTRs. First, as Apps and Rees (2010) point out, EMTRs over the income range form an inverted U shape, with highest

levels in the middle income ranges. Second, and more important in terms of disincentives to earn more, if one were to argue that EMTRs above 50 per cent were particularly problematic (given that this rate is higher than the highest marginal tax rate on Australian personal incomes), these stretch over a considerable income range, from below $50,000 to $112,000 – the range into which a considerable proportion of earnings in Australia fall.[2] The two very high 'chimneys' further to the right in the graph are probably not problematic for the primary earner from an incentives point of view, since they occur over very narrow ranges of income.

Figure 2 plots EMTRs for a two earner-couple with two school going children aged under 13 years. To illustrate the effect of the current joint taxation system on the second earner's income, the second earner's EMTRs are plotted where the primary earner's income is fixed at $50,000 per annum. EMTRs faced by second earners are in some ways worse than those faced by primary earners, and in some ways better. Assuming the first earner has an income of $50,000 per year, the second earner will lose 20 per cent of the first dollar that she earns as FTB-A is withdrawn. Once her earnings increase to about $3,000, she begins to lose 40 cents in every extra dollar earned with the combined 20 per cent tapers on both FTB-A and FTB-B. However, the income range $28,000 to $48,000 represents something of a 'sweet spot' for the second earner. Once her income reaches around $20,000 her eligibility for FTB-B is exhausted, so the 20 per cent FTB-B taper on her income no longer applies. At around this income level however, she becomes liable for income tax at a rate of 19 per cent. Once her income reaches $28,000 the family only becomes eligible for the base rate of FTB-A, meaning that the 20 per cent taper on FTB-A no longer applies until her income reaches $48,000, although income tax increases when her income reaches $37,000.

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[2] Median earnings in May 2012 for all employees were $963 per week, or just over $50,000 per year. Earnings at the 90th percentile were $2073 per week, or just under $110,000 (ABS, 2013, Employee Earnings and Hours, Australia, May 2012, ABS Cat. No.6306.0).

Figure 2   EMTR for second earner in a couple with two schoolgoing children, first earner has $50,000 income, 2012-13

Second earner (partner earns $50,000) - EMTR on family income

Source: authors' calculation.

On the other hand, between the income levels of $48,000 and $63,000, she faces both an income tax rate of 32.5% and a withdrawal rate from FTB-A of 30 per cent, until entitlement to FTB-A (and the SchoolKids Bonus) is exhausted. Over this income range, depending on the earnings of their partners, it seems likely that EMTRs may play a role in discouraging second earners from seeking to earn more. However, the employment and other circumstances of people with children vary considerably. We therefore use a microsimulation model to examine the impact of the current tax and transfer system, and some alternative systems, in greater detail.

The effects of high EMTRs can be seen in Figure 3, which shows the percentages of partnered men and women who work different hours, according to the ages of their youngest children. This is an updated and simplified figure similar to that presented by Apps and Rees (2010). It shows how the proportion of women engaged in full time work is low where there are dependent children of any age. The rate of full time work for women whose youngest child is aged 5-17 is somewhat higher than the rate for women whose youngest child is aged 0-4, but still considerably less than the rate of full time work for men. The purpose of any reform to the tax and transfer system, according to Apps and Rees (2010), and Daley (2012) should be to increase employment among these women through improving their incentives to work.

Figure 3   Hours worked by partnered men and women, by age of youngest child (per cent)

No dependent children	Youngest child aged under 5 years	Youngest child aged 5-17 years
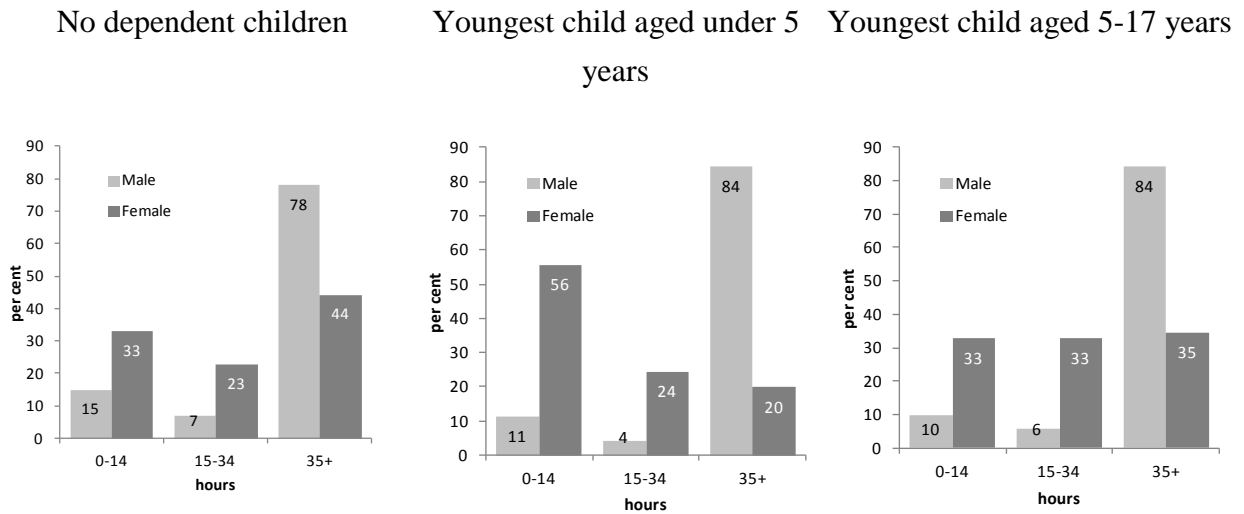
Source: Survey of Incomes and Housing, 2009-10, authors' calculations.

4. Model and Data

The Australian Tax-transfer Model (ATM) is a static microsimulation model that simulates the main aspects of the Australian tax and transfer system as it impacts on people of working age, in particular income taxes levied on individuals and government payments to families. As a static model, it estimates liability for taxes, and eligibility to benefits, for a nationally representative sample of individuals, families and households drawn from an existing large scale income survey, and can estimate the 'morning after' impact of a proposed or actual change in tax-transfer policy. ATM is based on a comparative microsimulation model for the European Union, EUROMOD, which has been developed by a team at the University of Essex, UK (Sutherland and Figari, 2013). EUROMOD enables researchers and policy analysts to calculate, in a comparable manner, the effects of taxes and benefits on family and household incomes and work incentives for the population each of the 27 EU countries, as well as for the EU as a whole.

Tax-benefit policies that can be simulated by ATM include income tax (and some associated offsets and rebates), the medicare levy (and exemptions), Newstart Allowance (the main payment for people who are unemployed), Parenting Payment Single and Parenting Payment Partnered (for people whose main role is caring for children), rent assistance for people in private rented accommodation, and family assistance – principally Family Tax Benefit Part A and Family Tax Benefit Part B. The model is described in greater detail in Redmond and Hayes (forthcoming).

The microdata used in ATM are extracted from the Survey of Income and Housing (SIH) available through the Australian Bureau of Statistics (ABS). The SIH is a nationally representative household survey which was first conducted in 1982 and repeated in 1986, 1990, 1994-95, 1995-96 and 1996-97, and then about every second year until 2009-10. The SIH collects information from residents of private dwellings in urban and rural (but not remote) areas of Australia, through personal interviews with a computer assisted questionnaire. Households are selected to the SIH sample through a stratified, multistage cluster design from the private dwelling framework of the ABS Population Survey Master Sample. In recent years, interviews have been distributed across a twelve month enumeration period (July 2009 to June 2010 in the case of the most recent SIH) period so that the survey results are nationally representative of income and expenditure patterns across the year. The 2009-10 SIH contains a sample of 18,071 households. The SIH collects detailed information from all persons in the household aged over 15 on their incomes, their education, their labour market status, their housing situation and costs, their families, and their demographic characteristics. Respondents are asked to provide information on both their current income (at the time of interview) and their income for the most recent full financial year (2008-09). In this exercise, we use data on current incomes, as the ABS reckons it to be more accurately reported, and more closely related to household and individual characteristics, than is the case with annual income.

We model liability for taxes and eligibility to benefits, in the financial year 2012-13. We adjust non-simulated incomes in the SIH according to the change in average earnings between the quarter of interview in 2009-10 and December 2012 (similar to Callan et al., 1999). However, we assume (unlike in real life) that everyone who is liable for income taxes pays them in full, and that everyone who is estimated as eligible to receive any government payments receives them in full. Nonetheless, the simulation of income tax as paid by individuals, and government payments that they receive, generally reflects reality as presented by reported on taxes and transfers (based on both survey and administrative data – see Redmond and Hayes, forthcoming). Unless otherwise stated, our unit of analysis is the income unit – single people, couples without dependent children, and single people and couples with dependent children; we use the word 'family' for shorthand. In order to compare incomes across families of different size and therefore take account of the different living standards that they afford, we divide them by an equivalence scale equal to the square root of family size, which is commonly used in analysis of family incomes. This scale assumes that a family with three members (of any age) requires an income of about 1.73 times that of a single person, and a family with four members would require an income of twice that of a single person, to obtain the same standard of living.

5. Modelling alternative approaches

As Apps and Rees (2010) point out, the Australian Tax Benefit System in the early 1980s was largely an individualised tax system with a modest universal family allowance (although it should be noted that payments for unemployed people, people with disabilities and aged people were all means tested on the basis of family income). From the mid 1980s onwards, starting with the introduction of the Medicare Levy in 1983, a series of reforms shifted the tax system from an individualised system to a joint system for families. In the mid 1990s, on the other hand, some transfer payments were partially individualised. From 1995, for example, each member in a couple had to individually apply for Newstart Allowance, or Parenting Payment if they were engaged in full time care work with their children. Nonetheless, as a result of reforms that introduced elements of family taxation into the income tax system, in addition to reforms that introduced and extended means testing of family assistance on the basis of family incomes, Apps and Rees (2010) characterise Australia's current tax-transfer system as a joint family based tax system where people on average incomes face the highest EMTRs, and where the second earner faces high barriers to increased employment and earnings, as evidenced in Figures 1 and 2 above. While they do not directly propose an alternative system that would overcome the flaws in the current tax-transfer regime as they see them, they do propose that a return to the system as it existed in the early 1980s – that is, a progressive individual income tax system, supplemented by a universal system of family allowances, would result in fewer deadweight losses, and greater equity in treatment between middle and high income earners, between men and women, and between people with and without dependent children.

In the remainder of this paper, we take Apps and Rees up on this challenge. We use ATM to model the fiscal, distributional and incentive effects of alternative tax transfer schemes where FTB-A and FTB-B are replaced with a universal child payment, and the Low Income Tax Offset is abolished.

Table 1 provides the details of seven proposed reforms that would replace FTB with a universal child payment, in some cases supplemented with changes to the income tax schedule in order to help pay for the reforms. For simplicity, we do not consider other means of paying for the reforms, for example through spending cuts elsewhere in the national budget, or through reform to other types of taxation. In all reforms, the Low Income Tax Offset is abolished. **Reform 1** replaces FTB with a universal payment of $5,000 per child with an additional $3,000 for lone parents. This is close to the maximum FTB payment for families with children in 2012-13. The universal payment is made taxable on the primary earner's income, the tax schedule remains the same as in 2012-13. **Reform 2** increases the amount of the universal child payment to $6,000 per child, plus an additional $5,000 for lone

parents. The payment again is taxable (on the primary earner's income). In order to approach revenue neutrality, a new income tax threshold of $130,000 is introduced with a rate of 45 per cent, with a 50 per cent rate imposed on the higher $180,000 threshold. **Reform 3** simply introduces the $5,000 and $3,000 child payments as non-taxable, with the existing 2012-13 tax schedule. **Reform 4** maintains the same non-taxable child payments structure as Reform 3, but increases all income tax rates by 2 per cent. **Reforms 5**, **6** and **7** all provide a universal payment of $6,000 per child and an additional $5,000 for lone parents but with varying changes to the tax schedule. **Reform 7** differs from all of the other reforms as it includes a means test (on primary earner's income only) where the primary earner's annual income is over $80,000.

Table 1   Alternative Approaches: Universal Child Benefit

	2012-13 System	Reform 1: Taxable Child Benefit	Reform 2: Taxable Child Benefit	Reform 3: Non taxable Universal Child Benefit	Reform 4: Non taxable Universal Child Benefit	Reform 5: Non taxable Universal Child Benefit	Reform 6: Non taxable Universal Child Benefit	Reform 7: Non taxable Universal Child Benefit
FTB-A[a]	$5150							
FTB-B[b]	$2,978							
Child Benefit Per Child		$5,000	$6,000	$5,000	$5,000	$6,000	$6,000	$6,000
Sole Parent Amount		$3,000	$5,000	$3,000	$3,000	$5,000	$5,000	$5,000
Means-tested	Yes	No	No	No	No	No	No	Yes[c]
Taxable	No	Yes	Yes	No	No	No	No	No
Tax Schedule								
Tax Rate	0	0	0	0	0	0	0	0
Threshold	$18,200	$18,200	$18,200	$18,200	$18,200	$18,200	$18,200	$18,200
Tax Rate	0.19	0.19	0.19	0.19	0.21	0.21	0.19	0.19
Threshold	$37,000	$37,000	$37,000	$37,000	$37,000	$37,000	$37,000	$37,000
Tax Rate	0.325	0.325	0.325	0.325	0.345	0.345	0.325	0.325
Threshold	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000
Tax Rate	0.37	0.37	0.37	0.37	0.39	0.39	0.37	0.37
Threshold	$180,000	$180,000	$130,000	$180,000	$180,000	$130,000	$130,000	$130,000
Tax Rate	0.45	0.45	0.45	0.45	0.47	0.47	0.45	0.45
Threshold			180000			180000	180000	180000
Tax Rate			0.5			0.5	0.5	0.5

Note: a. maximum for one child aged 0-12, including the end-of-year supplement. Maximum where a child is aged 13-15 (or up to 19 years if in secondary school) is $6479; b. Maximum where youngest child is aged over 5 years, including the end-of-year supplement. The maximum rate where the youngest child is aged under 5 years is $4117; c. Means tested on primary earner's income only, where this exceeds $80,000.

Note that under all the reform systems, we do not take into account costs associated with child care, or the associated Child Care Benefit, a means tested payment made to families to subsidise approved child care costs, or the Child Care Tax Rebate, which allows taxpayers to offset a portion of child care costs against taxable income. Child care raises particular issues with respect to incentives to work, involving not only the cost of child care and the amount of subsidy, but also its availability and quality. The incentive effects of child care costs have been extensively researched elsewhere, but they apply for the most part to parents with children of under school age (see for example Kalb, 2009).

Costs of reforms

Table 2 displays the estimated cost of FTB for 2012-13 and compares it to the estimated expenditure on each of the seven possible reforms outlined in Table 1. In 2012-13, estimated expenditure on FTB is just over $19 billion. Unsurprisingly, the cost of the universal child payment under each of the reform scenarios exceeds this amount. The universal child payment under Reforms 1, 3 and 4, where families receive $5,000 per child with an additional $3,000 for sole parents, costs $25.3 billion. The universal payment under Reforms 2, 5 and 6, where families receive $6,000 per child, plus an additional $5,000 for sole parents, cost $31.1 billion. Although reform 7 includes the same payment amounts as reforms 2, 5 and 6 expenditure on this reform is lower at just under $27 billion as a result of the income test on the main earner's income above $80,000.

Table 2 Costs of reforms - expenditure on Family Tax Benefit and universal child payment, and revenue from income tax reform, 2012-13 ($ bn.)

	2012-13	Reform 1	Reform 2	Reform 3	Reform 4	Reform 5	Reform 6	Reform 7
Family payments	19.56	25.3	31.1	25.3	25.3	31.1	31.1	26.9
Income taxes	140.9	149.0	154.4	141.8	151.2	154.1	145.4	145.4
Net cost (compared with 2012-13 system)[a]	0.00	0.30	-0.0	-6.8	2.6	-0.4	-9.1	-4.9

Source: ATM, based on Survey of Incomes and Housing 2009-10, authors' calculations. Notes: a. Positive amount means reform is more expensive than 2012-13 system; negative amount means reform is less expensive.

Table 2 also displays the levels of estimated income tax revenue raised through the simulated 2012-13 system, and the reforms. The model estimates income tax revenue for 2012-13 to be $140.9 billion. Under all the reform systems, the removal of the LITO adds almost $1 bn. to the increase in tax revenue. Income tax revenue is largest under Reform 2, where the universal child payment is taxable and the tax schedule has been altered to include a tax band with at $130,000, and a higher 50% tax rate from $180,000. Under Reforms 6 and 7, where there is also a higher tax rate, but the universal child payment is not taxable, tax revenues are considerably lower. Overall, Reforms 1, 2 and 5 are broadly revenue-neutral, Reform 4 would produce a revenue gain of $2.6 billion, and Reforms 3, 6 and 7 would cost extra that would need to be found from elsewhere – between $5 bn. and $9 bn. However, it is important to emphasise that none of these estimates take into account behavioural effects – the fact that changes of this scale might encourage more people to earn more, for example, and reduce any deadweight losses associated with the current system. Changes in EMTRs as an indicator of incentives to work under the different systems are examined in more detail below.

Impact on EMTRs

As Apps and Rees (2010) and Daley (2012) argue, the main point of reforming the current

system of family taxes and transfers is to reduce effective marginal tax rates for second earners in couple families with children, so as to increase their incentives to engage in (or increase their engagement in) paid employment. Figure 4 models the effect of the current system, and three of the seven reforms proposed in this article, on EMTRs faced by couple families with children, where the female partner increases her employment by one hour, assuming that she is paid at the minimum wage (EMTRs under the other proposed reforms are very similar to those shown here). EMTRs at the 50th and the 75th percentiles are shown for each decile group of family (or income unit) income.

Figure 4 Effective marginal tax rates faced by couples with dependent children (cents in extra dollars earned lost in taxes and withdrawal of payments)

Median EMTRs   75th Percentile EMTRs
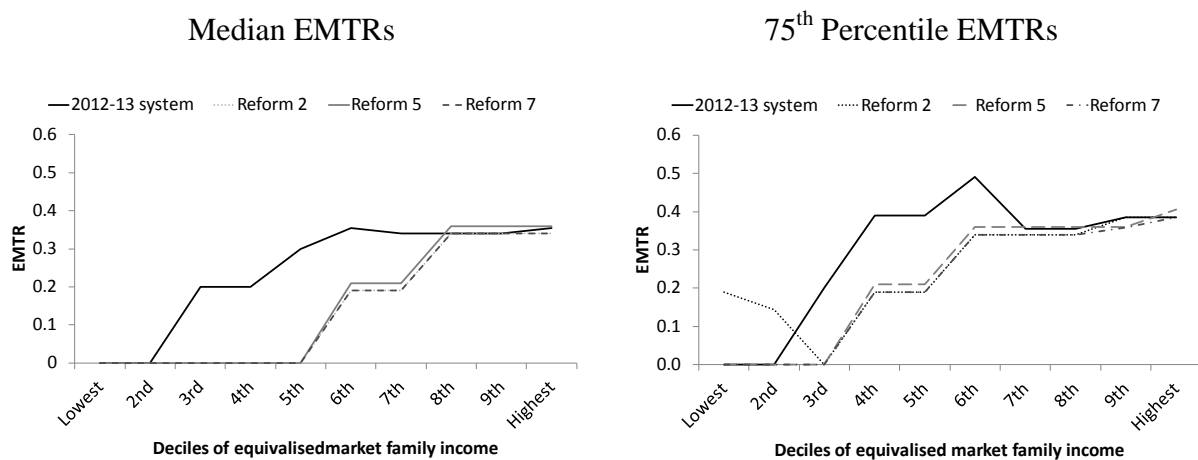
Source: ATM, based on Survey of Incomes and Housing 2009-10, authors' calculations.

As expected, EMTRs in the bottom half of the distribution are mostly (but not universally) considerably higher under the current system than those under the proposed reform. The left hand picture shows that under the current system, median EMTRs range from 20 cents in the dollar in the third decile, to 34 per cent in the 4th decile. However, many families face considerably higher EMTRs than this. The right hand panel shows that at least a quarter of couples with children face EMTRs of 38 cents in the dollar or more in the fourth decile, rising to 48 cents in the dollar in the sixth decile. Under the proposed reforms, couples have median EMTRs of zero in the bottom five deciles, rising to 20 cents in the dollar in the sixth and seventh deciles. Apart from the bottom of the distribution under reform 2, there is very little difference in EMTRs under the different reforms at the 75th percentile, where they range from around 20 cents in the dollar in the 4th decile to 38 cents in the dollar in the top decile. However, since the universal child benefit is taxable under Reform 2, some families (for example those with higher numbers of children) are liable for income tax on their child benefit, and on the first dollars that they earn. This is indicative of some issues associated with taxing a universal payment on the highest earner's income. About three in ten couple

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families in the bottom two deciles have three or more children, so they get more child benefit, but this also pushes up their taxable income. Only about two in ten families in the third decile have three or more children, so even though their equivalised market incomes are higher, in many cases their taxable incomes are lower, meaning that many face lower EMTRs.

Table 3 shows the impact of the current system and Reform 2 on partnered women with dependent children's incentives to work. The panels on the left show EMTRs under the current system, and the panels on the right show EMTRs under Reform 2 (EMTRs under the other reforms are similar to this), where the female partner decides to increase her earnings by one hour at the minimum wage rate (about $15). EMTRs are shown separately for couples with dependent children by quintile groups of the male and female partners' earnings. The top two panels compare median EMTRs in each earnings category under the current system and Reform 2, while the bottom two panels compare EMTRs at the 75th percentile. For some women, child care costs would increase disincentives to increase their hours of work. Therefore, the EMTRs shown in the table may understate actual disincentives to increase hours of employment.

Table 3 Effective marginal tax rates faced by women in couples who increase their earnings by working one extra hour per week at the minimum wage rate, by quintiles of male and female partners' earnings

| | 2012-13 system | | | | | | Reform 2 | | | | | |
| | female partner's earnings | | | | | | female partner's earnings | | | | | |
	No earnings	lowest quintile (up to $13,379)	2nd quintile (up to $33,444)	3rd quintile (up to $61,638)	4th quintile (up to $95,916)	Highest quintile	No earnings	lowest quintile (up to $13,379)	2nd quintile (up to $33,444)	3rd quintile (up to $61,638)	4th quintile (up to $95,916)	Highest quintile
male partner's earnings												
EMTRs at the 50th percentile point												
No earnings	0.00	0.00	0.00	0.35	0.55	0.38	0.00	0.19	0.19	0.34	0.34	0.39
lowest quintile (up to $52,356)	0.00	0.00	0.19	0.36	0.36	0.39	0.00	0.00	0.19	0.34	0.34	0.39
2nd quintile (up to $79,056)	0.20	0.20	0.39	0.36	0.35	0.38	0.00	0.00	0.19	0.34	0.34	0.38
3rd quintile ($up to $113,028)	0.20	0.20	0.39	0.35	0.35	0.39	0.00	0.00	0.19	0.34	0.34	0.38
4th quintile (up to $165,552)	0.00	0.20	0.19	0.35	0.35	0.38	0.00	0.00	0.19	0.34	0.34	0.39
Highest quintile	0.00	0.00	0.19	0.35	0.35	0.39	0.00	0.00	0.19	0.34	0.34	0.39
EMTRs at the 75th percentile point												
No earnings	0.00	0.00	0.19	0.43	0.56	0.38	0.14	0.19	0.19	0.34	0.39	0.46
lowest quintile (up to $52,356)	0.00	0.20	0.39	0.55	0.56	0.39	0.00	0.00	0.19	0.34	0.39	0.46
2nd quintile (up to $79,056)	0.20	0.40	0.40	0.65	0.36	0.39	0.00	0.00	0.19	0.34	0.34	0.39
3rd quintile ($up to $113,028)	0.20	0.20	0.49	0.36	0.36	0.39	0.00	0.00	0.19	0.34	0.34	0.39
4th quintile (up to $165,552)	0.30	0.30	0.20	0.36	0.36	0.39	0.00	0.00	0.19	0.34	0.34	0.39
Highest quintile	0.00	0.00	0.19	0.36	0.36	0.46	0.00	0.00	0.19	0.34	0.34	0.51

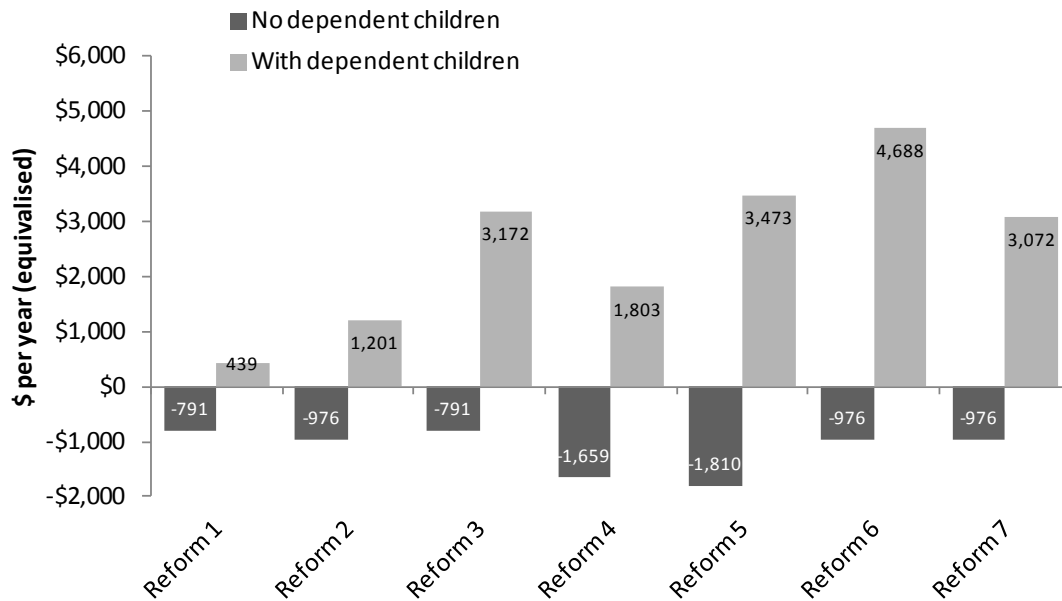Source: ATM, based on Survey of Incomes and Housing 2009-10, authors' calculations.

We focus here on EMTRs at the 75th percentile point. At least a quarter of partnered women face EMTRs at or above the rates shown in the bottom panels of the Table. Under the 2012-13 system, the highest EMTRs (50 per cent or more) are in the yellow shaded cells; EMTRs

of about 40 per cent or more (other than those faced by the very highest earners) are in the orange shaded cells. The bottom right panel shows that under Reform 2 (the most onerous of the reforms for low earners, since the universal child benefit is included in taxable income) EMTRs fall dramatically, by between 20 and 30 percentage points. Under the 2012-13 system, EMTRs are highest at the middle of the female earnings distribution. Under Reform 2, EMTRs increase in line with women's individual incomes. It is worth noting that the shaded cells include about three in ten of all partnered women with children.

Impact on family incomes

Figure 5 shows the estimated impact on family disposable incomes for each of the reforms compared to the 2012/13 system, for families with and without dependent children. Since all the reforms propose an increase in individual taxation (at the very least, by the abolition of the Low Income Tax Offset) in order to partially cover costs associated with the introduction of a universal family payment, families without children lose under every reform, with losses ranging from almost $800 under Reforms 1 and 3 (where Low Income Tax Offset is abolished, to $1,800 under Reform 5 (where Low Income Tax Offset is abolished and all income tax rates are increased by two percentage points, with new rates on incomes over $130,000). Families with children on the other hand gain, on average, under every proposed reform, from $440 under Reform 1 (taxable universal payments of $5,000 per child plus $3,000 per sole parent family with abolition of Low Income Tax Offset, but no change in income tax rates); to almost $4,700 under Reform 6 (universal payments of $6,000 per child plus $5,000 per sole parent family with abolition of Low Income Tax Offset, and increase in income tax rates on incomes over $130,000). The fact that earners without dependent children would likely have to pay for any substantial reform (especially if reform is confined to the income tax system) is significant, and potentially politically sensitive.

Figure 5 Gains and losses for families with and without dependent children under the Reform systems compared to the 2012/13 System ($ per year, equivalised)

Source: ATM, based on Survey of Incomes and Housing 2009-10, authors' calculations.

While families with children gain on average from all proposed reforms, they do not gain equally. Figure 6 shows that couple families with children gain under all the proposed reforms and experience the biggest gains under Reforms 3 and 6. Lone parent families on the other hand experience a significant loss of over $1,700 on average under Reform 1, a small loss under Reform 4, and little gain on average under Reform 3. Under Reforms 5 and 7, on the other hand, the average gains of lone parent families exceed those of couple families with children. Under these schemes, lone parent families benefit from the larger universal payments of $6,000 per child plus $5,000 per lone parent family, but do not lose much from increased taxes, since the earnings of lone parents are generally low.

Figure 6 Gains and losses for lone parent and couple families with dependent children under the Reform systems compared to the 2012/13 System ($ per year, equivalised)
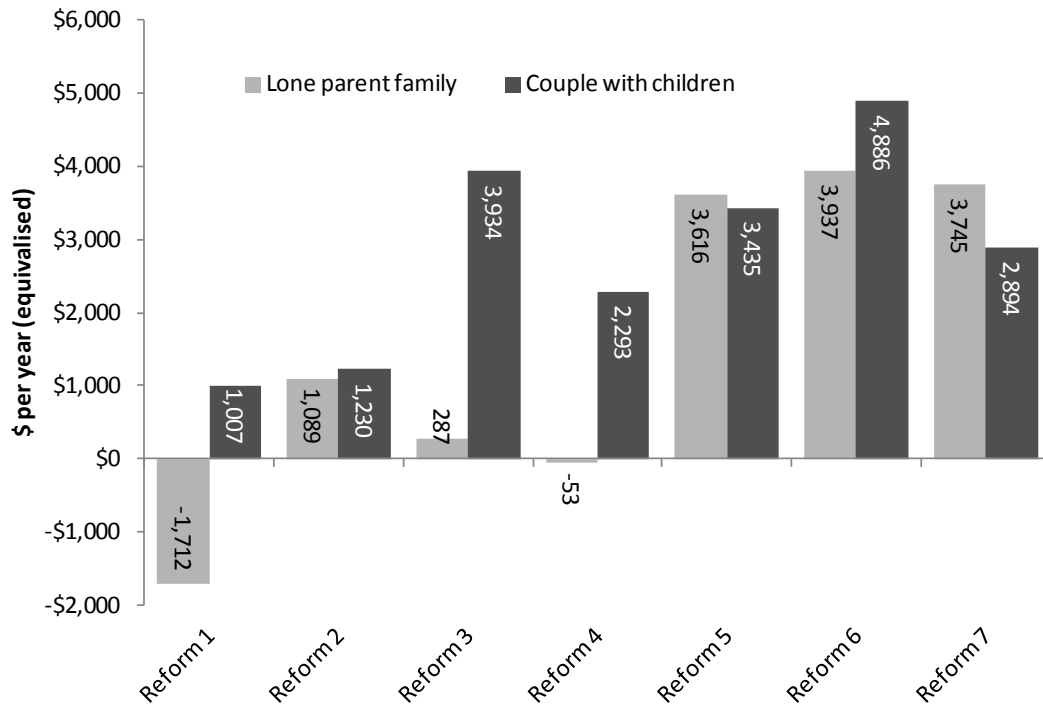
Source: ATM, based on Survey of Incomes and Housing 2009-10, authors' calculations.

Figure 7 shows the distributional impact of the seven proposed reforms, compared to the 2012-13 system, for families with dependent children. The top panel shows the effects of Reforms 1 to 4, and the bottom panel shows the effects of Reforms 5 to 7. Under all reforms, gains are heavily skewed towards the top half of the distribution. Under Reforms 1 to 4, families with children in the bottom half o the distribution actually lose as a result of the switch from the 2012-13 system. Under Reforms 5 and 7, all families except those in the bottom and top deciles gain on average. Under Reform 6, families in the bottom decile are the only ones who lose out, on average. Most striking however are the very large gains (of about $4,000 and upwards) enjoyed by families with children in Deciles 6-9 under nearly all the proposed Reforms. In short, the switch from the current means tested system to a universal system would appear to have somewhat disequalising effects in the absence of very substantial and radical income tax reform.

Figure 7 Distribution of gains and losses for families with dependent children under the Reform systems compared to the 2012/13 System ($ per year, equivalised)
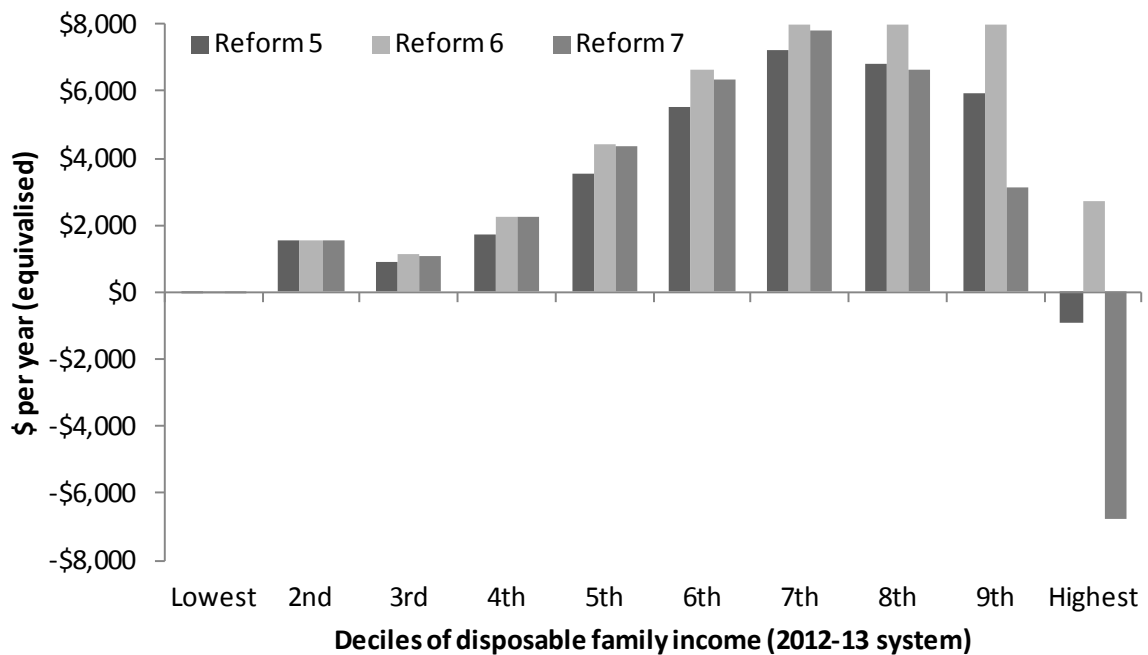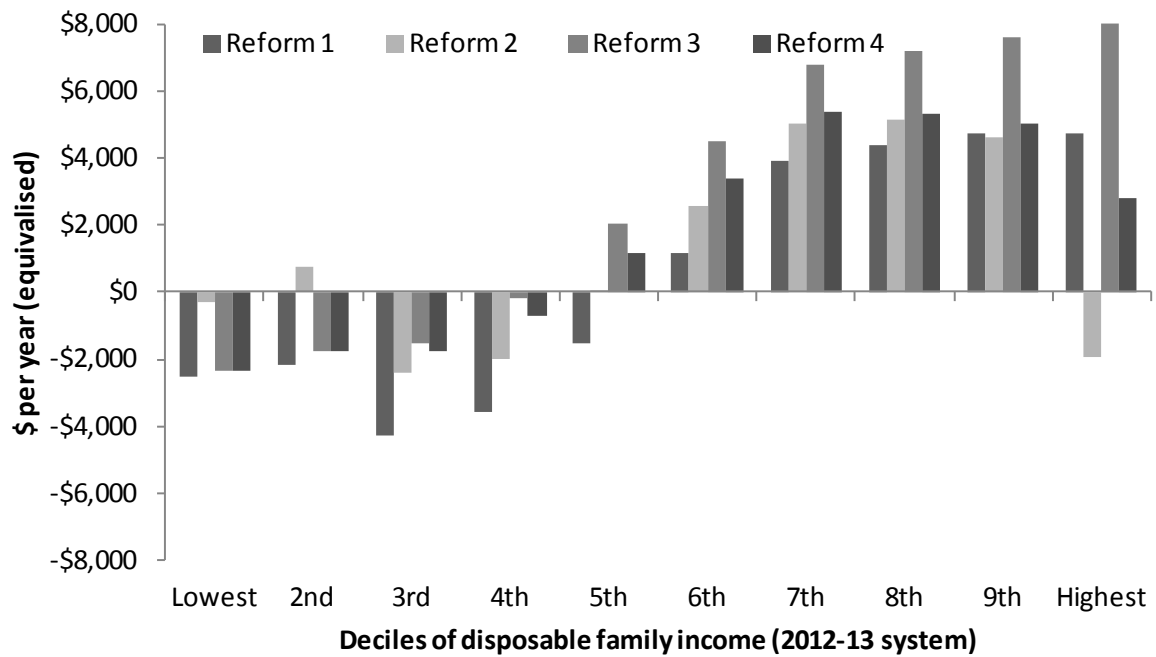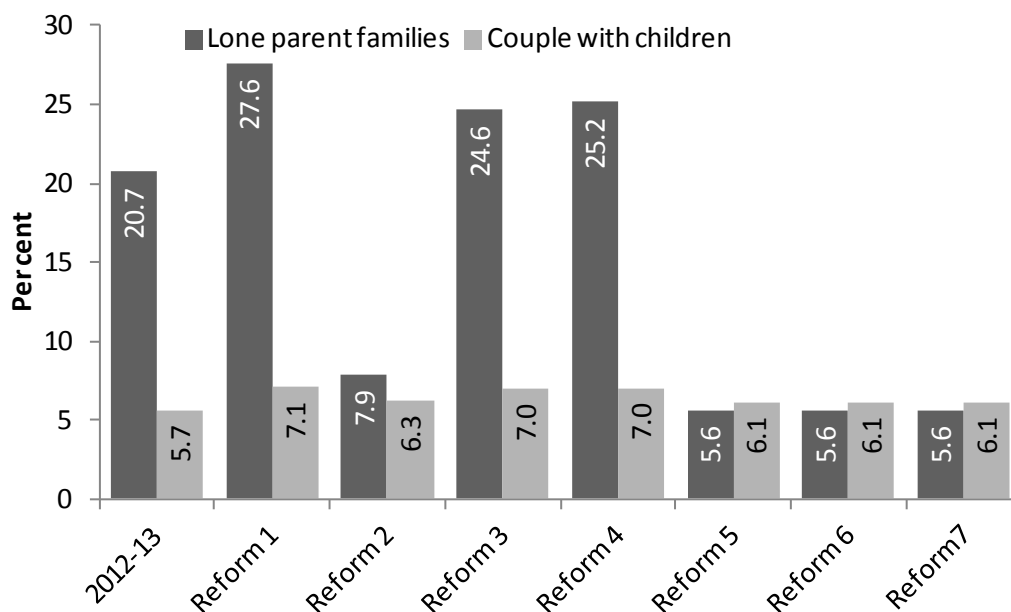

Source: ATM, based on Survey of Incomes and Housing 2009-10, authors' calculations.

Figure 8 shows that the impact of the introduction of a universal child benefit on relative child poverty would depend on the rate at which it is paid. The figure shows that under the current system, the poverty rate among children in lone parent families at 21 per cent, is

almost four times as high as the poverty rate among children in couple families, assuming a poverty line of half median income. Under Reforms 1, 3 and 4, with a universal payment of $5,000 per child and an additional $3,000 for each lone parent family, the proportion of children in both lone parent and couple families in poverty would increase, the increase in poverty among children in lone parent families being particularly notable. Under Reforms 2, 5, 6 and 7, with a universal payment of $6,000 per child and an additional $5,000 for each lone parent family, the poverty rate for lone parent families would fall substantially, while the poverty rate among children in couple families would increase slightly. In effect, poverty rates among lone parent families and couple families with children would be equalised under Reforms 2, 5, 6 and 7.

Figure 8 Poverty rates for lone parent families and couples with children under the 2012/13 and the Reform systems

Source: ATM, based on Survey of Incomes and Housing 2009-10, authors' calculations.

6. Discussion

Analyses by Daley (2012) and Apps and Rees (2010) have opened a debate that needs to be taken to its logical conclusion. If the current tax and transfer system as it impacts on second earners in families with children is to be reformed, the shape that those reforms take is important. Apps and Rees have proposed that the introduction of a universal child payment could provide one means of increasing incentives and reducing deadweight losses in the tax system. Our contribution in this article has been to focus on the 'morning after' costs and distributional effects of a number of proposed reforms. Certainly, incentives, in the shape of

effective marginal tax rates, improve under all proposed reforms that replace the current Family Tax Benefit system with universal child payments, even where they are accompanied by increased income tax rates. If the reforms had the desired effect and encouraged parents to increase their hours of work, deadweight losses would be reduced, and the actual net cost of introducing a universal child benefit would fall. Improved incentives in the shape of reduced EMTRs should result in increased hours of employment among many (predominantly female) second earners in families with children, even allowing for variability in response due to need for, availability, quality and price of child care.

The analysis shows moreover that if the universal payment is made generous enough ($6,000 per child, with $5,000 for each lone parent family), there could be a substantial impact on rates of child poverty, especially among children living in lone parent families. This would represent a substantial step forward: relative child poverty rates in Australia have remained roughly constant since the mid 1990s. Moreover, the provision of a universal child payment would give all parents, but especially lone parents, a secure financial basis for experimenting with different forms of employment, safe in the knowledge that their universal payments would continue irrespective of the outcome. With the shifting of all lone parents whose youngest child is aged under eight years from (non-work tested) Parenting Payment to (work tested) NewStart Allowance from July 2013, this form of incentive could assume greater importance.

On the other hand, this paper also shows that the challenges associated with introduction of a universal payment are not trivial. Costs are not necessarily an issue. It would be possible to make even a generous universal payment broadly revenue neutral, even before incentive effects in terms of increased labour supply (with increased earnings and taxes) are taken in to account. We have modelled broadly revenue neutral schemes with universal payments set at $5,000 per child with $3,000 extra for each lone parent family; and with payments set at $6,000 per child with $5,000 extra for each lone parent family. However, this is only possible where income tax rates are increased, with new thresholds introduced, supplementing the abolition of the Low Income Tax Offset. The income tax increases modelled are highly progressive. However, they do not only affect the incomes of families with children, but also single people and couples without children, who can only lose financially from the reforms.

More problematically perhaps, given recent debates in Australia on middle class welfare (Whiteford et al., 2011), the biggest gains from the introduction of a universal payment do not go to the low income families with children, or even those in the bottom half of the income distribution, but to families with children in the 6th to 9th deciles. Under a number of the modelled schemes, families with children in the bottom half of the distribution actually lose out, on average. Under other schemes, their gains are considerably smaller than those in

the top half of the distribution. This finding raises questions about how radical reform of the tax and transfer system could be implemented with the aim of improving incentives for second earners in families with children to increase their hours of paid work, while protecting low income families with children from poverty, in ways that will be generally seen as fair and equitable. While reduced rates of poverty among lone parent families with children would represent an important plus, increasing support to families with children in the top half of the income distribution might be politically hard to defend.

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