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**Cut-offs, Knock-ons and Welfare Payment Taper Rates:
An Evaluation of the July 2000 Tax and Welfare Changes for Lone Mothers**

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Abstract

High welfare withdrawal rates as private earnings increase generate high effective marginal tax rates and work disincentives. But reducing withdrawal rates can extend eligibility for income support and provide large income transfers to the better off. We analyze taper rate reductions in terms of cut-off and knock-on effects for lone mothers subject to the Australian tax and welfare reforms of July 2000. Despite the expressed government desire for significant reform, the work incentive effects of taper changes were trivial. Taper reductions extended income support and higher family payments to lone mothers whose high private incomes had previously excluded them. Better off lone mothers were drawn back into income support and received the largest income increases. Ninety per cent of the better off group had a long history of welfare support and the reforms encouraged them to stay on welfare longer.

Key-words; Welfare Reform, Lone Parents, Pension Tapers, Work Incentives

JEL Classification: H55, I38, J19

I Introduction

High withdrawal rates on welfare payments (tapers) pose special policy problems for welfare reform. Most attention has been focused on interactions between tapers and income tax schedules that produce high effective marginal tax rates (EMTRs), often in the range of 60 to 90 per cent (Beer, 1998, 2003, Harding and Polette, 1995). The effect of high EMTRs on work incentives is often given as a reason for taper reductions (Ingles, 2000) but there are other important taper effects on income transfers and work incentives that have not received adequate attention. Indeed, awareness of these other taper effects can lead to quite different assessments of the effectiveness of taper reductions and their desirability, relative to other aspects of welfare reforms. Taper effects that tend to be neglected relate to four issues.

First, *taper end points* or income cut-offs - the private income level where the taper removes all welfare program income - define welfare program eligibility. When tapers are reduced cut-offs change and program eligibility shifts. In most cases changes in taper induced eligibility will be more important than taper induced changes in EMTRs, and the former will have a very different impact incidence.

Second, changes in income levels at which withdrawal tapers start (*taper starting points*) may also be more important than changes in taper rates. Significant policy induced shifts in taper starting points are likely to occur where there is an interconnectedness among welfare programs, each with their own taper, and a convention that significant taper overlaps should be avoided wherever possible.¹ We have in mind a policy knock-on effect between two programs whereby a reduction in the first program taper moves the program cut-off point and produces a knock-on effect which

¹ See Keating and Lambert (1998) for an early discussion of overlap problems across payment withdrawals in the welfare system.

increases the private income level at which the second program taper starts. In the example we explore, the first program provides income support for lone mothers and the second program provides family payments for their dependent children.

Third, the knock-on from a taper reduction of the first program produces induced cut-off eligibility changes for the second program. In many circumstances the induced new cut-off of the second program may have a larger income effect than the direct impact of the taper reduction of the first program that started the process.

Fourth, taper reductions may be motivated by concern for those with low incomes and high EMTRs but the combined impact of cut-off and knock-on effects will usually deliver the largest income gains to those lower EMTRs and higher incomes. The regressive income effects of “cut-offs” and knock-on created by taper reductions seem not to have been sufficiently anticipated in recent Australian reforms.

Part II of this paper illustrates the importance of cut-off and knock-on effects with a simple diagram applied to a major welfare reform package - “A New Tax System for Australians” (ANTS) –introduced in July 2000 together with the introduction of the GST. Many groups were affected by these reforms but we focus on lone mothers with dependent children.² The ANTS package increased income support for lone parents (the first program) and increased family payments for their dependent children (the second program); and, more importantly from our perspective, it reduced income support and family payment tapers (from 50 to 40 percent and from 50 to 30 per cent, respectively). These taper changes produced two cut-off and one large knock-on effect, which had a

² This reform cut the taper only on income support *pensions* (lone parents, and disability and age pensions) and not for *allowances* (unemployment benefits and parenting payments for partnered mothers). Ninety per cent of lone parents using income support are lone mothers.

significant impact on program eligibility and increased government payments most to those with higher levels of private income.

Part III describes the institutional detail of the Australian welfare system for lone mothers.³ The ANTS reforms should have had a significant impact. Almost all lone mothers access family payments; approximately 80 to 85 per cent access income support; and, of the 30 to 40 per cent of lone mothers with private income, almost all fall within income support or family payment taper ranges.

Part IV documents ANTS reform outcomes and shows that the knock-on and changes in cut-offs ensured that it was lone mothers - those with highest incomes which was sufficient to exclude them from income support - that received most of the economic gains from these reforms.

Part V explores the characteristics of these newly eligible lone mothers on income support and compares their characteristics with those of the least advantaged pre-reform income support eligible group. Part VI offers concluding remarks.

II The Importance of Cut-offs and the Knock-on

A simple diagram

We begin with a simplified two-program-two-taper welfare model with no taxes. This captures the essence of the Australian welfare system and the taper reductions involved in the ANTS reforms. In Figure 1 the horizontal axis represents private income from employment. The vertical axis going upwards measures income support available to a lone parent as private income increases. Line A represents this relationship for the pre-ANTS setting. The vertical axis going downwards (but measured as positive amounts)

³ Those interested in the interactions between lone mothers and the Australian welfare system might consult Barrett (2002), Flatau and Dockery (2001), Duncan and Harris (2002), Yi-Ping and Wilkins (2003) and Toohey and Beer (2003).

indicates family payment amounts paid to all low income parents with dependent children. The level of family payments also decreases with private income. Line C represents this relation in the pre-ANTS setting. The gap between the horizontal axis for the income support and family payment diagram is the base level of family payments that is not removed by the family payment taper over the income range that is of interest to us. Total income support and family payments received by the lone parent, putting aside the base level of family payments, is the sum of the vertical distance between line A, line C and their respective horizontal axis.

Consider the pre-reform environment. Line A indicates, after an initial earnings disregard, that income support is subject to a 50 per cent taper. The income support cut-off, where income support is exhausted, is at private income **a**. Line C indicates, over the income range we are interested in, that the pre-reform family payments program consists of three steps: (i) the maximum rate to the left of **a**, (ii) the more-than-base rate (paid when the 50 per cent family payment taper begins at private income **a**), (iii) a base rate (paid after the family taper effect is exhausted at private income **h**). There are two cut-off points, **a** (income support), and **h** (family payments). There is no taper overlap. The family payment taper begins when the income support taper is exhausted at point **a** (i.e. the knock-on convention is applied).

{Figure 1 here}

The Income Support Taper Reduction and the Knock-on convention

The ANTS reforms had many components that affected disposable income and they were all introduced at once. For expositional purposes they are included in Figure 1 as a sequence of three steps that produce three waves of income changes. The first reform step cut the income support taper from 50 to 40 per cent (this step is represented by Line B in Figure 1). In response, the cut-off level for income support moves up the private

income scale from **a** to **b**. Those who gain the most additional income (the vertical gap between line A and line B) are lone mothers located near **a**, the private income region of the old cut-off point.

In the absence of a knock-on convention the EMTR on gross income after this first step would increase to 90 per cent between **a** and **b**, the old and new cut-off points⁴, before falling back to the 50 per cent family payment taper that prevailed until private income reached **h**.

The second reform step is taken when the knock-on convention is applied to avoid taper overlap, and, in response, a second wave of income increase is created. The income at which the family payment taper starts moves to private income level **b**, and the new family payment entitlements are indicated by line D. Moving from lower to higher incomes, the important knock-on effects induced by the income support taper reduction are as follows:

First, the knock-on convention gives eligibility for maximum family payments to the higher income newly eligible income support group – those located at private incomes between **a** and **b**. This higher income group gains twice from the income support taper reduction – they have newly acquired access to income support and to the maximum rate of family payments (thus avoiding the 50 per cent family payment taper that previously applied to them).

Second, an even higher private income group, those located between **b** and **h**, gain additional family payments because the new income support cut-off and the knock-on effect increased the starting income level for the family payment taper. This group faces the same taper as before and no increase in their EMTR but receives additional more-than-base-rate family payments (the vertical distance between line C and line D).

⁴ The sum of the overlapping income support and family payment tapers at 40 and 50 per cent, respectively.

Third, between private income **h** and **i**, a newly eligible group is created for more-than-base-rate family payments. This group now receives higher family payments income but their EMTR increases from zero to 50 per cent.

The additional income delivered from the income support taper reduction and the family payment knock-on rule is the shaded areas between the old and the new pension entitlements (line A and line B) and the old and the new family payments (line C and line D). There is clearly an uneven allocation of income gains. Those that gained most are (i) those with higher income and newly acquired eligibility for income support (**a** to **b**) and (ii) those receiving additional family payments but not income support (**b** to **i**). The least advantaged is the old income support group (to the left of **a**) whose low income and high EMTRs may have been the initial stimulus for the taper reduction.

The Family Payment taper reduction

The third reform step that produced a third wave of income gains derives from the family payments taper reduction from 50 to 30 per cent (the move from line D to line E). This delivers additional family payment increases to those with private income to the right of the new income support cut-off point, **b**, and extends family payment entitlements up to private income level **j**. This additional income peaks at the family payment cut-off point, **i**, which was created by the knock on effect.⁵

The schematic framework of Figure 1 illustrates a number of important points. First, there is no simple correspondence between income gains and the changes in tapers and EMTRs. This can be seen in Figure 2 which plots the three waves of additional income and divides private income into three zones according to the EMTR change: minus ten percentage points (the income support taper reduction), minus 20 percentage

⁵ This simple diagram can easily illustrate other parameter changes. The base level of income support or family payments could be increased (a movement along the vertical axis) and additional tapers could be represented as kinks in line A and line C.

points (the family payment taper reduction) and plus 30 percentage points (the new group eligible for more-than-base family payments, but now subject to the new family payment taper of 30 per cent). Among individuals who receive the greatest income increases are those subject to the highest increase in the EMTR, a thirty-percentage point increase.⁶ Among those who receive the least income gains are those subject to a 10 percentage point reduction in their EMTRs.

Second, on average, the largest income gains go to the highest income groups affected by the reforms and those with income well in excess of the old income support cut-off point. Newly created eligible groups for income support and more-than-base family payment all do very well. Those that do worst are the old income support group whose high EMTRs may have triggered the reforms. This suggests that income and welfare effects of income support taper reductions, and their associated knock-on and cut-offs, should be thought of primarily in terms of their impact on *extended eligibility* for income support and family payments. Taper effects on the pre-reform income support group and their EMTR changes are less important.

{Figure 2 here}

III The Pre-ANTS welfare system

The ANTS reforms also included increases in the maximum and base rate of family payments and adjustments to income tax and tax rebates. We now document the full set of changes in the disposable income of lone mothers starting with a necessary description of the details of the March 2000 welfare system. The March 2000 system (pre ANTS) will be compared with that of July 2000 (post ANTS).

⁶ The income gains illustrated in Figures 1 and 2 are based only on pension and family payment taper rate changes. They exclude other aspects of ANTS, such as income tax changes and higher maximum and base rate family payments. The total effect of ANTS on disposable income of lone parents is taken up in the next section.

The complex system is simplified a little and presented in Table 1 as three modules: the determination of (A) taxable income, (B) income taxes and rebates, and (C) family payments.⁷ Each row lists either an income source or a tax obligation. Each column represents different levels of private income. The calculations⁸ are for a lone parent with one child under five and who does not receive any child maintenance, rent assistance or childcare benefits.⁹

{Table 1 here}

Taxable income and the Income Support taper

Taxable income is the sum of private income (first row) and pension income¹⁰ (second row). Three key parameters determine pension income: (i) the base income support entitlement when private income is zero, \$186 per week¹¹, (row 2, column 1), (ii) the earnings disregard (the range of private income allowed before the income support taper begins, \$63 per week, (row 1, column 2) and (iii) the 50 per cent income support taper applied when private income exceeds the earnings disregard. The income support cut-off point is \$440 in March 2000.

⁷ This is a simplified description of the March 2000 situation when there were ten different types of family payments for lone mothers, some of which varied by the age and number of children. There is also one more taper applied at higher income that completely removes family payments; but the income level at which this occurs is outside our range of interest.

⁸ The values in Table 1 (and subsequently in Table 2) are derived from the pension and family payment rates and tapers built into the PET calculator program developed by FaCSIA for the respective time periods.

⁹ Lone mothers with one dependent child under five years of age account for 19 per cent of pension recipients. We discuss outcomes for families with more children in Section IV. Rent assistance, child maintenance and childcare assistance involve a different range of issues that are put aside in this paper. The effects of ANTS on the work incentives faced by other pensioner groups – such as aged and disability pensioners – are not discussed here.

¹⁰ Pension income and income support are used interchangeably.

¹¹ For some time now the lone parent pension has been set at 25 per cent of average total male weekly earnings.

Income taxes and rebates

The community wide income tax schedule is applied to taxable income (row 3) to generate tax payable (row 4). Lone mothers were entitled to three significant tax rebates (as indicated in the Notes to Table 1, and aggregated into row 5) which are subtracted from tax payable to calculate tax liability (row 6). Each tax rebate was subject to its own taper, triggered by taxable income thresholds. At March 2000, the community wide tax-free income threshold was \$5,400 per annum, but, after tax rebates, a lone mother with one child under five years of age did not pay income tax until taxable income exceeded \$16,640 per year (column 3). As a result, income tax obligations of lone mothers receiving income support are relatively unimportant.

Family payments and their withdrawal taper

Part C of Table 1 aggregates income from all family allowances. In March 2000 the maximum level of family payments for one child under 5 years was \$86 per week and the base rate was \$12 per week.¹² Family payments are not subject to income taxes but are subject to a taper that begins close to the private income level where the pension taper exhausts income support. The lack of overlap between the end of the pension taper and the start of the family payments taper is the knock-on rule. When the family payment taper begins the EMTR is approximately 75 per cent (row 9, Table 1). If the two tapers overlapped the EMTR would increase to approximately 125 per cent.

IV Reform Outcomes

The July 2000 reforms were quite extensive and affected each module. The government emphasised that reforms would cut income taxes and withdrawal tapers to reduce

¹² The family payments in Table 1 include Family Tax Assistance Part B which was not a payment per child but a lump sum payment for all lone parents with at least one child under 5 (and for partnered parents where there was only one primary earner).

EMTRs and “provide more incentives to work” (Treasurer, 1998, p4). Little was said about extending income support eligibility to include higher income earners and there was no obvious recognition of the regressive nature of the income gains flowing from cut-off and knock-on effects or their potential impacts on work incentives.

So, were work incentives improved? How well does Figure 1 predict financial outcomes of the reforms? Were taper reduction effects and the associated knock-on and cut-off changes offset, or reinforced, by other reform initiatives?

The answers to these questions can be found in Table 2, which, for each level of private income, lists various sources of income difference between the pre and post-reform periods at March and July 2000, respectively. The initial three columns show the three main components of disposable income changes for lone parents – the gross pension increases (column 2), gross family payment increases (column 3) and gross income tax changes (column 4, with a negative entry denoting an increase in taxes paid). These three components sum to after-tax disposable income (column 5). Before discussing these aggregate results we subdivide column 2 and column 3 into taper, cut-off and knock-on effects.

{Table 2 here}

Cut-offs, knock-on and taper reductions

Column 6 of Table 2 isolates the gross income effects of the income support taper reduction by comparing March 2000 income support with what gross income support would have been in July 2000 if only the pension taper had been cut from 50 per cent (March 2000) to 40 per cent (June 2000), everything else remains constant at March 2000 levels. There is no allowance for the small increase in the base pension to compensate for GST price increases (the difference between column 2 and column 6).

The taper cut-off effect extends income support eligibility from private earnings of up to \$440 per week to \$550 per week – an increase of approximately 25 per cent in the income eligibility range. Less than 20 per cent of lone mothers - the proportion with private income above \$63 per week (Table 4) - gain an income increase. As expected, pensioners with higher private income are favoured and income gains are largest, \$35.20 a week, at the old income support cut-off (point **a** in Figure 1).

The tax schedule does not impact on cut-off locations, the extent of the knock-on or the associated income support and family payment eligibility changes; but income taxes reduce disposable income directly flowing from the income support taper reduction. The maximum net income effect evaluated at pre-reform income tax rates, was \$21.69 per week at the old cut-off point (column 7, Table2).¹³ This is just under five per cent of the total income of these lone mothers. The average after tax income gain for all pre-reform eligible lone mothers (with private income ranging from \$0 to \$440 per week) is less than \$3. On average, the direct income effect of the taper reduction is negligible which suggests that most taper reform income gains are likely to come from the knock-on and family payment cut-off changes.

The knock-on effect, as illustrated in Figure 1, increases family payments to newly eligible income support customers in the income range **a** to **b** and to non-income support customers in the income range from **b** to **i**. The actual knock-on gains (column 8) reach a maximum of \$35.52 per week for family payments at the new pension cut-off income of \$550 and this maximum is almost twice that of the after tax income gain flowing directly from the income support taper reduction (column 7). Moreover, the

¹³ The net taper effect after taxes (column 7, Table2) is derived by applying the March 2000 income tax and rebate schedule to the gross income gain from the taper change (column 6) at each annual taxable income level that corresponds to the weekly private earnings (column 1).

large knock-on effects are delivered only to higher income lone mothers, either those newly eligible for income support or those who receive more-than-base family payments but continue to be excluded from income support by their high income levels.

The family payment taper was also reduced from 50 to 30 per cent which, in combination with the additional discretionary increases in the maximum and the base level of family payments, extended the more-than-base family payments cut-off from \$535 to \$674 per week, another significant increase.¹⁴ The additional income received from the family payment taper effect, however, is relatively small (column 9) and applies only to a narrow high-income group.

The aggregate net income effects - flowing only from taper reductions, knock-on and cut-offs as illustrated in the three income zones of Figure 2 - is the sum of (i) the net income support taper effect (column 7) which represents the 1st income wave that peaks at the old pension cut-off, (ii) the knock-on effect on family payments (column 8) which represents the 2nd income wave and peaks at the new pension cut-off, and (iii) the family payments own taper effect (column 9), which represents the 3rd income wave and peaks at private income levels just beyond the new pension cut-off.

Other reform changes

ANTS reforms also involved discretionary changes in lone parent pension and family payment levels. There was a small increase in the base pension rate, \$7.45 to \$8.37 per week, to compensate for an increase in indirect taxes. But by far the largest income change was a discretionary increase in family payments of \$25.15 at low levels of private income to \$56.60 per week at high levels of private income (column 3).

¹⁴ These weekly figures correspond to annual income cut-offs at which the base rate of family payments began. This cut-off increased from \$27,835 to \$35,050 for a lone parent with one dependent child under 5.

Even though this increase in family payments was the only income gain for lone parents with no or low earnings (given that the base pension rate increase was to compensate for price increases) it also favoured high income recipients.

Finally, there were significant tax schedule changes (column 4). It had seemed obvious, from government announcements, that taxes paid by income support recipients would fall with ANTS. The general tax-free threshold was extended from \$5,400 to \$6,000 per annum for all tax payers, and the lowest marginal tax rate was reduced from 20 to 17 per cent. But, despite the rhetoric focused on tax reductions and work incentives, lone mothers' actual tax obligations increased (negative entries in column 4, Table 2) across the income range up to \$800 per week. How did this happen? Tax reform removed the substantial Sole Parent Rebate and, as a result, the implicit tax-free threshold for lone mothers decreased from \$16,640 to \$14,787. This adjustment dominated marginal income tax reductions.

Overview of the Total Reform Effect

We are now in a position to provide a quick summary assessment of the total reform effects.

First, as indicated above income taxes were substantially and surprisingly increased for lone mothers until their weekly income exceeded \$800. No one had expected that a government committed to income tax reductions would increase income taxes so substantially on a low income group such as lone mothers (column 4).

Second, tax increases removed much of the direct gains from income support taper reductions. What was gained on the swings of the income support taper reduction was lost on the roundabout of income tax increases (column 2, column 4).

Third, nevertheless, for the pre-reform income support eligible group, average

disposable income per week increased by around \$35, almost all of which is generated by the base pension increase to compensate for the GST and, the \$25.15 base increase in family payments (column 3, column 5).

Fourth, the largest income increases go to the newly eligible income support groups through higher levels of non-taxable family payments produced by the knock-on and cut-off effects. These income increases reached a maximum of \$64.92 for those lone mothers near the new income support cut-off point (column 5).

Fifth, on average, the largest income gains go to higher income groups ineligible for income support. Family payment income increases produced by the knock-on effect dominate and the large increase in discretionary family payments further reinforces this outcome. There is a strong and consistent pattern throughout Table 2 that favours those with higher incomes.

Sixth, the accumulated disposable income effects of all reform components resemble the three income waves illustrated in Figure 2 and there is no obvious mapping between income gains and reductions in EMTRs.

Change in work incentives

Given that the direct effect of the taper reductions were trivial and were largely offset by income tax increases it is unlikely that work incentives were improved. Line A in Figure 3 (column 14, Table 2) shows the additional post reform income from moving from non-employment to employment.¹⁵

{Figure 3 here}

For approximately 85 per cent of lone mothers, whose private income was less than

¹⁵ Line A graphs the values in the final column 14 of Table 2. It is constructed by subtracting the additional net income gain (indicated in column 5 of Table 2 at each private income level) from the base increase in disposable income at zero private earnings (which was \$32.60).

the pre-reform income support cut-off point (the old eligible group), the average work incentive effect is trivial. The average gain is about \$5 per week after tax. For the small proportion of lone mothers newly eligible for income support (NE) the change in work incentives is much larger, peaking at \$32.32 at the new income support cut-off point. These incentive gains then decline but increase quickly beyond the \$700 private income level due mainly to the ANTS income tax cuts that apply at these higher incomes.

It is apparent that the increased work incentive effects flow primarily from changes in access to higher levels of family payments. Line B in Figure 3 shows the sub-component of Line A that is due to the pension taper and tax changes and it is clear that the taper and tax changes reduced work incentives for lone mother with private incomes between \$470 and \$900 per week. The knock-on effect produces the result that the major work incentive effect of taper reductions of one program (single parent income support) is to be found in another program (family payments and are concentrated among higher income earners who are likely to work full-time. There is little incentive gain for part-time workers, the majority of lone mothers who combine income support and employment income, unless they are sufficiently well paid to earn about \$550 weekly.

Another perspective on the work incentive effects of ANTS is provided by comparing the average effective tax rates (AETR) before and after the reforms as it applied to lone mothers working at different levels of private earnings. This is illustrated in Figure 4 which shows that the AETR changes induced by ANTS were quite small.¹⁶

¹⁶ The average effective tax rate (AETR) is measured as one minus the ratio of the change in disposable income, calculated from moving from no private income to a positive gross private income, divided by that gross private income.

{Figure 4 here}

Family Size

Since the largest income increases and strongest incentive effects are associated with family payments, the question is naturally raised whether the results vary significantly by family size. On the surface the answer would seem to be no. For example, for those on income support, the discretionary increase in the maximum family payment for one child was \$25 and for three children the total increase was \$32, an additional \$7 for an extra two children. For those with higher income and not on income support, the differential increase in family payment between one child and three was \$24, again a change which favoured those with higher incomes.

Figure 5 presents reform total net income changes for three lone mother family types: (i) one child under five years, (ii) one child under five and another aged between 5 to 12 years and (iii) two children under five and one child 5 to 12 years. There is a clear pattern. Below the old income support cut-off point (area A), there are no noticeable differences in income increases for each family size apart from the base increase in family payments, a gap of \$7 between a family of one child and a family of three children. For those newly eligible for income support (area B), reform effects are much the same for families of different sizes. However, at higher private income levels, around the old family payment cut-off points (area C), a noticeable income variation begins to appear. A three child family with private income between \$700 and \$800 a week received additional family payments of around \$50 per week more than a one child family. The largest increases in income and work incentives, somewhat paradoxically, go to those least likely to be able to claim them by working full-time i.e. those lone mothers with the largest number of dependent children.

{Figure 5 here}

V Lone Mothers' Employment Outcomes in the LDS

Taper reductions can only deliver income increases to employed lone mothers with sufficient earnings and, in turn, the associated knock-on and cut-off effects can only deliver the largest increases to those with higher earnings.

To document the characteristics and number of lone mothers advantaged by the reforms we turn to the Longitudinal Data Survey (LDS) of FaCSIA, which contains a one percent sample of Centrelink's fortnightly payment records. The LDS links individual welfare and family payment recipients by a personal identifier and follows their Centrelink payments, private income and personal characteristics through time.¹⁷ The LDS data allows us to compare lone mother work patterns before and after the July 2000 reforms.¹⁸

Part A in Table 3 shows the distribution of different categories of lone mothers in the LDS sample; those receiving income support, combining income support and employment or receiving more-than-base or base rate family payments at June of each year between 2000 and 2004.¹⁹ The June 2000 figures reflect the situation just before

¹⁷ Research access to the LDS is subject to strict confidentiality protocols.

¹⁸ In methodological terms a "before" and "after" comparison is not the same as a "with" and "without" reform comparison, since no account is taken of other influences that may affect outcomes. Nor is it possible to effectively use a different group of mothers as a control group. However, since the LDS is a longitudinal data set that extends back to 1995, we implicitly make use of the historical trends to assess what kind of changes one could reasonably have expected in the absence of a policy change. With such a control we can then highlight more clearly the specific changes in July 2000 that are due to the ANTS reforms. There is considerable stability in the longer run data which suggests that behaviour was not very sensitive to changes in the pre ANTS environment.

¹⁹ The LDS does not record the number of lone parents receiving base rate family payments until June 2001. We estimate the proportion for the year 2000 based on the more or less fixed total number of such mothers since the LDS records have been kept.

ANTS. Looking across the years it is apparent that there are no large scale changes to these broad categories. The changes in tapers, cut-offs and the knock-on appear to have had only marginal behavioral effects at this level of aggregation. The proportion receiving income support has remained stable (57-58 per cent), the proportion of lone mothers employed has increased marginally (20-24 per cent) and the proportion receiving more-than-base family payments has fallen slightly (10-7 per cent).²⁰

Within these broad categories, however, there are more noticeable and consistent reform effects as lone mothers reallocate into newly eligible higher income ranges and into those private income levels associated with the largest welfare income increases (Part B, Table 3). The proportion of lone mothers in the weekly income range of \$200 to \$450 - those in the old eligible income support group that gain little from the taper reduction - does not change; but there are significant increases among higher income newly eligible income support groups. The proportion of lone mothers in the newly eligible group for income support, increases from less than 1 per cent of all lone mothers in 2000 to 7 per cent in 2004. The proportion of lone mothers in the newly eligible group for more-than-base family payments at higher income levels, increases from 1 to 4 per cent.

The taper reforms therefore appear to have had a very narrow but noticeable impact among those newly eligible for income support or more-than-base family payments. About 4 of the 10 percentage point change in the newly eligible groups flowed from increased access to more-than-base family payments and mostly occurred within one year of the taper reductions. The largest impact, however, flowed from newly acquired access to income support at higher private income levels (0 to 7 percentage points). This took place over a longer period and the trend seems to be continuing.

²⁰ Of course there may have been offsetting macro effects but it seems unlikely.

The Income Dynamics of Newly Eligible Groups

The number of lone mothers newly eligible for income support can increase in three ways; an increase in *outside inflows* (those not on income support at the time of the reforms, but who subsequently enter the new income support eligible group), an increase in *inside inflows* (those on income support at the time of the reforms but who increase their earnings and move into the new income support eligible group) and reduced *outflows* from the newly eligible income group.

Figure 6 presents LDS data back to January 1995 and it gives a clear picture of the changing numbers who combine income support with high private earnings before ANTS. Over the period as a whole we adopt \$400+ private income per week as a close proxy for the high earnings group including those lone mothers made newly eligible for income support by ANTS.

Inside and outside inflows into the \$400+ per week category gradually and slowly increase between 1996 and 2000; then, in the year following the taper reduction, there is a three to four fold increase (Figure 6).²¹ The largest increase occurs for *inside inflows* and the increase continues after the reforms at a faster rate than before the reforms. The second largest increase is *outside inflows* that appears primarily to be a one-off effect concentrated in the twelve months between June 2000 and June 2001. Finally, outflows were increasing in the pre-reform period but after the reform there was a marginal reduction before outflows begin to increase again, along with the increased stock of lone mothers in this income category.

It appears, combining increased inside inflows and reduced outflows, that most of the increase in lone mothers into income support at higher levels of private income were

²¹ For simplicity we compare the status of individuals at the last fortnight of June with that of the previous June.

already on income support before the reforms and either moved up the private income distribution or reduced the probability of leaving the newly eligible group.

{Figure 6 here}

We can also use the LDS to document the five and half year income support history of the newly eligible group. This is done in Table 4. The *inside inflow* group had spent approximately two thirds of the previous five and a half years on income support and almost all (91.5 per cent) had previously combined employment and income support at some time (column 4).²² When employed, and on income support, private income was approximately equal to pension income (column 7).

Outside inflows also had a substantial income support history. Around 70 per cent (5,500 out of 7,800) were on income support at some time since 1995, accounting for 33.8 per cent of their time. Eighty per cent had combined employment with income support at some time and, on average, earned income was also approximately equal to income support (column 7).

{Table 4 here}

It is noticeable, adding the first three categories in Table 4 (continuing stock, inside and outside inflows), that only 10 per cent of the post ANTS stock of lone mothers, combining income support and earning \$400+ weekly, had no previous income support history since 1995. This suggests that most employment changes among lone mothers, in response to the taper reduction, takes place within the income support system. This finding is consistent with Gregory and Klug, 2001 who emphasise long spells of income support combined with intermittent employment as the typical lone mother experience.

²² For those who entered from within the Income Support system around 70 per cent were combining Income Support and earned income just before the reforms. Most of this group moved from an income of more than \$325 per week into the higher income range.

The LDS flow data suggest that taper reductions, by increasing the eligible range of income, primarily extend time spent on income support rather than bring into the income support system a substantial number of “new” lone mothers with no income support history. Rather than encouraging employment among lone mothers to foster a greater rate of leaving income support, the reforms appear to have had the opposite effect, at least over this data period.

The LDS can also document outflow destinations from the newly eligible income range. In the first year after the reforms almost 75 percent of outflows went to lower private income levels and remained on income support ²³, an outcome which again highlights that most employment changes occur within the income support system.

We now turn to those newly eligible for more-than-base family payments? Lone mothers receiving more-than-base family payment, but no income support, are a small group accounting for the 10 per cent of all lone mothers and therefore the numbers affected by the family taper reductions are not substantial. Nevertheless, there are close parallels with the outcomes for those newly eligible for income support. One parallel is that a concentration of lone mothers quickly develops in the newly eligible income range. The proportion of lone mothers rapidly increases from 10 per cent to just over 50 per cent of those who receive more-than-base family payments. Another parallel finding is that most inflows into the newly eligible income range occur within the more-than-base family payment group rather than from outside inflows, in much the same way that inflows into the newly eligible income range for income support flowed from those already on income support.

²³ The ratio of outflow(2) to all outflows (Table 4).

VI Concluding Remarks

Most advocates for taper reductions emphasize the need to reduce the adverse incentive effects associated with high marginal effective tax rates among those eligible for income support. But, as a policy instrument to help welfare recipients with the lowest incomes, or to encourage their employment, we show that taper reductions appear to be relatively ineffective. For example, in the context of the 50 to 40 per cent taper reduction on pension payments the taper reduction impacted directly only on 21 per cent of lone mothers on income support immediately before ANTS and delivered, on average, an additional after tax income of around \$8 per week for those employed. For the group of all lone mothers on income support the increase averaged less than \$4.

The more important welfare payment taper reduction effects are likely to be found among individuals with incomes above the previous income support cut-off. Taper reductions inevitably create new eligible groups for welfare payments among those with relatively higher incomes. The ANTS taper reduction, for example, extended the pension income cut-off point by 25 per cent and moved it from the 45th to 60th percentile of weekly earnings for women. Under the expanded welfare system these mothers can now stay in the welfare system with employment income as high as \$550 to \$600 a week.

When there are substantial knock-on effects the largest income gains from taper reductions in one program may well lie in another program not directly affected by the taper. In the ANTS example, the largest income gains from the pension taper reduction were among those ineligible for a lone mother pension but who received a substantial increase in family payments, an effect which is magnified because additional family payments are not subject to income taxes. This outcome further advantages lone mothers with higher incomes. Lone mothers with three children and a private income of

around \$700 per week for example received an extra net income of \$90 per week. Lone mothers with no private income were not subject to a knock on effect and received an extra \$32 per week.

It has also become clear that measuring the impact of taper changes, cut-offs and the knock-on effects are not straightforward and any policy proposal has to be analyzed in detail because of the complex interactions between programs. There is no one-to-one correspondence between the level of the EMTR, the change in the EMTR and the income gains that flow from the taper reduction. Pre-reform EMTRs provide little guidance to taper change income effects. Many of those who received the largest income increases also were subject to a thirty per cent increase in their EMTRs.

Finally, even though those newly eligible lone mothers brought into the income support system and into more-than-base family payments are among those with highest incomes almost all have a history of welfare support. A truly new entrant was rarely brought into the welfare system. Thus, taper reductions, and the creation of new eligible income ranges by cut-off and knock-on effects, probably increase the total time that individuals spend on income support and receive more-than-base family payments.

The pension taper reduction increased the number of lone mothers combining employment and income support but not by primarily increasing work incentives for the existing set of lone mothers on income support but by bringing into an expanded welfare system employed lone mothers with high weekly earnings who were previously excluded. The taper reductions, new cut-offs and the knock-on effect meant that after the reforms virtually all lone mothers receive some special level of government assistance either in the form of income support or more-than-base family payments.

Where to now?

If the government objective is to reduce the proportion of lone mothers receiving some level of income support there is an obvious conflict inherent in further pension taper reductions. On the one hand, work incentives for existing income support lone mothers may increase marginally; but, on the other hand, taper reductions extend cut-off points further up the income scale and bring into the welfare system a significant proportion of the few remaining lone mothers not currently receiving income support or more-than-base family payments. If something is to be done to reduce high effective marginal tax rates a more radical approach is needed. One possibility is to combine larger taper reductions with moving the base level of income support downwards. This policy will inevitably make those lone mothers without private income worse off. It would not be surprising therefore if government continued to search elsewhere to reduce welfare reliance and increase work incentives. It may turn towards better and more child-care assistance, more employment related counselling, an extension of mutual obligations and perhaps changing eligibility rules for various income support payments and allowances. The recent July 2006 welfare reforms are a partial movement in this direction.

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Figure 1 A Simple Model of Person and Family Allowance Tapers
Taper Reductions

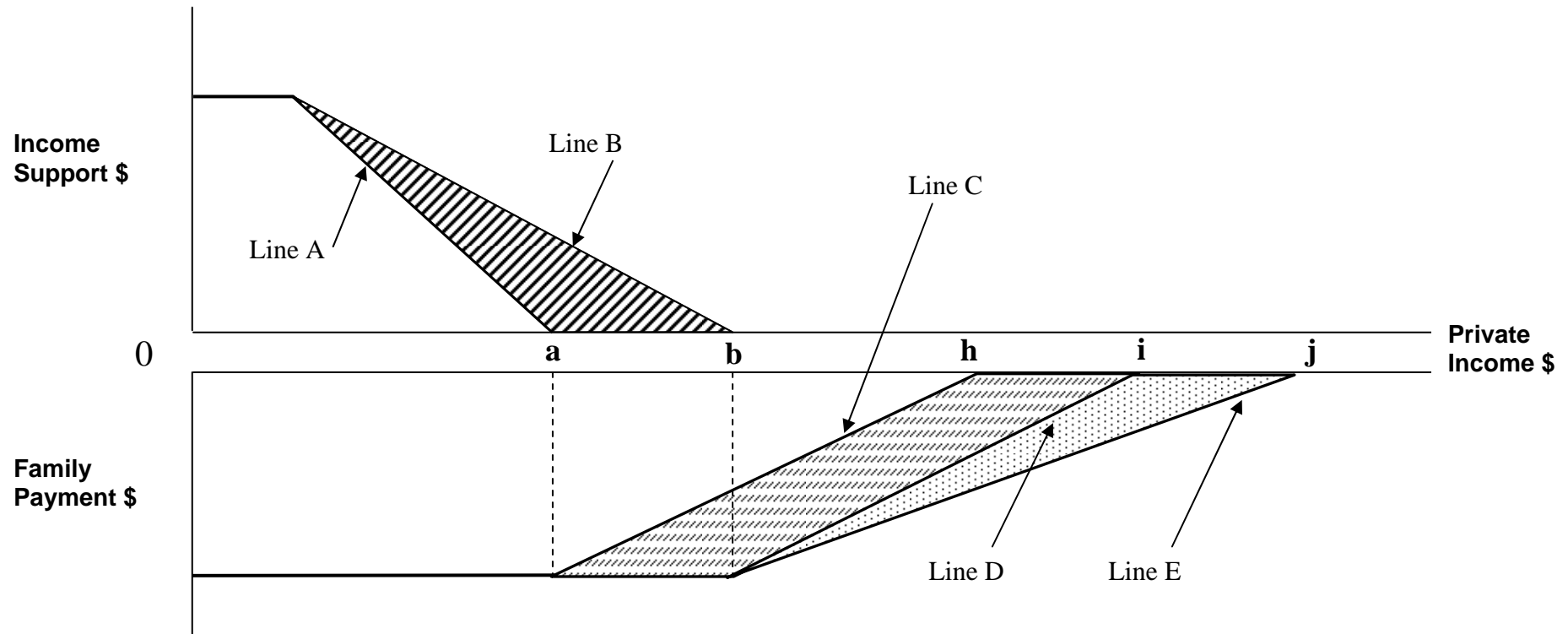
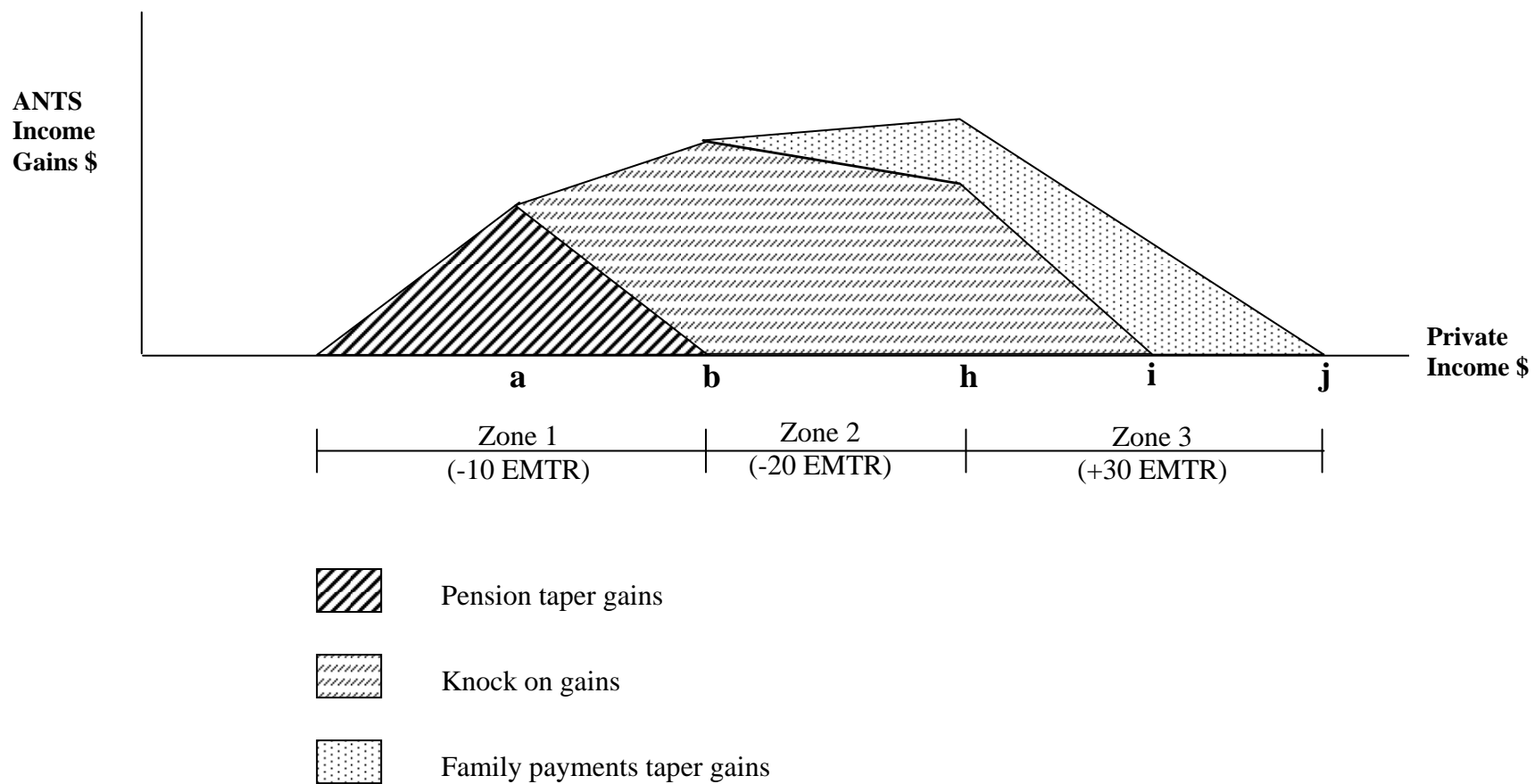


Figure 2 Taper Changes, Knock-ons and Income gains



**Table 1 March 2000 Weekly Disposable Income for Lone Parents
(with one child under five)**

	1	2	3	4	5	6	7	8	9	10
Part A										
1 Private Income	0	63	200	300	400	440	556	600	700	800
2 Pension Income	186	186	117.50	67.50	17.50	0	0	0	0	0
3 Taxable Income	186	249	317.50	367.50	417.50	440	556	600	700	800
Part B										
4 Tax Payable	16.43	29.03	42.73	52.73	65.45	73.10	96.66	114.04	148.04	188.27
5 Rebates**	53.71	52.21	43.64	37.39	30.37	25.40	24.19	24.19	24.19	24.19
6 Tax Liability	0.00	0.00	0.00	15.34	35.08	47.70	73.29	98.84	134.34	176.08
Part C										
7 Family Payments	85.66	85.66	85.66	85.66	85.66	85.66	33.84	12.00	12.00	12.00
8 Disposable Income	271.66	334.66	403.16	437.83	468.08	477.96	493.11	513.16	577.66	635.92
9 EMTR***	0.0	0.0	50.0	65.3	69.7	75.3	86.9	54.4	35.5	41.7
10 AETR****	0.0	0.0	34.3	44.6	50.9	53.1	60.2	59.8	56.3	54.5

Notes:

** Pension Rebate	26.63	25.13	16.57	10.32	4.07	0	0	0	0	00
Sole Parent Rebate	24.19	24.19	24.19	24.19	24.19	24.19	24.19	24.19	24.19	24.19
Low Income Rebate	2.88	2.88	2.88	2.88	2.11	1.21	0.00	0.00	0.00	0.00

*** EMTR is effective marginal tax rate.

**** AETR is average effective tax rate (relative to no private income).

Table 2 The July 2000 Tax Reforms: Income and Work Incentive Changes for Lone Parents *

Private weekly income	Components of net disposable income changes				Pension Taper effects		Effects on family payments		Aggregate taper & knock-on effects		Discretionary increases		Additional income gain if working +
	Gross pension increase	Gross family payments increase	Gross income tax changes #	Total Net effect on disposable income	Gross pension taper effect	Net pension taper effect	Knock on effect of pension taper	Own taper change effect	Total net taper effects	Total net taper plus knock-on effects	Base pension increase	Family payments increase	
1	2	3	4	5 = 2+3+4	6	7	8	9	10 =7+9	11 =8+10	12	13	14
\$ 0	7.45	25.15	0.00	32.60	0.00	0.00	0.00	0.00	0.00	0.00	7.45	25.15	0.00
\$ 63	7.45	25.15	0.00	32.60	0.00	0.00	0.00	0.00	0.00	0.00	7.45	25.15	0.00
\$ 65	8.60	25.15	0.00	33.75	0.23	0.23	0.00	0.00	0.23	0.23	8.37	25.15	1.15
\$ 100	12.07	25.15	0.00	37.22	3.70	3.70	0.00	0.00	3.70	3.70	8.37	25.15	4.62
\$ 150	17.07	25.15	-7.39	34.83	8.70	8.70	0.00	0.00	8.70	8.70	8.37	25.15	2.23
\$ 200	22.07	25.15	-16.24	30.98	13.70	9.81	0.00	0.00	9.81	9.81	8.37	25.15	-1.62
\$ 250	27.07	25.15	-17.88	34.34	18.70	12.62	0.00	0.00	12.62	12.62	8.37	25.15	1.74
\$ 300	32.07	25.15	-20.61	36.61	23.70	15.80	0.00	0.00	15.80	15.80	8.37	25.15	4.01
\$ 350	37.07	25.15	-26.44	35.78	28.70	14.98	0.00	0.00	14.98	14.98	8.37	25.15	3.18
\$ 400	42.07	25.15	-28.76	38.46	33.70	17.63	0.00	0.00	17.63	17.63	8.37	25.15	5.86
\$ 440	43.57	25.15	-26.77	41.95	35.20	21.69	0.00	0.00	21.69	21.69	8.37	25.15	9.35
\$ 500	19.57	49.00	-19.06	49.51	11.20	5.21	21.00	0.00	5.21	26.21	8.37	28.00	16.91
\$ 550	0.00	74.00	-9.08	64.92	0.00	0.00	35.52	0.00	0.00	35.52	0.00	38.48	32.32
\$ 600	0.00	78.70	-20.54	58.16	0.00	0.00	10.54	11.56	11.56	22.10	0.00	56.60	25.56
\$ 650	0.00	63.70	-18.54	45.16	0.00	0.00	0.00	7.10	7.10	7.10	0.00	56.60	12.56
\$ 700	0.00	56.60	-16.54	40.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.60	7.46
\$ 800	0.00	56.60	-6.31	50.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.60	17.69
\$ 900	0.00	56.60	6.69	63.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.60	30.69
\$ 1,000	0.00	56.60	16.61	73.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.60	40.61

Notes: Columns 6 and 12 above add up to column 2; and columns 8, 9 and 13 add up to column 3.

With reference to the lines indicated in Figure 1, column 6 above = line A - line B; column 8 = Line D - line E and column 9 = line E - line D.

* For lone parents with one dependent child under 5 years, and not receiving any rent assistance or child maintenance. Also excludes childcare assistance.

Negative values in column 4 mean an increase in income taxes paid after ANTS at these private income levels (due mainly to the abolition of the sole parent rebate).

+ The value of additional disposable income in column 14 = the value in the corresponding row of column 5 less the first entry in column 5 (\$32.60).

Figure 3 ANTS Additional Income Gains to Lone Parents if Employed

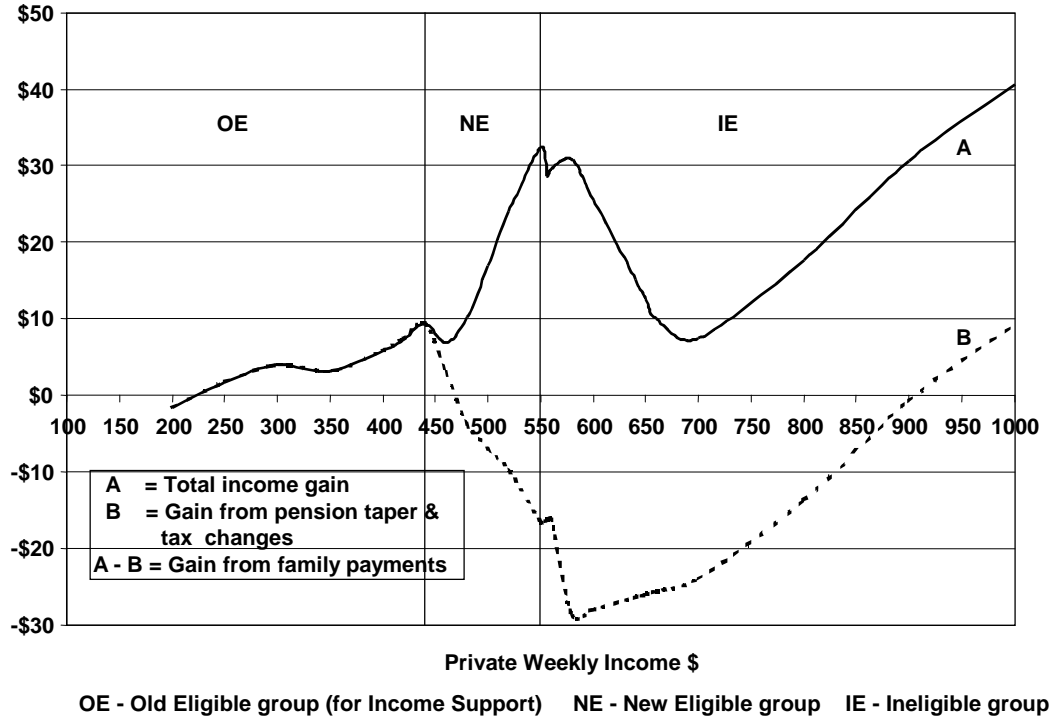


Figure 4 Average Effective Tax Rates: March and July 2000

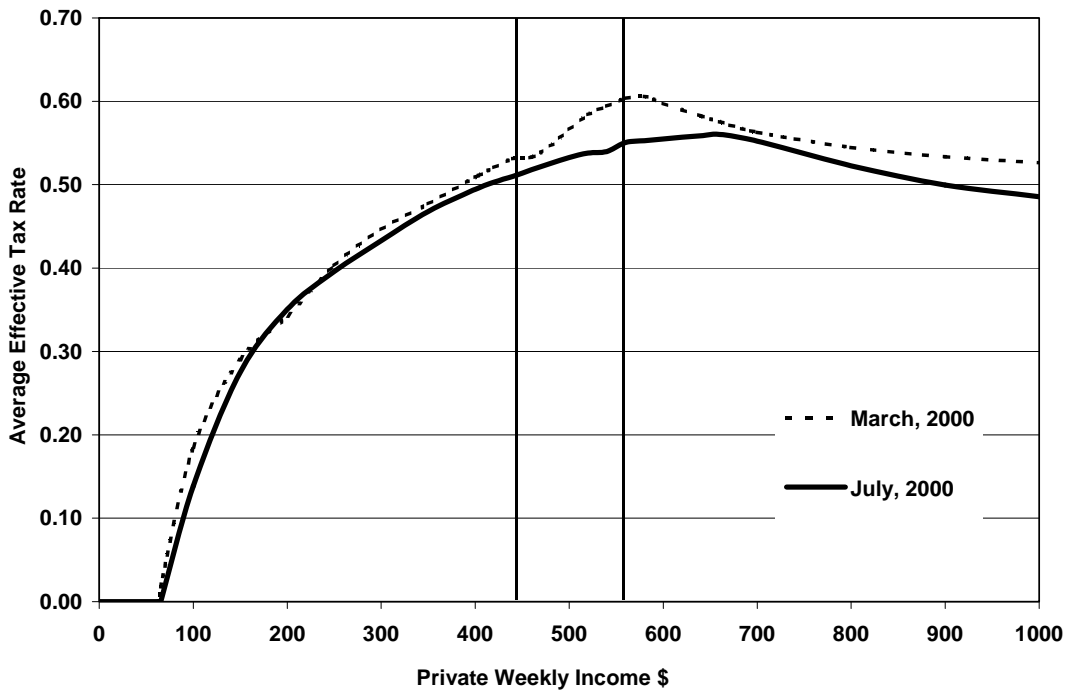


Figure 5 Comparative ANTS Income Gain for Lone Parents by Number of Children

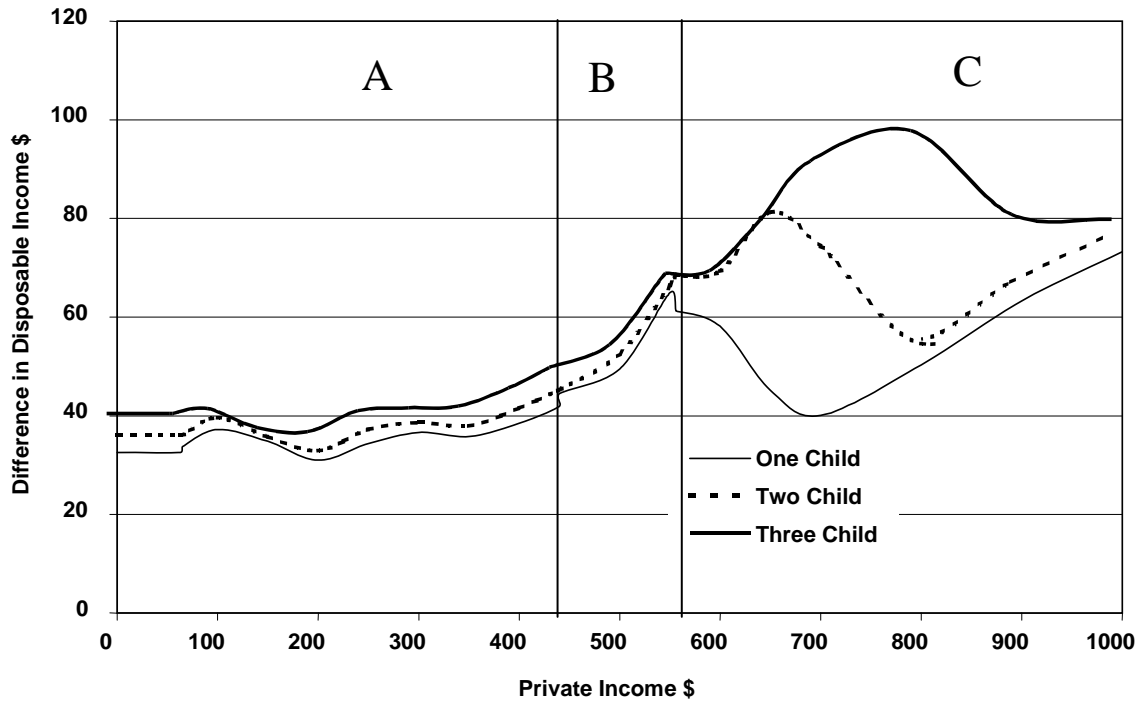


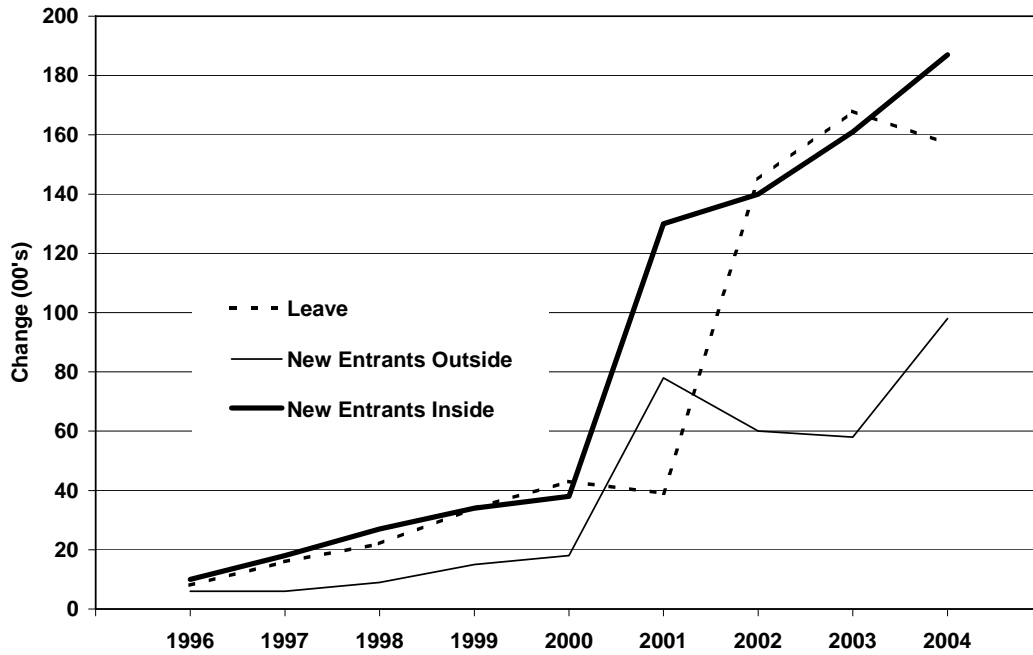
Table 3 Distribution of Lone Mothers by Income Support, Employment Income and Family Payment Levels
Proportion of all Lone Mothers in the LDS sample for 2000 - 2004

Year	PART A				PART B				Total New Eligible**
	Income Support		Family Payment		Employment Income Combined with Income Support, per week		More than Minimum Family Payment per week		
	Income Support*	Income Support & Employed	More than Minimum	Base Rate	\$200-450	\$450+	<\$600	\$600+	
					Old Eligible	New Eligible	Old Eligible	New Eligible	
2000	0.58	0.20	0.10	0.09	0.10	0.00	0.08	0.01	0.01
2001	0.57	0.22	0.09	0.08	0.11	0.03	0.06	0.03	0.07
2002	0.57	0.23	0.08	0.08	0.10	0.04	0.05	0.03	0.07
2003	0.58	0.23	0.08	0.08	0.10	0.05	0.04	0.04	0.08
2004	0.57	0.24	0.07	0.08	0.10	0.07	0.03	0.04	0.11

* On Parenting Payment Single.

** Sum of the two 'New Eligible' groups (in the \$450+ and the \$600+ weekly income categories).

Figure 6 Change in the Number of Lone Mothers who Combine Welfare and Work with Earnings of >\$400 per week
Movements from year to year, June



**Table 4 Employment Status and Income Support History from January 1995 – June 2000
Lone Mothers on Income Support and Earning >\$400 weekly, June 2001**

Lone Mother Category*	Number of Lone Mothers**	Percent Time Spent on Income Support	Percent Ever Employed when on Income Support	If Ever Employed (Jan 95 - Jun 00)		
				Proportion of Time Employed when on Income Support	Mean Earnings \$ weekly	Ratio of Employment Earnings to Total Income
1	2	3	4	5	6	7
1. Continuing Stock	2,700	64.5	100.0	72.4	306	68.6
2. Inside Inflow	13,000	66.1	91.5	63.5	237	50.3
3. Outside Inflow	7,800					
3.1 On income support previously	5,500	33.8	80.0	51.4	280	52.3
3.2 New customer	2,300	-	-	-	-	-
<i>Total, June 2001</i>	23,500					
4. Outflow	3,900	65.0	100.0	57.3	263	55.1
4.1 Outflow(1)	1,000	71.5	100.0	56.1	281	54.9
4.2 Outflow(2)	2,900	62.8	100.0	57.7	257	55.2

Number of lone mothers is the estimate for the total population in scope for the LDS sampling frame (i.e. those receiving income support or any family payments), based on blowing up the numbers encountered in the LDS 1% sample.

** Lone mother categories are as follows (where IS designates income support):

1. *Continuing stock*: on IS and earning >\$400 weekly in both (June) 2000 and (June) 2001.
2. *Inside inflow*: on IS and earning <\$400 weekly in 2000 but on IS and earning >\$400 in 2001.
3. *Outside inflow*: not on IS in 2000 but on IS and earning >\$400 weekly in 2001.
 - 3.1. Outside inflow, lone mother who has IS history in the LDS between Jan 1995 and June 2000.
 - 3.2. Outside inflow, lone mother who has no IS history in the LDS between Jan 1995 and June 2000.
4. *Outflow*: on IS and earning >\$400 weekly in 2000 but not in the same category in 2001.
 - 4.1. Outflow lone mother who is not in the LDS in June 2001.
 - 4.2. Outflow lone mother on IS and earning <\$400 in June 2001.