
G Paid parental leave and return to work

Key points

- The Commission estimates that new mothers are likely to extend their leave from work by an average of *ten weeks* following the introduction of the proposed statutory paid parental leave scheme.
- Mothers who, based on previous patterns of leave taking, would be likely to take less than 26 weeks leave, are estimated to take on average an additional six weeks.
 - The average of six weeks is for all eligible mothers who would be likely to take less than 26 weeks leave — including those expected to opt out of the scheme
 - For those mothers likely to take less than 26 weeks leave and expected to opt into the scheme, the average increase in leave is expected to be eight weeks
 - There is greater uncertainty than these estimates suggests since they reflect several assumptions, required in part because of imprecision in the base data.
- The greatest change in leave is expected among those groups that experience financial constraints:
 - those on lower incomes who were likely to take a short period of leave
 - most of the families who were likely to take less than two months of leave
- Of the families eligible for the proposed scheme, at least 86 per cent are projected to benefit from the 18 week parental leave payment, and therefore to use the statutory paid parental leave scheme. The 86 per cent estimate is more likely to be an underestimate given the uncertainties associated with the data.
 - Families opting in are expected to be better off by over \$2000 on average, excluding paternity leave or superannuation benefits if introduced.

The key results and how to interpret them

A core objective of the proposed paid parental leave scheme is to allow women to take a longer period of leave around the birth of their child if they wish to do so. This appendix sets out the likely impacts of the proposed scheme on the duration of leave that new parents take from work.

The sections below spell out the Commission's approach on this issue, but the bottom line is that a statutory paid parental leave scheme would be likely to have significant impacts on leave durations of mothers.

It is important to clearly differentiate the outcomes for two broad groups.

Users

The first group are those eligible mothers who ultimately *use* the scheme. The impact of the scheme on this group is measured as the total additional weeks of leave from the scheme divided by the number of mothers actually using the scheme. Since budgetary costs only relate to those mothers who use the scheme, this provides one measure of the effectiveness of the scheme for users. A measure of the cost-effectiveness of the scheme could be obtained by calculating the total number of weeks of additional leave and dividing by the net scheme cost, to give the net cost per week of additional leave.

We found that the average increase in leave of this group to be around 12 weeks. For mothers who initially take less than 26 weeks of leave, we estimated that the average additional leave taken would be around 8 weeks. For a small proportion, the increase in leave would be 14 weeks or more. These would be largely low income mothers taking very short leaves prior to the scheme.

All potentially eligible mothers

This group is the overall target of a statutory paid parental leave scheme. The outcome for this broad group is the total additional weeks of leave from the scheme (as above), but divided by the *total* number of mothers eligible for the scheme, regardless of whether the mothers actually take the leave. Were many eligible women to opt out of the scheme, then it would show up as a relatively small number of additional weeks per eligible woman. This would suggest that the scheme had fallen short of its goal of changing leave duration for a broad range of women.

We found that the average increase in leave of this group to be around 10 weeks. For mothers who initially take less than 26 weeks of leave, we estimated that the average additional leave taken would be around 6 weeks. The lower amount of average leave reflects the fact that around 14 per cent of this group are projected to opt out of the scheme.

Our analysis suggests that single mothers would be unlikely to substantially alter the leave they take.

-
- The vast majority of low-income single mothers do not return to work in the first two years of their child’s life.
 - High-income single mothers would be unlikely to receive sufficient compensation from the proposed paid parental leave scheme to encourage a later return to work.

Partners

While most partners would be eligible for paternity leave, it is estimated that many will not be very responsive to the proposed scheme. This estimate is based on their current patterns of leave taking, as well as their financial comparisons between the paternity leave payment and at work incomes. Nevertheless, around one third of fathers may use the paternity leave provisions by (section G.4).

G.1 Estimating additional leave by mothers

The Commission’s estimates of mothers’ leave responses are based on the likely financial impacts of the scheme on each family. In measuring these benefits, only the gains from paid parental leave are included, with no consideration of the benefits from the proposed paternity leave payment and any potential superannuation contributions by employers. To determine the financial impact, information from a representative sample of families has been used.

The financial impacts of parental leave

Following the introduction of the proposed statutory paid parental leave scheme, many parents will increase their initial duration away from work. Two effects can underlie this behavioural response.

The price effect

Paid leave lowers the price of taking leave, where the price is measured as the income forgone from taking a week of leave. For instance, a woman may have a job paying \$650 a week that she could go back to after the birth of her child. If she has to take unpaid leave, then each week of leave costs her \$650 of forgone earnings (\$650 is the ‘price’). If she gets paid parental leave of \$543.78 a week for 18 weeks then the cost of each week of leave in forgone earnings is now around \$105 a week — a more than 80 per cent reduction in the price of leave. (In this discussion, to explain the basic concepts, we are abstracting from the complex interactions that

may arise from the tax and welfare system. However, we have incorporated these interactions in the empirical analysis we have undertaken.)

As the ‘price’ of leave falls with statutory paid parental leave, it increases the amount of leave taken because it changes the balance of the benefits from unpaid time spent caring for their children (which is highly valued by most parents) compared with paid employment.

The income effect

This is the usual tendency for demand for a ‘good’ — in this case, leave taking — to respond to higher income levels. It recognises that financial constraints affect how much leave parents can take and that higher income can help them to prolong their period of exclusive parental care.

The difference between the ‘price’ and ‘income’ effect

The role played by the price and income effects depends on the circumstances of the families using statutory paid parental leave.

In some instances, a statutory paid parental leave scheme means that there is no forgone income from taking leave — in effect, families in this position face a negative price. As an illustration, a woman who could return to a job paying \$300 per week would face a price of \$300 a week for taking leave if she only had recourse to unpaid leave, but, after the proposed statutory paid parental leave scheme, would get an additional \$240 in income per week from taking leave. As such, these families would be expected to take every week of paid parental leave that they are offered. The price effect approach allows us to identify which families fall into this category and to ensure all those families are estimated to take at least the 18 weeks of paid parental leave offered to them.

Parents who already take more than 18 weeks of leave also face a negative price of leave for the proposed period of paid parental leave. This is because taking a week of statutory paid leave concurrently with existing leave (as is permitted under the Commission’s proposal) does not result in any forgone income. If a mother was getting \$600 a week for 18 weeks of privately negotiated leave and took statutory paid leave at the same time, she does not give up the \$600, but gets \$543.78 on top of that payment. However, it is in this situation that the income effect comes into play. In this instance, the woman has additional income of around \$9800, which can be expected to increase her overall length of leave.

One of the reasons that a statutory paid parental leave scheme is likely to increase leave by more than payments like the baby bonus is that a leave scheme exploits both the income effect and the price effect.

Some mothers will not be very responsive to the scheme

Some mothers who will not extend their leave even if the proposed paid parental leave scheme is introduced, including those:

- whose monetary and non-monetary rewards from a job are very high
- who have lower preferences for full-time caring of their child
- who have sufficiently high financial pre-commitments (for example, mortgage repayments) that can only be adequately met by returning to work.¹ While financial pressures are more typically associated with lower income levels, around a quarter of families with recent children where the post birth income of the mother exceeded the federal minimum wage had faced at least one financial constraint in the year before the interview.²

The theoretical structure

The change in leave behaviour arising from the introduction of the proposed scheme depends on the scheme's effects on families' net incomes. From the LSAC database, a sample of over 1500 families who are deemed to meet the eligibility criteria — our 'eligible' sample — have been used in our estimates (box G.1).

Estimating net income before paid parental leave

We calculated the net income of each of the families in the 'eligible' sample for the financial year in which their child was born and for the following financial year. The net income comprises

- the mother's wages from work
 - based on the weekly pre-birth wage of the mother for each week worked before the baby was born, as well as for each week of paid leave taken

¹ The capacity for families to deal with these pressures by increasing the father's earnings is usually limited since most fathers already work full-time hours.

² In the LSAC survey, financial constraints include not being able to pay a utility bill on time; going without food because of a lack of money; missing mortgage or rent payments; seeking help from a charitable organisation; and not being able to afford to heat or cool their home.

-
- the weekly post-birth wage of the mother for each week she worked after completing her parental leave
 - the partner’s wages from work
 - less income taxes and medicare levies payable by the family
 - including the impact of the low income tax offset and the low income medicare reduction. For families receiving parenting payment (single), the pensioner tax offset has been included and for those receiving parenting payment (partnered), the beneficiary tax offset has been included.
 - plus the value of government payments that the family may be eligible for
 - the payments covered in this analysis are the baby bonus, family tax benefit A (including rent assistance and the large family supplement), family tax benefit B and parenting payment (single and partnered).

Estimating net income with paid parental leave

To estimate the net income families would receive under the paid parental leave scheme, the above analysis was repeated, but with the mother receiving the paid parental leave payment in addition to her wages. The mother would receive

- 18 weeks of paid parental leave at the rate of \$543.78 per week if she were taking at least 18 weeks of leave
- if she were taking less than 18 weeks of leave, the mother would only receive parental leave payments for the number of weeks of leave taken
- but the family would not be eligible for family tax benefit B while receiving paid parental leave and the family would be ineligible for the baby bonus

The ordering of leave could also make a difference to the benefit families would receive. It was assumed that each mother would use any paid leave from her employer at the start of her parental leave period. If mothers took at least 18 weeks of unpaid leave, they were assumed to begin receiving the paid parental leave

- from birth if they had no paid parental leave
- after their paid leave ceased.

While the proposed scheme would allow mothers to take paid parental leave concurrently with other forms of paid leave, mothers were only assumed to take leave concurrently if they took fewer than 18 weeks unpaid leave. Analysis of this option indicated that families would, on average, be worse off (primarily for tax reasons) if they chose to take statutory leave concurrently with other paid leave rather than receiving the paid parental leave payment while on unpaid leave.

The initial and final estimate of benefit

The benefit a family would receive from the 18 week parental leave payment is calculated as the amount by which their net income, when receiving the parental leave payment, exceeds their net income in the absence of the payment. For each family in the sample, two estimates of benefit are made — an initial and a final benefit estimate. The initial estimate

- uses the leave data from LSAC to estimate each mother's income and entitlements to government benefits
- is used to estimate how much additional leave a mother might take from the introduction of the proposed paid parental leave scheme
- cannot be negative, as families are assumed to opt out if the paid parental leave scheme does not provide a net benefit to them.

The final benefit is the estimate of benefit quoted throughout this report. It

- is based on an estimate of leave for each mother that includes the estimated increase in leave that may occur because of the proposed scheme
 - the revised leave data is used to estimate net income with and without the paid parental leave scheme
 - all additional leave is assumed to be unpaid leave and replaces an equivalent period of post-birth paid work

Families who do not receive a positive estimate of final benefit are assumed to opt out of the scheme. Their estimated benefit is zero and they are assumed not to change their leave behaviour.

Possible need for further analysis

The interaction between the tax and welfare system in Australia is very complex. While the estimated benefits should address the circumstances faced by the majority of families, some circumstances have not been addressed. If the proposed parental leave scheme were to be implemented, it may be necessary to consider what impact the scheme would have on families who experience events not covered by the analysis. For instance, the analysis does not cover families where parents are separated and have joint custody of the child, or instances where there are complex maintenance arrangements.

Estimate of additional leave

This section outlines the method used to estimate the degree to which a statutory paid parental leave scheme increases primary carers' leave durations (L_{add}). For all families in our 'eligible' sample (box G.1), we estimated the additional leave based on the 'income' approach. We also estimated the additional leave based on the 'price' effect for those families where the mother initially takes less than 18 weeks leave. For those families where both price and income effects indicated increased leave duration, we assumed that the actual change in leave duration was the larger of the two estimates.

Income effect approach

A statutory paid parental leave scheme would increase family net income around the birth or adoption of a child. One of the ways families can spend that additional income is to finance an extended period of leave, estimated as:

$$L_{add} = L_{ini} \times \left(\frac{Y_{ini} + Benefit_{ini}}{Y_{ini}} \right) \times \eta - L_{ini} \quad (G.1)$$

where L_{ini} is the initial length of leave, Y_{ini} is the initial net income of the family, L_{add} is the additional length of leave in weeks, η is the income elasticity of demand and $Benefit_{ini}$ is the initial estimated benefit a family would receive if the proposed paid parental leave scheme were introduced.

The income elasticity (η) used for the income effect differs with family net income, so that a family with a lower income increases their leave by more than a higher income family who otherwise have the same characteristics. The elasticity for a family is given by

$$\eta_i = 1 + \left(\frac{\sum_{i=1}^{1716} (Benefit_{ini}^i \times weight_i)}{\sum_{i=1}^{1716} (weight_i)} \times \alpha \right) \times \frac{1}{NetIncome_i} \quad (G.2)$$

where $NetIncome_i$ is the initial net income for family I , $weight_i$ indicates how common a family type is in the population and α is a constant. We considered that a plausible weighted *average* elasticity was around 1.2. With $\alpha=12$, the weighted average elasticity was 1.16, in line with that prior. Accordingly, in calculations of the individual income effect, we used $\alpha=12$.

With the above parameters, we found that a 1 per cent increase in net income would increase leave duration by 1.7 per cent. Sensitivity analysis around that elasticity is explored in section G.2.

Price effect approach

We also estimated the potential role of a price effect in increasing the leave durations of families where the mother initially took less than 18 weeks of leave. The effect on the leave duration of this group was assumed to be the higher of the effects stemming from the price and income changes resulting from a scheme.

If a mother returns to work because their family faces financial constraints, providing that family with additional money at that time could encourage an extension of leave. The ‘price’ of parental leave measures the amount of net income a family must forgo for taking an extra week of leave. It compares the weekly net income of a family based on a mother returning to work and the net income if the mother remains on leave for a week. As such, it only examines payments and taxes that occur or are withheld on a weekly or fortnightly basis.³

For families who have a higher net income if the mother returned to work, the estimate of additional leave based on the ‘price’ effect is given by

$$IF L_{ini} < 18 \text{ and } P_1 > 0 \text{ then } L_{add} = \frac{(P_1 - P_0)}{P_0} \times L_{ini} \times \varepsilon - L_{ini} \quad (G.3)$$

where P_0 is the net amount of money forgone from taking an additional week of absence from work (taking into account lost wages and any offsets from social welfare payments or reduced taxes) before the introduction of the statutory paid leave scheme; P_1 is the equivalent price after the introduction of the scheme; and ε (the elasticity) is the responsiveness of time taken away from work to the cost (or price) of taking that time off work. An elasticity of -1.0 has been used, which implies that a 10 per cent decrease in the price of leave increases the amount of leave taken by 10 per cent.⁴

³ As such, it does not account for supplementary family tax benefit payments or tax offsets.

⁴ In order to provide an estimate of the increase in leave, a specific value for the elasticity had to be set. However, we have no information on the appropriate value of this elasticity. For many consumer goods, an own price demand elasticity between -1.0 and -1.2 is common. We chose a (conservative) elasticity of -1.0 in this range, which would result in the smallest estimated change in leave duration. We undertook sensitivity analysis to examine how uncertainty in the value of the elasticity influences the estimated increase in leave.

When a family would not need to forgo money for taking leave under the proposed paid parental leave scheme (when P_1 is less than or equal to zero), then we assume they will take the full 18 weeks of paid parental leave offered to them. In those cases the increase in leave can be represented by

$$\text{IF } L_{ini} < 18 \text{ and } P_1 \leq 0 \text{ then } L_{add} = 18 - L_{ini} \quad (\text{G.4})$$

The impact of the baby bonus

Families surveyed as part of the infant cohort in the LSAC survey were selected because their babies were born between July 1 2003 and June 30 2004. The policy that is now called the baby bonus was first made available for babies born on or after July 1 2004 — with families entitled to a payment of \$3000 per baby. As such, none of the families in the LSAC database received that payment for the leave period being studied.

As the baby bonus provides parents with additional income, the baby bonus should have encouraged parents to extend their parental leave. Any such increase in leave would be additional to the initial length of leave contained in the LSAC database.

Accordingly, an estimate has been made of the likely additional leave that families in the LSAC database may take because of their access to the untaxed baby bonus payment. The additional leave induced by the baby bonus is calculated using the ‘income’ effect method. The only difference is that for each family, instead of using the estimated benefit of the proposed paid parental leave scheme, the net gain from the baby bonus is included.

The net gain from the baby bonus is calculated by taking the amount of baby bonus the family would now be entitled to (as of January 2009) less the amount of maternity allowance they were entitled to when their baby was born. Those families were eligible for an untaxed maternity allowance worth between \$822 and \$842 depending on when the baby was born.

Overall, mothers are estimated to take on average an additional ten weeks of leave if they receive the \$5000 baby bonus payment — for mothers with shorter initial leave lengths, the increase in leave will be smaller. For mothers initially taking up to nine months of leave, it is estimated that the baby bonus would extend their leave by three weeks. The reliability of these estimates depends on the plausibility of the assumed value of the income elasticity. We explore the consequences of different parameter assumptions in section G.2.

The initial leave period used for this analysis includes the leave measured in the LSAC database, as well as an estimate of the leave those families would have taken had they received the current baby bonus payment.

G.2 Reliability of the estimates

Good policy advice typically requires quantification of the likely benefits. However, in this instance, simply providing an estimate of the benefits could be misleading. In particular, the measurement of the initial and additional length of leave for individuals is imprecise. This imprecision affects the ability to accurately project a key objective of the proposed scheme — the proportion of mothers taking at least 26 weeks of leave after the birth of their child.

Imprecision in the initial length of leave

The exact date of birth and return to work is not recorded in the LSAC database, so that the calculated length of a mother's postnatal leave is imprecise.⁵ For example, the birth of a baby may be recorded as occurring in March 2004 and the timing of the mother's return to work could be recorded as May 2004. Using the example of a baby born in March and a mother returning to work in May of the same year, the estimated length of post birth leave will be two months (or 61 days). Yet the actual length of leave could differ by up to 30 days from this estimate:

- if a child was born on March 31 and a mother returned to work on May 1, the actual length of post birth leave would be 31 days. In effect, the calculated length of leave could overstate the actual leave by a month
- similarly, if a child was born on March 1 and a mother returned to work on May 31, the actual length of post birth leave would be 91 days. As such, the length of leave could understate the actual leave by a month.

Because of the imprecision of recording dates in the LSAC database, it is only possible to say with confidence that a mother initially took less than 26 weeks of leave if she were recorded as taking less than 21.5 weeks of leave. To be confident that a mother actually took at least 26 weeks of leave initially, she would need to be recorded as taking more than 30.5 weeks of leave.

⁵ Only the month that events occur in is recorded in the LSAC database.

Imprecision in the estimate of additional leave

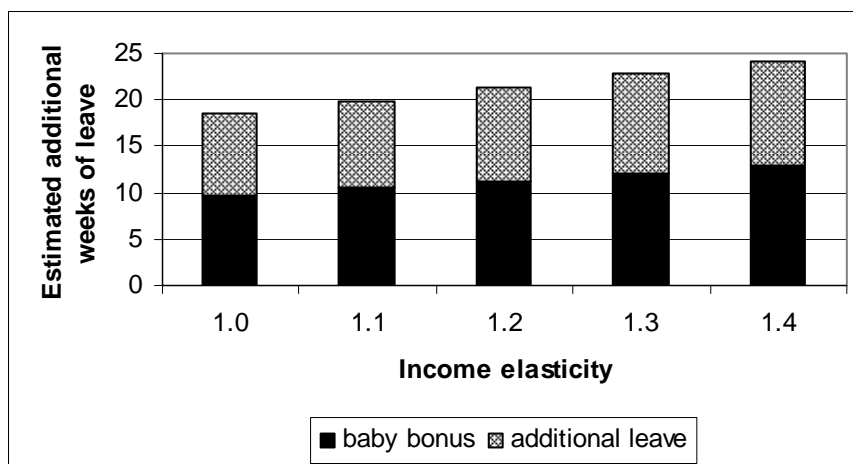
Two methods have been used to estimate the additional leave — the ‘income’ effect and the ‘price’ effect. Calculations based on the ‘income’ effect will be particularly susceptible to imprecision. Part of that imprecision will arise because of the problems with the leave data in the LSAC database and some will arise because of uncertainty over the chosen income elasticity.

The ‘income’ effect methodology has been used to estimate the effects of the baby bonus and statutory paid parental leave on additional leave. The ‘income’ effect calculates an amount of additional leave as a proportion of the original leave.

- For example, if a family were estimated to increase their initial leave by 50 per cent and their recorded length of initial leave was eight weeks, then the estimated additional leave would be four weeks.
- However, if the actual length of initial leave was ten weeks, the additional leave should be five weeks.

Inconsistency can also arise due to the choice of income elasticity. For this study, we have used an average income elasticity of 1.16, but different assumptions would obviously alter the estimated outcomes. From figure G.1 it can be seen that a change in the income elasticity by 0.2 could alter the estimated leave differences by around three weeks. This difference would appear to be evenly split between the estimated additional leave because of the baby bonus and the additional leave because of the proposed 18 week parental leave payment.

Figure G.1 **Sensitivity of additional leave to changes in income elasticity**
estimated weeks of additional leave with different income elasticities



Data source: Productivity Commission calculations.

For mothers initially taking fewer than 26 weeks of leave, the additional leave from the 18 week paid parental leave scheme is largely determined by the ‘price’ effect measure. In fact, approximately 5.7 weeks of the average 6.1 weeks of additional leave is due to the ‘price’ effect. The additional imprecision in the estimated length of leave for this group will be small

- this group will still be affected by the imprecision of the ‘price’ effect in relation to the baby bonus induced additional leave — likely to be in the order of a week
- there will also be some impact from uncertainty over the price elasticity of demand — but estimates using a wide range of price elasticities changed the average leave for this group by less than a week
- analysis of the additional leave arising from the introduction of the baby bonus indicates that the estimated increase in leave related to that payment may be underestimated — at least for mothers taking short initial lengths of leave.

The combined impact of this imprecision

A key objective for the proposed paid parental leave scheme is to encourage parents to take additional leave around the birth or adoption of a child. In particular, there are substantial health and welfare benefits that flow from a child having at least six months of full time parental care. As such, there is likely to be detailed focus on the proportion of parents taking at least 6 months (or 26 weeks) off work.

When combined, the three sources of imprecision dealt with above could result in any observation being as much as six or eight weeks from the true length of leave. Fortunately, the level of imprecision is likely to be less for mothers taking shorter initial lengths of leave — with the largest errors being closer to five weeks. But even that level of imprecision is very significant when compared to the key measure of mothers taking at least 26 weeks of leave. While some of this imprecision should be averaged out when examining aggregate level data, the estimates should be considered broad indicators rather than precise estimates.

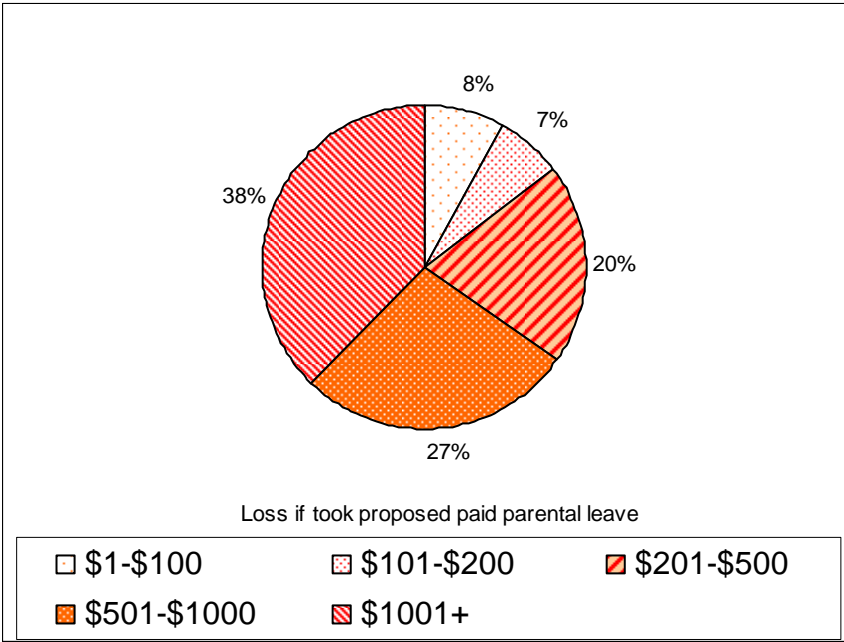
The imprecision in the length of leave data from LSAC results in further estimation errors. For example, as the average family would need to receive at least 14 weeks of parental leave payments to obtain a benefit from the proposed scheme, imprecision in the length of leave data will result in some families incorrectly being assumed to opt into or out of the scheme.

To examine the potential impact of this imprecision on the opt out rate, figure G.2 examines the financial impact of the proposed scheme on those families where the mother takes less than 26 weeks of leave and where the families are estimated not to benefit from the scheme — this group account for just 6 per cent of the ‘eligible’

sample. This analysis is artificial because families who do not benefit from the scheme can opt out and be no worse off. However, this analysis lets us assess the proportion of people who may incorrectly be projected to opt out of the scheme.

If families are projected to make small losses from opting into the proposed 18 week parental leave payment, imprecision in the estimated length of leave increases the likelihood that these families have been incorrectly projected to not benefit from the scheme. Around a quarter of families where the mother initially took less than 26 weeks leave are estimated not to benefit from the scheme. Of these families, 15 per cent were estimated to lose less than \$200 (figure G.2). If these families had their initial length of leave underestimated by as little as two weeks, it is likely that they would benefit from the scheme. As such, it is quite possible that the opt out rate will be smaller than the estimated 14 per cent of eligible families.

Figure G.2 Estimated scale of potential loss for families not benefiting^a
 Families with mothers initially taking 26 weeks of leave who are estimated to have a negative benefit from the proposed 18 week parental leave payment



^a This is only a 'potential loss' because families can opt out of the scheme. Families in this group comprise just 6 per cent of the mothers assessed to be eligible for the proposed scheme.

Data source: Productivity Commission calculations.

G.3 Estimated benefits of the scheme

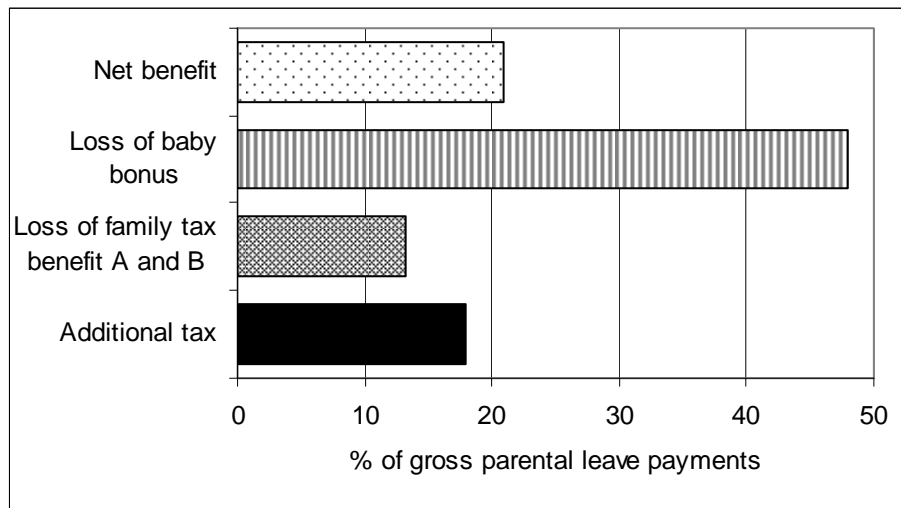
Based on the analysis of LSAC data, 86 per cent of eligible families are projected to benefit if the proposed 18 week parental leave payment were introduced. The

estimated average benefit for these families would be approximately \$2050. That average benefit is just over 20 per cent of the gross proposed parental leave payment (figure G.3). When this benefit is averaged over all eligible families — including the 14 per cent projected to receive no benefit — the average benefit would be \$1750.

Figure G.3 outlines what would be expected to happen to the nearly \$10 000 in parental leave payments received by families. On average, the loss of baby bonus would account for half the gross payment. Another 18 per cent of the gross payments would be paid in additional tax. Families would also be eligible for less family tax benefit A and B — the loss of these benefits would be approximately equal to 13 per cent of the gross payment.

Based on the proposed scheme, 86 per cent of families would be projected to benefit from the scheme. The vast majority of these families would be expected to receive a full 18 weeks of paid parental leave payments. But a small number of families, primarily those who would be ineligible for the baby bonus, are projected to opt into the proposed paid parental leave scheme, but not to take the full 18 weeks of leave.

Figure G.3 What would happen to the parental leave payment



Data source: Productivity Commission calculations.

Does paid parental leave encourage bunching of births around the start of the financial year?

The expected behavioural change projected in this appendix stem from the expected financial impacts of a statutory paid parental leave scheme on families. Part of those benefits flow from the complex interaction between the tax and welfare system,

whose effects vary with the timing of the birth of the child. Peter Apps in his article ‘Maternity Leave mish-mash’ (see sub. DR369) suggests that the introduction of a taxable paid maternity leave scheme would influence the timing of new births. He argues that entitlement to an additional taxable payment creates an additional incentive to alter the timing of births so that they occur at the start of a financial year.

Given this concern, we assessed the scope for families to time the birth of their children to maximise tax and welfare gains. To calculate the potential incentives to have births at different times during the financial year, we have analysed the tax implications of births spaced at three month intervals across the financial year. The results suggest that in some situations tax is minimised when the birth occurs at the start of the financial year, but in other circumstances tax is minimised when births occur towards the middle of the financial year. While we did not find systematic evidence of financial benefits for families having children at the start of the financial year, we found evidence of benefits from choosing other birth times for some families.

To assess the potential for birth timing effects, we explored various scenarios. For these scenarios, we assumed an annual full time wage of \$50 000 for mothers, that mothers work full time before the birth but return at half-time hours after the birth, and that mothers take six months of maternity leave. In addition, the impacts of both wholly paid leave and wholly unpaid leave were calculated (see table G.1 and figure G.4).

Table G.1 Income received and tax paid over two years with six months of maternity leave

	<i>Income</i>	<i>Tax^a</i>	<i>Net income</i>	<i>Percentage tax</i>
Unpaid leave				
Birth at 0 months	62 500	8375	54 125	13.4
Birth at 3 months	43 750	1713	42 037	3.9
Birth at 6 months	50 000	2900	47 100	5.8
Birth at 9 months	56 250	4613	51 637	8.2
Paid leave				
Birth at 0 months	62 500	13 850	48 650	22.2
Birth at 3 months	43 750	11 850	31 900	27.1
Birth at 6 months	50 000	12 788	37 212	25.6
Birth at 9 months	56 250	14 250	42 000	25.3

^a Includes income tax and the low income tax offset.

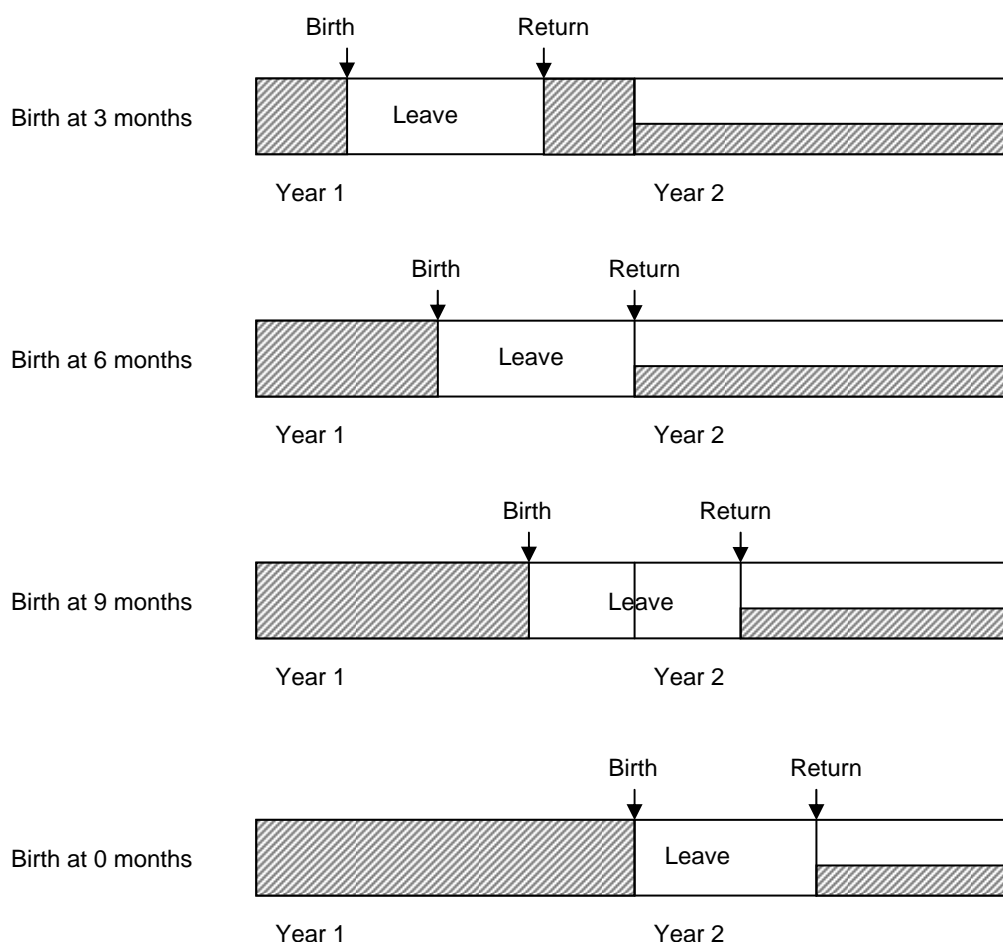
Source: Productivity Commission calculations.

The results suggest that the more unpaid leave there is, the greater the potential incentive to have births towards the middle of the financial year rather than at the very beginning of the financial year. That is, in theory there could be incentives to either bring forward or delay births.

However, the apparent incentives to move births to the middle of a financial year to minimise tax may not be very strong. For example:

- reproductive decisions are unlikely to be made in such a calculating way
- there is a great deal of uncertainty in the timing of a birth, even once a decision to have a baby is made
- other factors, such as having reached a sufficient level of income or having accumulated enough savings or leave, are more likely to be important in the decision-making process
- having paid leave lessens the amount of tax reductions that can be gained by having a child in the middle, rather than at the start, of a financial year
- starting maternity leave in the middle, rather than at the start of a financial year also usually minimises the amount of family tax benefit lost
- bringing forward having a baby requires foregoing a large portion of a year's income
- pushing back having a baby may also push back a mother's return to full-time work — delaying future earnings
- children bring benefits that will be discounted by any decision to delay having a child
- there are many parents who wish to have children as soon as possible, especially those who have partnered later in life.

Figure G.4 Taking leave at different times during the financial year



Nevertheless, there is scope, using existing data, to test whether birth timing is influenced by the desire to minimise tax. Were strong incentives to exist to have births at particular times during the financial year then we would not have to wait for the introduction of statutory paid parental leave scheme to observe them — they should be affecting the timing of births right now. This is because existing tax structures already provide some degree of financial incentive to alter the timing of the date of birth.

Moreover, there are other financial benefits generated by having a baby, such as privately provided paid maternity leave. For example, mothers who already have access to paid parental leave should be subject to the same financial incentives that Apps anticipates that future recipients of the proposed statutory paid parental leave scheme will experience. This means that we can look at the current data to see if we can observe such effects.

Statistical tests of the timing of births

The Commission undertook a set of statistical tests based on mothers surveyed in the LSAC wave 1.5 parental leave mail-out survey to determine whether tax structures caused birth timing for a number of comparable groups. These groups include:

- mothers in paid employment versus mothers not in paid employment
- mothers in paid employment, who have access to private paid maternity leave, versus mothers not paid employment
- mothers in paid employment, who have access to private paid maternity leave, versus mothers in paid employment who do not have access to private paid maternity leave.

There was no evidence of a difference between the distribution of births over the year of mothers in paid employment and those not in paid employment, despite the very different rate of taxation that would be applied to women in these two groups. The same was true when comparing mothers in employment with and without paid parental leave, and when comparing mothers in employment with paid parental leave to those not in employment.

In conclusion, analysis of the LSAC data base revealed no evidence that mothers respond to incentives to minimise taxation or maximise family payments by arranging births to occur at particular times of the year.

Minimising risk of families making the wrong choice

The analysis above tests the hypothesis that some families will attempt to alter the timing of their child's birth to maximise the financial incentives available to them. However, the technical details of the tax and welfare system would make it difficult for most families to distinguish between choices that would be to their financial benefit or detriment.

The addition of the proposed paid parental leave scheme would further complicate the existing interactions between the tax and welfare system. Because of the means-testing of existing welfare arrangements it would be possible for families to be worse off by incorrectly opting into (or out of) the proposed scheme. As such, families may require assistance to determine their optimal strategy — either to opt into or out of the parental leave scheme.

How people are deemed to be eligible

To estimate the additional leave that families could take if the Australian Government introduces the proposed paid parental leave scheme, household level data from the LSAC database has been used to develop an ‘eligible’ sample that closely represents families that would be eligible for the scheme (box G.1).

Box G.1 Identifying the ‘eligible’ sample

To be eligible for the proposed scheme, mothers would have to meet an hours test and an employment tenure test (appendix E).

All families in the LSAC database who clearly meet the eligibility criteria have been included in the ‘eligible’ sample for detailed analysis. However, the LSAC database does not provide sufficient information in all circumstances to identify whether families would meet the proposed eligibility criteria or not.

- The LSAC database indicates what range of hours people worked per week in the year before birth. As one of the ranges is people working less than 10 hours a week, it is not possible to identify who in this group would have worked at least 330 hours during the qualifying period.
 - Only people indicating that they worked 10 hours or more a week were included in our ‘eligible’ sample.
- For employees, the LSAC questionnaire differentiates people who have been employed for at least 12 months (either with the same employer or with different employers) and people who have less than 12 months attachment to the labour force.
 - Only employees who had been working for at least 12 months were included in our ‘eligible’ sample.

For self-employed people, no employment tenure question was included in the LSAC questionnaire. To be included in the ‘eligible’ sample, self-employed people were not subject to a workforce tenure test.

Because of the uneven application of the employment tenure test, self-employed people are likely to be over represented in the ‘eligible’ sample.

Families were also excluded from the ‘eligible’ sample if they did not provide information on the income they earned or if there were inconsistent responses about the amount of leave they took. After these adjustments have been made, the ‘eligible’ sample comprises information on 1716 families. All analysis using the eligible sample has been weighted according to the sample weight (the ‘aweight’ variable) from the LSAC database.

G.4 How much additional leave will be taken by partners

While an eligible partner of either sex can take the proposed paternity leave, most eligible partners will be men. The high level of labour force attachment of Australian men suggests that most fathers will be eligible for the proposed paid paternity leave (appendix E).

Significant proportions of men already take some leave around the birth or adoption of a child (table G.2). Around 26 per cent of fathers already take some unpaid leave, and would be expected to use at least part of the proposed paternity leave provisions. Fathers who earn the minimum wage or less (around 12 per cent of fathers eligible for the proposed scheme) would also benefit financially from taking the proposed paternity leave. After accounting for the overlap between these two groups, they make up 33 per cent of eligible fathers. The financial incentive may also encourage some men to increase the amount of leave they take. In general, financially constrained fathers who have lower non-pecuniary costs associated with leave from the workplace are the most likely to respond to the provision of paternity leave. For example, the self-employed, casuals or those who work on short term contracts may have the flexibility to extend their leave in the presence of financial support.

It is also possible that the widespread provision of paternity leave will normalise leave-taking by men around the birth of a child and, accordingly, increase the amount of paternity leave taken. It is hard to predict the magnitude of the effect.

Given some fathers using leave will actually use less than their full entitlement of two weeks, we have used a 25 per cent ‘weighted’ take-up rate in our costing of the scheme — appendix B.

Table G.2 Fathers who worked at least ten hours while partner was pregnant

As a share of total fathers^a

<i>Father's income</i>	<i>Not applicable</i>	<i>Paid leave only</i>	<i>Unpaid leave only</i>	<i>Paid and unpaid leave</i>	<i>Took leave (not further defined)</i>
	(%)	(%)	(%)	(%)	(%)
\$1500 plus	3.9	12.2	4.1	0.5	0.5
\$1000 to \$1499	3.5	16.6	3.5	1.2	0.2
\$800 to \$999	3.3	10.4	3.3	1.5	0.2
\$650 to \$799	2.6	7.5	4.1	0.5	0.3
\$550 to \$649	2.4	3.0	1.9	0.3	0.2
\$450 to \$549	1.4	0.7	1.8	0.1	0.0
\$300 to \$449	1.3	0.8	1.6		
less than \$300	2.4	0.8	1.3		

^a A blank cell indicates no observations were present for that cross tabulation.

Source: ABS Pregnancy and Employment Transitions confidentialised unit record file.