

Mothers' employment transitions following childbirth



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Statistics on employment among mothers consistently show that the age of the youngest child is an important determinant of the probability of being employed.

The relationship between childbearing and employment is well known, and has been demonstrated for Australia (Brusentsev 2002; Gray, Qu, Renda and de Vaus 2003) as well as many other industrialised countries.

In fact, this relationship recognises transitions out of and into work following childbirth – some women continue to work through their childbearing years while others take a break from paid work. Also, some had left work before childbearing, or had not worked at all before childbearing. Of those who take a break from work, some return to work faster than others.

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The analysis contained in this article investigates these breaks

from work and the return to work, looking at how work transition patterns have changed from the 1970s through to the 1990s, and whether there are certain personal or family characteristics associated with these patterns. The article draws on work published in more detail in Baxter (2005).

The data

The analysis uses data from Waves 1 and 2 (1996-1997 and 2000) of the Negotiating the Life Course (NLC) Survey (described below). The NLC Survey captured a retrospective work history for all respondents, as they were asked for their work status in every year from the age of 15 years to the survey date. For female respondents these data were aligned with the

Negotiating the Life Course Survey

This national survey was conducted by telephone, the original sample having been randomly selected from the electronic white pages. Those in scope were people aged 18 to 54, with only one person per household interviewed, although in the case of couples, the respondent provided extensive information about him/herself, his/her partner, and the household. The first wave of this survey was conducted in 1996-1997 and resulted in a total sample of 2,200 people (McDonald, Evans, Baxter and Gray 2000). These respondents were followed up in 2000, resulting in interviews with 1,768 respondents (Breusch 2003). Further interviews were also conducted in 2003, but these data have not been incorporated in this analysis.

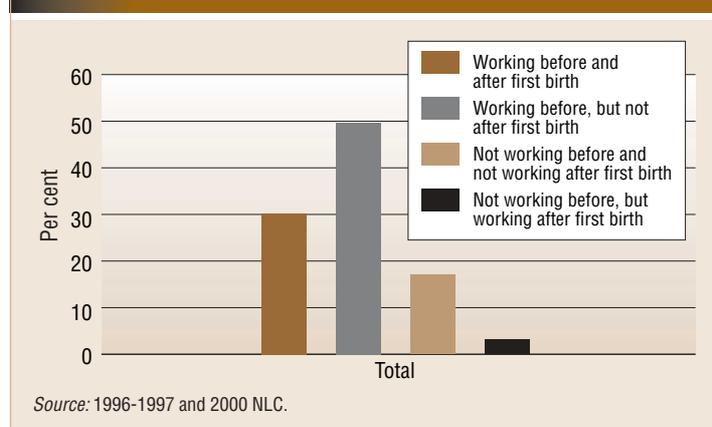
comprehensive fertility and relationship histories also collected in this survey. These data, then, provide information on maternal employment from a longitudinal, or life course, perspective, which enables an examination of workforce transitions, particularly those associated with childbearing.

Data were extracted for all female respondents who had one child or more born between 1970 and 1999 – a total sample of 799. Work status was determined for each year from the year before their first birth, as full-time, part-time or not working. The change in an individual's work status from one year to the next was used to measure workforce transitions. The first transition captured is that from before the year of first birth, to the year of, or the year after, the first birth. The year after the first birth had to be considered because, for some women, work transitions may not be evident in the data until the year after their first child was born, especially if the child was born in the latter part of the year. In this case, a mother is likely to report having worked in the year of the birth, but may then report not working in the year after the birth. The present analysis first focuses on this transition – the one that occurs in the year of or the year after the first birth. Then, for those mothers who were not working either in the year of the birth or the year after, the analysis looks at when they first (re-)enter work after this.

The greatest difficulty in using these data to analyse workforce transitions lies in the collection of data in annual blocks. In these data, short breaks from work go unrecorded. This has implications for an analysis of breaks from work following childbearing – while the data are useful for looking at broad patterns of exits from and returns to employment, they cannot help in an analysis of maternity leave. Not only are short breaks hidden in the data, there is also no information on whether a year away from work was taken using formal maternity leave, or taken as a break from a job using a less formal arrangement, or whether it involved resigning from one job and starting another. Also, no information is available on whether a break from work was paid or unpaid.

Another problem in using these data occurs because those working about half a year have to decide whether to record this as mostly working or not working. One anomaly that can arise is that a woman can be recorded as taking no break if she took several months off at the end of one year and the beginning of the next, and reported that she spent most of each year working. This woman would have been classified as taking no break from work, even if the total time she took off approached one year. This contrasts to the situation where a woman may have taken less time off than this within a year (say, seven months) who reported she spent most of the year not working – she would be classified as having taken a break. Nothing can be done to correct for this, but it is not expected the results would be biased one way or other as a result. It should only affect a minority of women.

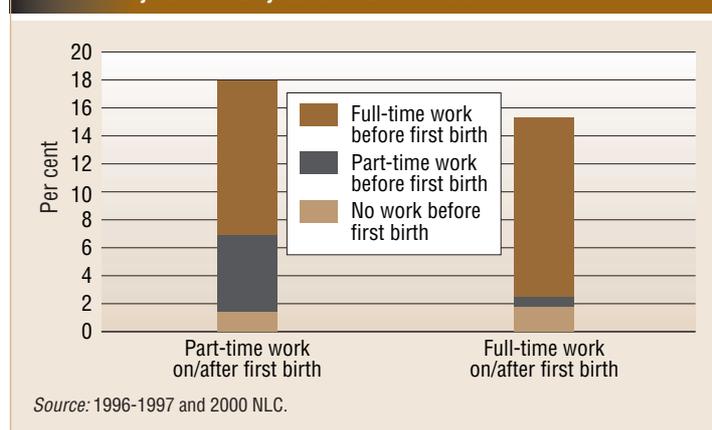
Figure 1 Transitions at first birth, women who had their first child between 1970 and 1999



Transitions around childbearing

Figure 1 shows the workforce transitions around the first birth for all women whose first child was born after 1970. Just under half of all these women had worked before their first birth, but reported not working in the year of, or the year after, this birth. Another three in ten women reported working in the year of the first birth, as well as the year before and the year after. Of course some of these would have taken shorter breaks not captured in this analysis. A further one in five women had not worked prior to the first birth, and most of these remained not working after the first birth.

Figure 2 Transitions to part-time or full-time work in the year of or the year after the first birth



Full-time or part-time at first birth

Mothers returning to work after childbearing often use part-time work to help manage the balance between work and family. To show to what extent this is true in this sample, those working in the year of or the year after the first birth (33 per cent of the total) can be classified into full-time or part-time workers, as shown in Figure 2. This figure also classifies mothers according to their work status before the first birth.

These data show that more women worked part-time when they had their first child (18 per cent) compared with working full-time (15 per cent). The majority of those working full-time had also worked full-time before the first birth.

Amongst those working part-time, many had already been working part-time before the first birth, although the majority did move from full-time to part-time work.

The pattern of return to work

Figure 1 showed that two-thirds of women were not working in the year of, or the year after, the first birth. This was made up of 50 per cent who had worked before the first birth and 17 per cent who had not. This section focuses on these women in the NLC Survey (533 in total), and follows them year-by-year to ascertain whether or not they returned to work at some stage.¹ In each year,

Once a second (or later) child is born, if the mother has not yet returned to work, the likelihood of returning in a particular year is lower. For example, for a mother who has just had another child and has not yet returned to work, in the year her youngest child turns one she has a risk of entering work of just 7 per cent (5 per cent return to part-time, 2 per cent full-time). The percentage returning to work gradually increases as the youngest child gets older, with the percentage returning to part-time work always higher than that of returning to full-time work. In fact, it is the return to part-time work that increases as the child gets older – return to full-time work remains low.

Many women take a break from work when they have their first child, although many then return when their first child is aged one or two.

women can make a transition from no work to full-time work or to part-time work, or they can remain not working. Women are only “followed” until they return to work, or until their youngest child is aged nine years old, whichever comes first. This age cut-off was applied to focus on transitions that occurred while children were younger.²

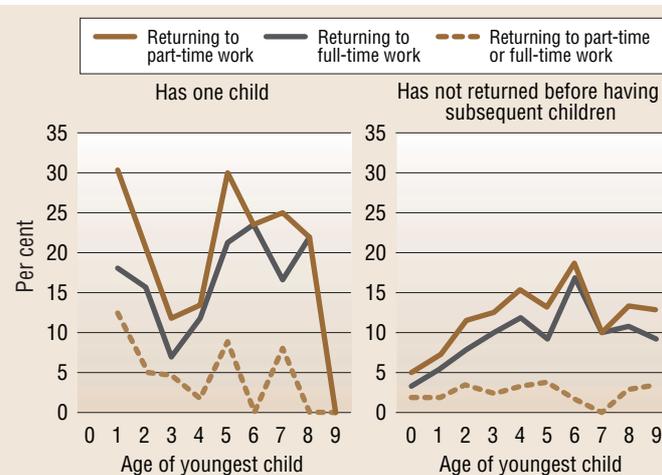
This analysis looks at the the likelihood of making the transition from no work into part-time or full-time work in a particular year, measured as a percentage of those who have not yet resumed work. This measure therefore does not represent the total percentage working at any point in time – this figure would need to take into account the percentage who did not take a break from work, the percentage who had already returned to work, as well as the percentage returning at this point in time.

An initial examination of these transitions data showed that it was important to take into account whether the mother had gone on to have more children after her first child. The transitions to work are very different for first-time mothers than for mothers who have not returned before having other children, as seen in Figure 3. There is a relatively high rate of returning to work amongst one-child mothers when their child is aged one – that is, many women take about one year³ off with their first child then resume work. Overall, 30 per cent of women who did not work in the year of their first birth went to work at this time (18 per cent to part-time work and 13 per cent to full-time work). Similarly, the likelihood of resuming work is high when the first child is aged two – 21 per cent of those who had not yet returned went to work at this time (16 per cent to part-time work and 5 per cent to full-time work). After this, the rate of return drops off while the child is aged three or four. It then increases again, but for these transitions the sample sizes are small, since so many women have gone on to have a second child by the time their first child is aged five.

Determinants of work transitions

While it is interesting to see the overall work transitions, it is useful to know whether there are certain personal or family characteristics associated with a higher attachment to work, either through a tendency to stay at work after childbearing or through a higher likelihood of returning to work. To investigate this, different multivariate techniques were used, as described in Baxter (2005). The personal and family characteristics derived for the NLC sample included highest level of education, relationship status and work experience/ job characteristics of employment prior to the first birth. These variables were selected because they had been shown to be important determinants of maternal employment transitions in international studies, as reviewed below. Further, it was important to take into account that these data covered a wide time period

Figure 3 Women not working in the year of or year after their first birth, transitions to work by number of children born and age of youngest child



Source: 1996-1997 and 2000 NLC.

– the 1970s through to the 1990s, so possible differences across time were controlled by including variables to indicate broad period effects (grouped into 1970s, 1980s, 1990s).

This article, explores the effects of education, relationship status and period. Other variables, including age of mother, country of birth, and pre-birth job characteristics, were also included in the models. Details of these models, as well as more information about the data items, can be found in the abovementioned paper.

Education

A higher level of education has often been found to be a significant determinant of work transitions on commencement of childbearing and on the return to work. Usually, women with more education are less likely to leave work on childbearing (Wenk and Garrett 1992), and to return to work faster (Dex, Joshi, Macran and McCulloch 1998; Hofferth 1996; Macran, Joshi and Dex 1996; Pylkkanen and Smith 2003; Shapiro and Mott 1994).

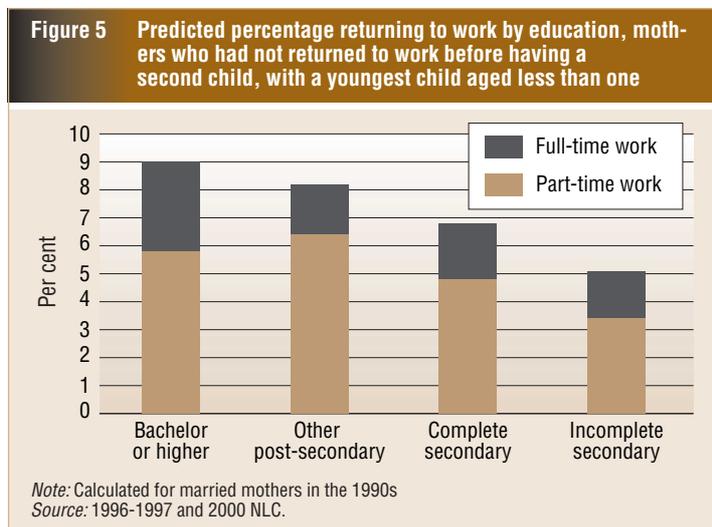
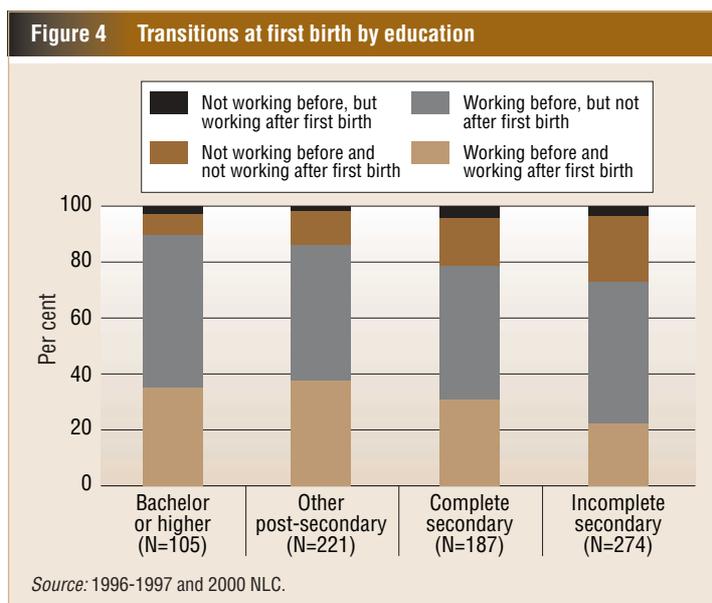
Women with higher levels of education might seek to minimise job breaks to reduce the opportunity

cost of childbearing, and to maintain their skills. Further, they may have access to jobs with better employment conditions, for example offering a period of paid maternity leave. The effect of education is not always clear, however, as employment conditions may differ considerably depending on the nature of the job, and even amongst those with high levels of education, there may be jobs in which conditions which enable the reconciliation of work and family, such as part-time work, may not be offered. In addition, the effect of education may be smaller where access to maternity leave, child care or family-friendly working conditions is widespread, as is the case in some European countries (Gustafsson, Wetzels, Vlasblom and Dex 1996; Gutierrez-Domènech 2004).

Figure 4 shows the employment transitions at the first birth by education for the NLC sample. The most likely transition within each education group was from work to no work. Of those that did work before the first birth, those with post-secondary qualifications were more likely to stay at work, compared to those with incomplete secondary education. However, this difference was not statistically significant.⁴ An important difference was that those with lower levels of education were more likely to be not working before and after the first birth. This difference was significant when comparing those with the highest and lowest levels of education: almost one quarter of those with incomplete secondary education were not working before and after the first birth, compared with less than eight per cent of those with bachelor degree or higher.

To show the effect of different variables, such as education, on the likelihood of returning to work, predicted values were calculated. Predicted values differ, of course, according to the values at which they are set. In particular, as is evident from Figure 3, the predicted percentage returning to work will vary considerably depending on the number of children and the age of the youngest child. As these differences are not the focus at this point, but the purpose is to illustrate the effects of other variables, the calculations were done by changing the values of one variable only, and holding all others constant. In all cases, the predicted percentage of moving into full-time or part-time work was calculated for a mother who has not returned to work before having her second child, and has a youngest child aged under one. Other variables were also held constant as indicated in the notes to the chart. If calculations were based on a different scenario, the predicted values would differ, but the effect of the variable would be the same.

The effect of education on the return to work for mothers who had a second or subsequent child without first returning to work is seen in Figure 5. Overall, those with the lowest level of education had a significantly lower likelihood of return to work, compared to those with the highest level of education. Those with a bachelor degree or higher had the highest percentage returning to full-time work, but a higher percentage returning to part-time work was found amongst those with other



post-secondary qualifications; however, these full-time/part-time differences by level of education were not significant.

Relationship status

International studies show that married women are more likely than single women to exit employment on childbearing (Drobnic, Blossfeld and Rohwer 1999), and to have a slower return to employment (McGovern, Dowd, Gjerdingen, Moscovice, Kochevar and Murphy 2000; Miller 1993). This finding is linked to the financial aspect – that married women have financial support from their husband, while single women do not have this option.

Of course, the degree of financial support provided by husbands varies considerably across families. For this reason, studies generally show that women with husbands earning lower incomes are likely to resume work faster (Hofferth 1996; Joesch 1994; McGovern et al. 2000). Financial need cannot be looked at in

Relationship status did not have a significant impact on the risk of returning to work. It was expected that single mothers would have a faster rate of return, and a greater tendency to work full-time. Neither of these results was found to be significant, although the parameter coefficients were in the expected direction. The lack of effect may be in part due to the inability to classify the partnered women according to their partner's income. It is also likely that the relatively small sample size for single mothers contributed to this lack of significance.

Examining changes over time

Given these data cover childbearing between 1970 and 1999, they are useful for evaluating how patterns of workforce transition have changed over recent decades. The rate of employment amongst mothers has increased over this time, as has the use of part-time work, so it would be expected that the patterns of employment around childbearing would reflect this.



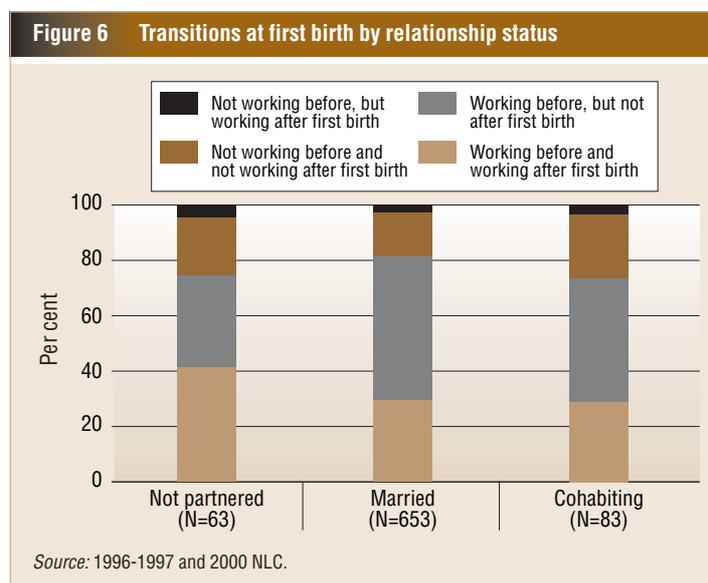
isolation, however, as returning to work requires access to affordable child care, and is likely to be associated with other costs of working as well as loss in government assistance, where government benefits or supplements are withdrawn as additional income is earned over a threshold amount. Unfortunately, this aspect cannot be analysed with this dataset, given the lack of information on the financial situation of the family at the time of childbearing.

Drobnic (2000) found that in the United States and in West Germany, single parents return to work full-time, rather than part-time. She attributed this to the interaction with the potential loss of government assistance if working part-time – part-time employment did not bring sufficient financial compensation for the loss of this assistance to bring single parents out of poverty. These parents then had the options of no work, with government assistance, or full-time work.

As shown in Figure 6, in the NLC data, most mothers were married when they had their first child, but for those who were not – who were in cohabiting relationships or not partnered – there were some differences in employment transitions at the first birth. Of the not partnered women who worked before the birth, more remained working after, compared to married and cohabiting women, who were more likely to leave work. This difference was significant. Another apparent difference, which was not significant, was that not partnered and cohabiting women were less likely than married women to be working before the first birth.

Figure 7 (over page) shows transitions at first birth by the decade of the first birth. There has been an increase in the proportion of women who report remaining in work after commencement of childbearing, especially when the 1980s and 1990s are compared to the 1970s. Further, the women having their first birth in the 1990s were much less likely to have not worked prior to the first birth, compared to women having their first child in the 1970s and 1980s.

When year of first birth is included in a multivariate analysis of these data, and other variables controlled,



this difference between the 1990s births and earlier births in relation to the likelihood of working before the first birth is significant. There was, however, no significant difference found in the likelihood of leaving work versus staying at work, for those who did work before the first birth.

Looking at the pattern of return to work, for those women who went on to have subsequent children after the first birth, there is evidence of an increase in the probability of returning to work over the period, with the rate of returning significantly higher in the 1990s compared to the 1970s (Figure 8).

The increased likelihood of returning to work appears to be associated with increases in the return to part-time employment. There was very little increase in full-time work over this period, while a significant increase in part-time work was detected. Nevertheless, the comparison of full-time to part-time work did not result in a significant effect – that is, by the 1990s the likelihood of returning to part-time work instead of full-time work was not significantly higher than it was in the 1970s. The coefficients indicated there was some increase, but evidently the standard errors were too high to achieve significance.

Conclusion

Mothers' employment patterns can be explained in terms of their transitions on commencement of childbearing, and on their pattern of return to work after childbearing. Clearly, many women take a break from work when they have their first child, although many then return when their first child is aged one or two. For those women who go on to have more children before returning to work, the likelihood of returning to work is low while they have very young children, but increases as the youngest child gets older.

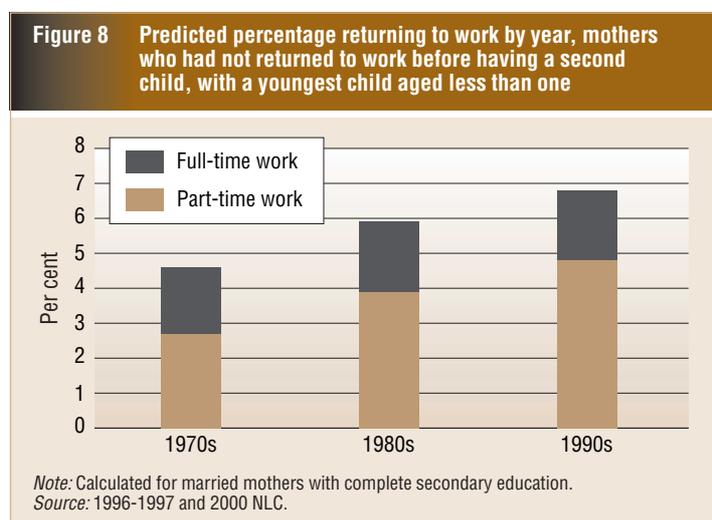
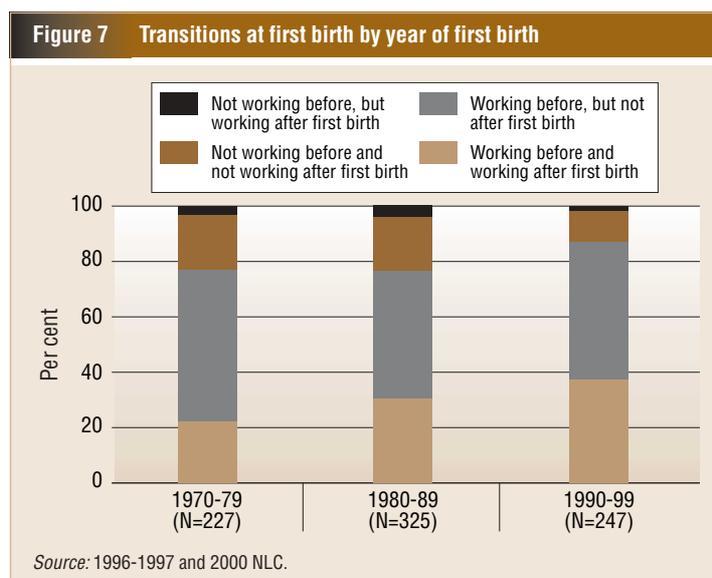
These data cannot show the full extent of breaks taken after childbearing, given they do not capture breaks unless they resulted in the mother reporting that she did not work in the year of or the year after the first birth.

As is usually found in studies of female employment, higher levels of education were found to be associated with a higher attachment to work. Women with the highest levels of education were less likely to exit from employment on commencement of childbearing, or likely to have a higher probability of returning, which equates to a faster return to work. The reasons for this were discussed earlier – those with higher education have a higher opportunity cost of not working, may have jobs for which they do not wish their skills to deteriorate, and may have a higher preference to work. Further, these women may have access to jobs with better employment conditions, including paid maternity leave, enabling them to maintain continuity with their job and their employer, and to have an easier return to work after their break.

There was some evidence in these data that married mothers have somewhat different patterns of employment around the birth of the first child compared to cohabiting or single parents. Married mothers are more likely to take a break from work, which suggests these women can better afford to interrupt their careers, given the support of a husband. It would have been interesting to determine whether employment transitions differed according to the level of support provided by a husband – using a measure of income, for example – but these data did not permit such an analysis.

While these data show the use of part-time work by mothers, they also show that the personal characteristics of the mothers, such as education and relationship status, did not differentiate significantly between those who worked in part-time or full-time jobs.

The employment transitions of those having their children more recently did differ from those having their children in the 1970s, which is consistent with employment data that shows more mothers are employed in recent years. Changes were evident in that women are now more likely to be working before the first birth (which, in turn is associated with a greater likelihood of working after this birth), and also a faster return to work amongst those who did take a break at this time.



An examination of employment patterns from this perspective goes some way towards understanding what is behind the aggregate employment statistics. There is more to understand, however. Further analyses of these or similar data could be used to examine the intermittent nature of employment for mothers – for example, how many of those mothers who worked after their first child, continued to work, or how many had later breaks? Also, to what extent did those moving into part-time work stay in part-time work, or did they later move to full-time work?

These questions are important, especially considering whether women with different personal or family characteristics, or with different labour force histories, face barriers to maximising their involvement in the labour market.

This view of the data enabled an examination of the changing employment of mothers from a different perspective usually gained through cross-sectional data. However, the data were not perfect, especially

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given their collection in annual blocks. A more detailed dataset, perhaps showing monthly work episodes, and also showing information about the use of paid or unpaid maternity leave, would be of immense value in understanding the transitions women make.

Endnotes

- 1 Throughout this analysis the word “return” is used to describe the transition to work. This word implies they have worked before, although this is not true of everyone.
- 2 Also, a comparison of these NLC data as derived from the work history to other Australian Bureau of Statistics data showed that the data were comparable for mothers of children aged under 10 for the 1970s through to the 1990s. For mothers of older children the NLC data were not reliable when looking at employment patterns in the 1970s and 1980s. See Baxter (2004) for details.
- 3 Remembering that these data cannot be used to say exactly how long a break from work was, and that there are problems in being able to detect ‘breaks’ from work amongst those who spent part of the year not in work, or whose absence was spread over two calendar years such that they appeared to have no break.
- 4 The 0.05 level of significance has been used throughout.

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