Newborns and New Schools: 
Critical Times in Women’s Employment

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The Institute for Fiscal Studies

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Introduction

Known features of gender differences in the labour market:
- women less likely to participate in work than men.
- women work shorter hours on average than men.
- women earn a lower average hourly wage than men.
- differences are greater for women with children (“family gap”).

Questions considered here:
- how do these differences relate to the presence of children?
- how much are childbirth and school entry critical times?
- are there related differences in other work characteristics?
Outline of Presentation

1) Background
   Underlying theory
   Previous findings
   Advances in this report
   Data sources

2) Findings
   Work participation
   Gender wage gap
   Other work characteristics
   Childcare around school entry

3) Conclusions
   Critical times?
   Policy implications and further research
(1) Background

Underlying theory
Previous studies
Advances in this report
Data sources
Underlying Theory

Source of gender differences in formal work is that mothers rather than fathers are primarily responsible for their children.
Short-term impacts of children on mothers:
• costs of working may increase.
• benefits of working may increase.
• mother’s actual or perceived productivity may alter.
• preferences over work characteristics may alter.

Impacts depend on:  - age and number of children.
                    - whether children are in school.

Long-term impacts:
• employers may anticipate future changes.
• accumulation of experience and training.
• slow adjustments.
Previous Findings

• Work participation following childbirth influenced by mothers’ age, education, number of children, wage, occupation, sector, employer tenure, and unearned income.

• Those qualifying for maternity leave tend to return more quickly than those not qualified.

• Extensions to current maternity leave would encourage qualified mothers to return later.

• Women returning to work within a year of birth tend to experience a smaller wage penalty for having children.
Advances in this Report

• Compares changes with two comparison groups: with women at other times and with men at the same critical points.
• Focuses on school entry as well as birth.
• Considers work characteristics other than participation and wage.

• Data sources cover more recent births.
• Use of panel data captures changes for individual women without potential participation biases in aggregate statistics.
• Annual panel interviews avoid using information recalled over long periods.
Data Sources

1) British Household Panel Survey (BHPS) waves 1-13:
   • panel of all adults for 1991-2003
2) Families and Children Study (FACS) waves 1-5:
   • panel of all families for 2001-2003
   • additional lone parents from waves 1999-2001

Sample sizes:
• 63,000 interviews with women and 52,000 with men
• 41,000 interviews with mothers and 30,000 with fathers
• 4,500 interview with mothers of newborns
• 4,300 interviews with mothers with children entering school
(2) Findings

Work participation
Gender wage gap
Other work characteristics
Childcare around school entry
Work Participation

- Overview across broad groups.
- Women’s absence from work following childbirth.
- Impact of maternity entitlements on the length of absence.
- The permanency of return to work following childbirth.
- Work participation over school entry.
- Changes in work participation over the lifetime.
<table>
<thead>
<tr>
<th></th>
<th>Percentage in Work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
</tr>
<tr>
<td>Before or no children</td>
<td>81.1</td>
</tr>
<tr>
<td>Children present</td>
<td>89.4</td>
</tr>
<tr>
<td>Children left</td>
<td>84.4</td>
</tr>
</tbody>
</table>
Figure 5.1. Work Rates by Years Before and Since Birth of First Child
Women’s Absence from Work Following Childbirth

➢ About half of mothers return within one year of birth.

➢ Length of absence depends upon:
  • first or subsequent birth.
  • whether mother was working prior to birth.
  • whether mother has a partner.
  • other demographic characteristics.
  • mother’s work characteristics prior to birth.
Figure 5.2: Work Return Rates After Childbirth

- **Percentage Returned to Work Following Birth**
- **Months After Birth**

- **Lines in the Graph**:
  - Blue: All
  - Pink: First birth, working prior
  - Red dashed line: First birth, not working prior
  - Green dashed line: Subsequent birth, working prior
  - Purple dashed line: Subsequent birth, not working prior
Figure 5.3: Work Return Rates After Childbirth: By Partnership

- **With Partner**
- **No Partner**
Figure 5.5. Average Length of Absence Following Birth for Uncensored Sample: Demographic Characteristics
Figure 5.6. Average Length of Absence Following Birth for Uncensored Sample: Prior Work Characteristics

Average Length of Absence Following Birth in Months

Prior Work Characteristics

- Wage < £5
- Wage £5 to £7.50
- Wage £7.50 to £10
- Non-permanent
- Permanent
- Non-supervisory
- Supervisory
- Work at home
- Work elsewhere
- Private sector
- Public sector
- Other sector
- Tenure <= 1 year
- Tenure 1 to 2 years
- Tenure 2 to 5 years
- Tenure > 5 years

Average length of absence follows different prior work characteristics, with some sectors and wage brackets showing higher average lengths.
Need more technical approach:

- figures use uncensored observations: understate differences.
- factors may be interrelated.
- differences may be “luck of the draw” in this sample.

Answer: use survival models

- use information from censored and uncensored observations.
- estimate the relationship with one factor allowing for related differences in other factors.
- test whether observed relationships are very likely to be representative of the entire population (= statistically significant).
Findings on the length of absence following childbirth:

- Mothers of subsequent newborns have longer absences. But, allowing for whether working prior to birth, mothers of subsequent newborns take shorter absences.

- Mothers working prior to birth have shorter absences, even controlling for a wide range of characteristics.

Does working between births affect how quickly return after subsequent births?

• First finding suggests no: those who work are select group.
• Second finding suggests yes: genuine persistence in working.
Longer absences following birth associated with:

- more children and shorter gap between children.
- younger and less educated mothers, but work characteristics explain differences for those working prior to birth.
- black ethnicity (over white).
- lone motherhood (over having a working partner), but work characteristics explain differences for those working prior to birth.
- higher partner’s earnings and lower partner’s hours of work.
- shorter work hours.
- higher wages.
- working in the private sector (over the public sector).
- occupation.
- time of day worked.
Maternity Rights

Unpaid maternity leave:
  • creates an incentive to return at the point of termination in order to be eligible for rights

Paid maternity leave:
  • creates an incentive to return later within the entitlement period because monetary loss from each month not worked is smaller (substitution effect).
  • creates an incentive to return later even beyond the end of entitlement because additional income means can afford to stay absent from work longer (income effect).
Entitlement to maternity rights:
  • estimated based on work history.
  • ignores non-statutory rights.

Main groups of entitlements during 1991-2003 (% of births):
  • no entitlements (39%)
  • 3-4 months paid Maternity Allowance (MA) (10%)
  • 3-4 months paid Statutory Maternity Pay (SMP) (10%)
  • 3-4 months paid SMP and 6-7 months unpaid leave (36%)
Figure 5.7. Monthly Hazard Rates for Returning to Work After Birth

Percentage Returning Conditional on Not Having Returned vs. Months After Birth
Figure 5.8. Monthly Hazard Rates for Returning to Work After Birth by Leave Entitlements

Percentage Returning Conditional on Not Having Returned

No entitlements
3-4 months' paid MA
3-4 months' paid SMP
3-4 months' paid SMP & 6-7 months' unpaid leave

Months After Birth

1 2 3 4 5 6 7 8 9 10 11 12

0 5 10 15 20 25 30 35
Summary of findings on maternity rights:

- Maternity pay allows mothers to extend their leave even beyond the entitlement period – extensions of entitlement period may have greater than expected effects.

- Maternity leave entitlement encourages some mothers to shorten their leave – could constrain the effects of maternity pay.
Permanency of Return to Work Following Birth

➢ Return to work after birth is often temporary or interrupted by subsequent birth.

Ten years after birth:
  • 51% of mothers have had a subsequent baby.
  • 17% of mothers permanently returned to work.
  • 27% of mothers temporarily returned to work.
  • 5% not returned to work.
Figure 5.9: Permanent and Temporary Return to Work and Subsequent Births
Is the high degree of temporary return due to normal labour market fluctuations?

- 38 percent of mothers who have returned to work within 10 years and not had a subsequent birth have remained permanently in work.

- 61 percent of fathers who have worked at some point in the 10 years following birth and have not had a subsequent child have remained permanently in work.
Other findings on the permanency of return:

- Subsequent births are less likely than first birth to be followed by another birth, but more likely to be followed by no return or temporary return than a permanent return to work.

- Single mothers less likely to have subsequent birth and more likely not to return to work in first five years following birth.
Does the length of absence following birth affect future work participation?

- No strong evidence that likelihood of mother being in work at later date (2 to 9 years after birth) is related to the length of absence following childbirth.

- Differs from previous studies which found a positive association between returning quickly and working at a subsequent date:
  - relationship may have altered over time.
  - previous studies used different controls and compared those returning within 8-9 months with those returning later.
Work Participation Over School Entry

Second potentially critical time in women’s employment:
• provision of free and compulsory alternative childcare.
• new demands from school life.

Traditional presumption:
• opportunities for employment greatly increased.
• particularly if last child entering school.
Table 5.7: Changes in mother’s employment with school entry

<table>
<thead>
<tr>
<th></th>
<th>Last child</th>
<th>First child</th>
<th>Middle child</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage in work:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in previous June</td>
<td>60.4</td>
<td>50.9</td>
<td>34.9</td>
<td>53.3</td>
</tr>
<tr>
<td>in September (12 months after school entry)</td>
<td>66.9</td>
<td>50.8</td>
<td>35.5</td>
<td>56.7</td>
</tr>
<tr>
<td>Entrants:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of those <em>not working</em> in previous June who are <em>working</em> in September (12 months after school entry)</td>
<td>32.0</td>
<td>22.4</td>
<td>15.6</td>
<td>25.2</td>
</tr>
<tr>
<td>Exits:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of those <em>working</em> in previous June who are <em>not working</em> in September (12 months after school entry)</td>
<td>6.6</td>
<td>16.7</td>
<td>21.1</td>
<td>11.1</td>
</tr>
</tbody>
</table>
Figure 5.12: Predicted Proportions Working in September Following School Entry: Mothers Not Working in Prior June
Figure 5.13: Predicted Proportions Working in September Following School Entry: Mothers Working in Prior June
Changes in Work Participation Over the Lifetime

Compare 2-year changes over critical periods with other times for women and with men at the same times.
Figure 5.14: Percentage Moving Into Work Over Two Years

Percentage of Those Not Currently in Work Who Are in Work Two Years Later

- Before children
- Newborns
- Pre-school
- School Entry
- Primary school
- Secondary school
- Children Left

For each category, the bar represents the percentage of men and women who moved into work two years later.
Figure 5.15: Percentage Moving Out of Work Over Two Years

Percentage of Those Currently in Work Who Are Not in Work Two Years Later

- Before children
- Newborns
- Pre-school
- School Entry
- Primary school
- Secondary school
- Children Left

Men  Women
Differences in graphs are generally statistically significant.

Mothers with newborns:
- exit from work *more likely* than women at all other times and men with newborns.
- entry into work *less likely* than women before children, with school entry or with school children and men with newborns.

Mothers with school entry:
- exit from work *similar* to mothers with pre-school children, but *more likely* than women with school children and men with school entry.
- entry into work *more likely* than women with pre-school children, but *similar* to mothers with school children.
Gender Wage Gap

- Overview across broad groups.

- Proportion explained by demographic and differences in work characteristics.

- Wage growth for mothers with newborns and school entry.
Table 6.1: Gender Wage Gap across Broad Groups

<table>
<thead>
<tr>
<th></th>
<th>Gender wage gap: average female wage as percentage of average male wage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All workers</td>
</tr>
<tr>
<td>Before or no children</td>
<td>91.3</td>
</tr>
<tr>
<td>With children</td>
<td>66.6</td>
</tr>
<tr>
<td>Children left</td>
<td>71.5</td>
</tr>
</tbody>
</table>
Figure 6.1: Gender Wage Gap by Years Until or Since Birth of First Child
Table 6.2: Log Wage Regressions by Broad Group

<table>
<thead>
<tr>
<th>Coefficient on FEMALE dummy variable</th>
<th>Regression Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before or no children</td>
</tr>
<tr>
<td>Additional Regressors:</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>−0.080</td>
</tr>
<tr>
<td>Family background variables</td>
<td>−0.099</td>
</tr>
<tr>
<td>Family background and work variables</td>
<td>−0.123</td>
</tr>
<tr>
<td>Family background and work variables, occupation and industry</td>
<td>−0.118</td>
</tr>
<tr>
<td>Family background and work variables, occupation, industry, employment experience and employer tenure</td>
<td>−0.111</td>
</tr>
</tbody>
</table>
Wage Growth

Compare 2-year changes over critical periods with other times for women and with men at the same times.
Figure 6.2: Average Two-year Percentage Change in Wage

Average 2-Year Percentage Change in Wage

- Before children: Men (12%) and Women (10%)
- Newborns: Men (11%) and Women (8%)
- Pre-school: Men (8%) and Women (6%)
- School Entry: Men (6%) and Women (5%)
- Primary school: Men (4%) and Women (4%)
- Secondary school: Men (3%) and Women (3%)
- Children left: Men (2%) and Women (2%)
Wage growth regressions found that only some of the differences are statistically significant:

- Women with newborns and school entry have lower wage growth than their male counterparts, although both are partly explained by differences in work characteristics.

- Women with school entry generally have lower wage growth than other groups of women.

- Regressions for full-time workers showed no significant differences between men and women for the newborn and school entry groups.
Does the length of absence following birth affect future wage growth?

- Longer absence associated with lower wage growth across all six interviews following birth, but only statistically significant for 1st and 6th interview.

- Weak evidence that longer absence is detrimental to future wage growth.
Children and other Work Characteristics

- Overview across broad groups
- Part-time work around the time of first birth.
- Changes in characteristics for mothers with newborns and school entry.
- Relationships between wage changes and changes in other characteristics.
Table 7.1 Other work characteristics

<table>
<thead>
<tr>
<th></th>
<th>Before or No Children</th>
<th>With Children</th>
<th>Children Left</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>Mean employer tenure in months</td>
<td>47.9</td>
<td>46.7</td>
<td>84.4</td>
</tr>
<tr>
<td>Percentage in sector:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- private</td>
<td>81.8</td>
<td>67.8</td>
<td>79.2</td>
</tr>
<tr>
<td>- public</td>
<td>14.4</td>
<td>27.4</td>
<td>17.9</td>
</tr>
<tr>
<td>- other</td>
<td>3.8</td>
<td>4.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Percentage self-employed</td>
<td>11.2</td>
<td>5.0</td>
<td>17.0</td>
</tr>
<tr>
<td>Mean weekly hours</td>
<td>43.2</td>
<td>38.4</td>
<td>46.0</td>
</tr>
<tr>
<td>Percentage in full-time</td>
<td>92.9</td>
<td>86.9</td>
<td>97.0</td>
</tr>
<tr>
<td>Percentage in permanent position</td>
<td>88.9</td>
<td>89.2</td>
<td>95.1</td>
</tr>
<tr>
<td>Percentage in supervisory position</td>
<td>34.6</td>
<td>34.8</td>
<td>48.7</td>
</tr>
<tr>
<td>Percentage work at home</td>
<td>3.6</td>
<td>1.7</td>
<td>7.2</td>
</tr>
</tbody>
</table>
Figure 7.1: Percentage of Workers Employed Full-time by Years Since Birth of First Child

- **X-axis**: Years Until or Since Birth of First Child
- **Y-axis**: Percentage in Full-time Employment
- **Legend**:
  - Blue triangles: Men
  - Red squares: Women
Women around the time of birth have:

- a greater probability of changing employer than women at other times and men at the same point.
- a decline in weekly work hours relative to women at other times and men at the same point.
- a greater (smaller) likelihood of becoming part-time (full-time) than women at other times.
- a greater (smaller) likelihood of becoming temporarily (permanently) employed than women at other times and men at the same time.
- a smaller probability of obtaining a supervisory position than women at other times and men at the same time.
- a greater (smaller) likelihood of moving to (moving from) working at home than women at other times.
Women around the time of school entry have:

- a greater probability of changing employer than women at other times and men at the same point.
- an increase in weekly work hours relative to men at the same point.
- a greater likelihood of becoming part-time than women at other times.
- a greater likelihood of becoming temporarily employed than women at other times and men at the same time.
- a greater likelihood of moving from working at home than women at other times.
Table 7.2: Changes in Other Work Characteristics over Two Years

<table>
<thead>
<tr>
<th>Groups:</th>
<th>men</th>
<th>women</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) before or no children</td>
<td>45.5</td>
<td>44.9</td>
</tr>
<tr>
<td>(2) with newborn child</td>
<td>47.2</td>
<td>74.2</td>
</tr>
<tr>
<td>(3) with pre-school child</td>
<td>35.2</td>
<td>49.8</td>
</tr>
<tr>
<td>(4) with school-entry child</td>
<td>31.9</td>
<td>58.4</td>
</tr>
<tr>
<td>(5) with primary-school child</td>
<td>30.6</td>
<td>44.4</td>
</tr>
<tr>
<td>(6) with secondary-school child</td>
<td>27.7</td>
<td>33.3</td>
</tr>
<tr>
<td>(7) children left</td>
<td>27.3</td>
<td>26.3</td>
</tr>
</tbody>
</table>
Table 7.3: Changes in Other Work Characteristics over Two Years

<table>
<thead>
<tr>
<th>Groups:</th>
<th>Mean change in weekly hours</th>
<th>Percentage of part-time who become full-time</th>
<th>Percentage of full-time who become part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>men</td>
<td>women</td>
<td>men</td>
</tr>
<tr>
<td>(1) before or no children</td>
<td>0.7</td>
<td>0.9</td>
<td>64.4</td>
</tr>
<tr>
<td>(2) with newborn child</td>
<td>−0.2</td>
<td>−7.1</td>
<td>60.0</td>
</tr>
<tr>
<td>(3) with pre-school child</td>
<td>0.0</td>
<td>1.4</td>
<td>70.8</td>
</tr>
<tr>
<td>(4) with school-entry child</td>
<td>−0.5</td>
<td>1.5</td>
<td>65.0</td>
</tr>
<tr>
<td>(5) with primary-school child</td>
<td>−0.1</td>
<td>1.9</td>
<td>73.7</td>
</tr>
<tr>
<td>(6) with secondary-school child</td>
<td>−0.1</td>
<td>1.8</td>
<td>69.8</td>
</tr>
<tr>
<td>(7) children left</td>
<td>−0.2</td>
<td>0.0</td>
<td>59.2</td>
</tr>
</tbody>
</table>
Table 7.4: Changes in Other Work Characteristics over Two Years

<table>
<thead>
<tr>
<th>Groups:</th>
<th>Percentage of permanent who move to temporary</th>
<th>Percentage of temporary who move to permanent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>men</td>
<td>women</td>
</tr>
<tr>
<td>(1) before or no children</td>
<td>3.8</td>
<td>3.7</td>
</tr>
<tr>
<td>(2) with newborn child</td>
<td>2.7</td>
<td>6.9</td>
</tr>
<tr>
<td>(3) with pre-school child</td>
<td>2.0</td>
<td>2.4</td>
</tr>
<tr>
<td>(4) with school-entry child</td>
<td>2.5</td>
<td>6.7</td>
</tr>
<tr>
<td>(5) with primary-school child</td>
<td>2.0</td>
<td>3.6</td>
</tr>
<tr>
<td>(6) with secondary-school child</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>(7) children left</td>
<td>2.4</td>
<td>2.3</td>
</tr>
</tbody>
</table>
Table 7.4: Changes in Other Work Characteristics over Two Years

<table>
<thead>
<tr>
<th>Groups:</th>
<th>Percentage of supervisory who move to non-supervisory</th>
<th>Percentage of non-supervisory who move to supervisory</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) before or no children</td>
<td>24.5    men</td>
<td>25.2    women</td>
</tr>
<tr>
<td>(2) with newborn child</td>
<td>17.6    men</td>
<td>36.7    women</td>
</tr>
<tr>
<td>(3) with pre-school child</td>
<td>19.8    men</td>
<td>27.5    women</td>
</tr>
<tr>
<td>(4) with school-entry child</td>
<td>15.2    men</td>
<td>29.7    women</td>
</tr>
<tr>
<td>(5) with primary-school child</td>
<td>17.8    men</td>
<td>23.2    women</td>
</tr>
<tr>
<td>(6) with secondary-school child</td>
<td>17.6    men</td>
<td>27.6    women</td>
</tr>
<tr>
<td>(7) children left</td>
<td>19.2    men</td>
<td>23.0    women</td>
</tr>
</tbody>
</table>


Table 7.4: Changes in Other Work Characteristics over Two Years

<table>
<thead>
<tr>
<th>Groups:</th>
<th>Place of Work</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Percentage of those working at home who move to elsewhere</td>
<td>Percentage of those working elsewhere who move to home</td>
</tr>
<tr>
<td></td>
<td></td>
<td>men</td>
<td>women</td>
</tr>
<tr>
<td>(1) before or no children</td>
<td></td>
<td>43.7</td>
<td>51.3</td>
</tr>
<tr>
<td>(2) with newborn child</td>
<td></td>
<td>39.6</td>
<td>15.8</td>
</tr>
<tr>
<td>(3) with pre-school child</td>
<td></td>
<td>46.2</td>
<td>37.8</td>
</tr>
<tr>
<td>(4) with school-entry child</td>
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<td>33.9</td>
<td>44.4</td>
</tr>
<tr>
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<td></td>
<td>30.1</td>
<td>27.9</td>
</tr>
<tr>
<td>(6) with secondary-school child</td>
<td></td>
<td>27.4</td>
<td>24.3</td>
</tr>
<tr>
<td>(7) children left</td>
<td></td>
<td>31.5</td>
<td>28.9</td>
</tr>
</tbody>
</table>
Types of women more likely to experience changes in work characteristics around the time of birth:

- Lone mothers more likely to change employer or switch from supervisory to non-supervisory role.

- Women with first newborns are less likely to change employer, but more likely to change industry or occupation, leave self-employment, change the time of day worked and experience a greater decline in weakly hours.

- Spacing between siblings also influential.
Changes in work characteristics and maternity leave:

- Women with longer absences from work are more likely to change employer or occupation or industry, more likely to move from permanent to temporary work, less likely to move from non-supervisory to supervisory, but less likely to change time of day worked.
- Women who return with maternity rights less likely to move towards non-supervisory or temporary positions and have a smaller decline in weekly hours.
- Women entitled to maternity pay more likely to experience changes in work characteristics, including moving to non-supervisory or temporary positions.
Types of women more likely to experience changes in work characteristics around the time of school entry:

- Lone mothers more likely to move into full-time work or into a supervisory position, but less likely to move from temporary to permanent work.

- Mothers with a “middle” child most likely to move employers.

- Mothers with twins or triplets entering school are more likely to move from permanent to temporary work.
How are changes in other work characteristics related to changes in wages?

• are the changes compensating?
• are the changes part of a more general decline in labour market position?

Problem: cannot identify which changes in other work characteristics are desirable.
Correlations in changes around the time of birth:

- movement from part-time to full-time has low wage growth.
- movement into self-employment has low wage growth.
- movement into public sector has high wage growth; movement into private sector has low wage growth.
Correlations in changes around the time of school entry:

- movement into self-employment has low wage growth; movement into employment has high wage growth.
- movements between sectors associated with variations in wage growth.
- movement to working at home has low wage growth.
- remaining in or moving into permanent work has high wage growth.
- remaining in or moving into supervisory work has high wage growth.
Changes in Childcare around School Entry

• Changes in type of childcare used over school entry.

• Changes in payment for childcare over school entry.

• Impact of childcare choices on mothers’ future employment.

Note:

• childcare only observed for children of working mothers.

• childcare type and payment is for all types of care used by all children in the family.
Changes in childcare use with school entry:

- increased use of immediate family / informal care.

- increased use of childminders / nannies between first child entering school and subsequent children entering.

- increased use of single type of other formal care (school clubs), but use remains relatively uncommon.

- decline in the use of mixed arrangements.
<table>
<thead>
<tr>
<th>Percentage using Childcare Type</th>
<th>First School Entry</th>
<th>Subsequent School Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prior to Entry</td>
<td>After Entry</td>
</tr>
<tr>
<td></td>
<td>Prior to Entry</td>
<td>After Entry</td>
</tr>
<tr>
<td>Within immediate family</td>
<td>19.9</td>
<td>25.0</td>
</tr>
<tr>
<td>Informal</td>
<td>26.4</td>
<td>31.3</td>
</tr>
<tr>
<td>Nanny / mother’s help</td>
<td>2.4</td>
<td>5.3</td>
</tr>
<tr>
<td>Nursery</td>
<td>16.2</td>
<td>4.3</td>
</tr>
<tr>
<td>Childminder</td>
<td>6.8</td>
<td>9.8</td>
</tr>
<tr>
<td>Other single formal type</td>
<td>2.4</td>
<td>5.7</td>
</tr>
<tr>
<td>Informal + single formal type</td>
<td>15.5</td>
<td>11.0</td>
</tr>
<tr>
<td>Informal + mixed formal</td>
<td>2.2</td>
<td>1.6</td>
</tr>
<tr>
<td>Mixed formal</td>
<td>8.2</td>
<td>6.1</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
### Tables 8.2 / 8.3: Changes in Childcare Type and Payment

<table>
<thead>
<tr>
<th></th>
<th>Pre-school Children</th>
<th>First School Entry</th>
<th>Subsequent School Entry</th>
<th>Primary School Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage with unchanged childcare type over two years</td>
<td>41.3</td>
<td>38.8</td>
<td>43.1</td>
<td>53.8</td>
</tr>
<tr>
<td>Change in propensity to pay over two years:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No pay / no pay</td>
<td>28.0</td>
<td>26.7</td>
<td>37.7</td>
<td>52.2</td>
</tr>
<tr>
<td>No pay / pay</td>
<td>7.9</td>
<td>4.8</td>
<td>4.5</td>
<td>4.2</td>
</tr>
<tr>
<td>Pay / no pay</td>
<td>10.6</td>
<td>13.5</td>
<td>15.2</td>
<td>7.3</td>
</tr>
<tr>
<td>Pay / pay</td>
<td>53.6</td>
<td>55.1</td>
<td>42.7</td>
<td>36.4</td>
</tr>
<tr>
<td>Change in average weekly childcare spending:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>all families</td>
<td>£11.42</td>
<td>£24.40</td>
<td>£28.84</td>
<td>£2.81</td>
</tr>
<tr>
<td>those paying at some point</td>
<td>£14.13</td>
<td>£30.74</td>
<td>£42.55</td>
<td>£5.43</td>
</tr>
<tr>
<td>those paying at both times</td>
<td>£14.05</td>
<td>£36.83</td>
<td>£53.45</td>
<td>£2.92</td>
</tr>
</tbody>
</table>
Impact of childcare choices on mothers’ future employment:

- Working mothers using only immediate family or informal care are less likely to be in work after school entry than those using other types of care.

- Change in work hours over school entry does not have a distinct pattern across childcare type.
<table>
<thead>
<tr>
<th>Childcare Type Prior to School Entry</th>
<th>Percentage of Mothers Working After School Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-School Children</td>
</tr>
<tr>
<td>(1) Within immediate family</td>
<td>84.8</td>
</tr>
<tr>
<td>(2) Informal</td>
<td>85.3</td>
</tr>
<tr>
<td>(3) Nanny / mother’s help</td>
<td>86.4</td>
</tr>
<tr>
<td>(4) Nursery</td>
<td>89.3</td>
</tr>
<tr>
<td>(5) Childminder</td>
<td>94.7</td>
</tr>
<tr>
<td>(6) Other single formal type</td>
<td>62.9</td>
</tr>
<tr>
<td>(7) Informal + single formal type</td>
<td>87.0</td>
</tr>
<tr>
<td>(8) Informal + mixed formal</td>
<td>100.0</td>
</tr>
<tr>
<td>(9) Mixed formal</td>
<td>90.0</td>
</tr>
<tr>
<td>All types</td>
<td>86.7</td>
</tr>
</tbody>
</table>
(3) Conclusions

Critical times?
Policy implications and further research
Critical times for work participation:

- Births, particularly first births, mark a dramatic decline in participation for women.

- Effect persists due to temporary returns and subsequent births.

- School entry is a time of considerable turnover in participation, marking the last years of unusually high exit rates from work and the first years of unusually high entry rates.

- Male and female participation rates do not become close again until twenty years after the first birth.
Critical times for wages:

• The accumulation of several periods of slow relative wage growth for women over childbirth and school entry leads to a gradual decline in the levels of women’s wages relative to men.

• Women’s relative wage does not begin to recover until twenty years after the first birth.
Critical times for other work characteristics:

- Sharp movement into part-time work for women following birth.

- Female workers considerably more likely to be part-time than male workers for remainder of working life.

- Transition towards non-permanent positions and non-supervisory roles for women around the times of birth and school entry.
Policy Implications

- Enhancing gender equality in the labour market should focus on mothers.

- Entitlement to maternity leave shortens the absence from work following birth for some mothers and is associated with fewer changes in work characteristics.

- The length of absence following childbirth is determined jointly by the length of entitlement and the generosity of maternity pay.
Enabling mothers to take longer absences from work following birth may have longer term impacts on participation, wages and other work characteristics.

Encouraging mothers to return to work between births may hasten their return after subsequent births.

There is a need to consider how to encourage women to remain in work once returned.

Should not presume that employment opportunities for mothers are suddenly enhanced when a child starts school.
- Raising household income through tax credits or benefits may encourage mothers to spend longer away from work.

- Policies directed towards helping lone mothers to work are well targeted.
Further research to identify:

- Why non-white mothers have longer absences from work following childbirth.

- Why women working in the public sector take a shorter absence from work following childbirth.

- Whether the gender gaps in other work characteristics result from mothers’ preferences or their weaker position in the labour market.

- Whether the low usage of school clubs when a child starts school reflects mothers’ preferences or availability of places.
Whether the lower likelihood of future work participation for mothers using only family and informal care prior to school entry is a causal relationship or reflects a lower degree of labour market attachment among this group.
Newborns and New Schools:
Critical Times in Women’s Employment

Mike Brewer & Gillian Paull

The Institute for Fiscal Studies