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Welfare Reform and Lone Parents in the UK

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Welfare Reform and Lone Parents in the UK

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Abstract

The last thirty years saw dramatic increases in the proportion of children living in lone parent households. In 1997 the incoming Labour government initiated a series of policy reforms aimed at reducing this high level of child poverty. A key element of their strategy was a move towards increasing employment rates among families with children by a combination of increased in-work support through the Working Families Tax Credit and active case management of the population on welfare through the New Deal for Lone Parents. The assessment of this policy reform agenda has focused to date mainly on lone mothers' employment and poverty. In this paper we extend this to include at the impact on the numbers of lone parent families and a range of outcomes for mothers and children. We cover mothers' mental well-being and health, child outcomes and relationship patterns. As well as representing the basic facts about employment incomes and hours of work. Our results show there was no significant impact of these policy reforms on family structure. Mothers malaise scores are, unsurprisingly, very high on family break up but they tend to recover after around 2 years. WFTC is found to reduce the spike of high malaise co-incident with the transition into lone parenthood but to have no longer term effects. This decline in malaise is strongly associated with improved financial indicators. Adolescent children in lone parents families report lower self-esteem, more unhappiness, lower quality relationships with the mother and a number of worse or risky behaviours. Difference-in-difference techniques suggest a marked narrowing if these gaps since WFTC. The magnitude of these changes are quite large, half of the gap in self-esteem and unhappiness scores and in truancy, smoking and planning to leave school at age 16 are eliminated after the policy reforms. This strongly suggests that the increases in incomes and employment associated with the reforms have profoundly changed the quality of life children in lone parent families.

Keywords: welfare reform, lone parents, tax credits, mental health, child outcomes

JEL Classification: H31, J22, J13, I38

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I. Introduction

Over the last thirty years, the share of families with children headed by lone parents has risen to nearly one in four. While employment rates of married and co-habiting mothers in the UK have increased, especially for those with young children (see Gregg et al. forthcoming, for a recent discussion), the employment rates of lone mothers were lower in the early 1990s than they had been in the late 1970s, and, at just 42 percent in 1995, were 24-percentage points lower than the employment rates of married mothers¹. The UK is almost alone among OECD countries in having employment rates for lone mothers so far below those of other mothers and in some countries, such as Spain, employment is higher among single mothers than married mothers. These very low employment rates contributed towards the UK having the highest proportion of children living in jobless households in OECD countries in 1996, and one of the highest incidences of children in relative income poverty (see OECD, 1998, and Micklewright 2000).

The incoming Labour government in 1997 initiated a series of policy reforms aimed at reducing child poverty. A key element of this was the move to increase employment rates among families with children, especially among lone parents. In North America in the 1990s there had been a number of experimental welfare-to-work programmes aimed at raising employment among lone mothers (see Grogger and Karoly 2005) and these provided much of the inspiration behind the British governments chosen strategy. The result was the adoption of a twin-track approach, with the Working Families Tax Credit providing improved financial incentives to work and the New Deal for Lone Parents and other welfare-to-work schemes introducing active case management into the welfare system for this group. The reforms have had two hugely ambitious targets set for 2010: raising employment of lone parents to 70 percent and reducing child poverty (defined in terms of relative income) by half.

While the package of reforms introduced was influenced by policy experiments that had taken place in N. America, the design was radically different from the welfare reforms seen in the US after 1996. In the UK the generosity of in and out-of-work benefits were both increased substantially for families with children, there has been no use of time limits for welfare payments to lone parents and participation in job search and training or other support programmes has remained, to date, voluntary. The only element of compulsion has been for

¹ Source: OECD Economic Outlook 2001

lone parents to attend interviews at the Job Centre to discuss work options. Thus, unlike in the US where in-work benefits were introduced with the primary objective of welfare caseload reduction or perhaps raising employment, in Britain the dominant policy aim has been to raise incomes for lone parents both in and out of work, with an increased earnings contribution being an important component of the intended income gains.

The aim of this paper is to assess the impact of policy change on lone parents and their children. The existing literature has focused mainly on employment rates, and poverty (although Francesconi and van der Klauuw, 2007, consider a wider range of impacts, including partnership and fertility). While we document changes in employment, we also consider whether the reforms impacted on mothers' mental health and child well being.

The rest of this paper is structured as follows. In Section II we review the evidence on policy reform on family structure and presents some simple confirmatory evidence on the impact of policy reforms from 1998 to 2002. Section III explores the impact of the policy reforms on lone parents' employment and in Section IV we look at mothers mental and general health outcomes. Section V explores the evidence for child outcomes and Section VI concludes.

II. Family Structure

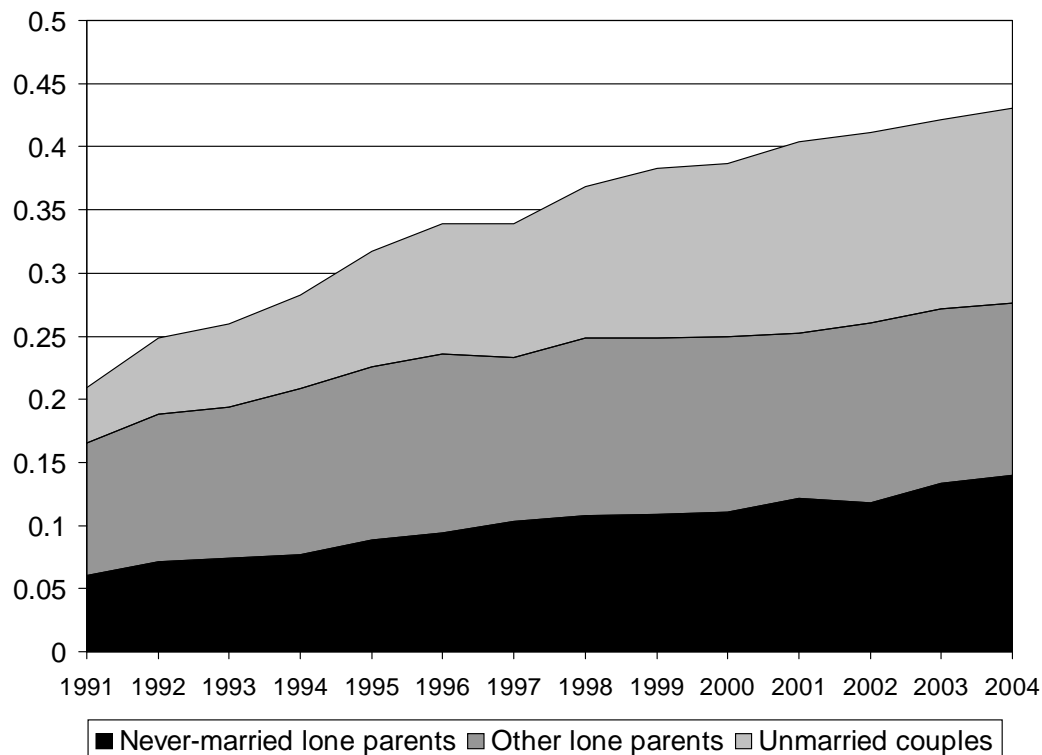
The incidence of single parenthood has increased steadily over the last 25 years. The proportion of women with dependent aged children who were lone parents doubled from 8 to 16 percent between 1977/79 and 1998/2000. As shown in Figure 2.1, the rise in lone parenthood reflects an increase in the rate of divorce and separation, but also a rise in the number of never married single mothers. There has been a corresponding increase in the number of women with children who are in cohabiting, rather than married, couples.

Did the reforms affect the number of lone parents? As shown in Figure 2.1, there was continued growth in the number of lone parent households following the reforms.

Government statistics show that the number of lone parents increased from 1,651,000 in Spring 1999 to 1,734,000 in Spring 2003, although this represented a much lower average annual increase than over the previous five-year period (23,000 a year compared to 60,000 a

year²). From a policy point of view though, the crucial issue is how much of this post-reform growth, if any, is attributable to the reforms.

Figure 2.1
Proportion of Women with Children by Family type



Note to figure: the proportion of lone parents is derived from official statistics; the proportions of never-married lone parents and cohabiting couples are derived from marital status information in the British Household Panel Survey. Overall, the BHPS tends to successively under-record the total proportion of lone parents over time. Our assumption is that this is not correlated with marital status.

There is an extensive US literature examining the effect of welfare on partnership, much of which exploits variation in program generosity and timing of implementation across states to identify an effect. The US evidence is mixed. In general, there is a correlation between more generous welfare benefits for lone parents and increased likelihood of female headship (see Moffitt, 1998), but the results are sensitive to specification and in many cases are not robust

² The ONS data suggests that there was an extraordinarily rapid rise in lone parent numbers in the early 1990s, were with numbers growing by 400,000 in just 4 years from 1992 to 1996.

to the inclusion of state fixed effects and trends, and individual fixed effects. Moreover, the effect of WFTC on partnership may differ from these results since. As discussed in Grogger and Kareoly (2007), the programme has ambiguous incentive effects for partnering, supporting one-earner couples and penalizing dual-earner couples (among low-earner families). Recent US studies of EITC have found a small, positive effect on the probability of marriage (see Dickert-Conlin and Houser (2002) and Eissa and Hoynes (2003))

There has been far less research into the effect of welfare on partnership in the UK, but there are three studies of WFTC, focusing on the impact on the probability of being in a couple (Anderberg, 2007), on the impact on the flow out of lone-parenthood (Francesconi and van der Klaauw, 2007) and on the impact on the break-up of couples (Francesconi et al 2007). On the face of it, the findings of these studies do not appear to be consistent and therefore require some discussion.

Francesconi and van der Klaauw. (2007) use a differences-in-differences approach to estimate the change in the probability of lone mothers re-partnering compared to single women with no kids using data from the British Household Panel Survey. They find a significant reduction of 2.4 percentage points (equivalent to a 28 per cent reduction in the re-partnering rate). Francesconi et al. (2007) also use a DiD approach to model the change in the probability of women in couples with children splitting up, compared to women in couples without children. Overall, they find no significant effect, but a positive and significant effect for women whose partner does not work or works fewer than 16 hours per week. With no overall change (or a rise for a small group) in the inflow and a fall in outflow, these estimates imply an increase in the number of lone parents – of around 40,000 per year, based on the stock of lone parents in 1999. This is not out of line with the increase that actually occurred but this implies that the large rises seen in the early 1990s would have stooped altogether but for the policy reforms.

Anderberg (2007) focuses on the effect of welfare partnership penalties/bonuses on couples. He models the change in benefit entitlement³ from being part of a couple compared to being

³ including income support and WFTC and the child tax credit and working tax credit that replaced WFTC in 1993

single using data from the Family Resources Survey and estimates the probability of being in a couple. He uses the estimated coefficients to simulate the effect of WFTC and finds that the reform was associated with an *increase* in partnership of around 0.8 percentage points – or around 50,000 additional couples.

In principle, these two sets of results could be reconciled if there was an increase in the number of couples with no kids, as a result of increased partnership among single women. Although the reform benefited households with children, this is possible if single women were forming partnerships in order to have children as a result of the reforms. However, (based on data from the British Household Panel Survey) to generate an increase in the proportion of couples of 0.8 percentage points would require an increase in the annual flow of singles to couples of around 30 per cent and there is little evidence to support a change of this magnitude. Moreover, if there were an increase in partnering among single women with no kids, this would invalidate the use of this group as a control in the Francesconi and van der Klaauw study and imply that their estimate overstates the reduction in repartnering among lone parents. More generally, the fact that the control groups chosen by Francesconi and van der Klaauw (2007) and Francesconi et al. (2007) may be affected by the reform may tend to bias the results.

Another important difference is that Francesconi and van der Klaauw (2007) and Francesconi et al. (2007) capture the effect of the package of reforms using the DiD approach – including both WFTC and the increased generosity of Income Support – whereas Anderberg (2007) only models the effect of WFTC. Since the increase in income support will have made lone-parenthood relatively more attractive, this would explain why he finds more of a pro-partnership effect. Anderberg (2007) does not simulate the impact of the change in IS, but his figures show that it raised the partnership penalty by a similar order of magnitude to the increase in partnership bonus brought about by WFTC. This suggests that the effect of the two reforms may well have cancelled each other out .

As further evidence on the impact of the reforms on partnership, Table 2.1 reports the results of a probit regression on lone-parenthood using the Family Resources Survey 1995 – 2003. Overall, using a differences approach, and controlling for a common trend, the data show a

small increase in the probability of lone parenthood following the reforms. In terms of numbers of lone parents, an increase of this magnitude would imply 40,000 additional lone parents in the post-reform period, smaller than that implied by Francesconi and van der Klaauw (2007) and Francesconi et al. (2007), and even this is statistically insignificant.

Table 2.1 Probit regression results, average marginal effects 1995-2003
Dependent variable = probability of being a lone parent (0/1)

| Women with children | | |
|---------------------|---|-------------------|
| Post-reform dummy | .0063 (.0094) | -.0019 (.0225) |
| Post * Low_ed | | .0106 (.0251) |
| Controls | Third-order polynomial in age, interacted with education Number of children – interacted with education Age of youngest child, interacted with number of children Education, Region, Housing tenure, Ethnicity, Trend | |
| N | 42321 | 42321 |

The simple differences approach does not control for other time-varying effects that may have affected the number of lone parents (other than imposing a common trend across the before and after period). Finding a suitable control group is not straightforward since the reforms potentially affect fertility and partnership for most groups of women. Here we split by education⁴ since better-educated women are arguably likely to be less affected by the reform. The results show a larger positive effect for low education women in the post-reform period, but again this is statistically insignificant.

Overall, together with the previous results, this suggests that the reforms had little impact on the number of lone parents. Anderberg's (2007) results showing an increase in the number of couples, while not out of line with US results on EITC, do not include the impact of the change in Income Support, which raised partnership penalties. However, his research highlights that any increase in lone-parenthood is likely to be attributable to the increased generosity of Income Support, rather than the introduction of WFTC, which supports one-earner couples among low earners and makes less educated men more attractive partners.

III. Evidence on the Impact of Welfare Reform on Employment

Between 1993 and 2003 employment rates of lone mothers rose from 40 to 51 percent (see Table 3.1).⁵ This rise began before the new policy regime came into effect, but occurred during a period of general employment growth – employment among married/co-habiting mothers also rose by 7 percentage points. Since 2000, however, employment of other mothers has been broadly flat whereas that of lone mothers has continued to rise (by 5.5 percentage points up to 2006). There has been an even more dramatic rise in lone parents' employment among those working 16-hours a week plus (the threshold for WFTC eligibility). In just five years after 1998, the employment rate of those working 16 or more hours per week rose by 9.7 percentage points (Table 3.1).

Table 3.1: Lone Parent Employment Rates

| Group/Year | 1978-80 | 1985-87 | 1991-93 | 1993 | 1996 | 1998 | 2000 | 2003 | 1998-1993 | 2003-1998 |
|--|---------|---------|---------|------|------|------|------|------|-----------|-----------|
| Lone Mother Employment Rate | 52.1 | 44.5 | 41.8 | 40.0 | 42.7 | 45.1 | 48.9 | 50.9 | 5.1 | 5.8 |
| Emp. Rate : Youngest Child 0-2 | 25.1 | 17.7 | 21.3 | 20.2 | 20.5 | 22.7 | 26.7 | 27.7 | 2.5 | 5.0 |
| Emp. Rate : Youngest Child 3-4 | 32.1 | 26.0 | 28.9 | 29.5 | 34.1 | 35.9 | 37.9 | 41.7 | 6.4 | 5.8 |
| Emp. Rate : Youngest Child 5-10 | 57.2 | 48.4 | 49.9 | 44.8 | 46.3 | 49.8 | 50.5 | 55.4 | 1.5 | 8.9 |
| Emp. Rate : Youngest Child 11+ | 66.0 | 65.4 | 62.7 | 61.9 | 63.7 | 63.4 | 65.8 | 68.2 | 1.5 | 4.8 |
| Share with Youngest Child Aged 0-2 | 16.8 | 22.9 | 28.4 | 25.7 | 24.0 | 23.1 | 21.0 | 19.7 | -2.6 | -3.4 |
| Employment Rate working > 16 hours | 37.2 | 29.9 | 26.1 | 31.8 | 35.1 | 36.9 | 41.5 | 45.6 | 5.1 | 9.7 |
| Married/cohabiting Mothers Employment Rate | 53.1 | 54.2 | 62.3 | 61.5 | 64.4 | 66.4 | 68.3 | 68.3 | 4.9 | 1.9 |
| Single Women w/o Children Employment Rate | 71.3 | 67.2 | 67.2 | 65.2 | 65.7 | 68.6 | 69.5 | 70.5 | 3.4 | 1.9 |
| Average Weekly Hours of Working Lone Mothers | 29.2 | 27.2 | 26.0 | 26.5 | 26.1 | 25.6 | 26.5 | 25.3 | -0.9 | -0.3 |

⁴ High education = left full-time education at 18+, low education = left full-time education at the compulsory school leaving age. Women who left school between the compulsory school leaving age and 18 are excluded.

⁵ Lone fathers, who make up around 10% of lone parents show a similar rise but somewhat higher employment levels of 42% and 53% in 1993 and 2003 respectively

Data from 1978-80 to 1991-93 is from the General Household Survey, from 1992 onwards data is from the Labour Force Survey.

The figures in Table 3.1 can be used to obtain a simple difference-in-differences estimate of the employment effect of the 1999 reforms. Rows 8 and 9 show the employment time path for the non-lone parent women in the population aged 16-59 – married mothers in row 8 and single women without children in row 9. They suggest an impact of 3.9 percentage points (5.8 – 1.9 for both groups with std. errors of 0.015 for the comparison with single women without children and 0.012 for mothers in couples). However, these simple comparisons do not adjust for changes in the composition of lone parents or for any differences in employment trends prior to 1998.⁶

Table 3.2 reports estimates of the employment gaps for lone parents conditional on a wide range of observable characteristics and how they change for three pairs of years, 1978/79 and 1986/7 prior to Family Credit, 1986/7 and 1992/3, when Family Credit was introduced and extended and 1993 to 1998 a period of relative stability. For the 1993 to 1998 period, immediately prior to the reforms scrutinised here, both single women without children and mothers in couples act as a good comparison once characteristics are conditioned on. However, in earlier periods lone parents' employment rates fell behind those with similar characteristics who were in couples with children. Reflecting the large increases in married/cohabiting mothers' employment in this period, when compared with single childless people the result is a much smaller relative decline. So our preferred benchmark group is single childless adults, as they act as a good benchmark for tracking lone parents' employment and are not affected themselves by the WFTC reforms (see Francesconi et al. 2007). Although we will compare with mothers in couples as well in what follows. This indicates that while employment rates rose throughout the period for the population as a whole after 1993, lone parents for given characteristics were not over-achieving before 1998.

Table 3.2: Probit Estimates for Employment Rates of Lone Mothers and Comparable Women in Difference-in-Difference Estimates, 1978/80 compared with 1985/87, 1985/87 with 1991/3 and 1993 with 1998

⁶ Prior to the introduction of Family Credit in 1988, working lone parents were entitled to little support from the state. In 1988 Family Credit was introduced, raising the level of support for working lone parents. In 1992 the number of hours of work required to be eligible for Family Credit was dropped from 20 to 16.dzax=

| | Comparison with Mothers in Couples | | | Comparison with Single Women with No Children | | |
|------------------------|------------------------------------|------------------|------------------|---|------------------|------------------|
| | Year 1 | Year 2 | Year 2 dummy | Year 1 | Year 2 | Year 2 dummy |
| | 1993 | 1998 | | 1993 | 1998 | |
| | 1985/6 | 1992/3 | | 1985/6 | 1992/3 | |
| | 1978/79 | 1985/6 | | 1978/79 | 1985/6 | |
| Lone Mother | -1.193 (.001) | -1.103 (.020) | -0.081 (.019) | -0.267 (.001) | -0.263 (.023) | -0.285 (.024) |
| Lone Mother* Year 2 | -0.009 (0.013) | -0.127 (.026) | -0.042 (.028) | -0.004 (0.016) | -0.046 (.030) | .027 (.030) |
| Year 2 dummy | .023 (0.005) | .091 (.011) | -0.004 (.010) | .015 (0.011) | -.032 (.018) | -.094 (.018) |
| Age Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Education Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Age of Child Controls | Yes | Yes | Yes | No | No | No |
| Ethnicity controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Regional Controls | Yes | Yes | Yes | Yes | Yes | Yes |

Table 3.3 shows conditional D-in-D estimates (row 2) of how lone mothers have fared when compared to all single women without children (column 1) and lone parents (mothers and fathers) compared to single adults without children (column 2). The inclusion of fathers shows a somewhat smaller raw difference-in-difference estimate than for just women women. Columns 3 and 4 repeat columns 1 and 2 but compare with couples rather than childless singles. The estimates of the employment effects in a fairly tight range of 3.8 to 5.2% (or 65 to 80,000 lone parents) suggesting that policy reform lay behind more than two thirds of the rise in employment from 1998 to 2003, as the employment growth in labour market as a whole slowed down.

Table 3.3: Probit Estimates for Employment Rates of Lone Mothers and Comparable Women in Difference-in-Difference Estimates, 1998 and 2003

| | Lone Mothers | Lone Parents | Lone Mothers | Lone Parents |
|------------------|---|--|--|--|
| | Comparison with | | | |
| | Single Women with No Children 1998 compared with 2003 | Single Adults with No Children 1998 compared with 2003 | Mothers in Couples 1998 compared with 2003 | Parents in Couples 1998 compared with 2003 |
| Lone Parent | -0.231 (0.011) | -0.196 (0.009) | -0.197 (0.013) | -0.182 (0.008) |
| Lone Parent*2003 | .052 (0.011) | .041 (0.012) | .038 (0.013) | .038 (0.011) |
| Year dummy 2003 | .053 (0.015) | .037 (0.012) | .011 (0.016) | .012 (0.009) |

| | | | | |
|----------------------------------|-----|-----|-----|-----|
| Age Controls | Yes | Yes | Yes | Yes |
| Education Controls | Yes | Yes | Yes | Yes |
| Age of Child Controls | No | No | Yes | Yes |
| Ethnicity controls | Yes | Yes | Yes | Yes |
| Regional Controls | Yes | Yes | Yes | Yes |
| Education*Gender interactions | No | Yes | No | Yes |
| Age*Gender interactions | No | Yes | No | Yes |
| Age of Child*gender Interactions | No | No | No | Yes |

Difference-in-difference estimates of the effect of policy reform on the employment rate where lone parents are working at least 16 hours are not reported in detail for reasons of space. Receipt of WFTC and its predecessor require the lone parent to be working at least 16 hours and this amount of work is required to lift most lone parents out of poverty. The increased generosity from 1999 may encourage some to move from working a few hours a week to over 16. These estimates suggest that policy has raised employment rate at 16 plus hours by 7.2 percentage points, implying that an additional 120,000 lone parents work more than 16 hours a week. This move away from hours of work below 16 hours a week is focused on those with their youngest child aged over 5.

These estimates are broadly comparable with other studies which have looked at the employment effects of WFTC. An early study by Blundell, Duncan, McRae and Meghir (1999) attempted to forecast the likely impact of the Working Families Tax Credit on employment. They developed a structural model of labour supply identified from past tax and welfare reforms, which they then used to simulate the effect of WFTC. The impact of other reforms, including the New Deals and other supporting tax and benefit reforms, were not considered. Their model suggested that the WFTC would lead to a 2.2 percentage point increase in single parents' employment. Brewer et al. (2004) report results from an updated version of this model incorporating evidence over the period WFTC was introduced and suggest lone mothers employment rose by 3.7ppts. Francesconi and Van Der Klauw (2007) estimate the impact of the whole package of reform using the British Household Panel Survey using a differences in differences approach, comparing employment of lone parents with that

of single women with no children, and conclude that lone mothers' employment rose by 5 percentage points (by 2001). These estimates therefore seem to offer a tight range for the likely impact of the post-1998 policy reform on the employment of lone parents, suggesting that policy change has led to an increase in lone parents' employment of around 4 to 5 percentage points. This translates into an additional 65-80,000 lone mothers in work but the reforms also induced a number of lone mothers to work more than 16 hours who previously had worked less than 16. So the bite of the policy was to increase the numbers working at or above 16 hours by 7 ppts or 120,000.

Employment Dynamics

The estimates of the effect of policy on employment rates among lone parents reflect a series of decisions about transitions; (i) into and out of work around transitions in and out of lone parenthood, (ii) the decision to stay in work among working lone parents, and (iii) the decision to enter work. These flows offer important insights into how welfare reform affects transitions.

The first important factor influencing the overall lone parent employment rate is what happens to employment on becoming a lone parent. In any one year just under 10 percent of lone parents re-partner and around 10 percent newly become lone parents, mostly as the result of a relationship breakdown. Employment rates among those becoming lone parents are lower than for those who remain partnered (around 62 percent compared to 71 percent in the post-reform period) although employment growth for both groups was similar over the period. What lone parents were doing on becoming a lone parent has been found to be an important influence on current employment (Marsh et al 1998), and entry into lone parenthood has been associated with job loss. However this has been changing. Figure 3.1 shows the percentage of working women who remain in work after becoming a lone parent. Prior to 1998 around one quarter of those in work left work on becoming a lone parent but by 2003/4 this proportion had fallen to 14 percent. Those remaining in work upon becoming lone parents have higher hours and earnings on average than other lone parents, and policies which enable lone parents to maintain these higher quality jobs are likely therefore to raise both incomes and overall employment in the long term. Again, changes in characteristics may

have influenced this change. To account for this possibility we look at how the probability of job loss has changed pre and post reform. The results are shown in Table 3.4. Pre-1999 the probability of leaving work was 10-percentage points higher (conditional on characteristics) for employed mothers who become a single parent, than those that did not. Post-reform this difference had fallen to zero suggesting that the previously observed patterns of job loss associated with family breakdown have now completely disappeared.⁷

Figure 3.1: Proportion Retaining Jobs on Becoming a Lone Parent

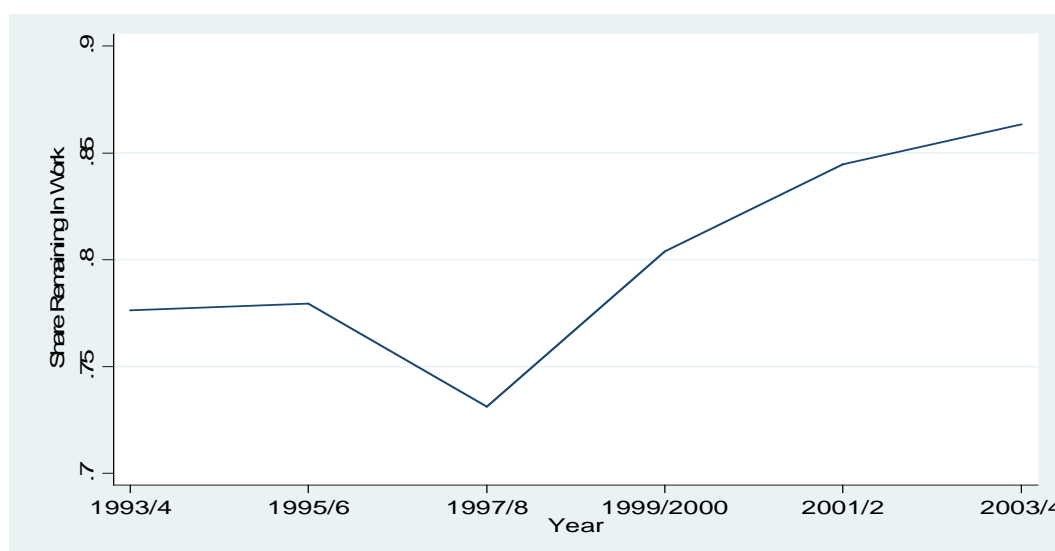


Table 3.4: Marginal Effects from Probit of Probability of Leaving Work and becoming Non-employed Upon Becoming a Lone Parent (all Partnered Women with children in Employment at t-1)

| Probability of leaving work | | Pre 1999 | 1999 to 2003 |
|-----------------------------|--|------------------|----------------|
| Become Lone Parenthood | | .095** (.000) | .007 (.754) |
| Mean Observed Probability | | .265 | .228 |
| Number of Observations | | 34031 | 27370 |

Note: Controls also included for education, region, year and quarter

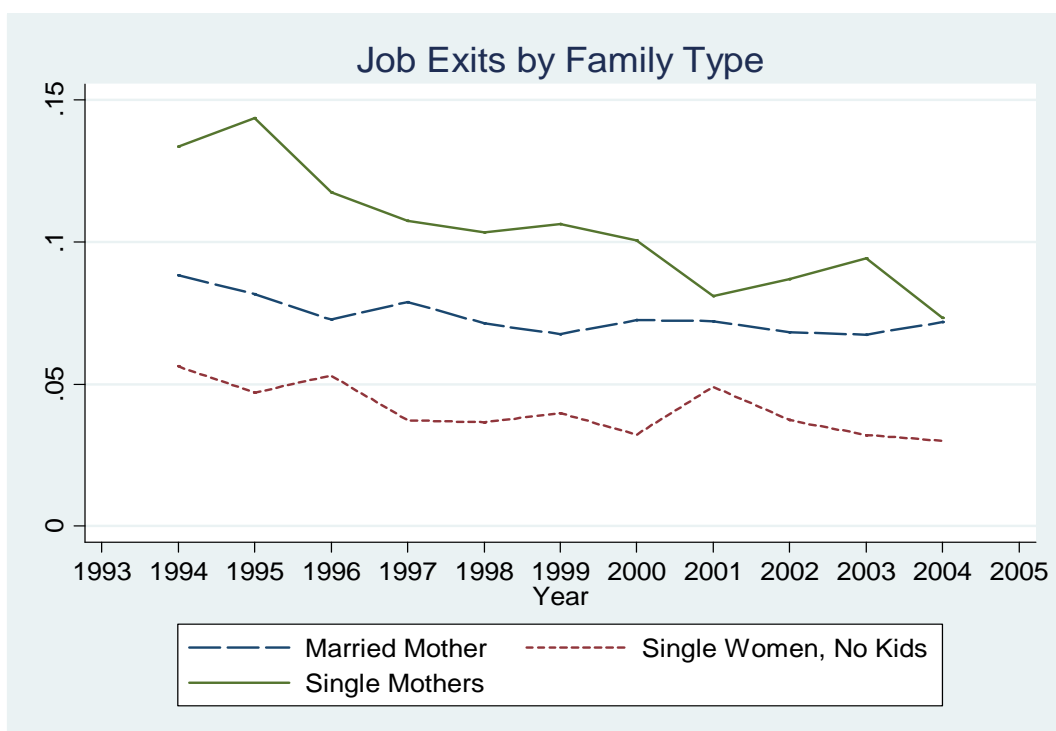
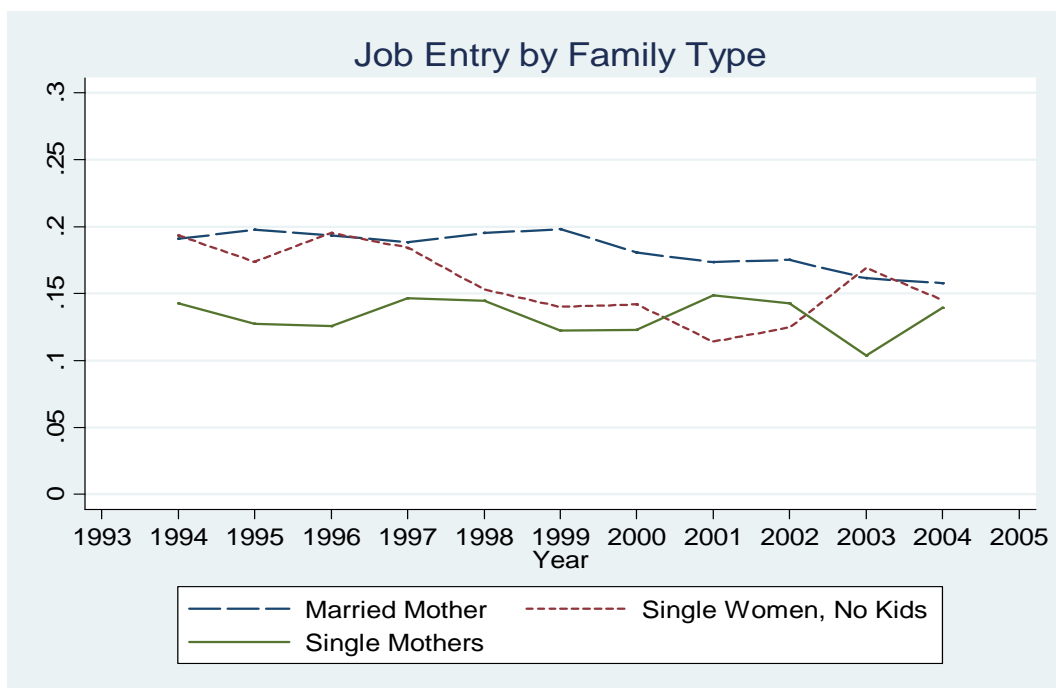
⁷ Average hours of work also fall in the post reform period on becoming a lone parent, by around one hour per

The UK literature on labour market transitions for existing lone parents has mainly focused on the evaluation of programmes on job entry rates (see for example Elias et. al., 2000, Knight et. al. 2006 on the New Deal for Lone Parents and Work Focussed Interviews). Francesconi and van der Klaauw (2007), however, do explore transitions in and out of work and suggest that the policy raised annual job entry and reduced job exit rates by around 6 ppts in each case. In Figure 3.2 the probabilities of being in work one year on from being observed out of work (non-employment), and of leaving work for the employed, are reported for lone parents and two comparison groups, married mothers and single childless women, between 1993 and 2004. Job entry rates have remained roughly flat for lone parents over the period, with around 15% of jobless lone parents moving into work each quarter, and remain somewhat lower than those for married women. Compared to single childless women however, while job entry rates were relatively low for lone parents in the first half of the 1990s by the end of the decade there was little difference in the chance of finding work for single women with and without children. Job exit rates were far higher for lone parents than other women but have fallen over time so that by 2004-05 working lone parents faced similar probabilities of leaving work as married mothers, although mothers as a whole remain more likely to exit work than childless women (and men).

While these raw differences suggest a convergence in employment transitions behaviour of lone parents toward that of other women, our comparison over time may also have been affected by changes in the characteristics of these three groups. In particular, as the employment rate rises and those lone parents with the most favourable employment characteristics enter work we may find that the remaining pool of non-employed face greater barriers to employment, as has been the case in the US where the rapid decline in welfare caseloads has meant that the remaining stock of welfare recipients are now harder to reach (Blank 2001). To examine how the job entry and job exit penalty to lone parenthood has changed, we therefore estimate a series of probit models of the probability of job entry and exit conditioning on differences in education, age and other observable differences. Here we use the richer Labour Force Survey Panel which allows the exploration of quarterly flows rather than the usual annual transitions.

week to 28 hours among those remaining in work.

Figure 3.2: Quarterly Job Entry and Exit Transitions for Women aged 25-49; 1993-2004



Note: Data is from the Labour Force Survey Five-Quarter Longitudinal data sets. To account for seasonal variations in job entry and exit moving averages are calculated over four consecutive five-quarter data sets. Averages are then taken over each year. The year 1993 contains data for four five-quarter panels, with the first quarters collected between March-May 1993 to December 1993-Feb 1994 (and final quarter March-May 194 and December 1994-Feb 1995 respectively). Subsequent years contain data covering the same months.

Table 3.5 shows the results from the probit models for job entry. We estimate the probability of entering work from a sample of non-working lone parents and single childless women, and for a second sample of non-working lone parents and married/cohabiting mothers, controlling for a variety of individual characteristics. We include only women aged between 25-49 in order to exclude transitions between work, education and early retirement. Compared to single childless women, results from the table suggest that being a lone parent reduces the probability of moving into work by around 7 percentage points in column 3 with health controls (or around a third). With the exception of inclusion of controls for poor health, other controls for a range of individual characteristics have little impact on this lone parent penalty. Policy reform has had the effect of reducing this penalty by half, with the estimated impact raising lone parent job entry rates by around 3 percentage points.

The post reform period therefore saw a limited degree of equalisation of job entry rates for lone parents and single childless women. An important difference between lone parents and single childless women however is in the proportion reporting poor health. A large and increasing share of non-working single childless women report poor health (two-thirds in the post reform period compared to one-third pre-reform, while figures for lone parents are roughly one-in-five and one-in-ten respectively) and inclusion of poor health controls both raise the lone parent penalty and reduce the estimated impact of reform. For the other comparator group, partnered women with children, poor health is a much less important factor in influencing employment transitions. Compared to partnered mothers lone parents are around 5 percentage points less likely to enter work, with around half of this difference explained by differences in individual characteristics. There is no impact of policy reform on job entry relative to partnered women.

Table 3.5: Marginal Effect of Lone Parenthood on Entering Work: Lone Parent / Single Childless Women and Lone Parent / Married –Cohabiting Mothers; Aged 25-49

| | Single Childless Women | | | Married / Cohabiting Mothers | | | |
|--------------------------------|------------------------|-----------|-----------|------------------------------|-----------|-----------|-----------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Lone Parent | -0.050 | -0.057 | -0.072 | -0.053 | -0.021 | -0.021 | -0.028 |
| | (0.000)** | (0.000)** | (0.000)** | (0.000)** | (0.004)** | (0.004)** | (0.000)** |
| Reform | 0.048 | 0.048 | 0.027 | -0.001 | 0.001 | 0.002 | 0.001 |
| | (0.006)** | (0.006)** | (0.119) | (0.958) | (0.932) | (0.847) | (0.922) |
| Post 1999 dummy | -0.054 | -0.057 | -0.026 | -0.006 | -0.006 | -0.002 | -0.001 |
| | (0.000)** | (0.000)** | (0.083) | (0.214) | (0.211) | (0.755) | (0.881) |
| Age Controls | - | Yes | Yes | - | Yes | Yes | Yes |
| Education Controls | - | Yes | Yes | - | Yes | Yes | Yes |
| Ethnicity controls | - | Yes | Yes | - | Yes | Yes | Yes |
| Regional Controls | - | Yes | Yes | - | Yes | Yes | Yes |
| Poor Health | - | - | Yes | - | - | Yes | Yes |
| Number / Age of Child Controls | - | - | - | - | - | - | Yes |
| Observations | 9742 | 9740 | 9740 | 28646 | 28639 | 28639 | 28639 |

Notes:

1. Data source is Five-Quarter Labour Force Survey Panel. Sample includes all non-working women aged 25/49 in period t-1 that are (i) single parents or single and childless; (ii) single parents or married/cohabiting with children. The reform period is defined as 1999 to 2003. 2004 is excluded because wider policy reforms took place that year (the move from WFTC to CTC).

2. All models also include a post reform dummy variable and controls for the first quarter of observation. More details of the control variables are reported in the footnote⁸.

3. Robust p-values in parentheses; * significant at 5%; ** significant at 1%.

Table 3.6 repeats this analysis for job exits but this time also including a larger set of controls for differences in job characteristics. Compared to single childless women the results in panel (i) suggest a substantial “lone parent penalty” to job retention compared to single childless women of around 18 percentage points. Accounting for differences in individual characteristics reduces this penalty to around 15 percentage points. Policy reform has reduced this penalty, with job retention among lone parents improving by around 4 percentage points. Job quality however matters too, in particular hours of work. Lone parents are particularly likely to work part-time, and part-timers are more likely to exit work and controlling for low

⁸ Control variables are poor health, ethnicity (black, asian, white), age (banded, (30-34, 35-39, 40-44, 45-49), home ownership, education (degree, A-level, O levels, less than Olevels) and standard region, number of children (2, 3+) and the presence of a child under 5.

hours reduces the penalty to just 4 percentage points. Again reductions in the numbers of very short hour jobs (<16) explains a large part of the improvement in job retention.

Table 3.6: Marginal Effect of Lone Parenthood on Exiting Work

(i) Single Childless Women

| | (1) | (2) | (3) | (4) |
|---------------------|-----------|-----------|-----------|-----------|
| Lone Parent | 0.175 | 0.149 | 0.127 | 0.038 |
| | (0.000)** | (0.000)** | (0.000)** | (0.000)** |
| Reform | -0.034 | -0.040 | -0.037 | -0.015 |
| | (0.004)** | (0.000)** | (0.000)** | (0.166) |
| Post 1999 Dummy | -0.015 | -0.009 | -0.014 | -0.006 |
| | (0.102) | (0.291) | (0.109) | (0.476) |
| Age Controls | - | Yes | Yes | Yes |
| Education Controls | - | Yes | Yes | Yes |
| Ethnicity controls | - | Yes | Yes | Yes |
| Regional Controls | - | Yes | Yes | Yes |
| Poor Health | - | Yes` | Yes | Yes |
| Occupation Controls | - | - | Yes | Yes |
| Hours Of Work | - | - | - | Yes |
| Observations | 17239 | 17237 | 17237 | 17237 |

(ii) Married / Cohabiting Mothers

| | (1) | (2) | (3) | (4) |
|----------------------------|-----------|-----------|-----------|-----------|
| Lone Parent | 0.006 | 0.001 | 0.001 | -0.007 |
| | (0.486) | (0.947) | (0.864) | (0.453) |
| Reform | -0.038 | -0.046 | -0.047 | -0.016 |
| | (0.001)** | (0.000)** | (0.000)** | (0.176) |
| Post 1999 Dummy | -0.036 | -0.030 | -0.034 | -0.017 |
| | (0.000)** | (0.000)** | (0.000)** | (0.000)** |
| Age Controls | - | Yes | Yes | Yes |
| Education Controls | - | Yes | Yes | Yes |
| Ethnicity controls | - | Yes | Yes | Yes |
| Regional Controls | - | Yes | Yes | Yes |
| Poor Health | - | Yes | Yes | Yes |
| Occupation Controls | - | - | Yes | Yes |
| Hours Of Work | - | - | - | Yes |
| Number and Age of Children | - | Yes | Yes | Yes |
| Observations | 56536 | 56526 | 56526 | 56526 |

Notes: As notes to Table 3.4. Further details of control variables are reported in the footnote⁹.

⁹ Control variables are as footnote 9 with additional controls added in models (4) and (5) for Standard Occupational Classification (9 categories) and hours of work (16-30 hours, 30 plus hours).

Panel (ii) compares lone parents to partnered mothers and shows that lone parents are no more likely to leave work than other mothers. Indeed in the post reform period lone parents' job exit rates have been lower than those of other mothers, with policy reform estimated to have raised lone parent job retention rates by around 5 percentage points. A decline in jobs with short hours (<16) again appears to be particularly important in explaining differential rates of job retention and reduces the estimated impact of reform to be insignificantly different from zero.

How much have these changes in flows of lone parents into and out of employment, and out of work on becoming a lone parent, contributed to the overall rise in employment? Between 1998 and 2003 employment rose by around 6 percentage points. Over the five year period the rate of lone parent job exits fell by 4 percentage points (to 8 percent). Starting from a 45-percent employment rate, such a fall would be expected to lead to a rise in employment of almost 2-percentage points each year and 5-percentage points over five years. The second contribution to employment growth comes from the improved rate at which women are now retaining employment on becoming a lone parent. The rate of employment of new lone parents rose by around 10 percentage point between 1998 and 2003, and as new lone parents account for around 10 percent of all lone parents in any one year, the improvement in job retention around the transition to lone parenthood would be expected to lead to a rise in employment of just over 1 percentage point in a year and 3 percentage points over 5 years.

Overall, the evidence on employment therefore suggests that the policy reforms have raised lone mothers' employment by around 4 to 5 ppts and around 7 ppts for working more than 16 hours. This has come largely from a sharp increase in share of mothers becoming lone parents holding on to work at the point of transition into lone parenthood; from those who are already lone parents leaving work less frequently; and to a lesser degree from improvements in getting non-employed lone parents into work. The results can not distinguish the impact of the WFTC from other contemporaneous reforms such as the National Minimum Wage, increases to Income Support and the New Deal for Lone Parents programme. However, we can say that the impact of WFTC on employment would have been greater if it weren't for increased out of work support (Brewer et al. 2004, report results suggesting this would be around 2 percentage points higher from their structural model). The NMW will have had only

minor effects on employment of lone parents as most are paid well above the NMW in this period, although its value has risen sharply since. Finally, the New Deal is focused primarily on job entry where the gains to the reform have been weakest, the impact on employment on transition into lone parenthood and the improvements in job retention among continuing lone parents suggest that WFTC has been the dominant driver of the employment gains.

IV. Mothers' Well-Being

Given the growing interest among economists (and policy-makers) in happiness or well-being as a policy outcome (see Frey and Stutzer, 2002, for a survey), it is relevant to look at what impact the reforms had on lone-parents' well-being, as well as on economic outcomes. Prior to the reforms, lone mothers had been identified as a group with below average levels of mental well-being (see Payne, 2000, Hope et al, 1999). In principle, the package of reforms should improve this in a number of ways, including a boost to employment (which may also increase social interaction), better financial circumstances and improved access to childcare, so reducing the strain on those already in work. However, the move into employment may be associated with an increase in stress as women attempt to juggle work and childcare commitments, often with little outside support.

We follow a number of previous studies in using answers to the twelve-part General Health Questionnaire as a measure of mental well-being. The data are taken from the British Household Panel Survey. The GHQ 12 is a screening device designed for use in general populations to detect both temporary disorders, and also more permanent conditions such as schizophrenia & psychotic depression. It comprises twelve individual measures, covering concentration, loss of sleep, whether the individual feels they play a useful role, whether they are capable of making decisions, whether they are constantly under strain, whether they have problems overcoming difficulties, whether they enjoy day-to-day activities, their ability to face problems, whether they are unhappy/depressed, whether they are losing confidence, their belief in their self-worth and their general happiness.

In all cases, individuals are asked to assess their state, relative to usual. So, for example, individuals are asked "Have you recently been feeling reasonably happy, all things considered" and given the following four options: 1 = more than usual; 2 = same as usual; 3 = less so than usual; 4 = much less than usual. The responses are always numbered such that a

higher number reflects greater disutility. Our analysis uses the aggregate Likert index that recodes each response from 0 – 3 and sums the twelve measures to produce a single index with a range of 0 – 36.¹⁰

We also consider another measure of well-being – how satisfied people report they are with their life. Individuals are asked “how dissatisfied or satisfied are you with your life overall?” and asked to choose from a scale of 1 to 7 (7 = completely satisfied). This is available from wave 6, limiting the before period.

Table 4.1: Summary Well-being statistics for Women

| | Lone mothers | Women in a couple, with kids | Single women, no kids |
|--|---------------|------------------------------|-----------------------|
| Mean GHQ score – range 0 – 36, 36 = poor health | | | |
| Before (91 – 97) | 13.07 (6.5) | 11.81 (5.2) | 11.93 (6.0) |
| After (99 – 03) | 12.45 (6.5)** | 11.79 (5.6) | 11.88 (6.1) |
| Proportion who are depressed | | | |
| Before (91 – 97) | 0.327 | 0.237 | 0.262 |
| After (99 – 03) | 0.292** | 0.227 | 0.267 |
| Overall life satisfaction – range 1 – 7 | | | |
| Before (91 – 97) | 4.49 (1.4) | 5.16 (1.3) | 4.97 (1.3) |
| After (99 – 03) | 4.64 (1.4)* | 5.21 (1.2) | 4.87 (1.3)** |
| Equivalised real income (per month) | | | |
| Before (91 – 97) | £784 | £1408 | £903 |
| After (99 – 03) | £1014** | £1640** | £1623** |
| Proportion with financial difficulties | | | |
| Before (91 – 97) | 0.308 | 0.121 | 0.156 |
| After (99 – 03) | 0.185** | 0.070** | 0.1154** |
| Proportion in employment | | | |
| Before (91 – 97) | 0.467 | 0.627 | 0.723 |
| After (99 – 03) | 0.559** | 0.659** | 0.766** |
| Proportion with housing debt | | | |
| Before (91 – 97) | 0.059 | 0.034 | 0.022 |
| After (99 – 03) | 0.025** | 0.011** | 0.015** |
| Notes | | | |
| Standard deviations for GHQ score and life satisfaction score reported in brackets | | | |
| **denotes difference between before and after period is significant at 5% level; | | | |
| * denotes significance at 10% level | | | |
| <i>Depressed</i> : defined by a score of 4 or more on the GHQ Caseness scale | | | |
| <i>Equivalised real income</i> = household income in the month before interview, equivalised by dividing by the square root of family size, in 2004 prices | | | |
| <i>Financial difficulties</i> = individual reports finding it quite or very difficult to manage financially | | | |
| <i>Housing debt</i> = individual reports they have been (at least) two months late with a housing payment | | | |
| <i>Poor health</i> = individual reports that their health over the past 12 months has been poor or very poor relative to other people their age | | | |
| Source: British Household Panel Survey data 1991 – 2003 | | | |

¹⁰ The other aggregate measure is the Caseness index, where scores of 0 or 1 are re-coded as 0, and scores of 2 or 3 are re-coded as 1. This produces a narrower aggregate index from 1 – 12. Findings based on this index are very similar.

The raw data (Table 4.1) show that there was a significant improvement in mental health, reflected by a reduction in the GHQ score, among lone mothers after the reforms, equivalent to over half a point. The gap between lone mothers and women in couples with children was halved after the reforms. The life satisfaction score also improved significantly. This contrasted with no significant improvement over the same period for either women in couples with children or single women without children.

These raw findings are confirmed by regression analysis. Table 4.2 reports three sets of regression results – two standard differences-in-differences results using OLS, comparing lone mothers with, respectively, women in couples with children and single women with no children, and a set of fixed effects regression results, exploiting the panel nature of the BHPS. Since, in the fixed effects results, the effect of being a lone mother is identified from people moving into (or out of) lone motherhood and since the overwhelming majority of people move into lone motherhood from a relationship, we only report these results using the comparison group of women in couples and we restrict the set of lone mothers to be those who entered lone motherhood from marriage or cohabitation.

The regression results confirm that there have been improvements in lone mothers' mental health and life satisfaction following the reforms, significant at the 5% level in the fixed effects regressions. Surprisingly little of this can be explained by the employment variables, although the fixed effects results show that employment is associated with improved mental health and life satisfaction, as well as an additional (temporary) positive effect on mental health of moving into employment.

More of the improvement appears to be explained by financial variables, particularly markers of longer-term financial deprivation – housing debt and financial difficulties – rather than current income. Of course, including a subjective measure of financial difficulties is not without its problems. When people are suffering from poor mental health, they may be worse at coping with their finances, as well as having a more pessimistic outlook (ie they may well *report* that they aren't managing well), suggesting that this variable is highly likely to be endogenous. However, it may be better than a measure of current income at capturing longer-term financial problems, as well as allowing particularly low levels of income to have an additional impact on mental health. Moreover, in the light of quite substantial improvements

in the proportion of lone mothers reporting they have financial difficulties (18% in the post-reform period, compared to 31% in the pre-reform period) it seems plausible that at least some of the effect is a genuine one.

An obvious question is why there has been no improvement in mental health among women with children in couples. While the reforms did not have the same pro-employment effects for most in this group (see Francesconi et al, 2007), many would have benefited from an increase in household income.¹¹ However, the income effects for this group were far smaller – an average increase of around 16%, which would translate into an increase in GHQ Likert index of 0.05. There was also a far smaller reduction in the proportion reporting financial difficulties (from 12% in the pre-reform period to 7% in the post-reform period).

Previous research has highlighted that there are important dynamics lying behind the link between lone-motherhood and poor mental health. In particular, the process of separation, the route into lone-motherhood for 80 per cent of lone mothers, is associated with a marked, but temporary, worsening of mental health (see Gardner and Oswald, 2006). As shown in Figure 4.2, the years preceding lone motherhood are associated with a steady deterioration in mental health (rising GHQ score), peaking in the first year of being a lone mother. After this, however, levels of mental health show rapid improvement and, two years after becoming a lone mother, average levels of well-being have returned to the same levels as five years before break-up.¹² This improvement cannot be explained by re-partnering – there is a similar level of improvement in mental well-being among women who remain lone mothers as there is including those who re-partner. Failure to take account of these dynamics will result in misspecification of the lone parent effect on mental health (see Laporte and Windmeijer, 2005), as well as of the effect of the reform.

¹¹ We experimented with creating a control group of women in couples with children who had some educational qualifications, for whom the reforms may be expected to have less of an impact (because of higher household income). However, the results were no different than when using the larger group.

¹² The return to previous levels of mental well-being may be overstated using the GHQ which asks people to rate their condition relative to usual. If people define “usual” to be the recent past, an apparent “bouncing back” would actually be evidence of no further decline. The life satisfaction score exhibits a similar profile to the GHQ, but does not fully return to previous levels after separation.

Table 4.2: Regression results, well-being

| | Dependent variable = GHQ score, Likert index (0 – 36) | | | Dependent variable = Life satisfaction score (1 – 7) | | |
|--|--|---------------------|---------------------|---|---------------------|---------------------|
| OLS regression results – comparison group = women in couples with children | | | | | | |
| Reform | -0.596* (0.312) | -0.537* (0.311) | -0.267 (0.299) | 0.093 (0.081) | 0.077 (0.080) | 0.026 (0.076) |
| Lone mother | 1.3145** (0.238) | 1.171** (0.236) | 0.355 (0.229) | -0.684** (0.080) | -0.644** (0.080) | -0.433** (0.077) |
| Employed | | -1.020** (0.166) | -0.509** (0.158) | | 0.245** (0.050) | 0.117** (0.049) |
| Move into employment | | -0.430** (0.171) | -0.545** (0.166) | | 0.039 (0.047) | 0.082** (0.045) |
| Lose job | | -0.231 (0.220) | -0.024 (0.210) | | 0.229** (0.066) | 0.169** (0.062) |
| Ln equiv real income | | | -0.345** (0.105) | | | 0.104** (0.033) |
| Housing debt | | | 1.510** (0.330) | | | -0.401** (0.146) |
| Financial difficulties | | | 3.457** (0.199) | | | -0.933** (0.065) |
| Fixed effects regression results – comparison group = women in couples with children | | | | | | |
| Reform | -0.485** (0.248) | -0.457* (0.248) | -0.151 (0.245) | 0.178** (0.075) | 0.168** (0.071) | 0.118* (0.071) |
| Lone mother | 0.700** (0.248) | 0.676** (0.206) | 0.187 (0.211) | -0.352** (0.075) | -0.345** (0.075) | -0.236** (0.077) |
| Employed | | -0.289** (0.139) | -0.190 (0.140) | | 0.108** (0.047) | 0.081* (0.047) |
| Move into employment | | -0.529** (0.153) | -0.515** (0.151) | | 0.058 (0.046) | 0.065 (0.046) |
| Lose job | | 0.262 (0.173) | 0.245 (0.171) | | 0.093* (0.054) | 0.088* (0.054) |
| Ln equiv real income | | | -0.124 (0.092) | | | 0.016 (0.030) |
| Housing debt | | | 0.947** (0.250) | | | -0.240** (0.102) |
| Financial difficulties | | | 2.523** (0.138) | | | -0.533** (0.048) |
| OLS regression results – comparison group = single women, no children | | | | | | |
| Reform | -0.556 (0.352) | -0.510 (0.263) | -0.224 (0.335) | 0.244** (0.089) | 0.241** (0.088) | 0.189** (0.082) |
| Lone mother | 1.138** (0.264) | 0.658** (0.263) | 0.173 (0.260) | -0.473** (0.087) | -0.392** (0.088) | -0.288** (0.083) |
| Employed | | -1.559** (0.237) | -0.819** (0.243) | | 0.235** (0.068) | 0.049 (0.071) |
| Move into employment | | 0.359 (0.291) | -0.032 (0.278) | | -0.001 (0.078) | 0.063 (0.073) |
| Lose job | | 1.239** (0.421) | 0.846** (0.404) | | -0.228** (0.125) | -0.148 (0.118) |
| Ln equiv real income | | | -0.152 (0.116) | | | 0.047 (0.033) |
| Housing debt | | | 0.929* (0.524) | | | -0.243 (0.170) |
| Financial difficulties | | | 3.612** (0.242) | | | -0.944** (0.069) |

Reform is a dummy that takes the value 1 for a lone mother in the post-reform period (1999 onwards)
All regressions include controls for age and a common post-reform effect
In the OLS regressions the standard errors are adjusted for clustering

Figure 4.1 compares the path of GHQ score around transition into lone motherhood before and after the reform (for people moving into lone motherhood from being in a relationship). This shows that the improvement in mental health seems mainly to come during the first year of entry into lone motherhood (this is consistent with the other evidence showing far less of an employment and income penalty in the first year of lone motherhood in the post-reform period). There is also evidence of improved levels of mental health in the year prior to separation.

The average GHQ scores at each point before and after separation are calculated over a different sample at each point. To control for composition effects, Table 4.3 shows the results of a fixed effects regression including dummies for the three periods prior to separation and the first year of lone motherhood. All are interacted with a dummy for the post-reform period. The reform term therefore picks up the average change in well-being among lone mothers after the first year, compared to an earlier time in the relationship (four or more years prior to separation). The results confirm that most of the improvement in well-being among lone mothers is concentrated in the first period after separation and that is an improvement in the year prior to separation. This could potentially be explained either by an improvement in employment and financial circumstances among those who go on to become lone parents, or by people exiting relationships at a less unhappy (earlier) point. Both explanations are consistent with the results on couples in Francesoni et al (2007).

Figure 4.1: Lead-lag analysis – Lone motherhood and mental well-being, before and after the reform

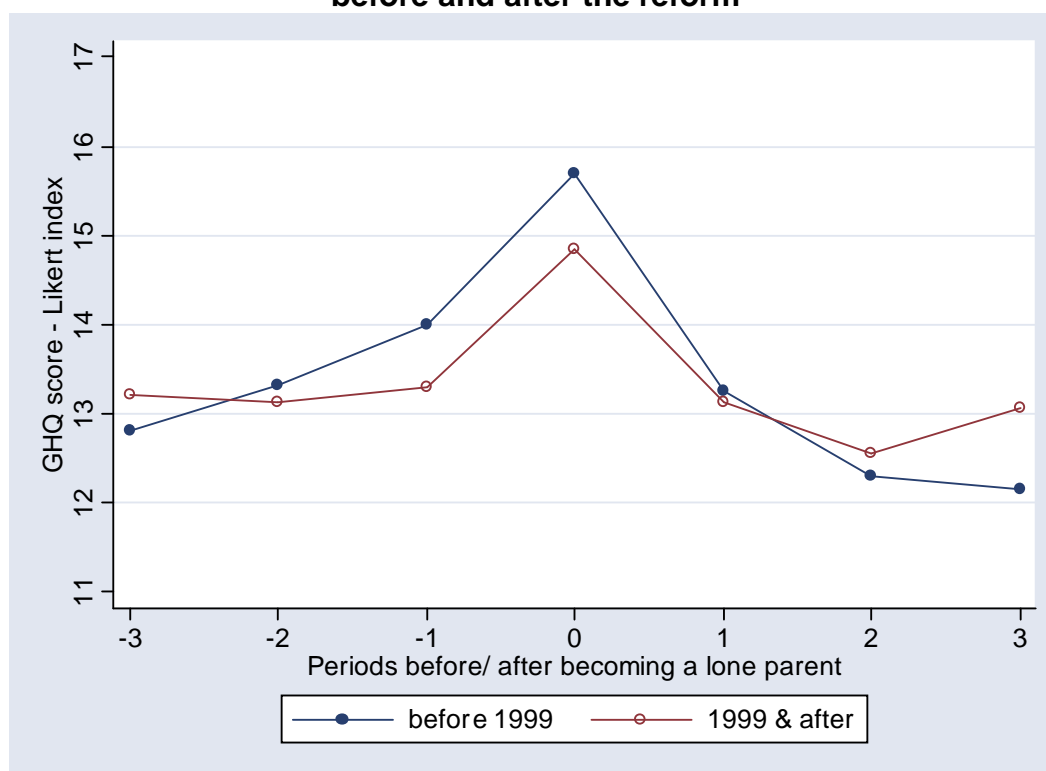


Table 4.3: Regression results

Dependent variable = GHQ score, Likert index (0 – 36)

Fixed effects estimation

| | | |
|---------------------------------|---------------------------------|------------|
| Reform | -0.2441 | (0.2672) |
| Lone mother | 0.4743 | (0.2385)** |
| First period of lone motherhood | 3.3855 | (0.4115)** |
| First period * post-reform | -1.0373 | (0.6127)* |
| One period before separation | 2.1500 | (0.3709)** |
| One period * post-reform | -0.9394 | (0.5690)* |
| Two periods before separation | 1.4370 | (0.3752)** |
| Two periods * post-reform | -0.6549 | (0.6173) |
| Three periods before separation | 1.0154 | (0.3928)** |
| Three periods * post-reform | -0.5169 | (0.6948) |
| Controls | Age + common post-reform effect | |

V. Child Outcomes

Numerous studies have suggested that children of lone parents do worse on a range of cognitive and mental health outcomes than those brought up by two parents. Here we consider whether child outcomes have improved for those in lone parent families since policy reform, looking in particular at the affect of rising employment, incomes and reduced

maternal mental stress on the well-being of 11 to 15 year olds. While children growing up in lone parent families do less well on average than those in intact families (see for example Haveman and Wolfe 1995 for a review of the consequences of divorce) a number of studies suggest that these differences can almost entirely be explained by the loss of income rather than the absence of a father per se (Walker and Zhu 2005). Since 1999 however the loss of fathers income has increasingly been substituted by state support, particularly were lone mothers work. Rising employment and increased financial support could therefore be expected to have a direct impact on raising child welfare. While we look only at youth outcomes, there is evidence to suggest that these may show smaller changes than for younger children. Duncan and Chase-Lansdale (2001) find that in the US younger children appear to have benefited most from welfare reform, while there is less evidence that reform has been beneficial for adolescents with there being some evidence of increased school problems and risky behaviour. Grogger and Karoly (2007, this volume) find, similarly, that welfare reform has been of greatest benefit to younger children, and that these gains operated primarily through increasing family income and greater use of centre based childcare.

A number of UK studies have looked at the effect of policy reforms on child poverty (see, for example, Brewer et al 2003) but few have examined the impact of policy on wider measures of child well-being. Here we examine the effect (if any) of policy change on a range of youth outcomes: self-esteem, (un)happiness, children's relationships with their mother, risk taking behaviour and aspirations. Data is taken from the BHPS youth files (collected from the 4th wave of the survey, since 1994, from youths aged 11 to 15) and matched to data from the adult and household files.

In order to assess the effect of reform on self-esteem and happiness we focus only on those questions which are asked over our pre- and post-reform periods. These scores range from 0 (strongly disagree) to 3 (strongly agree) and the mean scores are reported in Table 5.1, with a lower score indicating higher self-esteem. Children in lone parent families see improvements for each of these indicators in the post reform period. While there was also some improvement in some of the self-esteem indicators for children living in two parent families, the improvements for those with lone parents were significantly larger and meant that in the post reform period the gap in self-esteem scores between children in lone-parent and couple

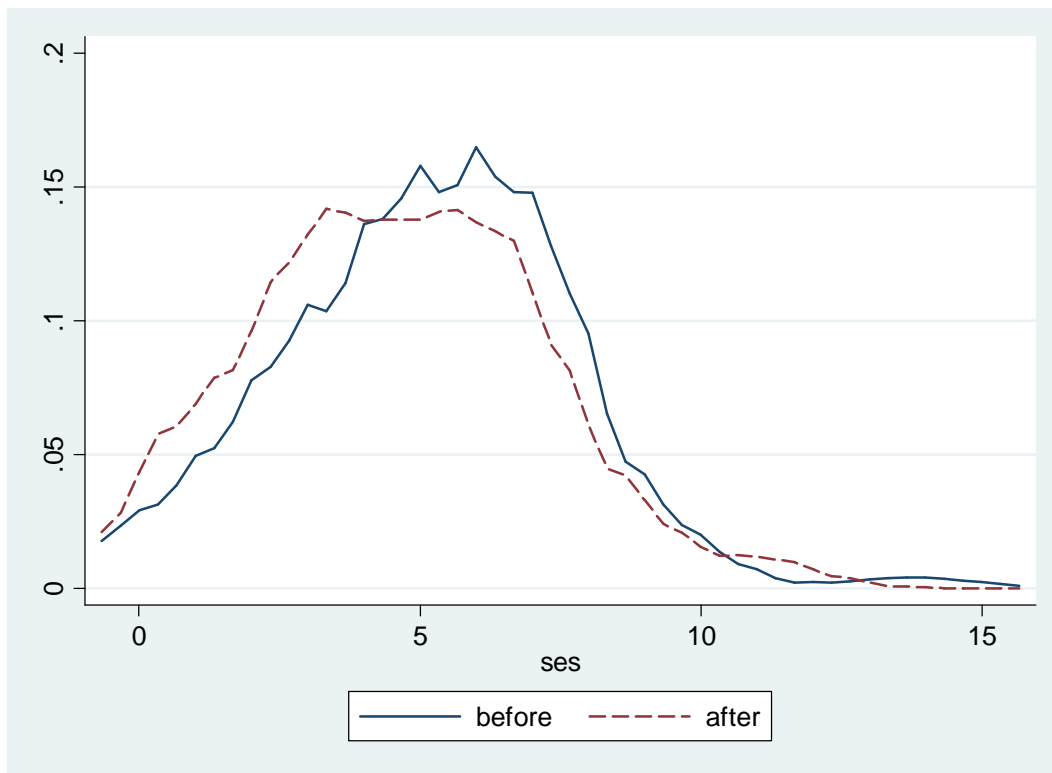
families virtually disappeared. We also construct an overall “self-esteem score” which is the sum of the scores of the five items¹³. This variable ranges from 0 to 15, again with a lower score indicating higher self-esteem. The distribution of this score, pre and post reform, is shown for lone parents in the kernel density estimates in Figure 5.1. This shows a clear leftward shift over the period indicating improved self-esteem across the distribution. So there is clear evidence of improved self-esteem around the reforms for children of lone parents which are significantly larger than those observed for children in couple families. Given that the reforms might, if anything, improve scores among children in couples then these effects will be biased downwards. Hence a reasonable conclusion is that the reforms have raised child self-esteem in lone parent families.

Table 5.1: Youth Scores for Low Self-Esteem, by Family Type before and after Welfare Reform (Mean Scores)

| | Lone Parent Families | | | Couple Families | | | Diff-in-diff |
|--|----------------------|-----------------|--------------------|-----------------|-----------------|--------------------|-------------------|
| | Before | After | Diff | Before | After | Diff | |
| Low Self Esteem (note: high scores indicate lower self –esteem) | | | | | | | |
| Coding: 0=strongly disagree, 1= disagree, 2= agree, 3=strongly agree | | | | | | | |
| # coding reversed | | | | | | | |
| At times I feel I am no good at all | 1.228 (.040) | 1.098 (.032) | -.130** (0.052) | 1.063 (.014) | 1.063 (.017) | -.000 (.022) | -.130** (.055) |
| I certainly feel useless at times | 1.377 (.038) | 1.368 (.033) | -.009 (.051) | 1.279 (.017) | 1.287 (.014) | .009 (.022) | -.018 (.055) |
| I am inclined to feel I am a failure | .772 (.037) | .649 (.027) | -.124** (.045) | .628 (.015) | .588 (.012) | -.041** (.019) | -.083* (.047) |
| I feel I have a number good qualities [#] | .874 (.028) | .787 (.022) | -.088** (.035) | .869 (.011) | .773 (.009) | -.096** (.014) | +.008 (.037) |
| I am a likeable person [#] | .903 (.026) | .768 (.020) | -.134** (.033) | .874 (.009) | .791 (.009) | -.083** (.014) | -.051* (.035) |
| Self-Esteem Score (0-15; 5 items) | 5.162 (.116) | 4.654 (.093) | -0.508** (.149) | 4.705 (.051) | 4.488 (.041) | -0.217** (.065) | -0.291* (.161) |
| **significant at 1% level; * denotes significance at 5% level Standard errors in parentheses. | | | | | | | |

¹³ Principal component analysis suggests that all components should be included in constructing the index.

Figure 5.1: Self-Esteem (SES) Score: Youths aged 11-15 in Lone Parent Families before and after Welfare Reform



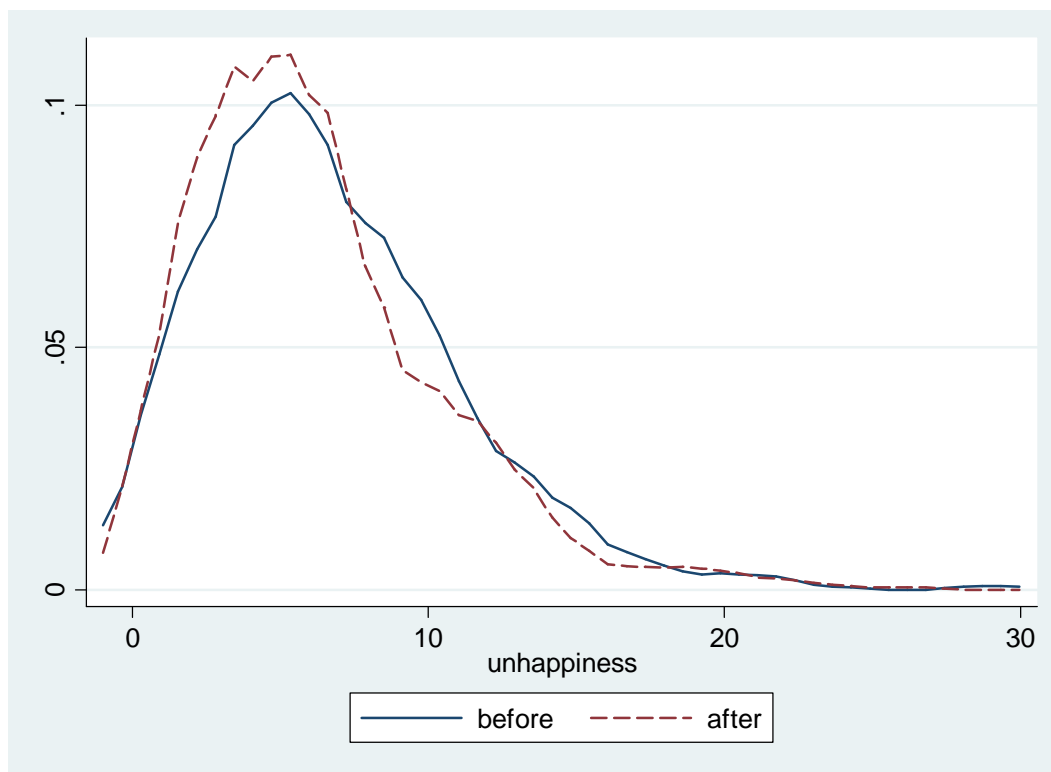
A second indicator of youth well-being is self-reported measures of unhappiness. Again we only look at indicators recorded in both our before and after periods. For each of these variables the unhappiness score ranges from 0 (completely happy) to 6 (completely unhappy) and again we construct an overall unhappiness score, which is the sum of our five indicators, which may take values ranging from 0 to 30. Increases in the score again indicate greater unhappiness. Table 5.2 shows an improvement in the overall happiness score for children in lone parent families subsequent to welfare reform, and there is some decline in the gap between children in lone parent and two parent families. However the improvement in this score is small and some of the individual indicators show a rise. Kernel density estimates of the overall happiness score are shown for the pre and post reform period for lone parents in Figure 5.2. Again a leftward shift in the distribution is seen, with improvements particularly for the most unhappy.

Table 5.2: Youth Unhappiness Scores by Family Type before and after Welfare Reform (Mean Scores)

| | Lone Parent | | | Couples | | | diff-in-diff |
|---|------------------------|------------------------|-------------------------|------------------------|------------------------|------------------------|-------------------------|
| | Before | After | Diff | Before | After | Diff | |
| Happiness (0=completely happy, 3=neither happy or unhappy; 6=completely unhappy) | | | | | | | |
| Feel about your school work | 1.848 (.063) | 1.815 (.050) | -.034 (.082) | 1.596 (.024) | 1.656 (.021) | .061* (.032) | +.095 (.081) |
| Feel about your family? | .945 (.058) | .734 (.039) | -.211** (.068) | .707 (.022) | .641 (.017) | -.066** (.028) | -.145** (.069) |
| Feel about your life as a whole? | 1.312 (.064) | 1.270 (.047) | -.041 (.077) | 1.099 (.025) | 1.158 (.021) | .059* (.032) | -.100* (.080) |
| Feel about your appearance? | 1.755 (.065) | 1.728 (.049) | -.027 (.081) | 1.659 (.017) | 1.686 (.022) | .027 (.035) | -.054 (.086) |
| Feel about your friends? | .829 (.044) | .695 (.034) | -.134** (.056) | .844 (.021) | .703 (.016) | -.141** (.026) | +.007 (.063) |
| Score (0-30; 5 items) | 6.702 (.199) | 6.224 (.150) | -.477* (.247) | 5.906 (.082) | 5.845 (.065) | -.061 (.104) | -.416* (.258) |

**significant at 1% level; * denotes significance at 5% level
Standard errors in parentheses.

Figure 5.2: Youths in Lone Parent Families aged 11-15 Unhappiness Score before and after reform



The additional measures of youth wellbeing examined are the relationship of young people with their mothers, and measures of risk taking behaviour and school leaving intentions. Data on mean scores and changes over time are reported in Table 5.3. This suggests that young peoples' relationship with their mother exhibits greater stress in lone parent families, with greater numbers reporting that they argue with their mothers every day or hardly ever talk to their mothers. Simple difference-in-difference estimates (final column) suggest there have been marked improvements in the post-reform period and this may be an important transmission mechanism for youth behaviour.

Table 5.3: Relationship with Mother, Risky Behaviour and School Intentions in Lone Parent and Two Parent Families before and after Welfare Reform

| | Lone Parent | | | Couples | | | Diff-in-diff |
|--|-----------------|-----------------|-------------------|-----------------|-----------------|-------------------|-------------------|
| | Before | After | Difference | Before | After | Difference | |
| Relationship with Mother | | | | | | | |
| Hardly ever talk to mother | 0.380 (.026) | 0.315 (.017) | -.0648* (.030) | 0.265 (.010) | 0.260 (.007) | -.005 (.012) | -.059* (.031) |
| Argue with mother every day | 0.159 (.019) | 0.140 (.012) | -.019 (.023) | 0.089 (.007) | 0.113 (.005) | .024** (.009) | -.043** (.022) |
| “Risky” behaviour and School Staying on Intention | | | | | | | |
| Play truant | 0.380 (.026) | 0.316 (.017) | -.064** (.030) | 0.265 (.010) | 0.260 (.007) | -.005 (.013) | -.059* (.031) |
| Smoked in last week | 0.195 (.021) | 0.135 (.013) | -.060** (.023) | 0.123 (.008) | 0.103 (.005) | -.021** (.009) | -.039* (.023) |
| Expelled / Suspended from School | 0.084 (.026) | 0.093 (.015) | .009 (.030) | 0.038 (.008) | 0.035 (.004) | -.003 (.009) | .012 (.024) |
| Fought with someone in last month | 0.297 (.024) | 0.299 (.016) | .002 (.029) | 0.306 (.011) | 0.294 (.007) | -.012 (.013) | .014 (.032) |
| Intend to leave School at 16 | 0.189 (.024) | 0.138 (.014) | -.051** (.026) | 0.136 (.009) | 0.120 (.006) | -.016* (.010) | -.035* (.026) |

There is some evidence from the US that welfare reforms encouraging lone mothers to work have had an adverse effect on adolescents risk-taking behaviour, possibly because parents are less able to monitor their behaviour. There is however little evidence of this in the raw data for the UK, in the simple difference-in-difference estimates there is little change in school

expulsions or fighting while there are large declines in truancy, smoking and in the intention to leave school at the age of 16, and a decline in the gap between children in lone and two parent families.

The US literature on children and welfare reform identifies three key pathways by which children may be affected; maternal employment, family structure and family income (Duncan and Chase-Lansdale, 2001). We do not explore family structure here because the earlier results suggest little policy impact on family structure. Moreover Grogger and Karoly (2005, this volume) find that the effect of welfare reform on family structure has little effect on child outcomes. Mothers' employment is expected to have an effect on child well-being because it is thought to "enhance mothers' self-esteem" and have an effect on "the discipline and structure that work routines, in contrast to welfare dependence, impose on family life". Resources are also expected to matter, and raised income levels subsequent to reform, both for those in and out of work, may be expected to have a positive effect. Duncan and Chase-Lansdale (2001) highlight that reduced supervision, through increased maternal employment, has detrimental effects on teenage outcomes such as smoking, drinking and crime. These results are supported by the findings reported for adolescents in Grogger and Karoly (2005)

Differences in self esteem, happiness and risk taking behaviour between children in lone parent and couple families may partly result from differences in child or parent characteristics. Similarly any improvement in their relative well-being could be a result of changes in these characteristics rather than policy. We run simple regression and probit models on a range of outcomes variables to isolate the effect of lone parenthood on youth well-being including a dummy variable for being a lone parent after 1999 to assess whether reform has had a significant effect. Initial analyses of the data suggest child gender has an important impact on our outcome variables and, as boys and girls may feel the impact of lone parenthood differently, we run separate regressions for boys and girls.

Table 5.4 reports results for self-esteem. Each of the models contain controls for mothers human capital (age at birth of child, and education), whether there are other siblings present in the family, a common post reform time effect, and youth age. In addition to these variables controls are also included for living in a lone-parent family, a welfare reform dummy variable

(equal to one for lone parents after 1999) and a set of control for maternal employment, working full-time, log of real equivalised real income and a dummy variable for maternal depression. The results for boys and girls self-esteem are strikingly different; for girls lone parenthood has no impact on our measure of self-esteem and the “reform” variable, unsurprisingly, therefore also shows no effect. Maternal employment and depression are the only variables which have a significant effect on self-esteem for girls, with mothers employment associated with higher levels of self-esteem, perhaps because of the positive role model provided, while maternal depression has a significant and detrimental impact. For boys however living in a lone parent family is highly significant and associated with a low self-esteem score in the pre period. Welfare reform has however had an impact on boys’ self-esteem with the “reform” coefficient being large enough to suggest that since 1999 the negative impact of lone parenthood on self-esteem has disappeared. Employment is significant for boys too, with maternal employment again being associated with higher self-esteem, although maternal depression and income have no effect. The results from the happiness regression show similar gender differences, with lone parenthood having no effect on the happiness of girls. Only maternal depression has a large and significant effect on girls overall happiness. Again however family structure matters for boys, with boys in lone parent families reporting much lower levels of overall happiness. The coefficient on reform suggests some improvement in the happiness of boys but is not significant at the 5-percent level. Neither income nor employment are important to boys or girls overall happiness, although having a full-time employed mother makes boys less happy. A probit model was also estimated with “unhappiness” as the dependent variable¹⁴ with very similar results. These differences in the effect of lone parenthood on happiness between boys and girls are in line with the results of Walker and Zhu (2005). Fixed effect models were also run, and these models suggested that lone parenthood had no significant effect on self-esteem or happiness. However the relatively short nature of the panel means that these results should be interpreted with caution as any negative effects of parental separation are likely to have had an impact on children prior to actual separation. In these models, maternal employment is associated with

¹⁴ Unhappiness being recorded as 1 if respondents answered that they felt unhappy with their life as a whole and zero otherwise.

higher self-esteem for girls while boys continue to be found to be less happy if their mothers are employed full-time.

Table 5.4: OLS Difference-in-Difference Estimates of the Effects of Welfare Reforms on Youth Self-Esteem and Unhappiness

| | Boys | | | | Girls | | | |
|----------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 1. Low Self- Esteem | | | | | | | | |
| Reform | -0.744 (0.314)* | -0.693 (0.320)* | -0.690 (0.321)* | -0.688 (0.321)* | -0.066 (0.300) | -0.040 (0.297) | -0.025 (0.298) | -0.037 (0.292) |
| Lone Parent | 0.722 (0.270)** | 0.650 (0.275)* | 0.632 (0.282)* | 0.630 (0.283)* | 0.226 (0.237) | 0.159 (0.235) | 0.116 (0.245) | 0.102 (0.241) |
| Post-1998 Dummy Variable | 0.001 (0.119) | -0.004 (0.118) | -0.003 (0.118) | -0.004 (0.118) | -0.450 (0.126)** | -0.463 (0.125)** | -0.458 (0.126)** | -0.438 (0.126)** |
| Employed | | -0.431 (0.140)** | -0.421 (0.143)** | -0.403 (0.144)** | | -0.385 (0.139)** | -0.364 (0.143)* | -0.317 (0.142)* |
| Full time | | 0.159 (0.133) | 0.163 (0.134) | 0.169 (0.135) | | 0.049 (0.139) | 0.062 (0.140) | 0.058 (0.138) |
| Log Y | | | -0.028 (0.103) | -0.014 (0.104) | | | -0.072 (0.121) | -0.054 (0.120) |
| Mother Depressed | | | | 0.136 (0.114) | | | | 0.573 (0.111)** |
| 2. Unhappiness | | | | | | | | |
| Reform | -0.793 (0.526) | -0.738 (0.526) | -0.750 (0.525) | -0.746 (0.528) | -0.113 (0.504) | -0.100 (0.504) | -0.122 (0.504) | -0.133 (0.503) |
| Lone Parent | 1.171 (0.441)** | 1.116 (0.442)* | 1.180 (0.446)** | 1.161 (0.451)* | 0.404 (0.421) | 0.335 (0.422) | 0.358 (0.438) | 0.359 (0.437) |
| Post-1998 Dummy Variable | 0.264 (0.180) | 0.264 (0.180) | 0.256 (0.181) | 0.228 (0.182) | 0.032 (0.186) | 0.029 (0.233) | 0.030 (0.228) | 0.028 (0.266) |
| Employed | | -0.324 (0.226) | -0.362 (0.230) | -0.337 (0.232) | | -0.402 (0.239) | -0.408 (0.240) | -0.358 (0.241) |
| Full time | | 0.475 (0.208)* | 0.457 (0.208)* | 0.461 (0.209)* | | -0.078 (0.244) | -0.085 (0.249) | -0.102 (0.248) |
| Log Y | | | 0.104 (0.167) | 0.096 (0.169) | | | 0.036 (0.193) | 0.083 (0.194) |
| Mother Depressed | | | | 0.259 (0.175) | | | | 0.641 (0.200)** |

Notes: 1. Models include controls for youth age, whether other siblings are in the family and controls for mothers being under 20 or over 30 at birth and mothers education. Income is log equivalised real income, depressed is GHQ12 score >3.

2. N=3174 boys, 3152 girls SES regressions; N=3241 boys, 3184 girls in happiness regressions.

3. Robust standard errors in parentheses

4. * significant at 5%; ** significant at 1%

The results for children presented here suggest that the effect of lone parent-hood on mental health outcomes vary greatly between boys and girls. For girls, lone parenthood has no

significant effect on any of our measured outcomes while for boys living in a lone parent family matters. The effect of policy reform on boys and girls unsurprisingly has therefore differed too. For girls lone parenthood has no impact on self-esteem and the “reform” variable, unsurprisingly, shows no effect. For boys on the other hand living in a lone parent family was significantly associated with poorer self-esteem in the period prior to policy reform. Policy has however had a significant impact on boys’ self-esteem, with the “reform” coefficient offsetting fully the positive coefficient on lone parenthood. Two other factors are of crucial importance: maternal employment and depression. To the extent that policy reforms have raised maternal employment children’s outcomes will have improved. Unlike in the US, the majority of lone parents in the UK work part-time and policies have broadly encouraged this. It is notable however that raising working hours among lone parents may be detrimental; boys in particular are less happy and more likely to engage in risky behaviour when their mothers work full-time. Maternal depression is another key factor influencing youth outcomes; children, and in particular girls, with depressed mothers do poorly and the incidence of depression remains disproportionately high among lone mothers.

VII. Conclusion

Lone parents are bringing up one-in-four children in the UK. Until recently these families have suffered from extremely high rates of poverty and joblessness. Since 1998 the Labour government has introduced a set of reforms aimed at reducing joblessness and poverty in lone parent families by raising welfare payments to those in and out-of-work, improving the financial rewards to working, and introducing a more pro-active welfare system.

The assessment of this policy reform agenda has focused to date mainly on lone mothers’ employment and poverty. In this paper we extend this to include at the impact on the numbers of lone parent families and a range of outcomes for mothers and children. We cover mothers’ mental well-being and health, child outcomes and relationship patterns. As well as representing the basic facts about employment incomes and hours of work.

Our results show there was no significant impact of these policy reforms on family structure. Difference-in-difference estimation techniques suggest that these policies have raised

employment rates of lone parents by around 5 percentage points while increasing hours of work among those already in work. The increase in the number of hours worked has been a consequence of lone parents shifting from short hours to over 16-hours a week in order to become eligible for the increased tax credits. We estimate that the proportion of lone parents working at least 16 hours a week has risen by 7 percentage points over the last four years as a result of the policy changes, meaning that an additional 120,000 lone parents are now working 16+ hours a week.

Mothers malaise scores are, unsurprisingly, very high on family break up but they tend to recover after around 2 years. WFTC is found to reduce the spike of high malaise co-incident with the transition into lone parenthood but to have no longer term effects. This decline in malaise is strongly associated with improved financial indicators. Adolescent children in lone parents families report lower self-esteem, more unhappiness, lower quality relationships with the mother and a number of worse or risky behaviours. Difference-in-difference techniques suggest a marked narrowing of these gaps since WFTC. The magnitude of these changes are quite large, half of the gap in self-esteem and unhappiness scores and in truancy, smoking and planning to leave school at age 16 are eliminated after the policy reforms. This strongly suggests that the increases in incomes and employment associated with the reforms have profoundly changed the quality of life children in lone parent families.

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