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Cross-National Research
Using Contemporary
Birth Cohort Studies:
A Look at Early Maternal
Employment in the
United Kingdom and
United States

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December 2008

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Bionotes

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The Early Childhood Longitudinal Study—Birth is being conducted by US National Center for Education Statistics (NCES) and the Institute of Education Sciences, in collaboration with numerous federal health, education, and human service agencies (including the National Center for Health Statistics, the National Institutes of Health, the US Department of Agriculture Economic Research Service, the Administration on Children, Youth and Families, the Maternal and Child Health Bureau, the Office of the Assistant Secretary for Planning and Evaluation, the Centers for Disease Control and Prevention and the Office of Minority Health, the Office of Special Education Programs, and the Office of Indian Education). Data are managed and housed at the National Center for Educational Statistics.

Abstract

The recent establishment of two national longitudinal studies of contemporary birth cohorts in the United Kingdom and United States creates a valuable opportunity for cross-national research on the early life experiences of young children and their families. This paper describes these new datasets and highlights the potential advantages and challenges of their combined use. To illustrate some of the issues involved in this type of research, we present the results of parallel analyses examining the patterns and predictors of British and American mothers' (re)entry into the labour force in the first 9 months post-birth. Similar to previous studies, we find that US mothers engage in paid work at much faster rates following the birth of a child than mothers in the UK. In both samples, mothers' human capital and other indicators of advantage predict higher rates (and earlier entries) of post-birth employment. However, within the subset of mothers most strongly attached to the labour force, i.e., those with recent employment experience, it is socioeconomic *disadvantage* that predicts sooner returns—but, only for US mothers. Lessons learned and directions for future research with these data are discussed.

Introduction

The utility of high-quality, national longitudinal data for understanding human development and informing social policy has been well-documented (e.g. Brooks-Gunn, Phelps, & Elder, 1991; Duncan, 1991; Hofferth, 2005). By providing detailed information about multiple aspects of children and families' lives over time, these studies can be used to identify proximal and distal influences on development, to trace the impact of life events and transitions, and to describe developmental trajectories. The sophisticated sampling designs and large sample sizes used in these studies enable more precise estimates and more generalizable findings than is possible with smaller-scale surveys. They also provide important opportunities for examining subgroup populations, identifying the antecedents and consequences of infrequent events, and using novel statistical techniques to approximate experimental conditions. Long used by researchers in economics, sociology, and political science, national panel studies have more recently become rich data sources for developmental psychologists and family scholars as well.

Several countries, including Australia, Canada, Denmark, the United Kingdom, and the United States, have recently initiated impressive efforts to assess the status of their youngest inhabitants, by tracking the health and development of children born in the new century. Our first purpose is to describe the design, strengths and limitations of two such studies—the Millennium Cohort Study in the UK and the Early Childhood Longitudinal Study-Birth Cohort in the US—and discuss how they might be used in tandem to understand contextual influences on the well-being of young children and their families. Second, as an illustrative case, we use these data to examine cross-national differences (and similarities) in the patterns and predictors of early maternal employment.

This paper is divided into four sections. We begin with a brief history of the use of national cohort studies for developmental research in the UK and US, noting the key factors that led to the establishment of the new studies. We then provide details about the MCS and ECLSB datasets, and discuss comparative research techniques. In the third section, we describe our study of the factors that predict whether mothers in the UK and US will engage in paid work in the first weeks, months or not at all during their children's first 9 months of life. The paper concludes with a discussion of lessons learned thus far, and new research that will be possible as more data from these studies become available.

1. National panel studies and developmental research in the UK and US

Few other countries have as long-standing or respected a tradition of national birth cohort studies as the United Kingdom; for more than 50 years, these types of data have been used to examine, among other things, the antecedent and consequences of education and employment, the predictors of health and anti-social behavior, and the underpinnings of social and economic inequality (Ferri, Bynner, & Wadsworth, 2003). The MRC National Survey of Health and Development (NSHD) of 1946, the National Child Development Study of 1958 (NCDS) and the British Cohort Study of 1970 (BCS70), have tracked the health and development of cohort members born in one week of each of these years. Findings from these studies have contributed not only to scientific understanding, but have influenced policy discussions and decisions as well. For example, research with the NCDS data linking mothers' prenatal smoking to infant mortality and low birth weight resulted in new health policies aimed at reducing women and infant's exposure to cigarette smoke (Butler, Goldstein, & Ross, 1971).

In the United States, the use of such data to learn about the lives of children is a relatively more recent development. Prior to the addition of children to the National Longitudinal Study of Youth (NLSY) in the 1970s, large-scale panel studies focused primarily on the economic and educational outcomes of youth and adults, and were used almost exclusively by economists, sociologists, and political scientists (Chase-Lansdale, Mott, Brooks-Gunn, & Phillips, 1991). Developmental psychologists and family scholars have traditionally relied on primary data collection with intensive investigation of a small and select sample of children or families. Many early national studies were ill-suited for addressing developmental questions because of their broad scope, reliance on single-item questions, and lack of repeated, micro-level measures of psychologically-oriented variables. Furthermore, until recently, developmental scholars have typically lacked training in the methods most appropriate for these types of data.

Several of the recommendations made in the 1990s for enhancing the potential of national studies were realized in the decade that followed. In the US, federal agencies and charitable foundations have made considerable investments in recent years to collect high-quality, longitudinal data on children and families, and to facilitate the use of these data by the scientific community. As a result, several large-scale panel studies focused specifically on children and adolescents have been initiated—these include the NICHD Study of Early Child Care and Youth Development, the Fragile Families and Child Well-Being Project, Panel Study of Income Dynamics Child Development Supplement, Welfare Reform and Children in Three Cities Study, and the National Study of Adolescent Health (for overview of these efforts, see Brooks-Gunn et al., 2000; Hofferth, 2005). In the UK, in addition to the four national birth cohort studies, the ESRC, various government departments and charities sponsor the collection of several large-scale panel studies which also focus on children and young people (e.g. Avon Longitudinal Study of Parents and Children, Young Person's Survey of the British Household Panel Survey, and Longitudinal Study of Young People in England).

2. Two new prospective studies of young children in the 21st Century

By the dawn of the new century, the trends described above along with increased interest in the earliest influences on development led to the establishment of two new national prospective studies, the Millennium Cohort Study (MCS) in the United Kingdom and the Early Childhood Longitudinal Study-Birth Cohort (ECLS-B) in the United States. Here, we describe the basic design and scope of these studies (summarized in Tables 1 and 2 respectively), and then highlight their shared strengths and distinguishing features.

2.1. The Millennium Cohort Study

The MCS is a nationally-representative sample of 18,818 children (within 18,552 families) who were born in the UK between September 2000 and January 2002, and were living in selected UK wards at the age of 9 months. The sample was drawn to over-represent those living in areas of high child poverty, areas with high concentrations of ethnic minorities, and the Celtic countries of the UK (i.e., Scotland, Wales, and Northern Ireland). The first sweep was undertaken when cohort members were 9 months old, with subsequent sweeps at ages 3, 5, and 7 years. Commissioned by the Economic and Social Research Council, whose public funding was supplemented by a consortium of government departments headed by the Office of National Statistics (ONS)—the MCS carries on the tradition of earlier British cohort studies by aiming to follow a sample of UK cohort members from birth through the life course. This continuity facilitates comparisons across several generations. At the same time, the MCS has several unique features (see Hansen, 2006).

The MCS is the first of the British cohort studies to over sample ethnic minorities and the disadvantaged, groups who have been more likely historically to attrite from samples. It is also the first to include Northern Ireland along with the countries covered as Great Britain. And, whilst prior studies sampled cohort members born within one week, the MCS samples those born across the entire year. As will be described in more detail below, one of the key strengths of the MCS is its comprehensive scope. Early childhood measures in prior cohort studies were largely health-related, and tended to be collected by health visitors shortly after a child's birth. In the MCS, professional fieldworkers with sampling and social survey experience use computer-aided interviews, direct child assessments, and interviewer observations to collect in-depth data on a wide range of developmental outcomes, family demographics, family process variables and multiple environmental contexts (e.g., neighborhood, child care). Particularly notable is the collection of previously unattained information from fathers regarding their involvement in children's lives. The initial sweep of the MCS occurred approximately 9 months after the child's birth (for additional details, see Shepherd, Smith, Joshi, & Dex, 2003; Dex & Joshi, 2005) and subsequent sweeps have taken place around age 3 and age 5 (when many enter primary school); a fourth survey is taking place during 2008, the children being now around 7 years of age.

2.2. The Early Childhood Longitudinal Study—Birth Cohort

The ECLSB has as its target population the nearly 4 million children born in the United States in 2001. Designed as a companion study to the ECLS-Kindergarten which gathers information about children's development and their environments from the time of school entry at age 5 or 6 (kindergarten) to approximately age 10 (fifth grade), the ECLSB provides new information about "the way America raises, nurtures, and prepares its children for school" (Flanagan & West, 2004, pg. 1). The study is being conducted jointly by the US National Center for Education Statistics (NCES) and the Institute of Education Sciences, in collaboration with numerous federal health, education, and human service agencies.

The ECLSB sample, drawn from birth certificates using a clustered, list frame sampling design, includes 10,688 children (in 9,859 families) born between January and December 2001. The first data collection occurred approximately 9 months after birth and subsequent surveys have been conducted at age 2, age 4, and age 5 (school entry for most). An additional survey is planned for 2007-08 to capture the school transition for the subsample of children who will begin kindergarten at age 6. The ECLSB was designed to over sample several populations of interest—children with low or very low birth weight, twins, and children from American Indian/Native Alaskan, Asian/ Pacific Islander, and Chinese heritage. Children born to mothers younger than 15 years of age, and those who died or were adopted prior to the 9-month data collection were excluded from the study. Through in-home interviews, direct child assessments, data records, teacher surveys and child care observations, the ECLSB collects extensive data on children's well being and experiences in multiple environments. Similar to the MCS, the ECLSB surveys resident and non-resident fathers about their child's development and their involvement in childrearing.

2.3. Common strengths and limitations

The MCS and ECLSB share several features which distinguish them from earlier data collection efforts in their respective countries. First, both improve upon prior national studies by providing detailed information on the lives of infants, toddlers, and preschoolers. Substantial evidence has accumulated regarding the importance of the first five years of life as the foundation for later development (Chase-Lansdale & Votruba-Drzal, 2004; Shonkoff & Phillips, 2000); yet, this period has received only limited attention in nationally-representative panel studies. The MCS and ECLSB were designed specifically to gather detailed information about the conditions of early childhood, offering a prospective look at key experiences and transitions in the lives of families with young children (e.g., employment transitions, entry into child care and school). Multiple data collections from birth to age 5 years provide valuable information about trajectories of early development and greatly improve upon earlier studies with only one or two childhood assessments. One of the limitations of the ECLSB, however, is its duration; cohort children in the study will be followed only through their first year in formal school.

Second, in addition to their unique focus on very young children, the MCS and ECLSB are notable because of their comprehensiveness, providing detailed

information about multiple aspects of children's lives and their well-being. These efforts reflect a growing awareness among social scientists of (a) the joint influence of multiple biological, genetic and environmental factors, and (b) the interrelatedness of intellectual, social, emotional and physical development (Case, Lubotsky, & Paxson, 2002; Keating & Simonton, 2005). Although the scope of earlier British cohort studies (e.g. NCDS58 and BCS70) were expanded over time (i.e., in later sweeps) to assess multiple aspects of development, these surveys were originally designed to assess health outcomes and this remains the primary focus of their early childhood measures (Plewis, Calderwood, Hawkes, & Nathan, 2004).

A third significant contribution of the MCS and ECLSB is their explicit intention to gather information about subpopulations largely excluded from prior national studies either because of their relatively small numbers or their high attrition rates. These data will be valuable in examining the reliability and validity of measures across diverse groups; small numbers in other studies often preclude this type of analysis. National longitudinal data on the conditions of early childhood for diverse groups of children are imperative given the early origins of social and economic inequality. A substantial literature indicates that disparities in health, academic achievement, and wealth accumulation among different racial, ethnic and socioeconomic groups are present before children begin formal schooling at 5 or 6 years of age (Currie, 2005; Duncan & Magnuson, 2005), and often persist throughout life (Boyce & Keating, 2004; Brooks-Gunn, Duncan, & Rebelo Britto, 1999; Feinstein, 2003). Data from the MCS and ECLSB have the potential to elucidate some of the mechanisms underlying these socioeconomic gradients.

Lastly, we note that the MCS and ECLSB are superior to many prior studies because they rely on established, developmentally-informed measures of child functioning. The fact that these studies collect high-quality, longitudinal data for large samples of children makes them well-suited for the sophisticated modeling techniques (e.g., fixed-effects models, propensity scores, linear growth models, and instrumental variables estimation) that can strengthen causal claims made with observational data. These methods, though common in economics, are just beginning to be used by developmental scientists, in part because psychological studies often rely on small, non-representative samples. Studies such as the MCS and ECLSB present wonderful opportunities to evaluate complex developmental questions with rigorous methods.

2.4. Potential benefits and challenges of a cross-national approach

Independently, the MCS and ECLSB study clearly stand to make important contributions to both social science and public policy. Central to this paper, however, is the question of what might be learned from comparative research looking across these two datasets (and others like them), and what benefits and challenges this approach entails. Hantrais & Mangen (1999) highlight both the promise and pitfalls of this method and provide several relevant points for the current discussion.

Three general approaches to cross-national research, distinguished by their treatment of cultural context, have been described in the literature (Hantrais, 1999). A

universalistic approach considers social phenomena without regard for the societal contexts in which they occur. This culture-free method has fallen largely out of favor in the field, ceding to approaches that elevate the importance of contextualizing human experiences. In a culturalist approach, social reality can be understood only within its specific context. Research in this vein tends to emphasize the difficulty of making valid cross-national comparisons.

A third method used in comparative research, the societal approach, makes explicit use of contextual knowledge to explain observed differences and similarities between cultures. According to Hantrais (1999), this last approach is preferable if the research goal is truly to understand how and why social phenomena vary across societies. Our own approach to comparing data from the MCS and ECLSB falls into this last category. Recognizing the potential influence of culture raises significant issues for cross-national research with regards to conceptual, measurement, and interpretive equivalence (Hantrais, 1999). Given that both are Anglo, Western, and industrialized, UK-US comparisons may involve fewer issues of equivalency. At the same time, however, the cultural similarity of these two countries limits the extent to which findings can be generalized to other cultures.

One hazard of cross-national comparative research is that an emphasis of international differences may overshadow or obscure important intra-national variation (Hantrais, 1999). In the United States, for example, the last decade has been a time of tremendous devolution in policymaking from the federal level to states and localities. This trend coupled with rapid changes in the demographics of the population has significantly increased the heterogeneity of families' experiences within the US. The presence of inter- and intra- national variation adds to the complexity of comparative research, but for some analyses, this variation may be an asset. For example, naturally occurring variations in policy can be used to estimate the effects of policy (and policy-induced changes in family functioning) on development.

Our limited focus here on data from two nations has both advantages and disadvantages. The fewer number of countries included in a comparative study, the easier the task for researchers to both develop an understanding of the relevant contextual details and to include these details analytically (Rose, 1991). At the same time, a sample of two nations is insufficient for making strong conclusions about the sources of international differences. Nonetheless, the complexities of the comparative method described above are likely to multiply quickly with the inclusion of additional countries (Hantrais, 1999).

3. The current study: A cross-national comparison of early maternal employment

Many households in the UK and US now rely heavily—and sometimes exclusively—on women’s earnings. Over the last several decades, women in developed countries have made tremendous gains in terms of their educational attainment and presence within the formal labour market. Expanded educational and occupational opportunities for women, along with a decline in men’s wages and employment opportunities, and an increase in the number of households headed by lone mothers have led to substantial growth in women’s labour force participation. The most dramatic changes have occurred among mothers of young children, a group that has been traditionally less likely to work outside the home. In the UK, employment among mothers of children younger than age 5 rose from 27 percent in 1973 to 57 percent by 2001 (OPCS, 1993; Dench et al., 2002). Similarly, between 1970 and 2000, employment rates among US mothers with preschool-aged children grew from 27 to 60 percent (Casper & Bianchi, 2002).

The steadily upward trends in women’s labour force participation over the last half century have generated a tremendous amount of research aimed at understanding its implications for women, children, families, and society. Employment in the first year or two following the birth of a child has been a topic of particular interest, and has been examined from two distinct standpoints—the first, being focused on the effects of childbearing on women’s employment trajectories, and the second, being focused on the effects of maternal employment on children’s developmental trajectories. Key in both of these literatures (reviewed briefly below) have been questions about whether—and in what ways—mothers’ post-birth employment matters and what factors influence the timing of this employment.

In the current study, we use data from the MCS and ECLSB to investigate the patterns and predictors of early maternal employment for national samples of children born in 2000-01 in the United Kingdom and United States. Specifically, we examine how well a host of individual-, family-, and community- level factors predict whether mothers engage in paid work during their infants’ first nine months of life and the timing of when this employment commences. Our intent in presenting this analysis is to illustrate some of the general issues involved in doing cross-national work with cohort studies, and to provide a starting point for considerations of how a comparative approach might be applied to the MCS and ECLSB. After briefly reviewing the relevant literatures, we elaborate on some key similarities—and more importantly—differences in the policy contexts facing new mothers in the two countries. Although we do not formally include policy variables in the current analysis, we consider cross-national policy variation to be an important backdrop to this study and a promising area for future research.

3.1. Background

3.1.1 Early maternal employment in the UK and US

As noted above, the rise in maternal employment rates over the last few decades has been particularly steep among women with very young children. During the 1970s,

approximately 20 percent of UK mothers with infants (younger than age 1) were in the labour market; these rates doubled during the early 1990s (Waldfogel, Higuchi, & Abe, 1999) and by 2001, 49 percent were employed by the time their child was 9 months old (Dex & Joshi, 2005). Likewise, whereas 31 percent of US mothers of infants were employed in 1975, by the mid-1990s, this figure had risen to 59 percent (Hoffman & Youngblade, 1999). Whilst mothers in the UK and US have a fairly equal likelihood of engaging in paid work during their child's first year, UK mothers tend to delay employment longer after childbirth than mothers in the US, and are more likely to work part-time once they return (Berger et al., 2004).

Early maternal employment has been of interest to social scientists because of its long-term implications for women's employment and economic outcomes, as well as for children's development. With respect to the former, substantial evidence exists that the presence of young children in a household significantly weakens women's attachment to the labour market (e.g., Joshi, 1984; Blau & Ferber, 1992; Dex et al., 1998). The interruption or reduction in labour force participation that often accompanies the arrival of children can have long-term effects on women's career trajectories—in part, because time away from the labour market hinders skill development and the accumulation of experience, thereby lowering a workers' overall earning potential (Bowlus, 1997; Felmler, 1995; Joshi et al., 1996). The “motherhood pay gap” that women with children experience in comparison to childless women has been well-documented (see review by Anderson, Binder, & Krause, 2003); however, evidence from British and American studies suggests that paid maternity leave benefits have the potential to offset this gap (Waldfogel, 1998). Along these lines, Joshi and Paci (1998) find that British mothers who return before or shortly after the expiration of maternity leave (approximately 7 months) do not appear to suffer a long-term wage penalty. In the US, where leave benefits are minimal compared to other Western nations, the birth of a child is one of the leading causes of job turnover among women, particularly for those with low-income (Earle, 2002). According to US census data from the late 1990s, approximately 20 percent of women working full-time during their pregnancy did not return to employment within a year of giving birth. Moreover, nearly 25 percent of those who returned within 12 months had changed employers (Overturf Johnson & Downs, 2005).

A second related literature has alternatively focused on questions of whether, and in what ways, early maternal employment affects child development. Since the 1950s, concerns have been raised that mothers' time and efforts in the paid labour market might interfere with childrearing and thereby pose risks to children. These concerns—and the spirited debate about whether they are justified—have been most intense for very young children (Melhuish, 2004). Despite ongoing debate, there is a consensus emerging in the scientific literature that early maternal employment—particularly when it is full time and during the infants' first year—may have negative consequences for children. Several recent studies with US samples, using a variety of methodological approaches, find that early maternal employment is associated with poorer outcomes for young children in the domains of health (Berger, Hill & Waldfogel, 2005; Ruhm, 2000; Tanaka, 2005), cognitive development (Brooks-Gunn, Han, & Waldfogel, 2002; Ruhm, 2004; Waldfogel, Han, & Brooks-Gunn, 2002), and social behavior (Kamerman, 2000; Waldfogel et al., 2002). Fairly similar results emerge from research conducted in the United Kingdom (Ermisch & Francesoni, 2000; Gregg, Washbrook, Propper, & Burgess, 2005; Verropoulou & Joshi, 2007);

however, effect sizes generally tend to be smaller than in US samples, perhaps because British mothers' employment has tended to be part-time when children are young (Dex, 1992). Importantly, the adverse effects of early maternal employment appear to be moderated by such factors as child care quality, parental characteristics, and family income (see reviews in Shonkoff & Phillips, 2000; Smolensky & Gootman, 2003). For instance, Gregg et al. (2005) find that infants of British mothers working full-time in the first 18 months post-birth fare better in formal (vs. informal) care settings.

3.1.2. Predictors of early maternal employment

Studies of women's post-birth employment decisions have been guided primarily by an economic model which posits that such decisions will reflect the relative costs and benefits of mothers allocating time to either the labour market or home environment (e.g., Heckman, 1993; Killingsworth, 1983). A range of individual-, family-, household-, community-, and macro- level factors have been considered within this framework. Not surprisingly, one of the strongest overall predictors of whether new mothers will engage in paid work is whether they were employed prior to the birth, especially during pregnancy (O'Connell, 1990).

Market wages and earning potential are among the chief predictors of women's (and men's) labour supply, and these factors continue to exert influence following the birth of a child. Mothers with higher wages and human capital are more likely than those with less earning potential to engage in paid work while their children are young (Lundberg & Rose, 2000), presumably because they receive a greater return for their time in the labour market. Along these lines, older mothers and those with higher levels of education are more likely to be in the labour force than very young mothers and those with low education levels—who may have limited work experience and, in a sense, have less to lose (in terms of earnings and advancement opportunities) from time spent out of the labour force (Desai & Waite, 1991; Marshall, 1999). At the same time, limited resources may create pressures for less advantaged mothers to engage in paid work soon after giving birth, especially for women with few or no alternative sources of income (Cohen & Bianchi, 1999). Historically, marriage and access to other income sources have depressed women's labour force participation; however, the effects of these on mothers' employment decisions have lessened considerably in recent years for women in both the UK and US (Cohen & Bianchi, 1999; Desai, Gregg, Steer, & Wadsworth, 1998).

In addition to human capital and demographic variables, mothers' decisions about engaging in paid work soon after childbirth may be influenced by infants' characteristics. Mothers who perceive that their child needs extra care and attention may delay post-birth employment. For example, there is evidence that mothers with premature or physically disabled infants, or infants with difficult temperaments are less likely to work for pay during their child's first year (and work fewer hours when employed) than mothers of infants without these characteristics (Galambos & Lerner, 1987; Gennaro, 1996).

Finally, the occurrence and timing of employment among mothers of infants are likely to be influenced by the broader social, economic and policy contexts in which families live. In particular, mothers' employment decisions are likely to be influenced

by: (a) social norms about women's labour force participation and gender-based expectations about parenting; (b) wage and job opportunity structures for women; and, (c) public policies that either encourage (and support) or discourage maternal employment. Given our specific interest in UK-US differences in policy, we focus our current discussion on this third set of factors. Multi-national data demonstrate that mothers' employment patterns are responsive to policies that facilitate balancing the demands of childrearing and paid work (Gornick, Meyers, & Ross, 1998; Vlasblom & Schippers, 2006).

Maternity (and parental) leave benefits are one such policy. Women with access to leave (especially paid leave) are more likely to eventually return to their job than those without this access (Heymann, Earle, Simmons, Breslow, & Keuhnhoff, 2004; Waldfogel, 1998); they are also more likely to continue working late into pregnancy (Joesch, 1997). At the same time, mothers with access to paid leave are less likely than those without this option to return to work during the initial period following childbirth (approximately 6 weeks in the US and 6 months in the UK) (Joesch, 1997; Berger & Waldfogel, 2004). On the whole, evidence suggests that new mothers tend to take leave when they are eligible to do so, but the amount of leave taken depends on family economic conditions. In the UK, lower-income mothers tend to return to employment at the expiry of paid leave; whereas higher-income mothers tend to delay their return until the expiry of their job-protected leave (Burgess, Gregg, et al., 2002; Hudson, Lissenburgh, & Sahin-Dikmen, 2004).

3.1.3. Policy contexts facing new parents in the UK and US

Much of the existing literature on employment and mothering has framed these two endeavors as being in conflict with one another; recently, however, some studies have taken a slightly different stance by seeking to identify supports that might enable women (and men) to balance paid work with childrearing (see discussion in Joshi, 2002). One of the primary motivations for our own cross-national comparison of the UK and US (in the analysis presented here, as well as in ongoing work) is to better understand which policies promote (or undermine) the well-being of young children and their families, given the current reality that most parents must manage responsibilities in both realms. In recent years, Great Britain and the United States have opted for somewhat different approaches to promoting parents' employment and investing in young children. Here, we briefly review a few key policies likely to affect new mothers' efforts to balance caretaking and formal employment. Specifically, we describe recent developments in the provision of public benefits to low-income families, governmental support for early care and education, and the availability of maternity leave (for a more extensive discussion of international policies related to young children and families, see Gornick et al., 1998; Vlasblom & Schippers, 2006; Waldfogel, 2001b; 2004).

Historically, Great Britain and the United States have paled in comparison to European countries in terms of public policies to support combining employment and childrearing (Gustafsson Wetzels, Vlasblom, & Dex, 1996). The final decade of the 20th century was a time of tremendous change in UK and US social policy, particularly with regards to young children and their families. During the mid- to late-1990s, in the face of increasing child poverty rates, the UK (under the Labour Government) and the US (under the Clinton administration) overhauled their systems

of support to low-income families. Reforms in both countries emphasized 'welfare-to-work' policies, intended to encourage employment among disadvantaged parents (especially lone mothers) by: (1) strengthening the link between benefit receipt and labour market participation; (2) improving incentives for paid work by expanding tax credits for working families and raising (or in the UK case instituting) the national minimum wage; and (3) increasing funding for work supports, primarily in the area of childcare for disadvantaged children (for details on the reforms in the UK and US, see Brewer & Gregg, 2003; Hills & Waldfogel, 2004; Pavetti, 2000). In the context of strong economic condition, reforms in both countries succeeded in significantly boosting employment rates among lone mothers in the late 1990s (Blank, 2002; Gregg & Harkness, 2004).

Despite some parallels in the welfare-to-work policy regimes of the UK and US; there are important areas of divergence as well. The UK system has been described comparatively as more generous in that it provides higher levels of support to both employed and unemployed parents, and does not place a time-limit on benefits, as is the case in the US following the 1996 reforms (Brewer & Gregg, 2003). Notably, the British employment-related reforms were part of a broader set of policies aimed at investing in children and communities in order to reduce (and eventually eliminate) child poverty and social exclusion. In contrast, changes in the US welfare system were motivated primarily by a desire to reduce dependency, and focused almost exclusively on increasing the employment and earnings (and to some extent marriage rates) of lone mothers. These different emphases have translated into somewhat different approaches to governmental supports for child care. Child care represents one of the primary costs associated with parents' employment; to the extent that policies that improve families' access to care arrangements which are acceptable to parents, they can facilitate mothers' efforts to sustain employment while children are young (e.g., Blau & Ferber, 1992). In both the UK and US, child care assistance has been targeted to low-income families, and has focused primarily on improving the affordability rather than quality of care. In the last decade, however, both countries have expanded their efforts to provide high-quality, educationally-based intervention services to disadvantaged children. Although 3- and 4- year olds were the initial target of these programs, attention has recently turned to children ages 0 to 2 (Bertram & Pascal, 2000; Waldfogel, 2004).

As part of its package of reforms, the UK government rolled out several initiatives related to the early care and education of young children, including the National Childcare Strategy, which aims to increase the availability, affordability and quality of childcare for all children (but, especially for those in disadvantaged families) from birth to age 14 years (DfES, 1998). Components of this ambitious strategy include building up and training the child care workforce, increasing the number of community-based child care centers and nurseries, expanding the tax credits to assist with childcare expenses, and working with employers to institute more family-friendly policies (Bertram & Pascal, 2000). In addition, the Sure Start program (modeled after Head Start in the US), offers comprehensive services to children from birth to age 4, with the goal of increasing school readiness. Taken together, the UK reforms of the late 1990s resulted in an estimated 68% increase in expenditures on young children (Sylva & Pugh, 2005). At the same time, concerns have been raised that child care costs in the UK remain high and that current care options may not

adequately meet parents' needs (see Hansen, Joshi & Verropoulou, 2006; Viitanen, 2005).

Cross-national comparative analyses categorize US government support for child care as low (particularly for infants and toddlers) (Gornick, Meyers, & Ross, 1998; Waldfogel, 2002). Even though infant and toddler care can be particularly expensive, is often in short supply, and tends to be of lower quality than arrangements for older children (US General Accounting Office, 1997), very few public supports are available to help US parents address these issues (with the exception of a child care tax credit available to families with taxable income). Child care subsidies and publicly-provided programs are heavily targeted to low-income families, and serve only a percentage of eligible families (Layzer & Collins, 2000); moreover, reimbursement rates tend to be low relative to child care market rates (Mezey, Schumacher, Greenburg, Lombardi, & Hutchins, 2002). In 1995, the US launched the Early Head Start (EHS) program, its first large-scale government-sponsored program for infants and toddlers. An extension of the long-running Head Start program for preschoolers, EHS offers low-income families a combination of high-quality child care, parent education, and family services. Currently, EHS serves a fairly small percentage of eligible families and its long-term effects are unknown; however, initial experimental evaluations of the program indicate a pattern of positive modest effects for children and parents (Love, Eliason-Kisker, Ross, Brooks-Gunn, & Paulsell, 2002).

Beyond supports for low-income families, one of the primary policy differences between the UK and US in terms of supporting new parents exists in the provision of family leave. At the inception of the Millennium study (2000-01), mothers in the UK were entitled to 18 weeks of paid maternity leave regardless of their job tenure. Under this policy, the first six weeks of leave is accompanied by Statutory Maternity Pay that is equal to the higher of two amounts—90% of the mother's average weekly earnings or £75 per week. The following 12 weeks are then paid at a standard rate of £75; women who have worked for the same employer for a year or longer are eligible for an additional period of unpaid leave up to 29 weeks after the birth (these provisions continued to improve after 2003). A parental leave statute enacted in 1999 further allows either parent to take up to 13 weeks of unpaid leave at any point in the child's first 5 years; parents of children with disabilities may take up to 18 weeks until the child's 18th birthday. Finally, beginning in 2000, new mothers with low incomes who were not actively engaged in the labour force prior to the birth are eligible not only for the range of supports available to low-income families with children, but also for a one time payment of £500 under the Sure Start Maternity Grant. Prior work with the MCS data indicates widespread use of leave by employed mothers in the UK—approximately 80% of women in the labour force during pregnancy report taking leave and the majority return to their jobs within 9-10 months after the birth (Dex & Ward, 2007).

Leave provisions in the US are considered minimal in comparison to the most other advanced industrialized countries (Gornick et al., 1998; Waldfogel, 2001b). The Pregnancy Discrimination Act of 1978 (PDA) prohibits employers from discriminating against employees because of pregnancy or childbirth, and requires that employer disability plans cover pregnancy as well. For more than a decade, the PDA stood as the sole national policy regarding employment and childbearing. The Family and

Medical Leave Act of 1993 (FMLA) mandates that eligible employees receive up to 12 weeks of unpaid, job-protected leave for childbearing or family caretaking. Eligibility is limited to employees at a work sites with 50 or more employees who have worked an average of at least 25 hours per week for one year. As the first federal law to provide job-protected leave, the FMLA has symbolic significance; however, its effects on new mothers' leave taking have been modest (Berger & Waldfogel, 2004; Han & Waldfogel, 2003; Klerman & Leibowitzm, 1998). This finding is not surprising for a number of reasons. First, FMLA eligibility restrictions translate into coverage for less than half of the US workforce (Cantor et al., 2001); mothers ineligible for leave under FMLA are likely to be poor, single, and African-American (Hofferth, 1996; Ross Phillips, 2002). Even when eligible for leave, however, many women return to employment earlier than 12 weeks simply because they cannot afford to forgo pay (e.g., Commission on Family and Medical Leave, 1996; Waldfogel, 2001a)—in 2000, the typical leave taken under FMLA lasted only 10 days. Although individual employers may provide paid leave for parents, few in fact do so. Estimates indicate that 8 percent of private sector employers offer paid leave (US Department of Labor, 2006), and only 2 percent of full-time employees at medium- or large-sized firms have access to this benefit (Waldfogel, 1999).

4. Method

4.1. Samples

Given our focus on maternal employment following childbirth, we limit our analysis samples to child cases in which the primary respondent is the mother. In the MCS, this represents 99.7% of the sample and results in an analysis sample of 18,760 children. The analysis sample in the ECLSB comprises 10,524 children and excludes 164 children for whom the survey respondent was someone other than the mother. A small number of mothers ($n=22$) in the ECLSB who reported working by the time of the first interview, but lacked data on when this employment began, were also excluded from the main analysis predicting the timing of post-birth employment. Sociodemographic characteristics of the two samples appear in Table 3.

4.2. Measures

On the basis of theory and prior research (as reviewed above), we examine a host of potential predictors of mothers' post-birth employment. These factors are categorized into four general domains—child characteristics, mother's characteristics, household characteristics, and regional indicators—and are entered as blocks into the analysis. Unless otherwise noted, the variables are defined equally across the two datasets. We note upfront that several variables of theoretical interest are not included here because they were either not measured (e.g., mothers' preferences for employment and time at home; more detailed information about women's work histories prior to the child's arrival) or they were measured at the 9-month interview (e.g., mothers' physical and mental health, breastfeeding practices, access to social and financial support) and are therefore potentially endogenous to mothers' employment decisions.

4.2.1. Child characteristics

We include indicators for whether the target child is the mother's first birth; whether it is a multiple birth; and whether the child had a low birth weight (defined as less than 5 lbs 8 oz or 2500g). We use low birth weight as a proxy for infant health, in the absence of detailed measures of health problems or complications during pregnancy or at birth; low birth weight is associated with a range of health risks for children (see Paneth, 1995). Ratings of child health collected at the 9-month interview are potentially endogenous to mothers' employment behavior and were therefore not included. We also account for child gender given some US-based research suggesting that it may influence family decisions about fertility, labour market activity, and nonparental child care (see review in Heidemann, Joesch, & Rose, 2004).

Models also include a variable indicating whether the pregnancy was intentional. In the MCS, mothers were asked if they were planning to get pregnant at the time they did or if it was a surprise; in the ECLSB, this variable reflects mothers' reports of discontinuing contraceptive use with the intention of becoming pregnant. Perhaps more accurately described as a characteristic of the birth rather than of the child, this variable may be nonetheless associated with mothers' decisions about paid

employment after childbirth. Mothers for whom the pregnancy was intentional may be particularly committed to spending time with their infant and may be better prepared for the task of balancing parenthood and a career than those for whom the pregnancy was unplanned. For example, women may re-organize their work activities, make adjustments to the family budget, and/or build up their savings in anticipation of the pregnancy, birth, and post-natal period. We note that for the ECLSB, there was substantially more missing data for this variable (3,050 cases) because the item was asked as part of the parent self-administered questionnaire rather than as part of the core survey. In order to retain these cases, we assign a value of 0 to those with missing data and include an indicator for whether the variable was imputed. This latter variable was never significant in the models suggesting that missingness was unrelated to the timing of mothers' employment; furthermore, models with and without the imputed variable yielded similar results.

4.2.2. Maternal characteristics

As noted above, new mothers with recent (pre-birth) employment experiences are more strongly attached to the labour force and thus, will be more likely to be employed post-birth than mothers without such experience. Our models thus include a variable to capture whether the mother worked for pay in the year prior to the target child's birth. We also include a set of variables identifying mother's age at the time of childbirth using the following categories: 14-19, 20-24, 25-29 (omitted), 30-34, 35-39, and 40 years or older. Given differences in the educational systems of the UK and US, nation-specific variables were used in the analysis to capture mothers' highest level of educational attainment. In the UK models, mothers were identified as having no qualifications (omitted), having completed their GCSE, having A-level qualifications, or completing a first degree or beyond. Mothers with overseas (or other) qualifications were identified as well. In the US models, mothers were identified as having: less than a high school education (omitted); a high school (or general equivalency) degree; some vocational or technical training beyond high school; some college experience; or a completed bachelor's degree or higher. Finally, we include a set of indicator variables for mothers' racial/ethnic identity, which may capture some variation in women's employment preferences, histories, and opportunities. Mothers in the UK were categorized as White (omitted), Black, Pakistani or Bangladeshi, Indian, or Mixed/Other; mothers in the US were categorized as non-Hispanic White (omitted), non-Hispanic Black, Hispanic, or Other.

4.2.3. Family and household characteristics

Mothers' marital/partner status was captured by three mutually-exclusive categories: single with no partner in the household; unmarried and cohabitating with a partner; or married (omitted). Continuous variables were used to identify the number of children (other than the target child) and the number of adults (other than the mother and her spouse/partner) in the household. Although the likelihood (and necessity) of early maternal employment may increase as the number of children increases, the relationship between family size and mothers' labour supply may be curvilinear such that returns to mothers' employment diminish once there are several children in the household who require care. To allow for this possibility, we include a term representing the number of children squared. Other household-level factors in the

models include whether a non-English language is spoken in the home and whether the family owns the dwelling in which they live. Prior work on UK women's employment transitions following childbirth indicates that mothers in owner-occupied housing return to employment sooner after the birth of a child than those with other housing arrangements, potentially because they face higher levels of economic pressures (Dex, Joshi, Macran & McCulloch, 1998). We note that a measure of family income is not included in the models, because the only variable available is income at 9-months post-birth, which is endogenous to mothers' early employment decisions.

4.2.4. Geographical indicators

Given potential regional variation in economic and employment conditions, country-specific geographical indicators were included in the analysis. In the US, variables reflecting the four major regions were used (Northeast, South (omitted), Midwest, or West). Controls for individual states should be considered in future work, but were unavailable in the first release of the ECLSB data. To parallel the US models, similarly broad geographical indicators were used in the MCS models, capturing residence in England (omitted), Scotland, Wales or Northern Ireland.

4.2.5. Timing of mother's employment post-birth

In the initial survey of both studies (conducted approximately 9 months post-birth), mothers reported on whether they had been employed since the delivery, and if so, when this employment began. For analysis purposes, we derive a series of mutually exclusive categorical variables identifying no employment versus employment that began 0 to 6 weeks, 7 weeks to 3 months (~7-16 weeks), 4 to 5 months (~17-25 weeks), or 6 to 9 months (~26-43 weeks) after the target child's birth. To provide some context for these intervals in terms of leave policies, we note that in the US, while federally-guaranteed unpaid leave expires at 12 weeks, many employed women are neither eligible for this leave nor receive paid leave from their employers (Ross Phillips, 2004; Ruhm, 1997). Moreover, employer-sponsored paid leave in the US, when available, is likely to be limited to only a few weeks, although this varies by employer and the extent to which employees have "banked" vacation and sick time.

Consequently, we expect to find (as others have) that a majority of the US mothers who begin employment in their child's first year will do so within 3 months of the birth. In contrast, statutory paid leave is available in the UK for the first 3 months following (and for 2 weeks prior to) the birth. Our third timing category corresponds then to the expiry of this leave, while the fourth category of 6 to 9 months corresponds to the expiry of statutory unpaid leave in the UK. It is thus reasonable to expect that more mothers in the UK will return between 4 and 9 months than in the first 3 months. To clarify, we do not distinguish here between mothers who were returning to employment versus entering for the first time (although we do include an indicator of employment status in the year prior to birth in our analysis). Long-term employment histories were not assessed as part of the initial sweeps and we are unable to determine clearly whether mothers' post-birth employment was with a previous or new employer.

4.2.6. Data analysis strategy

In order to investigate the patterns and correlates of early maternal employment for new mothers in the UK and US, we compute basic descriptive statistics and conduct multinomial logistic regressions to predict the timing of mothers' post-birth employment. We decided not to combine data from the MCS and ECLSB, choosing instead to examine similar but separate models for each country. Within each country, we compare the characteristics of mothers who begin paid work sooner versus later (or not at all) during the first 9 months following their child's birth. We then discuss these results within their broader national contexts, considering how different policy environments in the UK and US may help to explain the findings.

Analyses were conducted using study-specific sample weights to account for the unequal probabilities of being sampled and to provide appropriate estimates of variance. Given their complex sampling designs, both studies require standard error adjustments to properly assess the statistical significance of population estimates. In the MCS, standard errors for the estimates were computed taking into account the stratification and clustering of the study; in the ECLSB, these were computed using a jackknife replication method. We also make adjustments given that in the case of twins, two children from the same household (with the same mother) are included in the sample. To account for multiple child observations per family, we calculate robust standard errors using the "cluster" option in STATA. Missing data were rare in the first sweeps of both studies (see Plewis et al 2004; National Center for Education Statistics, 2005), with the exception of the imputed "intended pregnancy" variable in the ECLSB (described above). Thus, we decided to use simple casewise deletion; this approach resulted in dropping 371 cases in the MCS (<2%) and 280 cases in the ECLSB (<3%).

Two of the strongest predictors of mothers' post-birth employment identified in the literature are women's labour force attachment prior to giving birth, and the availability (and level of) partner earnings. Given this, we conduct two additional analyses to further explore these factors. First, we condition on mothers' prior employment to examine which factors predict the timing of employment within the sample most likely to work for pay during their children's early years. Second, we run a set of models that examine the influence of partners' employment status and educational attainment (as a proxy for earning potential) for the subset of mothers who are living with a partner or spouse. Specifically, we add two indicator variables to the model to identify whether the partner is employed at the time of the 9-month survey and whether the partner is "highly educated" (i.e., has attained a 4-year degree or beyond).

5. Results

5.1. Characteristics of new parenthood and early employment in the UK and US

As shown in Table 3, infants born in 2001 (and living with their biological mothers) in the UK and US share some interesting similarities and differences in their basic characteristics. First, the proportion of infants who are male, first-born, part of a multiple birth, the result of an intended pregnancy or who had low birth weight is similar across the two countries; in part, these similarities may reflect comparable levels of maternal health and prenatal and antenatal care.

More substantial differences are evident in the characteristics of mothers and households. On average, American mothers are younger, less educated, and less likely to be Caucasian than their UK counterparts; 57.4% of the ECLSB sample self-identified as white, compared to 89.6% of the MCS mothers. The proportion of households in which a language other than English is regularly spoken is also higher in the US than in the UK (18.8% compared to 9.4%). Although marriage rates are roughly comparable across the two countries, the living arrangements of non-married mothers differ noticeably. A larger proportion of US mothers are single parents, (20.4% vs. 13.7%), whilst a larger proportion of UK mothers cohabit with a partner (25.1% vs. 14.4%). Households of US infants are also more likely than those in the UK to contain other children and non-parental adults (11.5% vs. 7.3%). Finally, UK mothers are more likely than their US counterparts to live in owner occupied housing (64.3% vs. 47.8%).

Despite some differences in their sociodemographic profiles, new mothers in both countries were equally likely to be employed in the year prior to giving birth (just over 70% of each sample). Patterns in women's labour force participation across the two countries, however, quickly diverge after the birth of a child. As shown in Figure 1 and described in Table 4, more US mothers than UK mothers are in the labour market by their child's ninth month, largely due to the quicker rate of employment (re)entry in the very early months. We note that most employed mothers in both samples are "returners", having been employed in the year prior to giving birth. Nearly 3 out of 4 US mothers, and more than 9 out of 10 UK mothers fall into this category. As mentioned earlier, data were insufficient to assess the continuity of mothers' pre- and post- birth employment in terms of whether they remained with the same employer.

Early maternal employment in the US not only begins sooner after childbirth than in the UK, but it is also likely to be of a different intensity, schedule and quality (i.e., amount of benefits) (see Table 4). Mothers in the UK who are employed by the 9-month interview are much more likely than those in the US to have a part-time (and nonstandard) schedule. Full-time employment is defined as 31 hours or more per week in the MCS study and as 35 hours or more per week in the ECLSB study. Nearly two-thirds of UK mothers engage in paid work for 30 hours or less per week. At the other end of the spectrum, nearly 15 percent of employed mothers in the US work very long hours, i.e., more than 40 hours per week, during their child's infancy.

5.2. Factors associated with the timing of mothers' post-birth employment

5.2.1. Child characteristics

Table 5 reports the results from parallel multinomial logistic regressions estimated using the MCS and ECLSB data. Associations between child characteristics and the timing of mother's post-birth employment are generally similar in the UK and the US. Women in the UK who have given birth to their first child are less likely to be working for pay in the first 6 months compared to those with older children. A first birth also decreases the likelihood of employment for US women, but only for the initial 6 weeks following the birth. In both countries, mothers of multiples (twins, triplets, etc.) and low birth weight infants tend to enter employment later than other mothers. These factors tend to delay mothers' post-birth employment until after 6 months in the UK and until after 3 months in the US. Child gender is not associated with the timing of mothers' post-birth employment in either sample.

5.2.2. Mother characteristics

Of the maternal characteristics considered, recent employment experience is the strongest predictor in both samples of mothers' paid work in the first nine months. That is, mothers who worked at some point in the year prior to giving birth were much more likely to be work soon after the birth than those without recent employment. In the UK, the size of this effect is similar across the different time periods; in the US, prior employment is most strongly associated with very early returns (0-6 weeks). Mother's age at childbirth also significantly predicts the timing of her post-birth employment, particularly in the UK sample. In the MCS, young mothers, aged 14 to 19 years, other things equal, are the least likely to be employed at any time during the first 9 months. Older mothers aged 30 years and over, whilst likely to (re)enter employment during this time, are less likely than those aged 25-29 to do so in the first six months. Maternal age is somewhat less predictive in the ECLSB sample; US women ages 30-39 are less likely than those ages 25-29 to begin working during the first six weeks after giving birth.

In both samples, early maternal employment is positively predicted by mothers' level of education; however, some interesting cross-national differences emerge in the pattern of results. In the UK, the association is quite linear, with higher qualifications increasing the likelihood of early return (in every interval between birth and 9 months). In the US, the primary distinction is between those with and without a basic education; compared to mothers who have not completed high school, those with a high school degree or beyond are more likely to work for pay in the first 3 months post-birth. The strength of this association is similar across education levels, though slightly weaker for mothers with only a high school degree. Having a college degree or beyond increases the likelihood that a US mother will work for pay within the first 6 months.

Early maternal employment in both countries is somewhat associated with mothers' race and ethnicity. In the UK, Black mothers are less likely than other mothers to work for pay in the first 6 weeks, but more likely than other mothers to begin doing so

between 6 and 9 months post-birth. Indian mothers in the UK are less likely than their White counterparts to begin paid work between 7 weeks and 6 months, and mothers of Pakistani or Bangladeshi heritage are least likely to be employed at all during the first 9 months post-birth. These patterns are consistent with ethnic group differences in overall employment rates for women (Cabinet Office, 2001). In the US, mothers' race/ethnicity is unrelated to very early employment (0-6 weeks); but, after this period, Black and Hispanic mothers are more likely than White mothers to begin paid work some time before children's ninth month.

5.2.3. Family and household characteristics

Whilst most of the statistical action appears to come from maternal characteristics, aspects of the family and household also predict if and when mothers begin employment after their child is born. Key among these is marital status, and very different associations emerge for this variable across the two samples. In the UK, single motherhood is uniformly associated with being less likely to work for pay during a child's infancy as compared to living with a partner or spouse. In contrast, unmarried US mothers (either single or cohabiting) are more likely than married mothers to be employed soon after giving birth. No other household composition variables are significant in the US models; for UK mothers, the presence of other adults in the home makes it more likely that they will start paid work between 7 weeks and 5 months. Finally, for both samples, home ownership increases the likelihood of early maternal employment.

5.2.4. Geographical regions

In both countries, the timing of mothers' employment depends in part on where families reside. In the MCS, mothers living in Scotland are less likely than other mothers to work for pay in the first 6 weeks following childbirth. In turn, mothers in Wales, Scotland, and Northern Ireland are all more likely to begin paid work around 4 to 5 months post-birth than those living in England. In the US, mothers in the Northeast are less likely than those in the South to begin paid work in the first 3 months; mothers in the West are less likely to be employed at any point during the first 9 months. Higher rates of employment in the South than in other US regions for mothers of young children have been noted elsewhere (Blau, 2001).

5.3. Models conditioned on prior employment and partner status

We conduct supplemental analyses for two subgroups of mothers. First, we examine the models described above for the subset of mothers most attached to the labour force —those who had worked for pay during the year prior to giving birth. Second, we evaluate these models for mothers living with a partner or spouse, in order to assess whether fathers' education level and employment status are related to the timing of mothers' post-birth employment. In the interest of space, these results are not presented in tables, but summarized briefly below.

5.3.1. Models conditioned on prior employment

Results for the UK sample change very little when the model is conditioned on prior employment. In general, more advantaged UK mothers are more likely to begin paid work at each time point in the first 9 months than less advantaged mothers. In the US, however, limiting the analysis to mothers with recent employment experience reveals a somewhat different set of predictors for the timing of post-birth employment than results for the full sample. The most striking differences are seen with respect to maternal education, marital status, and home ownership. In the full sample, US mothers' educational level positively predicts earlier (re)entries to paid work. When the model is limited to mothers with recent work experience, however, the effect of education changes—US mothers with higher levels of education are less likely than those with lower levels to begin paid work in the first six weeks. In the full sample, home ownership predicts earlier returns for US mothers throughout the first 9 months post-birth. When only mothers who worked in the year prior to childbirth are considered, home ownership predicts fewer returns between 6 and 9 months (and is not predictive of returns before 6 months).

The results related to child characteristics are somewhat different in the conditional versus the full sample model, but this is true only for the US sample. Although first births and low birth weight in infants predict slower returns to employment in the full sample of US mothers, these factors are not significantly predictive in the conditional model. Similarly, in the full sample model, US mothers of multiples are less likely than those of singletons to begin paid work in the first 3 months. In the conditional model, although they are still less likely to begin paid work in the first 6 weeks, mothers of multiples are more likely than those of singletons to begin paid work between 6 weeks and 9 months post-birth.

5.3.2. Models conditioned on partner status

Finally, we examine a set of models restricted to women living with a partner or spouse at the time of the 9-month interview. To evaluate the role of partner characteristics, we add partners' education level and employment status to the model. In prior work, these variables have been found to negatively predict women's employment rates following childbirth. We find few differences between the UK and US samples in the association between partners' education level and mothers' early employment. In both countries, having a partner educated to at least degree level predicts lower levels of employment for mothers during the initial period after childbirth. This finding is significant for the UK sample between 6 weeks and 5 months, and between birth and 3 months for the US sample. Partner's employment status, on the other hand, is only significant in the US sample, where mothers with an employed partner are less likely than those with an unemployed partner to have entered the labour market between birth and 3 months. Marital status (i.e., married vs. cohabiting) is also only significant in the US model where mothers cohabiting with a partner are significantly less likely than married mothers to begin paid work at any point in the first nine months. This result may reflect differences in human capital (e.g., less education and work experience) among cohabiting versus married women.

6. Discussion

The recently established Millennium Cohort Study (in the UK) and the Early Childhood Longitudinal Study-Birth Cohort (in the US) join several other international efforts to assess the well-being of young children in the twenty-first century. Rich, longitudinal data from these national cohort studies create exciting opportunities for social scientists interested in understanding early influences on development. The application of cross-national comparative methods to these types of data has the potential to expand upon the individual contributions of each study to social science and public policy.

In this paper, we have provided an overview of the MCS and ECLSB, and described our initial efforts to use these datasets to explore cross-national differences in the patterns and predictors of new mothers' employment. In both countries, children born in the 21st century are more likely than ever before to have mothers in the labour market. In accordance with earlier studies (e.g., Berger et al., 2004; Gregg & Waldfogel, 2005), we find striking differences between the UK and US in rates of mothers' (re)entry to employment following childbirth. Within 3 months of having a child, more than 40 percent of US mothers are in the labour force; whereas this occurs for only 13 percent of UK mothers, who are much more likely to (re)enter employment between 4 and 9 months post-birth. We also find that by infants' ninth month, a slightly greater percentage of US mothers are in the labour market overall (59% vs. 49% in the UK), and their employment is much more likely to be full-time (62% vs. 23% in the UK).

When we examine the factors related to the rates at which women begin or resume employment after having a child, we find both similarities and differences across the two samples. As expected, one of the strongest predictors of UK and US mothers' early (re)entries to employment following a birth is having been employed during the period preceding childbirth. In the UK, mothers with prior employment experience were more likely than mothers without to begin post-birth employment throughout the first 9 months; in the US sample, this factor only predicts higher rates of employment during the first 6 weeks. Similarly, maternal education positively predicts (re)entry to employment following childbirth—throughout the first 9 months in the UK and for the first 3 months in the US. For several other variables as well, we find that the primary distinction in the UK occurs between mothers who engage in paid work before versus after approximately 6 months post-birth; in the US, the primary distinction is whether mothers begin paid work during the first 6 to 12 weeks. This difference makes sense given the normative patterns of post-birth employment within each country and in the context of differential access to leave benefits. In both samples, first births, multiple births, and low birth weight tend to postpone mothers' employment. Interestingly, lone motherhood predicts later entries into to post-birth employment for UK mothers, but quicker entries in the US.

Models conditioned on prior employment and partner status reveal some interesting cross-national differences in the factors that differentiate mothers who work sooner versus later versus not at all in the first 9 months after their baby is born. Among the group of mothers most likely to be employed following childbirth, i.e., those who were employed in the year prior to delivery, advantaged mothers in the UK (in terms of

education and marital status) are more likely throughout the first 9 months to return to the workforce than their less-advantaged counterparts. In the US, however, it is the less educated and unmarried mothers who make more rapid returns, while mothers with more resources delay their employment returns until infants are older.

In the US, women with low education levels typically cannot afford to take the unpaid leave provided by the government and are also unlikely to be in jobs that provide employer-sponsored leave benefits (Commission on Family and Medical Leave, 1996). Our findings are consistent with the argument that the lack of universal paid leave in the US exacerbates socioeconomic disparities (Wexler, 1997). In the UK, where maternity benefits have been expanded a number of times over the last decade, a period of maternity leave following childbirth has now become standard for most mothers. Estimates from the MCS indicate that 80% of women employed during their pregnancy took leave following their child's birth (Dex & Ward, 2007).

Analyses limited to women living with a partner or spouse indicate that having a better-educated and employed partner reduces the likelihood of early maternal employment in both countries, especially with regard to very early employment (in the first three months of life) for US mothers. Consistent with the fact that cohabitation is more widely practiced and accepted in the UK than in the US (see Barlow & Probert, 2004), we observe that married and partnered mothers in the UK differ little in their patterns of post-birth employment; whereas marital status plays a more important role in explaining US patterns.

The results presented in this paper are primarily descriptive and draw from the first sweeps of data only. As more data from these studies becomes available, there are many possible directions for future research, only a few of which we identify here. We focus specifically on how the MCS and ECLS-B data might address the need to know more about linkages between policy, maternal (and paternal) employment, and the well-being of infants and toddlers (see discussion in Gregg & Waldfogel, 2005).

First, research with both American and British samples suggest that the effects of early maternal employment vary by type and quality of child care, quality of parental care, and family income (e.g., Brooks-Gunn, Han, & Waldfogel, 2002; Gregg et al., 2005; Shonkoff & Phillips, 2000; Smolensky & Gootman, 2003). In general, the adverse effects of mothers' employment for young children tend to be limited to or concentrated among married, more affluent and better-educated mothers, raising questions about the processes involved. An examination of how the contexts and trajectories of employment differ across various groups of women (within- and across- nations) may help to unpack these findings. Issues of selection bias—the possibility that mothers who work soon after giving birth are qualitatively different than those who postpone employment while their child is young—are paramount in studies of the effects of maternal employment on child development. As mentioned above, the large scale, comprehensive nature, and longitudinal design of the MCS and ECLS-B facilitate the use of novel analytic techniques that can address issues of selection bias and approximate experimental conditions with observational data.

Two other related areas which the MCS and ECLS-B are well-suited to address are the effects of early care and education settings on young children and families, and

issues of employment and parenting for fathers. With respect to the first, the MCS and ECLSB join a handful of recent smaller-scale studies with high-quality data on child care and early education in the UK and US (see Sylva et al., 2007). Together, these data can help to address identified gaps in our understanding of how non-parental care environments during the first few years of life affect development in the short- and long- term (Melhuish, 2004). With respect to the second topic, we note that the political and scientific discourse (especially in the US) regarding parents' employment while children are young has focused almost exclusively on mothers, as is the case with the current study. Similar research examining how fathers balance paid employment with caregiving and household responsibilities, and the extent to which policy influences these experiences is necessary and increasingly possible; both the MCS and ECLSB expand upon prior studies in their efforts to include data on fathers.

Finally, the MCS and ECLSB present interesting opportunities to examine the effects of social policy on development, especially as additional waves of data become available. As noted above, in the current analysis, we do not formally include policy variables and cannot therefore tie our findings explicitly to policy or institutional differences across the two countries. Instead, we simply describe some of the major cross-national differences in the availability of supports to parents combining formal employment and the caretaking of young children as an important backdrop to our findings. However, in future work, well-identified policy variation within and across the MCS and ECLSB samples could be exploited to estimate the effects of different policies on young children and their families.

The possible challenges involved in cross-national research using birth cohort studies are not to be minimized. We have described some of the issues encountered in our initial work with the MCS and ECLSB, as well as issues anticipated as we move forward. Rather than deterring researchers from looking cross-nationally at these types of data, we hope this discussion will stimulate others to consider (and realize) the tremendous potential of these studies.

References

- Anderson, D., Binder, M. & Krause, K. (2003). The motherhood wage penalty revisited: Experience, heterogeneity, work effort and work-schedule flexibility. *Industrial and Labour Relations Review*, 56(2), 273–295.
- Barlow, A. & Probert, R. (2004). Regulating marriage and cohabitation: Changing family values and policies in Europe and North America—An introductory critique. *Law & Policy*, 26(1), 1-11.
- Berger, L.M., Hill, J., & Waldfogel, J. (2005). Maternity leave, early maternal employment and child health and development in the US. *The Economic Journal* 115, F29-F47.
- Berger, L.M., & Waldfogel, J. (2004). Maternity leave and the employment of new mothers in the United States. *Journal of Population Economics*, 17, 331-49.
- Bertram T. & Pascal C. (2000). *The OECD Thematic Review of Early Childhood Education and Care: Background Report for the United Kingdom*. Available electronically at <http://www.oecd.org/dataoecd/48/16/2479205.pdf>.
- Blank, R. M. (2002). Evaluating welfare reform in the United States. *Journal of Economic Literature*, 40 (4), 1105-1166.
- Blau, F.D. & Ferber, M.A. (1992). *The Economics of Women, Men, and Work*. Englewood Cliffs, NJ: Prentice Hall.
- Blau, D. (2001). *The child care problem: An economic analysis*. New York: Russell Sage.
- Bowlus, A.J. (1997). A search interpretation of male-female wage differentials. *Journal of Labour Economics*, 15(4), 625-657.
- Boyce, W.T. & Keating, D.P. (2004). Should we intervene to improve childhood circumstances? In D. Kuh and D. Schlomo (Eds.) *A Life Course Approach to Chronic Disease Epidemiology*. Oxford University Press.
- Brewer, M. & Gregg, P. (2003). Eradicating child poverty in Britain: Welfare reform and children since 1997. In Walker and Wiseman (Eds.), *The Welfare We Want*. Bristol: Policy Press.
- Brooks-Gunn, J., Han, W., & Waldfogel, J. (2002). Maternal employment and child cognitive outcomes in the first three years of life: the NICHD study of early child care, *Child Development*, 73(4), 1052–1072.
- Brooks-Gunn, J., Berlin, L., Leventhal, T., & Fuligni, A. (2000). Depending on the kindness of strangers: Current national data initiatives and developmental research. *Child Development*, 71, 257–268.

Brooks-Gunn, J., Phelps, E., & Elder, G.H. (1991). Studying lives through time: Secondary data analyses in developmental psychology. *Developmental Psychology*, 27(6), 899-910.

Brooks-Gunn, J., Duncan, G.J. & Rebello Britto, P. (1999). Are socioeconomic gradients for children similar to those for adults? Achievement and health of children in the United States. In D.P. Keating & C. Hertzman (eds.), *Developmental Health and the Wealth of Nations: Social, Biological, and Educational Dynamics*. New York: Guilford Press.

Burgess, S., Gregg, P., Propper, C., Washbrook, E. and the ALSPAC Study Team (2002). *Maternity Rights and Mother's Return to Work*. CMPO Working Paper. Available electronically at <http://www.bris.ac.uk/Depts/CMPO/workingpapers/wp55.pdf>.

Butler, N.R., Goldstein, H. & Ross, E.M. (1971). Cigarette smoking in pregnancy: Influence on birth and perinatal mortality. *British Medical Journal*, 1, 127-130.

Cabinet Office (2001). *Ethnic Minorities and the Labour market: Interim Analytical Report*. Available electronically at <http://www.emetaskforce.gov.uk/reports.asp>

Cantor, D., et al. (2001). *Balancing the Needs of Families and Employers: Family and Medical Leave Surveys, 2000 Update*. Rockville, MD: Westat.

Case, A., Lubotsky, D., & Paxson, C. (2002). Economic status and health in childhood: The origins of the gradient. *American Economic Review*, 92, 1308-1334.

Casper, L.M., & Bianchi, S.M. (2002). *Continuity and change in the American family*. Thousand Oaks, CA: Russell Sage.

Chase-Lansdale, P.L., Mott, F.L., Brooks-Gunn, X, & Phillips, D.A. (1991). Children of the National Longitudinal Survey of Youth (NLSY): A unique research opportunity. *Developmental Psychology*, 27(6), 918-931.

Chase-Lansdale, P.L. & Votruba-Drzal, E. (2004). Human development and the potential for change from the perspective of multiple disciplines. In P.L. Chase-Lansdale, K. Kiernan, & R.J. Friedman (Eds.), *Human Development Across Lives and Generations: The Potential for Change*. New York: Cambridge University Press (pp. 343- 366).

Cohen, P.N. & Bianchi, S.M. (1999). Marriage, children and women's employment: What do we know? *Monthly Labor Review*, 122(12), 22-31.

Commission on Family and Medical Leave (1996). *A Workable Balance: Report to Congress on Family and Medical Leave Policies*. Washington, DC: U.S. Department of Labour.

Currie, J. (2005). When do we really know what we think we know? Determining causality. In S. M. Bianchi and L. Casper (Eds.), *Work, Family, Health and Well-Being*. Mahwah NJ: Lawrence Erlbaum Associates.

Dench, S., Aston, J., Evans, C., Meager, N., Williams, M. & Willison, R. (2002). *Key Indicators of Women's Position in Britain*, Department of Trade and Industry, Women and Equality Unit.

Desai, T., Gregg, P., Steer, J. & Wadsworth, J. (1998). Gender in the labour market. In P. Gregg and J. Wadsworth (Eds.) *The State of Working Britain*. Manchester: Manchester University Press.

Desai, S., & Waite, L.J. (1991). Women's employment during pregnancy and after the first birth: Occupational characteristics and work commitment. *American Sociological Review*, 56, 551-566.

Dex, S. (1992). Women's part-time work in Britain and the United States. In B. Warne, K.L.P. Lundy, and L. Lundy (Eds.), *Working Part-time: Risks and Opportunities*, 161-164. New York: Praeger.

Dex, S. & Joshi, H. (2005). *Children of the 21st Century: From Birth to Nine Months*. Bristol: The Policy Press.

Dex, S., Joshi, H., Macran, S. McCulloch, A. (1998). Women's employment transitions around child bearing. *Oxford Bulletin of Economics and Statistics*, 60(1), 79-98.

Dex, S. & Ward, K. (2007). *Parental care and employment in early childhood. Analysis of the Millennium Cohort Study (MCS) sweeps 1 and 2*. Working Paper Series No. 57. Institute of Education, University of London.

DfES (Department for Education and Skills) (1998). *Meeting the Childcare Challenge: A Framework and Consultation Document* (Green Paper). Available electronically at: <http://www.surestart.gov.uk/publications/?Document=523>.

Duncan, G.J. (1991). Made in heaven: Secondary data analysis and interdisciplinary collaborators. *Developmental Psychology*, 27, 949-951.

Duncan, G.J. & Magnuson, K. (2005). Can family socioeconomic resources account for racial and ethnic test score gaps? *Future of Children*, 15(1), 35-54.

Earle, A.E. (2002). What causes job loss among former welfare recipients: The role of family health problems. *JAMWA*, 57, 5-10.

Ermisch, J. & Francesconi, M. (2000). The Effects of Parents' Working on Children's Educational Attainment, ISER Working Paper 2000-28, University of Essex.

Feinstein, L. (2003) Inequality in the early cognitive development of British children in the 1970 cohort. *Economica*, 70, 277, 73-98.

Felmlee, D. (1995). Causes and consequences of women's employment discontinuity. *Work and Occupations*, 22(2), 167-187.

- Ferri, E., Bynner, J. & Wadsworth, J. (2003). *Changing Britain, Changing Lives: Three Generations at the Turn of the Century* (Bedford Way Papers). London, UK: Institute of Education.
- Flanagan, K., & West, J. (2004). *Children Born in 2001: First Results from the Base Year of the Early Childhood Longitudinal Study, Birth Cohort (ECLS–B)* (NCES 2005–036). U.S. Department of Education, Washington, DC: National Center for Education Statistics.
- Galambos, N.L. & Lerner, J.V. (1987). Child characteristics and the employment of mothers with young children: A longitudinal study. *Journal of Child Psychology and Psychiatry*, 28(1), 87-98.
- Gennaro, S. (1996). Leave and employment in families of preterm low birthweight infants. *IMAGE: Journal of Nursing Scholarship*, 28, 193-198.
- Gornick, J.C., Meyers, M.C., & Ross, K.E. (1998). Public policies and the employment of mothers: A cross-national study. *Social Science Quarterly*, 79(1), 35-54.
- Gregg, P. & Harkness, S. (2004). Welfare reform and lone parents employment. In R. Dickens, P. Gregg and J. Wadsworth (Eds.), *The Labour Market Under New Labour: State of Working Britain*. New York, NY: Palgrave.
- Gregg, P. & Waldfogel, J. (2005). Symposium on parental leave, maternal employment, and child outcomes: An introduction. *The Economic Journal*, 115(501), F1-F6.
- Gregg, P., Washbrook, E., Propper, C., & Burgess, S. (2005). The effects of a mother's return to work decision on child development in the UK. *The Economic Journal*, 115(501), F48-F80.
- Gustafsson S., Wetzels C., Vlasblom, J. D. & Dex, S. (1996). Labour force transitions in connection with child birth: A panel data comparison between Germany, Great Britain, and Sweden. *Journal of Population Economics*, 9, 223–246.
- Han, W. & Waldfogel, J. (2003). Parental leave: The impact of recent legislation on parent's leave taking. *Demography*, 40(1), 191-200.
- Hansen, K. (2006). *Millennium Cohort Study First and Second Survey: A Guide to the Datasets*. London: Centre for Longitudinal Studies.
- Hansen, K., Joshi, H., & Verropoulou, G. (2006). Childcare and mothers' employment: Approaching the millennium. *National Childcare Economic Review*, 195(1), 84-102.
- Hantrais, L. (1999). Contextualization in cross-national comparative research. *International Journal of Social Research Methods*, 2(2), 93-108.
- Hantrais, L. & Mangen, S. (1999). Cross-national research. *International Journal of Social Research Methods*, 2(2), 91-92.

- Heckman, J. (1993). What has been learned about labor supply in the past twenty years? *AEA Papers and Proceedings*, 83(2), 116-121.
- Heidemann, B., Joesch, J. & Rose, E. (2004). More daughters in child care? Child gender and the use of nonrelative child care arrangements. *Social Science Quarterly*, 85(1), 154-168.
- Heymann, J., Earle, A., Simmons, S., Breslow, S. & Keuhnhoff, A. (2004). *The work, family, and equity index: Where does the United States stand globally?* Boston: The Project on Global Working Families. Available electronically at http://www.hsph.harvard.edu/globalworking_families/images/report.pdf
- Hills, J. & Waldfogel, J. (2004). A "third way" in welfare reform? Evidence from the United Kingdom. *Journal of Policy Analysis and Management*, 23(4), 765-788.
- Hofferth, S. (1996). Effects of public and private policies on working after childbirth. *Work and Occupations*, 23(4), 378-404.
- Hofferth, S. (2005). Secondary data analysis in family research. *Journal of Marriage and Family*, 67, 891-907.
- Hoffman, L.W. & Youngblade, L.M. (1999). *Mothers at Work: Effects on Children's Well-Being*. New York: Cambridge University Press.
- Hudson, M. Lissenburgh, S. & Sahin-Dikmen M. (2004). *Maternity and Paternity Rights in Britain 2002: Survey of Parents*. Department of Work and Pensions In-house Report No.131. Available electronically at <http://www.dwp.gov.uk/asd/asd5/ih2003-2004/IH131.pdf>
- Joesch, J.M. (1997). Paid leave and timing of women's employment before and after birth. *Journal of Marriage and the Family*, 59, 1008-1021.
- Joshi, H. (1984). *Women's Participation in Paid Work: Further Analysis of the Women and Employment Survey*, Department of Employment Research Paper, No. 45, London.
- Joshi, H. (2002) Production, Reproduction and Education: women, children and work in contemporary Britain. *Population and Development Review*, 28(3), 445-474.
- Joshi, H., Macran, S., & Dex, S. (1996). Employment after childbearing and women's subsequent labour force participation: Evidence from the British 1958 Birth Cohort. *Journal of Population Economics*, 9(3), 325-348.
- Joshi, H. & Paci, P. (1998). *Unequal Pay for Women and Men: Evidence from the British Birth Cohort Studies*. Cambridge, Mass: MIT Press
- Kamerman, S. (2000). Parental leave policies: An essential ingredient in early childhood education and care policies. *Social Policy Report*, 14(2), 3-15.

- Keating, D.P. & Simonton, S.Z. (2005). *Developmental health effects of human development policy*. National Poverty Center Working Paper, available at http://www.npc.umich.edu/publications/working_papers/?publication_id=94&
- Killingsworth, M. (1983). *Labour Supply*. Cambridge University Press, Cambridge.
- Klerman, J.A., & Leibowitz, A. (1999). Job continuity among new mothers. *Demography*, 36(2), 145-155.
- Layzer, J. & Collins, A. (2000). *National Study of Child Care for Low-Income Families: State and Community Substudy. Interim Report*. Abt Associates. Prepared for U.S. Department of Health and Human Services, Administration for Children and Families.
- Love, J.M., Eliason-Kisker, E., Ross, C., Brooks-Gunn, J. & Paulsell, D. (2002). *Making a Difference in the Lives of Infants and Toddlers and Their Families: The Impacts of Early Head Start*. Washington, DC: US Department of Health and Human Services.
- Lundberg, S. & Rose, E. (2000). Parenthood and the earnings of married men and women. *Labour Economics*, 7, 689–710.
- Marshall, K. (1999). Employment after childbirth. *Perspectives on Labour and Income*, 11(3), 18-25.
- Melhuish, E.C. (2004). A literature review of the impact of early years provision on young children, with emphasis given to children from disadvantaged backgrounds. *Report to the Comptroller and Auditor General*. London: National Audit Office. Available at http://www.nao.org.uk/publications/nao_reports/03-04/268_literaturereview.pdf
- Mezey, J., Shumacher, R., Greenburg, M., Lombardi, J., & Hutchins, J. (2002). *Unfinished agenda: Child care for low-income families since 1996: Implications for federal and state policy*. Washington, DC: Center for Law and Social Policy.
- National Center for Education Statistics. (2005). *Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) Methodology Report for the 9-Month Data Collection (2001-2002)*. Available electronically at <http://nces.ed.gov/pubs2005/2005147.pdf>
- O'Connell, M. (1990). Maternity leave arrangements: 1961-1985. *Current Population Reports, Special Studies series P-23, no. 165*. US Census Bureau.
- OPCS (1993). *General Household Survey 1991*. London: HMSO.
- Overturf Johnson, J. & Downs, B. (2005, October). *Maternity leave and employment patterns of first-time mothers: 1961–2000 (Current Population Report P70-103)*. Washington, DC: U.S. Census Bureau. Retrieved March 6, 2007, from www.census.gov/prod/2005pubs/p70-103.pdf.
- Paneth, N.S. (1995). The problem of low birth weight. *Future of Children*, 5(1), 19-34.

- Pavetti, L. (2000). Welfare policy in transition: Redefining the social contract for poor citizen families with children. *Focus*, 21(2), 44-50. Madison, WI: Institute for Research on Poverty.
- Plewis, I. Calderwood, L., Hawkes, D. & Nathan, G. (2004). *Changes in the NCDS and BCS70 Populations and Samples over Time*. Centre for Longitudinal Studies, University of London.
- Rose, R. (1991) Comparing forms of comparative analysis. *Political Studies*, 39(3), 446–462.
- Ross Phillips, K. (2002). *Parent work and child well-being in low-income families*. (Occasional paper, no.56). Washington, DC: Urban Institute.
- Ross Phillips, K. (2004). *Access to Leave among Working Parents*. Policy Brief No. B-57 in the New Federalism: National Survey of America's Families Series. Washington, DC: The Urban Institute.
- Ruhm, C.J. (1997). Policy watch: The Family and Medical Leave Act. *Journal of Economic Perspectives*, 11(3), 175-186.
- Ruhm, C.J. (2000). Parental leave and child health. *Journal of Health Economics*, 19(6), 931-60.
- Ruhm, C.J. (2004). Parental employment and child cognitive development. *Journal of Human Resources*, 39(1), 155–92.
- Shephard, P., Smith, K., Joshi, H., & Dex, S. (2004). *The Millennium Cohort Study First Survey: Guide to the SPSS Data Set*. London: Centre for Longitudinal Studies, Institute of Education, University of London.
- Shonkoff, J.P., & Phillips, D.A. (Eds.) (2000). *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, DC: National Academy Press.
- Smolensky, E. & Gootman, J. (Eds.) (2003). *Working Families and Growing Kids*, Washington, DC: National Academy Press.
- Sylva, K. & Pugh, G. (2005). Transforming the early years in England. *Oxford Review of Education*, 31(1), 11-27.
- Sylva, K., Stein, A. Leach, P., Barnes, J. Malmberg, L. & the FCCC team. (2007) Child care in England in the first year. *Early Childhood Research Quarterly*, 22, 118-136.
- Tanaka, S. (2005). Parental leave and child health across OECD countries, *Economic Journal*, 115, F7–28.
- U.S. Census Bureau. (2001). *Maternity leave and employment patterns: 1961-1995*. Washington, DC: Household Economic Studies.

U.S. Department of Education. (2005). *Postsecondary participation rates by sex and race/ethnicity: 1974–2003 (NCES Issue Brief 2005-028)*. Washington, DC: National Center for Education Statistics. Retrieved March 15, 2007, from <http://nces.ed.gov/pubs2005/2005028.pdf>

U.S. Department of Health and Human Services (2000). *Change in Welfare Caseloads Since Enactment of New Welfare Law: Total TANF Recipients by State*. Washington, DC: Author.

U.S. Department of Labor. (2006). *National compensation survey: Employee benefits in private industry in the United States*. (Bureau of Labor Statistics). Washington, DC. Retrieved March 6, 2007, from www.bls.gov/ncs/ebs/sp/ebsm0004.pdf.

U.S. General Accounting Office. (1997). *Welfare Reform: Implications of Increased Work Participation for Child Care (GAO/HEHS 97-75)*. Washington, DC: U.S. General Accounting Office.

Verropoulou & Joshi, H. (2007). *Maternal Employment and Child Outcomes: Analysis of Two British Cohort Studies*. Centre for Longitudinal Studies, Institute of Education, University of London. Available electronically at <http://www.smith-institute.org.uk/pdfs/maternal-employment.pdf>

Viitanen, T.K. (2005). Cost of childcare and female employment in the UK. *Labour*, 19, 149-70.

Vlasblom, J.D., & Schippers, J. (2006). Changing dynamics in female employment around childbirth: Evidence from Germany, the Netherlands, and the UK. *Work, Employment and Society*, 20(2), 329-347.

Waldfogel, J. (1998). The family gap for young women in the United States and Britain: Can maternity leave make a difference. *Journal of Labor Economics*, 16(3), 505–545.

Waldfogel, J. (1999). Family leave coverage in the 1990s. *Monthly Labor Review*, 122, 13-21.

Waldfogel, J. (2001a, September). Family and medical leave: Evidence from the 2000 surveys. *Monthly Labor Review*, 17-23.

Waldfogel, J. (2001b). What other nations do: International policies toward parental leave and child care. *The Future of Children*, 11(4), 99-111.

Waldfogel, J. (2002). Child care, women's employment, and child outcomes. *Journal of Population Economics*, 15, 527 – 548.

Waldfogel, J. (2004). *Social Mobility, Life Chances and the Early Years*. CASEpaper 088. London: Centre for Analysis of Social Exclusion, London School of Economics.

Waldfogel, J., Han, W. & Brooks-Gunn, J. (2002). The effects of early maternal employment on Qchild cognitive development, *Demography*, 39(2), 369–92.

Waldfogel, J., Higuchi, Y. & Abe, M. (1999). Family leave policies and women's retention after childbirth: Evidence from the United States, Britain, and Japan. *Journal of Populations Economics*, 12, 523-545.

Wexler, S. (1997). Work/family policy stratification: The examples of family support and family leave. *Qualitative Sociology*, 20(2), 311-322.

Appendix : Tables & Figures

Table 1. Description of the Millennium Cohort Study and the Early Childhood Longitudinal Study-Birth

	MCS	ECLSB
Population	Nationally-representative sample of children born between September 2000-January 2002	Nationally-representative sample of children born between January and December 2001
Design	Longitudinal, over samples areas with large proportions of ethnic minorities and child poverty.	Longitudinal, over samples twins, Asian and Pacific Islander children, American Indian children, and children with moderately low and very low birth weight
Sample Size	18552 families; 18818 children	9859 families; 10688 children
Periodicity	9 months, age 3, age 5, age 7	9 months, age 2, age 4, Kindergarten (ages 5 and 6)
Types of Assessment	<p>Parent interviews (both resident mother and father); direct child assessment; survey of older siblings; interviewer assessment of neighbourhood conditions; teacher questionnaire.</p> <p>Sub-studies: health visitors, fertility, early child care observation</p> <p>Linkage of data with birth records and hospital episodes.</p>	<p>Birth certificate data; parent interview; direct child assessment; resident and non-resident father interviews; early care and education provider interviews; early care and education observations; teacher questionnaire.</p>
Data Availability	Public access	Public access with restricted use
Sponsors	Economic & Social Research Council and a consortium of Government Departments headed by the Office of National Statistics (ONS)	U.S. Department of Education, National Center for Education Statistics in collaboration with several federal health, education and human services agencies
Study Website	http://www.cls.ioe.ac.uk	http://nces.ed.gov/ecls/Birth.asp

Table 2. Topics Covered in the MCS and ECLSB Cohort Studies

	MCS ^a				ECLSB			
	9 mos	Age 3	Age 5		9 mos	Age 2	Age 4	Age 5/6
Child and Parent Demographics	✓	✓	✓		✓	✓	✓	✓
Children's Development								
Physical health status & conditions	✓	✓	✓		✓	✓	✓	✓
Nutrition & physical activity	✓	✓	✓		✓	✓	✓	✓
Motor development	✓	✓	✓		✓	✓	✓	✓
Cognitive & language development		✓	✓		✓	✓	✓	✓
Social & emotional development	✓	✓	✓		✓	✓	✓	✓
Temperament	✓	✓	✓		✓	✓	✓	✓
Parent Characteristics								
Physical health	✓	✓	✓		✓	✓	✓	✓
Nutrition and health behaviours	✓	✓	✓		✓	✓	✓	✓
Psychological well-being	✓	✓	✓		✓	✓	✓	✓
Cognitive skills	✓	✓	✓		✓	✓	✓	✓
Marital/partner relationships	✓	✓	✓		✓	✓	✓	✓
Social support	✓	✓	✓		✓	✓	✓	✓
Parenting behaviour & attitudes	✓	✓	✓		✓	✓	✓	✓
Beliefs about child care & school	✓	✓	✓		✓	✓	✓	✓
Family of origin characteristics	✓	✓	✓		✓	✓	✓	✓
Family Environment								
Household structure	✓	✓	✓		✓	✓	✓	✓
Quality of home environment	✓	✓	✓		✓	✓	✓	✓
Father involvement	✓	✓	✓		✓	✓	✓	✓
Parent-child interaction	✓	✓	✓		✓	✓	✓	✓
Media use		✓	✓		✓	✓	✓	✓
Family routines and practices		✓	✓		✓	✓	✓	✓
Family Resources and Service Use								
Household income & earnings	✓	✓	✓		✓	✓	✓	✓
Public assistance use	✓	✓	✓		✓	✓	✓	✓
Assets & material well-being	✓	✓	✓		✓	✓	✓	✓
Health insurance & health care	✓	✓	✓		✓	✓	✓	✓
Neighbourhood Quality	✓	✓	✓		✓	✓	✓	✓
Geographical Location	✓	✓	✓		✓	✓	✓	✓
Child Care								
Intensity and timing of care	✓	✓	✓		✓	✓	✓	✓
Types of arrangements	✓	✓	✓		✓	✓	✓	✓
Provider characteristics	✓	✓	✓		✓	✓	✓	✓
Structural and process quality ^b	✓	✓	✓		✓	✓	✓	✓
Schools								
Demographics			✓					✓
Programs			✓					✓
Family-school interaction			✓					✓

Note. ^a The fourth data collection for the MCS study (MCS4, age 7) is in the planning stages and not included here. ^b Both the MCS and ECLSB studies collect survey data on characteristics of child care arrangements for the full sample and conduct child care observations for a subset of the sample.

Table 3. Descriptive Statistics for the MCS and ECLSB Analysis Samples

	MCS		ECLSB	
	Mean		Mean	
Child Characteristics				
Child is male	51.3		51.0	
First Birth (%)	42.6		41.6	
Multiple Birth (%)	2.9		2.9	
Low/Very Low Birth Weight (%)	7.3		7.3	
Pregnancy was intended (%)	58.4		59.1	
Mother Characteristics				
Age at Child's Birth (%)				
	14-19	7.2	11.0	
	20-24	15.9	25.3	
	25-29	27.4	26.5	
	30-34	31.8	23.5	
	35-39	15.4	11.3	
	40 plus	2.3	2.4	
Highest Level of Education (%)				
	No Qualifications	11.9	No High School Completion	27.6
	NVQ1	8.1	High School Diploma/ General Equivalency Degree	21.7
	NVQ2 (GCSE)	29.8	Vocational or Tech Program	2.2
	NVQ3 (A-level)	14.2	Completed Some College	24.1
	NVQ4 plus (Degree or higher)	33.7	Bachelor's Degree or Higher	24.4
	Overseas or other educational qualifications	2.2		N/A
Ethnicity				
	White	89.6	White	57.4
	Black	2.6	Black	13.9
	Indian	1.8	Hispanic	22.9
	Pakistani/Bangladeshi	3.6	Other	5.8
	Mixed/Other	2.4		
	Employed during year prior to birth	72.8		71.2
Family Characteristics				
<i>Marital Status</i>				
	Single	13.7		20.4
	Cohabiting	25.1		14.4
	Married	61.2		65.2
	Employed partner/spouse in household	78.2		70.1
	Highly-educated partner/spouse in HH	40.1		23.6
	Number of other children in HH	0.92		1.13
		(.01)		(.01)
	Any non-parental adults in HH	7.3		11.5
	Non-English language used in HH	9.4		18.8
	Owner occupied housing	64.3		47.8
Geographical Region				
	England	81.9	South	36.9
	Wales	5.2	Northeast	16.9
	Scotland	9.4	Midwest	22.3
	Northern Ireland	3.5	West	23.9
Observations		18389		10244

Note. Standard errors for continuous variables appear in parentheses. Percentages reflect weighted estimates.

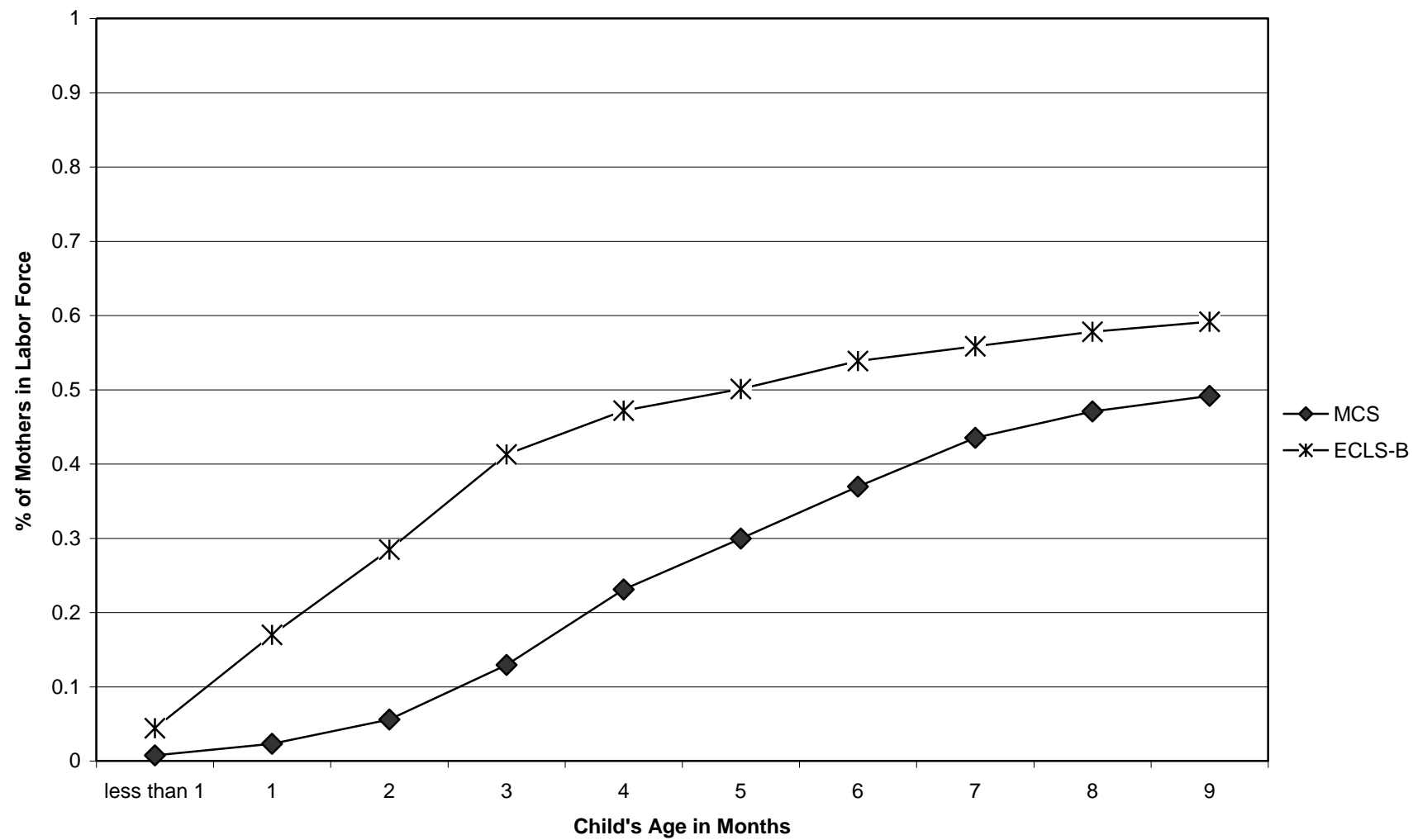
Figure 1. Mothers' Labor Force Participation During Children's First 9 Months of Life

Table 4. Characteristics of Mothers' Early Employment in the MCS and ECLSB

	MCS		ECLSB
	(n=18389)		(n=10244)
Any work for pay during child's first 9 months	49%		59%
Timing of mother's post-birth employment			
0 – 6 weeks	2.3%		13.7%
7 weeks – 3 months	10.6%		27.6%
4 – 5 months	17.0%		8.8%
6 – 9 months	19.2%		9.0%
<i>For mothers employed at 9 months:</i>	<i>(n=7954)</i>		<i>(n=5143)</i>
Work schedule ^a :			
Part-time	72%		38%
Full-time	23%		62%
40+ hours per week	5%		14%
Works regular, daytime hours	54%		72%
Works at multiple jobs	N/A		5%

Note: Percentages reflect weighted estimates. "N/A" identifies items that were not ascertained as part of the survey.

^a Part-time employment is defined as less than 31 hours per week in the MCS, and less than 35 hours per week in the ECLSB.

Table 5. Multinomial Logistic Regressions Predicting Timing of Mother's Entry into Employment Following Child's Birth

	MCS					ECLSB			
	Employed 0-6 wks	Employed 7 wks-3 mos	Employed 4-5 mos	Employed 6-9 mos		Employed 0-6 wks	Employed 7 wks-3 mos	Employed 4-5 mos	Employed 6-9 mos
Child Characteristics									
Child is male	-0.132 (0.125)	0.028 (0.059)	-0.014 (0.056)	0.006 (0.049)		-0.126 (0.102)	-0.045 (0.088)	-0.049 (0.101)	0.012 (0.104)
First birth	-0.661 (0.309)*	-0.440 (0.129)**	-0.289 (0.123)*	-0.166 (0.127)		-0.329 (0.139) *	-0.060 (0.107)	0.152 (0.145)	0.003 (0.135)
Multiple birth	-3.334 (0.927)**	-0.552 (0.334)	-0.717 (0.271)**	-0.333 (0.241)		-0.815 (0.176) **	-0.461 (0.152) **	0.014 (0.163)	0.152 (0.140)
Low birth weight	-0.425 (0.320)	-0.633 (0.172)**	-0.304 (0.134)*	0.065 (0.109)		-0.346 (0.090) **	-0.209 (0.080) *	-0.057 (0.100)	-0.046 (0.118)
Pregnancy was intended	-0.204 (0.152)	-0.136 (0.074)	-0.180 (0.057)**	0.006 (0.063)		-0.232 (0.106) *	-0.053 (0.102)	-0.002 (0.137)	0.122 (0.145)
Mother Characteristics									
Mothers' Age									
14-19	0.581 (0.288)*	-0.554 (0.171)**	-0.735 (0.139)**	-0.531 (0.163)**		-0.078 (0.211)	-0.225 (0.178)	0.280 (0.246)	0.054 (0.197)
20-24	0.389 (0.205)	0.216 (0.085)*	-0.144 (0.091)	-0.176 (0.093)		0.022 (0.126)	-0.170 (0.128)	0.026 (0.178)	-0.053 (0.182)
(omitted) 25-29									
30-34	-0.167 (0.169)	-0.388 (0.084)**	-0.091 (0.072)	0.081 (0.068)		-0.295 (0.118) *	0.037 (0.101)	0.052 (0.165)	0.092 (0.127)
35-39	-0.120 (0.224)	-0.577 (0.108)**	-0.300 (0.085)**	0.124 (0.084)		-0.499 (0.152) **	0.008 (0.114)	0.246 (0.166)	-0.261 (0.182)
40 plus	-0.057 (0.331)	-0.649 (0.248)**	-0.451 (0.180)*	-0.142 (0.186)		-0.079 (0.282)	0.073 (0.229)	0.374 (0.277)	-0.260 (0.344)
Mother's Ethnicity									
(omitted) White					(omitted) White				
Black	-1.871 (0.560)**	-0.104 (0.187)	0.109 (0.189)	0.415 (0.134)**	Black	-0.161 (0.142)	0.284 (0.146)	0.520 (0.145)**	0.326 (0.152)*

	MCS					ECLSB			
	Employed 0-6 wks	Employed 7 wks-3 mos	Employed 4-5 mos	Employed 6-9 mos		Employed 0-6 wks	Employed 7 wks-3 mos	Employed 4-5 mos	Employed 6-9 mos
Indian	-0.076 (0.499)	-0.625 (0.291)*	-0.934 (0.259)**	0.234 (0.184)	Hispanic	0.022 (0.156)	0.316 (0.154) *	0.330 (0.152) *	0.355 (0.177) *
Pakistani/Bangladeshi	-0.488 (0.538)	-0.957 (0.248)**	-0.838 (0.271)**	-0.622 (0.205)**					
Mixed/Other	-0.071 (0.456)	-0.145 (0.208)	-0.161 (0.223)	-0.469 (0.258)	Mixed/Other	0.171 (0.148)	0.062 (0.142)	0.102 (0.158)	-0.200 (0.152)
Mothers' Education									
(omitted) No qualifications					(omitted) No degree				
NVQ1	0.473 (0.340)	0.231 (0.153)	0.550 (0.167)**	0.114 (0.140)	High school degree	0.455 (0.138)**	0.364 (0.105)**	0.080 (0.165)	-0.044 (0.154)
NVQ2 (GCSE)	0.412 (0.274)	0.539 (0.131)**	0.830 (0.136)**	0.171 (0.113)	Vocational training	0.600 (0.356)	0.772 (0.260)**	-0.046 (0.392)	0.379 (0.349)
NVQ3 (A-level)	0.632 (0.317)*	0.498 (0.147)**	0.912 (0.150)**	0.415 (0.120)**	Some college	0.583 (0.174)**	0.619 (0.101)**	0.254 (0.155)	0.140 (0.156)
NVQ 4 plus (degree or above)	0.888 (0.290)**	0.394 (0.141)**	0.986 (0.142)**	0.718 (0.109)**	4-yr degree or above	0.583 (0.180) **	0.655 (0.124)**	0.443 (0.189)*	0.141 (0.187)
Overseas/other qualification	0.785 (0.477)	0.123 (0.284)	-0.362 (0.274)	0.033 (0.226)					
Mother employed in prior yr	3.846 (0.389)**	3.843 (0.210)**	3.352 (0.167)**	2.448 (0.103)**		3.112 (0.190) **	2.712 (0.108) **	1.718 (0.133) **	0.803 (0.121) **
Family Characteristics									
Marital Status									
Single	-0.443 (0.311)	-0.452 (0.124)**	-0.626 (0.122)**	-0.933 (0.121)**		0.401 (0.154)*	0.385 (0.136)**	0.186 (0.168)	0.471 (0.187)*
Cohabiting	0.252	0.076	0.076	-0.112		0.460	0.634	0.421	0.811

	MCS					ECLSB			
	Employed 0-6 wks	Employed 7 wks-3 mos	Employed 4-5 mos	Employed 6-9 mos		Employed 0-6 wks	Employed 7 wks-3 mos	Employed 4-5 mos	Employed 6-9 mos
	(0.160)	(0.089)	(0.072)	(0.066)		(0.159)**	(0.139)**	(0.169)*	(0.175)**
# of other children in HH	0.429	-0.052	-0.324	-0.252		-0.099	-0.159	-0.094	-0.321
	(0.277)	(0.134)	(0.126)*	(0.136)		(0.120)	(0.099)	(0.155)	(0.132)*
# of other children-squared	-0.038	0.027	0.044	0.011		0.011	0.006	-0.004	0.027
	(0.053)	(0.028)	(0.027)	(0.033)		(0.022)	(0.021)	(0.034)	(0.025)
# of other adults in HH	0.300	0.293	0.445	0.218		0.114	0.074	0.230	-0.028
	(0.307)	(0.132)*	(0.108)**	(0.124)		(0.142)	(0.124)	(0.156)	(0.152)
Owner occupied housing	0.293	0.342	0.733	0.504		0.250	0.393	0.090	0.102
	(0.173)	(0.091)**	(0.087)**	(0.073)**		(0.106)*	(0.102)**	(0.137)	(0.116)
Non-English language spoken	-0.151	0.038	-0.104	-0.260		-0.247	-0.070	-0.342	-0.283
	(0.289)	(0.161)	(0.141)	(0.140)		(0.158)	(0.118)	(0.152)*	(0.182)
Geographical Region									
(omitted) England					(omitted) South				
Wales	0.065	0.075	0.158	0.045	Northeast	-0.571	-0.348	-0.059	0.049
	(0.191)	(0.089)	(0.074)*	(0.062)		(0.197)**	(0.158)*	(0.120)	(0.152)
Scotland	-0.539	0.192	0.278	0.095	Midwest	-0.013	-0.064	-0.104	0.183
	(0.185)**	(0.103)	(0.079)**	(0.076)		(0.139)	(0.111)	(0.147)	(0.116)
Northern Ireland	-0.378	0.169	0.401	0.175	West	-0.461	-0.443	-0.262	-0.276
	(0.230)	(0.102)	(0.079)**	(0.073)*		(0.136)**	(0.121)**	(0.123)*	(0.137)*

Note: Standard errors in parentheses. * significant at 5%; ** significant at 1%.

Base category: not employed at all in the first 9 months. MCS N = 18389; ECLSB, N = 10244. Percentages reflect weighted estimates.

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