Published in final edited form as:

Fam Relat. 2010 July 1; 59(3): 297–312. doi:10.1111/j.1741-3729.2010.00603.x.

Maternity Leave in Taiwan

Joyce Yen Feng[Professor] and

Department of Social Work at National Taiwan University

Wen-Jui Han[Associate professor]

Columbia University School of Social Work

Abstract

Using the first nationally representative birth cohort study in Taiwan, this paper examines the role that maternity leave policy in Taiwan plays in the timing of mothers returning to work after giving birth, as well as the extent to which this timing is linked to the amount of time mothers spend with their children and their use of breast milk versus formula. We found that the time when mothers returned to work coincided with the duration of guaranteed leave. In particular, mothers with a labor pension plan resumed work significantly earlier than mothers with no pension plan, and mothers with no pension plan returned to work significantly later than those with pension plans. The short leave of absence guaranteed under existing policies translated into mothers spending less time with their children and being more likely to exclusively use formula by 6 months after birth. In contrast, mothers who resumed work later than 6 months after birth were more likely to have not worked before birth or to have quit their jobs during pregnancy. Implications and recommendations for parental leave policy in Taiwan are discussed.

Keywords

breast-feeding; maternity leave policy; parental leave policy; Taiwan

Investing time and resources in the first few years of a child's life has been widely acknowledged to promote children's health and wellness, which in turn has important implications for later success in school and the workplace (Heckman, 2006). Traditional social expectations dictate that women take on most, if not all, child care responsibilities (Smolensky & Gootman, 2003). In recent decades, the tremendous increase in female labor force participation, particularly among mothers with very young children, has raised concern about whether and in what ways maternal absence during children's first years of life may compromise their well-being (Smolensky & Gootman, 2003).

This paper focuses on a policy that has great implications for working parents and for child well-being: parental leave policy.¹ We investigated such a policy in Taiwan, a country not considered on par economically with OECD (Organisation for Economic Cooperation and Development) countries like Japan, but which has played a significant economic role in the East Asian region over the past 40 years. In this paper, we provide the first ever evidence of how public policies in Taiwan correspond to mothers' employment, time spent with their children, and the use of breast milk versus formula after birth. We used data from the first

Address Correspondence: Wen-Jui Han, Columbia University School of Social Work, 1255 Amsterdam Avenue, New York, NY 10027. Tel: (212) 851-2233. Fax: (212) 851-2206. wh41@columbia.edu.

¹The terminology used to describe various types of leave policy across countries varies widely; thus, throughout this paper we use "parental leave" as an umbrella term that includes leaves for maternity, pregnancy, paternity, birth, adoption, and longer-term care of young children.

nationally representative birth cohort study in Taiwan, the Taiwan Birth Cohort Study (TBCS), which includes detailed information on the employment of mothers gathered during interviews at 6 months and then again at 18 months after birth.

Our study adds to the international body of literature on mothers' labor activity during their children's first months of life by examining parental leave policy in the context of an East Asian welfare regime. An essential element of the productivist welfare capitalism that characterizes East Asia's welfare systems is the subordination of social policy to the overriding policy objective of economic growth (Holliday, 2000) — a policy stance for which Taiwan is no exception. Within this policy context, Taiwan's parental leave policy is striking in its aim to allow modern families to balance their work and family demands. A policy with such progressive goals has two important consequences implications. One is the possibility that Taiwan could move away from a system in which welfare policy is subordinate to economic productivity and toward a social policy that has been widely adopted in European countries since the 1970s. Many European countries have endorsed equal social rights in the context of the social democratic welfare regime, in which social rights or the entitlement to government-provided benefits based on citizenship is endorsed, and that the goal of all social policies is to promote individual and family well-being as the first priority (Esping-Anderson, 1997; Holliday, 2000). Second, the recent enactment of a more generous parental leave policy in April 2009 in Taiwan is a step toward gender equity as currently endorsed and promoted in parental leave policies in Europe, particularly in Nordic countries.

Parental Leave Policy

The general aim of parental leave policy is to protect the employment rights of mothers and the incomes of families during the period of disruption around the birth of a baby. Previous studies have shown that allowing mothers to stay home with their newborns results in healthier children and improves the position of women in the workplace (Ruhm, 2000). Most, if not all, of the European OECD countries believe these policies jointly protect the physical health of working women and their children and safeguard families' economic positions (Kamerman, 2000).

Previous research suggests that when it is offered, women take advantage of leave opportunities; in addition, the opportunity for leave levels the playing field between men and women at least a bit. For example, studies in the United States have found leave laws to be associated with more leave-taking (Han & Waldfogel, 2003; Han, Ruhm, & Waldfogel, 2009; Waldfogel, 1999). Evidence also indicates that access to leave may reduce labor market inequalities between men and women by facilitating continuous employment and reducing wage penalties associated with motherhood (Glass & Riley, 1998; Hofferth, 1996; Joesch, 1997).

While parental leave mandates may provide job protection, prior studies have shown that the availability of leave may also accelerate re-entry into the workforce. For example, using a sample from the United States, Klerman and Leibowitz (1997) showed that the median time away from work for women receiving either paid or unpaid leave was about 7 weeks. In contrast, the typical mother who quit her job at or immediately before childbirth did not return to work for more than a year. Evidence from Sweden and Denmark also indicates that a higher compensation rate of parental leave is related to a generally longer stay at home, but

mothers who are not employed prior to childbirth tend to enter the work force² later than those who do (Pylkkänen & Smith, 2003).

Parental Leave Policy and Child Health Outcomes

The argument for parental leave policy also has its roots in the child development literature. Psychologists, sociologists, and economists have pointed out the importance of the parent-child relationship in (a) developing a child's trust and sense of self, (b) helping children understand and express language, (c) developing a variety of skills and solving cognitive tasks, and (d) aiding in the development of children's emotional capacities. Concerns have thus been raised about maternal employment in the first year of a child's life, when children are so dependent on their parents for care. Indeed, previous studies have found that early maternal employment may have adverse consequences for child well-being (e.g., Brooks-Gunn, Han, & Waldfogel, 2002).

The timing of when a mother returns to work or enters the workforce after giving birth is linked (either directly or indirectly) with the time mothers spend with their children. Mothers who return to work sooner may have less time to spend with their newborns than mothers who return to work later. Studies using samples from the U.S. have found that first-year maternal employment is associated with lower cognitive achievement at age 3, which may persist into first grade (Brooks-Gunn et al., 2002; Han, Waldfogel, & Brooks-Gunn, 2001; Ruhm, 2004). Studies in the U.K. have had similar findings (Ermisch & Francesconi, 2000; Gregg, Washbrook, & the ALSPAC Study Team, 2003).

Several studies have linked parental leave policy with positive child health outcomes. Using data on 16 European countries, Ruhm (2000) found that parental leave has favorable and possibly cost-effective impacts on child health, including reductions in low birth weight and the death of infants and young children. Additionally, Tanaka (2005) found that the paid parental leave (not unpaid leave) provided by 16 OECD countries from 1969–2000 was significantly associated with improved infant health outcomes, such as a lower infant mortality rate and a decreased rate of low birth weight.

Parental Leave Policy and Breastfeeding Choices

Other lines of research have shown that women who stay home longer are more likely to breastfeed than women who quickly return to work. The benefits of breast-feeding have now been widely acknowledged, leading the World Health Organization (WHO) to recommend exclusive breastfeeding for the first six months of life (WHO, 2005). Many studies link breast feeding with a decreased incidence or severity of many diseases (e.g., lower respiratory infection and chronic digestive disease), reductions in infant mortality from a variety of causes, and possibly enhanced cognitive development (Gibson-Davis & Brooks-Gunn, 2006; Hetzner, Razza, Malone, & Brooks-Gunn, 2009).

Because parental leave policies affect when a woman is likely to return to the workforce, they can impact the incidence of breastfeeding. The length of maternity leave has been shown to be positively associated with the duration of breastfeeding (Hammer, Bryson, & Agras, 1999; Visness & Kennedy, 1997). A recent study using a U.S. sample found that an early return to work (e.g., within 12 weeks after the birth) was associated with a reduction in breast-feeding as well as increases in children's externalizing behavior problems (Berger, Hill, & Waldfogel, 2005). More recent results from a U.S. sample revealed some potential negative effects on children's health and cognitive development for families using only

²In this paper, we use work and employment interchangeably to refer to women's paid employment in the labor market. However, we acknowledge that all mothers work whether it is paid or unpaid and whether it is inside or outside the home.

formula compared to only breast milk or a combination of breast milk and formula (Hetzner et al., 2009).

Though a new mother's decision about when to return to work involves personal choices, available resources often heavily influence this timing. Previous cross-national research has shown consistently that leave policy matters (Gornick & Meyers, 2004; Gornick, Meyers, & Ross, 1998; Ruhm, 2000). Lengthy parental leave rights are the norm throughout Europe, and more recently, Canada, and this entitlement is associated with mothers taking longer leave after childbirth (Gornick & Meyers, 2003). The following section provides a brief overview of how policies affect individual choices and how these choices, in turn, can lead to changes in policies.

Ecological Systems Theory and Parental Leave Policy

Bronfenbrenner's seminal work on Ecological Systems theory (2005) helps to explain how embedded societal values and cultures that are reflected in parental leave policies influence individual behavior and how this affects individual as well as family well-being in balancing work and family demands. National parental leave policies (a macrosystem) essentially transmits social values and expectations to parents with young children regarding the proportions of their time parents should devote to the workplace and to their young children. The amount of time parents who have young children devote to the workplace is also heavily influenced by workplace cultures, specifically the attitude of employers toward the costs and benefits a parent would pose to the organization. A specific example of this is deciding between the benefit of retaining a productive employee so as to save the organization the time and effort spent training a new employee who may or may not be productive vs. the cost of hiring temporary workers or requesting employees to cover the work that belongs to the parent-employee. In essence, the interaction between parental leave policy and parental behaviors in choosing the timing of the return to work and the amount of time spent with young children is a perfect example illustrating how macro systems (e.g., parental leave policy stipulates the amount of time parents have to stay home), mesosystems (e.g., the workplace culture and attitude toward parent-employees influence the parent-employee's behavior in returning to work earlier than the time off allotted by the parental leave policy stipulates), and microsystems (e.g., the quantity and quality of the time parents spending with children) interact with each other to shape the well-being of the individual child and the parent. The generosity of a national parental leave policy essentially impacts the ability of parents trying to combine work and family responsibilities. Of course, it is important not to forget that the trajectories of individual lives are influenced by the value orientation of a society and the policies and practices of the major institutions within the country. Considering parent's context at the chronosystem level (a system encompasses the dimension of time as it relates to a child's environments), a national parental leave policy also has a large impact on the likelihood of parents quitting their jobs to solely attend to their parental responsibilities (Klerman & Leibowitz, 1997). This means that if the guaranteed leave duration is shorter than what a parent would like to have, parents may be forced to leave their current position out of necessity. Quitting a job may result in a lower income throughout the parent's lifetime. Using the interaction between multiple systems of relationships as a foundation for conceptualization, this paper explore show a national parental leave policy may impact the experience of family life and the implicitly suggested consequences on children's well-being.

Parental Leave Policy Across the World

More than 100 countries have implemented some form of parental leave policy, with most assuring about 3 months of paid job absence and an average of 10 months of leave among OECD countries. For example, the UK provides 65 weeks of leave with 12 weeks at full

pay, and Canada provides 52 weeks of leave, 29 of which are fully paid. The other OECD countries particularly Nordic countries provide an average of 85 weeks of leave with almost half of the leave duration fully paid (e.g., Norway, Sweden). However, the U.S. lags behind other OECD countries, providing only 12 weeks of unpaid maternity leave that applies to only 50% of the workforce. We thus observe that in the United States, 41% of mothers are working within 3 months after birth, and 59% by 9 months (Han, Ruhm, Waldfogel, & Washbrook, 2008). In 2007 in the UK, although 71% of mothers worked in the year prior to giving birth (a rate similar to the U.S.), only 7% were working 3 months after birth, and fewer than half (48%) were working 9 months after birth (Han et al.). In contrast, in some European countries, many mothers stay home for a year or more after giving birth.

The welfare regimes developed by Esping-Anderson (1990) provide a fruitful context for understanding these various leave policies. He characterized social policy in Nordic countries (e.g., Norway, Sweden) as generally organized along *Social Democratic* lines, with generous entitlements linked to universal social rights. These countries have the most generous and most gender-equalitarian parental leave policies, granting mothers about 30 to 42 weeks of full-time wage replacement, and fathers receive comparatively generous benefits bolstered by incentives for take-up.

Social policies in the continental European countries (e.g., France, Germany) are largely *Conservative*, typically tied to earnings and occupation, with public provisions replicating market-generated distributional outcomes. Social policies are often shaped by the principle of subsidiarity as well, which stresses the primacy of family and community in providing dependent care and other social supports. The Conservative countries provide substantially less generous benefits for mothers – about 12 to 16 weeks of fully-paid leave – and provisions and incentives for fathers are generally weak.

Social benefits in English-speaking countries are described as *Liberal*, that is, organized to reflect and preserve consumer and employer markets, with most entitlements deriving from need based on limited resources. Provisions in the U.K. are minimal and the U.S. stands out as the exceptional case, as it is alone among the OECD countries with no national policy of paid maternity leave.

The Policy Context in Taiwan

Employees in Taiwan are protected by different social insurance programs (pension plans) according to their occupation. Though the details of maternity leave in each pension plan vary, all mothers with and without a pension plan in Taiwan are generally entitled to approximately 8 weeks of paid maternity leave. Taiwan has four social insurance programs that cover the majority of the workforce: public insurance (government employees, teachers, and military personnel), farmer's insurance, fisherman's insurance, and labor insurance (for employees not in the public sector or the occupations mentioned above). About 10% of the workforce, mainly in the service and sales sectors, is not covered by any pension plan.

Table 1 provides details about the parental leave policies of each of these four types of pension plans. The public plan, which has been in effect since 1947, grants all pregnant employees a total of 50 days of leave not counting weekends and holidays. Fathers are allowed 3 days of paid paternity leave. The plan also grants a childbirth allowance equal to 2 months of full salary. Consequently, a new mother covered by the public plan can receive a total of 4 months of full pay.

According to the Labor Standards Law of 1984, female employees covered by the labor pension plan are granted a total of 8 weeks of maternity leave, which can be taken before and/or after childbirth. Fathers can take 3 days of paid paternity leave. Female employees

who have worked for the employer for at least 6 months receive full pay during their maternity leave; those who have worked for the employer for less than 6 months receive half their monthly pay. New mothers are also eligible for a onetime payment equal to 1 month of their salary. Therefore, mothers receive a total of 3 months of salary. Women with a fisherman's or farmer's pension plan, as well as women without any pension plan, are guaranteed this same maternity leave by the Labor Standards Law, though women with no pension plan do not receive the one-time childbirth allowance.

Parental Leave in Taiwan in Comparison to Other Countries

Though many of Taiwan's social policies aim to stimulate and support economic development while emphasizing the primacy of family and traditional gender roles, parental leave policy in Taiwan is similar in many ways to that of Conservative countries and, to a lesser degree, Liberal countries. For example, Germany provides a 14-week maternity leave for working mothers (6 weeks before and 8 after birth), with 100% wage replacement. In addition, Germany provides a child-rearing leave until a child is 3 years old and the parent receives a pro-rated benefit. As shown in Table 1, mothers in Taiwan are eligible for 8 weeks of full-pay leave in addition to another 1 or 2 months of full pay (depending on the pension plan). Beginning in April 2009, a 2-year child-rearing leave was enacted in Taiwan with a 60% wage replacement during the first 6 months. Nonetheless, a short 8 weeks of leave is not even comparable to the meager 12 weeks of unpaid leave provided in the U.S., which lags behind other OECD countries. All in all, we may fairly say that the comparison of leave policies between Taiwan and the average OECD countries shines an unfavorable light on Taiwan's policies; however, when compared to the United States, Taiwan's leave policies may seem relatively generous.

Cross-national studies have identified five parental leave policy "best practices": (1) generous paid leave; (2) non-transferable quotas of leave for each parent; (3) universal coverage combined with modest eligibility restrictions; (4) financing structures that pool risks among many employers through a social insurance scheme; and (5) scheduling flexibility (Ray, Gornick, & Schmitt, 2009). The right to take parental leave on a part-time basis – that is, to combine leave-taking with part-time employment – has not been addressed as extensively by many countries as the other four policy practices. Previous studies have shown that flexible work arrangements are essential to achieving a more balanced work and family life (Hill, Hawkins, Ferris, & Weitzman, 2001) that may be associated with reduced job spillover into the home (Grice, McGovern, & Alexander, 2008; Hill et al.).

Additionally, a body of literature from Western countries emphasizes the association between the availability of childcare and the timing of mothers' return to work; however, we do not address this concern in the present study. Though we acknowledge the importance of this support in many societies, the majority of families in Taiwan rely heavily on grandparents or relatives to provide care for children before kindergarten. Thus, mothers in Taiwan are relatively less sensitive to the cost and availability of childcare compared to mothers in Western countries. Indeed, the large majority of children living in other types of families at 6 months of age are living with and are cared for by grandparents who live far away from their parents.

In the following sections, we explore two research questions: First, how does maternity leave policy in Taiwan influence when mothers return to work? Second, how is the time taken to resume work after birth linked to the amount of time mothers spend with their children and the use of breast milk versus formula? Answers to these questions will provide insights into the role played by public policy in mothers' post-birth employment and will allow us to examine, albeit indirectly, how public policy affects the daily life experiences of mothers and their infants.

Data and Method

Data

In this paper, we use data from the Taiwan Birth Cohort Study, a prospective longitudinal cohort study by the Bureau of Health Promotion at the Department of Health in Taiwan. Samples were selected using a multistage stratified systematic sampling design from the national birth registration from January to December 2005. A total of 369 towns in Taiwan were organized into 12 strata according to administrative divisions (four strata) and the fertility rate (three strata). Using the principle of proportion probability to size, 85 towns were randomly sampled from the 12 strata. Starting from January 2005, participants were randomly sampled from the study areas every month by birth announcement. A total of 24,200 pairs of mothers and their newborns were recruited. Children were and will be followed with home visits at the age of 6 months, 18 months, 3 years, and 5 years.

A total of 21,248 participants (87.8%) completed the first interview at 6 months between July 2005 and July 2006. Almost 60% of the lost cases were due to refusals to participate. Home interviews at 18 months were conducted between July 2006 and July 2007 with a response rate of 95%, resulting in a total of 20,172 mothers completing the interviews. Among participants who were lost between 6 and 18 months, 41% were due to refusals, 17% to having moved with no new address available, and another 12% to mothers who were abroad during the interview period. No significant differences in maternal education, marital status, family type, family income, or maternal work status were found between mothers who were followed successfully and those who dropped out of the study.

All study participants gave their informed consent, which was approved by the Ethics Review Board of the National Taiwan University College of Public Health. Information collected at birth, at 6 months, and at 18 months was available as of this writing. Basic demographic information on parents and infants were taken from the Taiwan national birth registration data; all other information was collected through home visits using a structured questionnaire. Because we are interested in the links between parental leave policy and the timing of mothers' resumption of work after birth, our analyzed sample includes 13,180 out of 20,172 mothers (65%). The 35% of mothers not included in our analyses did not work before pregnancy nor before birth and had no plans to start working after birth; these women were essentially unaffected by the maternity leave policy and differ from the mothers of interest here. Mothers who did not work tended to have lower incomes and to be younger, foreign-born, and less educated than mothers who worked.

Measures

Timing of mothers resuming work—This information was collected from a home interview with the mother at both 6 and 18 months of the child's life. Mothers were asked the month and date that they resumed work after birth. This information was then transformed into the number of days after birth that passed before the mother went back to work. This information was available for mothers who started working within 18 months after the child's birth. Only about 1% of mothers who worked during pregnancy had not returned to work by 18 months.

Pension plan (maternity leave benefits)—Women were asked if they had a pension plan before pregnancy, during pregnancy, and at 6 months and 18 months after birth. The information from "during pregnancy" was used to identify whether the woman had a pension plan that would provide her with maternity leave benefits. The pension plans included public, labor, farmer, military, fisherman, and other unknown (See Table 1 for

pension plan details). Because few mothers were covered by plans other than public and labor, all of the other pension plans were grouped together as “other.”

Time spent together with the child—Mothers were asked how many hours on average each day and how many days per week that they spent with their newborn, excluding children’s sleeping time. Thus, any time the mother spent with her child was counted no matter whether or not this was her primary activity (such as doing household chores while watching the child in the same room). This question was asked in the home interviews at both 6 and 18 months.

Feeding patterns—Mothers were asked in the home interview at 6 months how many days or months they used each of the following feeding options for their children: only breast milk, mostly breast milk supplemented with some formula, mostly formula supplemented with some breast milk, and only formula. The sum of these four feeding patterns equaled 180 days (6 months, but the total for some women was more than 180 days given that some of the 6-month interviews were conducted when the infant was 7 months old).

Child, parent, and family characteristics—Unless otherwise noted, each of the following characteristics was measured at the 6-month interview: whether the child was a boy (from birth registration); whether the child was a single birth (from birth registration); whether the child had a low birth weight (from birth registration), the mother’s age, educational level, and marital status at childbirth; whether the mother worked before giving birth; the number of children under age 6 in the home; the family’s income the year before the child’s birth; and the child’s living arrangement (i.e., two-parent, single-parent, or other) at 6 months. Of course, even with these extensive controls, the possibility remained that families differed in other ways that could not be controlled for in the data, and that might have biased the results.

In our regression analyses, we included an extensive set of covariates based on the child development and maternal employment literature (Smolensky & Gootman, 2003) to address, at least partially, issues of omitted variables and selection bias. It is possible that women who return to work earlier may be positively or negatively selected in terms of characteristics that affect their children’s development (see Ruhm, 2004); therefore, selection bias is a concern in estimating the effects of mothers resuming work. Failure to control for these characteristics could lead to the estimation of spurious positive or negative “effects” associated with the timing of mothers’ return to work. Given that in Taiwan economy-first considerations dominate the ideologies and the establishment of most of the existing social policies (Holliday, 2000), variables that are important to economic behaviors (e.g., employment and wages), such as education, family structure, and number of children, are likely to affect maternal behavior corresponding to the maternity leave policy. Our covariates attempt to control for such characteristics.

Results

Raw data (not shown) indicated that the average age of mothers at the birth of their child was about 29, with fathers being slightly older ($M = 33$). Almost all of the mothers were married at birth, but about 4% of children were living in single-parent families at 6 months. Approximately 14% of children were living in the “other” family type, mostly children living with grandparents (or relatives) while their parents were working and living at a different location. Both mothers and fathers had similar educational attainment of an average of 13 years of schooling. Approximately 13% of mothers were not born in Taiwan. Almost all of the children were single births, about half of the children were boys, and 41% of

children had siblings at birth. In the year before the child's birth, more than half of the families had incomes between 30,000 and 70,000 National Taiwan dollars (NT\$). In 2005, the poverty line in Taiwan was NT \$13,562, while the average monthly income was NT \$43,147. The currency conversion in 2005 was about 31 NT dollars to 1 US dollar.

With regard to employment, 75% of women who had ever worked before the pregnancy, during pregnancy, or after birth were working before pregnancy an average of 47 hours per week (among those who were working). This share dropped to 59% during pregnancy; the percentage was the same 6 months after birth and rose only to 60% by 18 months. An average of 45 working hours per week was observed across these three periods. Approximately 96% of fathers were working an average of 52 hours per week at all times. Regarding the mother's work status before and during pregnancy and then 6 months after childbirth (data not shown), almost all of the women who did not work before pregnancy (97%) did not work during their pregnancy either, and about 77% of the women who worked the whole year before pregnancy were still working during pregnancy. Notably, about 20% of women did not work at all during pregnancy even though they had been working the year before the pregnancy. One possible explanation is that women quit their jobs when they learned they were pregnant and did not intend to re-enter the workforce soon after the birth. Similar distributions were observed when we compared women's work status before pregnancy with work status 6 months after birth, as well as work status during pregnancy with work status 6 months after birth. Women who had weak labor force attachment—those who only worked for a few months during pregnancy—tended to not be working 6 months after the birth.

Regarding the timeframe in which women resumed work after birth, on average, 15% of mothers resumed work in the first month after birth, and another 50% resumed work by the second month, clustering around the 56th and 60th days, when the duration of guaranteed leave ended for labor and public pensions. All in all, 96% of mothers who worked during pregnancy resumed work in the first year after birth.

In raw data (not shown), approximately 11% of mothers did not have any pension plan during their pregnancy, while the majority of mothers (61%) had a labor pension plan that came with their jobs. About 9% of mothers were covered by the public pension plan. Raw data also indicate that women who were not working before birth spent the longest time at home before entering the workforce ($M = 189.65$ days); for working women, those who had no pension plan spent more time at home after birth ($M = 92.42$ days) than women who had public, labor, and other pension plans ($M = 67, 66, \text{ and } 74$ days, respectively).

As noted before, women in this survey were asked to report the time they spent with their children whether or not this was their primary activity. In general, raw data (not shown) indicate that at both 6 and 18 months, mothers who did not work before birth or who did not have a pension plan tended to spend more time with their children ($M = 49$ and 45 hours per week, respectively) than other groups of mothers (with an approximate average of 32 hours per week). The results by the time taken in resuming work confirmed this finding. Mothers resuming work between 42 and 60 days after birth tended to spend less time with their children at both 6 and 18 months of age (an approximate weekly average of 32 hours), whereas mothers resuming work 6 months after birth tended to spend more time with their children (an average of 60 hours or more per week).

In regard to breastfeeding, prior research using the same dataset found that in 2005 in Taiwan the prevalence of exclusive and partial breastfeeding (to any degree) was 17.9% and 47.0% during hospitalization, 22.3% and 48.4% at 1 month, and 16.7% and 17.4% at 3 months, respectively. A decline of more than 50% was noted between 1 and 3 months, in

addition to the extremely low rates of exclusive breastfeeding (Chien, Chu, Tai, & Lin, 2005; Chuang et al., 2007). Given this context, any policy that may improve the usage of any degree of breast milk may indeed be considered as an important step forward. In our analyses linking participation in the workforce with mothers' feeding habits, the raw data indicated that by six months after birth, mothers tended to give their children only breast milk if they resumed work after 6 months, whereas mothers resuming work before 6 months tended to use only formula.

Do Pension Plans Matter to the Timing of Mothers Resuming Employment?

Raw data suggested that pension plans may affect the timing of mothers' re-entry to the workforce after birth; this is confirmed in the first column of Table 2. The findings in the second column of Table 2 then show the association between pension plans and the timing of mothers' resumption of work after birth while controlling for an extensive set of demographic covariates. The results indicated that working mothers with a labor pension plan resumed work significantly earlier than working mothers with no pension plan (the comparison group), while mothers who did not work before birth resumed work significantly later. These results are consistent with previous findings using a U.S. sample (Klerman & Leibowitz, 1997) that very short maternity leave benefits (e.g., a short of leave duration such as 8 or 12 weeks and/or low or no wage replacement) push some women back into the workforce earlier (in contrast to losing their jobs). However, mothers with a public or other pension plan did not significantly differ from mothers without a pension plan in terms of their time in returning to work.

The disappearing significance for mothers with a public or other pension plan between columns 1 and 2 of Table 2 may indicate the importance of demographic characteristics, such as mother's education level, in explaining when these mothers chose to return to the workforce.

Is Maternity Leave Associated With the Amount of Time Mothers Spend with their Children?

We next examined how maternity leave benefits were associated with the amount of time mothers spent with their children within the first and second year of the child's life. As discussed earlier, many previous studies have posited that extended maternity leave benefits may increase the time that mothers invest in their children, particularly in the early days of their children's lives, and that an increased time investment may, in turn, promote healthier child well-being.

We used the type of pension plan to proxy maternity leave benefits because the timing of the resumption of work and leave benefits are both tightly connected with a mother's pension plan. Because information on pension plans in our dataset was collected before the child's birth, we at least partially avoid the possibility of reverse causality. We also experimented with using the number of days that the mother took to resume work. We acknowledge that this indicator is not ideal because (a) it was collected at the same data collection points (i.e., 6 and 18 months) as the information on the amount of time spent with the child; (b) the amount of time spent with the child is very likely lower for mothers who had already resumed work before 6 months; and (c) it is possible that the amount of time spent with children alters the time in which mothers resumed work instead of vice versa. When using this indicator, the results were similar to our finding that later returns to work were associated with more time spent with children, and the mother was more likely to use breast milk either alone or in combination with formula (results are not presented to preserve space but are available upon request).

Table 3 presents the results from the analysis that regressed the amount of time mothers spent with their children at 6 months and again at 18 months of age on pension plans along with all of the covariates presented in Table 2. Compared to working mothers with no pension plan, working mothers with a pension plan spent significantly fewer hours per week with their children at both 6 months and 18 months of age. In contrast, mothers who did not work before birth spent significantly more time with their children at both 6 and 18 months. These results, together with the results in Table 2, implicitly suggest that the duration of maternity leave benefits is associated with the amount of time mothers spend with their children. Given that pension plans in Taiwan allow for only a short leave of absence (e.g., 56 days after birth), the plans seem to push mothers to resume work earlier than they would otherwise. Moreover, the shorter stay at home translates into mothers spending less time with their children. Of course, the amount of time says nothing about the quality of care that mothers provide for their children, and thus the results should be interpreted with caution.

Is Maternity Leave Associated With the Mother's Feeding Patterns?

We next explored the links between the time in which mothers resumed work and the feeding patterns they used during the first 6 months. Again, we used pension plans to proxy maternity leave benefits in our analyses of the four feeding patterns described earlier. Specifically, mothers were asked to report the number of days or months in which they used each feeding pattern. Thus, four outcome variables were created to represent the number of days that mothers had used each of the feeding patterns by 6 months, as shown in Table 4; each of the four columns represents a separate regression analysis. Because a large number of zero days were observed for each of the four feeding patterns (except for the category of formula only), we used a zero-inflated Poisson regression first to take into account the selection of mothers into each of the four feeding patterns; then we regressed each of the four outcome variables on the maternity leave benefits, conditional on the selection. The results in Table 4 indicate that, compared to working mothers with no pension plan (who as a group resumed work later than those with pension plans), working mothers with a labor pension plan were significantly less likely to use only breast milk and more likely to use formula either alone or combined with some breast milk. Mothers with a public pension plan were significantly more likely to use a combination of breast milk and formula and less likely to use only formula. Mothers with other pension plans were significantly more likely to use mostly breast milk combined with some formula or to use formula only. Finally, mothers who did not work during pregnancy were significantly more likely to use formula combined with some breast milk and less likely to use mostly breast milk combined with some formula.

Robustness Check

An analysis using information on mother's work status before pregnancy (instead of mother's work status during pregnancy) also produced consistent results. Additionally, no significant association was found between father's work status and the timing of mothers resuming work. We conducted a supplementary analysis to determine if co-resident relatives (particularly grandparents) moderated the association between maternity leave benefits and the time in which mothers resumed work. Results suggested that mothers with pension plans indeed resumed work significantly earlier than those without pension plans if they resided together with relatives, whereas pension plans made no difference in the timing of mothers' return to the work force if they did not reside with relatives.

Discussion and Conclusion

With a pre-pregnancy labor force participation rate of 75% for women in Taiwan, the issue of providing equal opportunity for women in the labor force is more important than ever. At

the same time, it is equally important to acknowledge the roles women play after giving birth and how public policy may help protect their right to be a mother. In this paper, we investigate the status of these rights using the first ever nationally representative birth dataset in Taiwan. This paper is a first step in filling the knowledge gap of the role played by public policy in shaping mother's employment and childrearing behaviors after birth in Taiwan.

Our results suggest that mothers' return to work correspond to the policy mandates: half of the working mothers in this sample returned to work after taking the guaranteed duration of leave. In general, working mothers with a labor pension plan resumed work earlier than those with no pension plan; this was true both before and after controlling for family demographic characteristics.

Why might working mothers with no pension plan return to work later than those with pension plans? Although we can only speculate, one primary reason might be that mothers with no pension plan were more likely to change jobs after birth. Thus, these women probably quit their job at some point during pregnancy with the intention of looking for another job after spending some time with their baby. Indeed, mothers working at the same job before and after birth returned to work earlier than mothers with different jobs (56 days vs. 93 days, respectively). Specifically, approximately 17% of mothers with no pension plan resumed work after 4 months or more, compared to only 3% of mothers with a public pension plan and 5% of mothers with a labor pension plan. These results are consistent with previous findings using U.S. samples (Klerman & Leibowitz, 1997) that having maternity leave benefits may actually push some women to resume work earlier than they would otherwise, particularly when maternity leave is short with partial or no pay. In our cohort, this was probably the case as mothers with either public or labor pension plans resumed work earlier than mothers who did not have a pension plan.

These results imply that the current maternity leave benefits are effective to a certain degree, yet they are not adequate. When mothers want to stay home longer than their leave would allow, they may quit their jobs to be with their newborn. In our sample, these women quit their jobs during pregnancy and thus were categorized in this analysis as not working before birth. They subsequently returned to work but at a much later time with new jobs. This situation is not ideal. Though these mothers often return to work later than women with a pension plan and thus can spend more time with their children, they are also more likely to spend time searching for a job that ends up paying a lower wage than what they earned before parenthood.

Would these women have kept their jobs if their maternity leave benefits had provided a longer leave time? Although we cannot know for sure, the present data suggest this is the case. Of course, some women may have chosen to quit their jobs in order to attend solely to their maternal responsibilities. However, the fact that almost all of the women who worked during pregnancy returned to work sometime after birth tells us that these mothers still intended to return to the labor force. Thus, the question for policy makers is how public policy can allow mothers to retain their jobs while enjoying a length of leave that they consider sufficient to care for their children and that will not compromise their career prospects (and wages). We are mindful that a long duration of leave (such as those discussed in Ruhm, 2000) may eventually hurt women's wages; however, given the present findings, the guaranteed length of leave offered before April 2009 in Taiwan does not seem adequate, considering that the average duration of leave offered in European OECD countries is about 10 months. In the writing of this paper, the Taiwan administration passed a law on April 1, 2009 guaranteeing every mother with a newborn 2 years of child-rearing leave with 60% pay for the first 6 months. This policy, in the context of East Asian welfare systems that

emphasize economic growth, represents an important step toward providing family-friendly policies in line with those currently adopted in many OECD countries. Although beyond the scope of this paper, the changes we observed in April 2009 tie into Ecological Systems Theory (Bronfenbrenner, 2005): the inadequate duration of 8 weeks of leave has generated new demand for longer leave from working mothers, and such changes may move Taiwan toward equal opportunity employment laws. However, women in Taiwan have voiced their concern about whether their jobs will be preserved by their employers for the full 6 months of child-rearing leave. Perhaps this concern reflects, at least partially, the productivist world of welfare capitalism in the East Asian region in which social policy is strictly subordinate to the overriding policy objective of economic growth (Holliday, 2000). Therefore, despite a step forward by the government in providing women more choices in caring for their young children, the promotion of economic growth may compromise the family-friendliness of the policy.

Indeed, compared to mothers who did not work before birth or who quit their job at some point during pregnancy, the short leaves of absence provided by the various pension plans seem to translate into mothers spending less time with their children and being more likely to use only formula to feed their children by 6 months. Although we cannot conclusively linkless parent-child contact and the use of only formula in the first year with negative child health outcomes and cognitive development, the empirical evidence thus far from the United States suggests that they have at least some negative effects (Hetzner et al., 2009). From a policy perspective, if children's health and cognitive development are at risk because public policies provide inadequate choices, we have the responsibility to address this situation.

We are mindful of the limitations of the indicators used to proxy maternity leave benefits when we examined the time spent with children and feeding patterns. Specifically, although pension plans are a good proxy for maternity leave benefits, the heterogeneity of women with the same pension plan calls for caution when interpreting our results. For example, even though mothers with labor and public pension plans were guaranteed similar lengths of leave, mothers with a public pension plan were very likely to give their children breast milk, whereas few mothers with a labor pension plan did so, even after considering mother's characteristics such as education. The results on the timing of mothers' return to the work force are insightful in this regard because the amount of time spent with children and feeding patterns were very closely associated with when mothers resumed work. In particular, a clear pattern emerged in which early resumption of work was associated with using only formula, whereas resuming work later was associated with using only breast milk. However, again, we want to be careful not to put too much weight on this analysis. Because most of the information was collected at 6 months, the results are likely to be confounded, particularly for mothers who returned to work before the data was gathered. Previous research has shown that an early return to work and inconvenient workplace conditions discourage women from breastfeeding or cause them to discontinue breastfeeding early (Berger et al., 2005; Meek, 2001).

While mothers are generally assumed to be the best caregiver for their own children, we are mindful that the time mothers spend with their children does not necessarily translate into quality care and the possibility that others (e.g., grandparents, highly qualified and experienced day care teachers) may offer a better quality of care. In addition, considering the importance of grandparents as caregivers in Taiwan, future studies should examine the availability of grandparents and the time they spend with the children. Indeed, in our supplementary analysis, the availability of grandparents allowed women with pension plans to return to the workforce earlier rather than later. In addition, future efforts including interviews with mothers would be helpful to understand how mothers evaluate the benefits and costs of combining work and family.

Furthermore, the Female Hiring Management Survey by the Council of Labor Affairs (2008) in Taiwan provides important insights into probable reasons that this analysis found mostly non significant differences between mothers with a public pension plan and mothers who did not work before birth, but mostly significant differences between mothers with a labor pension plan and mothers who did not work before birth. In the survey, female employees in the private sector indicated that taking maternity leave would affect their annual evaluation and thus their wage raise and job promotion, but this was not the case for the female employees in the public sector. This is a sign that taking leave is still very difficult for mothers working in the private sector in Taiwan. Additionally, more than 96% of the women in the public sector reported that they would receive full pay for the duration of their maternity leave, but only 63% of women in the private sector said they would receive full pay. Even if mothers in the private sector took leave, our results show that they were more likely to return to work earlier. An early resumption of work could explain why mothers in our sample were less likely to use breast milk (even in combination with formula). These facts call for government action to strengthen and enforce maternal leave benefits. Additionally, the government should support more family-friendly policies such as flexible work arrangements that would reduce parents' burden of balancing work and family demands.

Although this paper focused on maternity leave benefits, we also note that the duration of paternity leave in Taiwan is only 3 days for fathers, seriously compromising their ability to share in childrearing. A longer duration of paternity leave might promote gender equity in the domain of care responsibilities. The raw data show that, on average, mothers spent 36 hours per week with their infant at 6 and 18 months of age, whereas fathers only spent about 20 hours per week with their infants. It would be interesting to examine how fathers' roles might change with modifications in parental leave policies (such as those adopted currently in European OECD countries) and/or the extent to which changes in fathers' roles might influence such public policies.

Finally, these data were collected when the economies in Taiwan and across the world were strong. It thus would be interesting to examine whether heightened unemployment rates among fathers create significant changes in mothers' employment behavior during an economic downturn, such as the current worldwide recession. Widespread unemployment may force mothers to work as families rely more on their incomes. In the future, the collection of additional data regarding the reasons why mothers return to work or resign from their employment would provide insight into the potential influence of the larger economic environment on an individual's labor market behavior.

In the future, as more data points become available for this cohort(e.g., at 36 months and at age 5), it will be important to conduct further analysis from a longitudinal lens. It would also be valuable to use comparable data from other countries with similar economic systems to present a cross-national study such as those conducted by Gornick and her colleagues (1998, 2003, 2004) using data on OECD countries with similar economic systems. Ultimately, although current public policy in Taiwan allows many women to return to their pre-birth jobs after a guaranteed length of leave, we do not know how much this timing is due to personal preference or to limited choices. Indeed, it was not a small share of mothers who quit their jobs before childbirth, presumably to stay home longer with their children. Extending the duration of maternity leave to at least 6 months seems appropriate given our empirical evidence that mothers who resumed work after 6 months spent more time with their infants and were more likely to breastfeed. European countries now follow the 1998 European Union (EU) directive mandating a 3-month parental leave, whereas the International Labour Organization (ILO) recommends maternity leave of no less than 14

weeks. However, typical maternity leave in many Asian countries falls below these levels, offering less than 12 weeks of paid leave (except Japan with 26 weeks of paid leave).

The best practices identified in recent literature are not simply about the duration of leave and the level of benefits, they also advocate universal coverage, gender equity (e.g., nontransferable benefits between mothers and fathers), and flexible work arrangements (Ray et al., 2009). Indeed, countries with more generous and gender-egalitarian policy designs tend to be the same ones in which, on average, parents have more time to spend with their children, mothers and fathers divide paid and unpaid work more equally, and children are doing better on key outcomes (Gornick & Meyers, 2003).

Acknowledgments

The authors would like to thank Meng-Jung Lee for wonderful research assistance. Joyce Yen Feng is obliged to the TBCS team and the financial support from College of Social Science at National Taiwan University. Wen-Jui Han gratefully acknowledges support from the Social Policy Research Center at the National Taiwan University.

References

- Berger LM, Hill J, Waldfogel J. Maternity leave, early maternal employment, and child health and development in the US. *The Economic Journal*. 2005; 115:F29–F47.
- Bronfenbrenner, U., editor. *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage Publications, Inc; 2005.
- Brooks-Gunn J, Han W, Waldfogel J. Maternal employment and child cognitive outcomes in the first three years of life: The NICHD Study of Early Child Care. *Child Development*. 2002; 73(4):1052–1072. [PubMed: 12146733]
- Chien LY, Chu KH, Tai CJ, Lin CY. National prevalence of breastfeeding in Taiwan. *Journal of Human Lactation*. 2005; 21(3):338–344. [PubMed: 16113022]
- Chuang CH, Chang PJ, Hsieh WS, Guo YL, Lin SH, Lin SJ, et al. The combined effect of employment status and transcultural marriage on breastfeeding: A population-based survey in Taiwan. *Paediatric and Perinatal Epidemiology*. 2007; 21(4):319–329. [PubMed: 17564588]
- Council of Labor Affairs. Labor Statistics Survey. Council of Labor Affairs, Executive Yuan; Taipei, Taiwan: 2008. 2008 Female Hiring Management Survey. Retrieved from http://www.cla.gov.tw/cgi-bin/SM_theme?page=4250dc44
- Ermsch, J.; Francesconi, M. The effect of parents' employment on children's educational attainment (IZA Discussion Paper No. 215). Institute for the Study of Labour; Bonn, Germany: 2000.
- Esping-Anderson, G. *The three worlds of welfare capitalism*. Princeton, NJ: Princeton University Press; 1990.
- Esping-Anderson G. Hybrid or unique? The Japanese welfare state between Europe and America. *Journal of European Social Policy*. 1997; 7:179–189.
- Gibson-Davis CM, Brooks-Gunn J. Breastfeeding and verbal ability of 3-year-olds in a multi-city sample. *Pediatrics*. 2006; 118:1444–1451.
- Glass J, Riley L. Family responsive policies and employee retention following childbirth. *Social Forces*. 1998; 76:1401–1435.
- Gornick, JC.; Meyers, MK. *Families that work: Policies for reconciling parenthood and employment*. New York: Russell Sage Foundation; 2003.
- Gornick, JC.; Meyers, MK. Welfare regimes in relation to paid work and care. In: Giele, JZ.; Holst, E., editors. *Changing life patterns in western industrial societies*. Netherlands: Elsevier Press; 2004. p. 45–67.
- Gornick JC, Meyers MK, Ross KE. Public policies and the employment of mothers: A cross-national study. *Social Science Quarterly*. 1998; 79(1):35–54.
- Gregg, P.; Washbrook, E. the ALSPAC Study Team. *Project of Understanding the Impact of Poverty on Children of the 90's*. Bristol, UK: 2003. The effects of early maternal employment on child development in the UK (CMPO Working Paper Series No. 03/070).

- Grice MM, McGovern PM, Alexander BH. Flexible work arrangements and work-family conflict after childbirth. *Occupational Medicine*. 2008; 58:468–474. [PubMed: 18667390]
- Hammer LD, Bryson S, Agras WS. Development of feeding practices during the first 5 years of life. *Archives of Pediatrics & Adolescent Medicine*. 1999; 153:189–194. [PubMed: 9988250]
- Han WJ, Ruhm CJ, Waldfogel J. Parental leave policies and parents' employment and leave-taking. *Journal of Policy Analysis and Management*. 2009; 28(1):29–54. [PubMed: 19090048]
- Han, W-J.; Ruhm, C.J.; Waldfogel, J.; Washbrook, E. Public policies and women's employment after childbearing. Paper presented at the Annual Fall conference of Association for Public Policy Analysis and Management (APPAM); Nov. 6–8; Los Angeles, California. 2008.
- Han WJ, Waldfogel J. Parental leave: The impact of recent legislation on parents' leave-taking. *Demography*. 2003; 40(1):191–200. [PubMed: 12647520]
- Han WJ, Waldfogel J, Brooks-Gunn J. The effects of early maternal employment on later cognitive and behavioral outcomes. *Journal of Marriage and Family*. 2001; 63(2):336–354.
- Heckman JJ. Skill formation and the economics of investing in disadvantaged children. *Science*. 2006; 312:1900–1902. [PubMed: 16809525]
- Hetzner NP, Razza R, Malone LM, Brooks-Gunn J. Associations between feeding behaviors during infancy and child illness at two years. *Maternal and Child Health Journal*. 2009; 13(6):795–805. [PubMed: 18839293]
- Hill EJ, Hawkins AJ, Ferris M, Weitzman M. Finding an extra day a week: The positive influence of perceived job flexibility and work family life balance. *Family Relations*. 2001; 50(1):49–58.
- Hofferth SL. Effects of public and private policies on working after childbirth. *Work and Occupations*. 1996; 23:378–404.
- Holliday I. Productivist welfare capitalism: Social policy in East Asia. *Political Studies*. 2000; 48:706–723.
- Joesch JM. Paid leave and the timing of women's employment before and after birth. *Journal of Marriage and the Family*. 1997; 58:1008–2021.
- Kamerman SB. Parental leave policies: An essential ingredient in early childhood education and care policies. *Social Policy Report*. 2000; 14(2):3–15.
- Klerman, J.; Leibowitz, A. Labor supply effects of state maternity leave legislation. In: Blau, F.; Ehrenberg, R., editors. *Gender and family issues in the workplace*. New York: Russell Sage Foundation; 1997. p. 65-85.
- Meek JY. Breastfeeding in the workplace. *Pediatric Clinics of North America*. 2001; 48:461–474. [PubMed: 11339165]
- Pylkkänen, E.; Smith, N. Career interruptions due to parental leave: A comparative study of Denmark and Sweden. *OECD Social, Employment, and Migration Working Papers*. 2003. Retrieved from <http://www.oecd.org/dataoecd/61/7/2502336.pdf>
- Ray, R.; Gornick, J.C.; Schmitt, J. Parental leave policies in 21 countries: Assessing generosity and gender equality. Washington, DC: Center for Economic and Policy Research; 2009.
- Ruhm CJ. The economic consequences of parental leave policies: Lessons from Europe. *Quarterly Journal of Economics*. 1998; 113:285–317.
- Ruhm CJ. Parental leave and child health. *Journal of Health Economics*. 2000; 19:931–960. [PubMed: 11186852]
- Ruhm CJ. Parental employment and child cognitive development. *Journal of Human Resources*. 2004; 39(1):155–192.
- Smolensky, E.; Gootman, J. *Working families and growing kids: Caring for children and adolescents*. Washington, DC: The National Academies Press; 2003.
- Tanaka S. Parental leave and child health across OECD countries. *The Economic Journal*. 2005; 115:F7–F28.
- Visness CM, Kennedy KI. Maternal employment and breast-feeding: Findings from the 1988 National Maternal and Infant Health Survey. *American Journal of Public Health*. 1997; 87:945–950. [PubMed: 9224174]
- Waldfogel J. The impact of the Family and Medical Leave Act. *Journal of Policy Analysis and Management*. 1999; 18(2):281–302.

World Health Organization (WHO). The world health report: 2005, Making every month and child count. Geneva, Switzerland: WHO Press; 2005. Retrieved from <http://www.who.int/whr/2005/en/index.html>

Table 1

Parental Leave Benefits by Pension Plans

Types of Pension Plan	Targeted Population	Parental Leave Benefits(available to all unless noted)		
		Duration	Wage Replacement	Childbirth allowance
Public	Government employees, teachers, and military personnel	Mother: 60 days(8 of these days need to be taken before birth) Father: 3 working days (after birth)	60 days of full pay (can be claimed by either the mother or the father but not both)	2 months of full pay (can be claimed by either the mother or the father but not both)
Labor	Employees not in the public sector nor the agricultural sector	Mother: 56 days Father: 3 working days	56 days of full pay if the employee had worked at the same job for 6 months or more 56 days of partial pay if the employee had worked at the same job for less than 6 months	1 month of full pay (can be claimed by either the mother or the father but not both)
Agricultural	Farmer/Fisherman	Mother: 56 days Father: 3 working days	56 days of full pay if the employee had worked at the same job for 6 months or more 56 days of partial pay if the employee had worked at the same job for less than 6 months	1 month of full pay (can be claimed by either the mother or the father but not both)
No pension plan	All other occupations (most likely in the business or banking industry, some sales or service sectors as well)	none	Only for mothers: 8 weeks of full pay if had worked at the same job for 6 months or more 8 weeks of partial pay if had worked at the same job for less than 6 months	none

Table 2

OLS Regression Estimates of Days at Which Mothers Return to Work

	Without Covariates b (SE)	With Covariates b (SE)
No Pension Plan	Omitted reference	Omitted reference
With Public Pension Plan	-23.58 (3.65) ***	-5.28 (4.01)
With Labor Pension Plan	-24.84 (2.62) ***	-10.74 (2.71) ***
With Other Pension Plan	-18.53 (6.06) **	-10.29 (5.97)
Did not work before birth	101.45 (3.09) ***	93.13 (3.06) ***
Child is boy		1.13 (1.55)
Child is single-birth		-13.07 (5.66) *
Child is low birth-weight		7.72 (3.45) *
Mother's age at birth		-0.46 (0.19) *
Mother is married at birth		17.69 (13.92)
Mother is foreign-born		23.46 (3.60) ***
Mother with <=11 yrs education		Omitted reference
Mother with 12 yrs education		5.94 (3.15)
Mother with >=13 & <=15 yrs education		7.75 (3.40) *
Mother with >15 yrs education		11.71 (3.65) ***
Living in single-parent family		2.00 (4.88)
Living in other types of family		-19.02 (2.01) ***
Number of kids age <6		0.89 (1.38)
Family income before birth		
< 30000		Omitted reference
30000 – 49999		-18.67 (3.59) ***
50000 – 69999		-43.78 (3.69) ***
70000 – 99999		-50.39 (3.90) ***
100000 – 149999		-47.28 (4.44) ***
150000 – 199999		-51.62 (6.59) ***
>= 200000		-52.88 (7.48) ***
Constant	90.43 (2.42) ***	115.44 (16.40) ***
Adjusted R-square	.2141	.2466
N	13180	13180

Note. Numbers are OLS unstandardized coefficients with standard errors in parentheses.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

Table 3

OLS Regression Estimates of Amount of Time Mothers Spending with Their Children

	At 6 th months b (SE)	At 18 months b (SE)
<i>Pension Plan</i>		
No Pension Plan	Omitted reference	Omitted reference
With Public Pension Plan	-10.46 (0.79) ***	-12.95 (0.93) ***
With Labor Pension Plan	-9.86 (0.50) ***	-10.92 (0.60) ***
With Other Pension Plan	-4.49 (1.18) ***	-4.46 (1.40) ***
Did not work before birth	10.59 (0.50) ***	11.07 (0.59) ***
Constant	33.90 (2.84) ***	22.44 (3.32) ***
Adjusted R-square	0.4160	0.2966
N	13180	13180

Note. Numbers are OLS unstandardized coefficients with standard errors in parentheses. Models controlled for whether the child is a boy, a single-birth, and had a low birth weight; the mother's age, educational level, and marital status at birth; whether the mother worked before the birth; the number of children age under 6; the family's income the year before the child's birth; and whether the child lived in a single-parent or other than two-parent family at 6 months.

*
 $p < .05$,

**
 $p < .01$,

 $p < .001$.

Table 4

Zero-Inflated Poisson Regression Estimates of Feeding Patterns Within the First 6 months

	Breast Milk Only b (SE)	Mostly Breast Milk w/some Formula b (SE)	Mostly Formula w/some Breast Milk b (SE)	Formula Only b (SE)
<i>Pension Plan</i>				
No Pension Plan	Omitted reference	Omitted reference	Omitted reference	Omitted reference
With Public Pension Plan	0.009 (0.007)	0.123 (0.010)***	0.152 (0.012)***	-0.034 (0.005)***
With Labor Pension Plan	-0.142 (0.005)***	-0.001 (0.008)	0.080 (0.010)***	0.016 (0.003)***
With Other Pension Plan	-0.010 (0.011)	0.055 (0.020)**	-0.023 (0.023)	0.047 (0.006)***
Did not work before birth	-0.007 (0.006)	-0.030 (0.010)**	0.094 (0.013)***	-0.000 (0.003)
Log Likelihood	-195041.7	-84687.53	-79718.41	-121957.1
N	13180	13180	13180	13180

Note. Numbers are unstandardized coefficients with standard errors in parentheses. Models controlled for whether the child is a boy, a single-birth, and had a low birth weight; the mother's age, educational level, and marital status at birth; whether the mother worked before the birth; the number of children age under 6; the family's income the year before the child's birth; whether the child lived in a single-parent or other than two-parent family at 6 months; and father's work status at 6 months.

*
 $p < .05$,

**
 $p < .01$,

 $p < .001$.