Social Class and Motherhood Wage Penalty

This research examines how the motherhood wage penalty differs by social class. It is well studied that having and rearing a child is associated with lower hourly pay for mothers (Waldfogel 1997; Budig and England 2001; Anderson et al. 2002, 2003). But the magnitude and cause of the wage penalty may not be constant cross class.

In this paper, I will use the most recent data, 1982-2002 National Longitudinal Survey of Youth to extend previous researches. Waldfogel and Anderson et al. use 1968-1988 National Longitudinal Survey of Young Women. Budig and England use 1982-1993 NLSY which covers young women only. Second, I will check if there is any change in the total penalty of recent cohorts. Waldfogel reports wage penalty of 6 percent for mothers with one child and 13 percent for mothers with two or more children using 1968-1988 National Longitudinal Survey of Young Women. Third, I will compare the size of penalty by social class. Fourth, I will decompose the origins of penalty by class. I assume each class is in the different situation and it makes them receive different volume of penalty by different reasons. Even though the absolute size of penalty looks similar, the causal relationship will be quite different by social class.

What makes women pay the penalty? Why is it different by class?

Previous papers break down the causes of motherhood penalty into four reasons that are known as losing human capital, less effort at work, compensating differentials and discrimination.

Human capital is one of the theories explaining wage differentials. According to the theory, mothers and non-mothers have different amount of human capital, as measured by cognitive ability, education and job experiences. If cognitive ability is randomly assigned regardless mother and non-mother, it can be dropped in my model. So most previous researches consider education and job experiences.

On the job experience, Waldfogel(1997) measure it by work experience years of full-time and part-time separately. Budig and England(2001) add full-time seniority and part-time seniority(work for one

employer). Anderson et al.(2002) use years of work experience. They consider women's occupation at industry level. As Kambourov(2002) finds, measuring human capital by years at one employer (seniority) or industry-level can be too specific or too broad. Changing a job to a different field can be a loss of human capital but if a worker still does the same kind of work, the loss will be minimal. Seniority sees human capital too narrowly and industry-level measure overemphasizes it. As an alternative, Kambourov recommends using three-digit occupation code that can be the best measure of job experiences.

Depreciation of human capital is also an important factor. Comparing to non-mothers, mothers are more likely to have a break when they prepare and have a baby and care their young children. Budig and England includes the number of breaks in the model and Anderson et al. consider time out of labor market.

I hypothesize that the loss of human capital may be quite different by social class. For the manual workers, break means only the duration without wages. When they come back to the work force, their human capital changes little. Human capital will be more important to upper class, especially professional workers.

In addition, work effort may differ by mothers and non-mothers. If a woman has a baby, she needs to spend a lot of time and effort to take care of the baby. For this, she would not do her best at work and store energy for anticipated work at home. Work hour will measure the amount of work effort directly. Having a child at age 0-2 will ask less work effort. Spouse income and the number of adults who lives together will lessen the burden of homework.

This situation also differs by social class. Lareau(2002) argues that there is different child-rearing culture between middle class and working(poor) class. She says middle class parents emphasize concerted cultivation through organized leisure activities, while working class parents leaves leisure activities to children themselves. Upper class women have more resources. They can buy more convenient home appliances. They cab employ maid and babysitter more often and longer to lessen the burden of home

work. So they can spend full energy for the productivity. I hypothesize that working class women spend less time to care a child comparing to middle class women. Then I can assume that working class women do not have much impact on their work effort when they have children, whereas middle class women have most vulnerable.

Mother may give more weight on mother-friendly job. Even though there is a job that can give the best payment, women may choose other job that can lessen the commuting hours, offer loose working rules such as flexible working hours and few demands for evening work, or can give day-care service though its payment is lower. The resource upper class women have make them their environment mother friendly and give power to bargain their working environment more favorable.

Motherhood wage penalty may come from discrimination of mothers against non-mothers. Employers give fewer wages to a worker who has a baby because they think average mother is less productive comparing to non-mother. When they cannot have full information on the worker or they think that it is too expensive to gather information, they will act based on their prejudice, – which is called "Statistical Discrimination." Or employers may give fewer wages just because there is distaste on the motherhood by employers, co-workers and customers, – which is called "Taste Discrimination." This factor will be shown among the residual penalty after controlling all other things. I expect that mother who has more power – upper class will be less vulnerable to discrimination. A lower class mother is the weakest part in discrimination.

I expect human capital has more exploratory power to upper class's motherhood penalty. On the work effort, middle class will be most vulnerable. On the discrimination, working class will be most vulnerable. In short, each class has different reason of penalty.

Data and method

I will use 1982-2002 National Longitudinal Survey of Youth. The sample will be limited to women who

have at least two hourly wage records from 1982 to 2002 because fixed effects model requires at least two observations on each person.

The dependent variable will be the natural log of hourly wages in the respondent's current job as a measure of the potential earning. They will be adjusted to the currency value of 2002. If there is less than $1 or more than $200 per hour, then they will be considered to outliers.

It is known that there are extraneous variables that may affect woman's wage and her fertility together. For example, a woman who has more weight on family events is more likely to have babies and at the same time more easily trade earnings for mother-friendly job. If these unmeasured heterogeneities are constant to individual's life, it can be absorbed in fixed effects that control time-invariant individual effects. Even though fixed effect model is not efficient comparing to random effect model, it is the cost that should be paid for getting unbiased and consistent parameter estimates.

The full model will be:

Log hourly $wage_{it}$ = marital status + (dummy of one child + dummy of two or more children) + (years of work experiences at the same three digit occupation code + education + years of break for a baby) + (work hour + dummy of part-time job + spouse income + # of adult family) + ε_{it}

where $\varepsilon_{it} = \mu_i + v_t + w_{it}$

μ is individual component of error, v is time wise component of error, and w is the random error.

Table. List of Hypothesis.

Hypothesis 1.	For upper class, most of penalties come from human capital – accumulation of job experiences.
Hypothesis 2.	For middle class, most of penalties come from work effort and compensating differentials.
Hypothesis 3.	For lower class, most of penalties come from discrimination.