# DIFFERENCES BETWEEN ASIAN AMERICAN AND WHITE WOMEN IN WORK-FAMILY TRADEOFFS AND THEIR CONSEQUENCES FOR EARNINGS

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#### Abstract

Asian Americans born or educated in the United States are unique among American minority groups in that they do not suffer a significant earnings disadvantage relative to whites with similar levels of human capital. Controlling for education and age, there is no significant difference in the earnings of Asian American and white men, but Asian American women have higher earnings than comparable white women. This study tests the hypothesis that Asian American women's high relative earnings may result from their adjusting their labor force behavior less than white women in response to parenthood, leading to a greater accumulation of work experience over time. I find that Asian American women are less likely than white women to respond to parenthood with reductions in labor supply, and that furthermore their greater work experience accumulation over time explains their high rate of earnings growth.

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## THE GENDER GAP IN EARNINGS REVISITED: DIFFERENCES BETWEEN ASIAN AMERICANS AND WHITES

Asian Americans born or educated in the United States are unique among American minority groups in that they do not suffer a significant earnings disadvantage relative to whites with similar levels of human capital (Xie and Goyette 2004; Zeng and Xie 2004). Among men, after taking into account education and work experience, there is no significant earnings difference between Asian Americans and whites (Greenman 2004). Asian American women, by contrast, actually have higher earnings than comparable white women, even after controlling for a broad array of factors (Greenman 2004; Xie and Goyette 2004). This study explores the reasons behind the high relative earnings of Asian American women.

In addition to providing new information on the labor market outcomes of Asian American women, who have rarely been considered in the earnings literature, this study will contribute to our understanding of a larger issue – racial variation in the gender earnings gap. The fact that Asian American women, but not men, have higher earnings than comparable whites of the same sex is evidence of an interaction between race and gender. In this case, the interaction takes the form of a smaller gender earnings gap among Asian Americans than among whites. This pattern of racial variation in the gender earnings gap is pervasive in the United States: Among U.S.-born workers, non-Hispanic whites have the largest male-female earnings gap of any of the 19 specific racial/ethnic groups studied by Greenman and Xie (2006). This pattern of lower gender earnings gaps among minorities holds true among both minority groups that have very low earnings relative to whites (such as African Americans) and among those with high relative earnings (such as most Asian American groups). Despite careful documentation of this empirical pattern, the causes of the race/gender interaction have not been fully explored.

The interaction between gender and race among Asian Americans and whites is a special case because Asian American and white men have comparable earnings. Thus, the race/gender interaction can be explored using a simpler approach than would be possible with other groups: under the assumption that there are no unobservable characteristics suppressing the earnings of Asian American men, explaining why Asian Americans' gender earnings gap is smaller than that of whites boils down to explaining why Asian American women earn more than white women. Therefore, while this study focuses empirically on earnings differences between Asian American and white women, conceptually and theoretically it also addresses the larger issue of the gender earnings gap.

Specifically, I address the hypothesis that Asian American women's earnings advantage may result from Asian American women not adjusting their labor force behavior as much as white women in response to parenthood. My reasoning is as follows: Asian American women's labor force participation rates have historically exceeded those of white women (Espiritu 1997; Xie and Goyette 2005). While white women's labor force participation rates have gradually caught up with those of Asian American women, employment among mothers with young children is still significantly higher among Asian Americans than among whites. There is an even greater contrast in the rates of full-time, full-year work (Greenman and Xie 2006). These differences suggest that Asian American women may be less likely to cut back on labor supply in response to parenthood. Such labor supply differences, due to the close link between work experience and earnings, should theoretically lead to higher earnings for Asian American women. I explore these issues using a sample of early-career Asian American and white scientists and engineers as a case study. The longitudinal nature of the data allows me to observe differences in employment patterns, earnings, and family formation as they develop over time.

#### Family and Gender Earnings Gaps Among Professionals

Why might there be differences between Asian American and white women in the relationship between family and work? To answer this question, it is necessary to first examine the relationship between family and work in general. One of the dominant theories of the gender earnings gap in the social sciences is that provided by neoclassical economics (Becker 1991; Mincer and Polacheck 1979), which centers on the interplay between women's family responsibilities and their labor market outcomes. While there is a great deal of diversity in modern family structures, the neoclassical explanation primarily focuses on married-

couple families with children (or on those who anticipate being part of such a family one day). This framework posits that decisions about the labor allocation of both spouses are made at the family level to maximize the family's utility. It assumes that families need both domestic production and labor market production, and that well-being is maximized if each spouse specializes in the area in which he or she has a comparative advantage. Because men are more likely to be the higher-earning spouse —and perhaps because some couples consider women to be more skilled at child-rearing – most couples choose for the wife to specialize in domestic production and the husband to specialize in labor market production.

There are several consequences for women's labor market outcomes: First, they may choose not to invest as much in human capital acquisition because they do not anticipate spending as much time in the labor force in which to reap the rewards. Second, their careers are likely to be interrupted due either to taking time out of the labor force or cutting back on hours worked in order to care for children. In addition to the income forgone as an immediate result of reductions in labor supply, such reductions slow down the rate of human capital acquisition from work experience, lowering earnings in the long run. Third, women may choose occupations that allow them to more easily juggle both work and family responsibilities. Such occupations theoretically have lower earnings penalties for taking time out, and possibly other "mother-friendly" characteristics such as more flexible work arrangements, few demands for evening or weekend work, and the like (Becker 1981; Budig and England 2001). By the theory of compensating differentials, these characteristics come at the cost of lower earnings. The influence of family responsibilities on women's occupational choices is therefore thought to result in both occupational sex segregation and the lower earnings of "female" occupations. Thus, neoclassical economics provides a theoretical framework that explicitly links gender inequality at work with gender role differences at home. This explanation will henceforth be referred to as "role specialization theory."

Empirical tests of role specialization theory have yielded mixed results. In particular, its explanation of occupational sex segregation has not held up well to empirical scrutiny (see England et al. 1988, England 1994). On the other hand, there is little doubt that taking time out of the labor force to care for children does lower women's earnings (England 2005). There is also evidence that role specialization

theory provides part of the explanation for the gender earnings gap among professionals. Noonan and Corcoran (2004, p.146) find that about half of the earnings disparity between male and female lawyers 15 years post-degree can be attributed to women's lower levels of labor supply. Xie and Shauman (2003) show that the gender gap in earnings for scientists and engineers is much larger for married workers with children than for childless workers, suggesting that family responsibilities have differential effects on men's and women's labor market outcomes. Many other studies have also documented the negative effect of child-related employment breaks on women's earnings in the general population of workers (Corcoran, Duncan, and Ponza 1983; England 2005; Jacobsen and Levin 1995).

While role specialization theory has been one of the most commonly invoked explanations for the gender earnings gap in the social sciences, it has important limitations (for examples, see England (2005), Greenman and Xie (2006)). Here I will limit my discussion to those most relevant to Asian Americans. The theory presents itself as being based solely on rational economic decision-making, and thus equally applicable to all families facing the same economic circumstances. However, the extent to which families conform to its predictions is also likely to be influenced by culturally-variable attitudes and values. Because they are culturally variable, such attitudes and values are likely to also vary by racial and ethnic group, potentially making role specialization theory more applicable to some groups than others. Unique historical circumstances, such as the history of slavery for African Americans and the particular immigration history of Asian Americans, may also influence the extent to which role specialization theory is applicable to different racial and ethnic groups.

One of the theory's limitations is that it fails to consider that for both men and women, there are often non-economic rewards to work that may outweigh considerations of maximum efficiency in the family allocation of labor. Workers with high work motivation, especially if they have invested a great deal in the development of a career, are unlikely to make their work decisions based solely on economic factors. The majority of Asian American women are immigrants, and among the highly-educated (such as the sample of scientists and engineers used in this study) often came to the United States specifically to seek educational or employment opportunities. It is very likely that these women have a strong work commitment, regardless of family-level utility maximization. Furthermore, a growing number of these women are the "primary immigrant" in a family, bringing their husbands as dependents (Espiritu 1997). In such cases couples are probably very unlikely to specialize along traditional gender lines after arrival.

Second, the theory ignores both the importance of cultural values regarding the importance of work and culturally-defined expectations regarding the responsibility of men and women for contributing financially to the family. Attitudinal surveys have suggested that there is racial variation in such values and expectations, with African Americans and Mexican Americans both expressing more support than whites for the idea of couples' shared responsibility for providing income (Blee and Tickamyer 1995; Taylor, Tucker, and Mitchell-Kernan 1999). These attitudes coexist with more gender-traditional attitudes on other issues, such as women's responsibility in the home and their role in public life (McLoyd 2000). It seems likely that attitudes regarding women and work have been shaped by the economic necessity of having most adults in the workforce among groups with lower earnings. Although Asian Americans' cultural values surrounding work and gender roles have not been directly measured with surveys, the recent immigrant history of so many Asian American families suggests that a similar argument may apply to them. Given the high costs of migration and the difficulty of gaining a solid economic footing in a new country, Asian American families may also have a higher expectation that women work outside the home, even if other gender-role attitudes remain more traditional.

Third, role specialization theory assumes, at least for families in which the wife's earnings are greater than the cost of child care, that there is still a perceived advantage of parental care that outweighs the additional income forgone in order to provide such care. However, there is variation in the value that different families place on different types of investments in children. For some families, having a parent available after school may not be as important as having the economic resources to provide children with the highest-quality educational experiences. Given the very high value placed on children's educational achievement in many Asian American groups (Goyette & Xie 1999; Slaughter-Defoe et al. 1990; Zhou and Bankston 1998), the assumption that the value of parental care would outweigh the desire to give

children better educational opportunities is questionable. Thus, there is reason to question whether role specialization theory describes the decisions of Asian American and white families equally well.

There has been little empirical research on racial variation in the applicability of role specialization theory, in part because most studies lack sufficient sample sizes to do separate analyses by race. Greenman and Xie (2006) do address this issue, although they are limited by their inability to measure work experience directly. They find that racial variation in the gender earnings gap is found primarily among married workers, with little variation among unmarried workers. Furthermore, they find that the labor force participation of women in many minority groups is not as influenced by their husbands' earnings as it is among whites. Both findings suggest that there may be higher gender role differentiation among white couples than among most other groups.

In addition to role specialization theory, another line of research on the relationship between family factors and women's earnings investigates reasons behind the "motherhood penalty," or the lower earnings of mothers compared to similar women without children. This literature finds that mothers have lower earnings than non-mothers even net of their lower labor supply (Budig and England 2001; Waldfogel 1997), suggesting that there are factors in play other than those emphasized by role specialization theory. Few studies have directly addressed racial differences in the motherhood penalty, but those that have tend to find smaller penalties for non-white mothers. Blair-Loy and DeHart (2003) find that there is no motherhood penalty for African American women lawyers. Waldfogel (1997) and Korenman and Neumark (1992) both find that African American mothers' earnings penalty is smaller than that of white mothers.' Budig and England (2001) report similar findings, for Latinas as well as African American women, but only for mothers with three or more children. No literature to date has examined the motherhood penalty among Asian American women.

Thus, there are both theoretical and empirical reasons to suspect that the relationship between family factors and labor market outcomes varies by race. The few existing studies on earnings differences between Asian Americans and whites have not been able to test the potential role of family factors adequately, primarily due to their reliance on cross-sectional data. This study uses longitudinal data on scientists and engineers to observe the effect of changes in family responsibilities on Asian American and white women's employment, job characteristics, and earnings. Specifically, I test three hypotheses:

1) Asian American women reduce their labor supply less in response to parenthood than white women, leading to a faster accumulation of work experience.

2) Asian American women are less likely to be deterred by parenthood from pursuing demanding professional careers – those often thought of as typical "male" careers – than are white women.

3) Differences in accumulated work experience and/or career type explain some or all of Asian American women's earnings advantage relative to white women.

If work experience or career types are indeed a cause for the Asian-white earnings differential among women, it is best to observe women at their early-career stages. Emerging gaps in experience, career characteristics, and earnings can thus be observed simultaneously, making it possible to relate them to each other. If differences in work experience or career types are responsible for Asian American women's higher earnings, then one would expect to see relatively small earnings gaps at the beginning of the career, followed by larger gaps later. Thus, to address my research questions I follow young workers as their careers develop over time.

#### **Data and Methods**

#### Data

I use data from the National Science Foundation's Scientists and Engineers Statistical Data System (SESTAT). This integrated data system combines respondents from three different NSF surveys – the National Survey of College Graduates the National Survey of Recent College Graduates, and the Survey of Doctorate Recipients. The target population for SESTAT includes adults with at least a college degree who a) have a bachelor's or higher degree in the natural or social sciences, mathematics, computer science, or engineering, or b) who work in one of those fields. A large cross-section of this population was surveyed in each of four survey years (1993, 1995, 1997, and 1999) and a subsample of each cross-

section was then followed into later survey years. Because the purpose of this research is to examine early-career employment patterns and earnings growth, I use only those respondents who were first sampled in 1993 and who were followed until the end of the survey in 1999. I also limit my analysis to respondents within the two youngest age cohorts of the survey, those under the age of 33 in 1993. This group includes 2,648 white women and 457 Asian American women.

SESTAT has both strengths and weaknesses as a data source for studying the career processes of Asian Americans. Its primary strength is that due to its large sample size and the high representation of Asian Americans in the science and engineering fields, SESTAT provides unique longitudinal data about Asian American workers. It has four primary drawbacks: First, the coverage is limited to scientists and engineers, and thus the results are not generalizable to other Asian American or white workers. Second, the sample is only followed for six years. This may not be a sufficient time horizon over which to observe career and earnings development. Third, it does not contain much information pertaining to the respondent's work history in the 2-year interval between surveys. Reliable work information is limited to the week of April 15 in the year of each survey. With repeated measures, however, it is still possible to differentiate respondents based on the number of survey reference weeks in which they were observed in certain states (such as working full-time versus being out of the labor force). Finally, while the sample size is adequate for studying Asian American scientists in the aggregate, it is not large enough to allow separate analyses by specific ethnic group. Given the diversity of sending countries, languages, and cultures among Asian Americans, this is a significant drawback.

I examine four outcome variables: Labor force participation, hours typically worked per week for those who are employed, whether the respondent is on a "professional-track" career path, and earnings. Labor force participation, hours, and earnings are measured directly by the survey, while I constructed the "professional-track" career outcome. My goal in creating a measure of a "professional-track" career was to capture high-status, demanding jobs of the type often considered the "best" jobs in science and engineering, but also widely considered to be among the most difficult to combine with child-bearing and rearing. For this study, a job is considered "professional-track" if it is full time and also meets any of the following criteria: 1) the primary job activity is research (not including activities such as using research results to generate products); 2) the primary activity is professional practice and the respondent has a professional degree (i.e., doctors, lawyers, etc.); 3) the primary activity is computer programming or systems development AND the respondent has a graduate degree in math or computer science; or 4) the primary activity is "managing or supervising" and the job involved supervising others.

My key independent variable is parenthood status. The survey does not ask directly about births or other ways in which children may enter a family; instead, I must infer these events from changes in the number of children in the household between survey waves. For each survey wave, I create three measures: whether any new child has entered the household since the last survey, whether a first child has entered, and whether a second or higher-order child has entered.

Differences in labor supply uncovered in the analyses of hours worked per week and likelihood of being not in the labor force will be manifested in differences in work experience by the end of the observation period. For my analysis of earnings, I therefore treat work experience at last observation as a summary measure of the differences in labor supply I examine in my first two analyses. I measure work experience based on the respondent's labor force status at each of the four survey waves. I create measures for years of full-time work experience, years of part-time work experience, and years out of the labor force by multiplying the number of years since the first observation by the proportion of observations the respondent was observed to be in each status. For example, if someone worked full-time in 1993, part-time in 1995, and full-time in 1997 and 1999, that person's 1999 full-time work experience would be counted as 4.5 years (6 (# of years) times .75 (proportion of observations working full-time).

In the multivariate models, I include the following control variables: Highest degree type (PhD, Professional, Masters, or Bachelors (omitted)); field of highest degree; whether current job is within the field of highest degree; whether born in U.S.; and 5-year birth cohort (the survey does not contain a less aggregated measure of age). It would also be very useful to have a measure of marital status, but unfortunately this information is not included on the public-release file.

#### Statistical Models

My first three analyses examine the effect of having a child on labor force behavior – specifically, labor force participation, hours worked per week, and the likelihood of being in a professional-track career. Because both the independent variable and the outcome are time-varying, I format the data into person-periods for these analyses. Each observation of each respondent is treated as a separate case. This allows me to examine the outcome at time t as a function of the predictor variables measured at time t-1. Because observations are not independent within persons, I use Huber-White standard errors and correct for clustering in all person-period analyses. Variables are defined as follows:

- L Whether or not in the labor force (1 = yes)
- H Hours worked per week
- P Whether or not in a "professional-track" job (1=yes)
- PC Number of observations in a professional-track job
- S Log of annual salary from principal job
- A Asian American indicator
- EF Years of full-time work experience
- EP Years of part-time work experience
- C New child has entered household since last survey
- X a vector of control variables, including highest degree type, field of highest degree, whether job is in the same field as the highest degree, foreign birth, and age.

The subscript *i* refers to the individual, *t* refers to the time period.

Using logistic regression, I first model the likelihood of being in the labor force at time t as a function of whether a new child has been added to the family between time t-1 and time t, in addition to hours, salary, and other covariates measured at time t-1 (before the addition of the new child). Because I want to capture the effect of a child on the probability of dropping out of the labor force, this analysis is restricted to women who are employed at time t-1. Differences in the effect of a child between white and

Asian American women are captured in the coefficient of the interaction term between having a child and being Asian American  $(B_5)$ :

$$L_{it} = B_0 + B_1 H_{i(t-1)} + B_2 S_{i(t-1)} + B_3 A_i + B_4 C_{it} + B_5 (A_i * C_{it}) + B_6 X_{i(t-1)}$$
(1)

Note that by measuring work-related covariates (such as salary and hours worked per week) *before* the birth took place, I reduce the bias that could otherwise result if women with poorer labor market prospects are simultaneously more likely to experience a birth and more likely to drop out of the labor force. Previous research on the effect of children on women's labor market outcomes has found that these effects may differ by parity (Waldfogel 1997). I therefore repeat this analysis for women who do not have children at time *t*-*1* in order to estimate the effect of a second- or higher-order child. I model the relationship between having a child and hours worked per week in exactly the same way, except I use OLS rather than logistic regression:

$$H_{it} = B_0 + B_1 H_{i(t-1)} + B_2 S_{i(t-1)} + B_3 A_i + B_4 C_{it} + B_5 (A_i * C_{it}) + B_6 X_{i(t-1)} + \varepsilon_{it}$$
(2)

I do two analyses for professional-track career. First, I wish to establish if there are differences between Asian American and white women in the likelihood of being in such a career at any given observation. I thus model the odds of being in a professional-track career using logistic regression, as follows:

$$P_{it} = B_0 + B_2 A_i + B_3 X_{i(t-1)}$$
(3)

Note that this model does not control for previous labor force outcomes such as salary and hours worked, as these may have been functions of being in a professional-track career at an earlier time point.

Second, I examine the relationship between motherhood and professional-track careers. The effect of having a child on being in a professional track career is potentially complex. Young workers' careers are often in flux, meaning that those whose first jobs are not professional-track may move into such jobs as they gain more work experience, while those who start out in such jobs may not stay in them. Therefore, in order to capture the total effect of parenthood it is desirable to examine transitions into and

out of professional-track jobs simultaneously. To this end, I create a variable that is the difference between current professional track job status (1= in a professional track job) and the status at the previous observation. The variable can thus take on three values: -1 if the worker transitioned out of a professional track job, 0 if the worker did not change job type, or 1 if the worker transitioned into a professional track job. I then model this change using OLS regression as follows:

$$P_{it} - P_{i(t-1)} = B_0 + B_1 H_{i(t-1)} + B_2 S_{i(t-1)} + B_3 A_i + B_4 C_{it} + B_5 (A_i * C_{it}) + B_6 X_{i(t-1)} + \varepsilon_{it}$$
(4)

Finally, I model earnings growth from first to last observation. My goals are twofold: First, to establish whether earnings grow at the same rate for Asian Americans as for whites; second, to test the contributions of labor supply differences and differences in professional-track careers in explaining differences in earnings growth. I model labor supply differences as cumulative work experience over the observation period, while I model professional-track job differences as the total number of observations over the period that the respondent was in a professional-track job. For this portion of the analysis, I looked at change in both annual salary and hourly earnings, but present results here for annual salary only. Annual salary is the preferred earnings measure because most of the workers in this highly-educated sample are paid on a salary basis, not on an hourly basis. This measure is thus more relevant and meaningful for them. It is also more likely to be correlated with long-term earnings and career prospects, since many salaried professional jobs (e.g., medical residents, assistant professors) require disproportionately large time commitments in the early-career stages.

I first model earnings at first observation in 1993 to establish baseline differences between Asian American and white women, both unadjusted and net of the vector of covariates X. I expect these initial differences to be small net of covariates. I then address Asian-white differences in earnings growth. I estimate the following models:

$$S_{i99} = B_0 + B_1 A_i + B_2 S_{i93} + \varepsilon_i$$
(5)

$$S_{i99} = B_0 + B_1 A_i + B_2 S_{i93} + B_3 X_{i93} + \varepsilon_i$$
(6)

$$S_{i99} = B_0 + B_1 A_i + B_2 S_{i93} + B_3 X_{i93} + B_4 E F_{i99} + B_5 E P_{i99} + B_6 H_{i99} \mathcal{E}_i$$
(7)

$$S_{i99} = B_0 + B_1 A_i + B_2 S_{i93} + B_3 X_{i93} + B_4 P C_{i99} + \varepsilon_i$$
(8)

In each equation,  $B_1$  indicates the difference between Asian Americans and whites in earnings growth between 1993 and 1999, net of the effect of 1993 earnings differences. In Equation (5), it gives the unadjusted difference. Equation (6) shows how much of this original difference is explained by covariates. Equation (7) adds current and past labor supply to the model. Current labor supply is measured by 1999 hours worked per week, while past labor supply is measured as accumulated full- and part-time work experience between 1993 and 1999. The reduction in  $B_1$  between models (6) and (7) indicates the extent to which earnings growth differences between Asian American and white women are attributable to differences in their cumulative labor supply differences over the 1993-1999 time period, while the reduction between models (6) and (8) indicates the extent to which differences can be explained by differences in time spent in professional-tack jobs.

#### Results

#### **Descriptive Results**

Several descriptive analyses are presented in Table 1. The goal of this portion of the analysis is simply to get a broad sense of possible differences between Asian American and white women, so I leave aside testing for statistical significance until the multivariate results.

The first panel in Table 1 shows differences in labor supply for all women, regardless of parenthood status. It appears that white women are less likely to work full-time than Asian American women, more likely to work part-time, and slightly more likely to be out of the labor force. Correspondingly, over the six-year observation period white women's average accumulation of full-time work experience is about .37 years lower than that of Asian Americans. The two groups are fairly similar in their family formation behavior over the study period. While more Asian American than white women have children at the first observation, similar proportions go on to have a birth during the study period, and there is no difference in the average number of children at the end of the study period. There are also no differences by parity in the likelihood of having a child.

The remainder of the table shows change in work patterns surrounding the arrival of a new child. Because there is no way to know the timing of the child's arrival during the two-year interval between observations, the observation after the arrival could be anywhere from a week or two up to two years later. As for the overall sample, in the observation before a child's arrival white women are somewhat less likely than Asian American women to be working full-time, and somewhat more likely to be working part-time or not in the labor force. They also work slightly fewer hours per week. At the observation after the new child, these differences have uniformly widened. While at the observation before the new child white women were about 5 percentage points less likely than Asian American women to be working fulltime, after the new child they are 13 percentage points less likely. While the change is not as large, Asianwhite differences in part-time work and being out of the labor force are also greater after the arrival of a new child.

The last two panels show patterns of transitions among possible work statuses between the observations preceding and following the arrival of a new child. For white women, about 62% are working full-time before a child's arrival and continue to do so after the arrival – thus making no adjustment in labor supply. About 15% transition from full-time to part-time work, and about 9.6% transition from working to being out of the labor force. Asian women are noticeably more likely to work full-time and continue to do so after a new child, with 75% falling into this category. They are also apparently less likely to drop out of the labor force. The last panel repeats this analysis for just the subset of women who were working full-time before the child's arrival. We can see here that some of the racial differences in the second-to-last panel were due to Asian women's greater likelihood of working full-time at the pre-child observation rather than in racial differences in responses to parenthood. Nonetheless, even among this more select sample, Asian American women appear to be more likely to drop out of the labor force.

Table 2 presents means of each of the outcome variables and significance tests for differences between Asian Americans and whites. Because the outcomes are all time-varying, these results are computed using the person-period data in order to get a sense of overall racial differences. For the two binary outcomes – being out of the labor force and being in a "professional track" career – the tests are for the significance of white/Asian odds ratios. For the other measures, tests for group differences in means are reported.

There are no significant differences between white and Asian American women in the likelihood of being out of the labor force. There is also no difference in period-to-period change in whether or not the respondent is on a professional track career. However, white women do have significantly lower overall odds of being in a professional track career. They also work about 2 hours less per week and earn about \$6,553 less per year. Next, I will test whether these differences are robust in a multivariate setting.

#### Multivariate Results

Results for being out of the labor force at the observation after the arrival of a new child are presented in Table 3. Reported coefficients are from logistic regression models and thus represent the differences in the log-odds of being out of the labor force at the observation following a new child associated with each independent variable. Because preliminary analyses revealed significant differences by parity in the effect of children, results are presented separately for first children and for second-or-later children (sample size is insufficient to further distinguish between higher-order children). Coefficients that are statistically significant at the .05 level are underlined.

Columns (1) and (2) examine the odds of being not in the labor force (henceforth NILF) at time t among women who had no children at time t-1. Column (1) shows that having had a child since the last observation increases the log-odds of being NILF by about 1.9, meaning that the odds of being NILF are approximately 6.7 times higher for women who have had a first child since the last observation compared with women who have not yet had a first child. There is no significant racial difference in the odds of being NILF, nor is there any significant interaction between race and having had a child. Column (2)

repeats this analysis, adding a set of control variables measured at time t-1. The addition of these covariates does not change the results from Column (1).

Columns (3) and (4) show the relationship between having a second- or higher-order child on the odds of being NILF. These results were calculated from a sample of women who already had children at time *t*-*1*, yielding a comparison between mothers who experience an additional birth and those who do not. Column (3) reveals that having a second child is positively associated with the odds of being NILF, but its effect appears noticeably smaller than that of having a first child. In the absence of covariates, there is no significant racial difference or Asian/child interaction in the odds of being NILF. After the addition of covariates in Column (4), however, there is a significant negative interaction between being Asian and having a child. This model shows that while for white women having a higher-order child does increase the likelihood of being NILF, for Asian Americans it does not – the total effect of a new child for Asian Americans (.76 + .1.85) is actually less than zero. By demonstrating that there is a stronger relationship between children and being NILF for white than for Asian American women, this result provides partial support for my first hypothesis.

Results for hours worked per week are presented in Table 4. Again, separate results are presented for first children and for second-and-higher children. Column (1) shows that women who have had a first child since the last observation work, on average, 6.2 fewer hours per week than women who remained childless. Asian American women work on average about 2 more hours per week than white women. There is a positive interaction between being Asian and having a child, but it is not statistically significant. Column (2) adds covariates to the model, including hours worked per week at time *t-1*. After the addition of this control, the interaction between being Asian and having a first child is larger and becomes significant at the .05 level. This interaction shows that while white women work about 6.2 fewer hours after having a first child, Asian American women only reduce their work hours by about 3.5.

Columns (3) and (4) give results for the effect of a second-or-higher child on hours. Only mothers are included in this analysis. Again, the unadjusted model presented in Column (3) shows that Asian American women work significantly more hours per week (about 2.2) than white women. Column (3)

also shows that there is still a significant reduction in hours following the arrival of an additional child, but this reduction, at about 2.6 hours, is considerably smaller than that associated with a first child. There is no significant difference in the size of this reduction between Asian American and white women. After the addition of control variables in Column (4), there is no longer a significant difference in the hours worked by Asian American and white mothers<sup>1</sup>. Overall, the results from Table 4 indicate that Asian American women cut their hours back less in response to motherhood than white women after the birth of a first child, but that later children do not lead to the development of additional differences.

Racial and family status differences in professional track careers are explored in Table 5. Columns (1) and (2) give results from logistic regression models that test for differences between Asian American and white women in the probability of having a professional-track job. The unadjusted racial difference, shown in Column (1), indicates that Asian American women's odds of being in a professionaltrack job are about 50% higher than those of white women (exp(.395)=1.3). This difference, however, is fully explained by the covariates included in Column (2).

Columns (3) and (4) present results from OLS regression models of the change in professionaltrack career status between time t-1 and time t. A positive coefficient can indicate either a smaller likelihood of moving out of a professional-track career, a greater likelihood of moving into one, or some combination of both. For this outcome there was no indication of differences by parity, so only one set of results is shown for the effect of parenthood. Column (3) reveals that having had a child since the last observation is associated with negative change in professional-track career status, meaning that women who have had children are more likely to move out of such careers, less likely to move into them, or some combination thereof. There is no significant difference in change in professional-track careers between Asian American and white women. Column (4) indicates that the effect of having a child is robust to the addition of control variables. Again, there is no significant racial difference, nor any significant interaction between race and having a child. The results for professional-track career can be summarized

<sup>&</sup>lt;sup>1</sup> The disappearance of this difference is not due simply to the inclusion of previous hours, which would mean only that the difference between Asian American and white women at time t was no bigger than that at time t-1. Results are similar without previous hours.

as follows: Asian American women are more likely than white women to be in a professional-track career, but this difference is explainable on the basis of observed characteristics. There is no Asian-white difference in the likelihood of switching in or out of professional-track careers. Having a child does affect change in professional-track careers, but there is no racial difference in this effect.

So far, I have examined differences between Asian American and white women in adjustments in labor force behavior in response to parenthood. Next, I turn to the implications of these differences for earnings. Asian-white differences in logged annual salary at the baseline in 1993 are presented in the first panel of Table 6. As shown in Column (1), by 1993 the Asian American women in the sample were already earning approximately 7.5% more per year than the white women. Column (2), however, shows that in 1993 this entire difference can be explained by the human capital and other control variables in the model. Supplementary analyses (available upon request) showed that the vast majority of this change was due to the inclusion of the controls for highest degree type. In the early-career stages, then, Asian American and white women with comparable levels of education also have comparable earnings.

The next four columns examine salary growth from 1993 to 1999. In each model, 1999 earnings are regressed on 1993 earnings and other covariates. The inclusion of 1993 earnings in the models means that coefficients on other variables represent effects on earnings in 1999 net of earnings differences that already existed by 1993 – essentially, effects on earnings growth. Column (3) shows that without adjusting for any covariates, Asian American women experience significantly higher earnings growth from 1993 to 1999 than white women – an additional increase in log salary of about .14, or in percentage terms, about an additional 15% growth over the 6-year period. Part of this difference is attributable to differences in the covariates included in Column (4). After the addition of these covariates, the Asian-white difference is somewhat smaller at .095, but still significant. Columns (5) and (6) test the roles of the two explanatory variables of interest: Differences in professional-track careers and differences in cumulative labor supply. Because there was no Asian-white difference in the likelihood of being in a professional-track career after adjusting for covariates, it would be surprising if this factor was behind much of the Asian-white difference in earnings growth. Indeed, Column (5) shows that it is not –

although each additional observation in a professional-track job was associated with an additional increase in log earnings of about .06, the Asian-white difference is unaffected. Column (6) includes measures of full-time work experience, part-time work experience, and current hours worked per week. Together, these variables measure cumulative labor supply over the period from 1993 to 1999. Their inclusion in the model causes the Asian-white difference to drop from .095 to .038 and renders it statistically insignificant. The remaining difference in earnings growth between Asian American and white women is thus attributable to Asian American women's higher labor supply over the 1993-1999 period<sup>2</sup>.

#### Discussion

By examining the process through which earnings differences between Asian American and white women emerge over time, this study has clarified the reasons underlying the heretofore unexplained earnings "advantage" of Asian American women. In the early-career stages, Asian American women's higher earnings are due almost entirely to their high educational attainment. There is no unexplained earnings "advantage" early in the career trajectory. Over time, however, Asian women's earnings grow faster than those of white women, creating an unexplained gap later in the career trajectory. This study tested the role of labor supply differences over the early-career years in explaining the greater earnings growth of Asian American women. The findings demonstrate that Asian American women's higher labor supply, in the form of greater accumulation of work experience and smaller reductions in hours worked per week over the observation period, does indeed account for the unexplained portion of Asian American women's higher earnings growth rates.

The results also demonstrate that Asian American and white women's different responses to parenthood contribute to these differences in labor supply. After controlling for Asian-white differences in covariates, Asian American women are less likely than white women to take time out of the labor force

 $<sup>^{2}</sup>$  Additional models (not shown) indicated that that both past work experience and current hours worked were important in explaining the Asian-white difference. While each variable by itself was sufficient to cause the Asian indicator to lose statistical significance, its effect size remained notably larger – on the order of about .05 – than the final model including both measures.

in response to having a child. They also make smaller reductions in the hours they work per week. But these general effects obscure interesting differences by parity, which can be summarized as follows: If Asian American women are going to drop out of the labor force in response to parenthood, they do it after the first child. Given that they are still employed at the time of a subsequent child's arrival, the additional child does not increase their likelihood of dropping out. For white women, by contrast, both first and later children increase the likelihood of dropping out. Among mothers who remain employed after a first child, white women make greater reductions in hours worked than Asian American women, and this Asianwhite difference is not changed by the arrival of a subsequent child. These differences, while unexpectedly complex, ultimately lead to higher labor supply among Asian American mothers than among their white counterparts.

The results thus support the hypothesis that Asian American women adjust their labor supply less in response to parenthood than white women. I did not find support, however, for the hypothesis that Asian American women are less likely to be deterred by parenthood from pursuing demanding "professional-track" jobs. Although Asian American women are more likely than white women to hold such a job, this difference is explainable on the basis of demographic and human capital factors. There are no Asian-white differences in change into and out of professional-track jobs, either overall or in response to parenthood. Thus, while there is evidence of differential labor market responses to parenthood between Asian Americans and whites, there is no evidence that these differences encompass career characteristics; instead, they appear to be limited to differences in labor supply adjustments.

How robust are these findings? Potential limitations of the analysis fall into two primary categories: Data limitations and selection bias. The data, while unique in enabling a longitudinal analysis of earnings among Asian Americans, are not ideally suited for studying career development or earnings growth. Of the problems mentioned earlier, including the short time horizon, lack of information on specific Asian ethnic groups, and the highly selective sample, the issue of lack of information on the period between survey waves deserves further comment. The survey was conducted only every two years, and few questions were asked about events between surveys – thus creating a "missing data" problem for

periods between surveys. This problem affects the present analysis by compromising my ability to measure work experience accurately. Being out of the labor force is measured only at a single point in time at each survey. Because being out of the labor force typically seems to be a temporary state for this sample (less than 5% are observed to be NILF for more than one observation), it is likely that a large portion of shorter employment breaks take place between surveys and are thus not observed. These problems are compounded by the lack of information about the timing of the arrival of new children between surveys. If a typical employment break following a birth is one year, for example, then I would not observe that break for half the women who had a child between surveys.

This data limitation could potentially affect comparisons between Asian American and white women. Not observing employment breaks necessarily results in over-estimating work experience during the 1993-1999 period. Because there is no pattern as to whose spells will be observed and whose will not, it also introduces an element of random error to the measurement of work experience. As is well known, this kind of measurement error on the independent variable can cause attenuation bias. Given that being Asian American is positively associated with work experience, attenuation bias on the effect of work experience could cause positive bias on the estimated effect of being Asian American. However, my models that include work experience show a positive but small and statistically insignificant effect of being Asian American; thus, there is no remaining significant difference between Asian Americans and whites that could be caused by a biased effect of work experience.

A second source of potential problems is bias resulting from selection. Researchers on the relationship between children and women's earnings have long recognized the potential for results to be biased due to selectivity of women, especially mothers, into the labor force (Korenman and Neumark 1992). For example, if women with the highest earnings are those most likely to return to work after having children, the apparent effect of children on women's earnings would then be underestimated due earnings being observed only among the higher-earning mothers. Although providing accurate estimates of the effect of children on women's earnings is not the goal of my analysis, this type of selectivity could still have implications for my results. I find that Asian American women have higher earnings and

earnings growth than white women; however, if selectivity into the labor force operates differently for Asian Americans and whites, this result could be unreliable. If Asian American women were selected into the labor force based on high earnings to a greater extent that white women, this could account for the difference I find. However, there is no indication of such selectivity in my sample: Controlling for previous earnings, Asian American women are actually *less* likely than white women to be out of the labor force following the addition of a child. It is more likely that selection bias would cause an underestimate of the difference between Asian Americans and whites: If the "extra" white women who are not working are those with lower earnings, estimates of white women's average earnings would be upwardly biased.

Finally, even if there are no biases resulting from selection into the labor force, the earnings analysis may still understate differences in economic outcomes between Asian American and white women. By considering only the group of women who have observed earnings in 1999, the comparison does not take into account racial differences in having zero earnings – in other words, in being not in the labor force. Because white women are more likely to be NILF, this comparison likely underestimates Asian-white differences.

I explored this possibility by doing some supplementary analyses using tobit models. Tobit models are designed to correct for selection caused by censoring of the type encountered here, in which the earnings of women not in the labor force are not observed, by allowing the inclusion of units with censored information in the analysis. I repeated several of the earnings growth models presented in Table 6 using tobit models instead of OLS regression (results available upon request). The tobit models gave a considerably higher estimate of the unadjusted difference between Asian American and white women in 1993-1999 earnings growth. After accounting for differences in covariates, however, the tobit estimates were no longer much different from those of OLS. Thus, the adjusted models presented in Table 6 are unlikely to be highly biased due to white women's greater propensity to be out of the labor force. In conclusion, although it is not possible to prove that the results are not biased by any of the limitations discussed above, I have found no indications of such bias.

#### Conclusion

This paper proposed that lower gender role specialization among Asian American couples might contribute to both Asian American women's high earnings and the smaller gender earnings gap among Asian Americans. As far as these results go, they provide support for this hypothesis. Asian American women are less likely than white women to respond to parenthood with reductions in labor supply, and their greater work experience accumulation over time explains their high rate of earnings growth. The high earnings of Asian American women also account for the lower gender gap among Asian Americans. However, gender role specialization by definition encompasses men just as much as women. The next crucial task in the investigation of racial differences in gender role specialization as a contributor to racial differences in the gender earnings gap is to bring men back into the picture.

The ideal analysis would examine domestic labor and outside employment simultaneously for both men and women. For models of gender role specialization within partnerships, the couple, rather than the woman, would be the primary unit of analysis. Furthermore, racial differences in selectivity into marriage would be explicitly considered, thus no longer limiting the analysis to married or partnered individuals. The relationship between women's and men's career prospects, earnings potential, and the probability of getting married is known to vary by race (Oppenheimer, Kalmijn, and Lim 1997); thus racial differences in gender role specialization within marriage could result in part from racial differences in who gets married.

Unfortunately, at least for Asian Americans, no data exists that would make this kind of analysis possible. In absence of such data, however, the results of this study provide fairly strong support for the part played by lower gender role specialization among Asian American couples in producing their lower gender earnings gap. Although we still know little about the male side of the equation, we do now have evidence that Asian American women do not make the type of career adjustments predicted by role specialization theory to the same extent as white women do.

#### References

Becker, Gary S. 1981. A Treatise on the Family. Cambridge, MA: Harvard University Press.

- Blair-Loy, Mary and Gretchen DeHart. 2003. "Family and Career Trajectories Among African American Female Attorneys." *Journal of Family Issues* 24(7): 908-933.
- Blee, Kathleen M. and Ann R. Tickamyer. 1995. "Racial Differences in Men's Attitudes about Women's Gender Roles." *Journal of Marriage and Family* 57(1): 21-30.
- Budig, Michelle J. and Paula England. 2001. "The Wage Penalty for Motherhood." *American Sociological Review* 66(2): 204-225.
- Cocoran, Mary, Greg J. Duncan, and Michael Ponza. 1983. "A Longitudinal Analysis of White Women's Wages." *Journal of Human Resources* 18(4): 497-520.
- England, Paula. 1994. "Wage Appreciation and Depreciation: A Test of Neoclassical Economic Explanations of Occupational Sex Segregation." In Social Stratification, edited by David B. Grusky. Boulder: Westview Press, Inc.
- ———. 2005. "Gender Inequality in Labor Markets: The Role of Motherhood and Segregation." *Social Politics* 12(2): 264-288.
- England, Paula, George Farkas, Barbara Stanek Kilbourne, and Thomas Dou. "Explaining Occupational Sex Segregation and Wages: Findings from a Model with Fixed Effects." *American Sociological Review* 53(4): 544-558.
- Espiritu, Yen Le. 1996. Asian American Women and Men. Thousand Oaks: Sage Publications.
- Greenman, Emily. 2004. "The Relative Wages of Asian Americans: Why Does Gender Make a Difference?" Paper presented at the meeting of the International Sociological Association Research Committee 28 (RC28) on Social Stratification and Mobility, Rio de Janeiro, August 2004.
- Greenman, Emily, and Yu Xie. 2006. "Double Jeopardy or Compensating Disadvantage? The Interaction Effect of Gender and Race on Earnings in the U.S." PSC Research Report No. 06-604. http://www.psc.isr.umich.edu/pubs/pdf/rr06-604.pdf
- Goyette, Kimberly, and Yu Xie. 1999. "Educational Expectations of Asian American Youths: Determinants and Ethnic Differences." *Sociology of Education* 72(1): 22-36.
- Jacobsen, Joyce P. and Laurence M. Levin. 1995. "Effects of Intermittent Labor Force Attachment on Women's Earnings." *Monthly Labor Review*, Vol. 118 (9).
- Korenman, Sanders and David Neumark. 1992. "Marriage, Motherhood and Wages." *Journal of Human Resources* 27(2): 233-255.
- McLoyd, Vonnie C., Ana Mari Cauce, David Takeuchi, and Leon Wilson. 2000. "Marital Processes and Parental Socialization in Families of Color: A Decade Review of Research." *Journal of Marriage and Family*, 62(4):1070-1093..
- Mincer, Jacob and Solomon Polachek. 1974. "Family Investments in Human Capital: Earnings of Women." *Journal of Political Economy* 82(2): S76-S108.
- Noonan, Mary C., and Mary E. Corcoran. 2004. "The Mommy Track and Partnership: Temporary Delay of Dead End?" Annals of the American Academy of Political and Social Science 596(1): 130-150.

- Oppenheimer, Valarie Kincade, Matthijs Kalmijn, and Nelson Lim. 1997. "Men's Career Development and Marriage Timing During a Period of Rising Inequality." *Demography* 34(3): 311-330.
- Slaughter-Defoe, Diana T., Kathryn Nakagawa, Ruby Takanishi, and Deborah J. Johnson. 1990. "Toward Cultural/Ecological Perspectives on Schooling and Achievement in African- and Asian-American Children." *Child Development* 61(2): 636-383.
- Taylor, Pamela J., M Belinda Tucker, and Claudia Mitchell-Kernan. 1999. "Ethnic Variations in Perceptions of Men's Provider Role." *Psychology of Women Quarterly* 23(4): 741.
- Waldofogel, Jane. 1997. "The Effect of Children on Women's Wages." *American Sociological Review* 62(2): 209-217.
- Xie, Yu and Kimberly A. Goyette. 2004. *A Demographic Portrait of Asian Americans*. New York: Russell Sage Foundation.
- Xie, Yu and Kimberlee A. Shauman. 2003. *Women in Science: Career Processes and Outcomes*. Cambridge, MA: Harvard University Press.
- Zeng, Zhen and Yu Xie. 2004. "Asian Americans' Earnings Disadvantage Reexamined: The Role of Place of Education." *American Journal of Sociology* 109:1075-1108.
- Zhou, Min and Carl L. Bankston III.1998. *Growing Up American: The Adaptation of Vietnamese Adolescents in the United States.* New York: Russell Sage Foundation.

	White	Asian	Difference
LE Status (person-period data)			
Full-Time	80.8	86.0	-5.2
Part-Time	14.6	10.5	4.1
Not in Labor Force	5.7	4.9	0.8
	•		0.0
Mean logged annual salary (person-			
<u>period data)</u>	10.31	10.49	-0.18
Mean change in legged salary from			
first to last obs	0.260	0 353	-0.09
	0.200	0.000	-0.03
Work experience at last obs			
Full-time	4.82	5.19	-0.370
Part-time	0.87	0.56	0.308
NILF	0.30	0.25	0.044
Paranthood Transitions			
% w/ childron at first observation	24.0	20.2	5 /
% w/ pow child during study	24.0 15.2	30.Z	-5.4
% w/ first child during study	40.0	43.3	2.0
% w/ 2nd+ child during study	41.0	59.7 15.6	-17
Ava family size at last observation	10.9	15.0	-1.7
(for those w/ kids)	1.8	1.8	0.0
	1.0	1.0	0.0
Observation before new child			
% Working Full-Time	84.3	89.6	-5.3
% Working Part-Time	13.8	6.7	7.1
% Not in Labor Force	2.0	3.8	-1.8
Avg hours worked/week	41.0	43.6	-2.6
Observation after new shild			
% Working Full-Time	61 7	74 7	-13.0
% Working Part-Time	24.7	15.8	-13.0
% Not in Labor Force	13.5	9.5	4.0
Avg hours worked/week	36.9	41.2	-4.4
LF Status Transitions after New			
	00.4	75.4	40.0
Full-Time to Full-Time	62.1	75.4	-13.3
Full-Time to Part-Time	15.0	13.2	1.8
	9.6	3.6	6.0
Part-Time to Part-Time	13.4	7.9	5.5
LF Transitions for prior FT workers			
Full-Time to Full-Time	70.8	79.7	-8.9
Full-Time to Part-Time	17.1	13.9	3.2
Full-Time to NILF	12.1	6.4	5.7

## Table 1: Descriptive Statistics on Labor Force Status and Parenthood

### Table 2: Unadjusted Means and Asian-White Differences in Outcome Variables

		Difference in								
	Mean		means	Logit		(White/Asian)				
	White	Asian		White	Asian					
Not in Labor Force (NILF)	0.057	0.049	0.008	0.060	0.051	1.167				
Hours/week	41.5	43.6	<u>-2.1</u> **							
"Professional-track" Career	0.257	0.308	-0.051	0.346	0.446	0.776 *				
Change in Professional-track Career	0.005	0.008	-0.004							
Annual Salary	41,166	47,719	-6,553 ***							

Note: Significance tests are reported for differences in means for continuous variables and odds ratios for binary variables.

\* p<.05

\*\* p<.01

. \*\* p<.001

Calculations are based on person-period data

		First	Child <sup>(1)</sup>		Second or Later Child <sup>(2)</sup>					
	(1) (coef)	(p-value)	(2) (coef)	(p-value)	(3) (coef)	(p-value)	(4) (coef)	(p-value)		
Had Child Asian <b>Asian*Child</b> Annual Salary Previous Hours Master's PhD Professional Born 1960-1964 Born 1965-1969 Foreign-Born Working outside Field Biology	<u>1.90</u> -0.84 <b>0.45</b>	(0.00) (0.07) <b>(0.44)</b>	2.02 -0.53 <b>0.40</b> -0.15 -0.01 <u>-0.60</u> -0.76 -0.30 0.26 0.27 0.00 0.15 <u>0.82</u>	$\begin{array}{c} (0.00) \\ (0.25) \\ (0.51) \\ (0.34) \\ (0.14) \\ (0.02) \\ (0.01) \\ (0.49) \\ (0.58) \\ (0.57) \\ (0.57) \\ (0.99) \\ (0.50) \\ (0.03) \end{array}$	0.63 -0.29 <b>-0.75</b>	(0.00) (0.31) <b>(0.12)</b>	$\begin{array}{r} \underline{0.76}\\ 0.16\\ \underline{-1.85}\\ -0.02\\ \underline{-0.06}\\ -0.18\\ \underline{-1.31}\\ -1.72\\ \underline{16.45}\\ \underline{16.83}\\ 0.31\\ -0.27\\ 0.40\\ 0.21\end{array}$	(0.00) (0.68) (0.92) (0.00) (0.47) (0.00) (0.11) (0.00) (0.00) (0.25) (0.26)		
Physical Sciences Social Sciences Engineering Non S/E Constant	-3.87	(0.00)	<u>1.01</u> <u>0.82</u> 0.68 <u>0.96</u> -2.65	(0.02) (0.02) (0.07) (0.02) (0.12)	-2.43	(0.00)	0.21 0.52 0.33 -0.40 -17.18	(0.65) (0.11) (0.28) (0.32)		

Table 3: The Effect of Having a New Child on Being Not in the Labor Force

Note: Underlining indicates statistical significance at the .05 level

Omitted categories: Bachelor's degree, Born 1970-1975, Math/Computer Science degree

1) Model includes only women without children at time t-1

2) Model includes only women with children at time t-1

3) All control variables are measured at time t-1

	First Child <sup>(1)</sup>					Second or Later Child <sup>(2)</sup>					
	(1) (coef)	(p-value)	(2) (coef)	(p-value)		(3) (coef)	(p-value)	(4) (coef)	(p-value)		
Had Child Asian <b>Asian*Child</b> Annual Salary Previous Hours Master's PhD Professional Born 1960-1964 Born 1965-1969 Foreign-Born Working outside Field Biology Physical Sciences Social Sciences Engineering Non-S/E Constant	<u>-6.21</u> <u>1.98</u> 1.99	(0.00) (0.02) (0.19)	$\begin{array}{r} -6.22\\ 0.14\\ \hline 2.69\\ 0.67\\ \hline 0.51\\ -0.93\\ \hline 2.21\\ 1.52\\ -1.24\\ -1.20\\ -0.15\\ 0.29\\ -0.13\\ -0.96\\ \hline -1.22\\ 0.00\\ 0.08\\ 16.71\end{array}$	(0.00) (0.82) (0.04) (0.15) (0.00) (0.06) (0.00) (0.23) (0.24) (0.81) (0.23) (0.24) (0.85) (0.23) (0.23) (0.05) (1.00) (0.91) (0.00)		<u>-2.61</u> <u>2.21</u> 1.60	(0.00) (0.01) <b>(0.32)</b>	$\begin{array}{r} -1.99\\ 0.32\\ 0.35\\ 1.17\\ 0.64\\ -0.71\\ 0.75\\ -1.82\\ -5.90\\ -6.36\\ 0.11\\ 0.76\\ 0.21\\ 1.16\\ 0.04\\ 0.64\\ 0.93\\ 7.35\end{array}$	(0.00) (0.64) (0.01) (0.01) (0.21) (0.24) (0.07) (0.10) (0.08) (0.85) (0.22) (0.79) (0.18) (0.96) (0.33) (0.22) (0.17)		

Table 4: The Effect of Having a New Child on Hours Worked per Week

Note: Underlining indicates statistical significance at the .05 level

Omitted categories: Bachelor's degree, Born 1970-1975, Math/Computer Science degree

1) Model includes only women without children at time t-1

2) Model includes only women with children at time t-1

3) All control variables are measured at time t-1

	Log-od	lds of being in	a "professio	onal track"	Change in Professional Track Career							
						Change in Froiessional Track Career						
	(1)		(2)		(3)		(4)					
	(coef)	(p-value)	(coef)	(p-value)	(coef)	(p-value)	(coef)	(p-value)				
Had Child					<u>-0.055</u>	(0.00)	-0.052	(0.00)				
Asian	<u>0.395</u>	(0.00)	0.011	(0.67)	-0.007	(0.58)	0.006	(0.71)				
Asian*Child					0.032	(0.39)	0.033	(0.37)				
Annual Salary							-0.014	(0.17)				
Previous Hours							-0.001	(0.20)				
Master's			0.118	(0.00)			-0.042	(0.00)				
PhD			<u>0.217</u>	(0.00)			-0.044	(0.00)				
Professional			<u>0.678</u>	(0.00)			<u>-0.061</u>	(0.00)				
Born 1960-1964			0.014	(0.70)			-0.038	(0.12)				
Born 1965-1969			-0.023	(0.54)			<u>-0.049</u>	(0.04)				
Foreign-Born			0.036	(0.16)			-0.004	(0.73)				
Working outside Field			<u>-0.105</u>	(0.00)			0.014	(0.33)				
Biology			<u>0.098</u>	(0.00)			<u>-0.062</u>	(0.00)				
Physical Sciences			<u>0.174</u>	(0.00)			-0.060	(0.00)				
Social Sciences			-0.048	(0.05)			<u>-0.028</u>	(0.04)				
Engineering			<u>0.163</u>	(0.00)			<u>-0.048</u>	(0.00)				
Non-S/E			<u>-0.091</u>	(0.00)			-0.019	(0.25)				
Constant	-0.645	(0.00)	0.229	(0.00)	-0.009	(0.11)	0.254	(0.01)				

Table 5: The Effect of Having a New Child on Change in "Professional-Track" Career Status

Note: Underlining indicates statistical significance at the .05 level

Omitted categories: Bachelor's degree, Born 1970-1975, Math/Computer Science degree

_	1993 Salary				Salary growth, 1993-1999							
					(5) Adjusted w/ (6) Adjust							
	(1) Una	djusted	(2) Ad	justed	(3) Una	idjusted	(4) Ad	justed	Profession	al-track	Expe	rience
	(coef)	(p-value)	(coef)	(p-value)	(coef)	(p-value)	(coef)	(p-value)	(coef)	(p-value)	(coef)	(p-value)
Asian	0.074	(.004)	0.030	(.245)	0.139	(.000)	0.095	(.028)	0.100	(.020)	0.038	(.318)
1993 Salary					0.695	(.000)	0.619	(.000)	0.598	(.000)	<u>0.578</u>	(.000)
Hours/week			0.004	(.001)							0.017	(.000)
Master's			0.073	(.001)			-0.016	0.677	-0.051	(.175)	0.008	(.815)
PhD			0.135	(.000)			0.233	(.000)	<u>0.176</u>	(.000)	<u>0.126</u>	(.001)
Professional			<u>0.206</u>	(.000)			<u>0.227</u>	(.002)	0.060	(.444)	<u>0.197</u>	(.002)
Born 1960-1964			<u>0.399</u>	(.000)			<u>-0.241</u>	(.004)	<u>-0.237</u>	(.004)	-0.136	(.062)
Born 1965-1969			<u>0.178</u>	(.000)			<u>-0.174</u>	(.035)	<u>-0.167</u>	(.041)	-0.106	(.142)
Foreign-Born			-0.039	(.147)			0.014	(.752)	0.005	(.917)	0.045	(.245)
Working outside Field			<u>-0.123</u>	(.000)			<u>0.103</u>	(.015)	<u>0.121</u>	(.005)	0.068	(.070)
Biology			<u>-0.297</u>	(.000)			<u>-0.136</u>	(.009)	<u>-0.169</u>	(.001)	<u>-0.166</u>	(.000)
Physical Sciences			<u>-0.149</u>	(.000)			-0.097	(.096)	<u>-0.141</u>	(.016)	-0.097	(.057)
Social Sciences			-0.268	(.000)			-0.209	(.000)	<u>-0.203</u>	(.000)	<u>-0.191</u>	(.000)
Engineering			<u>0.094</u>	(.001)			0.053	(.247)	0.013	(.782)	0.015	(.712)
Non-S/E			<u>-0.077</u>	(.021)			0.006	(.919)	0.024	(.658)	-0.036	(.455)
Obs. Professional-track									<u>0.056</u>	(.000)		
FT experience											<u>0.293</u>	(.000)
PT experience											<u>0.212</u>	(.000)
Constant	10.424	(.000)	10.031	(.000)	3.479	(.000)	4.488	(.000)	4.652501	(.000)	2.44	(.000)

Table 6: Asian-White Differences in Earnings and Earnings Growth

Note: Underlining indicates statistical significance at the .05 level

Omitted categories: Bachelor's degree, Born 1970-1975, Math/Computer Science degree