



Gerald R. Ford School Of Public Policy, University Of Michigan

National Poverty Center Working Paper Series

#03-1

May 2003

**Pay Differences Among the Highly Trained:
Cohort Differences in the Male-Female Earnings Gap in Lawyers'
Salaries**

Mary C. Noonan, Department of Sociology, University of Iowa

*Mary E. Corcoran, Gerald R. Ford School of Public Policy,
University of Michigan*

*Paul N. Courant, Gerald R. Ford School of Public Policy,
University of Michigan*

This paper is available online at the National Poverty Center Working Paper Series index at:
http://www.npc.umich.edu/publications/working_papers/

Any opinions, findings, conclusions, or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the view of the National Poverty Center or any sponsoring agency.

**Pay Differences Among the Highly Trained:
Cohort Differences in the Male-Female Earnings Gap in Lawyers' Salaries***

Word Count = 8,854

Mary C. Noonan
Department of Sociology
University of Iowa

Mary E. Corcoran
Gerald R. Ford School of Public Policy
University of Michigan

Paul N. Courant
Gerald R. Ford School of Public Policy
University of Michigan

* Correspondence concerning this paper should be addressed to Mary C. Noonan, Department of Sociology, The University of Iowa, W140 Seashore Hall, Iowa City, Iowa 52242-1401; or e-mail: mary-noonan-1@uiowa.edu. We thank Kevin Leicht for helpful comments. An earlier version of this paper was presented at the Population Association of America annual meeting in Atlanta, 2002.

Pay Differences Among the Highly Trained: Cohort Differences in the Male-Female Earnings Gap in Lawyers' Salaries

Abstract

Using unique data from University of Michigan Law School graduates we test predictions from three sets of social science explanations of gender-based earnings gaps as to how sex differences in pay should have evolved as women entered an elite male field: law. We compare male/female differences in earnings 15 years after graduation for two cohorts: (1) men and women who graduated from law school between 1972 and 1978, and (2) men and women who graduated from law school between 1979 and 1985. We find that the gender gap in earnings has remained relatively constant; 15 years after graduation, women in both cohorts earn approximately 60% of men's earnings. Penalties to part-time work and career interruptions also remain steady. While within occupation sex segregation has declined over time, sex differences in hours worked have increased and assume a more prominent role in explaining the sex gap in lawyers' earnings.

Pay Differences Among the Highly Trained: Cohort Differences in the Male-Female Earnings Gap in Lawyers' Salaries

INTRODUCTION

In this paper we ask whether the wage gap between women and men lawyers has declined as women have increasingly entered the legal profession. Studies examining the wage gap for lawyers generally find that women lawyers earn substantially less than men lawyers (Chiu and Leicht 1999; Curran and Carson 1994; Dixon and Seron 1995; Foot and Stager 1989; Hagan and Kay 1995; Robson and Wallace 2001; Wood, Corcoran, and Courant 1993). The gender gap in lawyers' earnings has been attributed to a variety of factors, including within occupational sex segregation and sex differences in work experience and family responsibilities. The unexplained portion of the wage gap is typically attributed to employer discrimination and/or to unmeasured sex differences in abilities, preferences, or job placement.

This paper differs from most previous work in this area in that we focus on *change over time* in the sex-based wage gap for lawyers. Based on three theoretical models, the human capital model, the statistical discrimination model, and the structural model, we hypothesize how the sex-based wage differences should have changed over time as women entered the previously male-dominated field of law. We test these hypotheses using detailed information on two cohorts of graduates of the University of Michigan Law School. Comparing the experiences of male and female law graduates from an early cohort (graduating classes 1972 to 1978) to a later cohort (graduating classes 1979 to 1985), we delineate how sex-based earnings gaps, within occupational

sex segregation, and earnings penalties to part-time work and career interruptions have changed over time.

According to human capital models, sex differences in labor supply – work hours, labor force interruptions, part-time work experience – are the major cause of sex-based segregation and earnings differences. As recent cohorts of women gain information by observing earlier cohorts of women lawyers, they may begin to look *more* like men or *less* like men with respect to their human capital, conditional on the relative importance of economic concerns versus family concerns. Depending which tendency predominates, the sex-based wage gap could widen, narrow, or stay the same over time. According to the statistical discrimination model, employers know very little about the potential productivity of women entrants into previously male-dominated fields and may rely on inappropriate gender stereotypes to predict women entrants' productivity. As women increase their representation in traditionally male fields such as law, employers should rely less on sex and more on women's actual labor supply choices when assessing women's productivity. This change would lead to a narrowing of the sex-based earnings gap and to an increase in the penalties associated with reductions in labor supply. Finally, structural models assume that institutional barriers in male-dominated fields constrain the ability of women to succeed in these fields. Such barriers will be resistant to change, because as women enter "male" fields they will be reseggregated into lower paying specialties. Thus, the sex-based earnings gaps will remain large over time.

One reason lawyers are a useful and interesting group from which to study change in gender inequality in the workplace is that the law profession is a high status, well-paid

occupation that has become increasingly “feminized” over time. Prior to 1970 there were few female lawyers; today, women constitute roughly one quarter of all lawyers and more than 40% of law students (Curran 1995). Lawyers provide a unique vantage point from which to study sex discrimination, because we can examine whether sex discrimination changes while an occupation is feminizing.

A second reason that lawyers are an ideal group to study is that women’s high level of work commitment and training should be clear to employers (i.e. graduating from law school entails large amounts of time and money), and as a result sex discrimination from employers should be minimal. In studies of the sex-based wage gap, the unexplained portion of the wage gap is typically attributed to sex discrimination and/or other unmeasured factors such as women’s lack of motivation and drive. By focusing on lawyers we are able to offer a more complete test of the existence of sex discrimination in the workplace because the women in our sample are likely to be more on par with men with respect to these unmeasured factors than they might be in most other non-professional occupations.

Finally, in our study we use unique data from surveys done of University of Michigan Law School graduates. These data offer precise measures of human capital, work histories, and law school performance and as a result enhance our ability to isolate the causes of any sex differences that do exist. While a few prior studies have examined the extent to which sex-based within occupational segregation and sex-based earnings differentials have changed over time for lawyers (Chiu and Leicht 1999; Curran and Carson 1994; Foot and Stager 1989; Reskin and Roos 1990), these studies have not used

very detailed work history information and they have not controlled for law school quality. These are major omissions. Male lawyers' work histories differ from those of female lawyers, and these sex differences in work history account for a large part of the gender gap in lawyers' earnings (Wood et al. 1993). In addition, law schools vary in quality, and graduates of elite law schools have a high earnings premium. Our data on two cohorts of Michigan law students provide work history details and allow us to control for law school quality.

In addition to contributing to the literature on sex discrimination in the workplace, this research contributes to research in the area of sex-role socialization. In this study we explore the role that sex-role socialization plays in working women's lives as they struggle to combine demands from both work and family. Like working women in other occupations, women lawyers may experience considerable pressure from themselves - or their families - to divert time away from paid work toward family responsibilities. However, unlike working women in most other occupations, women lawyers command very high earnings in the work force. As a result of these high salaries, women lawyers can afford high-quality childcare and are heavily penalized by periods of non-work or part-time work. Thus, if women lawyers do indeed take time away from paid work to attend to home demands, it would be indirect evidence that the pressure – or desire – to devote time to family responsibilities is very high (Fuchs 1988).

BACKGROUND

Three models have been proposed to explain pay differences between men and women: the human capital model, the statistical discrimination model, and the structural

model. Each model has different implications for how sex-based wage differences should have changed over time as women entered the previously male-dominated field of law.

Human Capital Model

The most influential economic explanation of sex-based wage inequality is the human capital model. According to this model, women do the bulk of child rearing and so acquire less experience and fewer jobs related skills (human capital) than do men. These sex differences in human capital, in turn, lead to the sex-based wage gap (Blank and Altonji 1999; Blau 1998; Mincer and Polachek 1974). One implication of this model is that as women enter male occupations “learning” should take place on the part of future women entrants. As recent cohorts of women gain information by observing earlier cohorts of women lawyers, one of two outcomes may occur. Depending on the relative importance of economic concerns versus family concerns, either women may begin to look more like men or women may begin to look less like men with respect to their human capital. If the second generation of women law school graduates are driven primarily by economic concerns when deciding how much to work, then over time their work history profiles and work hours and job settings should converge with those of men, and the sex-based wage gap should drop. Hull and Nelson (2000) term this the assimilation model.

On the other hand, Hewlett (2002) argues that the second generation of women professionals may take away a very different lesson from the experiences of women pioneers in their profession. She posits that women professionals may come to realize

over time that “you can’t have it all” and that women will react in one of the two ways. Some women will decide to forego marriage and children in favor of their careers, leading to lower rates of childbearing among second-generation lawyers. Other women will question whether work commitment has too high a personal cost in terms of lost time with children and family, and opt for more family friendly patterns of work – i.e. “mommy tracks.” As a result, earnings inequality among women lawyers should rise and a substantial part of earning inequality should be explained by divergent career paths or hours worked within the groups. Changes in the male/female gaps in lawyers’ mean work hours, mean labor supply, and mean earnings will depend on the proportion of women who opt for career versus “mommy tracks”.

Statistical Discrimination Model

A second variant of the human capital explanation for the gender gap in wages is that women’s access to high-paying positions is limited because of statistical discrimination on the part of employers. Employers have imperfect information about potential employees and so use sex to predict future work commitment and the likelihood that a worker will take time off. Since women, on average, have more career interruptions than men, employers may hesitate to hire or promote women to jobs that require a long period of training and acquisition of firm-specific human capital (Lazear and Rosen 1990).

The role *incorrect* statistical discrimination plays in determining earnings ought to change over time as employer “learning” takes place. For example, the Lazear-Rosen statistical discrimination argument is driven by employer expectations about women’s

future child-rearing plans. Prior to 1970 there were few female lawyers (Curran 1985). As a result, during the early 1970s, employers had little experience predicting women lawyers' future work commitment. It is plausible that employers based their predictions of women lawyers' future child-rearing plans on their experience with women workers in general. If so, it would have been commonplace for employers to "under-predict" women lawyers' future work commitment.

Today, women constitute roughly one quarter of all lawyers and more than 40% of law students (Curran 1995). With the large influx of women into the legal profession, employers likely have become better at predicting women lawyers' expected labor force participation. If so, statistical discrimination based on inaccurate perceptions by employers of women lawyers' future labor force attachment should have diminished over time, and this would result in a narrowing of the gender wage gap between men and women with similar credentials and work histories.

The organizational studies literature leads to a similar prediction about how employers' treatment of women professionals and/or managers might evolve over time as women increasingly enter a previously "male" field. According to Kanter (1977), the first female entrants into a "male" field are highly visible given the lack of other women in that field, and employers' perceptions and treatment of these first female entrants will be shaped by their expectations about women in general. As more women enter law, employers should eventually come to see that women lawyers are not a homogeneous group and to rely less on sex and more on objective indicators when judging women lawyers. Both the Lazear-Rosen and Kanter models predict that as women increase their

representation in a previously “male” field that penalties to part-time work and career interruptions should increase over time, because employers increasingly rely on “objective” measures - such as women’s choices about how much they work - rather than on sex to predict women’s future productivity. At the same time, the sex-based earnings gap, once human capital differences have been accounted for, should decline over time. A second implication is that as employers learn to better differentiate among women lawyers, inequality in women lawyers’ earnings might increase.

Structural Model

Structuralists view the processes that sort men and women into occupations and determine their relative earnings quite differently. According to structural theorists, sex segregation in the workplace is not only the result of women’s individual choices, it is also the result of institutional barriers facing women workers (Jacobs 1989; Reskin and Padavic 1994; Rhode 1988). Such barriers might include hostile work environments, attitudes about appropriate gender roles that are embodied in firms’ hiring, evaluation, and promotion practices, as well as overt discrimination. Such institutional constraints limit opportunities for inaccurate stereotypes about women’s potential productivity to change over time – i.e. for employer “learning” to occur and “behaviors” toward women to change. Structuralists argue that when women enter traditionally male occupations they are often segregated into the least desirable jobs within those occupations (Reskin and Roos 1990). According to this queuing model, within occupational sex segregation in the field of law is unlikely to drop much over time and may increase over time. As a result, the sex-based wage gap should not converge much over time.

Chiu and Leicht (1999) extend Reskin and Roos' (1990) queuing model by arguing that women can successfully enter a "male" field when the occupation is expanding in size, when specialized degrees are important (i.e., when degrees provide a clear signal about worker's skills), and when wages are increasing. All of these conditions were met in the legal field in the 1980s. The number of lawyers increased by 49 percent between 1980 and 1991; a legal degree is highly specialized; and mean real earnings of lawyers rose throughout the 1980's. According to Chiu and Leicht (1999:563), the combination of "occupational growth and required expertise force employers to put women ahead of untrained men in the job queue." As a result, their model predicts that there should be less within occupational sex segregation in the field of law over time, and a related narrowing of the wage gap.

DATA

We use a unique sample of University of Michigan Law School graduates to test these hypotheses. The law school surveys all graduates 5 and 15 years after graduation. Graduates are asked a series of questions about their earnings, work hours, work histories (including interruptions and years worked part-time), work settings, and families. These survey data are matched with law school records, giving us additional information on graduates' performance while in law school. We use only the 15-year data because it is the most comprehensive and generally reflects the established careers of the respondents. The "early cohort" is defined as the graduating classes of 1972 to 1978 and the "late cohort" is defined as the graduating classes of 1979 to 1985. Since we use the 15-year data, the earnings of the early cohort are observed from 1987 to 1993 and the earnings of

the late cohort are observed from 1994 to 2000. Respondents from these class years include 268 women and 1,490 men for the early cohort, and 438 women and 1,119 men for the late cohort. The average response rate across all years was 60% for women and 64% for men.

Restricting the sample to respondents who were employed at the time of the interview further reduced the early cohort sample to 251 women and 1,485 men; the late cohort sample was reduced to 381 women and 1,103 men. Finally, we excluded women and men with missing data on the main variables to arrive at a final sample size of 201 women and 1,278 men in the early cohort, and 284 women and 876 men in the late cohort.

MEASURES

Our dependent variable is the log of annual earnings, converted to 2000 dollars using the consumer price index. Independent variables include a set of six variables: demographics, law school performance, family characteristics, hours of work, experience, and job setting. The demographic variables include a dummy variable for whether a respondent is white, and whether he or she lives in a city with a population of one million or more (a proxy for high costs of living and the opportunity to earn higher wages). A dummy variable for the year of graduation is also included. This controls for average wage changes over time and for anything else that might make the labor market facing one class different from that facing another.

Law school performance is measured with the respondent's grade point average in law school. High grades are expected to increase earnings. While there are additional

measures of law school performance collected in the survey (participation in moot court exercises and participation in law review/law journal), these measures are missing for a high percentage of graduates from the classes of 1982-1985.¹ Therefore, to be consistent over time, we have not included these measures in the analysis. However, Wood et al. (1993) included measures of moot court and law review participation in their analyses of sex-based differences in University of Michigan Law School graduates' earnings and report that sex differences on these measures were small and explained virtually none of the sex-based gap. We also include measures of respondent's undergraduate grade point average and respondent's LSAT score to control for human capital at law school entry.

Family variables include a dummy variable for whether a respondent is married and a variable indicating the number of children he/she currently has.² Marriage and children typically result in an earnings penalty for women (Budig and England 2001; Korenman and Neumark 1992; Lundberg and Rose 2000; Waldfogel 1998), and either have no effect or a positive effect on the earnings of men (Gray 1997; Lundberg and Rose 2000).

We measure multiple aspects of experience: years the respondent has practiced law, months since law school during which the respondent worked part-time to care for children, months since law school during which the respondent did not work at all to care for children, and the number of jobs held since law school.³ Years practicing law is expected to positively affect earnings, while months worked part-time and months not employed are expected to negatively affect earnings. Number of jobs held is also expected to have a negative effect on earnings.

Job setting variables include the number of years the respondent has worked in private practice, and a series of dummy variables indicating the type of job the respondent currently has: business lawyer, government lawyer, legal services, judge/professor, nonlegal, solo practice, or small/medium/large private firm. We categorize jobs in this way because the most highly paid legal positions are in private law firms and as the size of the firm increases, so does the average rate of pay. A dummy variable indicating whether a respondent's job setting is missing is also included; we included this dummy variable instead of excluding those cases with missing data because the percentage of cases missing data vary across time.⁴

METHODS

We first compare male/female differences in average earnings, family characteristics, employment histories, and job settings 15 years after graduation by cohort to see whether sex differences have changed across cohorts. Next, we pool data within each cohort and regress the log of annual earnings on sex (1= male, 0= female), school performance, family characteristics, log of work hours, and work experience for each cohort. We analyze regression models with and without a set of dummy variables measuring job settings to assess the extent to which sex-differences in job settings account for sex differences in earnings within each cohort. By comparing regression coefficients across equations, we can tell whether wage penalties to being female, and wage penalties to part-time work and interruptions have changed over time. Finally, we perform earnings decompositions within each cohort. This allows us to estimate how important different factors were in accounting for the male/female earnings gap within

each cohort. This decomposition approach, developed by Oaxaca (1973) and Blinder (1973), states that the difference in earnings attributable to a particular variable X is $b(\bar{X}_m - \bar{X}_f)$, where b is the coefficient from the pooled regression, and \bar{X}_m and \bar{X}_f are the group means for men and women respectively. If men and women have similar means on an element of X , or if that element of X has only a small effect on earnings, then mean sex differences for that element will contribute little to explaining male/female earnings differences.

RESULTS

Descriptive Statistics

Table 1 shows the means and medians of annual earnings, annual work hours, and hourly wages for the women and men in our sample. Both women and men graduates of the University of Michigan Law School earn high salaries and work long hours. In the first year after graduation, women and men lawyers in both cohorts earn nearly equivalent salaries. For instance, in the early cohort, women earn 91% as much as men, and in the late cohort they earn 99% as much as men. However, 15 years after graduation, the gender gap in earnings is evident for both cohorts, with men earning substantially more money than women. For the early cohort, the ratio of female-to-male average earnings is 0.63. The gap changes very little for the late cohort (ratio is 0.61).⁵ This lack of change in the male/female wage gap is predicted by Reskin and Roos (1990). In addition to earning higher salaries, men also work longer hours than women in both cohorts. In the early cohort the ratio of female-to-male average hours is 0.88 and in the late cohort the gap widens resulting in a ratio of 0.85.

[TABLE 1 ABOUT HERE]

For the early cohort, the female-to-male ratios in median 15th-year earnings are relatively close to the female-to-male ratios of mean 15th-year earnings, showing that the gender gaps in earnings is not driven by a few extreme cases. This is not the case for the late cohort. For the late cohort, the gender gap in earnings changes by five percentage points when median figures are used instead of mean figures, largely because men's earnings are positively skewed. As a sensitivity test, we performed our analysis excluding these outliers.⁶ The results did not differ significantly from the results including the outliers, and so we have included these cases in our sample.

We also calculated the Gini coefficients of 15th-year annual earnings for both cohorts of women. The Gini coefficient is a measure of income inequality, ranging between 0 (perfect equality) and 1 (perfect inequality). Hewlett's (2002) reasoning implies that women professionals will increasingly split into two subgroups – one which sacrifices family for career success and one which chooses the “mommy track”. This should lead to an increase in inequality in women lawyers' earnings across cohorts. We would also expect increases in earnings inequality across cohorts of women lawyers as employers become better at predicting women's productivity. But inequality in women's earnings was the same in each cohort (Gini coefficient = 0.38; figures not shown in table).

Table 2 shows the means of our predictor variables presented separately by sex and cohort. We begin by discussing the means for the early cohort. As expected, differences in men's and women's human capital at college entrance were small. The

mean undergraduate grade point average was slightly higher for women and mean LSAT score was slightly higher for men. Both gender differences are significant. Women and men perform equally well in law school; on average, women earn a 3.06 grade point average and men earn a 3.12.

[TABLE 2 ABOUT HERE]

Women's and men's family characteristics are different fifteen years after graduation. Women are less likely to be married than men (70% vs. 85%), have fewer children on average than men (1.31 vs. 1.86), and are also almost twice as likely to be childless as men (36% vs. 19%; figures not shown in table). These sex differences in marriage and parenthood suggest that women professionals pay a higher price in terms of family than do professional men.

In addition to working fewer hours at the time of the survey, women and men law school graduates report different work histories. Women had spent fewer years practicing law (12.81 vs. 13.41), more months working part-time to care for children (10.29 vs. 0.12), more months not working to care for children (4.12 vs. 0.04), and had held more jobs since leaving school (3.08 vs. 2.54). The most notable sex differences are those in part-time work and non-work.

Table 2a provides more details on parents' work histories. Work interruptions and part-time work experience were common for mothers, but not for fathers. Forty-two percent of mothers had worked part-time to care for their children; these women averaged 38 months – over 3 years - of part-time work. Thirty-seven percent of mothers had taken a break from employment to care for their children, and these women averaged 17

months of non-employment. Only 0.01 percent of fathers (seven out of 1,036) had worked part-time to care for their children, and only 0.01 percent of fathers (nine out of 1,036) had left the labor force to care for their children. However, although women lawyers' family lives impinge on their work lives more so than is this case for men lawyers, when compared to the general population of working women, women lawyers work very long hours and take little time out (Wellington 1994).

[TABLE 2A ABOUT HERE]

Gender differences in job setting are large for the early cohort (see Table 2). Men are more likely than women to be in private practice (66% vs. 38%); men have more years of work experience in private practice (10.07 vs. 6.57); and men are more likely to be in large firm practice (29% vs. 15%). Men are less likely than women to be in the relatively low-paying areas of government and legal services.

We next ask whether sex differences on the predictor measures – academic performance, family characteristics, work hours, experience and job settings – have widened, narrowed, or stayed the same over time. In the early cohort, sex-based differences in credentials at law school entry were small. This remained true in the late cohort. The sex difference in law school performance as measured by mean GPAs was small in both cohorts (0.06 in the early cohort and 0.08 in the late cohort), and was significant only in the late cohort. Given the small differences in women's and men's credentials, it is unlikely that gender differences in undergraduate grades, LSAT scores, and law school performance account for much of the sex-based wage gap in either cohort.

Contrary to Hull and Nelson's (2000) prediction, the labor supply decisions of men and women professionals did not converge over time. Women in the late cohort work fewer hours than do women in the early cohort (2100 vs. 2200 annual hours), and men work about the same number of hours in both cohorts (2500 annual hours). Thus the gender gap in hours worked has increased over time.⁷

In both cohorts, men and women lawyers' work histories differed, but the pattern of sex-based work history differences changed across cohorts. On average, women lawyers' months of part-time work to care for children rose across cohorts (from 10.29 months to 14.72 months), and women's months of nonwork to care for children dropped across cohorts (from 4.12 months to 2.54 months). The reduction in women's nonwork across cohorts led to decreases in gender gaps in years practiced law and in months of nonwork that were offset by a corresponding increase in the gender gap in months worked part-time.

Table 2a provides detail on the shift from dropping out altogether to working part-time among women lawyers with children. Dropping out of work and working part-time were common among mothers in each cohort – 37 to 38 percent dropped out to care for children, and 42 to 48 percent worked part-time to care for children. One major cross-cohort change was that mothers who dropped out spent less time not working (17 months in the early cohort vs. 10 months in the late cohort). This reduction in average time out was offset by a roughly equal increase in months worked part-time among mothers who had worked part-time (38 months in the early cohort vs. 45 months in the late cohort).

The decrease in women lawyers' hours of work and the shift from dropping out altogether to working part-time may be a sign that law firms are increasingly likely to offer "family friendly" policies, such as part-time schedules, to their employees. For example, while only 21% of women in the early cohort were currently working part-time (defined by the authors as less than or equal to 1800 annual hours or 36 hours per week), 27% of women in the late cohort were part-time workers.⁸ These results are consistent with Hewlett's (2002) argument that the costs of maintaining a demanding career as well as a family will lead more women to opt for the "mommy track"

Although the majority of mothers in these two cohorts of lawyers reported having either taking time off from work or working part-time to care for children, at least 40 percent of mothers in each cohort reported never having taken time off or having worked part-time. In addition, 36 percent of women lawyers in the early cohort and 32 percent in the late cohort were childless (results not shown). Thus, approximately 60 percent of all women lawyers in each cohort have not interrupted work or worked part-time to care for children. Note that the increase in parenthood among women lawyer' is inconsistent with Hewlett's (2002) proposition that as women professionals observe the high cost of combining family and work, the number of women professionals that delay and forego child-bearing should increase.

Contrary to the predictions of Reskin and Roos' (1990) queuing model, gender differences in job settings dropped across cohorts. More women in the recent cohort work in large firms (an increase from 15% to 20%) and as business lawyers (an increase from 11% to 17%), and fewer women work in relatively low-paying areas of government,

legal services, and judge/professorships. Women in the late cohort have almost two years more private practice experience than women in the early cohort. These changes are consistent with predictions of Chiu and Leicht (1999).

Regression Results

Table 3 shows the results of the regression model predicting annual earnings.⁹ Because earnings are in logarithmic form, a unit increase in an independent variable is expected to change earnings by $100 * [(exp(b)-1)]\%$, holding all other variables constant. When b is small, coefficients multiplied by 100 may be interpreted as the percent change in earnings that would result from a unit increase in the independent variable.

[TABLE 3 ABOUT HERE]

We estimate a pooled model, instead of separate models for women and men, because we find little evidence of gender differences in returns for the characteristics in our model. The primary exception is months worked part time to care for children; as a result we include a sex interaction with months part time.¹⁰ Model 1 excludes the set of dummies measuring job settings; the job setting measures are subsequently added in model 2. We estimate models with and without the job setting dummies because sex differences in job settings could be due either to women's preferences or to employers' preferences. Below we discuss the results for model 1 for both cohorts, and then follow with a discussion of results for model 2.

In the early cohort of law school graduates, the coefficient for being male is .161, meaning that, holding work hours, demographics, family, and human capital characteristics constant, men earn 17 percent more than women in annual earnings.¹¹

According to the statistical discrimination explanation, as employers learn to better predict women lawyers' productivity, wage differences between men and women lawyers with similar human capital should drop over time. This did not happen. In the late cohort, men earn 18 percent more than women, holding work hours, demographics, family, and human capital characteristics constant.

Marriage and children have positive and significant effects on earnings in both cohorts. While this result is not surprising for men, it is for women. A large body of literature has documented a "motherhood penalty" in earnings, even after controlling for work experience and hours. We further examined this issue by reestimating the wage regression only on women lawyers. When wages are regressed separately only on marital status and then number of children, children do have the expected statistically significant negative effect on women's earnings for the late cohort. This effect is "washed out" after demographic controls, work experience and hours are controlled for. Effects of marital status on women lawyers' earnings are small and insignificant in each cohort both with and without controlling for demographic characteristics and labor supply.

Earnings are higher the more hours one works and the more years one has practiced law, and earnings are lower the more job changes one has experienced. In the early cohort, the penalty to part-time work for women is strong; a month worked part-time to care for children reduces log annual earnings by .004 for women, implying that a year of such part-time work would reduce earnings by 4.8 %. Men are even more heavily penalized for part-time work, with each month of part-time work reducing earnings by 2.9%. It seems that men in the legal profession who take on non-traditional gender roles

(i.e. taking responsibility for child care) pay a high price for that behavior. However, because less than 1% of the men have ever worked part-time (see table 2a), this penalty has little effect on male lawyers' earnings as a whole.

Taking time out from work to care for children carries an even stronger earnings penalty for women than does working part-time. A month spent out of the labor force to care for children reduces log annual earnings by .007 for women lawyers in the early cohort -- that is, a year out of the labor force would reduce earnings by 8.4%.

We predicted, based on the Lazear-Rosen (1990) statistical discrimination model and on the organizational studies literature (Kanter 1977), that as women increasingly entered law, penalties to reductions in labor supply should increase over time. This was not the case; there were no significant changes in penalties to part-time work or dropping out across cohorts.

The last two columns in Table 3 report the results when measures of job setting and years of private practice are added to model 1. As expected, wage growth is faster in private practice. Also, as expected, large firms (the omitted job setting category) pay better than do other job settings. Coefficients on the other job setting dummy variables are negative and significant. Legal services pay the worst, followed by solo practices and government work.

Not surprisingly, the effects of most of the variables included in the model either remain constant or weaken somewhat when job setting variables are added to model 1. The earnings advantage to being male drops when job settings are controlled: from 17% to 12% for the early cohort and from 18% to 13% for the late cohort. Some argue that the

appropriate measure of the male earning advantage should not include controls for job settings because women lawyers may face discrimination in access to jobs. Others counter that women lawyers' job preferences may differ from those of men, and that failure to control for job settings will result in overestimates of the "true" male/female wage gap.

We analyzed several alternative models to see if our findings were sensitive to various specifications. These modifications included: (1) adding a dummy variable indicating whether or not the respondent had a mentor, (2) adding a variable indicating whether the respondent was or was not a partner (in place of the small, medium, large private practice firm variables), (3) adding a variable equal to the number "full-time equivalent" months spent out of the labor force (in place of the part-time months and months out of the labor force variables). The substantive results from the sensitivity analyses did not differ from those presented here and are available upon request.

Decomposition Results

Table 4 shows the results of our decompositions of the male/female earnings differences, separately by cohort and model specification.¹² The overall difference in log earnings between men and women is 0.522 in the early cohort and 0.521 in the late cohort (see last row, table 4). The first two columns of numbers under each model in Table 4 show how much each variable contributes to the log earnings difference, and the second two columns of numbers report the percentages of the total log earnings difference that are due to categories of characteristics.

[TABLE 4 ABOUT HERE]

Results of the decomposition analyses were similar across cohorts in three respects. First, and most importantly, the proportion of sex differences in earnings that is not explained by demographics, law school performance, family characteristics, work hours, and work experience is large (between 31 and 32 % in both cohorts). Even after controlling for job settings, the unexplained portions remain large – 21% in the early cohort and 24% in the late cohort. Second, sex differences in demographic characteristics, grades, and family characteristics account for little of the sex-based earnings gap in either cohort. Third, in both cohorts sex differences in work experience are important in explaining sex-based earnings gaps. In the early cohorts, sex differences on the experience measures explain about 21% of the gap before the job setting variables are included and about 16% after the inclusion of job settings. In the late cohort, sex differences on the experience measures explain roughly 14% to 15% of the gap in both model specifications.

Decompositions of male/female earnings gaps changed in two ways across cohorts. Sex differences in hours worked, the most powerful predictor of the sex-based earnings gap in the early cohort, is even more powerful in the late cohort largely because the gender gap in hours worked has increased over time. In the early cohort, sex differences in work hours explain 34% of the wage gap when job setting variables are excluded, and this figure drops to about 29% with job setting controlled. Sex differences in hours worked explain even more of the wage gap in the late cohort – 45% when job setting variables are excluded and 41% with job setting controlled. The second change in earnings decompositions is that sex differences in job settings and years spent in private

practice explain less of the earnings gap in the late cohort (15%) than in the early cohort (24%). The reason for this drop is that job settings and years spent in private practice have converged for men and women over time as predicted by Chiu and Leicht (1999).

CONCLUSION AND DISCUSSION

Sex-based earnings inequalities have not narrowed over time across two successive cohorts of University of Michigan Law School graduates. In both cohorts, women law school graduates start out earning roughly the same as men, but 15 years later women graduates earn only about 60% as much as male graduates. In each cohort, sex differences in labor supply (work hours, years worked, part-time work experience, labor force interruptions) account for about half the male/female earnings gap.

There were changes across cohorts. Sex differences in job settings declined, with women more likely to be business lawyers and to work in large firms, the two highest paying legal job settings in the late 1990s. Sex differences in lawyers' work hours rose across cohorts. Women lawyers' work history patterns also changed. Months spent not working for family reasons dropped sharply; this was offset by a roughly equal increase in months worked part-time for family reasons.

At the beginning of this paper we outlined three sets of models of male/female employment differences – the human capital model, the statistical discrimination model, and the structural queuing model. Each set of models has predictions for changes in men and women lawyers' labor supply, job settings and earnings over time. Below we discuss how well these predictions are supported by our results. Most of these predictions were not supported by our analyses.

According to the “statistical discrimination model” and the organizational studies literature, employers know little about the potential productivity of early women entrants into previously male-dominated fields and may rely on inappropriate gender stereotypes to predict women entrants’ productivity. As women increase their representation in previously all male fields, employers should rely less on sex and more on women’s labor supply choices when assessing women’s productivity. As a result, wage penalties to part-time work and labor force interruptions should increase over time; the sex-based earnings gap, once labor supply differences are controlled, should drop over time; and inequality in women’s earnings may increase over time. Results are not consistent with these predictions. There was no consistent pattern of increased penalties to work interruptions and part-time work across cohorts. Penalties to work interruptions rose and penalties to part-time work dropped, but neither change was significant. The sex-based earnings gap, after adjusting for human capital differences, increased rather than decreased across cohorts, although the increase was insignificant. There was no change in earnings inequality among women over time.

According to human capital models, sex differences in labor supply – work hours, labor force interruptions, part-time work experience – are the major cause of sex-based segregation and earnings differences. More recent cohorts of women lawyers learn from the experiences of early cohorts that there are large costs to cutting back labor supply. If women lawyers are primarily motivated by income concerns, then we could expect that the more recent cohorts of women lawyers would work more hours and would spend less time working part-time and/or stopping working altogether to care for their children than

did the early cohort of women lawyers. This did not happen. Hewlett (2002), on the other hand argues that more recent cohorts of women professionals may take away a different lesson from the experiences of early cohorts of professionals — i.e., that it is hard to reconcile the competing claims of a family and career. She argues that the stresses of balancing work and family demands may result both in increased childlessness among women lawyers who value careers and in more women opting for the “mommy track.” This, in turn, should lead to increased inequality in earnings among women lawyers. The evidence for this prediction is mixed. The women lawyers in the late cohort, contrary to Hewlett’s predictions, are more likely, not less likely, to have children. There was no change in earnings inequality over time. On the other hand, the drops in women’s annual hours worked and shift from dropping out of work entirely to increasing part-time work suggests that use of “mommy tracks” may have increased.

Our results provide mixed support for the two variants of structural queuing theory. As predicted by Reskin and Roos (1990), there has been virtually no decline in the sex-based earnings gap – before or after controlling for sex-based differences in labor supply. On the other hand, contrary to predictions of Reskin and Roos (1990), sex segregation in job settings has declined dramatically over time. We suspect that this decline is largely due to changes on the demand side in the structure of legal jobs (see Chiu and Leicht 1999).

One big puzzle in the results is the persisting large gap between men and women law school graduates’ salaries, both before and after controlling for sex differences in human capital. This pattern contrasts sharply with patterns of change in gender-based

wage gaps in the general population, and in several professional fields. Unadjusted and adjusted sex-based earnings gaps have declined over time in the general population (Blank and Altonji 1999; Blau 1998; Marini 1989; Wellington 1994); and sex-based gaps in engineers' (Morgan 1998), physicians' (Morgan and Arthur 2003), and scientists' (Shauman and Xie 1996) salaries tend to be small or non-existent once human capital and work hours are controlled.

Why is there such a large wage gap? We suggest four possibilities. First, perhaps women, because of parenting responsibilities not captured in these analyses, alter their employment behaviors in ways that lower their productivity. Parenting appears to be important in accounting for the wage gap – in the late cohort, 56% of the sex-based earnings gap could be attributed to sex-based differences in work hours, work interruptions and part-time work. But once we control for sex differences in labor supply and work history, childless women earn no more than single mothers, and single women earn no more than married women. Having traced out and measured the mechanisms whereby children reduces mothers' earnings, and having found no direct negative effects of children and marriage on women's earnings, we find it highly implausible that the remaining unexplained portion of the difference between men's and women's earnings in the legal professions can be attributed to some remaining unmeasured effect of women's commitment to home. There can be no doubt that sex differences in parenting are important, but something else is going on as well.

A second possibility is unmeasured human capital variables. Not knowing what these might be, this possibility is hard to evaluate, but we note that any such human

capital attributes would have to be of a nature that would not affect undergraduate grades, LSAT scores, and law school performance. We deliberately chose to examine Michigan Law School graduates because we expected that sex differences in unmeasured characteristics, such as talents, ambitions, and drive, would be small – given the costs in time and money of obtaining a law degree and the entry requirements of an elite law school.

A third possibility is compensating wage differentials. Women, might, on average, work in types of practice that are less onerous, or more personally rewarding. As a result, there may be systematic unmeasured gender differences in the kinds of jobs and work experience these lawyers have had. Note that whatever these unmeasured work differences are, our detailed set of job setting variables is not correlated with them. It thus would have to be the case that within the various job settings, women had “better,” and hence less remunerative, work than men.

And then there is discrimination, systematic differences in treatment that tend to disadvantage women. This could be due, in whole or in part, to statistical discrimination along the lines suggested by Lazear and Rosen (1990). It could also be more fundamental, arising from embedded institutional practices suggested by Reskin and Roos (1990) that tend to resegment women into the lower-paid legal specialties. For instance, a hostile work environment may lower women lawyers’ productivity. It could be due to direct discrimination, either by law firms themselves or by (some of) their customers. Because male/female earnings gaps, after adjusting for sex differences in

labor supply, have not dropped over time, as predicted by Lazear and Rosen's (1990) model, we suspect that institutional/direct discrimination is operating.

These results provide support for both behavioral and structural explanations of the wage gap. Many women lawyers (and virtually no men lawyers) with children trade reduced work hours and reduced earnings for more time with their children. Women lawyers appear more willing than men to sacrifice wages and promotions for the joys and responsibilities of parenting. That the traditional sex division of childcare is present in a population where women face such high opportunity cost of childcare suggest to us that the forces that lead women (relative to men) to sacrifice income in order to care for their children are very powerful. Nonetheless, not all of the wage gap can be explained by these forces. Even with differences in labor supply and work history accounted for male lawyers enjoy a considerable earnings advantage. This suggests to us that the legal labor market, on average, treats men and women differently – that there is discrimination by sex.

ENDNOTES

¹ Beginning with the class of 1982, law school-related information was no longer collected in the 15-year surveys. The rationale for this discontinuation was that the information could be gathered from the respondent's 5-year survey. However, a significant percentage of respondents who returned the 15-year survey did not return the 5-year survey (i.e. 12% for class of 1982, 21% for class of 1983, 23% for class of 1984, and 18% for class of 1985). The omission of these law school measures will likely be inconsequential to our analysis because in order for a variable to contribute to the sex-based earnings gap there needs to be a considerable sex difference in the average value of the variable. Based on respondents who did have data on these law school variables we found there to be no sex differences. Additionally, we analyzed a regression model that included the law school measures for respondents with non-missing values. The results of this analysis are substantively equivalent to the results presented here and are available upon request.

² Ideally, we would like to identify separately the number of children the respondent had upon graduation from law school and the number had since law school. The presence of children upon graduation may, especially for women, have effects on the kind of employment that a lawyer will take as a first job, and first jobs are important in legal careers (Hull and Nelson 1997). However, as is the case for other law-school related information, a high percentage of students from the graduating classes 1982-1985 are missing data on the number of children had at the time of graduation and so we do not include this variable in our analysis.

³ For the majority of graduating cohorts about 1% of respondents are missing information on the two questions that asked for months worked part-time or not at all to care for children. However, for the classes of 1980 and 1981, 12% are missing information on “months part-time” and 9% are missing information on “months not worked”. Most of the respondents missing data are women and most reported at the initial lead-in question that they had worked both “part-time” and “not at all”, but then failed to provide the actual number of months. Instead of excluding the missing cases, we impute the average time spent working “part-time” and “not at all” based on gender-specific means for those who did work part-time/not at all in 1980 and 1981.

⁴ For the graduating classes 1972 – 1980 between 1% and 2% are missing job setting information per year, but for classes 1982 – 1985 about 7%-9% are missing job setting information per year. The reason for the differential response rates on this measure is unclear.

⁵ We more closely examined whether the earnings gap has changed over time by estimating an earnings model with three sets of predictors: a dummy variable for sex (1= male, 0= female), 13 year dummies for each graduating cohort (1972 graduating class was the omitted category), and year by sex interactions. A statistically significant year*sex interaction would indicate a statistically significant change in the sex-based wage gap. None of the interactions were statistically significant.

⁶ For the recent cohort, we exclude those men and women who earned more than the 99th percentile for their sex. This resulted in the exclusion of 3 women and 10 men. The 3 women earned on average \$720,000 and the 10 men were all earning over \$1,000,000.

⁷ The gender gap in hours worked narrows substantially when mothers are excluded from the analysis. When we exclude mothers from the analysis, we find that the ratio of female-to-male hours worked is 0.99 for the early cohort and 0.96 for the late cohort. Thus for the early cohort “motherhood status” completely explains the gender gap in hours and almost completely explains the gap for the recent cohort.

⁸ Based on the authors’ calculations using data from the March Current Population Survey, we find that among the population of employed women with a college degree, there has been a small decline over time in hours worked. In 1980, women with a college degree worked an average of 37.1 hours per week, with 34% working part-time. In 1998, results shows that women with a college degree worked an average of 36.4 hours per week, with 37% working part –time.

⁹ Because we only observe earnings of workers, we re-analyzed the data use the Heckman selection model to correct for potential sample selection bias (Heckman 1980). These results do not differ substantively from those presented here and are available upon request.

¹⁰ We also performed the decomposition analysis using the set of coefficients derived from just the female sample and then from just the male sample. The results from these decompositions were very similar to those presented here and are available upon request.

¹¹ $100 * (\exp(.161) - 1) = 17$

¹² Appendix A shows how much *each* variable contributes to the log earnings difference.

REFERENCES

- Blank, Rebecca and Joseph Altonji. 1999. "Race and Gender in the Labor Market." Pp. 3144-3259 in *Handbook of Labor Economics*, vol. 3c, edited by Orley Ashenfelter and David Card. New York, NY: Elsevier Science Press.
- Blau, Francine D. 1998. "Trends in the Well-Being of American Women, 1970-1995." *Journal of Economic Literature* 36:112-165
- Blinder, Alan S. 1973. "Wage Discrimination: Reduced Form and Structural Estimates." *Journal of Human Resources* 8:436-55.
- Budig, Michelle J. and Paula England. 2001. "The Wage Penalty for Motherhood." *American Sociological Review* 66:204-225.
- Chiu, Charlotte and Kevin T. Leicht. 1999. "When Does Feminization Increase Equality? The Case of Lawyers." *Law and Society Review* 33:557-594.
- Curran, Barbara A. 1985. *The Statistical Lawyers Report: A Statistical Profile of the U.S. Legal Profession in the 1980s*. Chicago: American Bar Foundation.
- Curran, Barbara A. 1995. *Women in the Law: A Look at the Numbers*. Chicago: American Bar Association, Commission on Women in the Profession.
- Curran, Barbara A. and Clara N. Carson. 1994. *The Lawyer Statistical Report: The U.S. Legal Profession in the 1990s*. Chicago: American Bar Foundation.
- Dixon, Jo and Carroll Seron. 1995. "Stratification in the Legal Profession: Sex, Sector, and Salary." *Law and Society Review* 29:381-412.

- Foot, David K. and David A. Stager. 1989. "Inter-temporal Market Effect on Gender Earnings Differentials: Lawyers in Canada, 1970-80." *Applied Economics* 21:1011-1028.
- Fuchs, Victor R. 1988. *Women's Quest for Economic Equality*. Cambridge, MA: Harvard University Press.
- Gray, Jeffrey S. 1997. "The Fall in Men's Return to Marriage." *Journal of Human Resources* 32: 481-504.
- Hagan, John and Fiona Kay. 1995. *Gender in Practice: A Study of Lawyers' Lives*. New York: Oxford University Press.
- Heckman, James J. 1980. "Sample Selection Bias as a Specification Error." Pp. 206-248 in *Female Labor Supply: Theory and Estimation*, edited by James P. Smith. Princeton: Princeton University Press.
- Hewlett, Sylvia Ann. 2002. *Creating a Life: Professional Women and the Quest for Children*. New York: Talk Miramax Books.
- Hull, Kathleen E. and Robert L. Nelson. 1997. *Gendered Career Paths in Law: Recent Evidence From a Survey of Urban Lawyers*. Chicago: American Bar Foundation.
- Hull, Kathleen E. and Robert L. Nelson. 2000. "Assimilation, Choice or Constraint? Testing Theories of Gender Differences in the Careers of Lawyers." *Social Forces* 79(1): 229-264.
- Jacobs, Jerry A. 1989. *Revolving Doors: Sex Segregation and Women's Careers*. Stanford, California: Stanford University Press.
- Kanter, Rosabeth. 1977. *Men and Women of the Corporation*. New York: Basic Books.

- Korenman, Sanders and David Neumark. 1992. "Marriage, Motherhood, and Wages." *Journal of Human Resources* 27:233-255.
- Lazear, Edward and Sherwin Rosen. 1990. "Male-Female Wage Differentials in Job Ladders." *Journal of Labor Economics* 8:S106-S123.
- Lundberg, Shelly and Elaina Rose. 2000. "Parenthood and the Earnings of Married Men and Women." *Labor Economics* 7:689-710.
- Marini, Margaret Mooney. 1989. "Sex Differences in Earnings in the United States." *Annual Review of Sociology* 15:343-80.
- Mincer, Jacob and Solomon Polachek. 1974. "Family Investments in Human Capital: Earnings of Women." *Journal of Political Economy* 82(2): S76-S108.
- Morgan, Laurie A. 1998. "Glass Ceiling Effect or Cohort Effect? A Longitudinal Study of the Gender Gap for Engineers, 1982 to 1989." *American Sociological Review* 63:479-483.
- Morgan, Laurie A. and Michelle M. Arthur. 2003. "Methodological Considerations in Estimating the Gender Pay Gap for Employed Professionals." Working Paper.
- Oaxaca, Ronald. 1973. "Male-Female Wage Differences in Urban Labor Markets." *International Economic Review* 14:693-709.
- Reskin, Barbara F. and Irene Padavic. 1994. *Women and Men at Work*. Thousand Oaks, CA: Pine Forge Press.
- Reskin, Barbara F. and Patricia A. Roos. 1990. *Job Queues and Gender Queues*. Philadelphia: Temple University Press.

- Rhode, Deborah L. 1988. "Perspectives on Professional Women." *Stanford Law Review* 40:1163-1207.
- Robson, Karen and Jean E. Wallace. 2001. Gendered Inequalities in Earnings: A Study of Canadian Lawyers. *Canadian Review of Sociology and Anthropology* 38:75-96.
- Shauman, Kimberlee A. and Yu Xie. 1996. "Geographic Mobility of Scientists: Sex Differences and Family Constraints." *Demography* 33(4):455-468.
- Waldfogel, Jane. 1998. "Understanding the Family Gap in Pay for Women with Children." *Journal of Economic Perspectives* 12:137:56.
- Wellington, Alison J. 1994. "Accounting for the Male/Female Wage Gap Among Whites: 1976 and 1985." *American Sociological Review* 59:839-848.
- Wood Robert G., Mary E. Corcoran, and Paul N. Courant. 1993. "Pay Differences among the Highly Paid: The Male-Female Earnings Gap in Lawyers' Salaries." *Journal of Labor Economics* 11:417-441.