

**Nond Prueksiri**

**Reading Note:** Azmat and Ferrer (2016), “*Gender Gaps in Performance: Evidence from Young Lawyers*”

## **Introduction and Motivation**

While there exist abundant studies on gender earnings gap, one issue that is still persist is how to control for performance, or even how to measure it: the paper aims to understand the factors behind gender performance gaps in legal profession. The advantage of studying such area of profession is that performance is transparently measured by hours billed and thus is a good setting to determine performance gaps and their determinants. In order to understand the gaps, the paper proposed hypotheses regarding determinants of the gaps. The following determinants were tested: discrimination, career aspirations, child rearing, over-billing, networking and weekend working.

## **Methodology**

The study employed survey data of young lawyers who passed the bar test. The data is panel with young lawyers being surveyed twice, in 2002 and 2007. The study used simple panel regression model with some fixed effects on individual, firm, region, and education based on models. The performance gaps are determined by estimating regression with performance (as measured by hours billed and new client revenue) being a dependent variable while dummy variable representing female being an independent variable. To find determinants of such gaps, the authors created interaction terms (determinant of interest interacting with female dummy) to see if coefficients corresponding them are significant. Measurement issue here mostly concerns quantitative variable representing qualitative aspect of the study, that is; aspiration variable in which the score of aspiration may or may not be compared with different individual. For example, a perception of 6 on aspiration may not be equal to 6 of the others in the survey and hence aggregating them possibly leads to imprecise measurement.

## **Findings and Re-interpretation**

In most cases, the estimates show that performance gap exists regardless of other time-invariant variable being controlled. Furthermore, the study conclude that two main determinants of the performance gap is child rearing, specifically, if a female has young children at home and career (partner) aspirations. The former determinant is in-line with the female life-cycle earning, that is; wage gap starts widening in females’ 30s while the gap tightens in females’ 50s. The latter determinant suggests that in legal profession, there still exists a “glass ceiling”, at least, in females’ perception because this study suggests that career aspiration plays significant role for female only at the partner level. The paper also anticipates that the gaps might not be close in the future as the authors might view these determinants as a “structural” problem for female.

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**Reading Note:** Card, Cardoso & Kline (2014), *“Bargaining, Sorting, and the Gender Wage Gap: Quantifying the Impact of Firms on the Relative Pay of Women”*

## **Introduction and Motivation**

With rich employment data along with firm data from Portugal, the authors matched the two datasets to estimate gender firm-specific pay premium using rent-sharing model. This is to quantify (1) gender pay premium gaps, and (2) to what extent sorting and bargaining can explain the gaps. The authors also argued that this case study of Portugal can be generalized as a structure of the gaps is similar to average OECD countries.

## **Methodology**

The paper employs Abowd, Kramarz and Margolis’ “Additive Worker-firm Effects Model” (AKM) to be estimated using OLS, with the assumptions proved to be “approximately satisfied”, for the pay premium for both men and women controlling for individual and firm. The specification of the model is that wage can be explained by (1) an individual permanent component, (2) a gender-firm-specific wage premium and (3) a composite error which arises from time-varying factors that affects firms, individual matching surplus, and a transitory component. The gender-firm-specific wage premium are also normalized by the same effects of low valued-added firm where the cut-off of low valued-added firm is to be estimated by bivariate regression models. This is to make sure that we recognize those low value-added firms pay no premium. Then, the difference between pay premium for each gender is decomposed by Oaxaca wage decomposition method into a sorting effect (expected wage difference given same gender individuals working for different jobs - that usually employ male vs female) and a bargaining effect (expected wage difference given both genders working for the same job).

## **Findings and Re-interpretation**

The descriptive evidence from matched employer-employee data shows that men see a larger change in wage due to job moving between the same sets of firms than women which can be implied that men have more bargaining ability than women. Meanwhile, the estimation results from AKM model suggest that women earns 10% less wage premium than men. Furthermore by Oaxaca-style decomposition, sorting effects explain about two-third of 20% and bargaining effects explain about one-third of the wage premium gaps, respectively. In addition, women are found to be more likely to work at lowly productive firm paying low wage premium for both genders. From the results, sorting effects tend to be more important, and this it is consistent with selection rules of women. (e.g. in Mulligan & Rubinstein, 2008) Moreover, one reason why bargaining effects explain less is that bargaining may not be very effective in low value-added firm (as they might not find it feasible to offer high wage) where women tends to work. (by sorting effects) This is consistent with the finding that bargaining plays larger role in wage premium gaps among more educated workers.

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**Reading Note:** Kleven, Landais & Sogaard (2017), “*Children and Gender Inequality: Evidence from Denmark*”

## **Introduction and Motivation**

Due to the fact that gender earning gaps have narrowed but does not seem to close, the paper is to show that the persisted gap is largely due to the “child penalties” – labor market outcome gaps from women’s childbirth and the choices they make after childbirth. With large panel data from Denmark, the authors attempted to determine the size of penalty both short and long run, and determine if an intergenerational transmission contributes to the persisted child penalties.

## **Methodology**

The main approach used is the “event study” method where event here is year of the first childbirth. The implementation is that the outcome of interest (e.g. wages, hours working) is regressed on dummy variables of time after the first childbirth while controlling age and year for both genders. A child penalty is defined as a difference of coefficient corresponding to time dummy between men and women in percentage. To understand the component behind the estimation, the framework that allows a direct childbirth effect and indirect childbirth effects (from the labor market choices as a result of childbirth) on labor market outcome is also constructed. Furthermore, Oaxaca-style decomposition is employed in decomposing labor market outcome gaps between men and women in order to determine the size of child penalty. The last estimation is to determine the correlation between child penalty and labor supply of the grandmother using the same event study method but interacting time dummy with a quartile position of grandmother’s labor supply. This is in order to document an intergenerational transmission.

## **Findings and Re-interpretation**

The persistence of gender inequality in earnings can be largely explained by the persistence of child-related gender inequality; i.e., child penalty. Robustness check is also completed using methodology from existing literature such as instrumental variable method. In fact, the gaps in labor market outcome are not only explained by childbirth but also the choices that women make conditioning on childbirth. For example, it is found that after the first childbirth, women tends to have a higher probability of working in family-friendly firm which employs large number of women with children, presumably firms with suitable workload for female parents. In addition, the persistence of child penalty can also be explained by the labor market choice made by the grandmother (intergenerational transmission of child penalties), that is; woman’s labor supply choices are heavily influenced her mother choices when she was young. This shows that although people are increasingly open about mother working full-time, the labor market outcome gaps that exist today are partly results of “traditional” expectation of the gender role.

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**Reading Note:** Betrand, Kamenica & Pan (2015), “*Gender Identity and Relative Income Within Households*”

## **Introduction and Motivation**

As it is observed that while women incomes are increasing a marriage rate decreases, the paper investigates whether the behavioral prescription that “a man should earn more than his wife” plays an important role behind this phenomenon. The consequences of violating such social norm in terms of marriage quality and what choices do wife with potential income higher than her husband make to avoid such violation, and roles of home production (nonmarket working hour for work such as chores) are also analyzed.

## **Methodology**

The authors began by constructing the “marriage market” which is defined by the set of individuals with similar characteristics. (age, race, education, and location) Then, they calculated the probability that female earns more than male by random pairing male and female in the market, comparing the earnings, and calculating probability for the market. This probability is then used as an independent variable in marriage rate regression with control variables such as income and education, but there is a concern that there are local conditions that might affect both marriage rate and income at the same time, and thus violates OLS assumptions. With this concern, modified Batik-style instrument, weighted average (based on fractions of worker in different industries and worker characteristics) wages of locations outside the market for each gender wage percentile, is used to calculate wage and income. In addition, several more dependent variables, whether wife is in the labor force, (potential) income gap, marital satisfaction, divorce, and hours in home production, are also regressed on the probability that woman earns more to analyze the rest of the aforementioned ideas.

## **Findings and Re-interpretation**

The key result is that the higher probability of women earning more than men, the lower marriage rate, and this can be implied that gender social norm still exists. Furthermore, the estimates suggest that violations on such norm can result in a lower marriage quality, for example, a higher of the probability of women earning more associates with a lower marriage satisfaction and a higher probability of divorce. From additional regressions, there are more evidences showing that women whose potential earnings exceed that of her husband tend to avoid violating such norms by not participating in labor market at all or dedicating more hours in home production so that she works less hours and earns less than her husband. The paper explores many aspects of how gender identity expectations by society influence marriage outcomes, however, all of them are from aggregate level. In my viewpoint, to pin down causation, we may need to look at individual choices that to what extent the partner’s income affect her decisions. Furthermore, by constructing marriage market based on “homophily pattern”, the analysis left out 41% of marriages that could potentially make the result more robust.

**Nond Prueksiri**

**Reading Note:** Mulligan and Rubinstein (2008), “*Selection, Investment and Women’s Relative Wages over Time*”

## **Introduction and Motivation**

In 20 years period, gender wage gaps were decreasing with women’s wages increased as much as 0.2 log points relative to men’s, meanwhile, wage inequality within gender also rose. This paper attempted to test whether such phenomenon can be explained by selection and investment of female workers. The authors examined a supply aspect of labor market, that is; they inspected the growth and composition of female’s labor supply through selection bias.

## **Methodology**

The paper employs Gronau-Heckman-Roy (GHR) model which is a probabilistic model for labor participation decision to construct the structure for selection bias estimation. The two-step estimation method derived from GHR comprises of: first step – estimate the inverse Mills ratio from probabilistic regression (dependent variable: employment, sometimes called selection ratio, independent variables: demographic characteristics) where Mills ratio represents net return on working, and second step – use the Mills ratio estimated in the first step as an independent variable in estimating wage linear regression equation along with demographic characteristics. Selection bias can be estimated from difference between wage gap from the two-step and OLS (doing only the second step without including the Mills ratio) estimation. With measurement concerns from the fact that the data is not panel, characteristic variables are different across time, apart from fixed weight methods, the paper also introduced Identification at Infinity Method. The method, deriving from different assumptions, only included the individuals who have predicted employment probability closed to 1 to check for robustness of the results yielded from the two-step estimation.

## **Findings and Re-interpretation**

The paper has identified that the narrowing gender wage gap can be explained by change in selection rule. By controlling for selection rule using two-step method which is considered to be the main contribution of this paper, the ratio of female wage over male wage did not increase which suggests that the selection rule had changed. During the time period, more capable female worker who had high predicted employment rate entered (selected herself) into labor market and earned relatively high wages. This resulted in changes in female labor supply composition and, thus wage inequality within gender increased. Investment enters picture here: selection rule does not only affect labor supply but also affects decision to invest in human capital (e.g. education) for women. With change in selection rule, women generally invested more in herself (e.g. attaining higher level in education), and therefore enters the labor market gaining relatively high wages.