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IS THERE A MARRIAGE OR PARENTHOOD INCOME PENALTY AMONG POLICE?: A CASE STUDY OF OCCUPATIONAL GENDER INEQUALITY IN THE PUBLIC SECTOR

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IS THERE A MARRIAGE OR PARENTHOOD INCOME PENALTY AMONG POLICE?: A CASE STUDY OF OCCUPATIONAL GENDER INEQUALITY IN THE PUBLIC SECTOR

A THESIS APPROVED FOR THE
DEPARTMENT OF SOCIOLOGY

BY

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Abstract

Research has found an earnings advantage for married men as well as men with children. In contrast, married women and women with children often receive a much smaller wage premium, or even face a wage penalty. Most research on the marriage and motherhood income penalties has focused on the private labor market, tacitly assuming that the laws and regulations that govern public sector occupations will prevent this form of occupational gender inequality within these domains. Whether this is the case remains an empirical question. With increasing numbers of females entering the labor force, examining whether these forms of occupational gender inequality are present within public sector jobs has become more important. Using data from the Current Population Survey covering 41 years, I explore the gendered effects of marriage and parenthood on income inequality using police officers as a case study of a public-sector occupation. My analyses reveal that female police officers experience both marriage and motherhood income penalties, though the marriage penalty is partially explained by the stronger negative effect of motherhood on female police officers' income. Furthermore, these analyses suggest that male officers enjoy stable marriage and fatherhood income advantages over time, but females continuously face a motherhood penalty. I conclude with a discussion of the implications of my findings for future research.

Chapter 1: Introduction

From 1950 to 1990, the number of women participating in the American labor force doubled, from around 30 percent to 60 percent (Byker 2016). This proportion has continued to increase, in what Goldin calls "the most significant change in the labor market over the past century" (2006:1). Accompanying the increase of women in the labor-force, the number of working mothers has also grown (Byker 2016) and more married women are choosing to enter and remain in the labor-force than ever before (Blau and Kahn 2007b). These structural changes in the gender composition of the labor force raise several concerns over the equitable treatment of women, and previous research has found less mobility and promotion for female workers, women being more likely to hold subordinate positions within the workplace, the devaluation of female-dominated occupations, and a persistent gender gap in earnings within the U.S. labor force (England et al. 1994; England, Allison, and Wu 2007; Misra and Strader 2013).

This paper will examine one form of this occupational gender inequality, focusing on how marriage and parenthood affect income for men and women. Prior research has found that women have continuously earned less pay on average than their male counterparts (e.g.: Bernhardt, Morris, and Handcock 1995; Jarrell and Stanley 2004; Blau and Kahn 2007a). In addition to this gender gap in pay, some women face other disadvantages, including receiving an income penalty for being married or having children (Budig and England 2001). There is a growing body of research that examines the negative effects of marriage (Waite 1995; Loughran and Zissimopoulos 2009) and motherhood (Budig and England 2001; Anderson, Binder, and Krause 2003; Correll, Benard, and In Paik 2007; Glauber 2007; Gangl and Ziefle 2009; Budig and Hodges

2010; Glauber 2012; Weeden, Cha, and Bucca 2016; Yu and Kuo 2017) on female income. Exacerbating this form of occupational gender inequality is the well-documented income premium experienced by married men (Hersch and Stratton 2000; Chun and Lee 2001; Ginther and Zavodny 2001; Antonovics and Town 2004; Dougherty 2006; Lincoln 2008; Cheng 2015) and men with children (Glauber 2008; Killewald 2013; Killewald and Gough 2013).

Several theoretical mechanisms have been proposed to explain these differences in pay by marriage and parenthood (Budig and Hodges 2010; Gough and Noonan 2013; England et al. 2016; Yu and Kuo 2017). Most of this research, however, has focused on the entire labor market or among occupationally specific studies, and the emphasis has been on private sector – as opposed to public sector – occupations. One possible reason for this oversight is that researchers assume that the formal rules and regulations – such as the Civil Rights Act of 1964 – make discrimination against females illegal (England et al. 2007) and these rules may be implemented more effectively in public sector positions compared to private sector jobs. By not focusing on public sector jobs, however, researchers are tacitly assuming that the occupational gender inequalities that are a persistent feature of the general labor-force and are widely present in several occupationally specific private sector jobs, will not be present in public sector occupations. Whether this is the case remains an empirical question.

Using police as a case study of occupational gender inequality in the public sector, this study answers the following questions, "Is there a gendered marriage or parenthood effect on income within the police sector and how have these income differences changed over time?" I use data from the nationally representative Current

Population Survey (CPS) from 1976 to 2017 to model the marriage and parenthood income differential among police officers over the past 41 years. I advance the research on the marriage and parenthood wage effects, as well as occupational inequality among police, in three ways. First, instead of exploring marriage and motherhood penalty in the overall labor force or private sector jobs, I decompose the effects of marriage and parental status on income in the conventionally male-dominated public-sector occupation of law-enforcement. Second, I also explore whether marriage or motherhood plays a stronger role in shaping the compensation structure of female police officers. Finally, taking advantage of the large sample size and long-time series, I track whether and how the marriage and parenthood income effects among police have changed over time.

Chapter 2: Background

Occupational gender inequality has been, and remains, a persistent feature of the American labor market (e.g.: Katrin, Thomas, and Carsten 2017; Thomas 2017). Despite the increase in women's labor force participation, females continue to experience a variety of inequalities within the workplace, including the devaluation of female-dominated occupations and an underrepresentation of women within high-paying professions and managerial positions (Blau and Kahn 2007b). Women's work is broadly under-valued relative to men's labor (England et al. 1994; Cohen and Huffman 2003a, 2003b), and those occupations with the largest proportion of female employees tend to be culturally feminized, and therefore devalued (Levanon, England, and Allison 2009). Furthermore, female employees tend to cluster near the bottom of professional hierarchies, have lower average earnings, have less occupational authority, and decreased advancement potential in comparison with men (Davies-Netzley 1998). Also, females experience persistent wage inequality compared to their male counterparts (England et al. 2007; Mouw and Kalleberg 2010). Beyond these forms of inequality, marriage and parenthood are additional mechanisms that can lead to occupational disadvantage among women in the labor market (Budig and England 2001) and are at least partly associated with the gender gap in pay within the general U.S. labor market.

2.1 Marriage Effects on Income

One important form of occupational gender inequality is the effect of marriage on income. The vast majority of research in this area finds that married females are payed significantly less than unmarried females (Waite 1995; Loughran and

Zissimopoulos 2009).[1] Korenman and Neumark (1991) found that marriage accounted for almost one-third of the gender difference in pay between men and women. Comparatively, married males receive a marriage premium and often earn significantly more than single men (Chun and Lee 2001).

A number of theoretical mechanisms have been proposed to explain this marriage income differential, including within-household specialization theory (Becker 1981; Hersch and Stratton 2000; Lincoln 2008; Rodgers and Stratton 2010; de Linde Leonard and Stanley 2015), selection hypothesis (Chun and Lee 2001; Ginther and Zavodny 2001; Bonilla and Kiraly 2013; Ashwin and Isupova 2014), employer discrimination (Bartlett and Callahan 1984; Hersch and Stratton 2000), and compensating differential theory (Reed and Harford 1989; Pollmann-Schult 2011). For example, according to the household specialization perspective, there exists cultural assumptions that married women are more likely to specialize in household labor while married men are expected to specialize in paid labor market activities (Becker 1981; Gupta 1999). Because employers perceive married women as less committed to their jobs, less productive at work, and more focused on housework (Bartlett and Callahan 1984; Hersch and Stratton 2000), they feel justified in paying married women less than women who are not married. Conversely, the selection hypothesis argues that the reason males experience a marriage premium is that high-earning men are more valued marriage partners due to their earnings capability, and are therefore more likely to get

[1] While the negative effects of marriage on females' income is the most common finding for research in this area, some studies have come to contradictory conclusions, including that marriage does not shape female pay (Korenman and Neumark 1992) or that females receive a marriage premium, though a smaller premium than men (Dougherty 2006; Glauber 2007; Killewald and Gough 2013).

married than less successful men (Cohen and Haberfeld 1991; Ginther and Zavodny 2001; Ahituv and Lerman 2007; Rodgers and Stratton 2010; Bonilla and Kiraly 2013). Researchers also point out several other explanations that explain the differential effects of marriage on men's and women's income, including more job training for married males (Rodgers and Stratton 2010), the aggregating effect of decreased job mobility for married women (Loughran and Zissimopoulos 2009), and gender differences in the investment in human capital (Becker 1985; Gough and Noonan 2013).

Despite the large literature on the gender differences in marriage's effects on wages and income (Dougherty 2006; Loughran and Zissimopoulos 2009; Cheng 2015), research in this area has largely focused on the general labor market. Although we know a lot about the marriage wage effect in the overall labor market, we do not know whether these differences exist or operate in the same way among employees within specific occupations. Focusing on public sector jobs, I examine whether this form of occupational inequality is present among law enforcement officers and how this pattern of gender disadvantage has changed over time.

2.2 Parenthood Effects on Income

Like the gendered marriage effects on income, a large body of research has found a strong positive relationship between parental status on male wages (Lundberg and Rose 2000; Glauber 2008; Hodges and Budig 2010; Killewald 2013) and a strong negative effect of parenthood on female wages (Budig and England 2001; Glauber 2007; Budig and Hodges 2010; Kahn, García-Manglano, and Bianchi 2014).[2] Mothers,

[2] There is a small contrarian body of research that finds either no direct effect of motherhood on women's wages (Korenman and Neumark 1992), or positive effect in certain occupations and situations (Amuedo-Dorantes and Kimmel 2005; Buchmann

on average, earn less than women without children, and less than men irrespective of whether they have children (Gough and Noonan 2013; Ipshita Pal and Waldfogel 2016). Moreover, this motherhood penalty has remained relatively stable over time (Avellar and Smock 2003; Misra and Strader 2013).

In terms of the mechanisms that may explain the association between motherhood and lower wages, there is considerable overlap with the literature on marriage's role in patterning income. Budig and England (2001) suggested four primary explanations for motherhood penalty: First, mothers will lose job experience as they are expected to take time off to have and care for their children; Second, their exists cultural assumptions that mothers will be less productive at work and have greater responsibilities concerning childcare and household labor; Third, women with children may be more likely to trade off higher-wage jobs for more family-friendly jobs that provide more flexibility and accommodation to balance family and career (Felfe 2012; Yu and Kuo 2017); Lastly, mothers may experience aggregating discrimination from employers (Benard and Correll 2010), who may pay women less than men (gender discrimination) and furthermore may pay mothers less than non-parents (motherhood discrimination) due to their cultural biases. Correll and colleagues (2007) tested these status-based forms of discrimination in an experiment and found that mothers suffered a substantial wage penalty and were penalized on a host of measures, including perceived competence and recommended starting salary, while men benefited from being a father.

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and McDaniel 2016). Amuedo-Dorantes and Kimmel (2005) found mothers with a college education enjoyed a wage boost of about 4 percent compared to college-educated childless women. Buchmann and McDaniel (2016) examined the family wage gap in specific elite male-dominated professions, such as science, engineering, medicine, and law finding that mothers gained earning premium compared to mothers in female-dominated professions.

A review of the motherhood wage penalty literature by Gough and Noonan (2013) systematically summarized the main theoretical explanations for this well-established finding, and these included human capital, work effort, job characteristics/compensating differentials, discrimination, and occupational selection processes.

The research on parenthood's effects on income, like the research on marriage and income, focuses primarily on the general labor market and this research provides a macro view of occupational gender inequality in the U.S. There are, however, some limitations to this research. One problem is that by focusing on the entire labor market, this research risks over-estimating the gendered effects of marriage and parenthood on wages due to job sorting. Because of the failure to account for the selection process into different occupations, the differences these researchers observe may rely on comparing individuals with high-prestige, high-wage jobs to lower earning occupations. Mouw and Kalleberg (2010) have argued that the overall gender gap in pay is largely the result of between-occupation inequality, with 66 percent of the increase in wage inequality from 1992 to 2008 explained by between-occupational sorting. While this is important information about the state of the entire U.S. labor market, the emphasis on between-occupational difference makes understanding the marriage and parenthood effects on income more difficult due to gendered selection process into different occupations.[3]

[3] While focusing on within occupational differences may solve some of these problems, others emerge. For instance, selection into a male-dominated occupation – particularly among females – may shape some of the processes analyzed here. While I do not believe that individuals selecting into this particular occupation are expecting to experience a gender difference in marriage and parenthood's effect on their pay, I am unable to account for how this and other unmeasured factors may shape my results.

Some research has focused on the within-occupational marriage and parenthood effects on income (Kelly and Grant 2012; Buchmann and McDaniel 2016). For example, one study has found a large marriage premium for married men compared to unmarried men among managers and professionals in a single firm (Korenman and Neumark 1991). Buchmann and McDaniel (2016) found that women with children experienced a wage penalty in female-dominated professions, but a wage premium within some traditionally male-dominated professions. Another study on within-occupational inequality showed that female clergy were penalized because of their marriage and motherhood status (Schleifer and Miller 2017). Overall, these studies partially overcome the issue of occupational sorting by comparing individuals within the same occupational setting. However, the occupational specific studies have concentrated on private sector jobs. By focusing on private sector jobs, researchers have assumed that these types of occupations are less subject to the formal rules and regulations governing occupational gender inequality, whereas public sector jobs may be less prone to occupational gender inequality because of laws and regulations governing these illegal practices (Mandel and Semyonov 2014). Whether this is the case remains to be seen.

2.3 Police as a Case Study of Public Sector Occupations

Policing provides an excellent opportunity to explore the marriage and parenthood effects on income within a public-sector occupation. Law enforcement is culturally understood as hyper-masculine profession (Garcia 2003; Schulze 2011; Archbold and Schulz 2012). Within this male-dominated field, female police officers have long been characterized as ‘the mother’ and their work has been perceived as

directed towards the protection of home and family (Garcia 2003) or towards social and protective services (Schulz 1995). Historically, females have also been placed within lower ranks within these law enforcement organizations and have received fewer opportunities for promotion (Schulz 1993). Under these conditions, previous research suggests that this occupational domain would experience high degrees of gender income inequality.

Despite their historic marginalized role within this hyper-masculine occupation, female police officers have seen their occupational roles shift from police matrons to policewomen to police officers and/or crime fighters (Archbold and Schulz 2012). Female police officers have outperformed, or performed as well as, male police officers in some types of jobs (Garcia 2003), and have shown themselves to be equally competent with male patrol officers (Archbold and Schulz 2012). Moreover, police agencies tend to have equal occupational expectations for male and female officers (Schulze 2011). These changes have occurred despite the "hegemonic masculinity" governing this domain (Schulze 2011) and this may lead researchers to expect a greater degree of gender parity within this public-sector occupation.

Moreover, within public sector occupations there is also a presumption that the strict legal rules and regulations governing gender discrimination– such as the *1963 Equal Pay Act and 1964 Civil Rights Act* – are more likely to be enforced within these jobs and this should guarantee equal pay for equal work and prohibit sex-based employment discrimination among police (Alkadry and Tower 2006; Seklecki and Paynich 2007; Reese and Warner 2011). The *Crime Control Act of 1973* specifies federal funds for law enforcement agencies are in part based on their non-discriminatory

employment practices, which some research suggests has benefited female officers to some extent (Archbold and Schulz 2012). Others have found that public sector jobs are more attractive to women due to the more egalitarian pay system and effective antidiscrimination policy enforcement (Mandel and Semyonov 2014). This would also lead researchers to expect a smaller gender pay gap in the public realm compared to the private labor market. Contrary to this finding, Luo, Schleifer, and Hill (2018) found that female police officers earn consistently less than male officers, though there has been a narrowing of the gender income gap among police officers compared to the general population.

It is the juxtaposition between the hyper-masculine occupational setting – where research suggests we would expect a greater degree of gender inequality (Shelley, Morabito, and Tobin-Gurley 2011) – and the public-sector occupations – where we assume there will be little to no gender inequality due to the enforcement of legal precedent – that makes law enforcement the ideal place to explore within-occupational gender inequality. With increasing numbers of females entering into the police labor force (Luo et al. 2018), examining whether any gender differences in marriage's and parenthood's effects on income are present within this occupation will inform the literatures on occupational gender inequality as well as inequality within U.S. law enforcement. By exploring the gender difference in marriage's and parenthood's patterning of police pay, I will uncover whether and to what degree these forms of occupational gender inequality exist among police in the U.S. and how any disparities may have changed over time.

Chapter 3: Data and Methods

3.1 Data

My study uses data from the Annual Social and Economic Supplement of the Current Population Survey (CPS) from 1976 to 2017 (Flood et al. 2017).4 The CPS data, jointly sponsored by the U.S. Census Bureau and Bureau of Labor Statistics, are the primary monthly household survey of the U.S. population and provide information on the labor force, employment, earnings, and other demographic characteristics. The CPS has been widely used to study income inequality in the U.S. (e.g.: Reynolds and Wenger 2012; Moore 2017). From 1976-2017, the CPS surveyed more than 7 million individuals, about 178,000 individuals each year.[5] For my purposes, the CPS includes a large sample of police officers that allows for tracking trends of marriage and parental status' impact on police income over the last 41 years.

3.1.1 Police in the CPS

The CPS collected information about respondents' jobs by asking "What kind of work do you do, that is, what is your occupation?" With this information, occupation was coded into the contemporary census occupational classification system. The coding scheme for the occupational data in the CPS has changed over time. For example, occupations are coded using the 1970 scheme from 1971-1982 and the 1980 scheme from 1983-1991, and so forth. For each census occupational scheme, the occupation codes for police officers have varied. To work with a consistent occupational coding

[4] The CPS data extract is downloaded from the IPUMS-CPS database at the Minnesota Population Center (Flood et al. 2017). See "https://cps.ipums.org/cps/" for more information.

[5] The CPS data on the IPUMS are available from 1962. Prior to 1976, the occupational information collected by the CPS does not allow me to isolate police officers. I therefore limit my sample to 1976 and beyond.

scheme for 1976 forward, I use the CPS's OCC1950 variable that recodes occupations into a common format using the 1950 census classification scheme and thereby provides occupational comparability over time. From the *OCC1950* variable, I combine three police categories – marshals and constables ($OCC1950 = 771$), policemen and detectives ($OCC1950 = 773$), and sheriffs and bailiffs ($OCC1950 = 782$) – to identify police officers throughout my time series.[6] Following previous research (e.g.: Schwartz 2010; Moore 2017), I limit my sample to individuals who are between the ages of 18 and 65, who are currently employed, and who worked at least 50 weeks in the previous year. After adjusting for missing data, this analytical sample includes 16,935 individuals who report police as their primary occupation, about 413 officers on average for each survey year. Among the police officers in this time-series, 2,628 (15.5 percent) are female.

3.1.2 Dependent Variable: Natural Log of Yearly Income

The outcome variable in this study is the natural logarithm of respondent's total pretax wage and salary income from the previous year, standardized to 2017 dollars.7 The CPS collects information about wages and salaried income from the respondent's primary occupation and this information will form the basis of my income variable. For confidentiality reasons, the CPS top codes reported income over a certain amount to

[6] As a robustness check, I create a police indicator using the non-harmonized CPS occupational information. To do so, I follow Meyer and Osborne (2005) who proposed a mapping between occupational category systems as they existed in the Census of Population from 1960 to 2000, and in the CPS from 1968 to 2003, into a unified set of categories. Following this procedure, I test the consistency of this measure of police officers and find the number of police officers using this procedure is identical to using the *OCC1950* procedure described above.

[7] All incomes are converted to 2017 dollars using Consumer Price Index (CPI). For more detail information about Consumer Price Index, see: "https://cps.ipums.org/cps/cpi99.shtml".

prevent the identification of individuals with extremely high incomes. This top coding system has changed multiple times over my time-series. To utilize my entire time-series, following Larrimore, Burkhauser, Feng, and Zayatz (2008), I replace the extremely high incomes with a uniform top-coded values for each survey year and then, following the "Rule of Thumb" (Burkhauser, Feng and Jenkins 2009), I replace top-coded income with 1.4 times that value.[8]

3.1.3 Key Independent Variables: Gender, Marital and Parental Status

Gender is a binary variable, coded 1 for females and 0 for males. The CPS collected information about respondent's marital status by asking "What is your current marital status?" I recode this information into a binary variable where 1 denotes respondents who are currently married, and this allows me to test the effects of marriage on police income. The CPS also collected information about respondent's children by asking "How many children (includes biological children, adopted children and step-children) are currently living in the household?" I recode this into an indicator for any children in home (having child in home coded as 1, otherwise 0). While the children at home is not a strict measure of parenthood – respondent may not live with their children – this provides a reasonable proxy for parenthood and follows previous research (e.g.: Buchmann and McDaniel 2016).

3.1.4 Control Variables

[8] Overall, 25 police officers (0.11 percent) in my sample report top-coded income. The CPS also uses a "hot deck" imputation of missing income and wage information and this process has been shown to bias income estimates (For an overview, see: Mouw and Kalleberg 2010). To avoid this issue, I exclude all imputed wage values in my analyses. The 1994 and 1995 survey year do not include information about which income values are imputed and I exclude these years from my data.

I control for a number of additional factors that may shape respondent's income. *Age* is a continuous variable that ranges from 18 to 65 and I also include an age-squared term (Age^2) to account for any curvilinear relationship between age and income. Working hours per week is continuous variable that runs from 1 to 99. Following Weeden et al. (2016), I recode this information to 3 dummy variables: working less than 35 hours a week (part-time work - reference category), working between 35 and 55 hours a week (*full-time work*), and working over 55 hours a week (*overtime work*). To control for respondent's race, I create two indicator variables for *black* and *other race* individuals with whites as the reference category. To control for educational differences in income, I recode the CPS education information into four dummy variables – less than high school (reference category), *high school*, *bachelor's degree*, and *advanced degre*e.[9] *Living in a city* is a binary indicator of urban residence (living in city coded as 1 otherwise 0) and I create a series of indicator variables for those living in the *mid-west*, *south*, and *west* with northeast as a reference, to control for regional differences. In additional models, I control for whether police officers are members of a *Union* with a binary indicator coded 1 for those who are union members and 0 for those who are not. The union membership variable in the CPS is only collected from 1990-2017 and was only asked of a random subsample of all respondents. This measure, therefore, includes a large amount of missing information (about 81.6%). Because of this, I only

[9] CPS changed how it collected information on educational attainment in 1992. Before 1992 the CPS asked how many years of education have respondents completed and in 1992 and after they asked the highest degree every completed. For consistency, I recode education before 1992 so that respondents who have not completed 12 years of school are coded as less than high school, those finishing 12th grade up to 3 years of college as high school education, completing 4 years of college or obtain a bachelor's degree as bachelor's degree, and those who complete over 5 years of college coded as advanced degree.

include this measure in supplementary analyses. Finally, to capture change over time, I include a continuous *year* of survey variable, coded from 0 for the first year 1976 to 41 for the most recent year 2017.[10]

3.2 Modeling Strategy

For my CPS police sample, I use an Ordinary Least Squares (OLS) regression of the natural log of yearly income on my independent and control variables. The linear regression models are estimated using the following form:

$$\ln(inc) = \beta_0 + \beta_1(x1) + \beta_2(x2) + \beta_3(x3) + \boldsymbol{\beta_4}(\boldsymbol{x4}) + \boldsymbol{\beta_5}(\boldsymbol{x5}) + e$$

where ln (*inc*) is the natural log of yearly income in 2017 dollars, *x1* is a binary indicator for females with the corresponding regression coefficient captured in the β_1. Two indicators *x2* and *x3* are included to examine the effects of marital and parental status on police income, respectively. Some models include interactions which are represented by the ***x4*** vector with corresponding coefficients of $\boldsymbol{\beta_4}$ vector. Likewise, all the control variables are captured by the ***x5*** vector with $\boldsymbol{\beta_5}$ vector of coefficients showing each control variables' impact on individual's yearly income. Finally, β_0 captures the model intercept and *e* captures any residual model error. All models use a list-wise deletion strategy to account for missing information. Among the variables that contain missing data, living in a city has the largest percentage of missing at about 17.6 percent, followed by income and age, around 4 percent and 2 percent respectively.

[10] To test whether the effects of time on income was linear, additional models (not shown here) included a year squared term. Results from this specification suggest a linear trend best captures change in police income.

Chapter 4: Results

To address my research questions, I pursue both descriptive and regression-based analyses to uncover any pattern of marriage and parenthood effects on police income by gender. Table 1 presents the descriptive statistics from my CPS data, averaged over the entire time-series. I have broken the data down into two groups: male officers and female officers. This descriptive information shows that the within-occupational gender difference in income among police is quite large, with male police officers making about 11.6 thousand dollars more in median income than female police officers, averaged over these 41 years. We can also see from these descriptive statistics a difference in the proportion of married individuals among male and female police. Only 47.5 percent of females working in law enforcement are married, compared to 78 percent of male police officers and this amounts to a greater than 30-percentage point difference in marital patterns by gender within this occupation. Likewise, the proportion of children in home for male and female police officers is also different, with 54 percent of women report having a child in their home compared to 65 percent of men. Male and female police officers also show some minor differences in racial composition, but outside of these differences they have a similar demographic profile.

[TABLE 1 ABOUT HERE]

To test whether these descriptive differences hold when controlling for additional covariates, I present a series of regression models in Table 2. For these analyses, Model 1 includes all key independent and control variables to determine if there are any general marriage and parenthood differences in income among police after controlling for additional factors. Model 2 includes an additional interaction between

my gender and marriage indicators to determine if the effects of marriage on income vary by gender. Model 3 includes an interaction between my female indicator and the indicator of parenthood. Finally, Model 4 in this table includes the marriage and parenthood gender interactions simultaneously to determine which of these family characteristics has a greater impact on police income.

[TABLE 2 ABOUT HERE]

Model 1 shows the conditional average difference in income across my covariates. Here, we see that females earn about 16.5 percent less ($Percent\ Difference = (\exp(-0.180) - 1) * 100$)[11] than males even after controlling for additional factors, when averaging over these 41 years. We can also see from Model 1 that both marriage and having child in the household have a significantly positive impact on income among all police officers, though the size of the premium is not large. Compared to unmarried police officers, those who are married earn an average of 4 percent more income per year, and those with children earn 2 percent more than those without kids in their home. As we shall see, these average differences mask some important gender variation within these data.

Model 2 shows important gender differences in the effect of marriage on income by decomposing these effects. Married female police officers make around 18.5 percent less($Comparative\ Percent\ Differences = (\exp((-0.152 + 0.053 - 0.050) - (0.053)) - 1) * 100$)[12] than married male officers, 14 percent less than unmarried males, and around 0.2 percent more than unmarried female officers. Figure 1 visualizes

[11] I use this formula to convert the coefficients into percentage differences to aide interpretation: $Simple\ Percentage\ Difference = (\exp(coefficient) - 1) * 100$

[12] $Complex\ Percentage\ Difference = (\exp(coefficient_1 - coefficient_2) - 1) * 100$

these differences by plotting predicted income across these groups of interest. Here we can see that the income for males, both married and unmarried, far exceeds the expected income for females. Among males, there is a large marriage premium with married male law enforcement officers earning around 3,224 dollars more in yearly income compared to unmarried males. Females show a slight marriage income differential, with unmarried females earning around 112 dollars less in yearly income. While the magnitude of the marriage difference among females is small, it does suggest that at best these women experience no marriage effect on income. Given that there is such a large difference among males, the compensation processes here appear strongly gendered.

[FIGURE 1 ABOUT HERE]

Model 3 from Table 2 decomposes the effect of having children in the home on male and female income. Figure 2 plots the predicted income across these groups to visualize any differences. Here we can see that motherhood exerts a stronger influence on female police income compared to marriage. Again, male police officers, whether they have a child in the home or not, earn much more than females. Males benefit from fatherhood, making 62,760 dollars expected income averaged during the 41-year time-series, which is 1,880 dollars more than their male counterparts with no children. Conversely, and as would be expected from research on the general labor force and private sector jobs, publicly employed female police officers are penalized due to their parental status, with an average earning of only 51,027 dollars compared to females without children who are expected to earn around 52,541 per year (a 1,514-dollar difference), while controlling for other factors. Female police with children earn the

least among these four groups – males with and without children, females with and without children – while males with children earn the most. It suggests that motherhood produces negative effects on income for female police officers. Model 4 includes both the marriage and parenthood gender interactions to determine if one effects is stronger than the other and it appears that parenthood status exerts a stronger influence than marriage on income for female officers.

[FIGURE 2 ABOUT HERE]

Since I combine three categories to identify police officers, these main models do not distinguish the effects of marriage and parenthood on income for the different types of officers I am able to isolate. To examine any possible differences across these groups, I run four additional analyses with interactions of female*married and female*child on 'policemen and detectives', and 'sheriffs and bailiffs' (There are only 18 individuals who report being 'marshals and constables', thus statistical analyses on this group are not warranted). I present the results from these models in Table 3. These models reveal that the marriage and parenthood patterning income for male and female police officers operate in similar ways across the different types of police captured in these data. To be specific, females who report working as 'policemen and detectives' experience both marriage and motherhood income penalties. Marriage and having children in the home also exert negative effects on income for females who report working as 'sheriffs and bailiffs', however, these effects are not significant in these models. This lack of significance may be due to the greatly reduced sample size and the general pattern I observe suggests that with a larger sample we would see a similar pattern across both groups.

My second set of analyses explores whether these patterns of marriage and parenthood on police income have changed overtime. To test this, I ran additional models on a male and female subsample of my data. Within these models, I include additional interactions of my marriage and parenthood indicators and year of survey variable and then I plot my results (See Table 4 for regression model results). In Figure 3, I plot the predicted marital income differences for males and females over the past 41 years ($Married\ Inc_{time\ x} - Unmarried\ Inc_{time\ x}$). These figures can be interpreted such that a plotted line above the 0 line represents an income premium and a plotted line below the 0 line represents an income penalty. The income difference for married versus unmarried males is around 2,434 dollars in 1976 and by 2017 this amount has increased only slightly to 2,786 dollars, an insignificant change. Thus, the marriage income premium for male police officers has remained consistent. Female police officers, conversely, experience a decline in marriage's effect on their income. In 1976, married female police earned 2,034 dollars more in income than unmarried female police and by 2017 this amount has decreased to 732 dollars. Despite these shifts over time among females, the trend in the income difference for married and unmarried female police officers is not significant. Overall, male police officers experience a marriage premium while females experience no marital difference in income, and the patterns have remained consistent over the past 41 years.

Figure 4 plots the parenthood effects on male and female income over the past 41 years. Here we can see that male police officers experience a fatherhood income premium over time (around 1,700 dollars bonus), and this premium has remained stable during the past four decades. By contrast, female police officers with children are paid

less than those who do not have children in the home. We can see that the income difference for females who have children in the home and who do not have children in the home is negative and it becomes worse in recent years. In 1976, the motherhood penalty was 141 dollars less than females with no children and by 2017 this proportion had increased to 1,715 less than non-mothers. To sum up, male officers enjoy both a marriage and fatherhood income premium and this premium remains stable over time, whereas female police officers experience a growing motherhood income penalty and a stable non-effect of marriage on their income.

[FIGURE 3 and 4 ABOUT HERE]

The final analysis for this project is a robustness check to determine whether being a member of a police union shapes marriage's and parenthood's effects on police wages (See Table 5 for the regression analyses). Information about union membership was only collect from 1990-2017 in the CPS-ASEC, and this measure will limit my sample due to large missing data issues. That said, some research suggests that unions may have a negative effect on occupational gender inequality within highly masculine occupations (Luo et al. 2018). I use what information is available within my data to account for this possibility.

Figure 5 and 6 show the marriage and parenthood income difference over time for male and female police officers controlling for union membership. When taking union membership into account, males still experience a constant marriage income benefit from 1990 forward, yet the income differential associated with marriage for females changes a lot. Married females have a large income advantage over unmarried females among the first ten years, but the trend of income differential among married

and unmarried females keeps declining and now married and unmarried female police officers show relative income parity. In Figure 6, as I plot the parenthood trend for males and females, we see an increasing and positive income gap between fathers and non-fathers. The income differences for female officers with children and without children decline sharply across this time-series. While these analyses are suggestive, the data limitations and the much smaller time series means that these trends cannot achieve significance in my formal models. Future research will need to unpack these processes with more fine-grained data.

[FIGURE 5 and 6 ABOUT HERE]

Chapter 5: Conclusion

Occupational gender inequality is a persistent feature in the U.S. labor market and has remained so for decades. With the increasing number of female police officers, a growing body of research has focused on these women (e.g.: Leger 1997; Franklin 2007; Ireland and Berg 2007; Shelley et al. 2011). Studies of the American police occupation have highlighted both the similarities and differences among male and female police officers, including arrest decision-making, use of force, and job performance (Ffrench and Waugh 1998; Archbold and Schulz 2012). A recent study on police moms by Ellis (2017), reveals that policewomen who are mothers face multiple challenges, especially when they have children at home, and therefore have poor retention rates during childbearing and child-rearing years. Despite the increasing research on female police officers, few studies have explicitly investigated any potential gender inequality in income among police officers, and no studies have explored the gender difference in marriage's and parenthood's effects on male and female income. To be specific, whether marriage and parenthood have a gendered effect on income within this traditionally male-dominated occupational sector was previously not known. Using over four decades of data from the CPS, this study exposes the ways that marriage or parenthood affects the income of police officers and how the income differences have changed over time.

Overall, this study provides evidence that the gender income differential in the police occupation is shaped in part by marital and parenthood effects. To be clear, we see from my analyses that female police officers who are married are paid on average 18.5 percent less than their married male counterparts, 14 percent less than unmarried

male officers, and 0.2 percent more than their unmarried female counterparts. While the income gap between married and unmarried female police officers is small, when juxtaposed to the large marriage premium experience by males this suggests that the compensation processes within this occupation are highly gendered, despite the rules governing public sector jobs. Additionally, female police officers are penalized due to their parental status. Female police officers with a child in their home earn 19 percent less than males with a child, 16 percent less than males without a child, and also about 3 percent less than female officers without children in their home. While I observe both a marriage and motherhood effect on police income, parenthood status exerts a stronger negative impact than marriage on income for female police officers and motherhood at least partially explains the marriage effects.

I have shown that married female officers or police officers who are mothers are paid less than their male counterparts. Ridgeway and Correll (2004) have argued that the "fatherhood wage premium" as well as the "motherhood wage penalty" is due to institutionalized gender inequalities. Law enforcement is commonly recognized as a gendered institution (Acker 1990; Garcia 2003), which possesses a culture of specific masculine qualities that places a high value on physical strength (Schulze, 2011). Females have difficulties being accepted into this profession and have generally been perceived as not strong enough to do police work (Archbold and Schulz 2012). Franklin (2007) also points out the gendered nature of the police institution in which female police officers are degraded, subordinated, and oppressed by male officers. Females who are married and may have more responsibilities for childrearing appear to face greater gender disadvantages in income within law enforcement institutions.

On the other hand, policing is a highly dangerous job, with the potential for violence in the line of duty, physical dangers and risks, and high levels of stress and fatigue (Territo and Vetter 1981). The lives of police officers are full of uncertainty as police employees are often asked to put their lives on the line. These unique features of police work (e.g.: shift changes, dangers and risks, the possibility of being called into work at any time of the day or night), present several challenges for females, especially females with children (Ellis 2017). The cultural notions concerning motherhood may make it harder for females to balance the role of mother and police officer. To display the culturally presumed gender roles of being a mother, many female officers may be forced (or feel forced) to give up on the chance of promotion (Archbold and Schulz 2012) or may accept less dangerous and less well-paid positions by choice. Female officers have also been found to have a relatively high divorce rate (Ellis 2017), and this may be explained by these women being forced to juggle multiple and conflicting social roles and identities in navigating their personal and professional lives. We do see from the descriptive statistics that females have a much lower rates of marriage and having children in the household. Male police officers may not experience the same trade-off between high income and high risk of police work and their socially defined role of father, as these social roles may be more aligned for these individuals.

When tracking any changes in the marriage and parenthood income difference over time, the results show a stable non-effect of marriage on female police officers' income. However, the predicted marital income difference from 1976 to 2017 among males and females reveals that the marriage income premium for male officers remains remarkably stable over time, which is contradictory to previous research of the

declining marriage premium for men (Cohen 2002). Similarly, the trend of parenthood income differences among male police officers also suggests that the large income benefit for fatherhood has not changed in the past 41 years. Female officers, on the other hand, experience a motherhood penalty that appears to be growing, particularly after accounting for union membership. This result is also contradictory to previous research on the motherhood penalty in the general labor market, which suggests a stable motherhood penalty over time (Avellar and Smock 2003; Misra and Strader 2013).

It is surprising to see these persistent marriage and motherhood penalties for female police officers. In recent decades, one of the most impressive changes in the police labor force has been the dramatic movement of females into law enforcement employment, where they often share the same responsibilities as their male counterparts (Rabe-Hemp, 2009; Schulze, 2011). With the work behavior of women and men converging, we might expect that the income for married and childrearing female police officers would draw closer to that for married and childrearing males, and the gendered marital and parenthood income differences would decline over time. In addition, the laws and regulations governing this occupational space should decrease the gender gap in pay and reduce the negative effects of marriage and motherhood on income for female officers. But my findings contradict this presumption. Indeed, male officers enjoy stable income advantages if they are married or fathers, but females continuously face a motherhood penalty. Through my analyses, I have shown that this public-sector occupation does not prevent this form of gender inequality.

Regarding the effect of membership in police union on marriage and parenthood income penalty, the findings are consistent with previous research that union

membership exerts a gendered effect on police income, by increasing the earnings for both male and female police officers, but also intensifying the gender income gap among police (Luo et al. 2018). Police occupation is characterized as high percentage of unionized institution. Although males and females both benefit from joining a union, disappointingly, it mainly protects the interests of the predominate members of the union, in this case males (Schuck 2014). Males, irrespective of their marital and parental status, have kept experiencing an increase in income since 1990, whereas females' income is declining during this shortened time-series. Consequently, the income differential among police officers differs from that without controlling for union. However, further research is needed to explore why union membership exerts such a gendered effect on income for male and female police officers.

There are several limitations to this study that deserve mention. The primary limitation is the inability of this dataset to account for some important measurements that affect income. The CPS does not include information about work experience or tenure at job. This is a major limitation because both of these factors play an important role in shaping income processes within occupations. In particular, without a measure of job tenure we cannot unpack whether mothers are underpaid because they take time off to have and raise their children or because of structural gender inequality within this occupation. Although I control for the linear and curvilinear effects of the age of respondents and I expect this measure to account for some of this variation, I cannot accurately examine how work experience and tenure may shape these processes with these data. While a large-scale labor force dataset allows me to trace some of the moments of occupational inequality over time, data that focus specifically on law

enforcement and some of the unique features of this work would be better suited to uncover some of the more fine-grained differences within this domain. Aligned with this concern, these data do not provide detailed information on the specifics of each police job. For example, I cannot determine what rank my police officers hold and there is no information about the overall size of the police department in which these officers are working. This missing information may exert an important impact on police officers' yearly income, further influencing the gendered income disparity within police occupation. While I find that there are no meaningful differences between 'policemen and detectives', and 'sheriffs and bailiffs', I am unable to provide a more detailed analysis of the different types of police work.

Finally, by focusing on one occupation I may be muting the actual gender difference within the public sector. While focusing on a single occupation helps alleviate some concerns, it may introduce others. For example, due to the relatively high earnings of police (particular compared to educational peers), individuals may be more likely to join in this occupation even if there are moments of gender inequality. Other public-sector jobs, such as public school teachers, may experience less gender inequality but also certainly experience lower income due to the cultural value place on this type of work. By using police as a case study, I acknowledge that my findings, while suggestive, may not be completely representative of other public-sector occupations.

My research advances the understanding of the marriage and parenthood effects on income across multiple dimensions. First, in contrast to much of the previous research on marriage and parenthood's effects on income, I focus on occupational

gender inequality within a specific public-sector occupation. Previous research has largely ignored the public sector, because researchers may have assumed a smaller degree of occupational gender inequality based on strict laws and regulations governing these occupations. But we see from previous research, both qualitative or quantitative studies, that gender inequality does exist in the police occupation. Women in this public-sector job also experience a persistent wage penalty. Policy implications can be employed to reduce the disadvantages presented to female police officers, such as hiring and retaining more women within a law enforcement agency, providing childcare for working police men and women, regular gender sensitive training for the human resource branches of law enforcement. Second, beyond the overall income effect of marriage and parenthood, I explore whether marriage or motherhood plays a stronger role in shaping the compensation structure of female police officer. For female police officers, having a child has a stronger adverse effect on income compared to marriage, and the motherhood effect appears to explain much of the variation in my measures of marital status. Finally, with the benefit of a large dataset and long-time series I map out how these income differences among males and females have changed over time. To my surprise, not only is this public-sector job not protective against these forms of occupational gender inequality, but the disadvantages female law enforcement officers experience has remained stable or gotten worse overtime. However, more studies and fine-grained data are needed to explore whether the mechanisms behind the marriage and motherhood income penalties among police are similar or different from the common mechanisms used to explain this occupation gender inequality within the overall labor market.

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Appendix A: Tables

Table 1. Descriptive Statistics

	Male Police	Female Police
Income (2017$)		
Mean	$67,000	$55,767
Median	$61,932	$50,350
Police officer[1]		
Marshals and constables	89.0%	11.0%
Policemen and detectives	86.8%	13.2%
Sheriffs and bailiffs	75.8%	24.2%
Married	78.2%	47.5%
Child in home	64.9%	53.7%
Age (year)	39	39
Race		
White	85.6%	68.2%
Black	10.3%	25.9%
Other race	4.1%	5.9%
Education		
Less than high school	1.3%	0.7%
High school	69.9%	65.5%
Bachelor's degree	23.5%	26.8%
Advanced degree	5.4%	7.0%
Hours worked per week		
Part time (< 35 hr/week)	0.9%	2.2%
Full time (35-55 hr/week)	92.0%	94.6%
Over time (55+ hr/week)	7.1%	3.3%
City	72.3%	73.9%
Region		
Northeast	23.0%	17.1%
Midwest	20.8%	17.8%
South	32.2%	40.6%
West	24.0%	24.5%
N	16,935	

[1] These proportion represent the percentage of male and female police officers within each category and therefore the row percentage for each type of police officer sum to 1. For the other variables in this table, the percentage is captured within each gender.

Table 2. Linear Regression on the Natural Log of Income among Police Officers, CPS 1976-2017

	Model 1	Model 2	Model 3	Model 4
Female	-0.180***	-0.152***	-0.147***	-0.135***
	(.01)	(.01)	(.01)	(.01)
Married	0.040***	0.053***	0.039***	0.047***
	(.01)	(.01)	(.01)	(.01)
Child in home	0.020*	0.017*	0.030***	0.027**
	(.01)	(.01)	(.01)	(.01)
Interactions				
Female*Married		-0.050**		-0.034
		(.02)		(.02)
Female*Child			-0.060***	-0.049**
			(.02)	(.02)
Controls				
Year	0.001***	0.001***	0.001***	0.001***
	(.00)	(.00)	(.00)	(.00)
Age	0.076***	0.076***	0.076***	0.076***
	(.00)	(.00)	(.00)	(.00)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***
	(.00)	(.00)	(.00)	(.00)
Race				
Black	-0.062***	-0.063***	-0.061***	-0.062***
	(.01)	(.01)	(.01)	(.01)
Other race	-0.064***	-0.063***	-0.064***	-0.064***
	(.02)	(.02)	(.02)	(.02)
Education				
High school	0.180***	0.180***	0.178***	0.178***
	(.03)	(.03)	(.03)	(.03)
Bachelor's degree	0.345***	0.344***	0.342***	0.342***
	(.03)	(.03)	(.03)	(.03)
Advanced degree	0.452***	0.452***	0.449***	0.450***
	(.03)	(.03)	(.03)	(.03)
Working hours				
Full-time work	0.985***	0.981***	0.980***	0.978***
	(.03)	(.03)	(.03)	(.03)
Overtime work	1.116***	1.111***	1.110***	1.108***
	(.03)	(.03)	(.03)	(.03)
City	0.273***	0.274***	0.274***	0.274***
	(.01)	(.01)	(.01)	(.01)

Table 2. continued

	Model 1	Model 2	Model 3	Model 4
Controls (cont.)				
Region				
Midwest	-0.123***	-0.123***	-0.123***	-0.122***
	(.01)	(.01)	(.01)	(.01)
South	-0.196***	-0.195***	-0.195***	-0.195***
	(.01)	(.01)	(.01)	(.01)
West	0.006	0.007	0.006	0.007
	(.01)	(.01)	(.01)	(.01)
N	16,935			
R^2	0.323	0.323	0.323	0.323
adj. R^2	0.322	0.322	0.323	0.323

*Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001*

[1]For race, white is the comparison group. Less than high school is the reference category for education. Part-time work is the comparison group for working hours. Northeast is treated as comparison group for region.

Table 3. Linear Regression on the Natural Log of Income among Different Police Officers, CPS 1976-2017

	Police and Detectives		Sheriffs and Bailiffs	
	Model 1	Model 2	Model 3	Model 4
Female	-0.136***	-0.134***	-0.119***	-0.123***
	(.02)	(.02)	(.03)	(.03)
Married	0.051***	0.036***	0.037	0.029
	(.01)	(.01)	(.02)	(.02)
Child in home	0.017*	0.030***	0.017	0.023
	(.01)	(.01)	(.02)	(.02)
Interactions				
Female*Married	-0.062**		-0.024	
	(.02)		(.04)	
Female*Child		-0.068***		-0.016
		(.02)		(.03)
Controls				
Year	0.002***	0.002***	-0.000	-0.000
	(.00)	(.00)	(.00)	(.00)
Age	0.075***	0.075***	0.060***	0.060***
	(.00)	(.00)	(.01)	(.01)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***
	(.00)	(.00)	(.00)	(.00)
Race				
Black	-0.043***	-0.040***	-0.031	-0.030
	(.01)	(.01)	(.02)	(.02)
Other race	-0.069***	-0.070***	-0.053	-0.053
	(.02)	(.02)	(.04)	(.04)
Education				
High school	0.177***	0.175***	0.166**	0.166**
	(.03)	(.03)	(.06)	(.06)
Bachelor's degree	0.323***	0.321***	0.258***	0.257***
	(.03)	(.03)	(.06)	(.06)
Advanced degree	0.431***	0.429***	0.265***	0.265***
	(.04)	(.04)	(.08)	(.08)
Working hours				
Full-time work	1.041***	1.040***	0.816***	0.817***
	(.03)	(.03)	(.06)	(.06)
Overtime work	1.155***	1.153***	0.993***	0.995***
	(.04)	(.04)	(.07)	(.07)

Table 3. continued

	Model 1	Model 2	Model 3	Model 4
Controls (cont.)				
City	0.255***	0.255***	0.229***	0.229***
	(.01)	(.01)	(.01)	(.01)
Region				
Midwest	-0.133***	-0.133***	-0.087***	-0.087***
	(.01)	(.01)	(.02)	(.02)
South	-0.192***	-0.191***	-0.207***	-0.207***
	(.01)	(.01)	(.02)	(.02)
West	0.004	0.004	0.040	0.039
	(.01)	(.01)	(.02)	(.02)
N	13,390	13,390	3,527	3,527
R^2	0.315	0.315	0.263	0.263
adj. R^2	0.314	0.314	0.259	0.259

*Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001*

[1]For race, white is the comparison group. Less than high school is the reference category for education. Part-time work is the comparison group for working hours. Northeast is treated as comparison group for region.

Table 4. Marriage and Child Time Interactions, CPS 1976-2017

	Male Police		Female Police	
	Model 1	Model 2	Model 3	Model 4
Married	0.040*	0.043***	0.045	0.023
	(0.02)	(0.01)	(0.06)	(0.02)
Child in home	0.028**	0.025	-0.024	-0.002
	(0.01)	(0.02)	(0.02)	(0.06)
Year	0.001	0.001	0.003**	0.003*
	(0.00)	(0.00)	(0.00)	(0.00)
Interactions				
Married*Year	0.000		-0.001	
	(0.00)		(0.00)	
Child*Year		0.000		-0.001
		(0.00)		(0.00)
Controls				
Age	0.077***	0.077***	0.075***	0.075***
	(0.00)	(0.00)	(0.01)	(0.01)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***
	(0.00)	(0.00)	(0.00)	(0.00)
Race				
Black	-0.067***	-0.067***	-0.052*	-0.053*
	(0.01)	(0.01)	(0.02)	(0.02)
Other race	-0.071***	-0.071***	-0.041	-0.042
	(0.02)	(0.02)	(0.04)	(0.04)
Education				
High school	0.168***	0.168***	0.334**	0.332**
	(0.03)	(0.03)	(0.11)	(0.11)
Bachelor's degree	0.321***	0.321***	0.550***	0.548***
	(0.03)	(0.03)	(0.11)	(0.11)
Advanced degree	0.433***	0.433***	0.633***	0.630***
	(0.03)	(0.03)	(0.11)	(0.11)
Working hours				
Full-time work	0.956***	0.956***	1.020***	1.020***
	(0.04)	(0.04)	(0.06)	(0.06)
Overtime work	1.083***	1.082***	1.191***	1.192***
	(0.04)	(0.04)	(0.08)	(0.08)
City	0.275***	0.275***	0.263***	0.263***
	(0.01)	(0.01)	(0.02)	(0.02)

Table 4. continued

	Model 1	Model 2	Model 3	Model 4
Controls (cont.)				
Region				
Midwest	-0.125***	-0.125***	-0.097**	-0.097**
	(0.01)	(0.01)	(0.03)	(0.03)
South	-0.208***	-0.208***	-0.125***	-0.125***
	(0.01)	(0.01)	(0.03)	(0.03)
West	0.002	0.002	0.050	0.050
	(0.01)	(0.01)	(0.03)	(0.03)
N	14,307	14,307	2,628	2,628
R^2	0.315	0.315	0.280	0.280
adj. R^2	0.314	0.314	0.275	0.275

*Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001*

Table 5. Linear Regression on the Natural Log of Income by Marriage and Child Controlling for Union, CPS 1990-2017

	Male Police		Female Police	
	Model 1	Model 2	Model 3	Model 4
Married	0.060	0.058*	0.131	0.043
	(0.05)	(0.03)	(0.11)	(0.05)
Child in home	0.013	-0.017	0.048	0.099
	(0.02)	(0.04)	(0.05)	(0.11)
Union	0.098***	0.099***	0.293***	0.292***
	(0.02)	(0.02)	(0.05)	(0.05)
Year	0.002	0.001	-0.002	-0.003
	(0.00)	(0.00)	(0.00)	(0.00)
Interactions				
Married*Year	-0.000		-0.005	
	(0.00)		(0.01)	
Child*Year		0.002		-0.003
		(0.00)		(0.01)
Controls				
Age	0.081***	0.081***	0.046*	0.046*
	(0.01)	(0.01)	(0.02)	(0.02)
Age^2	-0.001***	-0.001***	-0.000*	-0.000*
	(0.00)	(0.00)	(0.00)	(0.00)
Race				
Black	-0.109***	-0.108***	-0.093	-0.092
	(0.03)	(0.03)	(0.05)	(0.05)
Other race	-0.084	-0.083	0.212	0.212
	(0.04)	(0.04)	(0.11)	(0.11)
Education				
High school	0.099	0.100	0.034	0.027
	(0.13)	(0.13)	(0.33)	(0.33)
Bachelor's degree	0.284*	0.285*	0.227	0.219
	(0.13)	(0.13)	(0.33)	(0.33)
Advanced degree	0.382**	0.383**	0.381	0.374
	(0.14)	(0.14)	(0.34)	(0.34)
Working hours				
Full-time work	1.042***	1.041***	0.756***	0.760***
	(0.10)	(0.10)	(0.14)	(0.14)
Overtime work	1.184***	1.184***	0.758***	0.766***
	(0.11)	(0.11)	(0.19)	(0.19)

Table 5. continued

	Model 1	Model 2	Model 3	Model 4
Controls (cont.)				
City	0.261***	0.262***	0.283***	0.284***
	(0.02)	(0.02)	(0.05)	(0.05)
Region				
Midwest	-0.144***	-0.145***	-0.117	-0.114
	(0.03)	(0.03)	(0.07)	(0.07)
South	-0.180***	-0.180***	0.016	0.016
	(0.03)	(0.03)	(0.07)	(0.07)
West	0.002	0.002	-0.076	-0.076
	(0.03)	(0.03)	(0.07)	(0.07)
N	2,041	2,041	472	472
R^2	0.331	0.331	0.309	0.308
adj. R^2	0.325	0.325	0.282	0.281

*Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001*

Appendix B: Figures

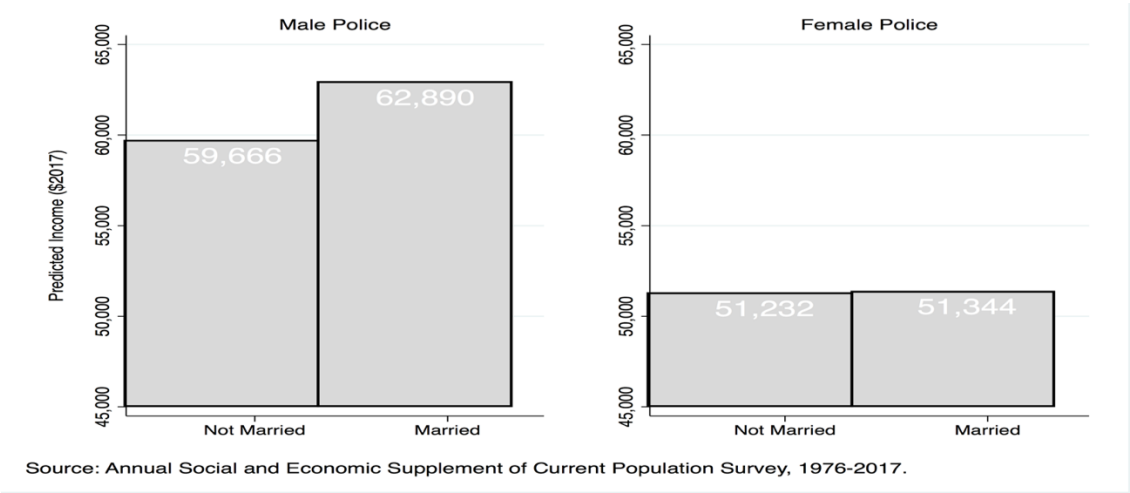


Figure 1. Predicted Value of Income by Gender and Marriage

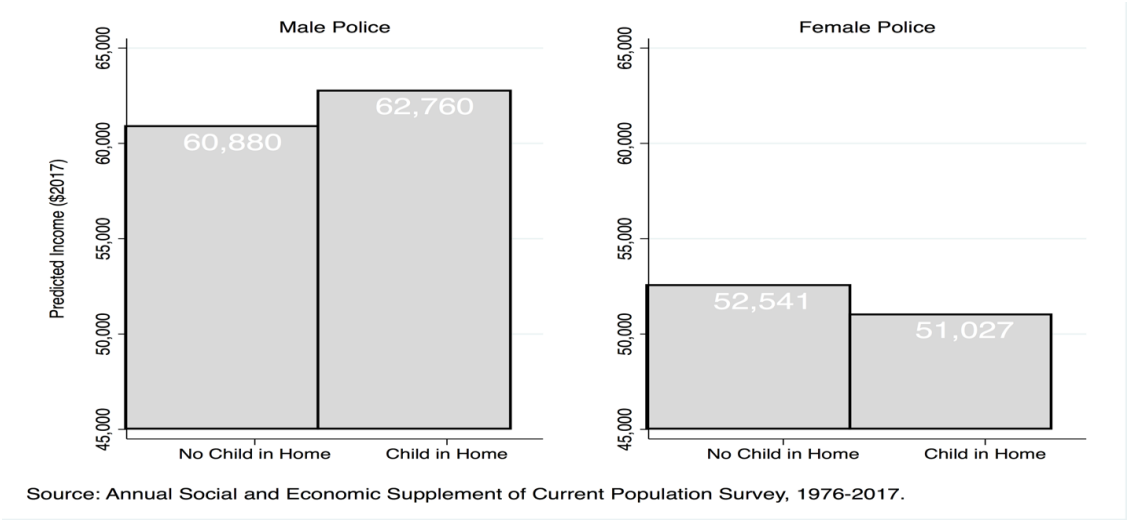


Figure 2. Predicted Value of Income by Gender and Parenthood

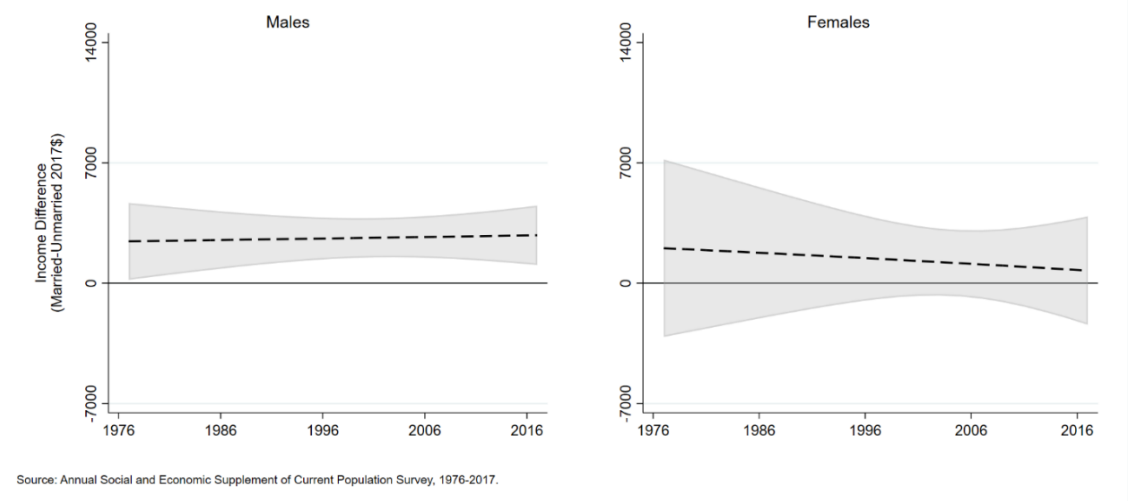


Figure 3. Marital Income Difference over time by Gender

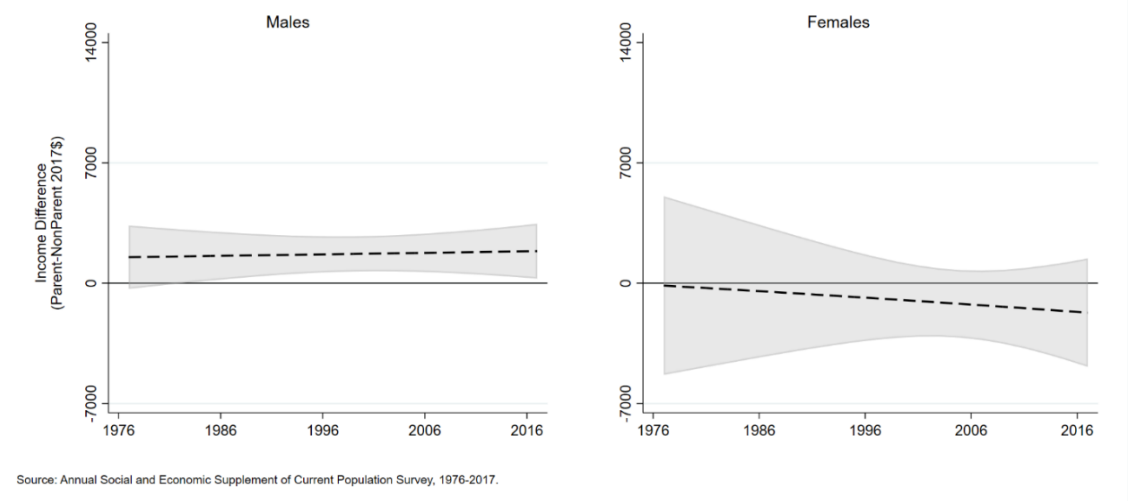
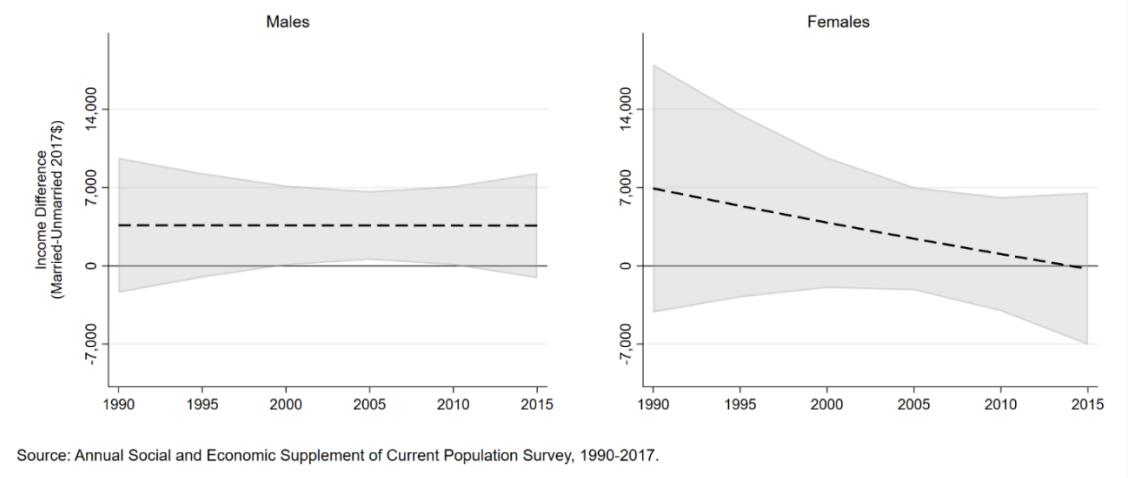


Figure 4. Parenthood Income Difference over time by Gender



Source: Annual Social and Economic Supplement of Current Population Survey, 1990-2017.

Figure 5. Trend of Income Differences by Marriage and Gender Controlling for Union Membership

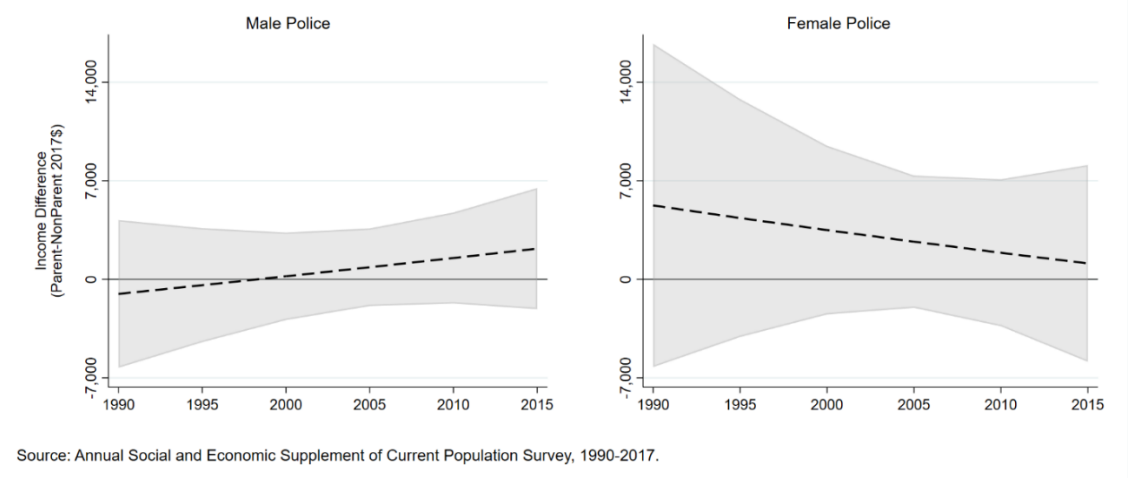


Figure 6. Trend of Income Differences by Parenthood and Gender Controlling for Union Membership