

# Literature Review

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The literature review chapter is structured in the following way. First, I will begin by briefly discussing the gender wage gap and potential explanations. It is found that understanding occupational choices is significant in understanding the gender wage gap. Thus the second section discusses the trends in occupational segregation in the U.S. labor market and the third section reviews a range of potential explanations for gender differences in occupational choices. In section 4, I review previous research that focuses on the working-hours flexibility in explaining persistent gender gaps in job choices, which is the major topic I will explore in this paper. Lastly, I will discuss how the literature review relates to my research question in the conclusion section.

## **1. Gender Pay Gap and Potential Explanations**

Numerous research has been conducted to account for the persistent gender pay gap. Traditional factors emphasize human capital, the family division of labor, compensating wage differentials, while recent new field focuses on the impact of norms, psychological attributes, and non-cognitive skills. Blau and Kahn (2017) documents that the role of occupation remains pronounced in explaining the gender wage gap. Specifically, occupational differences account for over 20 percent gender wage gap and are currently at the top of observed factors. However, it is found that male continue to choose male-dominated occupations while female prefer entering predominantly female occupations in the past three decades (Bettio & Verashchagina 2009). In sum, understanding occupation choices plays a significant role in understanding the gender wage gap.

## **2. Trends in Gender Occupational Segregation:**

Even though female has gained higher economic status and entered previously male-dominated occupation over the past decades, there still existed persistent gender wage gaps in U.S. labor market as well as those in other western countries (Blau and Kahn, 2016). Blau et al. (2013) provide evidence on the gender occupational segregation based on the historical data from 1970 to 2009. In this paper, a common method which is developed by Duncan and Duncan (1955) was used to measure occupational segregation in gender. The index indicates the "proportion of women or men that would need to change occupations for the occupational distribution of men and women to be the same" (Duncan and Duncan, 1955). It is showed that there was a significant decline in occupational segregation index from 1970 to 1980. The index continued to decline while at a slower pace from 1980 to 1990 and kept a stable declining rate thereafter.

## **3. Factors affecting Gender Occupational Choice Difference:**

### ***3.1 Personality Skills***

The relationships between occupational choices and personality skills are quantitatively important. Borghans et al. (2006) document the importance of people skills for understanding the individual outcome. They find that "computerization and modern forms of work organization complement the importance of people tasks". They also find that the importance of people tasks at work is consistent with the decline speed in gender wage gap. Specifically, large increase in the importance of people tasks explains part of the rapid decline in the gender wage gap from the 1980s to early 1990s.

In a most recent study, Baker and Cornelson (2018) show that occupational segregation would be reduced by about twenty percent when controlling skill demands, which is a relatively

large effect of explaining gender segregation. Pan (2017) examined how personality traits and skills that jobs require affect gender occupational choices using data on occupational content from O\*NET linked to ACS (American Community Survey). It is found that female prefer jobs requiring more interactional skills and less physical skills. The share of female is relatively higher in occupations that place a greater emphasis on social contributions and cognitive skills. These results continue to hold even when including additional controls for occupation level characteristics such as the educational composition, average age, and racial composition of workers in an occupation.

Jaimovich et al. (2017) confirm the labor demands towards personality skills. The authors study a general model of the market for high-skilled workers and investigate gender differences from several perspectives: the labor supply, occupational choice, discrimination, and labor productivity. There is a greater increase in the demand for female-oriented skills relative to male skills in high-wage/cognitive occupations relative to others. And the increasing demand for female labor in high-wage/cognitive occupations associated with an increase in the importance of social skills in these jobs relative to other occupations.

### ***3.2 Psychological Attitudes***

Gender differences in personal psychological attitudes have been found in both experiments and observations. Men and women are sorted into different types based on their attitudes towards risk, competition, money, etc. and thus leading to wage difference.

Bonin et al. (2007) show that individuals with higher risk aversion tend to work in occupations with lower earnings risk using data from German Socio-Economic Panel. And this pattern is found regardless of the occupation categories, region, gender and labor market experience. DeLeire and Levy (2004) use the family structure as a proxy for willingness for

safety and wages trade-off to test the workers' risk attitudes. The authors show that female holds a higher level of risk aversion and single mom is the most averter. The results confirm that the risk of death on the job is an important factor affecting female and male occupational choices and this could explain one-quarter of gender occupational segregation.

Niederle and Vesterlund (2007) find that men are more overconfident and prefer performing in a tournament than women through laboratory experiment. This result confirms that women are shy away from the competition. Hanek et al. (2016) suggest that women's greater distaste for competition accounts for part of the occupational difference in gender. McGee et al. (2015) use data from the NLSY79 and NLSY97 and find that gender difference in competition explains less gender wage gap than results in the laboratory experiment. Specifically, Buser et al. (2014) find that boys are more likely to opt-in prestigious profiles than girls even in the same level of academic ability on the basis of the experiment of 15-year old students in the Netherland. Over twenty percent of profile choices are attributed to gender difference towards competition.

Brahim and Claude (2009) indicate that men are more sensitive than women to initial earnings when choosing major field and occupation. Bridges (1998) report that female shows lower expectations for their own performance—*self*-expectations than male in male-dominated occupations. However, females report higher expectations for themselves in female-dominated occupations. In addition, results indicate that the weight put by the female on money and success is lower than that of male, and it depends upon the educational level of the parents partly.

#### **4. Research focusing on Long Working Hours:**

Recently, more and more research pay attention to job attributes such as workplace flexibility, corporate culture, family-career balance, working hours and so on. Fouad et al. (2012)

document females' condition in management position: "Most of management is a male-dominated culture (male conversation topics, long hours, demanding lifestyle, career-focused expectations). ... Women usually choose to leave WITHOUT FIGHTING THE UPHILL BATTLE to make improvements. It is a self-sustaining cycle!" Current engineers work over twice hours than in 2000. And too long hours has been one of the major reasons for the female to leave engineering field. At the same time, expanding work hours has been a standing trend in U.S. labor market and there is a large increase in the share of male working overtime (which is defined as working over 48 hours per week) (Pencavel, 2016). Cortes and Pan (2016) calculate the prevalence of overwork for educated male in US and find that "the share of college-educated males working 50+ hours per week in the US was 36%, larger than that in every Western European country, including France (31%), United Kingdom (28%), Germany (26%), Italy (22%), Spain (17%), and the Netherlands (10%)."

One one hand, overwork prevalence usually comes with the change of the hourly wage rate. Elke (2002) studies the "impact of working hours on gross hourly wage rates by using a simultaneous wage-hours model which fully accounts for labor supply effects" She finds that jobs working over 48 hours have lower marginal compensation.

On the other hand, there is an undeniable fact that women tend to shoulder larger family responsibilities than men. Cortes and Pan (2017) use data from 2005 International Social Survey Programme (ISSP) and demonstrate that over 50 percent of female "prefer working fewer hours and earning less money" than "working more hours and earning more money" or "working the same of hours and earning the same of money" while only 20 percent of male do. In addition, mothers are likely to exit occupations when work hours over 50 hours. However, the same effect isn't observed on male or childless female.

## **5. Conclusion**

I have reviewed the possible explanations for gender occupational choice difference. Traditional factors emphasize in human capital, the family division of labor, compensating wage differentials, the impact of norms, psychological attributes and non-cognitive skills. Recently, a small but growing number of papers start to examine how the work hours influence female's occupational decisions. The switch towards less working-hours occupation and "flee" from male-dominated are even more prevalent among well-educated women since they are more "affordable" for potential wage loss. However, few studies focus on this narrow group and test the effect. Thus I plan to place emphasis on the well-educated female group and compare their occupational choices with those male or female with partial similar characteristics.

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