DISSERTATION

THREE ESSAYS IN FEMINIST ECONOMICS: EMPIRICAL & HISTORICAL APPLICATIONS

Submitted by

Sarah F. Small

Department of Economics

In partial fulfillment of the requirements

For the Degree of Doctor of Philosophy

Colorado State University

Fort Collins, Colorado

Spring 2022

Doctoral Committee:

Advisor: Elissa Braunstein

Anita Alves Pena
Stephan Weiler
Silvia Canetto

ABSTRACT

THREE ESSAYS IN FEMINIST ECONOMICS: EMPIRICAL & HISTORICAL APPLICATIONS

This dissertation includes three essays in feminist economics. The first two are quantitative empirical studies, which study the interactions between paid work, allocations of housework, and intrahousehold power dynamics. Chapter 1 examines the extent to which men extract unpaid household labor from women to support entrepreneurial ventures. Models using Panel Study of Income Dynamics (PSID) data from 1985 to 2019 illustrate that, in married White couples, women's disproportionate share of housework increases when their husbands take on business ownership. However, there is no evidence that White husbands extend such support when their wives own businesses. In Black couples, wives take on even greater housework shares when they own a business. These dynamics suggest that the success of married White men's entrepreneurship may be built on extracting domestic labor from their wives: a notion consistent with patriarchal rent seeking theories. Chapter 2 offers a quantitative test of hegemonic masculinity theory and demonstrates how men of different race and income groups respond to their women partners out-earning them— an economic 'threat' to masculinity. Results indicate in upper-income White men have a strong aversion to the situation in which a woman out-earns her male partner. As hegemonic masculinity theory would suggest, middle-income White men follow suit, but lower income White men, and Black men in most income groups, do not. The third chapter is a qualitative history of Barbara Bergmann's occupational crowding hypothesis. The chapter situates the hypothesis among contemporary competing theories on the

economics of discrimination and explains why the crowding hypothesis did not persist as a major explanation of wage differences in the mainstream of the economics profession. Each chapter contributes to the feminist economic mission to overcome androcentric bias in economic analysis, to speak to power, and to extinguish oppression.

ACKNOWLEDGMENTS

I owe thanks to several individuals for their support. First, to my tiny dog Ellie for bringing me joy and keeping me sane since September 2019.

To some of my early mentors, including Martin Bressler who introduced me to economics in 2010, Dr. Demetrius Kantarelis who encouraged me to pursue a PhD when I did not know it was an option, and Dr. Smriti Rao who introduced me to the feminist economics and has been a lasting mentor ever since.

To my dissertation committee, whose comments and support have been consistently helpful. Your time and insight are so highly valued. Dr. Anita Alves Pena and Dr. Stephan Weiler have been especially patient and helpful as I began to shape these projects years ago.

To the 2020-2021 fellows and faculty at Duke University's Center for the History of Political Economy. The Center's funding, along with the community's comments and support, were instrumental in the development of the third chapter. I would like to offer special thanks to Dr. Steven Medema who patiently helped me reshape the manuscript over countless revisions, and to Dr. Sofia Valeonti whose friendship helped me persist.

To my cohort, Levi Altringer, Nina Poerbonegoro, and Jorgen Rasmussen. Countless hours spent in collaboration and friendship with you have been some of my happiest.

To the economics department at Colorado State University. The program has been a warm home to me since 2016. Special thanks to Dr. Anders Fremstad, Dr. Jo Burgess Barbier, Dr. Caridad Souza, and Dr. Steven Pressman, whose mentorship has meant the world to me. The economics department has also brought Teresa Perry, Kelly Lee, Bryanna Dixon, and Kasey Rorabaugh into my life, and I am especially thankful for their unwavering friendship.

To Dr. Elissa Braunstein, who has so patiently mentored me in all things. She has unquestionably shaped my research, my career, and my life in the most positive ways. Her fierce leadership, deep knowledge, and steady support have been the most rewarding aspects of my graduate career. One could not ask for a better mentor.

Lastly, to my mom Karen Shea and grandmother Violet Goode, who are feminist economists in their own right.

TABLE OF CONTENTS

LIST OF TABLES

Chapter 1 Tables:

Chapter 2 Tables:

Appendix Tables:

LIST OF FIGURES

Chapter 1 Figures:

Appendix Figures:

INTRODUCTION

This dissertation presents three essays in feminist economics. The first two are quantitative empirical studies on the interactions between paid work, unpaid household work, and intrahousehold power dynamics. The third chapter is a qualitative history of Barbara Bergmann's occupational crowding hypothesis, largely pulling from archival resources. Although the third chapter seems very distinct from the first two, readers will find that the same dynamics of power and patriarchy are present in all chapters.

Chapter 1, "Patriarchal Rent Seeking in Entrepreneurial Households: An examination of Business Ownership and Housework in Black and White Couples," examines the extent to which men extract unpaid household labor from women to support entrepreneurial ventures. To answer this empirically, I use Panel Study of Income Dynamics (PSID) data from 1985 to 2019 to examine how business ownership affects intrahousehold allocations of labor in Black and White opposite-sex couples in the United States. Generally, I find that business ownership within married opposite-sex couples increases women's share of housework. However, the effect does not hold for unmarried cohabitating couples. Additionally, both the gender of the business owner and the couple's race matter in determining these outcomes. In married White couples, women's disproportionate share of housework increases when their husbands take on business ownership. However, there is no evidence that White husbands extend such support when their wives own businesses. In Black couples, wives take on even greater housework shares when they own a business, though they do not take on greater relative shares of housework when their husbands are entrepreneurs. Results from this chapter suggest that the success of married White men's entrepreneurship may be built on extracting domestic labor from their wives: a notion consistent with patriarchal rent seeking theories.

Chapter 2 also uses PSID data and examines how macro-cultural dynamics of hegemonic masculinity complicate microeconomic negotiations in households. In this paper, I use hegemonic masculinity as an explanatory framework to understand how gendered work in households differs along income and race dimensions. I empirically demonstrate how men of different race and income groups respond to their women partners out-earning them, an economic 'threat' to masculinity. Results indicate that upper-income couples with White men have a strong aversion to the situation in which a woman out-earns her male partner. Middle-income White men follow suit, but lower income White men, and Black men in most income groups, do not. These empirical findings are consistent with the theory of hegemonic masculinity.

The final chapter is in the field of history of economic thought and examines Barbara Bergmann's occupational crowding hypothesis. Feminist economist Barbara Bergmann was well known for many contributions to economics, but she was perhaps most famous for her 1971 occupational crowding hypothesis. The hypothesis was published during a surge of literature on the economics of discrimination, and it temporarily stood among the mainstream neoclassical theories before being relegated primarily to feminist and stratification economics. This chapter situates the crowding hypothesis among contemporary competing theories on the economics of discrimination and explains why it receded from the mainstream. Despite Bergmann's neoclassical framing, the model's conclusions did not align with models of perfect competition and more closely aligned with heterodox perspectives on group power and conflict.

Though this third chapter may seem like a very disparate strand of research from those in Chapters 1 and Chapter 2, they are tied together in their feminist economic theoretical approach. Feminist economic research works to overcome androcentric bias in economic methodologies

and questions, speaks to power, and aims to extinguish oppression. Each chapter, in its own way, reflects these core principles and, in some ways, work in conjunction with one another.

For instance, all chapters study the interacting nature of labor, income, and power. Chapter 3 considers this in the formal, paid labor market with Bergmann's occupational crowding hypothesis. Chapter 2 considers how labor and income influence work, power, and identity in the household, and Chapter 3 examines how patriarchal norms and labor structures may benefit White men as entrepreneurs.

The empirical quantitative chapters make heavy use of feminist methodology and framework. For instance, Chapter 2 is especially interdisciplinary, as it looks outside economics and borrows heavily from sociologists who have studied hegemonic masculinity for decades. Both Chapter 1 and Chapter 2 also work to uncover ways in which women experience classed and racialized oppressions, thus leaning on Black feminists' intersectionality theory. Ultimately, both chapters stress the importance of power relations both inside and outside the home, has been a central goal of feminist economists for decades.

The concluding study provides a broader, meta-analysis of feminist economics as a discipline: Chapter 3 provides unique insight into the economics discipline and discusses the ways in which works considered 'feminist' fit in or do not fit in. It also directly addresses the role of power and patriarchy along many fronts: in the life of Barbara Bergmann, in her occupational crowding hypothesis itself, and in the reception of the theory.

Ultimately, the broad goals of each paper are to overcome masculine bias in economic methodologies and questions. These overarching connections to the principles of feminist economics reflect my broader research and personal aspirations, as discussed in the conclusion of this dissertation.

CHAPTER 1

PATRIARCHAL RENT SEEKING IN ENTREPRENEURIAL HOUSEHOLDS: AN EXAMINATION OF BUSINESS OWNERSHIP AND HOUSEWORK BURDENS IN BLACK AND WHITE US COUPLES

1. Introduction

White people and men own businesses at higher rates than other demographic groups in the United States. In 2015, 61 percent of all new entrepreneurs were White and 59 percent were men. Women's and Black men's entrepreneurial activity stagnated over the past several decades: in 2015, women accounted for 41% of new entrepreneurs, a decrease from their 1996 level of 44 percent. Black entrepreneur accounted for just 8.4 percent of new businesses owners in 1996 and only increased to 8.9 percent by 2015 (Fairlie, Reedy, Morelix & Russell-Fritch, 2016). Subsequently, researchers have investigated several aspects of women- and Black-owned businesses in the United States: for instance, how they are pushed or pulled into starting a business, their success and profitability, or their access to resources like credit and capital. However, few researchers consider how access to the resource (or burden) of unpaid domestic labor contributes to entrepreneurship and entrepreneurial success. In this paper, I argue that unpaid household labor can indeed support business ownership, and that access to this resource differs based on a business owner's position in the race-gender hierarchy.

Feminist economists have long highlighted the constraints women face when burdened with disproportionate levels of housework (Himmelweit, 1995; Nelson, 2004; Gupta & Ash, 2008; Baxter & Hewitt, 2013). They have also examined the ways men, and the economic system at large, benefit from exploiting women's unpaid domestic labor (Fraser, 2017). However, few have considered this in the context of business ownership in the United States. Using Panel Study of Income Dynamics (PSID) data from 1985 to 2019, I examine how

household business ownership affects relative housework burdens within Black and White opposite-sex married and unmarried couples. Generally, I find that business ownership within households increases wives' already disproportionate share of housework. However, this result does not hold in unmarried, cohabitating couples. Further, when examining which partner owns the business and the couple's race, the story becomes more complicated: housework burdens are increasingly shouldered by White women when their White husbands take on business ownership.[1] However, there is no evidence that such domestic support is extended when White wives own businesses and Black wives face even greater burdens in their share of housework when they own a business. Results suggest that White men's entrepreneurship is propped up by women's unpaid domestic labor, a notion consistent with theories on patriarchal rent seeking. That is, results suggest that patriarchal social norms are allowing White men in entrepreneurial households to extract unearned rents that may lower a household's social efficiency.

I begin this paper by examining the existing literature on US business ownership by race and gender and drawing from economic and psychology literature to explain the importance of family and domestic support in entrepreneurship. I then introduce economic theories of intrahousehold labor allocation where I briefly situate patriarchal rent seeking in the context of household entrepreneurship. Subsequent sections present the data, econometric approach, results and robustness checks. I conclude with a discussion of the results in the context of patriarchal rent seeking as well as business ownership and success, and their implications for policy.

[1] As discussed in subsequent sections, these analyses are based on same-race couples.

2. Literature Review & Motivation

2.1. Barriers to Entrepreneurship

Many scholars have studied why women start businesses and suggest that their motivations are often different from men's. Some argue that women have been attracted to self-employment by the promise of independence, flexibility, and the opportunity to escape barriers in paid employment— the 'pull' mechanism (Kirkwood, 2009; Dawson & Henley, 2012). Others argue that women have been 'pushed' into business ownership as restructuring and downsizing have eroded the availability of once secure jobs (Hughes, 2003).

Several scholars have studied barriers women face in small business ownership. For instance, some find that, compared to men, women have less access to capital (Carter & Allen, 1997; Becker-Blease & Sohl, 2007) and less access to credit (Coleman, 2000), both of which are instrumental inputs to the entrepreneurial process. Black business owners face many barriers to entrepreneurial success that White business owners do not face. For instance, Bates (1989) demonstrated that weak internal markets, commercial bank redlining, and loss of entrepreneurial talent undermined inner city Black businesses and communities. More recently, Fairlie & Robb (2007) compare White and Black business owners and their family histories. They find that, in addition to wealth and inheritance gaps, the lack of prior work experience in a family business among Black business owners negatively affects Black business outcomes. Gai and Minniti (2015) examine external financing and the survival of Black-owned start-ups and find that commercial financing tends to underfund Black-owned businesses compared to White businesses.

Insights from intersectionality theory suggest that those operating under overlapping modes of oppression face additional hurtles.[2] In this context, Black women face additional hurtles to business ownership and success compared to White women in the US. Mora & Dávila (2014) find that businesses owned by minority women face higher risks of closing down within a year of opening. And Wang (2013) found that, compared to White women, ethnic minority women own businesses in a tighter concentration of industries. Those sectors pay less and have smaller profits.

2.2. The Role of the Household in Business Ownership

These aforementioned barriers are certainly substantial, and housework burdens may only compound issues women face when starting a business. A family-embeddedness approach to entrepreneurship studies can explain a great deal of our questions about business ventures, gender, and success. Families and businesses have widely been treated as separate institutions, but they are inextricably intertwined (Stafford, Duncan, Dane, & Winter, 1999; Aldrich & Cliff, 2003). Many scholars have considered the role of housework in women-owned businesses in developing country contexts (for instance, Ufuk & Özgen, 2001; Kim & Ling, 2001), perhaps because unpaid family labor is a more prominent aspect of traditional modes of production. However, outside of a growing literature on gender differences in time use, there is little attention paid to the connection between domestic labor and business success in developed countries like the United States.

[2] The term intersectionality refers to the critical insight that race, class, gender and other social categories "operate not as unitary, mutually exclusive entities, but as reciprocally constructing phenomena that in turn shape complex social inequalities" (Hill Collins, 2015: 2). Experts in intersectional theory suggest that researchers "must analyze each structural inequality separately, as well as simultaneously" (Bowleg, 2008: 319).

The family's structure, resources, and support network have implications for the emergence of new business opportunities, business start-up decisions, and the resource mobilization process. Scholars like Zachary (2011) and Rogoff and Heck (2003) have acknowledged that a "growing body of research points to the fundamental guiding principle that the combustion of entrepreneurship cannot ignite and grow without the mobilization of family forces" (p. 560). For instance, in a longitudinal study, Matzek, Gudmunson, and Danes (2010) found that spousal capital affects both the sustainability of a new business and for couples' relationship quality.[3] Similarly, Neneh (2017) illustrates how spousal emotional and financial support are essential in small business success. Neergaard, Shaw, & Carter (2005) also emphasize the importance of social capital, including emotional support, especially within families.

A few studies focus explicitly on the importance of household reproduction in business ownership and success. For instance, in a study of 200 businesses in north-east England, Wheelock and Baines (1998: 59) find that business survival depends heavily on a flexible supply of family labor, provided both as labor for the business but also as unpaid domestic labor. Hundley (2001) found that presence of small children and greater hours of housework have a much greater negative effect on women's self-employment earnings than on men's. Loscocco & Bird (2012) ask why women lag behind men in small business success, and find that being a women business owner increases the likelihood of doing housework as compared to male business owners. However, they do not look explicitly at intra-household dynamics: namely,

[3] Business ownership can lead to tensions around fair allocations of labor in the home. Danes and Morgan (2004) use qualitative and quantitative data and insights from psychology to find that business-owning husbands and wives report conflicts related to work-family life balance and unfair distributions of resources (i.e. money, time, energy) between family and business systems. Other work finds similar conclusions: Danes, S. M., & Lee, Y. G. (2004); Danes, S. M., Zuiker, V., Kean, R., & Arbuthnot, J. (1999); Danes, S. M., & Olson, P. D. (2003).

their data do not allow them to examine, for example, how a man's business ownership might affect his wife's housework. My study fills this gap by focusing on how business ownership is related to intrahousehold distributions of housework.

2.3 How Do Families Allocate Housework?

Because this paper examines how business ownership influences intrahousehold allocations of labor, one must ask: how are intrahousehold allocations of labor typically decided upon in the home? Mainstream and feminist economists have examined this question, and I briefly discuss both groups' theoretical contributions. Mainstream, Beckerian theories focus on specialization according to comparative advantage: if a wife has a comparative advantage in housework and a husband has a comparative advantage in market work, it is economically efficient for them to specialize accordingly (Becker, 1991). More recent mainstream scholars building off of Becker focus on shifts in relative prices, explaining that the rising opportunity cost of women's time induces a shift of women's work from the household to the market. Of course, with more women entering the workforce, we have witnessed a decrease in absolute specialization between housework and paid work within households.

Yet many empirical studies indicate that even when comparative advantages do not exist in the gendered way Becker suggests, women still do more housework than men. For instance, Bertrand, Kamenica, and Pan (2015) find that when women out-earn their husbands, they actually take on larger shares of housework than women who earn less than their partners. They, and others, attribute this to gender-deviance neutralization theory, whereby a man's sense of gender identity is threatened when he is not the primary breadwinner, so households compensate by ensuring he does less housework and his wife does more.

Results demonstrated by Bertrand, Kamenica, and Pan's (2015) also support feminist economic theories of intrahousehold allocations of labor. For feminist economists, unpaid housework has more to do with power and patriarchy than opportunity cost and comparative advantage. Heidi Hartmann (1979) has usefully defined patriarchy as:

> [A] set of social relations which has a material base and in which there are hierarchical relations between men and solidarity among them which enable them in turn to dominate women. The material base of patriarchy is men's control over women's labor power. That control is maintained by denying women access to necessary economically productive resources. . . Men exercise their control in receiving personal service work from women, in not having to do housework or rear children. . . and in feeling powerful and being powerful. (p. 14)

Feminist economists argue that men have incentives to force women to overspecialize in reproductive labor (Folbre, 1994b; Folbre, 1997). Patriarchy allows men, and capitalist society at large, to benefit from women's reproductive labor.[4] This includes opportunities for men to extract unpaid labor from women in the home, which ultimately props up men's own labor power.

This is consistent with feminist economists' work on patriarchal rent seeking. Feminist economists have long studied the link between the patriarchal rules that govern intra-household bargaining and male rent-seeking in the family (Braunstein and Folbre, 2001; Folbre, 1997; Purkayastha, 1999). Anne Krueger (1974) defined rent-seeking behavior as efforts to claim unearned revenues. Braunstein (2008) argues that rent-seeking can also influence the organization of nonmarket institutions: patriarchal norms maintain male dominance and privileged access to resources, including domestic support. Patriarchal rent seeking refers to situations in which patriarchal "social norms and legal rules afford men opportunities for

[4] Social reproduction theorists examine the relationship between patriarchy and capitalism. Social reproduction theory offers a distinct perspective which considers housework and care work as reproductive labor: part of what creates and sustains workers (Fraser, 2017).

individual gain in ways that can lower social efficiency" (Braunstein, 2008: 969). Unpaid household labor is part of what allows men to sell their own labor power in the market and is often what limits women's abilities to sell theirs. This notion can be extended to business ownership: extracting unpaid housework from their wives supports men's ability to start and run businesses, and social norms which lighten men's unpaid domestic work responsibilities ultimately limit women's abilities to start and run their own businesses.

At the same time, one should expect the strength of patriarchal power to differ based on a man's position in the patriarchal hierarchy. Hartmann (1979) explains that though men are united in their shared relationship of dominance over women, patriarchy is hierarchical and men of different classes, races, or ethnic groups sit at different places in the patriarchal hierarchy. Sociological theories on hegemonic masculinity similarly demonstrate that patriarchal norms may be stronger among men closer to the top if the race and class hierarchies (Connell & Messerschmidt, 2005).[5] In the context of extracting unpaid housework from wives, Black men may not be afforded the same patriarchal rents as White men because of these hierarchical relations. In fact, many studies find that Black husbands contribute more to household labor than White husbands on average (Kamo & Cohen, 1998; Landry, 2000; Orbuch & Eyster, 1997; Ross 1987; Shelton & John, 1993; John & Shelton, 1997).[6] This means that when Black men own businesses, we may not expect the same intrahousehold allocations of housework as we would see when White men own businesses. However, as I discuss in subsequent sections, this also means they are not privy to the same domestic support or relief that White entrepreneurs extract. Therefore, similar to inequalities in Black and White men's unequal access to credit and capital

[5] For example, Black men in the US are often punished and heavily surveilled for enacting the same masculinity norms as White men (Royster, 2007).
[6] Additionally, within Black US couples, there is a long history of role sharing and fluidity in work that can be traced to the slavery era (see Broman, 1991 and Sayer & Fine, 2011).

in entrepreneurship, there are also inequalities in access to unpaid household labor in entrepreneurship.

In this paper, I ask: are men extracting unpaid household labor from women to support entrepreneurial ventures? And if so, which men? To answer this empirically, I examine how business ownership is related to intrahousehold allocations of labor in Black and White opposite-sex couples in the United States.

3. Data

To answer these questions, I use Panel Study of Income Dynamics (PSID) data, a nationally representative longitudinal household survey in the US. I restrict my sample to opposite-sex couples where both partners are aged 18 or older during the period 1985-2019.[7] I focus primarily on married couples, but begin with a brief analysis of both married and unmarried 'permanently cohabitating couples'. I also restrict my sample to those who have reported the number of housework hours done per week by both the man and woman partners. It is worth noting that the PSID measurement of housework is rather course. There is only one question which asks, "About how much time do you spend on housework in an average week—I mean time spent cooking, cleaning, and other work around the house?" It does not break down the specific aspects of housework nor does it consider secondary activities. However, an advantage of PSID is that in includes both data on housework hours per partner as well as business ownership data.[8] PSID not only asks if a household member owns a business, but also

[7] The term "opposite sex couples" in this study refers to a couple in which one individual indicated their sex was male and the other female. PSID does not include information on whether one or more of the household members is transgender, and only began explicitly identifying same-sex couples in 2015.

[8] Another advantage of PSID is that, while unbalanced, the data are panel. In future analyses, American Time Use (ATUS) data may also be useful, as they provide more detailed breakdowns of household activities. But ATUS's limited data on business ownership and cross-sectional structure make PSID more desirable for this study.

specifies which member owned the business (limited to male household head, his spouse, co-ownership, or 'some other household member').[9]

Table 1 provides summary statistics for variables used in the primary models, disaggregated by married and unmarried couples in the sample. A few differences are worth pointing out. First, on average married women take on a greater share of housework (close to 70 percent) than women in unmarried couples (who take on 64 percent). Business ownership is also more likely in married than unmarried couples. The unmarried sample is substantially smaller in addition to being younger and more likely to live in an apartment and an urban place. They also have fewer children on average than those in the married sample, but are more likely to have a young child (under three years of age).

Figure 1 compares wives' share of housework hours by business ownership status. Across both married and unmarried couples, business ownership is associated with higher rates of the woman's share of housework compared to households in which nobody owns a business. However, this gap is especially pronounced among married couples. In my analysis, couples that break up are removed from the sample in the years following their breakup. Similarly, unmarried couples who become married are moved into the married sample for the years in which they are married. In these samples, I observe unmarried couples for an average of 1.8 periods and married couples for 5.6.

[9] Businesses include both incorporated and unincorporated businesses. Unfortunately, PSID does not include information on whether or not a business is run out of the home, though these data would be very useful for this analysis.

4. Analysis of Housework & Entrepreneurship in Married & Unmarried Couples

4.1. Econometric Models

I first examine how business ownership is related to a woman's share of housework in both married and unmarried couples. Model 1 examines how business ownership affects relative housework in the couple. I estimate a linear probability model with couple and year fixed effects regressing women's share of total housework in year *t* on whether the household owned a business in *t* – 1.[10] The equation for Model 1 is below:

$$WShareHousework_{i,t} = \beta_1 HHOwnsBusiness_{i,t-1} + \beta_2 \boldsymbol{I_{i,t-1}} + \beta_3 \boldsymbol{X_{i,t}} + \lambda_i + \alpha_t + \epsilon_{i,t} \qquad (1)$$

The variable $WShareHousework_{i,t}$ is the proportion of housework done by the wife. It is calculated as the number of hours the wife spends on housework per week in year t, divided by the sum of her housework and her husband's housework hours in year t, multiplied by 100. The independent variable of interest $HHOwnsBusiness_{i,t-1}$ is a binary variable equal to 1 if anyone in the household owned a business in year t-1.

Vector $\boldsymbol{I_{i,t-1}}$ includes income and labor controls. These include the natural log of the woman's labor income, man's labor income, and household's total income, which includes non-labor income. Vector $\boldsymbol{I_{i,t-1}}$ also includes the woman's relative income, as motivated by the work done by Bertrand, Kamenica and Pan (2015). The vector also includes binary indicators for whether or not each spouse is unemployed, number of hours both spouses engage in paid work per week, and a binary indicator for whether or not they own their home or rent.

[10] Hausmann tests for fixed effects indicate that fixed effects models are appropriate for both models.

Vector $\boldsymbol{X_{i,t}}$ is a vector of couple-specific controls. It includes the age of both partners, the number of children under 18 in the household, and a binary indicator for whether or not they have a child under the age of three in the household. Previous literature indicates that households with children, particularly young children, often experience higher housework burdens for women compared to households without. Vector $\boldsymbol{X_{i,t}}$ also includes binary variables indicating whether each partner has a bachelor's degree or not, a binary indicator for whether they live in an urban or rural setting, and whether they live in a house or apartment. Families living in rural areas and in homes, particularly those with yards, are more likely to see smaller gaps in housework burdens (Quadlin & Doan, 2018). Lastly, the vector also includes a rank variable measuring each partner's health, ranging from 1 (excellent health) to 5 (poor health). Individuals with poor health are of course less likely to take on housework. The terms λ_i and α_t represent couple and year fixed effects respectively.

Model 2 is the same as Model 1, but now $HHOwnsBusiness_{t-1}$ is instead disaggregated by the ownership status of the business. In other words, the model is now:

$$WShareHousework_{i,t} = \beta_1 WOwnsBusiness_{i,t-1} + \beta_2 MOwnsBusiness_{i,t-1} + \beta_3 CoOwnBusiness_{i,t-1} + \beta_4 \boldsymbol{I_{i,t-1}} + \beta_5 \boldsymbol{X_{i,t}} + \lambda_i + \alpha_t + \epsilon_{i,t} \quad (2)$$

Where $WOwnsABusiness_{i,t-1}$ is a binary variable equal to 1 if the woman in the household owned a business in year t-1, $MOwnsABusiness_{i,t-1}$ is a binary variable equal to 1 if the man owned a business in year t-1, and $CoOwnABusiness_{i,t-1}$ is a binary variable equal to 1 if the couple co-owned a business in year t-1. The dependent and other independent variables are the same as in Model 1.

I first apply both models to married couples, then to unmarried cohabitating couples. Intersectionality theories emphasize the importance of running separate models on different

demographic groups, rather than, for instance just including dummy variables for race or gender (Sprague, 2016; Scott & Siltanen, 2017). In this context, the separate models approach allows for an investigation of how the mix of explanatory factors changes across households of different marital status as well as race. It also allows for a direct comparison of the models' explanatory power across these intersections. As indicated in the subsequent section, the models' overall explanatory powers are much weaker in the unmarried sample. Several covariates differ across married and unmarried households and the constant is substantially higher in married than in unmarried couples.

4.2. Results & Discussion

Table 2 shows the results from Equations 1 and 2 in both the married and unmarried samples. Both use bootstrapped standard errors. Coefficients in vector $\boldsymbol{I_{i,t-1}}$ and $\boldsymbol{X_{i,t}}$ are largely as expected. For instance, women in couples with children have increased shares of housework in both married and cohabitating couples, all else constant, though the effect is stronger in married couples. Married and unmarried couples in urban areas have more equal shares of housework than those living in rural areas, all else constant, as do those living in apartments instead of single-family houses. Relative income dynamics are similar to those described in Bertrand, Kamenica, and Pan (2015): as women's incomes increase their share of housework decreases, but when their income exceeds their partners', this no longer holds on average.

As indicated in Table 2, business ownership in married households is associated with an increase the woman's share of housework by 0.96 percentage points. In terms of actual time spent, this translates to nearly thirty minutes of additional housework for married women per week. Model 2 indicates that the effect is stronger when a couple co-own a business or when the

husband owns a business. Among married couples, when a couple co-own a business, the woman's share of housework increases by 1.4 percentage points, and by 0.99 percentage points when her husband owns a business. There is no statistically significant coefficient associated with wives owning a business.

Among unmarried couples, however, the coefficient on women's business ownership is positive and statistically significant. In fact, among unmarried couples, women owning a business is associated with a 7.6 percentage point increase in their share of housework. These results suggest that married women take on a greater share of housework when their husbands own businesses, but do not often receive the same support when starting their own businesses (as might be reflected by a negative coefficient on the variable for women owning a business). Among unmarried couples, though the coefficient estimate for the impact of men's business ownership on women's share of housework is positive, it is about half the magnitude of the married couple sample and not statistically significant. However, unmarried women end up taking on a much larger share of unpaid housework if women themselves own a business.

Relative to those who are not married, women bound by a marriage contract may be more likely to accrue financial gains from investing in their spouses' entrepreneurial ventures through domestic labor. Marriage also allows for more patriarchal rent seeking opportunities. Separation costs are higher among married than unmarried couples, which may reduce wives' fallback options when faced with a partner that expects she take on more housework, or with a partner taking on less housework when she needs the support. Further, many feminists studying queer identities have pointed out that marriage often implies heteronormative roles in households and remind us of the institution's origins in patriarchal property ownership (Ferguson, 2007; Barker,

2012; Smart, 2013). Patriarchal norms and separation costs may make patriarchal rent seeking more likely in marriage than outside of marriage.

Because married and unmarried couples have different investment strategies and rent-seeking incentives, the following section focuses on dynamics in married couples. Appendix I includes a brief analysis of the relationship between business ownership and housework in unmarried couples of different race groups.

5. Housework in Married Entrepreneurial Couples: An Examination by Race

5.1. Data

In the following analysis, I restrict the sample to married couples. While this introduces some selection bias, which I briefly discuss in my presentation of robustness checks, it provides useful insight into how the marriage contract may differ in business-owning households and across different racial groups. I otherwise restrict my sample as before: namely, to couples over 18 who reported housework hours from 1985 to 2019.[11] For the purposes of this study, I consider an individual as "White," for example, if they indicate so in their first two (of four possible) mentions of race. I use the same method for "Black". Couples included in these analyses are same-race couples.[12] Because an analysis of other races or ethnicities requires consideration of different social and historical dynamics of oppression and privilege, I focus only on these two racial groups in this paper. Couples identified as other races are excluded from the sample.

[11] While PSID goes back to 1969, I restrict my data to 1985 in this study because this is when the survey used a consistent measure for race. Since 1985, PSID respondents have been able to indicate more than one race.
[12] In these data, the sample sizes of mixed-race couples are very small: 82 percent of unmarried Black men in an opposite-sex couple are partnered with a Black woman and 91 percent of unmarried White men in an opposite-sex couple are partnered with a White woman. Among opposite-sex married couples, 93 percent of Black men are married to a Black woman and 97 percent of White men are married to a White woman.

In Table 3 I present the summary statistics for the married sample, disaggregated by Black and White couples. Note that Black and White wives take on similar shares of housework, but White households are much more likely to own a business. Figure 2 illustrates differences in housework by race and business ownership. Perhaps most noteworthy is the racial differences in housework burdens when wives own businesses. Among Black couples in which the wife owns a business, she does 74 percent of the housework on average. Among White couples in which the wife owns a business, she does just 69 percent of the housework on average.

5.2. Model & Results

Results presented in Table 4 make use of the same econometric models, including bootstrapped standard errors, presented in Equations 1 and 2. However, in this section samples are now limited to married couples and separated by race instead of marital status. Results suggest that among White couples, the proportion of wives' housework increases by 1.08 percentage points when their husbands own a business and by 1.67 percentage points when the couple co-owns a business. There is not a statistically significant relationship between White wives' business ownership and her relative housework, though the coefficient is positive. Among Black couples, wives' business ownership is associated with 2.81 percentage point increase in their relative housework. However, neither husbands' business ownership nor co-ownership are associated with a statistically significant increase in Black women's share of housework. Interestingly, both of these results are in line with those for the unmarried sample in Table 2, though coefficient magnitudes are larger in the latter.

Overall, these results suggest that, on average, dynamics related to housework and business ownership differ substantially between White spouses and Black spouses. Among

married White couples, wives face an increased share of housework when their husbands' own a business, which may help subsidize his time and investments in the firm. There is no evidence suggesting the same benefits are extended to White wives when they start a business. Similarly, Black husbands do not experience the benefits of reducing their share of housework when running a business. Black women, however, face increased shares of unpaid housework when owning a business, creating another hurtle for successful business ownership.

5.3. Who is (or isn't) Doing the Housework?

To better understand the intrahousehold labor dynamics, I separately consider how men's and women's housework hours change with business ownership. In other words, I ask: are men decreasing their housework hours when they own a business, are women increasing their housework hours, or both? I re-estimate Equation 2 in married Black and White couples, but instead of women's share of housework as the dependent variable, I use husband's housework hours and wives' housework hours.

Results in Table 5 illustrate White men *decreasing* their housework hours during business ownership, no matter the business owner. For example, when White spouses co-own a business, men decrease their housework by 43.8 minutes per week, on average, all else constant. On the other hand, if their wives own a business, they decrease their housework hours by 25.4 minutes per week on average. Results suggest that they also decrease their housework hours when they own a business, but only by 18 minutes on average. None of the coefficients on Black men's housework hours are statistically significant, but the signs suggest that Black men too decrease their housework hours when co-owning a business with their wives and when their wives own businesses. Similarly, none of the coefficients women's housework hours are statistically

significant, but unsurprisingly, coefficients are positive on β_3 meaning that when men own businesses there is a statistically insignificant *increase* in women's housework hours.

Previous studies have suggested women are often 'pulled' into business ownership by improvements in time flexibility, which allow them to take on care and housework responsibilities. It is possible that men, on average, decrease their housework when their wives own businesses because of her increased flexibility. However, this behavior still does not reflect the same time investment and support of wives' entrepreneurial activity that women seem to invest in their husband's entrepreneurial activity through their increased housework hours. This also does not explain why men would decrease their housework hours at such high rates when co-owning a business.

5.4. Discussion

Ultimately, these results offer a possible explanation for why White men are able to start businesses at higher rates and experience more entrepreneurial success than other groups: they are more often able to reduce their own housework burdens and instead rely on the unpaid domestic labor of their wives or perhaps that of paid domestic workers.[13] Others, namely women and Black men, do not seem to have access to same benefits based on these results.

These results are also consistent with theories of patriarchal rent seeking. Namely, patriarchal norms allow men to pull back from domestic work and push the burden to women, even when household allocations of labor might be more efficient when used to support an entrepreneurial partner. This trend seems especially strong among White couples, which deepens

[13] PSID asked whether a household received help (paid or unpaid) with housework from outside the family unit only during the years 1968 to 1972. This analysis, which span 1985 to 2019, therefore does not include direct analyses of housework outsourced to paid laborers.

one's understanding of how patriarchal norms are often stronger among those closer to the top of the race-gender hierarchy.

6. Robustness Checks & Limitations

6.1. Selection into a Couple

Some of the empirical results differences by race might be explained by well-documented differences in marriage markets and marriage contracts (i.e. Brown & Kesselring, 2006; Hamilton, Goldsmith, & Darity, 2009). To better understand whether the results are influenced by racial differences in selection into marriage, I make use of a Heckman selection model. The Heckman selection model is a two-step statistical approach correcting for non-randomly selected samples such as these. It has been commonly used when considering wage estimates dependent on selection into the labor force (i.e. Gammage, 2010; Blau & Kahn, 2005; Goldin 1990; Heckman & Willis, 1977). Here it is used to account for selection into a couple. When including this selection equation, (which I estimate as a function of age, education, children, income, and employment status), the same narrative described previously holds: when a woman owns a business in a Black couple she has a higher average share of housework than if she did not.

6.2. Specialization Theories

Proponents of specialization theories of household labor might argue that results indicating Black wives face higher shares housework when they own a business are driven by the possibility that Black women are more likely than other groups to own domestically-oriented service businesses. In other words, it might be the case that many Black women specialize in the

home according to the same work they specialize in their businesses. Indeed, in this sample of married couples, 27.8 percent of businesses owned by Black women are in the "personal services" industry, compared to 17.4 percent of White women's businesses. Personal services include work that one often does in the home (e.g. lodging, laundering, cleaning, beauty shops, barber shops, dressmaking, and shoe repair). To address the concern that women in these industries might simply be continuing to specialize in unpaid personal services work in the home, I estimate an additional regression, described in Equation 3.

$$WShareHousework_{i,t} = \beta_1 WOwnsBusiness_{i,t-1} + \beta_2 OwnsPSBusiness + \beta_3\left(WOwnsBusiness_{i,t-1} \times OwnsPSBusiness\right) + \beta_4 MOwnsBusiness_{i,t-1} + \beta_5 CoOwnBusiness_{i,t-1} + \beta_6 \boldsymbol{I_{i,t-1}} + \beta_7 \boldsymbol{X_{i,t}} + \lambda_i + \alpha_t + \epsilon_{i,t} \quad (3)$$

Here, again, I separate the sample of Black spouses and the sample of White spouses and estimate Equation 3 for each, which includes an interaction term for women owning a personal services business.

Results for both Black and White samples are presented in Table 6. While the specialization story may fit with White households, there is no evidence that it holds in Black households. In White couples, wives who own a personal service business face an additional 2.6 percent share of housework compared to White wives owning other types of businesses. However, the results from the Black households sample indicate that the specialization in personal services does not explain away the previous finding: the interaction term's coefficient β_3 is not statistically significant among the Black sample. Black wives who own a business that is not a personal service business face a 2.7 percentage point increase in housework burdens compared to Black wives who do not own a business.

6.3. The Separate Models Approach versus Interaction Terms

I additionally test robustness by using an interaction term for race as opposed to a separate models approach. The regression equations are nearly identical to those in Section 4, but in this case, I add an interaction term $BlackCouple_i$ indicating whether or not both members of the couple are Black. Because the sample is restricted to Black and White couples, the comparison group is simply couples in which both members are White. The coefficients of interest in Equation 4 are β_1, which will indicate whether or not someone in the household owns a business is related to the wife's share of housework, and β_3 which will indicate whether household business ownership is related to wives' share of housework among Black couples:

$$WShareHousework_{i,t} = \beta_1 OwnsBusiness_{i,t-1} + \beta_2 BlackCouple_i + \beta_3\left(OwnsBusiness_{i,t-1} \times BlackCouple_i\right) + \beta_4 \boldsymbol{I_{i,t-1}} + \beta_5 \boldsymbol{X_{i,t}} + \lambda_i + \alpha_t + \epsilon_{i,t} \quad (4)$$

Similarly, the independent variables of interest in Equation 5 are those associated with whether or not a wife owns a business, husband owns a business, or spouses co-own a business, as well as the interaction term for Black couples.

$$WShareHousework_{i,t} = \beta_1 WOwnsBusiness_{i,t-1} + \beta_2 MOwnsBusiness_{i,t-1} + \beta_3 CoOwnBusiness_{i,t-1} + \beta_4 BlackCouple_i + BlackCouple_i\left(\beta_4 WOwnsBusiness_{i,t-1} + \beta_5 MOwnsBusiness_{i,t-1} + \beta_6 CoOwnBusiness_{i,t-1}\right) + \beta_7 \boldsymbol{I_{i,t-1}} + \beta_8 \boldsymbol{X_{i,t}} + \lambda_i + \alpha_t + \epsilon_{i,t} \quad (5)$$

In both models, the remaining dependent and control variables are identical to those described in Section 4.

Results presented in Table 7 are not meaningfully different from those in the separate models approach: Black women face a larger share of housework when they own businesses, but not when their husbands do or when the couple co-own. White women face a larger share of

housework when their husbands own a business or when the couple co-own a business, but not necessarily when they own a business.

6.4. Limitations

The panel nature of PSID is useful in this study by allowing for couple fixed effects. Ideally, one would also be able to use the panel to examine how housework burdens change before and after business ownership. However, in practicality, the limited sample of individuals owning businesses (limited further when stratifying by race and gender) make this empirically challenging and garners few statistically robust results. The models presented in this paper are therefore not causal, meaning that we do not know from this analysis whether unequal shares of housework allow for and drives business ownership, or whether business ownership directly causes changes in shares of housework. However, regardless of the causal direction, the models provide a key descriptive insight into entrepreneurial families' time use and allow scholars to better understand the domestic resources at the disposal of White men and not others.

This work is also only suggestive of how race and gender differences in housework burdens/support during business ownership could explain race and gender differences in entrepreneurial start up and success rates. Both a larger sample of coupled business owners and more detailed data on the firm's success could allow one to study how intrahousehold housework dynamics affect firm success. However, PSID includes only a limited number of variables related to the households' businesses (namely, profits, industry, and income) and does not ask questions that may be important to include in any examination of a firms' success (i.e. firm size, longevity, assets/capital, etc.). This study therefore refrains from making any explicit claims on how intrahousehold dynamics affect firm success and longevity, though it alludes to the fact that

household labor is either a support in the entrepreneurial process, or a burden, based on the entrepreneur's race and gender.

7. Concluding Remarks

The models suggest that on average married White men reduce their housework hours when owning a business, leaving their wives to face a larger share of the housework. However, results do not indicate that women nor Black men experience a reduced share of housework when owning businesses. These results are consistent with patriarchal rent seeking in the home: not only do White men have opportunities to extract domestic labor from their wives to allow themselves the time and energy to run their own businesses, but they even double down and reduce their housework further during periods where their wives' own businesses or where they co-own a business.

Married Black men do not capture the same sorts of rents in their households as White men. If patriarchal behavior operates on a hierarchy, as Hartmann suggests, and if those closer to the top of the race-gender hierarchy accrue the most benefits, it is unsurprising that there is less evidence of patriarchal rent seeking among Black men relative to White men. Further, the advantages White male entrepreneurs accrue through the unpaid work of their wives are not evenly felt among Black entrepreneurs, thus resources available to both groups are unequal. Black wives who own businesses take on a bigger share of housework burdens than those without, all else constant. This is a potentially important obstacle for Black women entrepreneurs. Ultimately, differences in housework allocations among entrepreneurial households might be part of why we observe White men running businesses at higher rates than

women and Black men and why small businesses owned by White men often have better success rates by some metrics.

Further research on how housework allocations affect likelihoods of entrepreneurial success or profitability will be useful. Presently, several datasets include detailed information on couples' time use, while others include detailed information about small, family-run businesses. However, very few include detailed information on both. Data collection agencies should gather household labor time-use data in detailed datasets on small businesses. With this information, one could render a more complete understanding of the symbiotic relationship between household dynamics and business success. For instance, like Compton and Pollak (2014) found with women's labor force participation, one could analyze whether proximity to family (i.e. mothers and mothers-in-law) improve women's entrepreneurial success. Qualitative analyses might also provide useful insight into the decision-making and labor allocation processes of entrepreneurial couples, particularly along race and class lines.

Ultimately, researchers have long investigated several aspects of women-owned and Black-owned businesses in the US, and have debated ways to best support entrepreneurship among these groups. However, the role of unpaid housework and care work is largely absent from such literature, a gap which this paper works to fill. If policymakers aim to encourage women and Black men in entrepreneurial ventures, we must better understand their responsibilities and their spouses' support (or lack thereof) in household work. This study makes it clear that business ownership and housework are inextricably related. In order to support women both as providers of unpaid domestic work and as business owners, one must not only provide enhanced domestic support but must also work to disincentivize men's rent-seeking behavior at the intersection of housework and entrepreneurship. Disincentivizing such behavior

requires innovative policy prescriptions: for instance, one might account for the availability of entrepreneur's domestic labor support (or burdens) in small business support policies so that the playing field is more even. Studies have shown support for domestic tasks like childcare also have the potential to improve entrepreneurial success, especially for women.[14] For this reason, publicly subsidized care work may lessen entrepreneurial women's domestic burdens and may be helpful at reducing barriers to business ownership among women.

[14] For instance, Mari, Poggesi, & De Vita (2016) find that presence of preschool aged children reduce revenues of woman-owned businesses in Italy. The authors suggest that women need improved public and private support of domestic tasks in order to run successful firms.

Table 1: Summary Statistics by Married and Unmarried Couples (PSID 1985-2019)

Couple:	Cohabitating Unmarried		Married	
	mean	S.D.	mean	S.D.
Woman's weekly housework hours	13.96	12.08	16.81	11.51
Man's weekly housework hours	7.92	8.65	7.56	7.79
Woman's share of housework	0.64	0.21	0.70	0.20
Someone in household owns a business	0.08	0.27	0.17	0.37
Man owns a business	0.06	0.24	0.09	0.29
Woman owns a business	0.01	0.12	0.03	0.18
Couple co-own a business	0.00	0.07	0.03	0.17
Woman's labor income	23,399.72	20,635.37	25,927.61	26,440.60
Man's labor income	30,181.96	24,520.28	45,166.32	60,001.14
Total household income	58,139.42	47,006.97	79,945.91	81,684.55
Woman's share of couple's income	0.44	0.20	0.37	0.19
Age of man	30.98	7.67	41.21	10.95
Age of woman	29.76	7.72	39.13	10.52
Woman has college degree	0.25	0.44	0.36	0.48
Man has college degree	0.21	0.41	0.34	0.47
Man's health	2.22	0.95	2.15	0.93
Woman's health	2.33	0.94	2.22	0.91
Number of children	1.02	1.22	1.19	1.17
Has a child under 3	0.25	0.43	0.17	0.38
Urban (not rural)	0.43	0.50	0.34	0.47
Owns a home	0.32	0.47	0.77	0.42
Man's paid labor hours	40.65	13.45	44.55	11.77
Woman's paid labor hours	36.29	13.36	36.36	12.87
Man unemployed	0.18	0.38	0.08	0.27
Woman unemployed	0.14	0.35	0.08	0.26
House (not apartment/multifamily)	0.54	0.50	0.83	0.38
n (number of couples)	1,779		9,843	
N (number of observations)	3,276		53,186	

Table 2: Business Ownership & Women's Housework Shares: Married & Unmarried Couples

Dependent variable: Woman's share of housework × 100	Unmarried cohabitating couples	Married couples
Model 1		
Someone in household owns a business	2.209	0.963***
	(1.922)	(0.306)
Observations	3276	53186
Number of groups	1799	9843
R^2	0.053	0.039
Model 2		
Couple co-own a business	1.238	1.383***
	(2.659)	(0.510)
Woman owns a business	7.617*	0.652
	(4.003)	(0.424)
Man owns a business	0.402	0.995***
	(2.095)	(0.326)
Observations	3276	53186
Number of groups	1799	9843
R^2	0.054	0.039

[a]Data from PSID 1985-2019. Reported R-squared is the within R-squared (as opposed to the between or overall R-squared), which captures how well the models account for changes in women's shares of housework within each of the households over time. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 3: Summary Statistics for Married Couples by Race (PSID 1985-2019)

Couple:	White Married Couples		Black Married Couples	
	mean	S.D.	mean	S.D.
Woman's weekly housework hours	17.02	11.36	15.73	10.98
Man's weekly housework hours	7.53	7.42	7.32	8.33
Woman's share of housework	0.70	0.19	0.70	0.21
Someone in household owns a business	0.20	0.40	0.09	0.29
Man owns a business	0.11	0.31	0.06	0.23
Woman owns a business	0.04	0.19	0.02	0.14
Couple co-own a business	0.04	0.19	0.01	0.10
Woman's labor income	26,355.97	27,295.96	23,831.16	20,048.99
Man's labor income	48,955.82	67,485.64	33,415.68	24,160.85
Total household income	85,217.30	89,935.97	62,820.28	42,153.27
Woman's share of couple's income	0.36	0.20	0.41	0.17
Age of man	41.54	11.12	40.43	10.27
Age of woman	39.47	10.74	38.30	9.70
Woman has college degree	0.40	0.49	0.26	0.44
Man has college degree	0.39	0.49	0.20	0.40
Man's health	2.07	0.91	2.35	0.94
Woman's health	2.11	0.89	2.49	0.91
Number of children	1.10	1.13	1.42	1.22
Has a child under 3	0.16	0.37	0.19	0.39
Urban (not rural)	0.31	0.46	0.39	0.49
Owns a home	0.81	0.39	0.65	0.48
Man's paid labor hours	44.96	11.53	43.32	11.91
Woman's paid labor hours	35.78	13.42	38.10	10.51
Man unemployed	0.07	0.25	0.09	0.29
Woman unemployed	0.07	0.25	0.09	0.29
House (not apartment/multifamily)	0.86	0.34	0.73	0.44
N (number of observations)	37,083		11,196	
n (number of couples)	6,381		2,207	

Table 4: Business Ownership & Women's Housework Shares: Married Black & White Couples

Dependent variable: Woman's share of housework × 100	Married White couples	Married Black couples
Model 1		
Someone in household owns a business	0.927***	1.145
	(0.357)	(0.845)
Observations	37083	11196
Number of groups	6381	2207
R^2	0.047	0.034
Model 2		
Couple co-own a business	1.674***	0.009
	(0.515)	(2.433)
Woman owns a business	0.299	2.808*
	(0.571)	(1.511)
Man owns a business	1.081***	0.618
	(0.324)	(0.852)
Observations	37083	11196
Number of groups	6381	2207
R^2	0.047	0.034

[a]Data from PSID 1985-2019. Reported R-squared is the within R-squared (as opposed to the between or overall R-squared), which captures how well the models account for changes in women's shares of housework within each of the households over time. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 5: Business Ownership & Housework Hours

	Married White couples	Married Black couples
Dependent variable: Woman's housework hours		
Couple co-own a business	-0.162	-1.173
	(0.358)	(0.908)
Woman owns a business	-0.246	-0.235
	(0.248)	(0.689)
Man owns a business	0.095	0.114
	(0.205)	(0.460)
Observations	37110	11211
Number of groups	6383	2207
R^2	0.092	0.030
Dependent variable: Man's housework hours		
Couple co-own a business	-0.730***	-0.259
	(0.177)	(0.648)
Woman owns a business	-0.424*	-0.021
	(0.230)	(0.712)
Man owns a business	-0.300*	0.007
	(0.160)	(0.333)
Observations	37110	11211
Number of groups	6383	2207
R^2	0.015	0.021

[a]Data from PSID 1985-2019. Reported R-squared is the within R-squared (as opposed to the between or overall R-squared), which captures how well the models account for changes in women's shares of housework within each of the households over time. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 6: Personal Service Business Ownership & Women's Housework Shares

Dependent variable: Woman's share of housework × 100	Married White couples	Married Black couples
Woman owns a business	0.070	2.697*
	(0.491)	(1.463)
Household member owns a personal service business	4.168***	1.799
	(1.553)	(3.114)
Woman owns a business × personal service business	2.630**	3.551
	(1.322)	(3.032)
Couple co-own a business	1.521***	-0.138
	(0.496)	(1.876)
Man owns a business	1.018***	0.536
	(0.342)	(0.954)
Observations	37083	11196
Number of groups	6381	2207
R^2	0.047	0.034

[a]Data from PSID 1985-2019. Reported R-squared is the within R-squared (as opposed to the between or overall R-squared), which captures how well the models account for changes in women's shares of housework within each of the households over time. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 7: Business Ownership & Women's Housework Shares (Interaction Terms Model)

Dependent variable: Woman's share of housework × 100	
Equation 4	
Someone in household owns a business	0.932***
	(0.286)
Black couple	3.056
	(5.348)
Someone in household owns a business × Black couple	0.237
	(0.719)
Observations	48263
Number of groups	8575
R^2	0.041
Equation 5	
Couple co-own a business	1.640***
	(0.514)
Woman owns a business	0.268
	(0.491)
Man owns a business	1.056***
	(0.356)
Black couple	3.036
	(5.348)
Couple co-own a business × Black couple	-1.387
	(1.712)
Woman owns a business × Black couple	2.575**
	(1.298)
Man owns a business × Black couple	-0.383
	(0.896)
Observations	48263
Number of groups	8575
R^2	0.041

[a]Data from PSID 1985-2019. Reported R-squared is the within R-squared (as opposed to the between or overall R-squared), which captures how well the models account for changes in women's shares of housework within each of the households over time. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

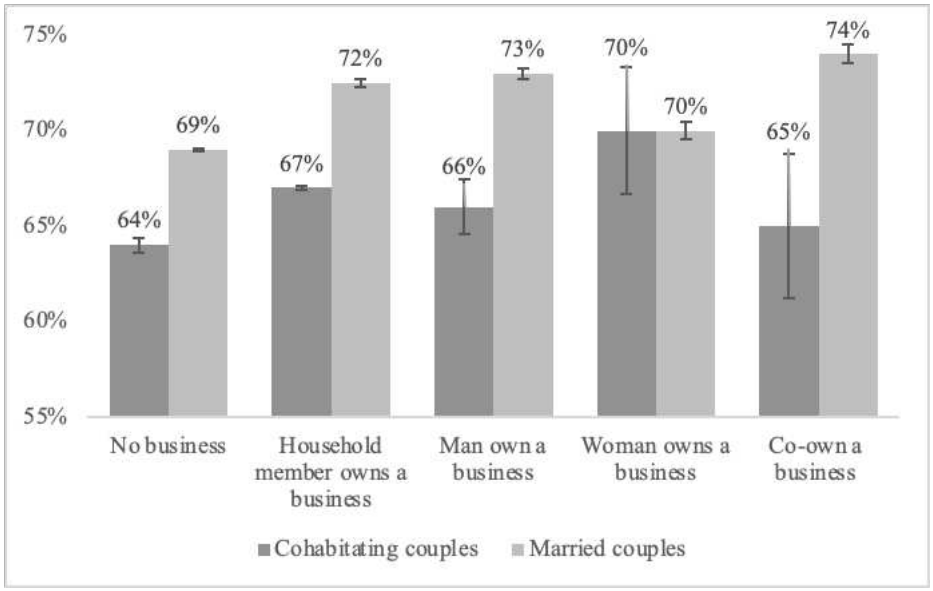

Figure 1. Woman's Share of Housework in Married and Unmarried Couples

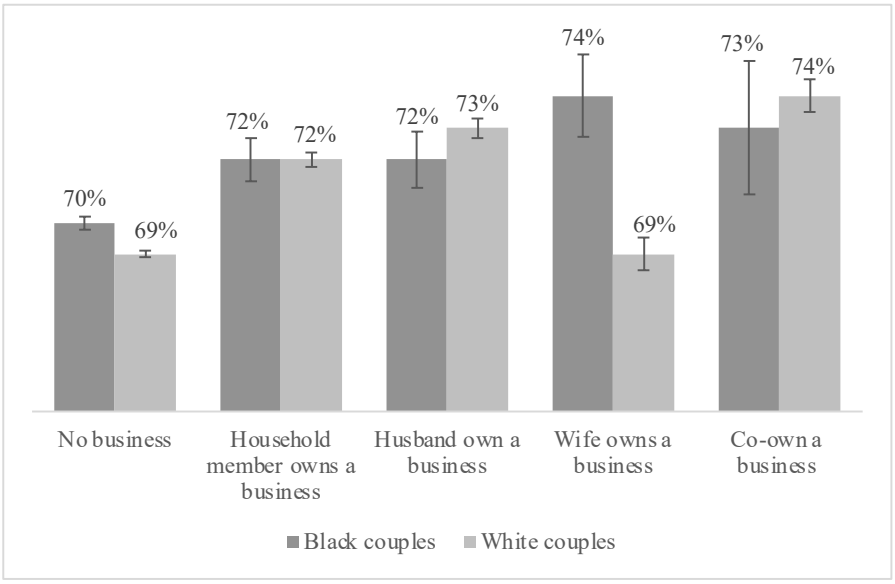

Figure 2. Woman's Share of Housework in Married Black and White Couples

CHAPTER 2

THE POLITICAL ECONOMY OF HEGEMONIC MASCULINITY: RACE, INCOME, AND HOUSEWORK IN THE UNITED STATES

1. Introduction & Motivation

Gender identity plays a key role in individuals' microeconomic decision making and bargaining. Even if inexplicitly, many economists have written on the ways in which men cohabitating with women respond to certain economic 'threats' to their masculinity. For instance, several have written on the male backlash theory in studies of intimate partner violence (Caridad Bueno & Henderson, 2017; Bhattacharya, 2015; Finnoff, 2012; Atkinson, Greenstein, & Lang, 2005). The male backlash theory postulates that when women begin to out-earn their male partners, those male partners respond with violence to reassert their dominant status in the home. Other studies have found that there is a general aversion to the situation in which a wife out-earns her husband, as illustrated in research on marriage markets, divorce, marital happiness, and allocations of housework (Bertrand, Kamenica, & Pan, 2015) and in research on men's stress levels (Syrda, 2019). Murray-Close and Heggeness (2018) even find when filling out the Current Population Surveys, respondents falsely inflate reports of husbands' earnings and falsely deflate reports of wives' earnings when the wife's income is greater than the husband's. Other scholars have found that men who do "women's work" in the paid labor market spend more time on male-typed housework relative to men in gender-balanced occupations (Schneider, 2012).

Based on these studies, it is clear that the role of gender identity, namely masculinity, is often intertwined with dynamics of income and work, both inside the home and out. However, unlike some of this research, I make the case for examining these questions in the context of hegemonic masculinity as opposed to gender deviance neutralization theory, which obfuscates the influence

of power and patriarchy as well as the role of race- and class-related oppression. Best put by Folbre (1994: p. 99), who writes, "Bargaining takes place on the cultural as well as on the micro economic level…macro economic or macro cultural dynamics complicate microeconomic negotiations." This paper considers how the macro cultural dynamics of hegemonic masculinity influence microeconomic negotiations and behaviors within the homes of opposite-sex couples in the United States.

I outline theories of hegemonic masculinity, briefly using historical examples, and motivate use of the theory by explaining how the behaviors of White and upper-class men have strategically shaped notions of Black masculinities and working-class masculinities. In an empirical exercise, I specifically consider how White and upper-income men respond differently to the economic 'threat' of a female partner out-earning a male partner, compared to the response of lower-income White men and Black men. Previous research has found that within a given couple, when the wife earns more than the husband, the gap in time spent on housework is wider relative to couples in which the wife makes the same or less than their husband (Bertrand, Kamenica, & Pan, 2015). My empirical models indicate that upper-income and middle-income White men adopt this behavior, but lower income White men and most groups of Black men do not. The empirical results serve as a quantitative test of hegemonic masculinity theory and demonstrate the importance of an intersectional approach to gendered household power dynamics.

While focusing on White, straight, upper-income masculinities may seem to place too much emphasis on those already often centered in discussion, this is an intentional act of 'studying up,' or rather, studying oppressors, rather than 'studying down' and placing blame or passivity on the subaltern. Sprague (2016: 15) puts it best, writing that "without a parallel concentration of

research focusing on the problematic character of elites and the social institutions bolstering their privilege, the focus on what is wrong with disadvantaged people creates a picture in which those on the downside of hierarchies have, and thus by implication are, problems." Studying up, in this context, means focusing on the hegemonic group when discussing the influence of hegemonic masculinity.

This paper's contribution is to enrich our current understandings of power and patriarchy by applying theories of hegemonic masculinity to recent economic phenomena. It both tests and indicates the usefulness of hegemonic masculinity theory. The empirical results and associated historical context should serve as motivation to avoid essentializing the behaviors of dominant groups to all groups, as it may feed into stereotyping or social norms which benefit the hegemonic group.

2. What is Hegemonic Masculinity?

Masculinity is a difficult concept to define: it means different things to different people based on class, race, geography, etc. Some scholars ascribe specific behaviors with masculinity. For instance, David Cohen (2010) has identified three central characteristics to contemporary U.S. masculinity: heterosexual, not feminine, and physically aggressive (Cohen, 2010: 525). Many scholars build upon such straightforward conceptualizations of masculinity. For instance, many studying 'gender deviance neutralization theory' argue that performing housework affirms women's identity as feminine and avoiding housework affirms men's identity as masculine (Bittman, et al., 2003; Sevilla-Sanz, et al., 2010; Thébaud, 2010; Simister, 2013). Gender deviance neutralization claims that when men and women diverge from normative expectations about gender in one realm, they seek to compensate for that deviance in other spheres of action.

Thus, when a woman out-earns her male partner, he seeks to neutralize this gender deviance by reducing his contributions to housework.[15] Or when a woman works in a male-dominated occupation, she seeks to neutralize her gender deviance by performing more 'female-typed' housework (i.e. cooking, cleaning, washing, and shopping) (Schneider, 2012).

However, I argue that this type of behavior is not just about performing gender, but has much more to do with wider notions of patriarchy, power, and privilege. While gender deviance neutralization is a useful concept to begin understanding the gendered aspects of social reproduction and relative income, it does not address the power dynamics at the core of the problem. Socially reproduction refers to work that creates and sustains workers, including unpaid household labor (Fraser, 2017). Socially reproductive work has often fallen on women, particularly low-income women of color (see Bhattacharya, 2017). When specifically considering the role of housework, one must recognize that housework is not only necessary, but laborious. Prescribing gendered notions of who ought to do housework is a reflection of power and patriarchy, just as gendered notions of relative income are a reflection of power and patriarchy. Heidi Hartmann (1979) has usefully defined patriarchy as:

> "a set of social relations which has a material base and in which there are hierarchical relations between men and solidarity among them which enable them in turn to dominate women. The material base of patriarchy is men's control over women's labor power. That control is maintained by denying women access to necessary economically productive resources…Men exercise their control in receiving personal service work from women, in not having to do housework or rear children… and in feeling powerful and being powerful." (Hartmann, 1979: 14)

The types of gendered behaviors described in many studies about gender deviance neutralization ultimately have less to do with performing gender and more to do with maintaining the social norms and expectations associated with patriarchy. Even women engaging in 'gender deviance

[15] This behavior is contradictory to standard neoclassical household bargaining frameworks, which posits that couples allocate housework based on comparative advantages between housework and paid work.

neutralization' take part in perpetuating patriarchy: as bell hooks (2010: 170) has written, patriarchy has no gender. Some women may be responding to certain spoken or unspoken threats that come with living in a patriarchal society, and others may engage in the norms set by a "white supremacist capitalist patriarchy" (hooks, 1995), because they benefit from their closeness to the hegemonic group. For this reason, instead of relying on gender deviance neutralization theory to understand masculine behavior, I use theories of hegemonic masculinity.

The term 'hegemonic masculinity' was introduced by R.W. Connell (1987) and has been as recently redefined as "the configuration of gender practice which embodies the currently accepted answer to the problem of legitimacy of patriarchy, which guarantees, or is taken to guarantee, the dominant position of men and the subordination of women" (Connell, 2005: 77). Stated another way, hegemonic masculinity is "the currently most honored way of being a man.… It requires all other men to position themselves in relation to it, and it ideologically legitimates the global subordination of women to men" (Connell & Messerschmidt, 2005: 832).

Unlike gender deviance neutralization, hegemonic masculinity encompasses both patriarchal power dynamics, and the changing nature of masculinity. Specific behaviors associated with manhood have changed over time and across cultures, making Connell's broad definition fitting for nearly any patriarchal society. For example, contrary to our recent understandings of masculinity in the United States, masculine behaviors historically did not necessarily involve distance from women or from social reproduction. In the U.S. preindustrial economy, women and men were often in the same world of daily experience: while they had separate roles that still reflected gender power, they both worked primarily in the home sphere and were responsible for work that maintained the household (Laslett and Brenner, 1989). White men often managed household labor and were responsible for educating their children according

to religious doctrine. Kimmel (2006) has described that, during this time, White men's masculine identity was wrapped up in being 'self-made' men, able to control their own destinies and coordinate their own productive labor. However, with industrialization and the rise of wage labor in the early nineteenth century, White versions of manhood were "no longer fixed in land or small-scale property ownership or dutiful service" (Kimmel, 2006: 17). White men were no longer the managers of household labor but instead were responsible for providing an income on which their families survived (Laslett & Brenner, 1989). The development of industrial capitalism took working-class White men's abilities to coordinate their own productive labor, and in turn their own destinies. For instance, Samuel Eliot in 1871 wrote that "to put a man upon wages is to put him in the position of a dependent" and "the less of a man he becomes" (cited in Rodgers, 1974: 33). This forced them to turn to other, more harmful ways to express masculinity: working-class White men were no longer seen as moral beacons, responsible for their children's religious and emotional upbringing, but were seen as aggressive, sexual, and competitive (Laslett & Brenner, 1989). White masculinities began to be defined by success in the market, individual achievement, mobility, and wealth. Further, the historical experiences of Black men in their breadwinning status and in housework are certainly different than that of White men: Black families in the United States have, for much longer than White families, often consisted of men and women both participating in paid work, and "the sharp dichotomy between male and female sex roles" so common to White families failed to develop as stringently (Staples, 1978: 171).

Illustrating some of the ways in which White masculinities have evolved over time and with new economic systems helps illustrate that masculinity has not always been defined as 'heterosexual, not feminine, and physically aggressive' (Cohen, 2010). These attributes are not a natural part of manhood, but rather a reflection of changing power and structures of labor,

production and reproduction. They are still, however, a reflection of patriarchy, which aims to control women's labor power.

3. What Makes Hegemonic Masculinity Hegemonic?

Theories of hegemonic masculinity not only consider the evolution of patriarchy and power, but also consider hierarchies of masculinities based on hierarchies of oppression. Scholar bell hooks reference to patriarchy as "white supremacist capitalist patriarchy" (hooks, 1995: 29) reflects how race- and class-based oppressions are intertwined with patriarchy. Hegemonic masculinity encapsulates these issues: not only is hegemonic masculinity about perpetuating dominance over women, but it is also about oppressing men outside the hegemonic group. Connell writes that hegemonic masculinity "requires all other men to position themselves in relation to it" (Connell & Messerschmidt, 2005: 832). Michael Kimmel (2006: 4) writes that "all American men must contend with a singular vision of masculinity, a particular definition that is held up as the model against which we measure ourselves." Masculinity is thus rooted in notions of power and social relations not only between men and women, but also among different groups of men. Connell and Messerschmidt acknowledge that notions of masculinity differ locally, regionally, and globally, but that there is generally a "singular form of masculinity that stand atop a gender hierarchy" (Garlick, 2017: 35). In her work, Connell is clear in her claim that only a small minority of relatively powerful men need to enact hegemonic masculinity in order for it to steer the behavior of other groups of men.[16]

For example, industrial-era working class White men, already feeling their identities threatened by wage work, turned to racism, antifeminism, and nativism: excluding the 'other'

[16] Notably, this is somewhat in contradiction to Himmelweit's (2003) macro-model of norms, in which the strength of the norm relies on the proportion of the population conforming to it.

would help White men to preserve their gender identity (Kimmel 2006: 62). The privileges conferred by race were (and continue to be) used to make up for alienating and exploitative class relationships (Roediger, 1999). Reeser (2011) similarly explains that White men often spread narratives about Asian men as effeminate, or Black men as hyper virile, leaving White masculinity as the perfect expression of manhood. These narratives should not be taken as two separate constructs, but "as part of a larger system of race-gender codings, the white man is privileged as the man in the middle: neither too masculine nor too unmasculine…Ending up in the middle is a way for white masculinity to be accorded the privileges of the happy medium and to keep those privileges away from the men coded otherwise" (Reeser, 2011: 150).

In this sense, hegemonic masculinity works to subordinate both women and 'non-hegemonically masculine' men. In explaining the subjection of Black men, Reeser writes the following on the narratives of Black masculinity:

> The image of the man in gender overdrive might be a way to suggest that he is out of control. The African American man is so gendered or so sexualized, or so the racist logic goes, that he is unable to control himself since he wants to have sex, to break into houses, or to rape women. The man of excess, then, can be just as subject to the rule of hegemonic masculinity as the effeminate man, and consequently, the construct of non-excessive or moderate applies to the white man or to another racialized group seen as ideal by contrast. ...This kind of thinking about excess can be a way to code a group as lacking and thus not fully legitimate in terms of masculinity. The white man may be disturbed or anxious by the black man's virility or by a perception of gender similarity with himself, and respond to this anxiety by coding his racial other as lacking in some way (without intelligence, culture, self-control, financial success, etc.). In this sense, and excess of masculinity can be transformed into a lack. (Reeser, 2011: 149)

When a powerful group in society codes Black men as 'excessive' and 'out of control', this provides justifications for heavy surveillance, incarceration, and other punishments of Black men, even when Black men enact gender norms in similar ways to White men. Scholars have found that in educational, labor market, and criminal justice settings, "black men pay a

disproportionate price for enacting masculinity norms in comparison to white males" with similar incomes (Royster, 2007).

Oppression stemming from hegemonic masculinity (and the hegemonic group) also occurs in class dynamics, particularly in forming working-class conceptualizations of manhood. Morgan (2005) discusses the shift of more and more men into service and managerial work in the late 20th century. He writes that upper- and middle-income working men aimed to make this work seem masculine and to separate themselves from work done by the masses. Because of this, working-class men "were presented as sheep who were easily led by politically motivated leaders or group pressure. Management, on the other hand, was presented as dealing with some of the key issues in the national economy" (2005: 170). In response, working class men constructed their masculinity as collective, physical, and oppositional. Additionally, designations of 'skilled' and 'unskilled' work were changing, largely driven by the capitalist class and a structural economic shift to service sector work. Men in the 'unskilled' category responded by prescribing physical strength to their masculine identities if they were to be excluded from notions of technical mastery (Maynard, 1986). On the other hand, middle and upper-class men working in services associated their masculinity with individuality, rationality, and intelligence. Again, efforts put forth by the hegemonic group to redefine masculine work or behavior places them in the optimal position: upper- and middle-income men seen as rational leaders and individuals rather than brutish sheep. In this way, the hegemonic group is again considered to have the perfect 'amount' of manhood relative to the oppressed working class.

4. Theory & Empirical Research Question

Carrigan, Connell, and Lee (1985) and Connell and Messerschmidt (2005) posit that there is a hierarchy of masculinities, subject to local, national and global dynamics, and to income and race dynamics. As Hartmann explains, “Hierarchies 'work' at least in part because they create vested interests in the status quo. Those at the higher levels can 'buy off' those at the lower levels by offering them power over those still lower” (Hartmann, 1979: 15). This is what is at play in notions of hegemonic masculinity. There are hierarchies of masculinity based on hierarchies of oppression. An individual’s decision to conform to hegemonic masculinity norms is largely based on their proximity to the hegemonic group and the benefits they receive from their closeness to the group.[17] Material benefits may accrue through identity advantages, like social networks that yield marriage, employment, or wealth earning opportunities, or reinforcement of discriminatory behavior (for instance, in the case of occupational crowding, as discussed in Chapter 3). I suggest that, if men have some kind of association with the dominant group, they may express their masculinity in similar ways. Namely, lower- and middle-income White men may sometimes express manhood in ways similar to upper income White men: they may be more open or susceptible to being ‘bought off’ with the promise of power over those lower still, particularly women and men of color. Lower-income Black men, on the other hand, may not enact the same types of masculinity norms as the hegemonic group because the advantages of (White) hegemonic masculinity are less accessible to them. Their relative distance in the hierarchy is too far from the top of the race, class, and gender hierarchy to accrue the same benefits in power, so they chart their own masculinity norms and behaviors.

[17] For instance, Tien (2017) argues that White women voted for Donald Trump in the 2016 US election because while his politics were oppressive to women, they were also oppressive to people of color. White women saw the opportunity to maintain their privilege as White people, and are often partnered with White men, giving them proximity to and benefits from the hegemonic group.

Ultimately, hegemonic masculinity theory suggests that those closer to the top of the race-gender hierarchy would enact patriarchal norms more strongly. My empirical work an effort at testing exactly this: do we observe that men further from the hegemonic group contribute to patriarchy in the same ways as those in the hegemonic group? Do quantitative data support hegemonic masculinity theory?

In the next sections, I briefly examine one example of hegemonically masculine behavior. I consider how men of different race and income groups respond to their female partner out-earning them, an economic 'threat' to masculinity. Previous research has found that within a given couple, when a wife earns more than her husband, the gap in time spent on housework is wider (driven both by men doing less housework and by women doing more housework) relative to couples in which a wife makes the same or less than her husband (Bertrand, Kamenica, & Pan, 2015). However, these studies rarely consider the phenomena in light of the income and race dynamics suggested by hegemonic masculinity theory. I therefore test the theory by investigating how couples of different income and race groups allocate housework when women out-earn them.

5. Data

I use Panel Study of Income Dynamics (PSID), a longitudinal household survey in the United States, from 1985 to 2019. My motivations for using this dataset as opposed to American Time Use data (ATUS) are twofold. First, and less important, I would like to offer comparison to Bertrand, Kamenica, and Pan (2015). Second, the panel structure allows one to include fixed effects and reduce omitted variable bias in empirical modeling, which time series data like ATUS do not allow.

I restrict my sample to those who are aged 18 and older, and to opposite-sex couples who are either married or 'permanently cohabitating'. Couples that break up over the panel are removed from the sample for those years.

The sample is restricted to those who have reported the number of housework hours performed per week by both the man and the woman.[18] In my models, covariates include paid labor hours per week, age, and education for both partners, as well as the number of children under 18 in the family unit, the total income of the family unit (including non-labor earnings), and whether or not the partners are married or permanently cohabitating.

I also provide descriptive statistics disaggregated by the race of the male partner in Table 8. From 1985, PSID respondents were able to indicate more than one race. For the purposes of this study, I consider an individual as "White," for example, if they indicate so in their first two (of four) mentions of race.[19] I limit my sample to White and Black couples, as an analysis of other races or ethnicities would require additional and careful examination of the social and historical backgrounds of oppression and privilege in those groups. However, note that those in the sample can be of any ethnicity.

Further, in the models presented in this paper, I analyze couples by the race of the male partner; the woman partner may be of any race. I focus on the race of the male partner, as I hypothesize that the patriarchal norms stem from the man and his social position. However, because the vast majority of couples is endogamous with respect to race, this decision has little impact on the results. For instance, among couples in the sample with Black men, 93 percent of

[18] A disadvantage of the PSID is its question about housework is rather vague: "About how much time do you spend on housework in an average week—I mean time spent cooking, cleaning, and other work around the house?" It does not break down the specific aspects of housework nor does it consider secondary activities.

[19] Results are not meaningfully different if race is constructed differently (i.e. if we count someone as "White" if they only indicate it in their first mention of race). Additionally, results using exclusively same-race couples or exclusively non-Hispanic couples are not meaningfully different than the results presented in this paper.

the women partners also consider themselves Black. Among couples with White men in the dataset, 97 percent of the women partners also consider themselves White.

As illustrated in Table 8, on average, housework gaps are narrower in couples with Black men. Additionally, women in couples with Black men are more likely to have higher incomes, both in terms of hourly wages and annual income. Couples with a White man are more likely to be married. I briefly discuss the role of marriage and marriage markets in subsequent sections.

In Table 9, I list summary statistics for the upper, middle, and lower income terciles, calculated simply by sorting the entire sample by income and then splitting into thirds for each year. Thus, the terciles are not constructed within race groups: Black and White households in the 'upper tercile' are of the same income bracket. As illustrated in Table 9, couples in the upper income tercile have the smallest housework hours gap, followed by those in middle and low income terciles, respectively. Further, women in the lower income tercile are most likely to earn more than their partners, followed by middle and upper income terciles, respectively.

6. Empirical Model

I estimate a linear probability regression model with couple and year fixed effects regressing the housework gap in year *t* on whether the wife earned more than the husband in year *t* – 1. My initial, simplest specification is as follows:

$$HouseworkGap_{i,t} = \beta_1 WomanEarnsMore_{i,t-1} + \beta_2 I_{i,t-1} + \beta_3 X_{i,t} + \lambda_i + \alpha_t + \epsilon_{i,t} \quad (1)$$

The dependent variable, the housework gap, is calculated as the woman's average weekly housework hours in year *t* minus the man's average weekly housework hours in year *t.* The independent variable of interest, $WomanEarnsMore_{i,t-1}$, is a binary variable equal to 1 if the

woman earned more than her male partner in time *t-1,* and equal to 0 if not. Throughout this section, a woman is considered to be earning more based on a comparison of reported hourly wage rates. In my regression, I also include various measures of income, represented by vector $I_{i,t-1}$. These include the natural log of each partner's labor earnings, the natural log of the household's total income (including non-labor earnings), all in year *t*-1. Vector $X_{i,t}$ represents couple-specific controls, including the age of both partners, their ages squared, as well as the number of children under 18 in the household, and whether or not they have a child under 3 in the house. The terms λ_i and α_t represent couple and year fixed effects, respectively. In additional regression models, I add controls for each partner's labor hours per week, level of education (measured by whether or not they have a bachelor's degree), a binary indicator variable for whether the woman is not engaged in paid work, and a binary indicator variable for whether the man is not engaged in paid work.

After estimating this initial model for the entire population, I then estimate separate models for couples with a White man and for couples with a Black man. I then estimate separate models for those in the lowest income group, the middle income group, and the highest income group. Finally, I estimate separate models for couples with Black men in the lowest, middle, and highest income groups. This separate models approach is useful to those undertaking quantitative analyses on intersectionality. The term intersectionality refers to the critical insight that race, class, gender and other social categories "operate not as unitary, mutually exclusive entities, but as reciprocally constructing phenomena that in turn shape complex social inequalities" (Collins, 2015: 2). Experts in intersectional theory suggest that researchers "must analyze each structural inequality separately, as well as simultaneously" (Bowleg, 2008: 319). The separate models approach allows for an investigation of how the mix of causal factors change across different

intersections of race and income status, and also facilitates a direct comparison of the model's overall explanatory power across these intersections (Sprague, 2016; Scott & Siltanen, 2017). Estimating separate models also allows us to better account for race- and income-based heterogeneity.

7. Results

When applying the model to the total sample, as presented in Table 10, the results are similar to those in Bertrand, Kamenica and Pan (2015): if a woman earns more than her male partner in period *t*-1, the gap in housework increases by a substantial amount.[20] More precisely, the gap increases somewhere between 39 to 67 minutes per week.[21] However, these results disguise very different patterns by income and by race. In the models separated by race and income, it becomes clear that this trend is applicable to couples in upper-income White couples, and is less prevalent among those in lower income couples and Black couples.

Recall that Table 8 shows, on average, housework gaps are narrower in couples with Black men, even though women in relationships with Black men are more likely to have higher relative incomes. This suggestive evidence affirms the treatise in hegemonic masculinity that Black men, because of their distance from the top of the race-class-gender hierarchy, may be less likely to perform the same masculinity norms as White men. However, Table 10 illustrates that there are no substantial differences in the coefficient of interest between couples with White men (Section B) and couples with Black men (Section C). It seems that, overall, both experience

[20] In all tables, I report the overall R-squared, which is a weighted average of the within R-squared and between R-squared. The within R-squared illustrates how well the explanatory variables account for changes in housework within each household. The between R-squared illustrates how well the explanatory variables account for differences in housework between households in the sample.

[21] 39 minutes is calculated by multiplying the coefficient in Section A, column 2 by 60 minutes (one hour). This is the lowest coefficient of all four models and is thus presented as a lower bound. Similarly, the upper bound is calculated by multiplying the highest coefficient (that in Section A, column 1) by 60 minutes.

increases in the housework gap when a woman has higher hourly wages than her partner. However, when accounting for income groups, the story becomes clearer.

In Table 11, I present the results for the models applied to separate income terciles. For the lowest income tercile, there is a relatively smaller and statistically insignificant relationship between the woman out-earning the man and the increase in the gap in housework. The increase in the housework gap when a female partner out earns her male partner is large in middle-income and largest in upper-income couples. In fact, the simplest regression (namely, that described in equation 1 and illustrated in column I of Table 11) suggests that housework gaps increase by nearly 77 minutes in upper-income households (Section C).

Finally, Table 12 and Table 13 illustrate that the trends differ when separating income groups by race. As indicated in Table 13, upper- and middle-income couples with White men experience large and statistically significant increases in the housework gap when women out-earn their male partners. Overall, these results should be interpreted cautiously, as there are some overlapping confidence intervals among these groups. Among couples with Black men, the results are less clear. Just the simplest regression model for upper-income couples with Black men (Section C, column 1 of Table 12) provides statistically significant results, and these are only at the ten percent level. Bootstrapped standard errors do not correct for this. Overall, based on the results presented in this section, it seems that upper-income White men have a stronger aversion to the situation in which a woman out-earns her male partner relative to lower-income men. Among Black men, this norm may be stronger in upper-income couples, but the results are not conclusive. Ultimately, this is consistent with hegemonic masculinity theory: masculinity norms may be stronger among those closer to the top of the race-class-gender hierarchy. In this

case, the aversion to a woman earning more than her male partner is stronger among upper-income White couples than others.

8. Robustness Checks

To examine if these results are dependent on the cutoff positions of income groups, I test different measures of income.[22] First, instead of using income terciles, I instead compare the very rich (the top ten percent of the income distrubution) to everyone else. As illustrated in Table 14, results using this measure of income were statistically significant and the effect does indeed seem to be stronger among those in the top ten percent of incomes. Additionally, the effect seems to be slightly stronger in very high income couples with Black men than those with White, though the results for upper-income Black men are only sigificant at the ten percent level. In the top decile of incomes, couples with Black men experience a 130 minute increase in the income gap while couples with White men in the same income group a 49 minute increase in the income gap.

To further test my results, I disaggrate income groups into quintiles instead of terciles. These results are presented in Table 15. The story remains clear for couples with White men: the higher the income group, the stronger the effect. However, in couples with Black men, the results are only statistically significant in the second-lowest income quintile—a somewhat contradictory result to those presented in the previous model.

I also test other measures of income and wealth, which are less robust even among couples with White men. For example, I separate the sample into two groups based on whether

[22] In all of the robustness checks I use the control variables described in column 4 of the previous tables, where each partner's labor hours, education, and working status are included in the model in addition to those described in equation 1.

or not the household owns stocks outside of an IRA or other retirement account. The results in this case were not statistically significant. Similarly, seperating groups by income deciles yield statistically insignificant results, likely due to small sample sizes.

In addition to considering these different measurements of income, I also test the robustness of the model using different dependent varaiables and different independent variables of interest. When changing the dependent variable from the gap in housework to women's share of the couple's housework hours (described in equation 2), the results are not meaningfully different. I present these results in Table 16.

$$Woman's\ Share_{i,t} = \frac{(Woman's\ Housework\ Hours)_{i,t}}{(Woman's\ Housework\ Hours)_{i,t}+(Man's\ Housework\ Hours)_{i,t}} \times 100 \qquad (2)$$

Overall results suggest that when a woman out-earns her male partner in hourly wages, her share of the housework increases by 0.75 percentage points. Results disaggregated by race and income group show that the effect is only statistically significant in upper income couples, both with Black men and with White men.

However, neither the housework gap measure nor the women's share of housework measure precisely describe the dynamics at play. Namely, are women increasing their housework hours, men decreasing their housework hours, or both? To understand this, I reestimate the initial models using women's housework hours as a dependent variable and men's housework hours as a dependent variable. Results presented in Table 17 indicate that generally both are occuring, but women are increasing their housework more than men are decreasing theirs: women increase their housework by 36 minutes per week and men decrease theirs by 12 minutes.[23] This is

[23] Women's housework hours calculated by multiplying Table 17's coefficient for all women (0.592) by 60 minutes. Similarly for men (-0.200 times 60 minutes).

especially prevalant in middle and upper income couples with White men, where women increase their housework substantially (by about 34 and 41 minutes per week respectively). Further, in Black couples overall, it seems that women increase their housework but there are no statistically significant results for men's housework hours. One should be careful not to immediately interpret this result as women's eagerness to 'perform gender'. Instead, one should again consider how women respond to spoken or unspoken patriarchal threats and how some women may benefit from patriarchal norms due to their closeness to the hegemonic group in the class-race-gender hierarchy. Women affiliated with men closer to the top of the race-class-gender hierarchy accrue benefits from their closeness to those at the top, and may therefore be more willing to comply with hegemonic masculinity norms. This is supported by other studies. Research finds that same-sex couples often do not enact the same gendered housework norms as straight couples and are more likely to have equal shares of housework (Martell & Roncolato, 2020; Martell & Roncolato, 2016). This indicates that it is not gender per say motivating these outcomes, but the gender relations of men and women and the relative power of women vis a vis men.

Not surprisingly, marital status matters. One has reason to believe that married couples have different bargaining strategies than unmarried couples. Unmarried couples typically may not have costs associated with separation as high as married couples. Furthermore, these bargaining relationships among married and unmarried couples also likely differ by race: marriage markets for Black women and men look different than marriage markets faced by White women and men (Charles & Luoh, 2010; Keane & Wolpin, 2010; Lundberg & Pollak, 2013). For instance, Charles and Luoh (2010) find that high imprisonment rates among Black

men has lowered the likelihood that Black women marry, and has shifted the gains from marriage away from women and toward men.

I reexamine the initial models disaggregating by married and unmarried couples with Black men and White men. As Table 18 shows, only married couples have statistically significant results. This may be due to sampling size, but also may be due to differences in bargaining abilities and gender roles between married and unmarried couples.[24]

These robustness checks offer more insight into the dynamics of the model and the dynamics of hegemonic masculinity. In line with hegemonic masculinity theories, they suggest that though aversion to women out-earns a men is particularly strong in White, upper income, and married couples. The robustness checks also offer addition avenues of research for future work, namely, how couples in different income groups consider relative income when making decisions about housework, and how and why this differs at intersections of race and marital status.[25]

9. Discussion & Conclusion

Recall that the broader research questions are as follows: What are the masculine behaviors that upper-income White men set as standards for masculinity in which 'all men must contend'? Who reinforces such behaviors and who works against them? I examined these questions where the 'threat' to masculinity is a woman out-earning a man, resulting in increased housework burdens for women. I empirically test the premises of hegemonic masculinity theory

[24] Bootstrapped standard errors do not meaningfully change the levels of significance.
[25] In addition to the aforementioned robustness checks, I reexamine all results by restricting the sample to those who do not identify as Hispanic, Latino, or of other Spanish origins. With this restriction, there is very little difference in the coefficients. Further, the degree to which the effect seems stronger in White couples than in Black remains largely the same across income groups.

using United States PSID data. Findings are in line with theoretical propositions that men closer to the top of the race-class-gender hierarchy would enact masculinity norms more strongly than those toward the bottom.

Results indicate that upper-income White men enact a social norm for which 'all men must contend', followed by middle-income White men. Results for couples with Black men are less clear, though the dynamic can appear in especially high-income couples (i.e. those in the top income decile). Middle-income White men and upper-income Black men may contend with the masculinity norms set by upper-income White men by conforming to and simulating them. Middle-income White men may conform because they still receive the social and economic benefits of Whiteness and therefore uphold notions of upper-income White masculinity.

Lower income couples with White men, as well as most couples with Black men, often do not push increased housework burdens on women partners when women out-earn them. These men may refuse to enact the same behavior as the hegemonic group because their relative distance in the hierarchy is too far to accrue the same benefits in power.

Ultimately, this empirical analysis only offers a peek into the dynamics of hegemonic masculinity. In order to get a more robust understanding of how various groups of men contend with prescriptions of masculinity passed down by hegemonic groups in society, one must consider other expressions of manhood and how different groups respond to 'threats' to masculinity. One must also consider questions that quantitative data cannot answer, and could additionally rely on qualitative methods to understand how masculinity is perceived along race and class lines and women respond.

While additional empirical work is required to understand how hierarchies of masculinity operate in different contexts, this quantitative exercise offers a glimpse into the applicability of

hegemonic masculinity theories. Gender deviance neutralization theory, while useful, is often static and obfuscates the influence of power as well as race- and class-related oppression. A hegemonic masculinity framework both recognizes evolving historical contexts and considers gender-based oppression alongside intersectional class- and race- based oppression.

Further, empirical studies which paint all groups of men as engaging in the same masculinity norms not only obfuscate complicated dynamics of hegemonic masculinity, but also have the potential to feed into stereotypes which benefit the hegemonic group. For example, this study finds that most groups of Black men actually do not necessarily engage in enforcing the same masculinity norms that upper-income White men use to retaliate against their female partners out-earning them. This finding also challenges racist depictions of Black men as hyper virile, which, as Reeser (2011) has pointed out, is a narrative often spread by White men to position themselves as 'the man in the middle' and to justify hyper surveillance of Black men. An empirical analysis which does not consider the hierarchical and intersectional nature of hegemonic masculinity does not address this racist myth.

The goal of feminist methodology is largely to uncover the ways in which powerful groups control the labor power of women and other oppressed groups. Such methodology illustrates the blind spots of White, androcentric approaches to economics, where not only is the role of gender in the economy often ignored, but so too is the overlapping experience of race, gender, and class. Intersectional analyses, including that of hegemonic masculinity frameworks, are useful in achieving these goals.

Table 8: Summary Statistics for Total Sample and by Race (PSID 1985-2019)

Couple:	Total sample		w/ White man		w/ Black man	
	mean	S.D.	mean	S.D.	mean	S.D.
Woman's weekly housework hours	17.3	12.5	17.5	12.3	16.2	12.1
Man's weekly housework hours	7.6	8.2	7.6	7.7	7.5	8.7
Woman's total annual labor income	24500.5	25814.4	25197.2	27098.7	22509.4	20254.9
Man's total annual labor income	42620.4	49938.8	46689.9	56067.8	31551.9	24128.9
Woman's reported hourly earnings	14.8	18.1	15.5	19.3	13.1	14.1
Man's reported hourly earnings	19.9	22.1	21.6	24.2	15.2	12.5
Woman weekly paid work hours	33.8	15.8	33.4	15.9	35.1	14.8
Man weekly paid work hours	43.2	14.0	43.8	13.7	41.7	14.6
Percent where women have higher annual income	0.23	0.42	0.21	0.41	0.27	0.44
Percent where women have higher wages	0.32	0.47	0.30	0.45	0.37	0.48
Percent only woman working	0.03	0.17	0.03	0.16	0.04	0.19
Percent only man working	0.09	0.28	0.08	0.27	0.09	0.28
Age of man	40.4	11.2	40.8	11.3	39.1	10.4
Age of woman	38.3	10.8	38.7	10.9	36.9	9.9
Percent married	0.91	0.28	0.93	0.25	0.87	0.33
Number of Children	1.19	1.19	1.09	1.14	1.43	1.24
Has a child under three years of age	0.18	0.39	0.17	0.37	0.21	0.41
Woman has a bachelor's degree	0.33	0.47	0.37	0.48	0.24	0.42
Man has a bachelor's degree	0.32	0.47	0.37	0.48	0.18	0.38
n (groups)	12,130		7,910		3,245	
N (observations)	64,523		45,716		15,149	

Table 9: Summary Statistics by Income Tercile (PSID 1985-2019)

Couple:	Lower Income		Middle Income		Upper Income	
	mean	S.D.	mean	S.D.	mean	S.D.
Woman's weekly housework hours	19.6	14.8	17.5	12.3	15.9	10.9
Man's weekly housework hours	7.8	9.8	7.7	8.1	7.5	7.2
Woman's total annual labor income	9889.1	8261.7	19655.6	13560.8	36600.4	33721.3
Man's total annual labor income	16422.9	10202.4	31379.7	15455.0	66615.6	68832.6
Woman's reported hourly earnings	7.68	7.60	12.13	11.55	21.18	23.99
Man's reported hourly earnings	9.17	7.35	15.12	9.39	29.98	29.91
Man's weekly paid work hours	38.8	16.7	43.1	13.2	45.6	12.6
Woman's weekly paid work hours	28.5	17.9	34.2	14.8	36.2	14.84
Percent where women have higher annual income	0.27	0.44	0.22	0.42	0.21	0.41
Percent where women have higher wages	0.36	0.48	0.32	0.47	0.30	0.46
Percent only woman working	0.06	0.24	0.03	0.16	0.02	0.13
Percent only man working	0.17	0.37	0.08	0.26	0.05	0.22
Age of man	36.2	11.8	39.2	10.8	43.7	10.1
Age of woman	34.2	11.3	37.0	10.4	41.5	9.7
Percent married	0.83	0.37	0.91	0.28	0.96	0.20
Number of Children	1.35	1.28	1.24	1.18	1.05	1.12
Has a chid under three years if age	0.26	0.44	0.19	0.39	0.14	0.35
Woman has a bachelor's degree	0.13	0.34	0.26	0.44	0.50	0.50
Man has a bachelor's degree	0.11	0.31	0.23	0.42	0.51	0.49
n (groups)	5,919		7,431		5,784	
N (observations)	14,056		23,917		26,550	

Table 10: Relative hourly wage rates and housework gap by couples with Black and White men

Dependent variable: housework gap	(1)	(2)	(3)	(4)
Section A: Total population				
Woman has higher wage rate in $t-1$	1.113***	0.656***	0.934***	0.735***
	(0.124)	(0.126)	(0.125)	(0.126)
Number of observations	65638	64789	64523	64523
Number of couples	12267	12166	12130	12130
Overall R^2	0.107	0.118	0.113	0.115
Section B: Couples w/White man				
Woman has higher wage rate in $t-1$	1.076***	0.597***	0.893***	0.663***
	(0.144)	(0.145)	(0.144)	(0.145)
Number of observations	46267	45863	45716	45716
Number of couples	7969	7932	7910	7910
Overall R^2	0.153	0.167	0.157	0.160
Section C: Couples w/Black man				
Woman has higher wage rate in $t-1$	0.959***	0.607**	0.794***	0.748***
	(0.261)	(0.267)	(0.264)	(0.268)
Number of observations	15612	15244	15149	15149
Number of couples	3309	3256	3245	3245
Overall R^2	0.035	0.0392	0.040	0.041
Additional controls:				
Labor hours	no	yes	no	yes
Education	no	no	yes	yes
Whether man/woman not working	no	no	yes	yes

[a]Data from the PSID 1985-2019. Each model includes the following controls: log of each partner's labor income, the log of the household's total income (including non-labor income), age of both partners, partners' ages squared, number of children under 18 in the household, whether there is a child under three in the household, and couple and year fixed effects. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 11: Relative hourly wage rates and housework gap by income tercile

Dependent variable: housework gap	(1)	(2)	(3)	(4)
Section A: Lower income group				
Woman has higher wage rate in $t-1$	0.794**	0.349	0.589	0.448
	(0.359)	(0.365)	(0.364)	(0.367)
Number of observations	14439	14112	14056	14056
Number of couples	6022	5936	5919	5919
Overall R^2	0.048	0.056	0.056	0.057
Section B: Middle income group				
Woman has higher wage rate in $t-1$	0.822***	0.487**	0.658***	0.577***
	(0.220)	(0.223)	(0.221)	(0.224)
Number of observations	24344	24020	23917	23917
Number of couples	7536	7458	7431	7431
Overall R^2	0.129	0.139	0.131	0.132
Section C: Upper income group				
Woman has higher wage rate in $t-1$	1.277***	0.664***	1.087***	0.748***
	(0.181)	(0.183)	(0.182)	(0.183)
Number of observations	26855	26657	26550	26550
Number of couples	5834	5800	5784	5784
Overall R^2	0.136	0.1523	0.143	0.155
Additional controls:				
Labor hours	no	yes	no	yes
Education	no	no	yes	yes
Whether man/woman not working	no	no	yes	yes

[a]Data from the PSID 1985-2019. Each model includes the following controls: log of each partner's labor income, the log of the household's total income (including non-labor income), age of both partners, partners' ages squared, number of children under 18 in the household, whether there is a child under three in the household, and couple and year fixed effects. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 12: Relative wage rates & housework gap by income tercile (for couples with Black men)

Dependent variable: housework gap	(1)	(2)	(3)	(4)
Section A: Lower income group				
Woman has higher wage rate in $t-1$	0.894	0.581	0.801	0.752
	(0.586)	(0.604)	(0.604)	(0.609)
Number of observations	4899	4745	4716	4716
Number of couples	1935	1897	1890	1890
Overall R^2	0.0402	0.0437	0.044	0.044
Section B: Middle income group				
Woman has higher wage rate in $t-1$	0.390	0.227	0.257	0.358
	(0.421)	(0.432)	(0.430)	(0.435)
Number of observations	6431	6272	6227	6227
Number of couples	2028	1988	1980	1980
Overall R^2	0.071	0.079	0.081	0.079
Section C: Upper income group				
Woman has higher wage rate in $t-1$	0.825*	0.423	0.715	0.585
	(0.483)	(0.498)	(0.488)	(0.499)
Number of observations	4282	4227	4206	4206
Number of couples	1138	1125	1119	1119
Overall R^2	0.049	0.048	0.049	0.049
Additional controls:				
Labor hours	no	yes	no	yes
Education	no	no	yes	yes
Whether man/woman not working	no	no	yes	yes

[a]Data from the PSID 1985-2019. Each model includes the following controls: log of each partner's labor income, the log of the household's total income (including non-labor income), age of both partners, partners' ages squared, number of children under 18 in the household, whether there is a child under three in the household, and couple and year fixed effects. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 13: Relative wage rates & housework gap by income tercile (for couples with White men)

Dependent variable: housework gap	(1)	(2)	(3)	(4)
Section A: Lower income group				
Woman has higher wage rate in $t-1$	0.815*	0.280	0.502	0.333
	(0.481)	(0.487)	(0.485)	(0.487)
Number of observations	8288	8144	8120	8120
Number of couples	3538	3499	3491	3491
Overall R^2	0.112	0.126	0.114	0.114
Section B: Middle income group				
Woman has higher wage rate in $t-1$	0.853***	0.463*	0.667**	0.544**
	(0.263)	(0.265)	(0.263)	(0.265)
Number of observations	16573	16442	16395	16395
Number of couples	4967	4934	4919	4919
Overall R^2	0.101	0.164	0.151	0.154
Section C: Upper income group				
Woman has higher wage rate in $t-1$	1.258***	0.625***	1.065***	0.699***
	(0.201)	(0.201)	(0.200)	(0.202)
Number of observations	21406	21277	21201	21201
Number of couples	4375	4357	4348	4348
Overall R^2	0.153	0.179	0.164	0.181
Additional controls:				
Labor hours	no	yes	no	yes
Education	no	no	yes	yes
Whether man/woman not working	no	no	yes	yes

[a]Data from the PSID 1985-2019. Each model includes the following controls: log of each partner's labor income, the log of the household's total income (including non-labor income), age of both partners, partners' ages squared, number of children under 18 in the household, whether there is a child under three in the household, and couple and year fixed effects. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 14: Relative wage rates & housework gap by top come decile and by race

Dependent variable: housework gap	In Bottom 90% of Household Incomes	In Top 10% Household Incomes
Total sample		
Woman has higher wage rate in $t-1$	0.669***	1.051***
	(0.137)	(0.346)
Number of observations	56826	7697
Number of couples	11725	2172
Overall R^2	0.108	0.167
Couples w/ White men		
Woman has higher wage rate in $t-1$	0.580***	0.820**
	(0.161)	(0.371)
Number of observations	39147	6569
Number of couples	7569	1756
Overall R^2	0.156	0.153
Couples w/ Black men		
Woman has higher wage rate in $t-1$	0.733***	2.161*
	(0.277)	(1.298)
Number of observations	14387	762
Number of couples	3215	292
Overall R^2	0.041	0.050

[a]Data from the PSID 1985-2019. Each model includes the following controls: log of each partner's labor income, the log of the household's total income (including non-labor income), age of both partners, partners' ages squared, number of children under 18 in the household, whether there is a child under three in the household, whether each partner has a bachelor's degree, each partner's labor hours, a control for whether each partner is working, and couple and year fixed effects. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 15: Relative wage rates & housework gap by income quintile and by race

Dependent variable: housework gap	Lowest quintile	Low quintile	High quintile	Highest quintile
Total sample				
Woman has higher wage rate in $t-1$	0.377	0.902***	0.590**	0.657***
	(0.508)	(0.297)	(0.250)	(0.207)
Number of observations	9190	16242	19125	19966
Number of couples	4469	6402	6211	4590
Overall R^2	0.077	0.067	0.105	0.139
Couples w/ White men				
Woman has higher wage rate in $t-1$	0.906	0.496	0.572**	0.673***
	(0.709)	(0.369)	(0.290)	(0.228)
Number of observations	5041	10528	13932	16215
Number of couples	2550	4077	4333	3527
Overall R^2	0.000	0.113	0.145	0.150
Couples w/ Black men				
Woman has higher wage rate in $t-1$	0.029	1.358**	0.289	0.198
	(0.801)	(0.531)	(0.526)	(0.592)
Number of observations	3239	4713	4288	2909
Number of couples	1476	1832	1510	814
Overall R^2	0.0512	0.044	0.049	0.0425

[a]Data from the PSID 1985-2019. Each model includes the following controls: log of each partner's labor income, the log of the household's total income (including non-labor income), age of both partners, partners' ages squared, number of children under 18 in the household, whether there is a child under three in the household, whether each partner has a bachelor's degree, each partner's labor hours, a control for whether each partner is working, and couple and year fixed effects. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 16: Relative wage rates & women's housework share by income and race

Dependent variable: Women's Share of Housework	All income groups	Low Income	Mid income	High income
Total sample				
Woman has higher wage rate in $t-1$	0.377	0.902***	0.590**	0.657***
	(0.508)	(0.297)	(0.250)	(0.207)
Number of observations	9190	16242	19125	19966
Number of couples	4469	6402	6211	4590
Overall R^2	0.077	0.067	0.105	0.139
Couples w/ White men				
Woman has higher wage rate in $t-1$	0.906	0.496	0.572**	0.673***
	(0.709)	(0.369)	(0.290)	(0.228)
Number of observations	5041	10528	13932	16215
Number of couples	2550	4077	4333	3527
Overall R^2	0.000	0.113	0.145	0.150
Couples w/ Black men				
Woman has higher wage rate in $t-1$	0.029	1.358**	0.289	0.198
	(0.801)	(0.531)	(0.526)	(0.592)
Number of observations	3239	4713	4288	2909
Number of couples	1476	1832	1510	814
Overall R^2	0.0512	0.044	0.049	0.0425

[a]Data from the PSID 1985-2019. Each model includes the following controls: log of each partner's labor income, the log of the household's total income (including non-labor income), age of both partners, partners' ages squared, number of children under 18 in the household, whether there is a child under three in the household, whether each partner has a bachelor's degree, each partner's labor hours, a control for whether each partner is working, and couple and year fixed effects. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 17: Relative wage rates & men's & women's housework by income and race

Dependent variable: Man's housework	All income groups	Low Income	Mid income	High income
Total sample				
Woman has higher wage rate in $t-1$	-0.200**	-0.233	-0.124	-0.089
	(0.082)	(0.231)	(0.146)	(0.125)
Number of observations	64523	14056	23917	26550
Number of couples	12130	5919	7431	5,784
Overall R^2	0.003	0.0104	0.005	0.002
Couples w/ White men				
Woman has higher wage rate in $t-1$	-0.154*	0.047	-0.064	-0.059
	(0.093)	(0.304)	(0.171)	(0.132)
Number of observations	45716	8120	16395	21201
Number of couples	7910.	3491	4919	4348
Overall R^2	0.005	0.020	0.001	0.004
Couples w/ Black men				
Woman has higher wage rate in $t-1$	-0.228	-0.585	-0.211	-0.299
	(0.179)	(0.386)	(0.290)	(0.361)
Number of observations	15149	4716	6227	4206
Number of couples	3245	1890	1980	1119
Overall R^2	0.003	0.016	0.013	0.000
Dependent variable: Woman's housework	All income groups	Low Income	Mid income	High income
Total sample				
Woman has higher wage rate in $t-1$	0.592***	0.237	0.523**	0.700***
	(0.115)	(0.327)	(0.208)	(0.169)
Number of observations	64523	14056	23917	26550
Number of couples	12130	5919	7431	5784
Overall R^2	0.161	0.061	0.153	0.164
Couples w/ White men				
Woman has higher wage rate in $t-1$	0.581***	0.417	0.570**	0.686***
	(0.133)	(0.433)	(0.248)	(0.186)
Number of observations	45716	8120	16395	21201
Number of couples	7910	3491	4919	4348
Overall R^2	0.165	0.103	0.154	0.172
Couples w/ Black men				
Woman has higher wage rate in $t-1$	0.541**	0.166	0.173	0.303
	(0.244)	(0.541)	(0.407)	(0.437)
Number of observations	15149	4716	6227	4206
Number of couples	3245	1890	1980	1119
Overall R^2	0.054	0.030	0.088	0.086

[a]Data from the PSID 1985-2019. Each model includes the following controls: log of each partner's labor income, the log of the household's total income (including non-labor income), age of both partners, partners' ages squared, number of children under 18 in the household, whether there is a child under three in the household, whether each partner has a bachelor's degree, each partner's labor hours, a control for whether each partner is working, and couple and year fixed effects. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

Table 18: Relative wage rates & housework gap by marital status and race

Dependent variable: housework gap	Married couples	Unmarried cohabitating couples
Total sample		
Woman has higher wage rate in $t-1$	0.728***	0.913
	(0.130)	(0.604)
Number of observations	58951	5572
Number of couples	10524	5572
Overall R^2	0.118	0.044
Couples w/ White men		
Woman has higher wage rate in $t-1$	0.706***	0.630
	(0.150)	(0.799)
Number of observations	42598	3118
Number of couples	7109	1646
Overall R^2	0.168	0.011
Couples w/ Black men		
Woman has higher wage rate in $t-1$	0.590**	1.591
	(0.283)	(1.005)
Number of observations	13134	2015
Number of couples	2597	998
Overall R^2	0.034	0.008

[a]Data from the PSID 1985-2019. Each model includes the following controls: log of each partner's labor income, the log of the household's total income (including non-labor income), age of both partners, partners' ages squared, number of children under 18 in the household, whether there is a child under three in the household, whether each partner has a bachelor's degree, each partner's labor hours, a control for whether each partner is working, and couple and year fixed effects. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

CHAPTER 3

TRACING BARBARA BERGMANN'S OCCUPATIONAL CROWDING HYPOTHESIS: A RECENT HISTORY

1. Introduction

Civil Rights and feminist movements in the United States in the 1960s and 1970s brought issues of race- and gender-based discrimination to the forefront of social consciousness, and economists responded. They responded with increased attention to issues of representation within the discipline and with a burgeoning body of research on discrimination: from detailed empirical analyses to new theories and criticisms of old theories.[26] Barbara Bergmann, a lifelong feminist and Harvard-trained economist, emerged as a key contributor to debates on the economics of discrimination with her occupational crowding hypothesis.

When Bergmann died in 2015, she was known as a leading feminist economist who spent most of her career tackling issues of discrimination in the economy (Olson, 2007). However, her career did not start in the realm of discrimination: her early career covered several different topics, and her occupational crowding hypothesis was her first work to directly tackle the issue of discrimination. Bergmann introduced the crowding hypothesis in her 1971 publication, "The Effect on White Incomes of Discrimination in Employment." Bergmann's theory suggested that because Black men were "crowded into a comparatively small number of occupations," their marginal productivities and their wages were driven down while White wages were simultaneously inflated by the suppression of Black labor supply.

[26] The Caucus of Black Economists, now the National Economic Association, was founded in 1969, and the *Review of Black Political Economy* was established in 1970 (Simms, 2020). The Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) and the Committee on the Status of Women in the Economics Profession (CSWEP) both became standing committees of the American Economic Association in the early 1970s.

Published in the *Journal of Political Economy*, Bergmann's model of racial discrimination in employment temporarily stood alongside other neoclassical theories of discrimination (like those of Becker, Arrow, Kreuger, and Thurow), but was largely relegated to the margins of economics by the 1980s. Today, most economists continue to rely predominantly on the canonical Becker models of discrimination, but some heterodox economists, namely stratification and feminist economists, often still turn to Bergmann's crowding hypothesis, as I discuss in subsequent sections of this paper.

In the following sections, I consider how Bergmann's personal and professional experiences brought her to the crowding hypothesis and what informed her understanding of the economy and discrimination. I then situate Bergmann's hypothesis in the debates on the economics of discrimination taking place during the 1950s, 1960s, and 1970s. I consider how it was initially received and then pushed outside the mainstream of a renewed labor economics. This historical examination of the occupational crowding hypothesis serves as an examination of a famous feminist economist's first step into a lifetime of research on discrimination.

Though traditionally in the periphery, recent historians of economic thought have increasingly focused on feminist economic thought. Pujol (1992) famously examined feminism in early economic thought, ranging from Smith, Stuart Mill, Marshall, and Pigou. More recently, several have studied feminist economic thought as it developed during the 1990s, when the International Association for Feminist Economics (IAFFE) was founded and the subfield thus institutionalized. For instance, Orozco Espinel and Gomez-Betancourt (forthcoming) research the development of the IAFFE. Others have researched the work of IAFFE's founders, including Barbara Bergmann. For example, Becchio (forthcoming) studies Bergmann's economic theory of

marriage.[27] Ultimately, this increasing focus on historicizing feminist economic thought is important to the mission of feminist economics as a whole. Feminist economists' goals has historically been to overcome androcentric bias in the field (Ferber & Nelson, 2009). Because history of economic thought plays a role in deciding the importance of economic ideas for future generations, documenting and historicizing the work and lives of feminist economists helps meet this goal by pulling feminist perspectives from the periphery and pushing them closer to the center stage of the economics discipline.

2. Who Was Barbara Bergmann? And What Brought Her to the Crowding Hypothesis?

Barbara Bergmann was known for many contributions in academic and policy spaces. She was a Harvard-trained economist who spent most of her career as a professor at the University of Maryland and American University. But many know Bergmann from her Congressional testimonies on poverty and discrimination, or from her role as a staff economist for President Kennedy's Council of Economic Advisors. Others know of her as a president and founding member of the International Association for Feminist Economics, or as the first president of the Eastern Economics Association. Many others might know of her outspoken opposition to the Nobel Prize for economics, her appearance on late-night American television shows in defense of affirmative action, and her cartoon book on social security. Yet, among a great deal of notable and often controversial work, Bergmann is perhaps most widely known in academic circles for her occupational crowding hypothesis. As noted above, she presented the hypothesis formally in her 1971 *Journal of Political Economy* article, "The Effect on White Incomes of Discrimination in Employment."

[27] Becchio's 2019 book also delves into several case studies on the development of gender economics and feminist economics.

Who was Bergmann before the crowding hypothesis? And what led her, as a young economist, to write about labor market discrimination? Understanding a researcher's background and overlapping social locations is important from the perspective of feminist standpoint theory (Harding, 2004) and from scholars in the history of economics thought (Howson, 2013; Forget, 2002). For stance, Forget (2002: 240) argues that historians of economic thought should take advantage of life writing to guide narratives on economic works, and to enhance our understanding how economists' lives inform their research. Similarly, standpoint theory is often used by feminist researchers to understand and reflect on how knowledge production is embedded in social, political, and historical contexts. In general, a standpoint epistemology argues "that knowledge is constructed from specific positions and that what a knower can see is shaped by the location from which the knower's inquiry begins" (Sprague, 2016: 47). More simply, "ideas cannot be divorced from the individuals who create and share them" (Collins, 2015: 252).

Bergmann's background provides an understanding of her perspectives within economics and within debates on the economics of discrimination. Namely, Bergmann's understanding about occupational segregation grew out of lived experiences: she faced a great deal of labor market discrimination as a Jewish woman born in New York City in 1927. In her later years, she reflected that she had faced discrimination in her career every step of the way. Her early-career experiences and frustrations with occupational segregation may have indeed been part of the spark for her development of the crowding hypothesis. Further, it is part of what made her analysis and perspective unique from that of other prominent economists working on competing theories in labor market discrimination. For instance, Gary Becker, Lester Thurow, and Kenneth

Arrow were certainly not experiencing gender- or race based-discrimination nor did they face the occupational barriers Bergmann faced as a Jewish woman.

Bergmann grew up in the Bronx with an immigrant mother and an absent father. Although neither of her parents had graduated from high school and she did not receive much support from her own high school, Bergmann applied to Cornell University and the Massachusetts Institute of Technology (MIT). The admissions committee at MIT "thought she was crazy" for expressing interest in civil engineering as a young woman (Olsen & Emami, 2002: 56). She was rejected from MIT but accepted at Cornell. After Bergmann graduated with a degree in mathematics from Cornell in 1948, she experienced first-hand the occupational segregation about which she would later theorize: upon graduating in the midst of a recession, Bergmann looked for a job in the "male categories" for months. She eventually gave up and took a job as a typist "in the female category," but "couldn't endure the boredom" and quit after two days (Bergmann, 2005: 12). She eventually found a low-ranking job at the Bureau of Labor Statistics (BLS) office in New York City in 1950. Though she had read Gunner Myrdal's *An America Dilemma* as an undergraduate and was a member of her university's NAACP branch, it was during her time at the BLS where she realized the discrimination she read about in Myrdal's book was not just confined to the South. Bergmann was frustrated with the way in which the BLS office's sole Black employee was not permitted to advance in his career. Bergmann was deeply affected by this experience, and even returned to a BLS office more than a decade later to see if similar types of discrimination were still in practice. She was disappointed to find that they were.

Ultimately, her interactions with economists at the BLS inspired Bergmann to pursue a doctorate in the field. In 1953 she was accepted at Harvard. Her time at Harvard was not free

from the discriminatory behavior she had hoped to escape at the BLS. Harvard was still segregated by gender (then Radcliffe for women), and the economics department had been rife with anti-Semitism.[28] Bergmann wrote her dissertation on regional consumer expenditures in New York City, and her work had nothing to do with labor market discrimination, race, or gender directly. After graduating with her PhD in economics, she again faced discrimination. As she explained in an American Association of University Professors newsletter, "I was second in my class at Harvard in 1959, but couldn't get an academic job… and I attribute it to sex discrimination" (Bergmann papers, box 7, folder 2).

She lingered at Harvard for several years until she secured a job in President Kennedy's Council of Economic Advisors (CEA) in 1962. This was a particularly notable CEA, as it included Kenneth Arrow, James Tobin, Rashi Fein, Arthur Okun, Robert Solow, and Walter Heller, many of whom would remain Bergmann's lifelong friends.[29] Most of the CEA reports during her years there did not have to do with discrimination, aside from one issued in September of 1962. The report was titled, "A Study on the Costs of Racial Discrimination." This study included empirical modeling of wage losses occurring as a result of racially-minoritized workers being excluded from certain jobs (Papers of John F. Kennedy, White House Staff Files of Walter W. Heller). The report did not indicate which members had authored it, however, the CEA in 1962 only had nineteen full-time staffers, so Bergmann likely knew about the study if she was not immediately involved. Bergmann was at least motivated to write about discrimination during this time: in a 2006 letter to Kenneth Arrow, Bergmann bemoaned, "I remember that many of us on the CEA staff at the time were unhappy with Kennedy—slowness

[28] See Backhouse (2014) and Weintraub (2014) for a discussion of anti-Semitism in the Harvard economics department during the 1930s and 1940s (largely from the perspective of former economics graduate student Paul Samuelson).
[29] See Romani (2018) for discussion on the Kennedy Administration's CEA.

to move in civil rights and taking economic advice from Bobby and his dad instead of from Walter Heller…." (Arrow papers, box 2, folder 13). Bergmann's curiosity in the economics of discrimination was certainly simmering while at the CEA. This curiosity received a significant boost after her move to The Brookings Institution as a senior staff member in 1963. While her early years at Brookings were spent travelling to Peru and Bolivia to research the impacts of highway investment on development, she acknowledged that her work on the crowding hypothesis began during this Brookings period (Bergmann, 1971: 294), and may have to do with the numerous labor movements taking place on the continent during the 1960s (Bergquist, 1986).

Bergmann slowly began to dip her toes into issues of race and discrimination in 1967. The first Bergmann-authored publication that considered the role of race in the economy was a 1967 report to the US Department of Commerce on structural unemployment. Bergmann and David Kaun, who had both been affiliated with Brookings, coauthored the report. In the section on "Negro Unemployment and Structural Unemployment," Bergmann and Kaun attempted to explain why Black unemployment rates were higher than White unemployment rates and estimated how this may change during periods of high output. They wrote primarily about the role of migration patterns, and only briefly engaged with theories of discrimination. For instance, they referred to the "last-hired, first fired" hypothesis, but indicated that they did not find conclusive evidence in support of it. They also referred to Gilman's (1966) work, which showed, using 1960 Census data, that a great deal of non-White unemployment had to do with the distribution of Black workers by occupation and industry. Gilman (1966: 1079) argued that Black workers were "concentrated in low-skilled occupations which have a high incidences of unemployment." Gilman did not explicitly explain the ways in which this impacted worker's wages, but Bergmann was hooked: she eventually used this same dataset and trends to motivate

her 1971 paper to explain the ways in which this occupational segregation impacted marginal productivity and wages.

Bergmann later published "Investment in the Human Resources of Negroes" in 1968, in which she discussed gaps in Black and White workers' human capital and estimated the ultimate toll this took on the nation's economy. She continued to largely avoid explicit discussion of the consequences of racism, and only wrote that "dollars which should have been invested in enhancing Negroes' ability to be economically productive…were not invested, in part because of discrimination, and in part because of the poverty and ignorance of the Negroes themselves." In this piece, she takes no clear stance: she waffles between blaming the plight of Black Americans on themselves and on discrimination. Similarly, Bergmann's 1969 publication "The Urban Economy and the 'Urban Crisis'" briefly discussed the wellbeing of Black individuals, but again did not directly engage with theories of discrimination.

All her publications related to race preceding her 1971 crowding hypothesis were purely empirical and did not directly engage with racism or discrimination, often merely relegating the words to footnotes or brief sentences if they were included at all. The 1971 crowding hypothesis, as described in the next section of this paper, dealt with the issue of discrimination head-on, and examined the benefits accruing to White workers as a result of labor market discrimination. In this sense, the crowding hypothesis dealt with issues of power and group conflict more than any of Bergmann's preceding work, and these became central topics for her as she continued her career. For example, she was among the founders of the International Association of Feminist Economics, which was organized in the 1990s to challenge patriarchal power both in the economy and in the economics discipline. Bergmann also continued to work on issues of race-based discrimination after her 1971 publication: for example, she wrote a book about affirmative

action and collaborated on work with the founder of stratification economics.[30] Stratification economics is a subfield of that focuses on intergroup inequality and identifies material benefits that accrue to dominant (and often discriminatory) groups as a result of economic discrimination. I discuss the crowding hypothesis's role in modern feminist and stratification economics in Section 5.

Ultimately, the bold shift reflected in Bergmann's 1971 paper, where she directly faced issues of discrimination, may be related to her career becoming less precarious: Bergmann had been an assistant professor at the University of Maryland for six years but by 1971 had received tenure.[31] That same year, she received a grant from the Office of Economic Opportunity to initiate and direct a Project on the Economics of Discrimination. She used the grant funding to develop research, including her occupational crowding hypothesis, as well as a course on poverty and discrimination, one of the first of its kind in the country (Olson, 2007).

Bergmann's own exclusion from certain occupations, her experiences witnessing race-based occupational segregation first-hand, and her activity in public policy circles during pivotal civil rights events in the United States and Latin America situated her perfectly to revive the occupational crowding hypothesis. Her tenure status and funding from the Office of Economic Opportunity likely bolstered her bravery to not just write empirical papers observing differences in economics outcomes by race, but to actually theorize about discrimination.

[30] Namely in work with William Darity, Jr., who is known as the founder of stratification economics (Darity, 2005; Darity, Hamilton & Stewart, 2015). This chapter discuss stratification economics more specifically in later sections.

[31] It is worth noting that archival data indicate that Bergmann felt she was being underpaid as a result of gender discrimination while at the University of Maryland. She drafted letters documenting her pay and accomplishments compared to that of her male colleagues, and eventually investigated similar gender pay gaps existed in other departments across campus. She eventually moved to American University in part because of this.

3. What is the Occupational Crowding Hypothesis? Bergmann's Contributions to the Theory

Bergmann's 1971 article "The Effect on White Incomes of Discrimination in Employment," introduced the occupational crowding hypothesis, and would become Bergmann's first publication in a long line of work on issues of racism and sexism in economic life. She began the paper with some empirical motivation: she provided US Census data indicating that Black men were excluded from many high-earning occupations and crowded into a comparatively small number of occupations. She then presented a theoretical model that indicated the consequences of crowding were: (1) lower marginal productivities and wages for Black men, enforced by abundance of labor supply, and (2) higher White marginal productivities and wages as a result of the reduced labor supply and competition.

Though Bergmann included a mathematical model, which I discuss in the subsequent paragraph, she explained her hypothesis most simply with a simple example:

> If Negroes were allowed only to be janitors and the number of Negroes in the labor force (plus the number of whites completely specialized to janitorial jobs) were larger than the number of janitors demanded in a color-blind economy, then restricting Negroes to this occupation alone would surely have the effect of driving the wage of janitors down below what it would be in a color-blind economy. In order to clear the market for janitorial labor, into which Negroes would be forcibly crowded, the marginal productivity of janitorial labor would have to be pushed to an abnormally low level. Even if the employers who restricted Negro labor to janitorial jobs paid Negro janitors a wage equal to their marginal productivity, such a wage would be below that paid to whites for jobs requiring similar talents. (Bergmann, 1971: 298)

Bergmann went on to explain that the opposite dynamic would hold for White workers: in jobs reserved for White workers, she argues their marginal productivity would be higher because of the exclusion from competition with Black workers.

In this example, the one-to-one assumption between marginal productivity and wages is not made explicit. Bergmann specified this in her mathematical model. In the model, she presents an economy with two segregated occupations, one with Black workers and the other

with White workers. She introduced a national output CES production function, replicated below, that included both types of labor and nonlabor capital, and assumed a racial 'restriction parameter', here labeled α:

$$Y^{-\beta} = \alpha_1 P_{White}^{-\beta} + \alpha_2 P_{Black}^{-\beta} + \alpha_3 K^{-\beta}$$

The value of α_2 in Bergmann's production function is smaller the more rigorous the racial restriction. Variables P_{White} and P_{Black} are the sizes of the White and Black labor forces and β is a parameter depending on the elasticity of substitution of labor groups and non-labor capital K. She then differentiates the production function to find the marginal productivity of White and Black workers:

$$MP_{White} = \alpha_1 \left(\frac{Y}{P_{White}}\right)^{1+\beta},\ MP_{Black} = \alpha_2 \left(\frac{Y}{P_{Black}}\right)^{1+\beta}$$

If racial restriction parameter α_2 is less than α_1, the marginal productivity of Black workers is lower than that of White workers. Here Bergmann noted that if employers maximize their profits subject to the rigid racial specialization, one could use wage data to estimate the racial restriction parameters.

In this section, Bergmann demonstrated that, in her model, the more rigorous the racial restriction, the bigger the difference in marginal productivities of Black and White workers. But in a world where occupations were opened to both races, she showed that labor would move until the marginal productivities were equal in both types of work. This would result in increased marginal productivities of Black workers and decreased marginal productivities of White workers, and therefore, increased and decreased wages respectively. However, she was sure to point out that this would also lead to an increase in national income, which would offset the decrease in White wages (300). In fact, after introducing the theoretical model, she went through an entire empirical exercise to demonstrate that the wage losses to White workers would be

limited to those less educated, and these wage losses would be minimal. She summarized by writing that the marginal productivity of Black workers "is lowered in comparison with that of whites of equivalent education" (310) because of crowding and that "very considerable gains could be made by Negroes in rate of remuneration at the expense of trivial losses for most white males and moderate losses for virtually all other white males" (303).

The crowding hypothesis was unlike contemporary theories on race-based discrimination, which I discuss in Section 4. But the theory was not entirely new to those studying gender discrimination, a fact which Bergmann made clear in her 1971 article. The crowding hypothesis stemmed largely from Edgeworth's (1922) work on *gender* differences in wages. "He argued that the main factor responsible for women's lower pay was the circumstance that they were crowded into a comparatively small number of occupations" (Bergmann, 1971: 295). Bergmann acknowledged that Edgeworth's work inspired her own, but did not recognize the woman who had inspired Edgeworth's conceptualization: Millicent Fawcett. This came to Bergmann's attention later in her life. In 1994 Kenneth Arrow was rereading Edgeworth (1922) for an essay on Edgeworth's ethics, became aware of Edgeworth's citations of Fawcett's work, and wrote to Bergmann to alert her of this omission. Bergmann replied to Arrow and wrote, "I was pleased with your revival of the contribution of Millicent Fawcett, but mortified that I had neglected it." (Arrow papers, box 2 folder 13).

The application to race was surely inspired by the Civil Rights movements taking place while Bergmann was writing the 1971 piece, as well as the burgeon of economic literature on discrimination, which I discuss in the subsequent section. But it certainly stemmed from her own interests in race-based discrimination, which were planted by Myrdal's 1944 book *An American Dilemma.* She recollected that "Myrdal's book sparked a lasting interest in race discrimination,

which was later extended to an interest in sex discrimination" (Bergmann, 2005). Bergmann read the book while in college at Cornell, and the book includes discussions which connect to the crowding hypothesis.

The main theoretical contribution of Myrdal's *An American Dilemma* was his assertion that "discrimination breeds discrimination" (381), otherwise described as a 'vicious circle of cumulative causation.' This is ultimately at the core of Bergmann's hypothesis: Bergmann showed that crowding Black workers into a limited selection of occupations maintained higher wages for White workers, which incentivized them to maintain discrimination. A section from Myrdal's (1944: 391) *An American Dilemma* made connections to an occupational crowding idea: "By excluding Negroes from the competition for jobs, the white workers can decrease the supply of labor in the market, hold up wages and secure employment for themselves." Myrdal further explained that "To give white workers a monopoly on all promotions is, of course, to give them a vested interest in job segregation." Though Bergmann did not cite Myrdal in her 1971 paper, her life-changing experience reading Myrdal (1994) as an undergraduate certainly resurfaced indirectly in the paper.[32]

Bergmann's other main addition to Fawcett's (1982, 1916) and Edgeworth's occupational crowding hypotheses is of course the formalization of the theory. The understanding of marginal productivity theory in monopolistic settings and the mathematical tools at Bergmann's disposal were primarily products of the time in which she was writing: Edgeworth and Fawcett would not have presented their theories in such a way. The tools she developed as a PhD student at Harvard brought these skills, and her perspectives on their use were influenced by her work under Edward

[32] It is also possible that Bergmann (1971) did not cite Myrdal because the book "was not regarded as an economic work, which may explain why its impact was more significant on the other social sciences" (Fleury, 2012). Indeed, though the book was groundbreaking on many fronts, only a few sections of his book had distinctly to do with the economics of discrimination, and those sections were primarily empirical analyses of the economic conditions of Black families.

Chamberlin. Bergmann classified Chamberlin's *Theory of Monopolistic Competition* as "an attempt to get away from the never-never land of perfect competition, and to describe the messier and more complex real-world phenomenon." Bergmann's occupational crowding hypothesis took tools like production functions and marginal productivity theories and combined them with her tutelage under Chamberlin on imperfect competition. The crowding hypothesis is, in essence, an examination of labor markets as an imperfectly competitive market, as stratified by gender and race discrimination.

Working under Chamberlin at Harvard inspired Bergmann to critique economists like Gary Becker, whose theories of labor market discrimination operated in the world of perfectly competitive markets. In her autobiographic notes, Bergmann reflected:

> "[Chamberlin's] lesson of skepticism I was able to apply to Gary Becker's theory that race and sex discrimination in employment, if ever they appeared, could not long persist. He claimed that any employer who discriminated would be driven out of business by competitors who didn't discriminate, who would be able to hire a labor cheaper, and produce the product at a lower price, drawing away all the customers of the discriminating employer. Becker's theory, neat but totally negated by the facts, gained wide acceptance among economists, and continues to be quoted with approval today." (2005:14)

These criticisms of Becker's work were harsher than the brief criticisms she presented in her 1971 work. This perhaps stemmed from decades of being pushed to the periphery while Becker's theories took center stage. In the 1960s and 1970s, Becker's work was the most prominent of theories on labor market discrimination, and in many circles, remains so. Even by the 1980s, Bergmann changed her tune and became criticizing Becker's work more harshly. In the subsequent sections, I discuss Bergmann's crowding hypothesis in the context of the 1960s and 70s debates on labor market discrimination theories, and examine why Becker's theories stuck in mainstream circles while Bergmann's was eventually relegated to heterodox circles.

4. Situating the Crowding Hypothesis: Familiar Methods, Unconventional Conclusions

During the 1960s and 1970s, many economists were writing about labor market discrimination, most empirically and some theoretically. Many of Bergmann's colleagues contributed to the empirical literature. For instance, Rashi Fein (1965), with whom Bergmann worked at the CEA, wrote empirical pieces on the social profile of Black Americans. Similarly, Walter Heller (1970), who ran the CEA while Bergmann worked there and cited her (1968) in his work, also wrote about the status of Black families in the country. Both Fein and Heller compared incomes, unemployment, and education rates between Black and White workers and, like Bergmann (1968), emphasized the toll racial-economic disparities took on the nation's economy.

While there was a great deal of empirical literature during this period comparing the incomes of Black and White workers, only a few prominent works focused on connections between occupational segregation and income differences.[33] For example, Glenn (1963), who Bergmann cited in her 1971 piece, showed that the occupational status of White workers was higher in localities where the size of the Black population was larger. Previously, Northrup (1943, 1946) had examined how Black workers were excluded from unions, and thus many occupations, and Dewey (1952) demonstrated the heavy concentration of Black workers in relatively few occupations. Thus, while Bergmann's empirical analyses were not especially novel, her theoretical contribution surfaced during a period when prominent economists were reexamining theories of labor market discrimination.

[33] Some focused on the intersections between housing segregation and consumption. For example, Hazel Kyrk described how urban Black families suffered housing discrimination, which led them to be charged higher prices than White families, which limited Black families' ability to express character in consumption (Kyrk 1950).

Much of the preexisting theoretical literature, for instance, that of Anne Krueger and Kenneth Arrow, built on Gary Becker's work and focused on individual preferences and applied the same tools used to understand all forms of market behavior to their models. Theories outside the dominant perspective often pointed to power and group distributional incentives as explanations of labor market discrimination. Bergmann's crowding hypothesis fell into both categories. At the time of its publication, Bergmann's hypothesis stood among other mainstream theories (like those of Becker, Arrow, Krueger, Thurow), but was later relegated to largely heterodox approaches.

Most theories on the economics of discrimination were built on Becker's seminal book *The Economics of Discrimination* (1971; first edition 1957). Though not immediately popular, Becker's theories had risen to prominence by the time of Bergmann's publication. In addition to the reasons described in Fleury's (2012) research, Becker's book may have had a difficult time penetrating the contemporary dominance of theories on competitive markets, especially general equilibrium theory. Traditionally, models of perfect competition left little room for analyses of discrimination: in competitive markets, discrimination should not exist. But Becker successfully fit his model into this world of competitive markets by modeling discrimination as a good with a positive price. Becker explained that if an individual has a 'taste for discrimination,' then they would act as if they were "willing to pay something, either directly or in the form of a reduced income" to avoid being associated with certain groups of people (15). This logic was also applied to employers: employers act as though the employment of Black workers imposes an extra monetary cost on them.

In Becker's models, employers were faced with the money wage rate plus an additional cost, the discrimination coefficient, that varied based on the intensity of the employer's taste for

discrimination. Becker wrote that Black and White workers would only be hired in the same firm if the wages owed to the White workers were the same as that of the Black workers plus the additional cost of a 'taste for discrimination.' In other words, an employer hires laborers up to the point at which their marginal product is equal to the marginal cost. For White workers, their wage is therefore equal to their marginal product. For Black workers, their wage is less than their marginal product, because the marginal cost of hiring a Black worker includes the discrimination coefficient (Becker, 1957: 51). Bergmann's occupational crowding hypothesis was even more 'neoclassical' than Becker's theory in that Bergmann brought marginal productivity theory back into the fold. In Bergmann's hypothesis, crowding reduces the marginal productivity of Black labor and therefor their wages. She assumed wages equal to marginal product. In Becker's model, Black workers' wages are less than their marginal product. Bergmann's training under Chamberlin was perhaps what brought Bergmann to this understanding. Chamberlin brought marginal productivity theory into imperfectly competitive contexts in his 1949 *Theory of Monopolistic Competition.* Bergmann used similar techniques in her 1971 crowding hypothesis, which is, in essence, a description of an imperfectly competitive market.

Bergmann's hypothesis was also well situated within other prominent literature on discrimination, most of which built directly from Becker's theories. For instance, Bergmann frequently relied upon and cited the work of her friend Kenneth Arrow. The majority of Arrow's work on theories of discrimination were simply extensions of Becker: Arrow declared that his goal was to "develop further Becker's models into a little more closely to the theory of general competitive equilibrium" (1973: 5). Arrow was very clear in his intentions to continue the use of neoclassical tools in his theories, and he relaxed many of the assumptions made by Becker to

provide them with more mathematical rigor.[34] Arrow and Bergmann seemed to be working in tandem on the economics of discrimination in the late 1960s. In her 1971 publication, Bergmann made it clear that correspondence with Kenneth Arrow was formative in many aspects of the paper: Bergmann wrote that she had "profited from reading a draft of a paper by Arrow [forthcoming] who has been working independently along parallel lines." She specifically pointed to the "The Treatment of Returns to Capital" section in her paper, writing that it she owed "a great deal to an extended comment by Professor Arrow" (304). Her work alongside Arrow seemed to help Bergmann more closely fit her model into a Beckerian, general equilibrium framework. [35]

Bergmann primarily aligned her work 1971 with Becker's, and did not offer scathing criticisms of his work, though they would have heated disagreements later in her life. She went a step further in siding with Becker when she disparaged a contemporary work that sparred with his: Lester Thurow's 1969 *Poverty and Discrimination*. Thurow was a fellow Harvard PhD and another Brookings staffer. Bergmann and Thurow had agreed on several key aspects of the debates on the economics of discrimination. For instance, their criticisms of Ann Kreuger's (1963) model of discrimination were nearly identical.[36] However, in her 1971 paper Bergmann was highly critical of the key mechanisms underlying Thurow's theory.

---

[34] Specifically, he relaxed the "convexity of indifferent surfaces, costless adjustment, perfect information, and perfect capital markets" (1973, p 4) assumptions and provided theoretical support for relaxing them.

[35] See Chassonnery-Zaïgouche & Larrouy (2017) for a more detailed discussion of Arrow's theories on the economics of discrimination.

[36] Kreuger's (1963) model built from one of Becker's (1957), where both economists modeled White and Black communities as separate economies, much like international trade models. They analyzed discrimination under the assumption that capital can flow between the economies, but the White sector owns a higher ratio of capital to labor as compared to the Black sector. "If no discrimination existed, whites would export capital (or import labor) to the point where the marginal products of capital (and hence labor) are equal in both sectors. With a 'taste for discrimination,' whites prefer to use their capital with white labor, and can be induced to export capital only at a higher return than they can get at home." (Kreuger, 1963, p. 481). Bergmann disliked this model, writing that in the real world, Black and White workers do cooperate in production and labor is not restricted to separate economies. Further, she suggested that it might actually be the case that Black workers work with more capital than White workers on average: "The janitor of an automated factory works with more capital than the white engineer who designed it." In any case, "The two-economies model also has a tendency to send its adherents off looking for nonexistent data on the capital used by Negroes." (Bergmann, 1971, p. 309). Lester Thurow also argued that the theory was not compatible with the real world since most Black workers were employed by White people, and because it is difficult to determine the race of owners of capital (1969, p. 29).

At the core of Thurow's 1969 *Poverty and Discrimination*, Thurow had rejected Becker's assumption that people had a taste for discrimination and postulated that discriminators did not necessarily seek *physical* distance from Black individuals, as Becker claimed, but instead sought 'social distance.' Thurow described this 'social distance' as "specifying the relationships under which the two parties will meet and how the Negro will respond" (Thurow, 1969: 117). In other words, Thurow emphasized the role of relative power and status White individuals sought over Black individuals. Many of Thurow's theories were focused on explaining how discriminators would arrange the economy to maximize their gains from discrimination. In his discussion on wages, Thurow explained that a discriminating employer would allocate White and Black labor efficiently but would seek to maximize the distance between Black workers' wages and their marginal productivity. This would result in Black workers being paid below their marginal product at a subsistence wage, and the discriminators would "appropriate part of the marginal product of Negro labor" and then there would "have been no losses coming from any inefficient distribution of economic resources." (Thurow, 1969: 120)

Both Bergmann and Thurow postulated that discriminators continue to discriminate because of the material gains they accrue from being in power. In this way, their models' conclusions align. However, the discriminating agents behave differently in Bergmann's world compared to Thurow's: Bergmann pointed out that the 'villain' in Thurow's model was "the man who hires Negroes and pays them low wages" and then appropriates their marginal product. However, "under the crowdedness hypothesis (and both Becker models) the villain is the entrepreneur who will not hire Negroes, perhaps on behalf of or under pressure from his white worker" (1971: 310). She did not directly spell out the goals of the entrepreneur or their

workers, a weakness for which she was later criticized.[37] Bergmann pointed out that "Under Thurow's hypothesis white workers would lose nothing at all if wage discrimination ceased." So while the White employer benefited from discrimination in Thurow's model, in Bergmann's model, White workers had a vested interest in maintaining discrimination.[38]

The conclusions one can draw from Thurow's model were more closely aligned with some of the 'radical' theories on the economics of discrimination at the time. These works were defined as such because they largely trivialized issues of race-based discrimination due to the dominance of class conflict, and therefore missed the ways in which White workers gain economic advantages from racism. In other words, they focused more on capitalist-labor conflict and less on intra-labor conflict. For example, Perlo (1975) briefly expressed intra-labor conflict, but sloughed off the issue writing that "whatever the advantage whites may gain from their more complete racial monopoly on better jobs in the South, they lose much more because of the existence of a deeply oppressed Black population is used by employers to lower the income of all workers in all kinds of jobs" (Perlo, 1975: 166). In this sense, Thurow's theory is similar: discrimination exists to benefit the White capitalist because they can appropriate portions of Black workers' marginal product.

---

[37] Donald Harris, the chair of a search committee to find a new economics faculty member researching in 'feminist studies' at Stanford University in 1984, pointed this out a key weakness of Bergmann's work. In a letter to Nathan Rosenberg, the chair of the economics department at Stanford, Harris listed Bergmann as one of the candidates for the position, and regarding her crowding hypothesis, wrote that "The actual implementation and working out of her ideas has met with mixed reception. Some find the crowding model to be not sharply specified as to which agent do the excluding and what are their goals." (Arrow papers, box 5, folder 7)

[38] In her 1974 paper, Bergmann clarifies how employers benefit from occupational crowding. This was perhaps in response to some of the criticism mentioned in the previous footnote. Bergmann contrasted her model to Beckerian models which argued that a discriminating employer is one who was "missing out on the cheapness of a group of laborers." In contrast, Bergmann emphasized that many employers *do* take advantage of the cheapness of Black men's labor, and maintain that cheapness by limiting their occupational choices:

> "putting the focus on occupational segregation highlights the fact that the discriminating employer does hire black men as janitors and white women in clerical capacities, while his wife hires black women as domestic servants. In fact, one characteristic of the occupations white men have chosen as 'fit' for blacks and white women is that their use is not narrowly restricted to one group of employers. Whatever the profits or losses to employers and discrimination they are fairly general throughout the system." (Bergmann, 1974b: 108)

Bergmann argued that the employing class takes advantage of the 'cheapness' of Black labor by keep the labor cheap by relegating those workers to a limited number of occupations.

The conclusions of Bergmann's crowding hypothesis were not 'radical' in this sense: her work did not fall back on class analyses. Instead, the hypothesis indicated that discrimination benefits White workers of similar income and education groups as Black workers. She also relied heavily on marginal productivity theory and other neoclassical tools to make her arguments.

However, her work was not entirely distant from those in the radical tradition. For example, Marshall (1974) identified Franklin and Resnick (1973) as "two writers in the radical tradition" and argued that their work reduced "to the crowding of blacks in particular industries and occupations, or in social spheres that limit the opportunities or experiences of blacks in relation to whites" (Franklin & Resnick 1973: 34). And like Franklin and Resnick, Bergmann was focused on group conflict, but the group was not class: it was race. Bergmann's conclusions ask readers to consider group conflict and power imbalances, as opposed to individual rational agents in perfectly competitive markets. As nicely put by Blau (1984: 121), Bergmann's hypothesis suggested, "in contrast to Becker's (1957) analysis, segregation may play a *causal* role in producing discriminatory pay differentials." So her conclusions were aligned with more radical theories in that they focused on group distribution and power, but her methods and tools (namely, marginal productivity and general equilibrium theories) belonged to neoclassical economists. She largely worked to align herself with Becker in her 1971 paper but introduced conclusions that were not aligned with his Chicago-style world of perfect competition.

Ultimately, Bergmann's crowding hypothesis was published during a time where a distinct heterodox and mainstream labor economics were being established. Lee (2004) discusses how starting in the 1950s, efforts were made to marginalize contributions to labor economics from institutional and imperfect, non-market clearing perspectives. He argues that, by 1970, labor economics became a branch of applied neoclassical microeconomics through a hegemonic

perfect competition, market-clearing approach. In this sense, Bergmann's hypothesis sat in between two increasingly divergent worlds: the heterodoxy and the mainstream. However, among neoclassical theories of discrimination, hers was not the most 'radical'. Thurow in many ways had a more Marxist approach to discrimination. So if Bergmann did not directly align herself with heterodox theories on class-based discrimination, and still approached the problem using a neoclassical mindset, why has Becker's theory prevailed over Bergmann's since the 1970s? And in which schools of thought did the crowding hypothesis thrive?

5. Bergmann Brushed Aside: The Crowding Hypothesis after the 1970s

As any perusal of modern economics textbooks will show, Beckerian models of labor market discrimination are now dominant, and Bergmann's crowding hypothesis only occasionally merits a passing mention. For instance, a widely used graduate-level labor economics textbook by Cahuc, Carcillo, and Zylberberg (2014) does not include any discussion of Bergmann's model and continues to rely solely on Becker's. Some undergraduate texts (i.e. Borjas, 2017; McConnell, Brue, & Macpherson, 2017) briefly mention occupational crowding, often in an exclusively gendered context, and only sometimes citing Bergmann. In this section, we will trace how and why occupational crowding receded from the mainstream.

The legacy of Bergmann's occupational crowding hypothesis, and her opposition to Becker's theories, becomes even more clear when tracking Bergmann's changing tone as time passed. Between 1971 and 2005, Bergmann's writing about Becker's work became increasingly oppositional. In her 1971 and 1974 pieces, she contrasted her work with Becker but often aligned parts of her crowding hypothesis with parts of his theories. She presented several criticisms of his work but provided no sweeping statements on the quality of the theory on the whole. Her

1973 work with Irma Adelman subtly suggested the 'tastes for discrimination' approach failed to address the core of the socio-economic issues at play. By 1989, Bergmann blamed Becker for widespread disbelief among economists in even the very existence of labor market discrimination. In the *Journal of Economic Perspectives,* Bergmann wrote, "For many economists, disbelief in the existence of substantial discrimination is based, not on empirical evidence, but on a theory due to Becker (1957), that if a firm discriminated it would fail" (Bergmann 1989: 50). She went on to suggest that Becker's theory needed "a confrontation with reality" (51). By 1995, she was calling Becker's work on family economics "preposterous" and by 2005 she wrote that Becker's theory on labor market discrimination was "neat but totally negated by the facts" and lamented that it had "gained wide acceptance among economists, and continues to be quoted with approval today."[39] She went on to write that most economists were "not capable" of seeing that "employment practices were and are affected by societal systems of status difference… They are trained to explain all business behavior on the basis of simple profit maximization." (Bergmann, 2005: 14). As the time passed, Bergmann became harsher in her views on Becker's work, but also, as evidenced by the passages above, became increasingly frustrated with the profession at large and what she saw as an inability or unwillingness to see labor market discrimination the way she did.

The lasting influence of Becker's model has largely to do with the shift in economics in the 1970s. The "never-never land of perfect competition" that Bergmann described was prevalent in the 1970s and Chicago School ideals were penetrating several corners of the economics discipline. Chicago-style models of perfect competition were incompatible with Bergmann's hypothesis: occupational crowding does not fit into a world of perfect competitive labor markets,

[39] In the first issue of *Feminist Economics,* Bergmann also published a piece titled, "Becker's theory of the family: Preposterous conclusions" in which she mercilessly critiqued Becker's New Home Economics.

where different groups of similarly qualified workers are easy substitutes for one another. For these economists, perfect competition should eventually prevail. By contrast, Bergmann highlighted a world in which imperfect competition was maintained because it benefited White workers and thereby maintained their group privilege. And though Bergmann's model was not class-focused in the same way that other heterodox theories were, Bergmann's conclusions highlighted issues of collective power that were inconsistent with how perfectly competitive labor markets work.

It is also possible that Bergmann's hypothesis was pushed aside by mainstream researchers as the motives for her work became clearer: Bergmann was concerned with social justice, and her work became thus more normative in nature. For instance, her 1986 book *The Economic Emergence of Women* shows the extent of Bergmann's willingness to speak about norms and standards of justice that societies should uphold. She openly claimed the goal of the book was to guide building new family and workplace arrangements with "justice, common sense, and humanity" (218). In the book, Bergmann revisits the occupational crowding hypothesis, this time describing the occupational crowding of women instead of Black workers, and focusing on injustices rather than pure economic efficiency.

In her 1971 work, Bergmann's occupational crowding hypothesis was largely couched in a discussion on how reducing occupational segregation would raise national output. In her 1986 reexamination, Bergmann couched the crowding hypothesis in issues of women's liberation, discussing how crowding limited women's potential and forced them to "spend their lives doing things they hate" (83). She wrote that "part of the problem is misogyny – the desire on the part of some men to keep women in an inferior status, and therefore out of jobs that would make them equal or superior of male employees" (89). Bergmann's newfound feminist frankness applied to

the crowding hypothesis may have scared away citations from economic researchers who aimed to discuss the economics of discrimination in a positive, rather than normative, manner, and who preferred to focus on economics 'laws of nature' rather power, racism, and patriarchy.

Still, in the 1970s and 80s, the crowding hypothesis was used in a number of empirical papers.[40] Many of these papers extended the application of the crowding hypothesis to gender segregation, perhaps encouraged by the description in *The Economic Emergence of Women* (186(or by Bergmann's 1974 publication in the *Eastern Economics Journal*, in which she briefly mentioned her hypothesis could be extended to sex discrimination. For example, analyses by Snyder and Hudis (1979) and Tre and Hartmann (1981) applied Bergmann's theory to occupational and income data and found that occupational earnings were affected by the gender composition of the occupation. Similarly, Ferber and Lowry (1976) also referenced Bergmann's work when demonstrating that a large part of the gender wage gap was attributable to occupational distributions, that earnings were lower in occupations dominated by women, and that discrimination was the most prominent explanation for these trends. They, along with England (1982), O'Neill (1983), Aldrich and Beuchele (1986), and Sorensen (1990) found women earned less if they worked in a job that hired women exclusively as opposed to gender-mixed occupations.

In addition to empirical applications of the hypothesis in gender-based labor market discrimination, many works pitted Bergmann's and Becker's theories against each other. Sawhill (1973) used Current Population Survey data to demonstrate that employment discrimination was more relevant than pure wage discrimination for women. She tied this result to Bergmann's crowding hypothesis and suggested the results cold serve as ammunition in a Becker versus

[40] Many continued to focus on race, including Bergmann & Lyle, 1971; Bergsman, 1982; Bergmann & Darity, 1981.

Bergmann battle comparing theories of taste-based discrimination to occupational crowding. Francine Blau reviewed the hypothesis in a 1979 work with Hendricks and in a 1984 edited volume for the National Academy of Sciences on sex segregation in the workplace. In these works, she updates previous studies on occupational segregation and, in her 1984 work, suggests that data on occupational segregation induce her to view Bergmann's theory as more persuasive than Becker's (1984: 130).

This post-1970s shift from a racial application of the crowding hypothesis to a gendered one may have simply been a reflection of changing interests at the time. In the United States, the Civil Rights Movement and issues of race-based discrimination were prominent in the 1950s and 1960s, but second-wave feminist movements began a bit later in the 1960s and 1970s. Given this chronology, it makes sense that many economists focused on race-based labor market discrimination in the mid-twentieth century, then turned to gender-based shortly after. Further, Bergmann's broader career began to shift to issues of gender-based discrimination. She published her first works on gender issues in the economy in 1973, just after her first work on the crowding hypothesis. Her first work on gender was a coauthored piece with Irma Adelman (1973: 509), where they argued that "a proper analysis of discrimination is yet to come" and that economists needed to move beyond unexplained tastes for discrimination to understand the true social forces at play, which was a direct and critical reference to Becker. Her second 1973 piece was focused on the "economics of women's liberation," where within the first few pages she briefly revisited her crowding hypothesis in gender applications.[41] Thus, Bergmann herself seemed interested in shifting the crowding hypothesis back to its gender-oriented origins. Additionally, her heavy involvement in the newly formed International Association for Feminist

[41] She specifically referred to empirical works by Victor R. Fuch (1970) and Malcolm Cohen (1971), both of which examine occupational segregation by sex and resulting wage imbalances.

Economics (IAFFE) in the 1990s may simply have meant that her work, including the 1971 and 1974 articulations of the crowding hypothesis, had been publicized among feminist economists more than those in other fields.

Feminist economics was in fact the perfect subdiscipline to carve out a home for the crowding hypothesis. Feminist economics and IAFFE were largely founded to combat androcentric bias in the economic research. Marilyn Power (2004: 3) has proposed that feminist economics, among other things, be made up of "analysis of economic, political, and social processes and power relations; inclusion of ethical goals and values as an intrinsic part of the analysis; and interrogation of differences by class, race-ethnicity, and other factors." Bergmann's crowding hypothesis, unlike Becker's theories of taste-based discrimination, offered an analysis of power relations by race and eventually by gender. Even today the crowding hypothesis is regularly referenced by feminist economists as an important determinant of gender differences in labor market outcomes (for instance, Seguino & Braunstein 2019; Aidis 2016; Grybaite 2006).

Similar to feminist economics, stratification economists also regularly draw on occupational crowding as an explanation of labor market dynamics. Stratification economics focuses on "the structural and intentional processes generating hierarchy and, correspondingly, income and wealth inequality between ascriptively distinguished groups" (Darity, 2005). It is a subfield which acknowledges that "there are *material benefits* that redound to dominant groups that motivate their efforts to maintain privilege" (Darity, 2005). In many ways, this description fits the crowding hypothesis perfectly as it explains how White workers accrue material (wage) gains when Black workers are shunted into a small group of occupations. Indeed, the term 'stratification economics' was coined by William Darity Jr., who had previously coauthored work with Bergmann in 1981 on explanations for occupational segregation by race and gender.

Recent stratification economists *a la* Darity still use the crowding hypothesis in research on racial disparities in labor markets (for instance, Holder, 2018 and 2017; Hamilton & Darity, 2012; Willow, 2011; Hamilton, 2006; Gibson, Darity, & Myers, 1998).

Ultimately, while Bergmann's crowding hypothesis has had a lasting impact in several disciplines, these have primarily been in the heterodoxy.[42] Feminist economists and stratification economists are rarely considered part of the mainstream, and many recent papers which make use of the crowding hypothesis have been published in *Feminist Economics,* which hails from the IAFFE organization which Bergmann helped found, and *The Review of Black Political Economy,* which was established in 1970 during the burgeoning of interest and concern about issues of racism in the economy and in the economics discipline. Ultimately, Bergmann's hypothesis successfully expanded from merely a model on race-based discrimination, to one that could be applied to both race- and gender-based discrimination, and it seems that Bergmann's hypothesis was accepted by these heterodox scholars because of its insights about power and group privilege. It was perhaps pushed out of the mainstream because it was based on an imperfectly competitive labor market, but also because the ties Bergmann made to Becker's theories in 1971 dissipated rapidly soon after. As Bergmann's disdain for Beckerian discrimination models (and for his models of the family) got progressively less subtle, one has to wonder if her increasing assertiveness in critiquing Becker distanced her work on crowding from those who favored Becker. Bergmann indeed had a reputation for being straightforward, undiplomatic, and staunch in her convictions, which could perturb some, probably partly because these characteristics were associated with a woman. Yet, as her colleague Susan Himmelweit in IAFFE's commemoration of Bergmann upon her death in 2005 noted: "She was straightforward,

[42] In addition to providing foundations for feminist and stratification economics, the crowding hypothesis has also penetrated literature on immigrant labor (for instance, Lindley & Elliot, 2008; Meng, 1998, Stevans, 1998 and 1996).

fearless, and ruthlessly honest—just what feminist economics needed to get started" (Bergmann papers, box 8, folder 1).

6. Conclusion

Bergmann had a personal and professional reputation far beyond her famous crowding hypothesis.[43] However, this paper serves to investigate Bergmann's first contribution to the literature on the economics of discrimination: her occupational crowding hypothesis. As standpoint theorists might hypothesize, Bergmann's own experiences with discrimination as a Jewish woman working to become an economist in the 1950s were related to her development of the hypothesis. Her experiences with discrimination as a woman in economics pushed her to examine workplace inequality throughout her life.

Bergmann's hypothesis was initially compared to work done by other prominent economists like Becker, Arrow, Thurow, and Kreuger. Hers was not the most 'radical' in the group, but was still eventually pushed out of the mainstream. This may be because of the shift in the mainstream to perfectly competitive worldviews, because of Bergmann's increasingly normative stances in economics, or because the conclusions of Bergmann's model ultimately suggest that discrimination is used to maintain *group* privilege and thus moves away from mainstream theories on individual rationality.

One could do similar historical examinations on the development and trajectory of Bergmann's other key contributions. For instance, her work on affirmative action, or her activity in policy spaces, or her involvement with founding IAFFE and the Eastern Economic Association. Yet because the occupational crowding hypothesis was Bergmann's first in a long

[43] Partially described in work by Olson (2007).

line of work that dealt with group inequality and discrimination, studying its history is, in many ways, a study of the intellectual origins of a pioneering feminist economist.

As the economics of race and gender continue to become more mainstream, it is important that historians of economic thought help the discipline revisit works that were pushed out of the mainstream because of their focus on the power dynamics of racism patriarchy. Further, if the goal of feminist economics is to overcome androcentric bias in the field, historians of feminist economics must point out the androcentric biases experienced by feminist economists in their careers and in the reception of their works. This study on Bergmann's occupational crowding hypothesis is certainly an effort in these directions.

CONCLUSION

Each of these chapters contribute to the broad field of feminist economics. More specifically, Chapters 1 and 2 are both intentional acts of 'studying up', that is, studying how privileged groups obtain and maintain economic advantages. This work helps us understand how power dynamics in the home allow White patriarchal privileges to flourish. Chapter 1 provides a novel perspective on how business ownership affects intrahousehold power dynamics and household production in the United States. Given the opportunity, I aim to expand this work through several potential avenues. First, I hope to examine how relative housework shares within a household affect the profits or longevity of family-owned businesses. I also intend to study how access to childcare (or lack thereof) affects entrepreneurial success in the United States, stratified by race and gender.

Using the same PSID dataset, I also intend to shift to more policy-focused research. For instance, I would like to study how healthcare workers'— and other shift workers'— childcare cost burdens may be heavier than those working typical 9-to-5 jobs. I also aim to leverage data from the National Transgender Discrimination Survey to better understand how state laws about changing one's sex on identification documents has affected employment and housing outcomes for transgender individuals.

The third chapter represents the beginning of my research interests in the history of economic thought. Scholarship in the history of economics thought largely shapes what future generations consider "economics." Work on the history of feminist economic thought is pivotal in ensuring feminist economists and their works are included in these narratives, so I aim to continue doing such work. For example, I am coauthoring a paper with Dr. Elissa Braunstein on the evolving epistemology of feminist economics. We examine the scope, approach, and success

of manuscripts submitted to and published in *Feminist Economics* in order to uncover biases in authorship and editorship, and to examine changes in methods used over time. We find distinct shifts to more quantitative empiricism, intersectional analyses, and authorship from the Global South in more recent years. This work helps us understand what scholars consider feminist economics, both historically and currently.

I also intend to further my research on Barbara Bergmann's contributions to the field. I am working with Dr. Jennifer Cohen to develop a book on Barbara Bergmann and her work. Throughout my career I hope to write papers similar to Chapter 3 on the work of other prominent feminist economists. This will of course depend on my career trajectory, which will ideally be in academia or policy. I am currently pursuing a post-doctoral research fellowship at Rutgers University's Center for Women and Work. While at the Center, I will focus primarily on my policy-relevant research questions.

I will also continue to work toward publication of these dissertation chapters. In fact, each are currently under review at an academic journal. Chapter 1 was submitted to *Feminist Economics* with a revise and resubmit request. Chapter 2 has been conditionally accepted for a special issue on feminist radical political economy at the *Review of Radical Political Economics*. Chapter 3 is under a second round of review for a special issue of women in the history of economic thought at the *History of Political Economy.* Ultimately, I hope these three works represent just the beginning of my career in feminist economics research.

BIBLIOGRAPHY

Aidis, R. (2016). Business and occupational crowding: implications for female entrepreneurship development and success. In Women's Entrepreneurship in Global and Local Contexts. Edward Elgar Publishing.

Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of business venturing*, *18*(5), 573-596.

Aldrich, M., & Buchele, R. B. (1986). *The economics of comparable worth*. Cambridge, Mass.: Ballinger Publishing Company.

Arrow, Kenneth J. Papers. David M. Rubenstein Rare Book & Manuscript Library, Duke University.

Arrow, K. J. (1972a). Models of Job Discrimination. In A.H. Pascal, ed. *Racial Discrimination in Economic Life.* Lexington, Mass.: D.C. Heath, 83–102.

Arrow, K. J. (1972b). Some Mathematical Models of Race Discrimination in the Labor Market. In A.H. Pascal, ed. *Racial Discrimination in Economic Life.* Lexington, Mass.: D.C. Heath, 187–204.

Arrow, K. J. (1973). The Theory of Discrimination. In Orley Ashenfelter and Albert Rees, eds. *Discrimination in Labor Markets.* Princeton, N.J.: Princeton University Press, 3–33

Arrow, K. J. (1998). What has economics to say about racial discrimination?. *Journal of economic perspectives* 12, no. 2: 91-100.

Atkinson, M. P., Greenstein, T. N., & Lang, M. M. (2005). For women, breadwinning can be dangerous: Gendered resource theory and wife abuse. *Journal of marriage and family*, *67*(5), 1137-1148.

Backhouse, R. E. (2014). Paul A. Samuelson's move to MIT. *History of Political Economy*, *46*, 60-77.

Baines, S., & Wheelock, J. (1998). Reinventing traditional solutions: job creation, gender and the micro-business household. *Work, Employment and Society*, *12*(4), 579-601.

Barker, N. (2012). *Not the marrying kind: A feminist critique of same-sex marriage*. Springer.

Bates, T. (1989). The changing nature of minority business: a comparative analysis of Asian, nonminority, and black-owned businesses. *The Review of Black Political Economy*, *18*(2), 25-42.

Baxter, J., & Hewitt, B. (2013). Negotiating domestic labor: Women's earnings and housework time in Australia. *Feminist Economics*, *19*(1), 29-53.

Becchio, G. (2019). *A History of Feminist and Gender Economics*. Routledge.

Becchio, G. (forthcoming) "Feminist economics versus gender neoclassical economics: the case of Barbara Bergmann's contribution on the theory of marriage." *History of Political Economy.*

Becker, G. S. (1957). *The economics of discrimination: an economic view of racial discrimination*. University of Chicago.

Becker, G. S. (1971). *The economics of discrimination: an economic view of racial discrimination*. Second Edition. University of Chicago Press.

Becker, G. (1991). *A Treatise on the Family.* Cambridge: Harvard University Press.

Becker-Blease, J. R., & Sohl, J. E. (2007). Do women-owned businesses have equal access to angel capital?. *Journal of Business Venturing*, *22*(4), 503-521.

Bergmann, B. R., & Adelman, I. (1973). The 1973 Report of the President's Council of Economic Advisers: The economic role of women. *The American Economic Review*, *63*(4), 509-514.

Bergmann, Barbara Papers. David M. Rubenstein Rare Book and Manuscript Library, Duke University.

Bergmann, B.R., & Kaun, D. E. (1967). *Structural Unemployment in the United States*. Vol. 46. US Department of Commerce, Economic Development Administration.

Bergmann, B. R. (1968). Investment in the human resources of negroes. *Federal Program for the Development of Human Resources*, 1(Part II).

Bergmann, B. R. (1969). "The Urban Economy and the" Urban Crisis". *The American Economic Review* 59, no. 4: 639-645.

Bergmann, B. R. (1971). The effect on white incomes of discrimination in employment. *Journal of Political Economy*, *79*(2), 294-313.

Bergmann, B. R. (1973). Successful Women in the Sciences: An Analysis of Determinants. The Economics of Women's Liberation. *Annals of the New York Academy of Sciences*, *208*, 154-160.

Bergmann, B. R. (1974a). The economics of women's liberation. *Challenge*, *16*(2), 11-17.

Bergmann, B. R. (1974). Occupational segregation, wages and profits when employers discriminate by race or sex. *Eastern Economic Journal*, *1*(2), 103-110.

Bergmann, B. R. (1985). The economic case for comparable worth. *Comparable Worth: New Directions for Research*, 71-85.

Bergmann, B. R. (1989). Does the market for women's labor need fixing?. *Journal of Economic Perspectives*, *3*(1), 43-60.

Bergmann, B. R. (1995). Becker's theory of the family: Preposterous conclusions. *Feminist economics*, *1*(1), 141-150.

Bergmann, B. R. (2005). Pushing for a more humane society. *The American Economist*, *49*(2), 11-15.

Bergmann, B. R., & Darity, W. (1981). Social relations, productivity, and employer discrimination. *Monthly Labor Review*, *104*(4), 47-49.

Bergmann, B. R., & Lyle, J. R. (1971). The occupational standing of Negroes by areas and industries. *Journal of Human Resources*, 411-433.

Bergquist, C. (1986). Labor in Latin America. *Comparative Essays on Chile*.

Bergsman, J. (1982). Apartheid, wages, and production costs in South Africa: An application of the crowding hypothesis. *The Journal of Human Resources*, *17*(4), 633-645.

Berman, B. R. (1959). *The Projection of Regional Consumer Expenditures* (Doctoral dissertation, Radcliffe College).

Bertrand, M., Kamenica, E., & Pan, J. (2015). Gender identity and relative income within households. *The Quarterly Journal of Economics*, *130*(2), 571-614.

Bhattacharya, H. (2015). Spousal violence and Women's employment in India. *Feminist Economics*, *21*(2), 30-52.

Bhattacharya, T. (2017). *Social Reproduction Theory: Remapping Class, Recentering Oppression*. Pluto Press.

Bittman, M., England, P., Sayer, L., Folbre, N., & Matheson, G. (2003). When does gender trump money? Bargaining and time in household work. *American Journal of Sociology*, *109*(1), 186-214.

Blau, F. D., & Jusenius, C. L. (1976). Economists' approaches to sex segregation in the labor market: an appraisal. *Signs: Journal of Women in Culture and Society*, *1*(3, Part 2), 181-199.

Blau, F. D., & Hendricks, W. E. (1979). Occupational segregation by sex: Trends and prospects. *Journal of Human Resources*, 197-210.

Blau, F. D. (1984). “Occupational segregation and labor market discrimination.” Pp. 117-143 in *Sex Segregation in the Workplace: Trends, Explanations, Remedies.* Edited by Barbara F Reskin. Washington, DC: National Academy Press.

Borjas, G. (2017). *Labor Economics.* Seventh Edition. McGraw Hill.

Bowleg, L. (2008). When Black+ lesbian+ woman≠ Black lesbian woman: The methodological challenges of qualitative and quantitative intersectionality research. *Sex roles*, *59*(5-6), 312-325.

Braunstein, E., & Folbre, N. (2001). To honor and obey: Efficiency, inequality, and patriarchal property rights. *Feminist Economics*, *7*(1), 25-44.

Braunstein, E. (2008). The feminist political economy of the rent-seeking society: An investigation of gender inequality and economic growth. *Journal of Economic Issues*, *42*(4), 959-979

Brown, C., & Kesselring, R. (2006). Declining marriage ratios of young Black women: testing alternative economic hypotheses. *The Review of Black Political Economy*, *33*(4), 27-48.
Cahuc, Pierre, Stéphane Carcillo, and André Zylberberg. 2014. *Labor economics*. MIT press.

Caridad Bueno, C., & Henderson, E. A. (2017). Bargaining or backlash? Evidence on intimate partner violence from the Dominican Republic. *Feminist Economics*, *23*(4), 90-116.
Carrigan, T., Connell, B., & Lee, J. (1985). Toward a new sociology of masculinity. *Theory and Society*, *14*(5), 551-604.

Carter, N., & R. Allen, K. (1997). Size determinants of women-owned businesses: choice or barriers to resources?. *Entrepreneurship & Regional Development*, *9*(3), 211-220.

Chamberlin, E. H. (1949). *Theory of Monopolistic Competition: A re-orientation of the theory of value*. Oxford University Press, London.

Charles, K. K., & Luoh, M. C. (2010). Male incarceration, the marriage market, and female outcomes. *The Review of Economics and Statistics*, *92*(3), 614-627.

Chassonnery-Zaïgouche, C., & Larrouy, L. (2017). "From warfare to welfare": Contextualising Arrow and Schelling's models of racial inequalities (1968–1972). *The European Journal of the History of Economic Thought*, *24*(6), 1355-1387.

Cockburn, C. (1991). *In the Way of Women: Men's Resistance to Sex Equality in Organisations*, London: Macmillan.

Cohen, D. S. (2010). Keeping Men Men and Women Down: Sex Segregation, Anti-Essentialism, and Masculinity. *Harv. JL & Gender*, *33*, 509.

Cohen, M. S. (1971). Sex differences in compensation. *Journal of Human Resources*, 434-447.

Coleman, S. (2000). Access to capital and terms of credit: A comparison of men-and women-owned small businesses. *Journal of small business management*, *38*(3), 37.

Collins, P.H. (2002). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment*. Routledge.

Collins, P.H. (2015). Intersectionality's definitional dilemmas. *Annual review of sociology*, *41*, 1-20.

Collins, P.H. (2015). "Black Feminist Epistemology", 252-256 in *Just methods: An interdisciplinary feminist reader*. Edited by Alison M. Jaggar. Routledge.

Compton, J., & Pollak, R. A. (2014). Family proximity, childcare, and women's labor force attachment. *Journal of Urban Economics*, *79*, 72-90.

Connell, R.W. (1983). Men's Bodies. *Which Way is Up? Essays on Sex, Class, and Culture,* 17-32.

Connell, R.W. (1987). *Gender and power*. Sydney, Australia: Allen and Unwin.

Connell, R. W. (1993). The big picture: Masculinities in recent world history. *Theory and society*, *22*(5), 597-623.

Connell, R. W. (2005). *Masculinities*. University of California Press.

Connell, R. W., & Messerschmidt, J. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society*, *19*(6), 829-859.

Danes, S. M., Zuiker, V., Kean, R., & Arbuthnot, J. (1999). Predictors of family business tensions and goal achievement. *Family Business Review*, *12*(3), 241-252.

Danes, S. M., & Olson, P. D. (2003). Women's role involvement in family businesses, business tensions, and business success. *Family Business Review*, *16*(1), 53-68.

Danes, S. M., & Morgan, E. A. (2004). Family business-owning couples: An EFT view into their unique conflict culture. *Contemporary Family Therapy*, *26*(3), 241-260.

Danes, S. M., & Lee, Y. G. (2004). Tensions generated by business issues in farm business-owning couples. *Family Relations*, *53*(4), 357-366.

Darity Jr, W. 2005. "Stratification economics: the role of intergroup inequality." *Journal of Economics and Finance* 29, no. 2: 144.

Darity Jr, W. A., Hamilton, D. & Stewart, J. (2015). "A tour de force in understanding intergroup inequality: An introduction to stratification economics." *The Review of Black Political Economy* 42, no. 1-2: 1-6.

Davis, A.Y. (1983) Chapter 11: Rape, Racism and the Myth of the Black Rapist, *Women, Race & Class*. Vintage Books, a division of Random House. New York.

Dawson, C., & Henley, A. (2012). “Push” versus “pull” entrepreneurship: an ambiguous distinction?. *International Journal of Entrepreneurial Behavior & Research*.

Dewey, D. (1952). "Negro Employment in Southern Industry." *Journal of Political Economy* 60: 279-94

England, P. (1982). "Skill Demands and Earnings in Female and Male Occupations." *Sociology and Social Research* 66, no. 2: 147-68.

Edgeworth, F. Y. (1922). "Equal pay to men and women for equal work." *The Economic Journal* 32, no. 128: 431-457.

Fairlie, R. W., & Robb, A. M. (2007). Why are black-owned businesses less successful than white-owned businesses? The role of families, inheritances, and business human capital. *Journal of Labor Economics*, *25*(2), 289-323.

Fairlie, R. W., & Robb, A. M. (2010). *Race and entrepreneurial success: Black-, Asian-, and White-owned businesses in the United States*. MIT Press.

Fairlie, R. W., Reedy, E. J., Morelix, A., & Russell-Fritch, J. (2016). Kauffman Index of Startup Activity: National Trends 2016. *Available at SSRN 2828359*.

Fawcett, M. G. (1892). “Mr. Sidney Webb’s article on Women’s Wages,” *Economic Journal II*, March, 173-176.

Fawcett, M. G. (1916). “The Position of Women in Economic Life,” in W.H. Dawson (ed.) *After War Problems.* London: Allen & Unwin

Fein, R. (1965). "An economic and social profile of the Negro American." *Daedalus*: 815-846.

Ferber, M. A., and Helen M. L. (1976). "The sex differential in earnings: a reappraisal." *ILR Review* 29, no. 3: 377-387.

Ferber, M. A., & Nelson, J.A. (Eds.). (2009). *Beyond economic man: Feminist theory and economics*. University of Chicago Press.

Ferguson, A. (2007). Gay marriage: An American and feminist dilemma. *Hypatia*, *22*(1), 39-57.

Finnoff, K. (2012). Intimate partner violence, female employment, and male backlash in Rwanda. *The economics of peace and security journal*, *7*(2).

Fleury, J.B. (2012). "Wandering through the borderlands of the social sciences: Gary Becker’s economics of discrimination." *History of political economy* 44, no. 1: 1-40.

Folbre, N. (1994) *Who Pays for the Kids'* Gender *and the Structures of* Constraint. London and New York: Routledge.

Folbre, N. (1997) "Gender Coalitions: Extrafamily Influences on Intrafamily Equality." In *Intrahousehold Resource Allocation* in *Developing Countries; Methods, Models and Policy,* edited by Lawrence Haddad, John Hoddinott, and Harold Alderman, pp. 263-274. Baltimore, MD: Johns Hopkins University Press, 1997.

Forget, E. L. (2002). "A hunger for narrative: Writing lives in the history of economic thought." *History of Political Economy*, *34*(5), 226-244.

Fraser, N. (2017). Crisis of care? On the social-reproductive contradictions of contemporary capitalism. *Social reproduction theory: Remapping class, recentering oppression*, 21-36.

Gai, Y., & Minniti, M. (2015). External financing and the survival of black-owned start-ups in the US. *Eastern Economic Journal*, *41*(3), 387-410.

Garlick, S. (2017). *The nature of masculinity: Critical theory, new materialisms, and technologies of embodiment*. UBC Press.

Gibson, K. J., Darity Jr, W.A., & Myers Jr, S.L. (1998). "Revisiting occupational crowding in the United States: a preliminary study." *Feminist Economics* 4, no. 3: 73-95.

Gilman, H. G. (1966). "Discrimination and the Non-White Employment Differentials," *American Economic Review.*

Glenn, N. D. (1963). "Occupational benefits to whites from the subordination of Negroes." *American Sociological Review* 28, no. 3: 443-448.

Grybaite, V. (2006). "Analysis of theoretical approaches to gender pay gap." *Journal of Business Economics and Management* 7, no. 2: 85-91.

Gupta, S., & Ash, M. (2008). Whose money, whose time? A nonparametric approach to modeling time spent on housework in the United States. *Feminist Economics*, *14*(1), 93-120.

Hamilton, D., Goldsmith, A. H., & Darity Jr, W. (2009). Shedding "light" on marriage: The influence of skin shade on marriage for black females. *Journal of Economic Behavior & Organization*, *72*(1), 30-50.

Hamilton, D. (2006). "The racial composition of American jobs." *The State of Black America*.

Hamilton, D, & Darity Jr, W.A. (2012). "Crowded Out? The Racial Composition of American Occupations." *Researching Black Communities: A Methodological Guide*: 60.

Harding, Sandra. G. 2004. *The feminist standpoint theory reader: Intellectual and political controversies*. Psychology Press.

Hartmann, H. I. (1979). The unhappy marriage of Marxism and feminism: Towards a more progressive union. *Capital & Class*, *3*(2), 1-33.

Heller, W.W. (1970). "Economics of the Race Problem." *Social Research*: 495-510.

Himmelweit, S. (1995). The discovery of "unpaid work": the social consequences of the expansion of "work". *Feminist Economics*, *1*(2), 1-19.

Himmelweit, S. (2003). Chapter 16: An evolutionary approach to feminist economics in *Toward a Feminist Philosophy of Economics*. Editors: Barker, D., & Kuiper, E. Routledge.

Holder, M. (2017). "African American Men's Decline in Labor Market Status during the Great Recession." In *African American Men and the Labor Market during the Great Recession*, pp. 35-62. Palgrave Macmillan, New York.

Holder, M. (2018). "Revisiting Bergmann's occupational crowding model." *Review of Radical Political Economics* 50, no. 4: 683-690.

hooks, bell. (1995). Killing rage: Ending racism. New York, NY: Henry Holt, LLC.

hooks, bell. (2010). *Teaching Critical Thinking: Practical Wisdom.* Routledge.

Howson, S. (2013). "The uses of biography and the history of economics." *History of Economics Review*, *57*(1), 1-15.

Hughes, K. D. (2003). Pushed or pulled? Women's entry into self-employment and small business ownership. *Gender, Work & Organization*, *10*(4), 433-454.

Hundley, G. (2001). Why women earn less than men in self-employment. *Journal of labor research*, *22*(4), 817-829.

Keane, M. P., & Wolpin, K. I. (2010). The role of labor and marriage markets, preference heterogeneity, and the welfare system in the life cycle decisions of Black, Hispanic, and White women. *International Economic Review*, *51*(3), 851-892.

Kimmel, M. S. (2004). Masculinity as homophobia. *Disch, E., Reconstructing gender. A multicultural anthology.* McGraw Hill, Boston.

Kimmel, M. (2006). *Manhood in America*. New York, NY: Oxford University Press.

Kimmel, M. (2012). *Gender of Desire, The: Essays on Male Sexuality*. SUNY Press.

Kirkwood, J. (2009). Motivational factors in a push-pull theory of entrepreneurship. *Gender in Management: An International Journal*.

Klein, J. A. (2017). *Bridging the Divide: How Business Ownership Can Help Close the Racial Wealth Gap*. Aspen Institute.

Kyrk, H. (1950). The income distribution as a measure of economic welfare. *The American Economic Review*, *40*(2), 342-355.

Laslett, B. & Brenner, J. (1989). Gender and social reproduction: Historical perspectives. *Annual Review of Sociology*, *15*(1), 381-404.

Lee, F. S. (2004). "To be a heterodox economist: the contested landscape of American economics, 1960s and 1970s." *Journal of Economic Issues* 38, no. 3: 747-763.

Lee, S. S., & Denslow, D. (2004). A study on the major problems of US women-owned small businesses. *Journal of Small Business Strategy*, *15*(2), 77-90.

Lindley, J. K., & Elliott, R. J. R. (2008). UK Immigrant Earnings and Occupational Crowding. *The Journal of the Royal Statistical Society Series A*, *171*(3): 645-671.

Loscocco, K., & Bird, S. R. (2012). Gendered paths: Why women lag behind men in small business success. *Work and occupations*, *39*(2), 183-219.

Lundberg, S., & Pollak, R. A. (2014). *7. Cohabitation and the Uneven Retreat from Marriage in the United States, 1950–2010* (pp. 241-272). University of Chicago Press.

Mari, M., Poggesi, S., & De Vita, L. (2016). Family embeddedness and business performance: evidences from women-owned firms. *Management Decision*.

Martell, M. E., & Roncolato, L. (2016). The homosexual lifestyle: time use in same-sex households. *Journal of Demographic Economics*, *82*(4), 365-398.

Martell, M. E., & Roncolato, L. (2020). Share of household earnings and time use of women in same-sex and different-sex households. *Eastern Economic Journal*, *46*(3), 414-437.

Matzek, A. E., Gudmunson, C. G., & Danes, S. M. (2010). Spousal capital as a resource for couples starting a business. *Family Relations*, *59*(1), 60-73.

Maynard, S. (1989). Rough work and rugged men: The social construction of masculinity in working-class history. *Labour/Le Travail*, 159-169.

McConnell, C., Brue, S., & Macpherson, D. (2017). *Contemporary Labor Economics.* Eleventh edition. McGraw Hill.

Meng, X. (1998). "Gender occupational segregation and its impact on the gender wage differential among rural-urban migrants: a Chinese case study." *Applied Economics* 30, no. 6: 741-752.

Mora, M. T., & Dávila, A. (2014). Gender and business outcomes of black and Hispanic new entrepreneurs in the United States. *American Economic Review*, *104*(5), 245-49.

Morgan, D. (2005). Class and masculinity. *Handbook of studies on men and masculinities*, 165-177.

Murray-Close, M; & Heggeness, M. L. (2018). Manning up and womaning down: How husbands and wives report their earnings when she earns more. *US Census Bureau Social, Economic, and Housing Statistics Division Working Paper*, *20*.

Myrdal, G. (1944). *An American Dilemma: The Negro Problem and Modern Democracy.* New York: Harper & Brothers.

Neergaard, H., Shaw, E., & Carter, S. (2005). The impact of gender, social capital and networks on business ownership: a research agenda. *International Journal of Entrepreneurial Behavior & Research*.

Neneh, B. N. (2017). Family support and performance of women-owned enterprises: the mediating effect of family-to-work enrichment. *The Journal of entrepreneurship*, *26*(2), 196-219.

Nelson, M. K. (2004). How men matter: Housework and self-provisioning among rural single-mother and married-couple families in Vermont, US. *Feminist Economics*, *10*(2), 9-36.

Northrup, H. R. (1943). Organized labor and negro workers. *Journal of Political Economy* 51, no. 3: 206-221.

Northrup, H. R. (1946). Unions and Negro Employment. *The Annals of the American Academy of Political and Social Science* 244, no. 1: 42-47.

Olson, P. I. (2007). On the contributions of Barbara Bergmann to economics. *Review of Political Economy* 19, no. 4: 475-496.

O'Neill, J.A. (1983). The Determinants and Wage Effects of Occupational Segregation. Washington, D.C.: The Urban Institute.

Orozco Espinel, C., & Gomez Bétancourt, R. (forthcoming). "Feminist Economics: genesis and transformation of a sub-field of economics." *History of Political Economy*

Papers of John F. Kennedy. Presidential Papers. White House Staff Files of Walter W. Heller. Subject Files, 1953-1964. Discrimination report, 1962. JFKWHSFWWH-MF31-011. John F. Kennedy Presidential Library and Museum.

Perlo, V. (1975). *Economics of Racism USA: Roots of Black inequality*. International Publishers.

Philipps, L. (2008). Silent partners: The role of unpaid market labor in families. *Feminist Economics*, *14*(2), 37-57.

Pigou, A.C. (1920). *The Economics of Welfare*. Palgrave Macmillan, 2013 reprint.

Polachek, S.W. (1981). Occupational self-selection: A human capital approach to sex differences in occupational structure. *The Review of Economics and Statistics*: 60-69.

Pujol, Michèle A. (1992). *Feminism and anti-feminism in early economic thought*. Edward Elgar.

Purkayastha, D. (1999). Patriarchal monopoly and economic development. *Feminist Economics*, *5*(2), 61-78.

Quadlin, N., & Doan, L. (2018). Sex-typed chores and the city: Gender, urbanicity, and housework. *Gender & Society*, *32*(6), 789-813.

Reeser, T.W. (2011). *Masculinities in theory: An introduction*. John Wiley & Sons.

Reuschke, D. (2016). The importance of housing for self-employment. *Economic Geography*, *92*(4), 378-400.

Rodgers, D. T. (2014). *The Work Ethic in Industrial America 1850-1920*. University of Chicago Press.

Roediger, D. (1999). *The Wages of Whiteness: Race and the making of the American working class*. Verso.

Rogoff, E. G., & Heck, R. K. Z. (2003). Evolving research in entrepreneurship and family business: Recognizing family as the oxygen that feeds the fire of entrepreneurship. *Journal of business venturing*, *18*(5), 559-566.

Romani, R. (2018). On science and reform: the parable of the new economics, 1960s–1970s. *The European Journal of the History of Economic Thought* 25, no. 2: 295-326.

Royster, D. A. (2007). What happens to potential discouraged? Masculinity norms and the contrasting institutional and labor market experiences of less affluent black and white men. *The ANNALS of the American Academy of Political and Social Science*, *609*(1), 153-180.

Sawhill, I.V. (1973). The economics of discrimination against women: some new findings. *The Journal of Human Resources* 8, no. 3: 383-396.

Sayer, L. C., & Fine, L. (2011). Racial-ethnic differences in US married women's and men's housework. *Social Indicators Research*, *101*(2), 259-265.

Schneider, D. (2012). Gender deviance and household work: The role of occupation. *American Journal of Sociology*, *117*(4), 1029-1072.

Scott, N. A., & Siltanen, J. (2017). Intersectionality and quantitative methods: Assessing regression from a feminist perspective. *International Journal of Social Research Methodology*, *20*(4), 373-385.

Seguino, S. & Braunstein, E. (2019). The costs of exclusion: Gender job segregation, structural change and the labour share of income. *Development and Change* 50, no. 4: 976-1008.

Sevilla-Sanz, A., Gimenez-Nadal, J.I., & Fernández, C. (2010). Gender roles and the division of unpaid work in Spanish households. *Feminist Economics*, *16*(4), 137-184.

Simister, J. (2013). Is Men's Share of Housework Reduced by 'Gender Deviance Neutralization'? Evidence From Seven Countries. *Journal of Comparative Family Studies*, *44*(3), 311-325.

Simms, M. C. (2020). The National Economic Association at 50: Where Have We Come From and Where Are We Going?. *The Review of Black Political Economy* 47, no. 2: 118-124.

Smart, C. (2013). *The ties that bind (Routledge revivals): Law, marriage and the reproduction of patriarchal relations*. Routledge.

Sorensen, E. (1990). The crowding hypothesis and comparable worth. *Journal of Human Resources*: 55-89.

Sprague, J. (2016). *Feminist methodologies for critical researchers: Bridging differences*. Rowman & Littlefield.

Stafford, K., Duncan, K. A., Dane, S., & Winter, M. (1999). A research model of sustainable family businesses. *Family business review*, *12*(3), 197-208.

Staples, R. (1978). Masculinity and race: The dual dilemma of Black men. *Journal of Social Issues*, *34*(1), 169-183.

Stevans, L. K. (1996). Immigration and occupational crowding in the United States. *Labour* 10, no. 2: 357-374.

Stevans, L, K. (1998). Assessing the effect of the occupational crowding of immigrants on the real wages of African American workers. *The Review of Black Political Economy* 26, no. 2: 37-46.

Syrda, J. (2019). Spousal Relative Income and Male Psychological Distress. *Personality and Social Psychology Bulletin*, 0146167219883611.

Thébaud, S. (2010). Masculinity, bargaining, and breadwinning: Understanding men's housework in the cultural context of paid work. *Gender & society*, *24*(3), 330-354.

Thurow, L. (1969). Poverty and Discrimination (Washington: Brookings Institute).

Tien, C. (2017). The racial gap in voting among women: White women, racial resentment, and support for Trump. *New Political Science*, *39*(4), 651-669.

Ufuk, H., & Özgen, Ö. (2001). Interaction between the business and family lives of women entrepreneurs in Turkey. *Journal of Business Ethics*, *31*(2), 95-106.

Wang, Q. (2013). Industrial concentration of ethnic minority-and women-owned businesses: Evidence from the survey of business owners in the United States. *Journal of small business & entrepreneurship*, *26*(3), 299-321.

Weintraub, E.R. (2014). MIT's openness to Jewish economists. *History of Political Economy* 46: 45-59.

Wight, V. R., Bianchi, S. M., & Hunt, B. R. (2013). Explaining racial/ethnic variation in partnered women's and men's housework: Does one size fit all?. *Journal of Family Issues*, *34*(3), 394-427.

Willow, M. (2011). Occupational crowding by race in the Pacific Northwest: A comparative study of Portland, Oregon and Seattle, Washington. *PSU McNair Scholars Online Journal* 5, no. 1: 24.

Zachary, R. K. (2011). The importance of the family system in family business. *Journal of Family Business Management*.

APPENDIX

In this section, I run analyses identical to those described in Section 5.2 of Chapter 1, but here the sample is now *unmarried* Black and White couples. Table 8 below illustrates the summary statistics for the sample, and Figure 3 shows women's average shares of housework in Black and White couples with varying business ownership statuses. However, note that the sample sizes representing data in Figure 3 are very small. For instance, the sample only includes four Black unmarried couples co-owning a business. Like in married couples, unmarried Black women have slightly higher shares of housework, and Black couples own businesses at lower rates than White. Table 9 below show the results from Equations 3 and 4 applied to the sample of unmarried couples with bootstrapped standard errors. Note that the only coefficient of interest with statistical significance is β_1 in Equation 4, suggesting that when White women in unmarried couples own businesses, their share of housework increases by 9.5 percentage points.

Table 19: Summary Statistics for Unmarried Couples (PSID 1985-2019)

Couple:	White Unmarried Couples		Black Unmarried Couples	
	mean	S.D.	mean	S.D.
Woman's weekly housework hours	13.11	11.42	15.00	13.31
Man's weekly housework hours	7.31	7.78	8.62	9.67
Woman's share of housework	0.64	0.20	0.65	0.22
Someone in household owns a business	0.09	0.29	0.05	0.22
Man owns a business	0.07	0.26	0.04	0.19
Woman owns a business	0.02	0.13	0.01	0.09
Couple co-own a business	0.00	0.06	0.00	0.06
Woman's labor income	25,693.32	21,996.40	20,304.38	15,286.30
Man's labor income	34,143.81	25,491.06	24,309.07	19,979.47
Total household income	65,001.45	53,688.46	48,126.17	32,896.53
Woman's share of couple's income	0.43	0.19	0.46	0.21
Age of man	30.55	7.66	31.48	7.57
Age of woman	29.36	7.73	30.03	7.57
Woman has college degree	0.35	0.48	0.14	0.35
Man has college degree	0.28	0.45	0.11	0.31
Man's health	2.16	0.92	2.29	1.01
Woman's health	2.27	0.89	2.38	0.98
Number of children	0.67	1.05	1.45	1.26
Has a child under 3	0.19	0.39	0.32	0.47
Urban (not rural)	0.39	0.49	0.50	0.50
Owns a home	0.38	0.48	0.22	0.42
Man's paid labor hours	41.54	12.05	39.24	14.58
Woman's paid labor hours	36.89	12.98	36.26	13.66
Man unemployed	0.15	0.36	0.21	0.41
Woman unemployed	0.13	0.33	0.16	0.36
House (not apartment/multifamily)	0.58	0.49	0.48	0.50
N (number of observations)	1,555		1,094	
n (number of couples)	891		563	

Table 20: Business Ownership & Women's Housework Shares: Unmarried Couples

Dependent variable: Woman's share of housework × 100	Unmarried White couples	Unmarried Black couples
Model 1		
Someone in household owns a business	1.428	-3.481
	(2.141)	(4.043)
Observations	1555	1084
R^2	0.131	0.116
Model 2		
Couple co-own a business	-3.148	-2.441
	(4.713)	(4.767)
Woman owns a business	9.505*	8.051
	(5.350)	(7.132)
Man owns a business	-0.611	-4.317
	(2.641)	(3.661)
Observations	1555	1084
R^2	0.134	0.118

[a]Data from PSID 1985-2019. Reported R-squared is the within R-squared (as opposed to the between or overall R-squared), which captures how well the models account for changes in women's shares of housework within each of the households over time. Standard errors are in brackets. ***significant at p less than 1%, **at p less than 5%, *at p less than 10%.

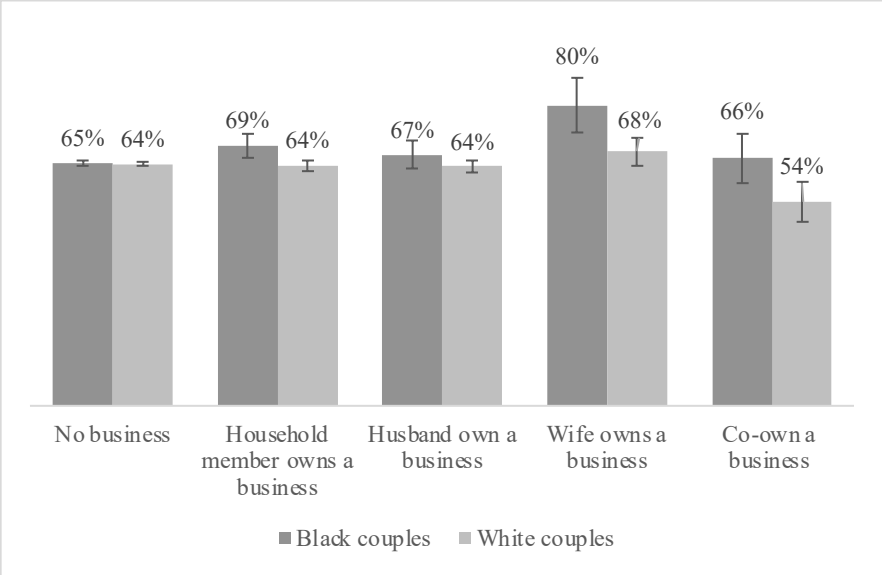

Figure 3. Woman's Share of Housework in Married Black and White Couples