

Gender and the Economy:
**A Comparative Institutional Perspective on the Family and Gender
Inequality**

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Abstract

This book explores the relationship between the economy and gender relations from a comparative institutional perspective. We argue that the ratio of the mobility of male economic assets to the mobility of female economic assets, which is largely a function of the mode of production, goes far in explaining intra-family bargaining power, and by extension, in explaining the norms that become socially dominant over long periods of time. Our main focus is on post-industrial societies, which have produced large numbers of flexible, general skills jobs and given women unprecedented opportunities for economic independence. We show how such independence transforms power within the family, creates new patterns of gender socialization and norms, alters family structures and fertility rates, generates a new gender gap in policy preferences and voting, and raises female political representation. But we also show how the transition to a less patriarchal society is powerfully mediated by political and economic institutions – especially proportional representation and coordinated market capitalism – which sometimes facilitate, but often inhibit, greater gender equality. We offer evidence from a variety of advanced democracies.

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Chapter 1

A Political Economy Approach to Gender Inequality

1.1. Introduction

For thousands of years, in most of the world's societies, females have had fewer life chances than males. Females have been underrepresented among the ranks of the rich and powerful, to be sure. But even among ordinary folk, women have been subordinated to their fathers and husbands, and sometimes to brothers and grown sons. In the 21st century, males still dominate, if to a lesser extent. For many people, patriarchy of one sort or another is so much a part of the warp and woof of life that it is largely invisible.

This book takes male dominance as a puzzle to be examined. Although patriarchy has ancient roots, it has varied considerably across time and place in ways that the standard tools of political economy can help to explain. A huge variety of factors has shaped this variation, ranging from biology to culture, to changing economic and political arrangements. Historians and social scientists have illuminated different dimensions of them, but none has paid sufficient attention to the ways in which they interact with the domestic dynamics between women and men. That is our focus here.

We employ a simple bargaining framework that considers how the productivity of male versus female labor in the marketplace—given the existing mode of production—tilts the balance of power between the sexes. Within family units, the market demand for male and female labor

tells us what the relative wellbeing of each member of a couple will be in the event of marital dissolution.¹ Their “outside options,” which provide a measure of their mobility across family units, account for their bargaining positions within the union. By extension, women’s economic viability outside of marriage influences whether social norms will steer girls towards the marriage market or towards economic independence.

Much else follows from this basic characterization of the family as an implicit bargaining unit. We think of patriarchal norms, which validate female subordination, as a collective giving up on the possibility of female economic independence. When parents know that there is limited market demand for their daughter’s labor, they will be more likely to feel obliged to equip her with attributes that give her every advantage in the marriage market instead. But rarely do parents—let alone the daughters—have to behave strategically in any conscious way, because social norms have a tendency to consolidate around economically efficient outcomes, and people internalize those norms unobtrusively. In many societies, girls are never taught why they must be docile, demure, and sexually chaste. They only learn that this behavior is proper, decent, and morally correct. They are rewarded for engaging in it.

In the chapters that follow, we develop the implications of the bargaining model for female well-being across a variety of contexts. In Chapter 2, we show that different systems of economic production attach different productivity values to male versus female labor. In agricultural societies, where male physical strength is valuable for food production, females tend to specialize instead in family work such as rearing children, combined, perhaps, with food processing and clothes manufacture that can be undertaken with children under foot. To the extent that females are also engaged in agricultural production, it is in an augmenting role.

¹ For simplicity, we are considering heterosexual unions, and calling them marriages even if they are informal forms of co-habitation.

1.2. Family Bargaining, Work, and Political Representation

Given the predominance of agricultural production in human history, it is not surprising that patriarchy—which imbues this economic division of labor with moral imperative—has been similarly entrenched in human experience. The fact that patriarchy was looser in hunter-gatherer societies, and is once again losing ground, is evidence that material causes rather than immutable human hard wiring are responsible for this otherwise exceedingly widespread form of social organization.

In Chapter 3, we present evidence from modern societies that outside options are indeed consequential for bargaining within the family. First, we find from survey data that women with better outside options—in the form of education and jobs—do relatively less housework than women who lack those options. It is a given, of course, that stay-at-home women do more housework than women who work outside the home. But we further found that a woman is able to pass off more housework onto her husband if there is merely the *possibility* of her working outside the home, as indicated by her education and by the demand for female labor in the market place.

Industrialization reduces the productivity advantage of male labor, but the modern welfare state hits women with an unanticipated disadvantage. Among industrial economies, the more interventionist welfare states protect workers from easy lay offs. Employers, in order to maximize their investment in long term workers, invest in the workers' firm-specific skills. They want to avoid investing in people who will then leave, taking their accumulated human capital with them. But women are left out of this game because employers know that they are more likely to interrupt their careers for child bearing and other family work. This knowledge reduces firms' prospects of making good on long term investments in women's human capital and, as a

result, private sector firms in countries with robust protections for labor tend to avoid hiring and promoting women. This dampens female labor force participation. Although the negative consequences for women are surely inadvertent, in most countries—in fact, in almost all of Europe outside Scandinavia—they remain unaddressed.

Market economies with the least interventionist governments are, paradoxically, the most congenial to female employment. Labor markets are relatively unprotected, and a worker's expected tenure at any given firm is relatively short. Workers invest in general skills that are mobile across firms, and employers structure production around a fungible workforce. Even if women are more likely to take time off for child rearing or other family work, employers will not have invested extensively in worker training that would go to waste on a quitting woman. In economies where men are as insecure in their jobs as women, the playing field is more or less gender-neutral, and family bargaining tends to be relatively egalitarian. Along other dimensions, of course, there are trade-offs, because gender equality often comes at the cost of intra-gender wage dispersion and income inequality.

Apart from factors affecting the demand for female labor, the possibility of divorce also shapes the bargaining environment in the family. Women are more likely to work—and likely to do less household work—in countries with higher divorce rates. The opposite is true in countries where legal or social barriers to divorce make it difficult to take outside options, even if they exist. Where partners are forced to treat the union as a going concern, bargaining—and the division of family labor—may reflect old social norms more than would be warranted by relative productivity of male and female labor productivity alone.

Chapter 4 considers the implications of domestic bargaining for family decisions such as how many children to have. All else equal, higher market demand for female labor increases

women's options remunerative work outside the home, lowering fertility as a result. But fertility statistics reveal a striking anomaly: in rich democracies, fertility is relatively high in countries with the highest female labor force participation. Apparently, the opportunity cost story provides only a partial account.

Our bargaining logic unravels the puzzle. In countries with high divorce rates, women are willing to have children only if doing so does not damage their ability to earn income on their own should the need arise. Countries with a high demand for female labor—either on account of fluid private sector labor markets that do not discriminate against women, or on account of large public sector employment of women—provide would-be mothers with the easiest possibilities of combining family with continuous work.

Fertility is lowest of all in countries with low demand for female labor and high divorce barriers, which are the conditions least conducive to female bargaining clout. One might expect women in these circumstances to give up on the possibility of autonomy and embrace the traditional maternal role. Perhaps because of the diffusion of values from more feminist countries, women in that tough spot instead have fewer children in what seems to be an effort to eke out whatever level of economic independence is possible.

Government policy can influence how easily women straddle their household and market roles, both by subsidizing childcare and other family work, and by employing women in the public sector. The bargaining model implies that men and women should be expected to have different preferences over these policies, since men and women will place some value on cultivating their respective outside options apart from maximizing family income. We test this proposition empirically in Chapter 5, and find that women are systematically more supportive of government spending on services and employment, holding income bracket constant. This result

accounts for the gender voting gap we observe in developed countries, where females have become more likely in recent years to vote for candidates and parties on the left.

A cultural theory of societal value change might predict that the gender voting gap would disappear with the crumbling of patriarchy. Instead, we find that the difference between male and female preferences is largest in the most gender-equal countries. This is in fact what the bargaining model would predict. Women in countries with a strong demand for female labor are more likely to have preferences over public policy that are distinct from their husbands' than women in countries with low female labor force participation. It makes sense in a bargaining context that women would favor policies that help them to maintain and improve their outside options. Curiously enough, however, it is not true that countries with more gender inequality are associated with a greater gender gap in policy preferences. To the contrary, it is those societies where women are in the most subordinate position in the economy and in the family that women are most likely to deviate from their husbands, even when the political system allows them to do so. This is one of the puzzles this book seeks to solve. As for why some women choose to stay home even in countries where they can work if they want to, there is still a role for values—and perhaps optimism about marriage.

The opening up of a gender voting gap highlights another empirical puzzle: the absence of correlation between the gender voting gap—or for that matter, any other measure of societal feminism—and female political representation. Countries with larger gender voting gaps do not necessarily have more female politicians. The variation in the proportion of legislative seats going to female politicians instead closely follows the type of electoral rules. Proportional representation systems, which pit parties against each other at the national or regional level, have more female politicians than plurality systems in which individual candidates compete for a

single seat in geographic districts. Why this happens requires some exploration, since electoral rules were often chosen before female political representation was conceivable and therefore hardly designed to affect the extent of such representation.

If we consider the market for politicians in the same terms as we evaluate other labor markets, we can see how electoral rules that place a premium on career continuity can create a bias against female success. This parallels the way in which labor markets with long term labor contracts create statistical discrimination against women because of the expectation of career interruptions on account of family work. District-based systems, and particularly those that require politicians to establish strong personal reputations, favor politicians who are able to accumulate political capital throughout their careers. As long as mothers are the default caretakers of children, female politicians will be at a disadvantage in competing against males who can begin their careers early and stick with the job. Voters need have no predisposition against females in general to explain this result, and indeed, female candidates who pass all of the nomination hurdles are likely to be as competitive in elections as males. But in personalistic electoral systems, relatively few women will be able to match the human capital of men at any given stage in their careers because of past career interruptions.

In proportional electoral systems, by contrast, each party presents voters with a slate of candidates who are the collective face of the party mandate. Because parties compete with each other on programmatic grounds, attention centers on the policies that each party advocates rather than on the personal qualities or political clout of the politicians on the lists. Female politicians do not confront high barriers to advancement in this system because time spent on family work does not interfere with acquiring the qualities that win politicians a place on the list: loyalty to the party platform and the ability to articulate the party's priorities. Unlike in district-based

systems, qualification for higher office does not rest crucially on seniority and the accumulation of personal political capital. The exception tends to be for the top leadership posts in the party, which again places relatively greater emphasis on individual qualities and accumulated experience, networks, and bargaining skills. Even for these positions, however, women are often better than in majoritarian systems because the pool of experienced female politicians is larger, and because the party continues to play a greater role in policy formation and competition for voters.

There are several kinds of evidence that add confidence to this explanation. In addition to the cross-national comparisons in which PR systems send more women into politics, we observe that in countries with mixed systems, women are more likely to be elected on lists than from districts. In countries that switch electoral rules from PR to districts or in the other direction, female representation moves in the direction that we would expect. It further militates against a cultural explanation that women do simultaneously better in business and worse in politics in district-based systems such as the US. Clearly, the cross-country comparisons are not merely picking up some national level of gender stereotyping.

1.3. Children and Childcare in the Family Bargain

Our model poses a challenge to the traditional economic analysis of the family, which assumes it to be a unitary actor maximizing a single utility function. The false power of that assumption becomes apparent when we see how many of the standard conclusions fall away when it is altered. A woman's individual utility may be lowered under a division of labor that maximizes family income if she has no control over its allocation. This is also true if taking on all household duties means that marketable skills are undermined because marketable skills are the only ones that can be used in the event of marriage dissolution. The problem is particularly

severe for time spent on children because such time constitutes a specific investment that carries no value in the re-marriage market. Alternatively, a man may be made worse off when the woman goes into the labor market and raises total family income, if her enhanced bargaining power reduces his slice of an enlarged pie or if this means that he can spend less time on developing his marketable skills.

In fairness to the efficiency model, it is important to remember that the family is taken to be maximizing collective utility, including those of children, rather than of income per se. It makes more sense to us to extend the model to include the utility of children, rather than to subsume them into a family unit. They are another element of heterogeneity rather than a reason to assume homogeneity of preferences.

The idea that childcare, at least during some stages of the child's life, cannot be subcontracted out of the family without some loss of child utility or quality of outcomes, rests on assumptions about child development that remain contested among experts.² We do not weigh in on that debate in the field of child psychology, except to note that attachment parenting does not require that parental involvement be principally by the mother. We focus instead on the distributional consequences of the asymmetric accumulation of marketable skills and experience between the parents. Even if the children are better off having a parent at home for some period—and we don't know if this is true—it should be taken as a trade-off against the deleterious effects on the subsequent life chances of those who thereby abstain from investing in the labor market.

Indeed, this tradeoff shows up in a striking tendency for women in some countries to have fewer children. What is sometimes referred to as a fertility crisis has its source, we argue, in the increasing desire of women to secure financial independence from men. If marketable

² Judith Rich Harris versus John Bowlby and followers.

skills are the only insurance against the consequences of divorce, and if childcare is in short supply or too expensive, women will sacrifice large families in order to build sustainable careers. The fertility crisis in some countries is perhaps the most vivid manifestation of the conflict of interest between men and women over the division of labor. Efficiency arguments not only fail to explain this phenomenon, but they also blind us to the efficiency consequences of gender conflict. As the Scandinavians realized when they faced their own fertility crisis, the funding of the welfare state, pensions and healthcare for older people in particular, depends crucially on a large economically active younger generation. Efficiency in the broader sense of intergenerational sustainability therefore cannot be separated from the question of how to solve or manage distributive conflict between the sexes.

Efficiency does not, then, capture all of the dimensions of the problem that we care about. But efficiency remains an important concept for the political economy of gender nonetheless. We have noted that social norms about gender roles tend to solidify around the efficient allocation of family resources regardless of the distributional effects on family members. In agricultural societies, which have made up the vast bulk of human communities in historical time, male physical strength was put to productive use in tilling the land while females were fully employed in the home keeping offspring alive under formidable conditions. On this telling, economic efficiency is one of the causal drivers of patriarchy.

It has been objected that the very idea of efficiency is itself a creation of the male mind, and has been used as a tool of domination.³ What better way to get the entire female sex to submit to male rule than to have them believe it was for the common good? As modern social scientists, we endanger the objectivity of our enterprise if we buy into an ideology that has enslaved women and other weak groups in society for millennia.

³ Dierdre McCloskey

While we do not question that patriarchs have enjoyed their position of domination within the family, or doubt that many have used brute force to enforce it when challenged, male power cannot be the whole causal story. Males face enormous collective action problems among themselves to achieve any common purpose. These problems are compounded by their competition among themselves for desirable female mates. Given the uneven allocation of strength among males, and given their competitive interests, male collusion should be an extraordinarily precarious state. Although polygamy is a terrible system for males at the bottom of the ladder who are consigned to sterility, monogamy is unstable under conditions of unequal wealth when wealthy males compete for the most desirable females. Male power alone cannot account for variation in family forms or for vertical power structures.

An explanation of patriarchy requires elements of both power and efficiency. Over the many centuries since the Neolithic Revolution, human societies have competed within and against each other for land and other resources. Competition rewards the productive allocation of assets and punishes others with annihilation or abandonment in favor of more successful models. Efficient allocation of resources changes with the technology of production, but, for much of human history, agricultural production has favored the physical strength possessed by males and child survival has favored long term nurturing by females.⁴

Among families and across the larger communities in which they resided, a wide variety of factors created winners and losers. Some societies waxed and others waned but our account concerns what happened to the families in all of those places. Agricultural production everywhere favored male brawn, and the exigencies of survival forced considerable homogeneity

⁴ Stiner and Kuhn (2002) suggest that homo sapiens may have out-competed Neanderthals by developing a division of labor within the family that better used available resources. Whereas Neanderthal communities hunted together, homo sapien males specialized in hunting and the females in gathering. Even if this is true, this early division of labor had minimal distributional consequences since homo sapien females still had access to their own means of livelihood.

around a male-dominated division of labor which left males better off than females. Social norms validated the best strategy, sparing each new generation costly errors. Male power is as much consequence as cause.

1.4. Gender and Domestic Bargaining

By taking a very long view of history, the bargaining model of gender provides a useful vantage point from which to evaluate the three dominant paradigms that have been put forward to account for patriarchy: materialism, institutionalism, and explanations that focus on values and beliefs. *Materialism* encompasses a wide category of arguments, but common to all of them is the primacy of material resources in generating effective demands on government, and the material basis of the interests imputed to groups of people who possess those resources.⁵ *Institutionalism* involves a similarly broad collection of theories and hypotheses, encompassing analysis of government and market institutions, but we pay special attention to the way these different kinds of institutions are related. The third paradigm takes ideas and values to be autonomous from the first two causal approaches, and we agree that in the short run they are often as powerful as the others.

But in the longer run, we believe, materialist analysis is the most useful because of the way material forces shape both institutions and values. Changes in production technology, in our argument, drive the emergence and demise of patriarchy by giving and then taking away a productivity advantage to male labor. Competition over resources creates patriarchal family

⁵ Materialism encompasses the neoclassical belief in market forces in its various forms such as factors of production (land, capital, labor, and human capital), or sectoral and firm-specific interests. It also includes the Marxian belief that classes are the relevant players on account of material interests that hold them together and drive them to collide. The main difference among these arguments is the appropriate level of aggregation, which rests on different implicit or explicit theoretical underpinnings about where collective action problems lie and what sorts of circumstances are likely to overcome them.

institutions across societies with labor-intensive agriculture.⁶ Social norms are principally a result rather than a cause in our argument, because families socialize their children in ways that help them navigate the strategic environment they will face. This is not to deny that for any relatively short period of time, norms can be powerful and autonomous forces that are thoroughly internalized, invisible, and resistant to change. In the fertility crisis example above, new opportunities for women in the labor markets have clearly shifted the balance of power towards a less gender-divided division of labor, but traditional norms, sometimes championed by a still influential church, seem to have temporarily blocked any effective political solution. If we are right that norms ultimately adapt to power, however, those countries currently experiencing a fertility crisis will undergo profound changes in family policy over the next decade or so. Indeed, we believe that this is precisely what is happening as we write in a country like Spain.

The institutionalist paradigm takes the organization of political and economic incentives to be crucial in shaping the demand for policies and their supply. There are numerous variants of institutionalist logic, but it stands to reason that there are complementarities between the incentive structures of legislatures and in the markets they regulate. Countries with proportional representation electoral rules are more likely to have strong labor parties that are effective in gaining labor protections and set the stage for long term labor contracts. PR also facilitates consensus-based regulatory institutions that manage and implement these rules, as well as those governing skill formation and wage-setting. In majoritarian and district-based systems, parties

⁶ Note the similarity to Foucault's argument about efficient forms of punishment under different modes of production: hurting the body if brawn is the currency, taking away a criminal's time if wage labor is the currency. The costs and available technologies of enforcement determined the severity of punishment in each case. Posner picked up on in this latter point in his 1985 Columbia Law Review article about optimal deterrence and the criminal law, arguing that prison was needed in cases where perpetrators couldn't afford to pay the fines needed to deter them. We are grateful to Ian Shapiro for pointing these out to us.

compete with each other to keep taxes low and markets fluid, and consensus-building in regulatory politics is inhibited by majoritarian control of government.

The labor market institutions that map onto each type of electoral system, in turn, profoundly affect the productivity of male versus female labor. In labor markets characterized by long term contracts, females are a bad investment because of women's greater likelihood of quitting work to attend to other family members. Proportional representation electoral rules and long term labor contracts were not adopted with the intent to suppress women's market power, but it is very difficult to change economic institutions that benefit incumbent workers, the male breadwinners. On the other hand, PR electoral systems have facilitated the political representation of women and their interests, which has modified the operation of labor markets.

We need all three paradigms, then, to make sense of complex strategic phenomena like the relative bargaining leverage of males and females. Which variant of materialist accounts are most useful depends on how production technology and the regulatory environment affects the collective action capacities of various possible actors. In today's rich democracies, women's interests are poorly aligned with class because labor parties are organized to protect existing—male—workers. More generally, whether resources, institutions, and values are causes or consequences depends on where one slices into the story and how long a perspective on history one takes. In the long run technological change and modes of production loom large in the story. In the medium run, institutions, and in the short run also norms, will assume a much more prominent role.

1.5. Conclusions

Differences in the degree and style of male dominance across countries and over stretches of history provide intriguing clues as to why and how men have ruled the world for so long. The

productivity of male versus female labor, depending on modes of production, provides a baseline explanation. In hunter-gatherer societies, the division of labor between male hunting and female gathering did not remove females from a source of their own food, should they seek to dissolve a relationship with a male partner.

The Neolithic Revolution was also a patriarchal revolution, because sedentary agriculture or herding shifted the advantage of food production to male brawn and consigned females to a supplementary and family-centered role. Females lost their mobility in agricultural societies, since their family-specific investments in children did not give them viability outside of the family unit. By contrast, a male controlled resources with which he could dominate his family and, if he was more successful than average, cultivate other relationships. The possibility of storing food and conquering others' stores make agricultural societies considerably more complex than hunter-gatherer ones, opening up new levels of wealth inequality, social hierarchy, and military organization. These in turn increased the importance of the marriage market for female livelihood and the strategic value of teaching daughters how to "marry up." The resulting web of gendered role expectations is patriarchal in the extreme.

Social norms that grew up around agricultural economies survived long into the industrial age, despite the gradual decline of a productivity advantage of male brawn. This is partly because of the stickiness of values. Even if a woman could operate a big machine, the idea was anathema to the Victorians who both introduced machines to the world and who did their best to keep women, petticoats and all, on a pedestal. The plaque on the pedestal might well have read "Long live woman, who faithfully serves her husband and nurtures her young." It was a pedestal encased in an invisible cage so that, like the nightingale, she would stay and sing for her master.

Eventually, the increased demand for female labor in post-industrial societies and the need for more family income in unequal ones would inspire many women to push past the bars of the cage. But the electoral rules, and the market arrangements they partly reflect and partly reinforce, generate vastly different levels of demand for female labor. Among countries with proportional representation in their political systems, and an economy based on long-term investments in specific skills, labor unions have clung to the long term contracts for which females are at a competitive disadvantage. Only Scandinavia has brought women into the labor force in numbers comparable to men – partly on account of a more flexible labor market, but mostly by hiring them into public sector service jobs. In market-based economies like the US, by contrast, women have made more inroads into the private labor market, but they have been left at a huge disadvantage in the political system and policies have done little to facilitate gender equality.

The bargaining model of gender follows the fall and rise again of female economic autonomy through the ages. In modern democracies, the power of public policy to bend markets to public priorities creates new opportunities to address the concerns of women left behind in the march to equality. Understanding which policies work, and at what cost, provides both the motivation and the purpose for this book.

Chapter 2

The Political Economy of Patriarchy: How Bargaining Power Shapes Social Norms and Political Attitudes

2.1. Introduction

Patriarchy—the dominance of males in social, economic, and political organization—characterizes much of human history. If Mr. Cleaver from the 1950s in America were to time-

travel back to an ancient agricultural village, he would, after the initial shock, take comfort in the stereotypical roles of the male household head who rules over his wife and children. Even Mrs. Cleaver, in the subordinate role, would find her status in that ancient society familiar. Then as now, the variance in gender norms across societies remains within recognizable bounds.

Patriarchy's very universality has made it invisible to otherwise perceptive philosophers and social critics from ages past. Jean Jacques Rousseau, an early modern champion of equality, applied his logic only to men. Not only did Rousseau fail to argue for gender equality, but as Nannerl Keohane has pointed out, he elevated the power differential between men and women "into a 'moral' principle that becomes the foundation of an immense and complicated argument about how men and women should behave in all aspects of their lives".⁷ Rousseau, of course, was validating an ancient belief rather than devising a new one. From the beginning of recorded history, men have not only been dominant, but societies have held that it is right that they should be so. The Heavens smile, the cosmos is balanced, God is pleased. We single out Rousseau not because he was unusually chauvinistic. Our point is rather that his disparaging attitude towards women was so utterly common that this champion of equality mistook convention for natural law, as a long line of fellow men had done before him.

Patriarchal conventions, or the social norms that make common sense of male dominance, have assigned women to second class citizenship for millennia. Because these norms have been with us for so long, this chapter takes our focus far back in time to understand where they came from and why they are both ubiquitous and persistent. The answer that emerges is not about how men have tricked women into subservience. Rather, patriarchal norms have tracked economically efficient uses of human resources, creating a bigger economic pie than in their absence. But they also reflect unequal power between the genders because at the

⁷ Keohane 1980: 139.

Pareto frontier men have a bargaining advantage that derives from their ability to more easily leave the household.

Economically efficient organization of productive resources can have starkly inegalitarian consequences, as epitomized by labor-intensive agriculture.⁸ The premium to male brawn in agricultural economies encourages a gendered specialization of labor that gives males command over assets that are more mobile than the female's family-specific investments. Regardless of the importance of the woman's contribution to the family wellbeing, the man is in a position to appropriate the returns of her work because his assets—his farming ability and experience—are more mobile than her family-specific investments, particularly her children.

Gender equality in human history takes on the shape of a giant U, starting with relatively egalitarian hunter-gatherer societies in which females were economically self-sufficient from their gathering role, falling into a trough of inequality when females became specialized in family work in agrarian societies, and then moving into greater equality as females gained access to market opportunities for which brawn was no longer at a premium. This is a different U from the one that Friedrich Engels drew (1884), in which markets and commodification of labor were the culprits that dragged women into slavery until communism would release them. Unlike Engels, we argue that it is not markets per se, but the way particular kinds of markets encourage specialization and allocate bargaining power across the sexes that shape opportunities for gender equality.

⁸ In drawing the causal arrow from material conditions to social norms, our argument has much in common with the structuralist “gender stratification theory” in the field of sociology (Collins 1971; Blumberg 1974; Collins, Chafetz, Blumberg, Coltrane, Turner 1993; Blumberg 2004), though there are differences. Collins's initial theoretical argument focused on male physical coercive power. Blumberg broadened the gender stratification theory to include the way relative economic productive power and kinship systems enable or disable autonomous female action. We argue that women themselves benefited, at least in the sense of constrained optimization.

The logic has a timeless quality, though the differences in asset mobility between men and women are sharpest in agricultural societies. Different modes of economic production shape the intra-household bargaining environment and, by extension, influence social norms that allocate duties and rights across the sexes. It would be ideal, from the standpoint of social science research, if we had access to information about gender norms from prehistoric times, and could trace their changes through various modes of economic production and family organization. Short of that, we can examine change in norms during the limited periods of history for which we have reliable data. Because of the great disparity in levels of economic development across human societies today, we can also observe how well different economic systems correspond to the value systems that we would predict.

In this chapter, we make use of psychologists' cross-cultural research on mate selection preferences for evidence that families choose to socialize their daughters differently under different systems of economic production. We find, as we would expect, that agrarian societies have the most discernibly patriarchal values, and they put pressure on girls to play to the marriage market rather than to acquire market-relevant skills on their own. Patriarchal values begin to attenuate in industrial societies, but they tend to be far weaker in post-industrial societies.

2.2. Efficiency, Bargaining, and Patriarchy

It is tempting to think that men, on account of their strength advantage over women, have been able collectively to write the rules of the game in their favor. From the beginning of the human race, men would have had a common interest in clamping down on any freewheeling

female impulses—particularly any impulses to mate freely and hide information about the paternity of their offspring--and they should have been strong enough to call the shots. Especially once societies became sedentary and men had assets to bequeath to the next generation, men must have been anxious to know which children were theirs.⁹

While there may be some truth to this account of male collusion, a collective action account based on brute strength alone fails to explain the stability of that outcome given that males compete with each other for females. Males competing with other males may use various strategies to appeal to potential female mates, of which forcible sex or female subordination more generally is only one. For one thing, males competing with one another for females should be motivated to cheat on the collective male enterprise by promising a better deal. For another, females are the choosier sex since females bear by far the larger burden from sexual reproduction than males, and female selection could well favor kind, nurturing qualities in males.¹⁰ The stability of patriarchal values that valorize female subordination against the backdrop of male competition is more of a puzzle than one might assume.

Arguably, patriarchy—along with, perhaps, respect for authority more generally--is the most encompassing and persistent set of social conventions that has governed human society. Our contribution to this line of analysis is to consider how patriarchal norms became virtually universal, and to explore the conditions under which patriarchy remains stable or begins to erode. Our argument begins with the observation that, in agricultural society, households could secure efficiency gains by organizing themselves around a gendered division of labor in which males

⁹ Paternity uncertainty is a peculiarly male problem. Females would have had mixed incentives: on the one hand, they would maximize resources to their young if they could assure their mates of their children's progeny. On the other hand, they would also have a biological incentive to mate with the best genetic material they could find, and pass the offspring off as their mate's. Social rules have been devised to increase the costs of this cheating.

¹⁰ Trivers' (1971) formalized the Darwinian argument that the parent with the higher investment in reproduction should be choosier mates. Adrienne Zilhmann (1989) extends the logic to conclude that female choosiness should confer a reproductive advantage on male traits such as nurturing and kindness that females desire for the fathers of their offspring.

specialized in labor-intensive agriculture and females specialized in family work including, primarily, the bearing and rearing of children.¹¹

2.2.1. Conceptualizing Power between the Sexes

Bargaining theory implies, and casual observation confirms, that power often flows from the ability of people to walk away from a deal. This is true whether we talk about haggling over the price of a used car, bargaining over wages, or deciding the division of household labor in the family. In bargaining theory the ability to walk away is in part captured by the concept of “outside options”: an agreement has to leave each bargainer at least as well off as he or she would be without an agreement. This means that outside options are constraints on the bargained outcome.

In principle outside options do not affect the bargained outcome unless the constraint binds. But if there is a risk that negotiations break down, the less risk averse player will have an advantage, and it stands to reason that this player is the one with less to lose – viz., the one with better outside options. Between otherwise identical individuals, therefore, those with the better outside prospects can more credibly threaten to hold out for better agreement unless the deal is already tilted towards them. The same result holds when one player is more “patient”, which is likely to be the one that has less to fear from having no agreement.

This is not the whole story about power, because the outcome may also depend on altruism, and, less easy to pin down, norms of fairness as well as the ability to manipulate or persuade others. More importantly, if an efficient contract involves investments that themselves affect outside options, such as a “Beckerian marriage contract” where the woman invests heavily in household-specific assets, the contract itself may depend on a credible commitment not to

¹¹ Gary Becker is best known for this argument: 1964, 1965, 1971, 1981, 1985.

dissolve it (see Appendix A for more detail). If contract termination is truly prohibited (“marriage till death you part”), there are no such things as outside options and “inside options”, especially the relative tolerance of living in a non-cooperative marriage, become decisive. In reality, rules against marriage dissolution have rarely prevented males from de facto abandoning a wife if alternatives are sufficiently attractive, so we are likely to learn a great deal about power, especially over long stretches of historical time, if we can identify variables that affect the relative ability of people in a bargaining relationship to prosper if they abandon it. Norms against marriage dissolution, however, is part of our story because we should expect these to become more salient if women are unlikely to enter marriage, and accept all the duties that come with it, unless they have some insurance against dissolution.

In modern times, the obvious equivalent of “walking away” from a family is divorce, and much recent scholarship in fact centers on that notion.¹² But marriage is not a precondition for forming households, and nor is divorce the only way to walk away from a marriage. In hunter gatherer societies, men and women formed households, or families, but they did not get married in the modern meaning of the term. Still, they were clearly in a bargaining relationship. In agricultural societies marriage became ubiquitous, and the norm against divorce was strong. Nevertheless, it was common for men to withdraw from their family responsibilities, not merely through infidelity and diversion of time and resources, but sometimes by altogether leaving the family to its own devices, physically and economically.

The ability to walk away in this sense depends critically on having skills and assets that can be applied easily outside the household. If all of one’s assets are tied to the household, the loss of leaving can be prohibitive. In agricultural societies, as we have argued, physical capacity for hard labor is an asset that can be applied outside the household as well as inside it, whereas

¹² Braunstein and Folbre 2001; Lundberg and Pollak 1996.

investments in children are specific to the household. This is true certainly until children are old enough to work for others. Children also impose a cost on women in the remarriage market in that another man's children do not provide the same psychic benefit as one's own offspring.

Aside from outside options, leaving or neglecting the family also means that any household-specific investment will be lost, or at least seriously devalued. Whatever time and money the male has spent on the family in the past is not likely to yield much of a return in the future unless he remains in the household. To the extent that children's economic or emotional stability requires continuous investment through a certain age, the departure of their father prior to that age reduces all previous investment in their wellbeing.¹³

We conjecture that men's outside options have been greater than women's throughout much of history because women, by most accounts, have a *comparative* advantage (though not necessarily an *absolute* advantage) in household-specific assets, while men has a *comparative* advantage in physical capacity for hard labor, which is a mobile asset. When the production technology, or mode of production, generates high demand for physical labor and a premium on having many children, as in agricultural societies, the gain from having a more or less complete division of labor is high and bargaining power will heavily advantage the male. But there is no reason that either sex should have a comparative advantage in mobile assets that require little or no hard physical labor, such as social and intellectual skills that are used intensely in most service production. The gain from a complete division of labor in the household will therefore be smaller, and women will have a reason to avoid it precisely because specialization for women means less power.¹⁴ The result is that the outside options of women improve, and men

¹³ See the Appendix for a formalization of this logic in terms of a Rubinstein bargaining game.

¹⁴ This implies that the game is in fact a dynamic one because the endowment of assets, which depends on specialization, is partly a function of prior choices by the household members. We discuss this issue in greater depth in the appendix..

consequently have a smaller bargaining advantage. Since the efficiency gains from specialization are lower, bargaining considerations will become more salient in determining the division of labor.

There is an important knock-on effect of a less complete division of labor, which is that the gains from marriage diminish. As the outside options of women improve, the bargaining space, or marital surplus, diminishes. If other factors that influence the marital surplus – such as emotional attachment, compatibility of personalities, consumption preferences, tolerance for disagreement, and so on -- vary in ways that are in the aggregate random, the probability that the sum of outside options exceeds the value of the marriage will go up. As we set out more formally in Chapter 5, this increases the incidence of divorce and expands the size of the re-marriage market. When this happens the opportunities outside the marriage improves, and the incentives of the spouses to work to improve their outside options also increase, which reduce the division of labor, etc., thus moving society to a higher divorce, lower division of labor equilibrium.¹⁵

It is our contention that bargaining power translates into inequities between the genders that are “codified” in norms of behavior. These norms, we suggest, are amplified by the socialization behavior of caring parents who are preparing their sons and daughters for adulthood. In agricultural societies, with a stark gender division of labor and a strong bargaining advantage for men, socialization of girls will come to reflect this inequity in ways that not only maximize girls’ position in the marriage market, but make it easier for females to accept their subordination in the marriage. By the same token, our “mode of production” explanation implies that caring parents will socialize boys and girls to have more equitable gender norms as the

¹⁵ This logic also points to a motivation that is difficult to separate from bargaining power: insurance against divorce. The more likely a marriage is to end in divorce, the greater the incentive to cultivate outside options by investing in marketable assets.

bargaining advantage of men is eroded in the course of the transition to a service-based economy.

As summarized in Table 2.1, the argument implies a curvilinear relationship between economic development and gender equality. Historically there was a sharp rise in inequality from hunter-gatherer societies to agricultural societies, and then a gradual reduction of inequality as we move to industrial and then postindustrial societies. We do not deny, of course, that political mobilization or institutions are unimportant. Indeed, later in this chapter we underscore their importance for modern democracies. But in the long sweep of historical time, this line of argument emphasizes the political and institutional effects of underlying power relationships between men and women. Nor do we want to suggest that there are no relevant distinctions in

Table 2.1. Modes of production and gender inequality

		Demand for non-manual labor	
		Low	High
Demand for hard physical labor (“brawn”) and household-specific skills.	Low	Hunter-gatherer: High equality between the sexes.	Postindustrial society: High equality in bargaining power. Modest division of labor, and equitable gender norms.
	High	Agricultural society: Male dominance. Sharp division of labor, and patriarchal norms.	Industrial society: Sharp division of labor, but emerging opportunities for women outside the family.

the mode of production within each of these categories. Our argument implies that such differences will matter for gender relations and norms, and in subsequent chapters we will make more fine-grained distinctions between skill-based modern economies.

2.3. Modes of Production

Different modes of production affect inter-gender bargaining power, and, by extension, the evolution of social norms. Both the male and female roles may be equally vital to the survival of the family but the relative bargaining power of the man and the woman is shaped instead by the reversion point for each in the event of family dissolution. Agrarian production generates sharp asymmetries between the sexes in life prospects upon the break down of a family, which should lead to pronounced differences in gender norms. These asymmetries are less pronounced in hunter-gatherer and in industrial and post-industrial economic systems, leading us to expect gender norms to be the most stark in agrarian societies.

2.3.1. Hunter Gatherer Economies

Our knowledge of hunter-gatherer systems is limited to archeological evidence and ethnographic reports of times past, and to information about a few extant hunter-gatherer societies that survive at the edges of agrarian communities in Africa, Asia, and Latin America. But from what we have gleaned about these societies, women seem to have had the ability to survive independently of a male provider.¹⁶ In their book *Woman the Gatherer* (1981), Frances Dahlberg and her collaborators revised the conventional wisdom that *Man the Hunter* (Lee and Devore 1968) provided the food, pointing out that women typically provided three quarters or more of the daily caloric intake of the community with the tubers and other plant foods they

¹⁶ See Leacock 1978; Zihlman 1989.

gathered. The protein provided by men might have been particularly desirable, and men might have been able to gain status and access to women by sharing meat; but the meat was not strictly necessary for survival, especially in areas with protein-rich pulses. Moreover, because meat would have been hard to store, hierarchies among men are likely to have been relatively underdeveloped and fluid, and based on hunting skill or, with population density, warrior prowess rather than on heredity.

Physical anthropologists characterize hunter-gatherer family structure as serial monogamy, in which a couple might break up at the instigation of either side and either partner may “remarry” several times in a life time. Divorce does not seem to be particularly discouraged or uncommon in the hunter gatherer societies we know about, and divorce does not lead to a sharp drop in the woman’s livelihood. Women share child care duties among themselves, and grandmothers, by providing supplemental childcare and food gathering, may be more important than husbands to the survival of the young.¹⁷

For the purposes of our bargaining model, it is crucial that divorce has a roughly symmetrical effect on both members of a couple in a hunter-gatherer society. The woman’s livelihood and child care arrangements would be largely unchanged, though she might have an incentive to remarry to have privileged access to meat. She continues to rely on her gathering work for nourishing herself and her children, and having existing children does not seriously damage her chances in the remarriage market because she and her circle of female kin and friends continue to bear primary responsibility for their care. Neither does the presence of these children seriously impede her ability to gather food. In this setting marriage does not provide an overwhelming economic advantage, and it is unsurprising that they often did not last.

¹⁷ Hawkes 1993; Hill and Murtado 1997; Hrdy 1981, 1999; Pinker 1997.

Although this picture is somewhat idealized, the crucial point is that, to the extent that women are, along with men, economically viable outside of marriage, the bargaining relationship between men and women is likely to be relatively equal within marriage, and marriage itself is a less sacred and important institution. Both partners in a relationship have investments—he in hunting, she in gathering and child care—that are more or less equally mobile across family units. Although a new husband will not likely value her children from a previous marriage, she retains the ability to provide for them and for herself across marriages.

To the extent that women are economically viable without a male patron, we expect parents to have no particular reason to socialize their daughters to behave differently from their sons, apart from the economic specialization entailed in hunter-gatherer societies. Where marriage is not necessary for livelihood, it need not last a life time; and parents worry less to ensure that their daughters marry the best possible mate. Because female economic autonomy puts males in a weaker position to demand the “female virtues” of virginity, chastity, and quiet subservience, we expect social norms will less likely form around these male preferences.

2.3.2. Agrarian Economies

Though gradual, the shift from hunter-gatherer to sedentary agriculture introduced a profound shift in the bargaining relationship within families. By extension, we argue, the Neolithic revolution set the stage for a very different set of social norms. With population growth and land scarcity, cultivation of food became more labor-intensive, bringing with it a premium on male brawn in plowing and other heavy farm work. Within the family unit, an efficient division of labor utilized the man’s physical strength to cultivate food, while the woman specialized in bearing and rearing children, processing and preparing food, making clothes, and other family duties -- including helping in the fields when feasible. Though a woman’s work

was crucial to the survival of the family, her role no longer gave her economic viability on her own.

We argue that it was the loss of economic independence that gave rise to social norms that made marriage the ultimate goal for a woman, for without marriage, a woman's survival was at risk. If the family were to break up, the man could take his brawn and start a new family. The women, having invested her human capital in children specific to that marriage, would have less rather than more value on the marriage market after making her investment. While she could take her children into another marriage, there is much evidence that males have a strong, "hardwired", preference for their own offspring.¹⁸ While the male's human capital increases with the experience of farming, the external value of the female's human capital therefore declines with every child.

We can see here how the issue of credible commitment enters the bargaining story. Without a credible male commitment to marriage women could be made worse off in the case of divorce than without entering marriage and having children in the first place. Since opportunities for women outside marriage were few, and with no insurance against violence and old age, the extent of the male commitment was of course corresponding limited. Legal provisions made divorce difficult, and alimony made it costly, but this did not prevent many men from effectively establishing independent lives outside the household, leaving their wives and children to live on a bare minimum. Yet, we can discern here the origins of a phenomenon that at first blush can appear paradoxical: Women are often the most vigorous defenders of social norms and legal codes that people often (rightly) view as manifestations of female subordination. As we will see in a later chapter the modern gender gap, in which women hold less traditionalist

¹⁸ Abzig 1989; Low 2000.

views on the family and politics, is a thoroughly modern phenomenon that is still limited to a relatively small number of postindustrial societies.

The bargaining power of males in agrarian societies translates into norms as parents socialize their children to make the best use of opportunities available to them. In an economy where male brawn commands a premium, a family would risk genetic obliteration in one generation if it reared daughters to resist male authority and to enjoy their sexuality on their own terms. Because in an agrarian society a woman's peak value is when she is young, fertile, and unencumbered with another man's progeny, parents would want to instill in their daughters the importance of preparing for the marriage market, for that is her single chance to secure her livelihood. Where economic efficiency gives males a bargaining advantage on account of greater mobility of their human capital from a gendered division of labor, families do best by socializing their daughters to cultivate the femininity that will help her win her a good man, and the docility that will help her to keep him. Because human history has been agrarian for most of recorded time, these are the values—let's call it patriarchy--most familiar to humanity.

2.3.3. Industrialization

Mechanization and the widespread introduction of labor saving devices have ushered in a new era of complex and interdependent markets; but for our purposes, the most important *long-term* effect of industrialization has been to increase female bargaining power by reducing the premium to brawn. However, early industrialization may actually *reduce* rather than increase female labor force participation, if we include piece work by farmers' wives as market labor, and given that in early stages of industrialization the available work is often loud, dirty, and dangerous—perhaps still claiming a premium on male brawn.¹⁹ The emergence of more varied

¹⁹ Claudia Goldin (1991).

kinds of market work eventually draws women into the labor market, particularly with the rise of service jobs in retail, banking, insurance, and clerical work that accompany later phases of industrialization. In time, the opportunity costs of keeping women at home overwhelm the inertial attachment to a gendered specialization of labor.

We take the growing acceptance of gender equality in industrialized societies to reflect the diminution of the male brawn premium that existed for millennia of agrarian history. By the late 19th and early 20th centuries, women in developed countries were no longer owned, literally, by their fathers and husbands; and they were given the right to vote. As women moved increasingly into labor markets, the idea that both parents are responsible for child rearing has gained acceptance, and views that women are less capable than men have become taboo. Men finally found it in their interests to allow women to work in order to supplement the family income as remunerative opportunities for female labor increased.²⁰ In addition, female bargaining power within families has grown as their exit options to marriage have improved. In response to this different opportunity structure for females, parents have adapted by providing their daughters with more educational preparation and by teaching girls how to survive in a competitive labor market, not just to snare a husband for life.

A male premium lingers, however, in industrial societies. Not only do some manufacturing processes utilize human strength; more importantly, many manufacturing processes can make use of increasing returns to human capital where, the longer one does the job, the better one gets at it. Firms may want to exploit this phenomenon by committing to long term employment contracts and investing in the employee's on-the-job training and skills acquisition. This can hurt the employment chances of women, given their higher probability of quitting or reducing their hours to bear and rear children. Elsewhere, we have argued that

²⁰ Geddes and Lueck (2002).

economies with strong specific-skills production processes will discourage women from the labor market by increasing the costs to the employer and employee of career interruption on account of family work.²¹ Subtle differences in social norms might follow from these differences in opportunities across the sexes. Japanese girls, for example, are still taught to speak in a feminine and deferential way—two characteristics that remain virtually synonymous in Japan. This is not surprising given the expectation of lifetime employment in Japan’s labor markets, and therefore the strong preference for employees that will not burden the company with time off for child birth and rearing.

2.3.4. Post-Industrial Service Economies

Women’s work opportunities expand even further in post industrial service economies with the availability of general skills jobs not characterized by increasing returns to specific human capital and that therefore do not penalize women for career interruption on account of child bearing and rearing. Post industrial employment includes for us both jobs in the service sector, such as retail, finance, insurance, health care; as well as clerical work in the manufacturing industry. What sets post-industrialization apart from service employment expansion under industrialization is that service sector employment – especially in social and personal services – grows at the same time as industrial employment declines, a pattern we document below. During industrialization, female clerical work in the manufacturing sector may be suppressed in countries with strong labor protections, because companies need to deploy otherwise redundant males to whose employment they are committed. Much of Japan’s clerical work, for example, is done by men in “lifetime employment” careers.²² But the move towards a post-industrial economy creates an irresistible force of change: when employing women became

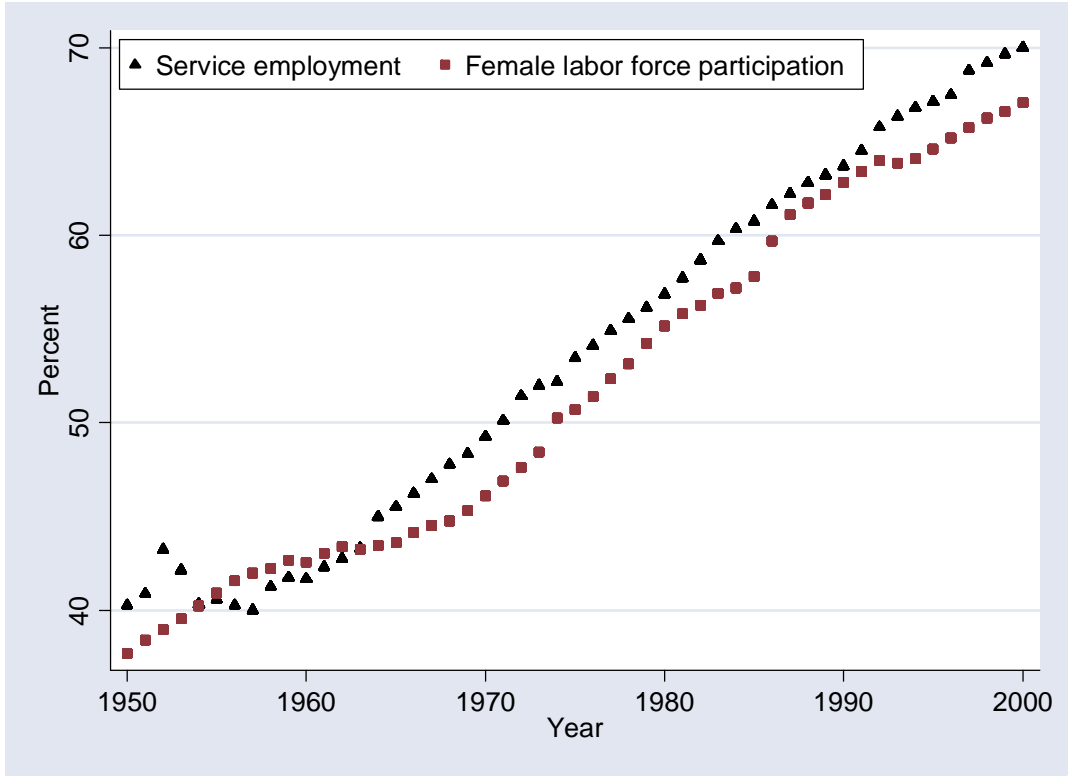
²¹ Iversen and Rosenbluth 2006; Iversen, Rosenbluth and Soskice 2006.

²² Brinton 2007.

as efficient as hiring men—or more to the point, when not employing capable women became inefficient—women began to move into the work force in large numbers.

The connection between service sector employment and female labor force participation is a strikingly close one. Figure 2.1 shows that female labor force participation in OECD countries closely tracks the rise in service employment. During the 1950s and 1960s most of this employment was linked to a female life-cycle pattern where women left the labor market when they married and started families and re-entered as the children reached adulthood. Women never became financially independent from men, and they had strong incentives to favor policies that maximized the income of the male breadwinner and strengthened the family as an institution. This continues to be the case for many women, but starting in the 1970s the rising opportunities for paid employment gave some women an option of real financial independence, which in turn led to a rise in divorce rates as many women left bad marriages. It is this combination of rising divorce rates and prospects of financial independence, we argue, that is the origin of new gender norms and socialization patterns.

Figure 2.1. Service employment and female labor force participation, 1950-1995 (OECD)



Source: OECD, *Labour Force Statistic* (Paris: OECD, various years).

We have explained the link between service employment and female labor force participation in terms of two factors: a smaller brawn premium in the services industry, and the high general skills content of jobs in much of the services industry, which reduces the costs to employers of career interruption associated with specific skills manufacturing.

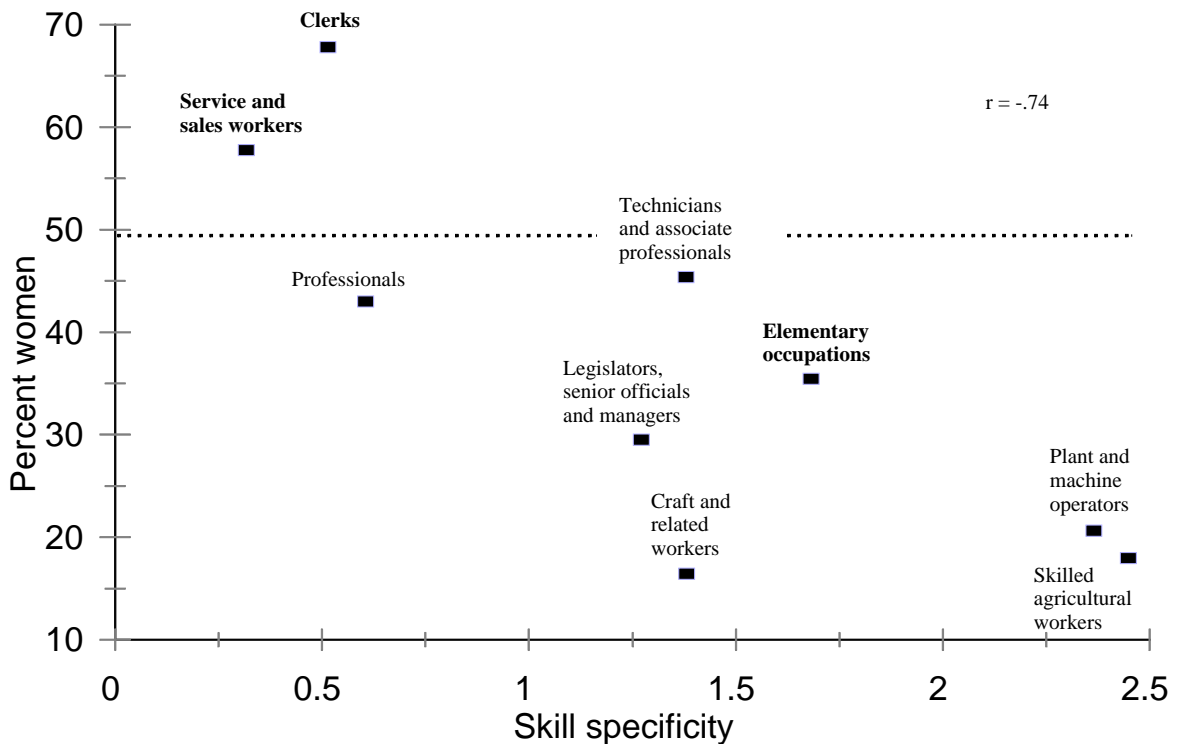
The clearest evidence for the latter thesis comes from data on the gender composition of particular occupations, based on ILO's standard classification of occupations (ISCO-88). Ignoring military personnel, ISCO-88 contains nine broad occupational groups, which are subdivided into numerous sub-groups depending on the specialization of skills represented within each major group. The number of sub-groups varies according to the size of the labor market covered by that major group, and the degree of skill-specialization within each group. By dividing the share of sub groups in a particular major group by the share of the labor force in those groups we can get a rough measure of the degree of specificity of skills represented by each major group.²³ In Figure 2.2 we have related this measure to the percent share of women in the different occupations for the most recent year available (2000). The numbers are averages for the 13 countries where we have comparable ISCO-88 data. Bolded occupations are those that have disproportionately large numbers of low-skilled and low-paid jobs.

Note the strong negative relationship with men dominating occupations that require highly specialized skills – a pattern that is repeated in every one of our 13 cases. Not surprisingly these jobs are in agriculture and manufacturing rather than in services.

Conversely, while men on average participate more in the labor market than women, women are relatively overrepresented in service sector jobs that require general skills – a clear

²³ See Iversen and Soskice 2001 for details. It may be objected that since occupational distribution of workers have changed since the introduction of ISCO-88 the skill-specialization of each group may simply reflect the depletion of some groups and expansion of others. However the patterns present below are very similar if we instead use employment data from the 1980s.

Figure 2.2. Skill specificity and occupational gender segregation.



Source: International Labour Organization, “Labour Statistics Database. ILO 1998-2004.

sign of comparative advantage (even as many of these jobs are low skill as indicated in bold).²⁴

The link to the previous figure is straightforward: the occupations in which women are well represented are the ones that have expanded most rapidly over the past 30-40 years, propelling women into the labor market and unambiguously improving their economic independence from men, as argued by Goldin and others.

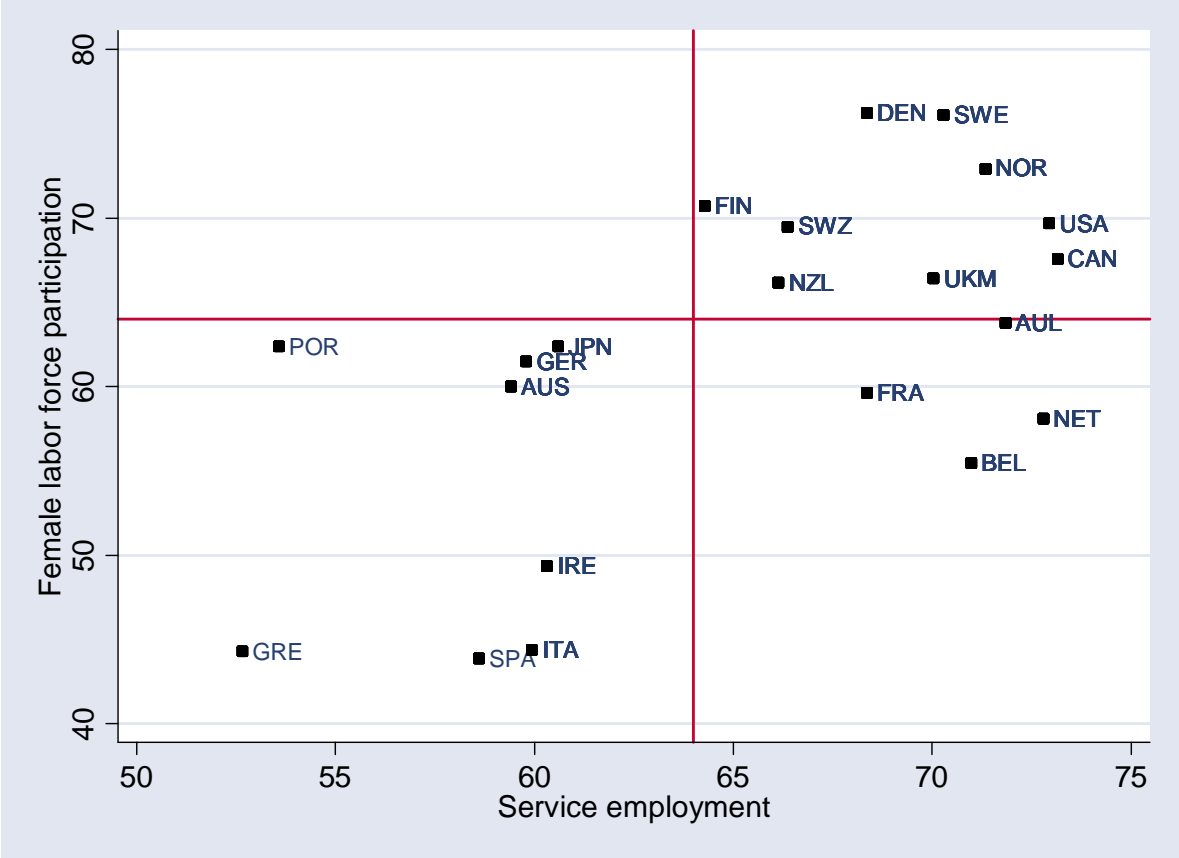
²⁴ It may be objected that since occupational distribution of workers have changed since the introduction of ISCO-88 the skill-specialization of each group may simply reflect the depletion of some groups and expansion of others. However the patterns present below are very similar if we instead use employment data from the 1980s.

As with the other economic systems we have reviewed, post-industrial societies tend to have a set of gender norms that reinforce the most efficient strategies for securing a stable livelihood for children of both sexes. With the possibility of independent livelihood outside of marriage, the bargaining position of women has improved, leading to a steady assault on patriarchal norms. Parents in developed economies no longer fear that assertive daughters will be consigned to lifelong poverty and misery on account of losing out on marriage; itself no longer a prerequisite to her survival. We expect instead for them to teach their daughters to optimize across the marriage and work markets to ensure their long-term welfare and happiness; and for the marriage market to be a smaller part of the welfare equation in the minds of most parents.

This is not to deny that the opportunities for paid female employment are still shaped by domestic economic and political conditions. This point is illustrated in Figure 2.3, which shows the cross-national relationship between service employment and female labor force participation. The cases where both service employment and female labor force participation is high in the 1990s are the Nordic countries and the liberal market economies. The latter rely heavily on general skills and flexible labor markets, which offers good opportunities for female employment, although there is a strong division among women along class lines. Indeed, the availability of low paid services is one of the conditions for the expansion of market-based services. This is not true in Scandinavia with more reliance on industry and occupational-specific skills, and highly compressed wages. In these countries female employment is enabled by a large feminized public service sector (about 80 percent are women), which combines relatively secure employment with flexibility that allows women to balance work and family. Public sector employment is clearly politically constructed, a fact to which we will return in Section 5. The

main point we wish to make here is that the jump in female employment between manufacturing and services may be as large as that between agriculture and manufacturing, with profound implications for social values about the proper roles of men and women in the economy.

Figure 2.3. Service employment and female labor force participation (1990s)



Source: OECD, *Labour Force Statistic* (Paris: OECD, various years).

2.4. Gender Norms and Human Mate Selection

This section introduces empirical data to test the proposition that norms, over long periods of time, reflect the bargaining relationship between the genders that economic structure and organization imply. Ideally, long-run panel data on gender stereotypes would allow us to evaluate how production structures shape attitudes towards women and their “proper roles”

across countries and within countries over the long duree. No such data exist. Instead, we make use of David Buss's study of human mate preferences in 37 cultures (Buss 1989) to see how labor market opportunities for women affect gender stereotypes with respect to the ideal mate.²⁵ David Buss, an evolutionary psychologist, used his data to make the point that human mate preferences are hard wired and are therefore remarkably uniform across cultures. While this is undoubtedly true for many aspects of mate preferences -- including good looks, emotional stability, good health, favorable social status, and even good financial prospect -- some of Buss's variables refer to social aspects of gender relations that our argument is designed to explain. While we agree that norms are not a reflection of culture, we expect socially malleable norms about desirable mate attributes to change as the economic independence of women increases.

There are three variables in the Buss data that are candidates for such an interpretation: the importance attached to chastity, being a good cook and housekeeper, and desire for home and children (referred to as simply "desire for family" in Figure 2.4). In male-dominated societies, especially agricultural ones, chastity is a norm that restricts the use of the only mobile "asset" of women: their sexuality. An inviolable norm of chastity restricts sex to an activity that can only occur inside the marriage, and thereby also restricts the ability of women to use sex for bargaining purposes. Of course, the limits of norms are constantly tested and sometimes broken -- much of world literature would not exist otherwise! -- but societies where men hold most of the power can be expected to develop norms of chastity as an expression of such power. In postindustrial societies where women have high mobility out of a marriage, on the other hand, chastity is an unsustainable, and inefficient, norm. If men insisted on virginity in this context,

²⁵ The 37 cultures are: Nigeria, South Africa (whites), South Africa (Zulu), Zambia, China, India, Indonesia, Iran, Israel (Jewish), Israel (Palestine), Japan, Taiwan, Bulgaria, Estonia, Poland, Yugoslavia, Belgium, France, Finland, West Germany, Great Britain, Greece, Ireland, Italy, Netherlands, Norway, Spain, Sweden, Canada (English), Canada (French), USA (mainland), USA (Hawaii), Australia, New Zealand, Brazil, Colombia, Venezuela.

they would severely limit the pool of potential mates. Hence, the movement from agricultural to postindustrial economies should be associated with a decline in the importance placed on chastity.

If we are right that females were economically viable without a male patron in hunter-gatherer societies, and this is the “environment” of early evolutionary adaptation, there is also no reason men and women are genetically coded to have mate preferences that reflect a particular sexual division of labor. It makes good sense for men to seek women who are good cooks and housekeepers, or have a strong desire for home and children, in societies where the structure of the economy induces a strict “traditional” gender division of labor, but not in societies where women have economic opportunities outside the family that rival those of men. In these cases, men who only consider women with traditional homemaker skills will again severely limit the available market for desirable mates.

The malleability of sexual norms, and certain mate preferences, is in fact reflected in the Buss data. For example, when respondents are asked about the importance of female chastity on a scale ranging from “3” (indispensable) to “0” (irrelevant or unimportant), the average for former Yugoslavia is 0.08 while the average for China is 2.61 (referring to the mid-1980s). The variation in the variables “good cook and housekeeper” and “desire for home and children” is somewhat lower, but still considerable: Between 1.1 and 2.1 for the former and 0.9 and 2.8 for the latter (again, the feasible range is from 0 to 3). Buss’ emphasis on constancy notwithstanding, variation of this magnitude invites for explanations such as ours that relate variability in gender stereotypes, including mate preferences, to the relative economic opportunities available to men and women.

The Buss data were collected from 37 “cultures,” which generally coincide with the boundaries of nation-states and represent a range of geographic regions, ethnicities and levels of development. The dataset consists of 10,047 individual-level observations, which are averaged for each of the 37 cultures. We focus on 31 of these cases because they refer to countries (not ethnicities) for which we have comparative data on potential independent variables. In the case of the U.S., Buss, Shackelford, Kirkpatrick, and Larsen (2001) build a data set from existing surveys dating back to 1939, and we make some use of these longitudinal data to examine cross-time trends. The individual-level data are unfortunately of little use for our purposes because they contain virtually no relevant political economy variables.²⁶

Buss and co-authors emphasize the relative cultural universality of mate preferences (including male preference for chastity and beauty and female preference for males with more resources), while we note the very significant changes in the three variables. Buss, Shackelford, Kirkpatrick and Larsen speculate briefly about the causes of these changes (the pill in the case of chastity and increased use of domestic help in the case of the good cook and housekeeper variable), but we see the changes to be closely related to broader structural-economic differences across time and space. Mate preferences should be quite different in agricultural societies compared to industrial and especially service-intensive economies because of differences in the economic position of women. Where women face good labor market prospects, they are less reliant on finding a spouse who can support them, and attributes such as chastity or desire to care for the family ought to decline in importance as male mate selection criteria.

²⁶ While an invaluable data source, there are other limitations of the data. The samples are not representative of the populations in each country, and rural, less-educated and lower-income areas in particular are under-represented. Furthermore, sampling techniques varied widely across countries; in some countries only high school students were interviewed. In another, surveys were taken of couples applying for marriage licenses, and in another, respondents were gleaned from newspaper advertisements.

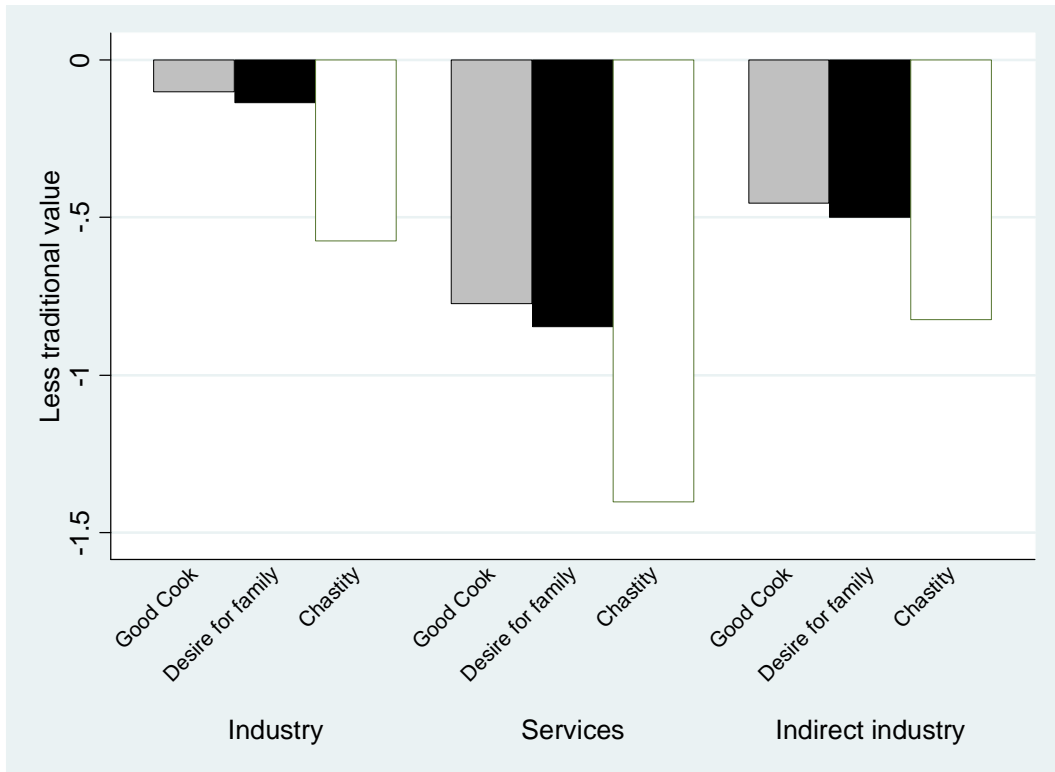
In fact, empirical evidence bears this out: mate preferences seem to change with the structure of the economy. In our simple cross-national OLS analysis, presented in Appendix B Table A2.1 and illustrated in Figure 2.4, the exogenous sector variables are the shares of total employment in industry and services (the dependent variable, again, varies between 0 and 3).²⁷ Since those not employed in these sectors are engaged in agriculture, agriculture serves as the reference group. In a simple regression with industrial and service employment as explanatory variables, both reduce the emphasis adults place on traditional values. But the direct effect is much stronger, and statistically significant, for services. While this seems to suggest that it is the service economy, not the industrial economy, that transforms norms, one has to be cautious with such an interpretation because industrial employment and service employment are compositional variables that rise in tandem through long periods of economic history (at the expense of agriculture). Indeed, the initial rise of services came *as a result of* the industrial revolution, and it was not until the 1960s that the expansion of services started to be associated with a decline in industry in some countries. In Figure 2.4 this is shown by the notable indirect effect of industrial employment. But the weak direct effect of industrial employment *does* tell us that the rise of manufacturing jobs has not always been a boon to female employment because these jobs tended to emphasize brawn or specific skills, with the exception of some low-skill occupations (elementary occupations in Figure 2.2). Service employment is the mechanism through which industrialization had an effect, and it becomes an exogenous engine of change during the period of post-industrialization from some time in the 1960s (in most OECD countries).

The results do not change dramatically when controlling for Western culture and fertility rates (shown in Table A2.2 in Appendix B). One might suppose that the decline in traditional

²⁷ Note that although the dependent variable can only take on four values, the regression is on country averages, which is a continuous variable. The variable is bound by 0 and 3, but non-linear estimations do not improve the fit.

gender norms reflects the rise of a secular and decadent Western culture, occasioned not by any economic laws of change but by excessive individualism, an explosion of popular culture, and lack of moral leadership. Yet it is only in the case of chastity that the Western dummy seems to add explanatory power, and even here it does not eliminate the importance of economic sector. Fertility rates seem to matter even less, although it is common to suppose that it is the pill, and the accompanying decline in fertility, is what has caused a transformation in gender norms. In the case of chastity, the effect of the fertility variable is actually in the wrong direction.

Figure 2.4. The effect of sector on support for traditional values (negative values indicate less traditional values).



Notes: Each bar shows the predicted effect of changing sectoral employment from the lowest to the highest values observed in the Buss sample of countries based on the regression results in Appendix B. The first two groups show the estimated *direct* effects of industry and services. The last group shows the estimated *indirect* effects of industrial employment, which are calculated by multiplying the coefficient on industry when service employment is regressed on industry employment (.86) with the coefficients on the direct effects of services.

Source: Buss (1989)

While the importance of the employment structure stands up to controls, it is true that the composition of employment is almost perfectly co-linear with economic development, which makes it impossible for regressions to control for development. A broader process of economic development could be driving the story in some sense, and certainly economic development is correlated with female labor market opportunities. Yet we think it is instructive to distinguish the effects of industry and services on norms because they matter in quite different ways as we

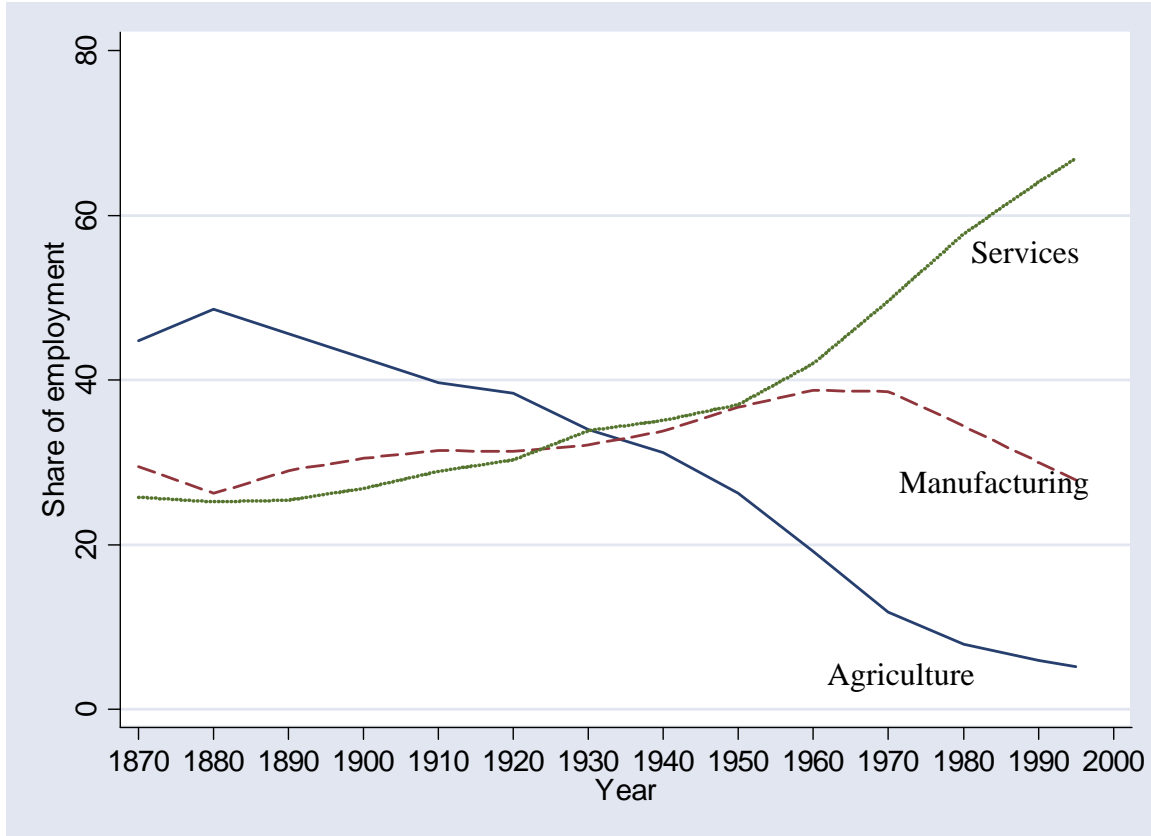
have shown. For more than a century, industrialization was the engine of economic development in Europe, but the transformation of gender norms was glacial compared to the effect of post-industrialization in the past four decades. The reason norms changed with industrialization can be attributed almost entirely to the accompanying rise in services. Considering that many manual jobs in manufacturing were as unappealing to women as agricultural labor, this is unsurprising, and it shows why it is not sufficient to simply focus on economic development. It is not wealth, but opportunities in the labor market that matter.

Because industrialization did not merely replace agricultural labor with tough manual jobs in the manufacturing sector, but also vastly expanded the number of secretaries, retailers, maids, accountants, insurance agents, merchants, and bankers, it had a transforming effect on gender norms. This is illustrated by the long-term employment trends depicted in Figure 2.5. Starting around the beginning of the industrial revolution in 1870, the graph shows how the rise of industrial and service employment went hand in hand, at the expense of agricultural employment, until the 1960s (for a sample of 17 OECD countries). From then on industrial employment begins to decline (along with agriculture), while service employment expands at an even faster rate.

Figure 2.6 illustrates this curvilinear relationship using both the intertemporal data on employment from Figure 2.5 (by decade) and the cross-sectional figures for the countries in the Buss data (by country name). Note from the inter-temporal data how employment in industry and services rise in tandem until industry accounts for about 40 percent employment. At that point services start to grow at the expense of industry. Given that a very similar pattern holds for the cross-sectional data, it is sensible to treat countries in the Buss data as if they are on different

developmental stages. With that assumption in mind we can then use the cross-sectional regression results to simulate mate preferences through time. In addition, because some data on

Figure 2.5. The sectoral composition of employment in 17 OECD countries, 1870-1995.

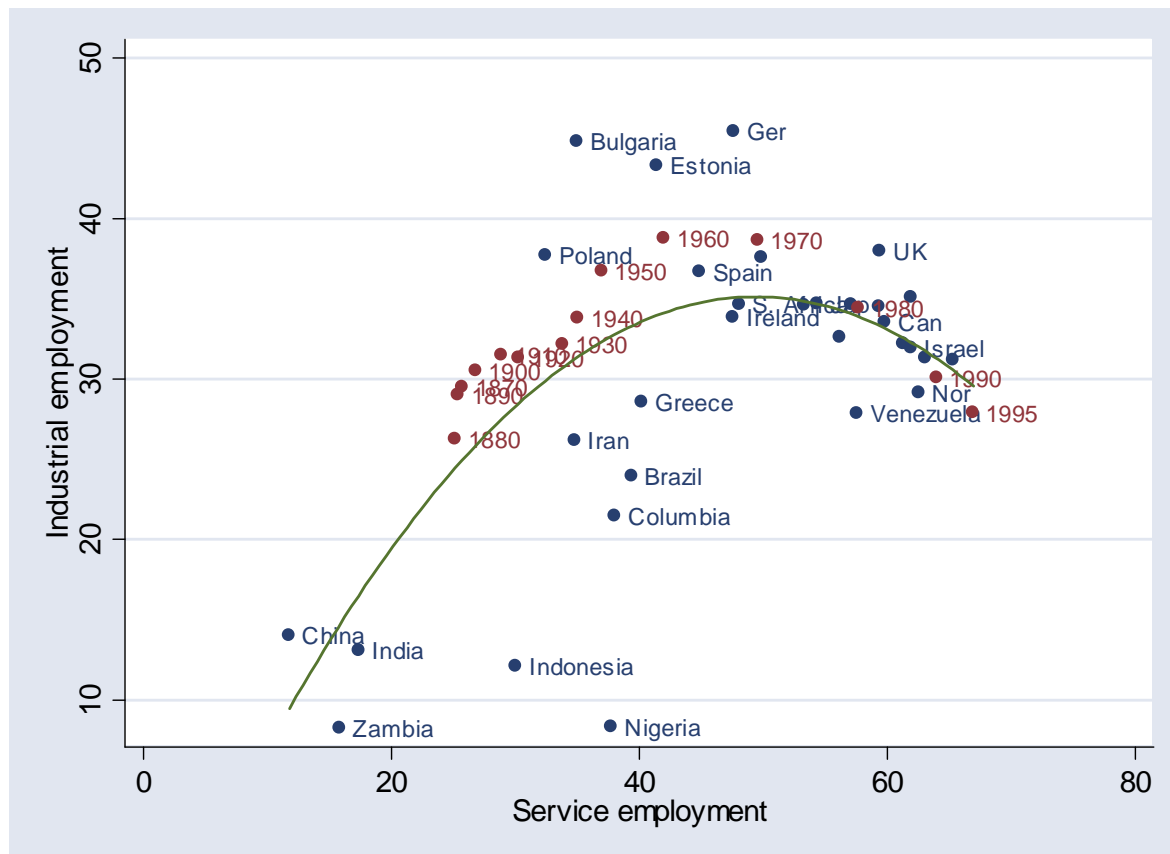


Note: The observations are averages for 17 OECD countries by decade.

mate preferences are available over time in the U.S. case we are also able to check whether the historical simulations match the actual data in this country.

Figure 2.7 shows the results of this simulation. If the key assumption holds (i.e., countries in the Buss data are on different developmental stages), it is clear that manufacturing employment as such has not been particularly conducive to the economic empowerment of women, or to gender equality, but the expansion of services that accompany industrialization has. Roughly half (49%) of the total estimated change in mate preferences since 1870 occurs during

Figure 2.6. The relationship between service and industrial employment



Notes: The country observations are for the countries in the Buss data (some names omitted); the decade observations are averages for 17 OECD countries. The solid line is the predicted relationship when regressing industrial employment on service employment and its square.

the 90 years of industrialization from 1870 to 1960. The rest occurs during the 35 years of deindustrialization from 1960 to 1995. So while industrialization clearly helped transform gender norms, deindustrialization greatly accelerated this transformation.²⁸ Changes in the

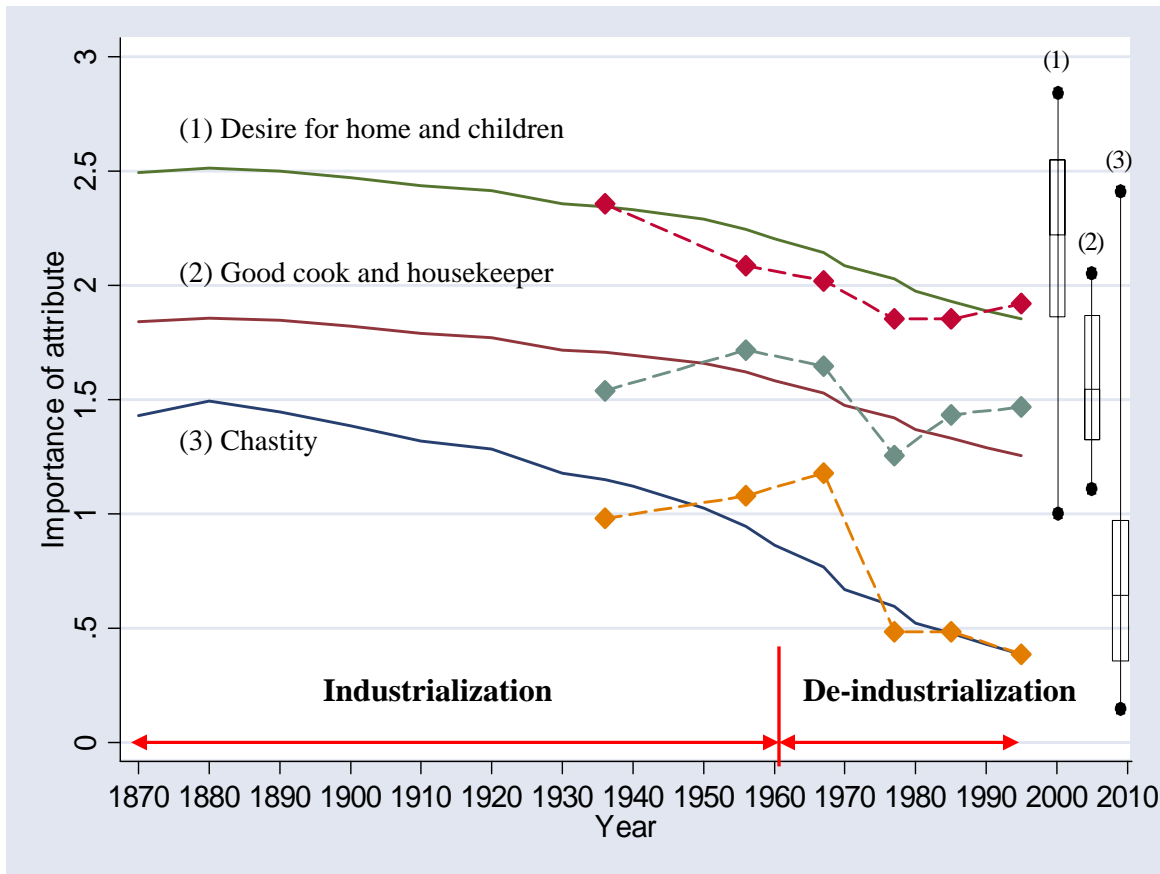
²⁸ The total estimated changes in values as a result of changes in the employment structure correspond to roughly one inter-quartile difference on each of the preference variables in the cross-sectional data (see the “box and whisker” plots on the right in Figure 6). This adds to the recent literature on deindustrialization, which argues that the rise of services has transformed the welfare state and redistributive politics (Esping-Andersen 1990; Iversen and Wren 1998, Iversen and Cusack 2000) and led to a rising gender gap in social policy preferences (Iversen and Rosenbluth 2006).

sectoral structure of the economy, especially the rise of general skills services, go a long way towards explaining, or at least predicting, changes in mate preferences.

Again, our simulations assume that the cross-sectional regression results are applicable across time, and we do not have any long-term survey data similar to those in Figure 2.6 to test this assumption. We do however have mate preference data for nearly half a century (1939-1996) in the case of United States. The evolution of preferences across the three variables in this case is shown by dotted lines in Figure 2.7. They generally follow the simulated trend, and one should not make too much of deviations for individual years since the samples are small, unrepresentative, and not consistently polled over time. In 1956, for example, the numbers are based on just 120 undergraduate students at University of Wisconsin at Madison. Other samples have different sizes and are from different universities. Giving these limitations, it is actually quite remarkable that the changes in the US are so similar to the simulated changes based on the cross-sectional data.²⁹ It gives us confidence that economic structure, or mode of production more generally, is historically linked to changing attitudes about desirable attributes in a marriage partner. Because the effect is so most intimately related to service employment where women are at the least disadvantage in the labor market, the causal mechanism that we have posited also seems to be operating.

²⁹Since the U.S. is an early industrializer, with only 18 percent of the labor force in agricultural employment by 1939, employment in industry and services are almost perfectly negatively correlated ($r=-.85$). We can therefore use service employment as a good proxy for the employment structure in this period, and it turns out to be strongly positively correlated with the dependent variables ($r=.8$, $.6$, and $.9$ respectively). Of course, we cannot exclude other causes given the small N, but the combination of evidence tells a story that is very supportive of the view that gender norms change with the relative economic mobility of men and women, which is in turn determined by the skills required to participate effectively in the economy.

Figure 2.7. Simulated mate preferences in 17 countries, 1870-1995.



Notes: The solid lines are the predicted preferences for particular attributes in potential mates based on the regression results in Table 2.2 and historical data on the average sectoral composition of employment. The connected diamonds are the averages for the U.S. based on actual historical data on the rankings of preferred attributes. The scale on the y-axis uses the entire range of the preference variable. The “box and whisker” plots on the right show the median, the range, and the inter-quartile difference for each variable.

In particular, we have suggested that the availability of remunerative employment for women changes the dynamics of gender socialization. Instead of rearing daughters solely for the marriage market, families begin to think of their children’s economic chances more equally. The social glorification of virginity declines as it loses its economic grip. Being a good cook and a good parent, while perhaps always desirable attributes in a mate, become less salient and no longer the sole province of the female partner. In Chapter 5 we extend this analysis to explain individual norms and policy preferences.

2.5. Conclusions

Patriarchal values, we have suggested, may be thought of as an internalized reckoning of relative bargaining power. When the alternatives to marriage are systematically weaker for females than for their male partners, it does not require a brutish man to keep his wife in submission. If her parents and social community have done their job, she will have learned as a girl the importance of virginity until marriage (though she may not think of it as a strategy for marrying “up”) and she will have cultivated many qualities to keep her husband pleased with her (though she may not consider these qualities as a means to maintain her livelihood). For her, as perhaps for her forebears, these are not schemes but are normal, commonsensical, perhaps even morally mandated ways to live. Patriarchy, when other options are unworkable, does not require a big stick, and even great philosophers like Rousseau are fooled into believing that it is the natural order of things.

The ability to walk away from the status quo confers bargaining power that is not available to women in agricultural economies where the premium to male brawn makes inefficient, perhaps even unviable, female employment on a par with a man’s. We have argued that industrialization, and even more dramatically, the rise of the service sector, are transforming social values by providing women with alternatives to unsatisfying marriages. Once employment opportunities for women have approached those of men in quantity and quality, socialization begins to shift away from “playing the marriage market.” The declining importance of virginity, along with lower male expectations of homemaking skills in a spouse, reflect a change in the way parents prepare their children for life and livelihood.

As this value change gain momentum it accelerates other changes in society because women who do not accept subservient marital roles will be more concerned about their

bargaining power within the marriage, seek independent careers, and advise their daughters to do the same. As we will see in Chapter 5, this is likely to be accompanied by gendered political preferences where women favor government policies that facilitate their ability to balance family and careers, further undermining a stark gendered division of labor.

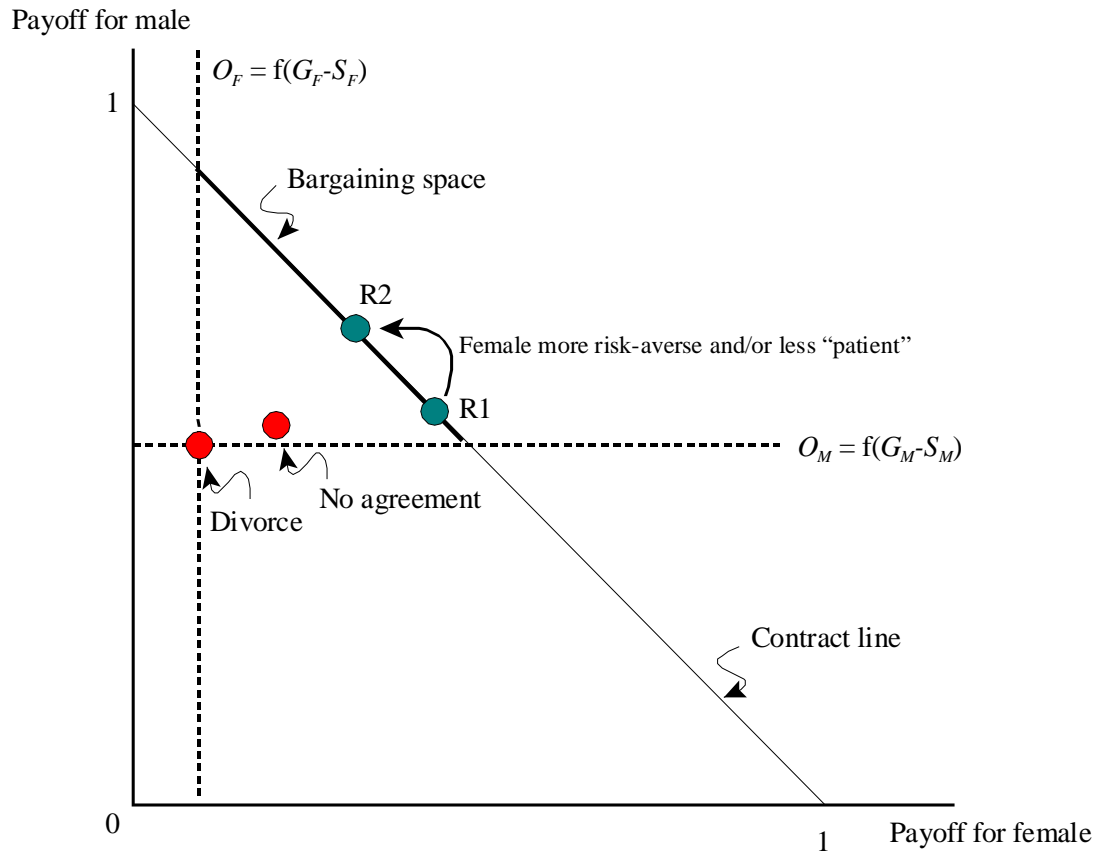
Appendix A; A brief primer on bargaining within the household

Figure A.1 shows a very simple bargaining game between a male and a female within a household, where the household itself is viewed as a contract (“marriage”). The total product of the household, broadly conceived to include all material and non-material benefits, is normalized to one and assumed to be divisible. The thick contract line is the feasible set of bargained outcomes, assuming that the household contract produces a net surplus compared to a situation without a contract. The bargaining set is bounded by the spouses’ “outside options” (O_M and O_F), which are the payoffs each partner can get if he or she leaves the household (leading to a “divorce”). The outside options, in turn, can be conceptualized as the returns on mobile or general or marketable assets (G_M and G_F) *minus* forgone returns on any household-specific assets (S_M and S_F), which are not marketable. Assuming away any first mover advantage, as well as any systematic differences in the patience of household members or their level of risk-aversion, the Rubinstein bargaining solution is simply the midpoint on the contract curve. This point is called R1 in the figure.

As long as R1 is within the outside options, the latter are irrelevant (this is called the bargaining space in the graph). By the same token a shift in the outside options will not have any effect on the outcome as long as the bargained outcome is still inside the bargaining space. The irrelevance of outside options is called the outside option principle (OOPS) in bargaining theory (Osborne and Rubinstein 1994, 128). The reason is that any threat to leave the household for the outside option is not credible as long as it is better for both to stay in the household. Non-credible threats should be ignored. Outside options may of course exceed what the marriage provides for either party, and then they are credible. During long periods of human history men

have enjoyed so much better outside options on account of their movable assets that these options may have been binding on the marriage contract.

Figure A2.1. A simple household bargaining game



But they probably did even better than that. The reason is that outside options cannot easily be separated from “inside options”. Inside options determine the division of the marital surplus within the family, subject to the outside constraints (ie. a particular point in the bargaining space). They are determined by the relative patience of the two parties in achieving an agreement – or alternatively by their relative tolerance of living with no agreement (one of the red point in Figure A.1) – and by their relative aversion to the risk that the marriage ends in a divorce after a protracted negotiation over who gets what. It stands to reason that the party to a

negotiation who has more to lose if the contract breaks down is more risk-averse. At R1 in Figure A.1, this is clearly the woman (note the distance between R1 and the divorce breakdown point). Since R1 is very close to the male's outside option, on the other hand, he can afford to be less concerned than the woman that an aggressive bargaining stance may lead to a dissolution of the marriage. Such a difference in risk-aversion shifts the bargained outcome towards the male's ideal point (say R2). The same is true for patience. If there is no agreement, the male will have access to most or all of the family's cash flow. These do not have to be shared, while the woman will find it harder to withhold the benefits of household labor. The man is therefore in a position to hold out longer for a better deal (ie, be more patient). This again favors the male and shifts the outcome towards his ideal point.

In general, while a large number of individual factors affect inside options, the ability to work away from a deal without much to lose is a major advantage, and this ability is closely related to the investments that have been made in marketable as opposed to household-specific assets. Bargaining power can therefore be roughly approximated as a function of the ratio of outside options of the spouses, which are themselves determined by the difference between mobile and household-specific assets.

An important complication to the analysis needs to be noted: the efficiency gains from marriage presuppose specialization, yet such specialization undermines the outside options of women. In the Becker model, the woman specializes completely in household-specific skills and only enters the labor market (typically on a parttime basis) when the time available for work exceeds the amount of required household labor (primarily before children are born and after they leave the household). Conversely, the male specializes exclusively in marketable skills. In the Becker model this stark division of labor is not problematic for the woman because of two

key assumptions: i) all market earnings will be shared for the collective benefit of the family, and ii) the marriage contract itself cannot be revoked. If the first assumption is violated the only way that the woman can strengthen her ability to affect the allocation of household income is by gaining access to her own stream of income, which requires entry into paid work. If the second assumption is violated, neither spouse can ignore their welfare in the event of divorce, which in turn depends on outside options and again undermines the incentive to invest in household-specific skills. The problem then is that without a credible long-term commitment to sharing and to the marriage itself, the full efficiency gains from specialization will not be realized.

Credible commitment problems have to be solved through institutions when reputation alone is not sufficient. In particular, when the potential efficiency gains from specialization are large – which we have argued is especially true in agricultural societies -- we would expect strong community and legal norms to balance the bargaining advantage of the male by establishing a set of family responsibilities for the head of the household and recognizing marriage as a “sacred” institution that can only be dissolved under exceptional circumstances. Patriarchy thus goes with strong protections of marriage as an institution, as well as with norms against abandonment by the head of the household.

Appendix B:

Cross-national regression analysis of mate preferences

Table A2.2. Mate preferences as a function of economic sector

	Dependent variable					
	Good cook and housekeeper		Desire for home and children		Chastity	
Industrial employment	-0.003 (0.005)	0.002 (0.008)	-0.004 (0.009)	0.013 (0.013)	-0.018 (0.010)	-0.001 (0.013)
Service employment	-0.014** (0.004)	-0.014** (0.004)	-0.016* (0.006)	-0.011* (0.007)	-0.027** (0.007)	-0.017** (0.007)
Western culture	-	0.084 (0.170)	-	-0.348 (0.278)	-	-0.923** (0.280)
Fertility rate	-	0.085 (0.054)	-	0.100 (0.089)	-	-0.069 (0.089)
Constant	2.293** (0.160)	1.858 (0.332)	3.006** (0.259)	2.325** (0.544)	2.823** (0.289)	2.584** (0.547)
Adj R-Squared	.451	.481	.262	.297	.576	.651
N	31	31	31	31	31	31

*Key: * Significant at .05 level; ** significant at .01 level (two-tailed test)*

Sources: Buss (1989); OECD, Labour Force Statistic (Paris: OECD, various years).

Chapter 3

The Gender Division of Labor, or Why Women Work Double Shifts

3.1. Introduction

On average, women participate less in the labor market than men, whereas they assume the lion's share of unpaid work in the household. Economists have traditionally explained this pattern as the outcome of a coordination game where a more or less complete division of labor is the efficient solution due to increasing returns to human capital: people get better and better at the tasks they undertake, so a division of labor makes sense.³⁰ Although the biological advantages of women specializing in household skills are slim in a modern economy, their gravitating towards household work may be reinforced by childhood socialization in which parents seek to maximize the success of their children later in life. Since gender roles are assigned before "true" preferences are observable, the coordination game is solved by using inherently small gender differences as the cue.

But while the efficiency model captures some key aspects of the family as an institution, levels of female labor force participation are actually quite varied across countries at comparable

³⁰ Gary Becker's pioneering work opened the economics of the family as a new field of study for economists. Becker 1964; 1971; 1981; 1985.

levels of development. The efficiency model also fails to explain why there is so much variance in the distribution of housework between the sexes *after* controlling for hours spent in paid work and earnings. Depending on the country, hours worked in the market place have a big effect--or not--on how evenly household work is shared between the sexes.

The *division of labor puzzle* can only be understood by treating marriage as an incomplete contract that is potentially subject to termination.³¹ When both members of the couple recognize that the marriage could fail, each has an incentive to cultivate their outside options by entering into paid work. The distribution of unpaid work is determined by bargaining, where bargaining power is dependent on political-economic factors outside the family. We make use of recent political economy arguments³² as well as macro-sociological work on the welfare state³³ to tie broad economic conditions to intra-family bargaining over the division of labor.

The rest of the chapter lays out the standard efficiency model of the family division of labor, and the bargaining model alternative that better fits today's world. Empirically we find that, controlling for a variety of factors, women with stronger outside employment options are able to reduce their share of family work. These options in turn reflect not only individual attributes like age and education, but also differences in economic institutions, family policy, and the role of the public sector.

3.2. Explaining the gender division of labor

³¹ In treating marriage as an incomplete contract, we build on recent economic bargaining models of the family including Folbre 1987; Braunstein and Folbre 2001; Pollak 1999; 2003; Lundberg and Pollak 1996; 2001.

³² See Hall and Soskice 2001, Pontusson; Iversen, Estevez 1999.

³³ Esping-Andersen 1990, 1999, Orloff 1993, Huber and Stephens 2001.

In the economic efficiency model of the family, couples engage in a division of labor to take advantage of gains from trade.³⁴ One family member will specialize in marketable skills and paid work, while another will specialize in household skills and unpaid work, on grounds that there are increasing returns to human capital in both domains, and that the care of children cannot be completely subcontracted out without loss to the children's wellbeing. The spouse specializing in household skills may enter the labor market part time if the domestic workload permits this – something that is more likely to be the case early and late in a marriage corresponding to the years before children are born and after they start school or leave the household.

Since dividing the work is in principle a pure coordination game, labor either the husband or the wife could specialize in market or household skills, but women will almost invariably specialize in the latter because of an initial comparative biological advantage in caring for very young children. This advantage, however, may only last for the first months of a child's life, and it is not hard to imagine distributions of preferences for type of work across the sexes that would lead to a far more even division of family responsibilities and paid work than we actually observe.

The economist Gary Becker, who formalized the efficiency model, solved this puzzle in two ways. First, a small comparative advantage is magnified by increasing returns to human capital -- people get better at tasks as they accumulate experience.³⁵ Second, parents have an incentive to prepare their children for responsibilities they will assume later in life, and this may reinforce the gender division of labor by instilling preferences through childhood socialization.

³⁴ Although the gains from trade are within the family, the model is exactly parallel to the argument David Ricardo made in the 19th century for why Britain would gain from removing restrictions on trade with the outside world. Britain would specialize in the production of goods in which it had a comparative, rather than an absolute advantage.

³⁵ Becker 1981.

Since children are unlikely to reveal their true role dispositions at a very early age, parents choose to socialize their children in skills that they are most likely to be good at, or even more reflexively, that society assigns. If females grow up thinking it is normal for them to stay at home with the kids, this magnifies biological differences and solves the family coordination problem later in life.

In hindsight (Becker developed his argument in the early 1960s) it is easy to ridicule Becker's model as an intellectual justification for the traditional male-dominated 1950s family. But it is precisely the capacity of the model to account for the stark gender division of labor and the differences in the socialization of girls and boys in the traditional family that makes it so powerful. Still, it is clear that something fundamental has changed in a number of countries in North America and Europe. The division of labor by sex is less pronounced, and socialization less gendered, than a few decades ago. Families in U.S., for example, are more likely to teach their girls to be assertive and independent than was the case some decades ago or than is still true in countries where female labor market opportunities are more restricted.³⁶

One factor that looms large in the explanation of these changes is the rise in divorce rates. Whether divorce rates are a response to exogenous changes in divorce law, or whether divorce is endogenous to a growth in labor market opportunities for women, divorce is now an accepted part of modern life in most rich democracies. In 1950 the probability that a first marriage would end in divorce was one in five in the U.S., and any behavior that could conceivably lead to divorce – infidelity but also overt challenges to established gender roles – were considered taboo by widely held religious and community norms. Today the divorce rate is one in two for first marriages and is now considered an acceptable, even desirable, solution to marital problems.

³⁶ Hrdy 1999.

The ease of divorce makes a tremendous difference to the Becker framework because spouses must now concern themselves with what they can do to secure their welfare in the event that the marriage breaks up. In other words, their outside options become crucial. And if we want to understand the implications of this for the division of labor and patterns of socialization, we have to treat family members as individuals with distinct preferences. The short hand of treating the family as a unitary actor is less useful than it may once have been.

The most obvious potential conflict of interest concerns the division of labor -- precisely the variable Becker's model was designed to explain. The problem is that heavy investment in household-specific skills is likely to undermine outside options. Not only will such investments crowd out investments in marketable skills, but the value of marketable skills is likely to be seriously reduced by longer absences from the labor market.³⁷

In principle, household skills can be "sold" on the re-marriage market, but since one critical "skill" in this market is to produce and nurture offspring, a woman's position in the re-marriage market will be seriously reduced as soon as she has children in another marriage. Adding insult to injury, another valuable commodity in the re-marriage market is youth and beauty, which also deteriorates with time. Hence, even in the remarriage market, the only non-perishable commodity is earnings power -- and perhaps also the attractiveness that comes with education and an active lifestyle.

From one perspective, investing in household-specific skills presents a long-term commitment problem. As we suggested in the previous chapter, when the gains from specialization are very large we would expect that legal and social norms (perhaps also religious ones) would make the marriage contract very difficult to terminate. But when the gains are smaller, it becomes harder to justify anything that approximates prohibition, and as access to

³⁷ Polachek 1975; 1978.

divorce improves the incentives to invest in household-specific skills decline, creating a snow-ball effect. Divorce rates are thus at least partly endogenous to the gains from specialization -- a theme we will return to in Chapter 5 when we consider family policy preferences -- but this does not change the fact that in a high-divorce equilibrium the division of labor will be contested. This is true even for segments of the population who may benefit from a complete division of labor since it is impossible to have different rules for divorce for different groups. In this sense divorce rates are an exogenous variable.

In the context of high divorce, since labor market participation is essential to cultivate outside options, women have strong reasons to resist a complete division of labor in the family. But by the same token men have an incentive to resist taking on more domestic responsibilities. Bargaining models of marriage capture this by assuming that compromises have to be found in a bargaining space that is constrained by the outside options. The simplest conception of outside options is whatever utility either party can get outside the marriage. But some models also allow for the possibility of non-cooperative outcomes without divorce where spouses recede into separate “spheres” characterized by more or less separate finances, partially divided living spaces, and general mutual avoidance.³⁸

In either formulation, opportunities in the labor market shape outside options and hence the marriage bargaining space. As we explained in the previous chapter, in a Rubinstein bargaining model the solution to the game must be found inside the constraints of the outside options, and the latter also tend to increase the risk each player is willing to take that a tough bargaining stance, with a potentially high payoff, could end in divorce. Willingness to take risks in turn improves a player’s bargaining power and shifts the outcome of the game towards the spouse with the better outside option. So if outside options are equally attractive to both sides,

³⁸ Lundberg and Pollak 1996.

we would predict an even distribution of household work. More realistically, since women's outside options tend to be inferior to men's, women will tend to do more of the household work. But women have a strong incentive to resist the complete division of labor that would be optimal in the Becker model.³⁹ This incentive rises with the probability that a marriage will end in divorce since the expected cumulative returns on household-specific investments will be smaller and since the insurance motive (make sure you are OK in the event of divorce) will figure more prominently in the calculation. The division of labor is therefore in part a function of the divorce probability, which plays no role in efficiency models.⁴⁰

Since household bargaining may lead to a less complete, and hence less efficient, division of labor, it is logically conceivable that an explicit marriage contract could compensate women for the risks of specialization in household skills and the associated deterioration of marketable skills. This could be done by guaranteeing a lump sum severance payment or the sharing of future income streams such as alimony and child support in the event of divorce. But to prevent problems of moral hazard, shirking, and other well-known maladies of incomplete information, such prenuptial agreements would have to stipulate all relevant contingencies in advance – including just cause for divorce, fair treatment of the other party in the marriage, the division of custody in the event of divorce, and penalties for non-compliance with any stipulations in the contract. Precisely this type of detailed marriage contracting has reached almost farcical complexity among Hollywood celebrities where the stakes and divorce rates are both very high. But few would claim that prenuptial agreements constitute a general solution to incomplete marriage contracting, and they are in fact rare. Just as in non-standard economic contracting,

³⁹ Braunstein and Folbre 2001; Lundberg and Pollak 1996; 2001; Rosenbluth, Light, and Schrag, 2005

⁴⁰ For a formal proof of this using a standard bargaining model, see Iversen, Rosenbluth and Soskice 2004.

comprehensive ex ante agreements are either impractical or prohibitively expensive to write and enforce.

In this chapter we focus on the bargaining process between two spouses, and leave the degree of efficiency loss from the breakdown in specialization as an open empirical question. If, for example, child care could be subcontracted without loss of child welfare, we might expect couples to abandon much of the specialization of labor without efficiency loss.⁴¹ This reduces the need to bargain over household labor. But the cost of childcare is of course very much a matter of public policy, and preferences over these policies, which we examine in Chapter 5, can be understood within the bargaining framework we use. Besides, time budget research, which we discuss below, shows that unpaid household labor continues to make up a very substantial portion of total labor.

With incomplete contracting we expect a woman's bargaining power within the family to be inversely related to the labor market's premium on specific skills. As we have emphasized, women are generally at a disadvantage when competing for jobs with men because they are expected to leave the labor market for purposes of child birth and rearing.⁴² Employers will therefore be more reluctant to invest in skills of women, and young women are likewise more reluctant to build up substantial employer-specific assets or even invest in the education that is needed for a specific skills kind of job since these may be forfeited with the birth of their first child.⁴³

⁴¹ At the other extreme, if the returns to specialization in family work exist but are hard to observe, or are not sufficiently internalized by either parent, we might expect suboptimal levels of child welfare to result from a decline in specialization. We are assuming, though perhaps without justification, that both parents have a full and equal interest in their children's well being, so that their bargaining over paid and unpaid work does not include the possibility of a lower overall level of investment in their children.

⁴² Mincer 1962; 1978; Polachek 1975; 1987.

⁴³ Anderson, Binder, and Krause, 2006.

How great the motherhood disadvantage is, however, depends on the nature of skills that employers are seeking.⁴⁴ If such skills are highly specific to firms, or even to industries, and if a substantial part of training is paid by the employer, there is a strong disincentive to make these investments in female employees where the average time horizon is comparatively short. This is reinforced by women's own decisions because they are disinclined to invest in specific skills for which they are at a disadvantage. Even if a woman invests to acquire a specific skill, her investment will not be protected to the same degree as a man's. Women are therefore more likely than men to invest in general skills and/or in skills that are less prone to deteriorate when not used for some period of time. This implies a heavily gendered structure of educational choices, and it is not surprising that vocations with more general educational content and low atrophy rates such as commerce, services and home economics are overwhelmingly female in composition.⁴⁵ Women facing tough labor market constraints may be better off aiming as high as possible in the marriage market, and educating themselves in the "gracious arts" rather than in marketable skills.

In the Becker model, the difficulty of women finding paid work does not matter for the household division of labor so long as the productivity of the husband is greater. The household division of labor is always complete. The Becker model allows that women may have time left over to enter the labor market, especially during parts of the life cycle where there are no dependent children. But only the bargaining model implies that the amount of paid work, and the earnings power of the woman, will matter for household division of labor. Also, in so far as skills are specific, paid employment should benefit men more than women because men are in a better position to accumulate specific skills.

⁴⁴ Estevez-Abe (1999) and Estevez-Abe et al. (2000).

⁴⁵ Estevez-Abe 2002.

The importance of the skill argument for understanding variation in bargaining dynamics inside the family is reinforced by broader cross-national differences in the structure of production. Taking advantage of the international division of labor, some countries have specialized in the forms of production that use specific skills intensely while others have specialized in production that uses general skills intensely.⁴⁶

Note the irony of how welfare states, designed to protect the weak, may inadvertently hurt women in several ways. Wage compression increases the cost of childcare services. Protective institutions, such as high job security, seniority pay, and generous employer-financed benefits, tend to reinforce insider-outsider divisions, and since women are more likely to be outsiders, they are at a greater disadvantage compared to more flexible labor markets where low protection encourages investment in general skills. Labor unions, and the parties that represent them, may as a consequence be less likely to champion the cause of women and other outsiders. But even more importantly, labor market protections motivate both employers and employees to invest in employees' acquisition of firm-specific skills: firms, because this is the way to get the most productivity out of their long term obligations to employees, and workers, because this is the path to advancement. Because firm-specific human capital depreciates with career interruptions, female labor market participation tends to be lower in countries with strong labor unions.⁴⁷

In economies with fluid labor markets, by contrast, women are generally better able to compete on an equal footing with men in the labor market because investments in skills are mostly borne by workers rather than by employers. The general skills that are acquired through

⁴⁶ Hall and Soskice 2001, Iversen 2005.

⁴⁷ The exception is Scandinavia where part-time workers are also highly unionized and where frequent center-left governments have given them a voice in public policies.

education do not depend on staying with a particular employer for a long period of time and do not lose value when the employee moves to a different employer.

Because of these differences in labor market institutions, the outside options of women in countries with fluid labor markets tend to be better than in specific skills systems, and by extension, so is their bargaining power within the family. This implies that, everything else being equal, female labor market participation tends to be lower in specific skills systems, and the distribution of household work tends to be more unequal, than in general skills systems.

Labor market effects, however, are mediated by social and economic policies deliberately designed to counter them. If governments support a woman's ability to form an independent household, especially through publicly provided services such as daycare, and through employment for women in these services, they compensate for the exclusion of women from good jobs in the private labor market.⁴⁸ The Scandinavian countries are prime examples. They have attained high female participation rates by creating a large, and heavily feminized, public sector, as we discuss in more detail in Chapter 6. This has been facilitated by frequent center-left governments where the interests of "outsiders" are effectively represented and reflected in public policies.

3.3. Empirical Analysis: Data and Measurement

To understand the effects of outside options on bargaining within the family, we took advantage of surveys of married and cohabitating couples undertaken by the International Social Survey Programme (ISSP) in 1994.⁴⁹ Based on answers to questions about household labor, we

⁴⁸ Orloff 1993; Esping-Andersen 1999.

⁴⁹ The data for our analysis are from the 1994 International Social Survey Program, which focuses on the family and gender relations. The data cover most established democracies, a few East European transition economies, and one developing country (the Philippines). We focus on the former since we have macro-level data for our institutional and labor market variables for these countries. None of these data are available for the east European cases, which

constructed a division of labor index. One of the questions in the survey, for example, reads: In your household who does the laundry, the washing and ironing? 1. Always the woman, 2. usually the woman, 3. about equal or both, 4. usually the man, 5. always the man? The other three questions ask who cares for sick family members, who shops for groceries, and who decides what is for dinner. One additional question asks who does repair work around the house. But such work is infrequent and often has a leisure or hobby component,⁵⁰ something that is confirmed by a principal factor analysis performed on all five items, which identifies two dimensions: one where only the first four items have high, and about equally large, factor loadings, and one where only the repair item has a moderately high loading.⁵¹

We base our division of household labor index on the first four items, where higher values mean that more of the work is performed by the woman. The factor loadings for each item are very similar (see fn. 51) so we use a simple additive index (weighting by the factor loadings makes no difference to the results). Since most household labor is done by the woman, one can loosely think of higher values as indicating more inequality in the division of labor. The variable ranges from 1 to 5, with 3 being an even sharing of work. The mean for the variable is 3.97, which is equivalent to an average response to each question of “usually the woman”. None of the reported results change substantively if we instead use an index based on all five items.

transitioned to democracy a few years before the survey and were still in the early phase of privatization. The cases included in the analysis below are Australia, Austria, Canada, Ireland, Italy, (West) Germany, Japan, the Netherlands, New Zealand, Norway, Spain, Sweden, the UK, and the U.S. One case, Spain, is missing so many of the key independent variables that it had to be excluded from the individual-level analysis (but we kept it in the macro-level analysis)

⁵⁰ Hochschild 1999.

⁵¹ The complete factor loadings are as follows:

	Factor 1	Factor 2
Laundry	0.51	-0.09
Caring for sick	0.59	0.08
Shopping	0.67	0.01
Dinner	0.66	-0.05
Repairs	0.15	0.22

The fact that child care is left out of these questions undoubtedly leads to a substantial understatement of the woman's share of work. Research on family work based on time diaries, which do include a category for child care, show that children of all ages increase women's overall unpaid work time three to four times more than they increase men's.⁵² But we expect, at least, that the male-female division of childcare responsibilities will parallel the way they divide other family tasks.

While it is not possible to know with precision how the survey-generated index (without childcare time) maps on to actual hours of work done, we can get a good sense of this by comparing the index to the results of international time budget research. According to one authoritative study, women on average perform more than two thirds of total household work.⁵³ That study also shows that the average adult spends 230 minutes per day on domestic work, equivalent to 460 minutes, or almost 8 hours, for a household with two adults. If the answer "always the (wo)man" means that the (wo)man literally does all the work, the index's range of 4 units is equivalent to 460 minutes, or about 115 minutes per unit -- or 14 hours per week -- assuming equidistant spacing between the different values. One standard deviation on the index is then .67 or about 77 minutes of work a day, and 9 hours per week. In the following we will assume that the index can be interpreted linearly in terms of time units, which seems reasonable and facilitates the substantive interpretation.

For paid work we use two variables that ask about the employment status of the respondent and of the spouse. It is coded 1 for those who are full-time employed, 0.5 for part-time employed, 0.25 for less than part-time employed, and 0 for those who consider themselves

⁵² Bittman, England, Folbre, Matheson 2001. Time diaries, which ask respondents to keep track of how they allocate time during the day, are preferable to less complete surveys of this sort. Unfortunately, they are only available for a few countries.

⁵³ Berthoud and Gershuny 2000

homemakers or who are retired. We ignore the unemployed and students. The variables are coded for men and women separately, and are included as independent variables in the regressions of unpaid work. Since an average work week for a full-time worker is about 40 hours in most OECD countries, and about half that for a part-time worker, we may reasonably gauge the substantive meaning of results of this variable in terms of weekly hours (assuming a five day working week).

To explain the individual-level variance in the division of labor, we use seven sets of independent variables. We measure the (*pre-tax*) *wage income* of the husband and wife separately, to gauge their effects on implicit bargaining over household work.⁵⁴ The *probability of divorce*, by our account, ought to affect the sensitivity of men and women to their economic circumstances.⁵⁵ *Past time spent on household labor* should have a negative affect on the acquisition of marketable skills, and hence current outside options.⁵⁶ The *number of dependents* will tend to increase the total amount of household work, as well increase the pressure, usually

⁵⁴ Since we only have information about the income of the respondent, the earnings of the spouse are inferred from information about household income. To do this we have to assume that all income is wage income and that husband and wife are the only wage earners in the household. Since there are non-wage sources of income, and sometimes more than two adult wage earners, this would suggest that income estimates based on the difference between family income and the respondent's income exceed the latter on average. In fact, inferred incomes of spouses are slightly lower than respondent incomes, but generally very similar (within 90 percent of the respondent's income). This suggests that the inferred number is a fairly good proxy for the spouse's income. It does at any rate not *systematically* bias the estimates of male and female income since the respondents were roughly equally divided between men and women.

⁵⁵ There is no direct measure of the probability of divorce at the individual level, so we use past divorce as a (very imperfect) proxy since we know that the aggregate likelihood of divorce is higher for those who are previously divorced (Bramlett and Mosher 2002). The variable is coded 1 if one of the spouses is previously divorced, 0 otherwise.

⁵⁶ We capture this logic using a battery of questions about past family-related labor market absences. Specifically, the questions inquire about time taken off during four different phases of child rearing: i) before the birth of the first child, ii) before the youngest child entered school, iii) after the youngest child entered school, and iv) after the children have left home. The variable takes on the value 1 when the wo(man) did not work during any of these periods, and the value 0 when the wo(man) worked full time during all four periods (part-time work is coded .5). This coding follows Librizzi (2003).

on the women, to specialize in such work.⁵⁷ *Education* is likely to boost labor force participation. In addition, families with highly educated spouses could be expected to share household duties more equitably. This could be seen as an effect of better outside long-term options not adequately captured by current employment and income, or one may speculate that education leads to more equitable gender norms.⁵⁸ *Religiosity* and *Catholicism* may also be factors of importance because it can be assumed to be related to perceptions of appropriate gender roles, and such roles are closely associated with the sexual division of labor.⁵⁹

Age is also a variable of theoretical interest. Although information about age is only available for the respondent, the respondent's age is highly correlated with the age of the spouse and thus serves as a proxy for both. Age does not play any role in efficiency models, except in so far as it affects labor force participation through life cycle effects, or is associated with having dependent family members. We control for these variables directly. By contrast, age plays a role in bargaining models because it differentially affects the position of men and women in the re-marriage market. As suggested above there are two reasons. First, the value of household specific skills deteriorates with age because they are so closely related to the bearing and rearing of children. Second, age itself tends to be a liability in the re-marriage market.

Since we do not have cohort data, we cannot exclude the possibility that age effects are due to generational differences. However, if women in older generations are expected to assume more household labor because of gender norms, this should also show up as a positive effect of retirement on the female share of household work (controlling for labor market participation).

⁵⁷ The number of dependents is calculated by combining information about the number of household members with information about whether the family is headed by one or two adults. In most cases it refers to the number of children, although it will also capture older generations of family members living in the household.

⁵⁸ The variable is measured in terms seven levels of general education ranging from none (1) to a completed university degree (7).

⁵⁹ Following Barro and McCleary (2003) we measure religiosity by frequency of church attendance, which varies from never to at least once a week. Catholicism is measured using the respondent's declared religion.

The bargaining model would lead to the opposite prediction insofar as retirement marks a relative decline in males outside options. We therefore include a *dummy for retirement*.

The final individual level control is the *gender of the respondent* because there may be a tendency for people to exaggerate how much work they do in order to look better in the eyes of the interviewer. This could bias the results for other variables.

At the national level we focus on three variables: *part-time employment*, *skill specificity*, and *spending on public service provision*. Part-time employment is measured as the percentage share of the working age population who are in part-time jobs.⁶⁰ The emphasis on specific as opposed to general skills in national training systems is measured by an index, which is equal to the mean, after standardization, of vocational training intensity and firm tenure rates.⁶¹ Specific skill systems tend to undermine the employment opportunities of women. Yet, as we have argued, this gender bias can be reduced by deliberate policies to hire women to perform social and personal services through the public sector. While there is no reason to think public service provision plays a role in general skill systems with flexible labor markets – public and private provision will be substitutes in this case – there is good reason to expect public service provision to reduce the labor market disadvantage of women in specific skills systems. The government is,

⁶⁰ The number of part-time employees is from the *OECD On-Line Labour Force Statistics Database* (www.oecd.org/scripts/cde/members/LFSDATAAuthenticate.asp), and the working age population is the number of people between the ages of 18 and 65, obtained from the OECD OECD, Labor Force Statistics, 2003.

⁶¹ Because both workers and employers want to reap the long-term benefits of specific skills investments, and because workers with such skills will find it harder to move around, firm tenure rates tend to be longer for workers with highly specific skills. This is an imperfect measure of skill specificity, however, because skills may be specific to an industry or occupation, which allows workers to move around between firms in the same industry or occupation. This problem is avoided by focusing on vocational training intensity. Such training is intended to provide skills that are much more specific to particular jobs than those acquired through general education, but it includes training in skills that are specific to industries or occupations, not just particular firms. Indeed the drawback of using vocational training intensity as a measure is that it does not fully capture training at the firm level. As argued in Estevez et al. (2001) and Iversen (2005), the two measures therefore complement each other, compensating for weaknesses in each. In combination they provide a good summary measure of differences in national training systems described by detailed case studies. Vocational training intensity is the share of an age cohort in either secondary or post-secondary (ISCED5) vocational training. *Source*: UNESCO (1999). Tenure rates are the median length of enterprise tenure in years, 1995 (Norwegian figure refers to 1991). *Sources*: OECD *Employment Outlook*, 1997, Table 5.5. For Norway: *OECD Employment Outlook*, 1993, table 4.1.

in effect, creating a layer of general skills jobs in an economy where the private sector resembles a specific skills economy. We measure public service provision as government purchases of goods and services, net of government spending on defense, as a percentage of GDP. In practice, the bulk of non-military purchases are social services⁶²

3.4. Empirical Estimation and Results

The division of household labor, if the theory is correct, is a function of individual-level characteristics (such as age or religiosity), family situation (such as the extent of caring responsibilities), as well as the availability of good “outside options” for spouses (essentially access to jobs and income). The latter, in turn, vary across countries according to the availability of part-time employment, the skill system, public service provision, and the interaction of the latter two. Yet, since jobs and income are not merely a reflection of labor market conditions, but also individual preferences, caring responsibilities, etc., these variables can be modeled as a function of both individual- and national-level variables. Consequently we use a multilevel modeling approach.⁶³ The model is explained in detail in Appendix A. The detailed regression estimates are provided in Tables A3.1 and A3.2. in Appendix B. Here we focus on the substantive results.

The individual level only results are shown in Figure 3.1. As expected, the probability of divorce significantly decreases the female share of unpaid work. The effect is not large, but it has to be recalled that the measure is whether the respondent has been divorced in the past,

⁶² The public consumption data are from OECD, *National Accounts, Part II: Detailed Tables* (Paris: OECD, various years), and the military spending data are from the International Institute for Peace and Conflict Research, *World Armaments and Disarmament: SIPRI Yearbook*, 1995.

⁶³ Pooling data across levels without taking into account the dependence of observations within clusters carries a significant risk that standard errors will be underestimated and that estimated parameter biased (Burton, Gurrin, and Sly 1998, Steenbergen and Jones 2002).

Figure 3.1. Individual-level determinants of the female share of household labor.



Notes: The effects are based on the regression results in model (2) in Table A3.1. (see Appendix B). The numbers are shown as projected effects on the weekly minutes of additional female household labor assuming that the reported share of female labor can be linearly translated into time units based on the results from time-budget studies (see text for details). All estimates are statistically significant at a .05 level (two-tailed) or better.

which is only weakly (though positively) related to future divorce. Presumably worrying about, or at least being cognizant of, the possibility of a marriage breakup, makes women inclined to assume a smaller share of household work and men more likely to accept this. As we will see shortly, higher divorce risk also makes women more prone to participate in paid employment

Women who have sacrificed work for family in the past also end up with a greater share of the household workload in the present. Since this effect is after controlling for the number of

dependents presently in the household, it implies that past investments in household-specific skills is major cause of the future gender division of labor. It also means that some of the effect of “the number of dependents” variable, which also somewhat disfavors the woman, will get magnified over time because of implied loss of outside options, and hence bargaining power, as a result of investing in household-specific skills.

Unsurprisingly, labor force participation reduces the share of household work for both spouses, but more so for men. As we noted above, this is consistent with an interpretation that men are better able to take advantage of opportunities to acquire specific skills in the labor market. Note also that market income reduces the share of household work. In the Becker efficiency model the effect of market income on the division of household labor should be a step-function with a complete division of labor always “in favor” of the spouse with the highest earnings power. Thus the marginal effect of income for one spouse should be zero except at the point where it is equal, or close to equal, to the other spouse (when the marginal effect is then infinite).⁶⁴ In our data the male virtually always has more income, so female income should not matter for unpaid work; yet the effect is strong and continuous. It is easy to explain this finding in a bargaining model because bargaining power is continuous in external options (under the assumptions laid out in the appendix to Chapter 1).

Another consistent result is that age increases the share of household work performed by the woman. Since the result is for respondents of both genders, aging has a disproportionately affects women – a result that holds up when we run the regression for men and women separately.⁶⁵ The only possible explanation for this effect in an efficiency model is that age

⁶⁴ Granted, the appropriate measure in the efficiency model is not total income but productivity or hourly income at equivalent hours of work. It seems unlikely, though, that this alternative measure would much affect the results.

⁶⁵ The two subsample results suggest that age *reduces* household labor for men, but since the ages of the co-habiting couple are highly collinear we do not know if this is because the female spouse is getting older.

reduces labor market participation more for women than for men or that the scope of domestic work rises with age. Yet, we have included controls for labor market participation and the number of dependents, and the effect of age is in fact *stronger* when these are included. In substantive terms, if we compare a newly wed couple at age 20 to a married couple at age 40, and controlling for everything else, the woman in the latter will spend about 14 additional minutes a day on household work.⁶⁶

As noted before, the effect of age is consistent with a bargaining perspective because age differentially affects men and women on the re-marriage market. Yet, it is also consistent with a generational hypothesis that younger generations have more equitable work norms. We cannot entirely exclude such an interpretation although it is noteworthy that the division of labor tends to be *more* equitable in families where the spouses are retired (the effect of the retirement variable is shown in Table A3.1). Also, it is worth pointing out that *if* norms have changed over time, the bargaining model in fact has something to say about why, as we discussed in Chapter 2. When outside options are important, and they *have* become more important over time in line with the rise in divorce rates, there is reason to expect that parents will raise their daughters to have more similar tastes for paid work as their sons. This makes daughters less willing to assume all domestic duties as adults. We consider this a fruitful area for future research.

Finally we note that education, as expected, is a strong predictor of more gender equality in the division of household work. Going from the lowest to the highest level of education reduces the predicted amount of household work by 3 hours a week. Note that this is after controlling for labor market participation and earnings, so it cannot simply be due to higher earnings power. When we run the regression separately for men and women it instead appears to

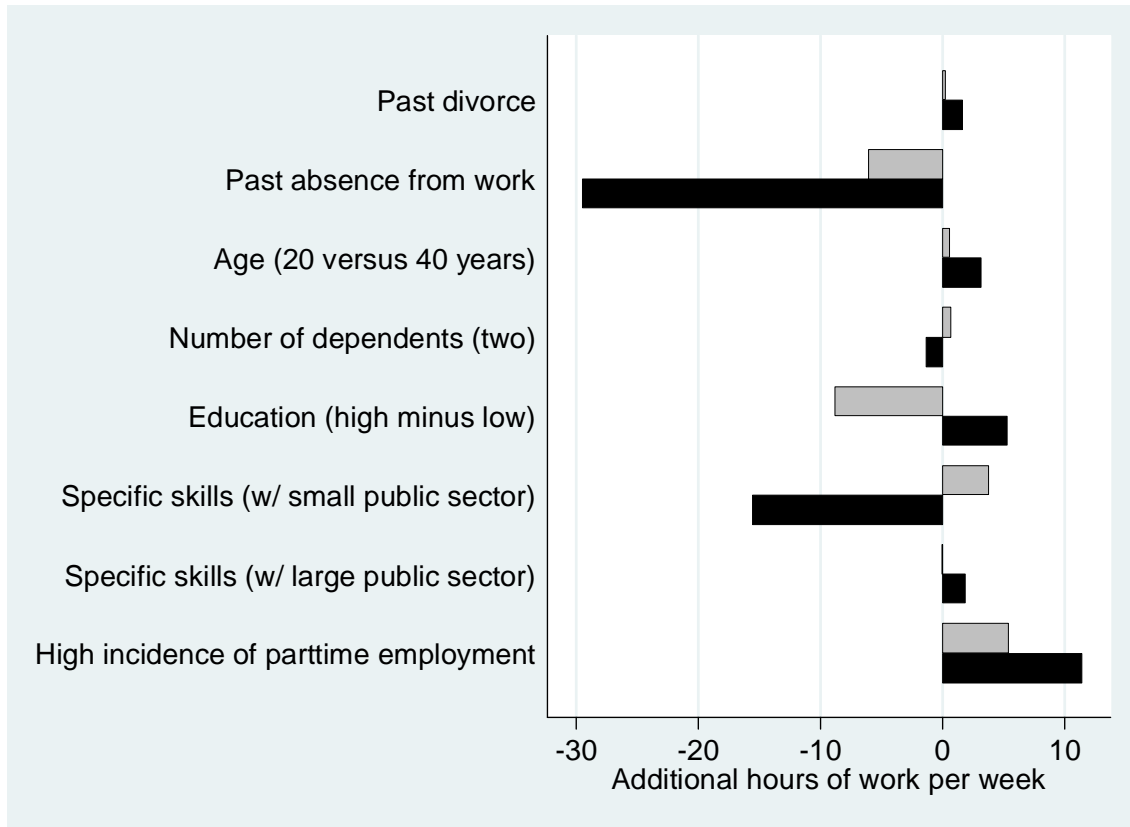
⁶⁶ 20 years in age is equal to .12 units on the dependent variable, and a unit is equivalent to about 115 minutes of work.

be the result of a combination of better outside options by women and greater willingness of educated males to share work. The latter result again points to the role of values, which we consider in a moment. It is also noteworthy that the results for paid work we discuss next (Figure 3.2) show that education significantly raises labor force participation of both men and women. This has a knock-on effect on household labor.

We also controlled for religion (not shown), which tends to increase women's share of the household labor, whereas women in religious families appear to be somewhat less likely to be in paid employment (see the results for paid work in Appendix B, Table A3.2). Whether the measure is religiosity or Catholicism, however, these effects are small and rarely significant. We should not be surprised by this apparent lack of impact, even if religiosity is positively related to traditional gender norms. As we argued in Chapter 2 norms are shaped by the same set of factors that affect bargaining power in the family, and therefore not necessarily having a strong direct effect.

The multilevel results in Figure 3.2 are for paid employment for men and women separately (the full regression results are in the first half of Table A3.2. in Appendix B). The estimated effects are on the number of hours worked per week, assuming that a full time job in the survey correspond to a 40-hour work week. Not surprisingly given the previous results, past absence from the labor market to care for children has a strong negative effect on women's labor force participation. A woman who has taken off the maximum amount of time in the past for purposes of child rearing, as many do, almost ensures that she will not work later in life whereas a woman who has not taken time off is predicted to work at least part-time. By contrast, very few men exit the labor market to care for children (less than 16 percent), and when they do it tends to be for very brief periods (less than 2 percent in the sample have taken full-time leaves).

Figure 3.2. Multi-level determinants of the gender division of labor (males: top light-shaded bar; females: bottom black bar).



Notes: The effects are based on the regression results in model (1) and (2) in Table A3.2. (see Appendix B). The numbers are shown as projected effects on the weekly hours of paid work assuming that the reported level of labor force participation can be linearly translated into hours and a full time work week is 40 hours. All estimates are statistically significant at a .05 level (two-tailed) or better except for the divorce and skill variables in the case of males.

This neither appears to much affect their subsequent participation in paid work, nor to increase their share of household work. Indeed, a sensible interpretation of these results is that men take off work only to the extent that it does not hurt their careers.

The effects of age for paid employment are interesting to compare to those for household work. Excluding those who are retired, women increase their participation in the labor market when they age, whereas men substitute work for leisure. These are clearly life-cycle effects, but

they imply that women are gaining some financial independence later in life, which we know from the results in Figure 3.1 has the effect of reducing their share of household labor. In fact, this indirect effect of age essentially outweighs the adverse direct effect of age on the inequality in the division of household labor.⁶⁷ A reasonable interpretation is that aging reduces the value of women in the re-marriage market, but increases their value in the labor market. The net effect appears to be mildly positive, which is another reason to be skeptical of interpretations that stress the importance of generational differences in norms.

But the most interesting results in Figure 3.2 concern the effects of the macro-level variables. The gender division of labor, if our argument is right, should be affected by the interaction of skill specificity (which disadvantages women) and the size of the public sector (which compensates for such disadvantages). As we move from general to specific skill countries we expect women, but not men, to be increasingly disadvantaged in the labor market -- except if the state steps in to provide jobs and services through the public sector. Such public employment policies, however, should not matter in general skills systems with flexible labor markets where they will simply replace private sector jobs for women. This is precisely the pattern we find.

When the public sector is small (zero on our standardized variable), the effect of skill specificity is to notably reduce the participation of women in paid work (the second to last bar). Going from the country with the most general skill system to the one with the most specific skill system – measured by the intensity of vocational training and length of firm tenure rates – reduces the predicted level of female participation in paid work by 16 hours a week. Part of this effect, which is large, may be due to differences in preferences for work – and we would in fact expect work opportunities and preferences to be related as discussed in the next chapter – but it

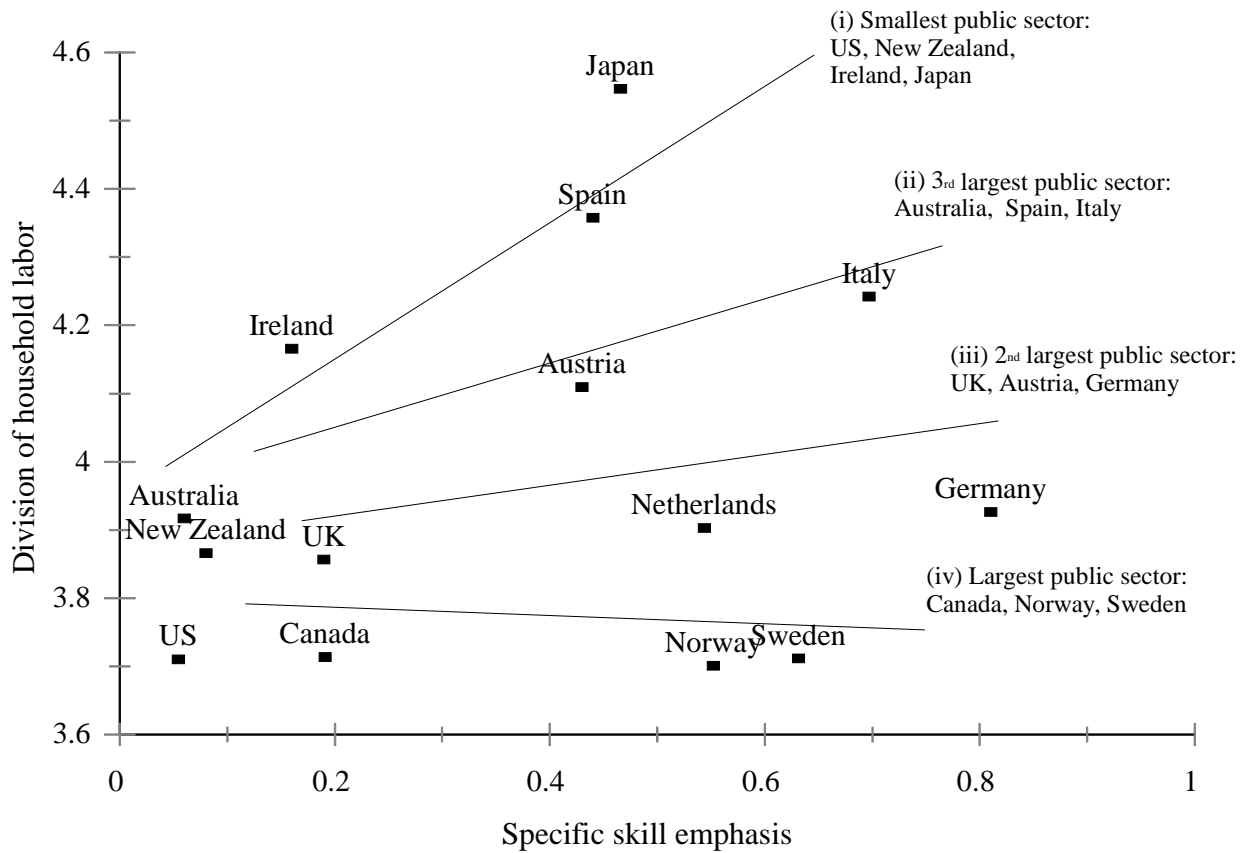
⁶⁷ Multiply the age parameter for paid work in Table 2 by the parameter for paid work in the household regression in Table 1 and compare it to the parameter for age in that regression. The indirect negative effect of age turns out to be greater than the positive direct effect.

should be noted that we control for the incidence of part-time work, which does not usually rely on specific skills and therefore capture at least some of the national differences in preferences for labor market participation. Also, the dampening effect of specific skills on women's participation in paid work is attenuated by a large public sector, which is precisely what our production argument implies. Since the extent of public service provision does not matter when skill specificity is low (as shown in detail in Appendix B, table A3.2), public sector employment appears to compensate for female disadvantages in private labor markets with heavy emphasis on specific skills.

The availability of part-time employment clearly also facilitates the entry of women into the labor market, and this is also true for men. In the case of male employment, however, skill specificity is not important. There is a hint in the full set of results (see Table A3.2. in Appendix B) that a large public sector may hurt the employment opportunities of men, but the effect is weak at best. If we think of public sector employment as providing a layer of general skills jobs, the conclusion is that skill systems are unimportant for the employment opportunities of men.

Figure 3.3. revisits the division of household labor, but now with the national-level variables standing in for the individual-level job and income variables (so that labor market opportunities are captured by differences in macro-institutions). The complete regression results are in Table A3.2. in Appendix B. Consistent with the results for paid employment, women assume a larger share of household work in specific skills systems, but this inequality is attenuated by a larger public sector. The figure illustrates the estimated relationship between skill specificity and the household division of labor, for different levels of public service provision. The y-axis shows the predicted female shares of household work when we assume a size of the public sector that corresponds to four groups of countries: (i) the US, New Zealand,

Figure 3.3: Skills, public sector, and the division of household labor



Notes: The estimated relationships between skill specificity and the division of household for four groups of countries are based on the results in column (3) of Table A3.2 (see Appendix B)– with all other variables kept at their (group) means. Lines are not necessarily intersecting when the specific skill variable is 0 because each cluster has different mean values in the controls.

Ireland, and Japan with a small public sector, (ii) the Australia, Spain and Italy with the next smallest public sector, (iii) the UK, Austria, and Germany with intermediately sized public sectors, and (iv) Canada, Norway and Sweden with large public sectors. We have also shown the actual location of all 14 countries. Note how the tradeoff between skill specificity and

equality in the division of household labor is reduced by a larger public sector. In the countries with the largest public sector the tradeoff disappears altogether. The only outlier is the Netherlands, which has a small public sector (it would belong to category i) but a fairly egalitarian division of labor. It appears that the Dutch achieve this outcome by having a very large and flexible market for part-time employment.

3.5. Conclusions

Explaining cross-national variation in income inequality has been one of the greatest preoccupations of modern political economy. But much of this analysis masks, we have argued, inequality within the very unit of analysis that is typically taken for granted: the family. When we abandon the traditional assumption of the family as a welfare maximizing unit, we confront the reality of strategic interaction between spouses. Because a spouse might favor his or her *share* of family welfare even at some expense of the *total* family welfare, it is important to disaggregate the family to understand the effects of labor market institutions and the public policies that govern them. Much distributive politics is “out of view” of standard political economy because it occurs inside the family where the division of labor and welfare does not enter official statistics. But the significance of family bargaining also “spills over” into the political contestation over public policies because the outside options in the household bargaining game are affected by these policies. As we will see in Chapter 5 this produces a gender gap in partisan preferences.

In this chapter we examined how the assumption of family as a unit can lead us astray in understanding the household division of labor. First, we join a growing chorus of social scientists challenging the idea that the household division of labor reflects an efficient allocation

of family resources.⁶⁸ A husband may resist his wife's outside employment, even if it could increase total family income (or more broadly, family utility including children's well being), because her accumulation of market skills and experience broadens her exit options to the marriage. By ramping up her bargaining power within the marriage, this greater economic independence can result in the husband contributing more and receiving less in the way of unpaid work in the home. It probably also affects a long list of other matters that spouses have to agree on in their daily lives, but that we do not have good data on – from what the family spends money on to how they spend time together.

Female labor force participation and higher female income do in fact shift the burden of household work a bit farther onto men's shoulders. Furthermore, labor markets that put a premium on the accumulation of specific skills hurt women's ability to gain equality in household work. Because women in specific skills economies typically bear a bigger penalty for career interruptions such as for child rearing, they face more limited work opportunities and may invest less in their market-relevant education as a result. This, in turn, weakens their bargaining power at home, and they get stuck sweeping floors more of the time than their counterparts in general skills economies.

Intriguingly, women in specific skills economies will not only do a larger share of housework, but also appear to do a larger share *over time*. This is because their market skills are not only low, but they deteriorate with time, dragging down their outside options along the way. We doubt that most couples think explicitly in the terms that we lay out here. But given the human propensity to slip into self-serving behavior, it is not at all unrealistic to suppose that spouses are quite aware of their options outside the marriage and sometimes test these. We ignore the strategic dimension of family life at the expense of realism and policy relevance.

⁶⁸ Lundberg and Pollak 1996, 2001; Braunstein and Folbre 2001

Appendix A Empirical model

We take our point of departure in the general model presented in Steenbergen and Jones (2002):

$$(1) \quad y_{ij} = \beta_{0j} + \sum_{p=1}^P \beta_{pj} x_{pij} + \varepsilon_{ij},$$

where y is the dependent variable, x is an explanatory variable, and i indexes individuals, j countries, and p variables. The dependent variable in our analysis is the gender division of household labor, and the first set of results refers to a model where the predictors are all individual-level variables, using country-specific intercepts (Table 3.1).

The second set of results (the first two columns in Table 3.2) separates out paid employment as a key “outside option” variable that is explained as a function of both national- and individual-level variables:

$$(2) \quad x_{qij} = \gamma_{00} + \sum_{r=1}^R \gamma_{0r} z_{rj} + \sum_{s=1}^S \delta_{sj} x_{sij} + \delta_{ij},$$

where x_{qij} is the subset of individual-level variables measuring outside options (jobs and income in our setup), and z_{rj} are country-level predictors indexed by r -- in our setup, part-time employment, skill system, public services, and the interaction of the latter two. In addition, there are S individual-level variables, X_{sij} , which are simply the remaining variables from (1) that are not measures of outside options. We focus on paid employment as the dependent outside option variable, although we could also have used market income.

Finally, we substitute equations (2) into (1) to get a model for y (the household division of labor) that is a function of both individual- and national-level variables. The advantage of doing this, compared to relying on individual-level variables only, is that we can examine how the gender division of household labor depends on national level variables that shape outside

options. This will also set the stage for the next section on the gender gap because it will make clear why men and women may have different preferences over policies that affect outside options. Specifically, the multilevel model for the household division of labor is

$$(3) \quad y_{qij} = \mu_{0j} + \sum_{r=1}^R \mu_{0r} z_{rj} + \sum_{s=1}^S \varphi_{sj} x_{sij} + \zeta_{ij}.$$

Note that country-specific intercepts in equation (1) have been replaced by a single constant. In effect, equation (3) assumes that these intercepts are also a function of differences in the structure of labor markets captured by our national-level variables. This is a necessary assumption because the national level variables are perfectly collinear with the intercepts and therefore cannot be entered simultaneously.

The effects of all independent variables are estimated using maximum likelihood regression with robust standard errors, assuming a normal density function for the disturbances. We obtained the estimates in Stata using the ml procedure for survey data (countries are treated as clusters).

Appendix B: Regression results

Table A3.1 shows the individual-level regression results for the household division of labor. Because much data for personal income are missing, the first column of Table A3.1 excludes these variables while column (2) includes them. In column (3) we have omitted some variables in order to enable the inclusion of the Netherlands (to include Spain would also require omission of religiosity and the income variables). Regardless of specification the results are similar, and Figure 3.1. and the discussion in the main text focuses on the most complete set in column (2).

Table A3.1: Individual-level determinants of the gender division of household work

	(1)	(2)	(3)
Divorce	-0.070*** (0.021)	-0.078** (0.028)	-0.097*** (0.031)
Past absence from paid work (women)	0.128*** (0.036)	0.157*** (0.040)	0.176*** (0.044)
Male labor force participation	0.228*** (0.049)	0.166*** (0.034)	-
Female labor force participation	-0.172*** (0.027)	-0.145*** (0.027)	-
Male income (log)	-	0.054** (0.018)	0.075*** (0.020)
Female income (log)	-	-0.053*** (0.014)	-0.057*** (0.016)
Number of dependents	0.019* (0.010)	0.031** (0.013)	-
Age	0.006*** (0.001)	0.006*** (0.001)	0.002** (0.001)

Education	-0.026*** (0.008)	-0.034*** (0.010)	-0.041*** (0.011)
Retired	-0.050 (0.059)	-0.082 (0.051)	-0.087*** (0.025)
Religiosity	0.006 (0.009)	0.005 (0.010)	0.014* (0.007)
Catholic	0.059** (0.019)	0.033 (0.029)	0.012 (0.033)
Gender of respondent (female)	0.206*** (0.036)	0.209*** (0.043)	0.214*** (0.035)
N	5719	3570	4939
No of countries	12	12	13

Key: *** $p < .01$; ** $p < .05$; * $p < .10$. *Notes:* Entries are maximum likelihood estimates with standard errors in parentheses. All models include country-specific intercepts (not shown).

Table A3.2 shows the multi-level regression results for paid work for both genders, and then the results for the division of household labor (where the dependent variable is the female share of household work). The regression model is described in Appendix A.

Note that the while the substantive effects of the skill variable and its interaction with the size of the public sector are large in the case of women's work (both paid and unpaid), the standard errors are also very large. The reason is that there is strong colinearity between the public sector variable, the skill specificity variable, and the interaction term. We can easily circumvent this problem, however, by omitting the component public sector variable from the regression, which we have done in columns (1b), (2b), (3b), and (4b). We can do this without affecting any of the substantive results because the effect of the component public sector variable is zero, or close to zero, as we would indeed expect from the theory (when skills are general, public sector jobs

simply substitute private sector jobs). Because there are virtually no effects on the estimated parameters for any other variables we have omitted these results omitted. The only change is that the standard errors on the skill specificity variable and its interaction with public sector are notably reduced. So the effect of skill specificity and its interaction with public sector can be in fact be estimated quite precisely.

Column (4) omits variables from the regression that allow both the Netherlands and Spain to be included, but doing so only has an effect on part-time employment, which has a greater impact (mainly due to the Netherlands).

Table A3.2: Multi-level determinants of the gender division of labor

	Paid work				Household work (female share)			
	Women (1)	(1b)	Men (2)	(2b)	(3)	(3b)	(4)	(4b)
Divorce	0.042* (0.016)		0.007 (0.017)		-0.098** (0.028)		-0.134** (0.029)	
Past absence from paid work	-0.737** (0.045)		-0.152** (0.035)		0.184** (0.031)		0.203** (0.049)	
Number of dependents	-0.017* (0.009)		0.008* (0.004)		0.043** (0.008)		-	
Age	0.004** (0.001)		-0.011** (0.001)		0.006** (0.001)		0.005** (0.001)	
Education	0.022** (0.006)		0.016** (0.004)		-0.032** (0.006)			
Religiosity	-0.020** (0.006)		-0.005 (0.004)		0.003 (0.010)		-	
Catholic	0.014 (0.018)		-0.017 (0.021)		0.054 (0.040)		0.028 (0.047)	

Retired	-	-	-0.152**	-0.137**	(0.037)	(0.047)		
Gender of respondent (female)	-0.002	-0.171**	0.219**	0.209**	(0.018)	(0.015)	(0.037)	(0.027)
Public sector	0.013	-	-0.102	-	(0.208)	(0.057)	-0.057	0.069
							(0.394)	(0.595)
Skill specificity	-0.389*	-0.4**	-0.002	0.08	(0.187)	(.10)	(0.073)	(.07)
							0.876*	0.9**
							(0.432)	(.30)
								0.851
								0.8**
								(.30)
Public sector * Skill specificity	0.690	0.7**	0.134	-0.06	(0.431)	(.12)	(0.154)	(.11)
							-1.302	-1.4**
							(0.840)	(.46)
								-1.469
								-1.3**
								(.46)
Part-time employment	0.019**	0.009***	-0.004	-0.025**	(0.004)	(0.003)	(0.012)	(0.006)
N	5312	3045	7144	9520				
No of countries	12	12	12	14				

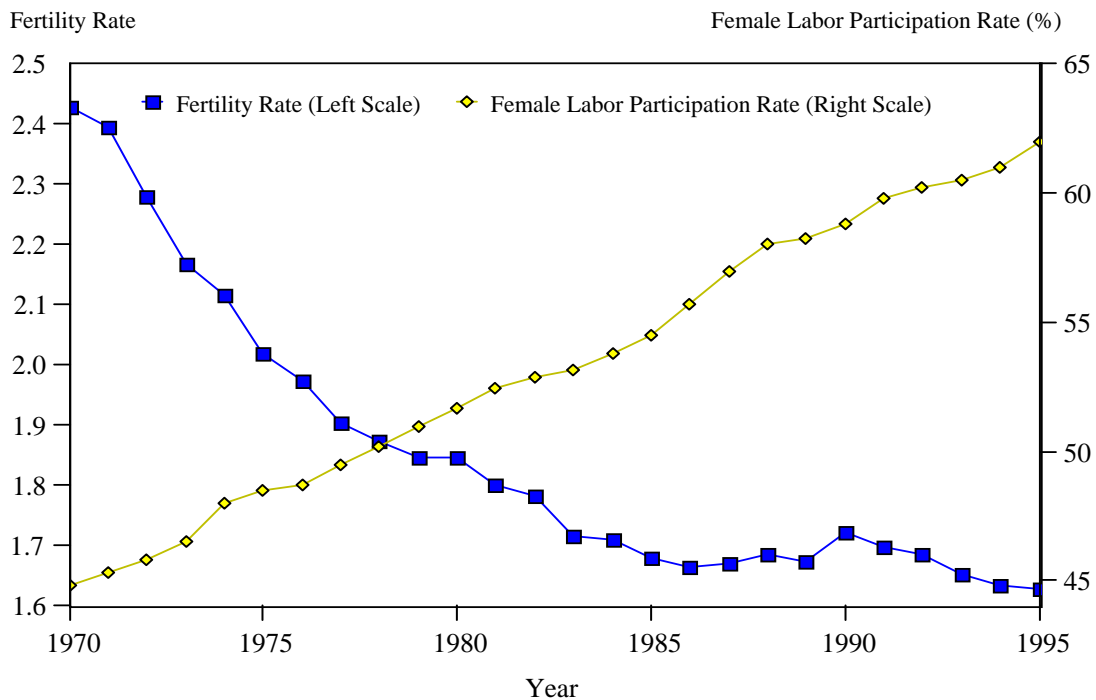
Key: ** p<.01; * p<.05. Note: Entries are maximum likelihood estimates; standard errors in parentheses.

Chapter 4 Fertility

4.1. Introduction

As women have moved inexorably into the paid workforce over the past century, fertility rates have plummeted. Average OECD fertility dropped from 2.4 children per woman in 1970, to less than 1.7 in 1995, during which time the female labor force participation rate rose from 45% to 62.5%. Juxtaposing these figures against time on the x-axis produces a figure of a giant X.

Figure 4.1. Fertility and female labor force participation rate (OECD Average)



One also finds this X in cross sectional depictions of fertility and female labor force participation, where countries are sorted on the x axis by GDP or level of development. The reasons for the inverse relationship between women's workforce

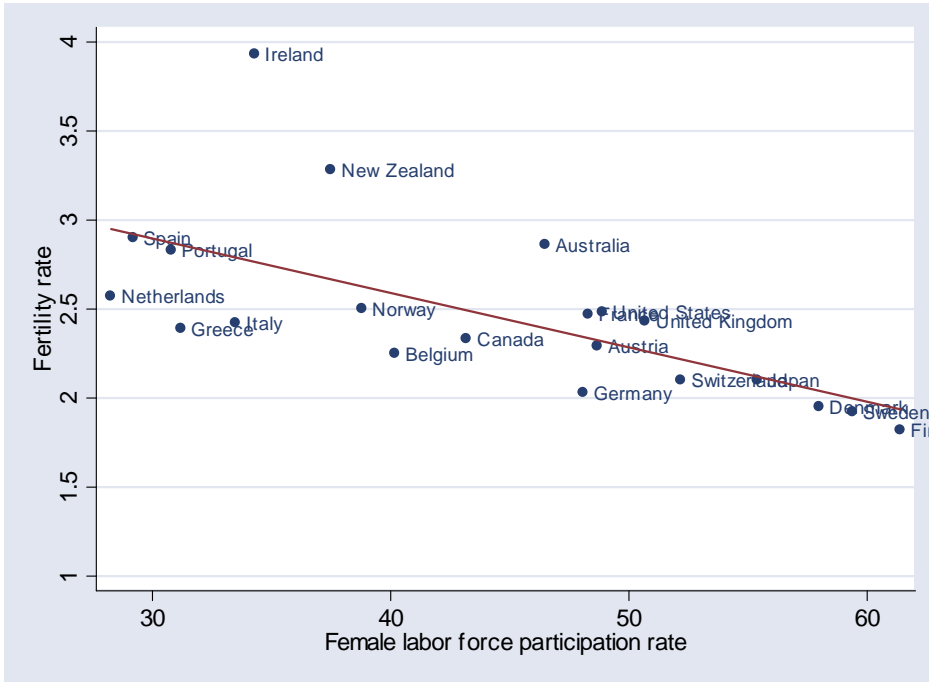
participation and fertility are not hard to fathom: women's opportunity costs of staying at home rise with the possibilities for remunerative work outside the home. And as we have argued, when the gender division of labor declines, divorce rates increase, and women will have strong insurance and bargaining incentives to shun heavy investment in household-specific assets. Below replacement fertility may just be a fact of the modern world.

The inverse relationship between women's paid work and fertility for rich democracies has weakened, however, in recent years. While female labor force participation has everywhere risen, and fertility everywhere declined, the rates of change vary. For some countries the right leg of the X juts out in a jaunty pose, defying gravity. In fact, if we look at the cross-national pattern, the relationship has reversed, as shown in Figure 4.2. Whereas in 1970s there was a clear and fairly strong negative relationship between female labor force participation and fertility (see panel a), in 2002 the relationship is *positive* (panel b). What explains this puzzle?

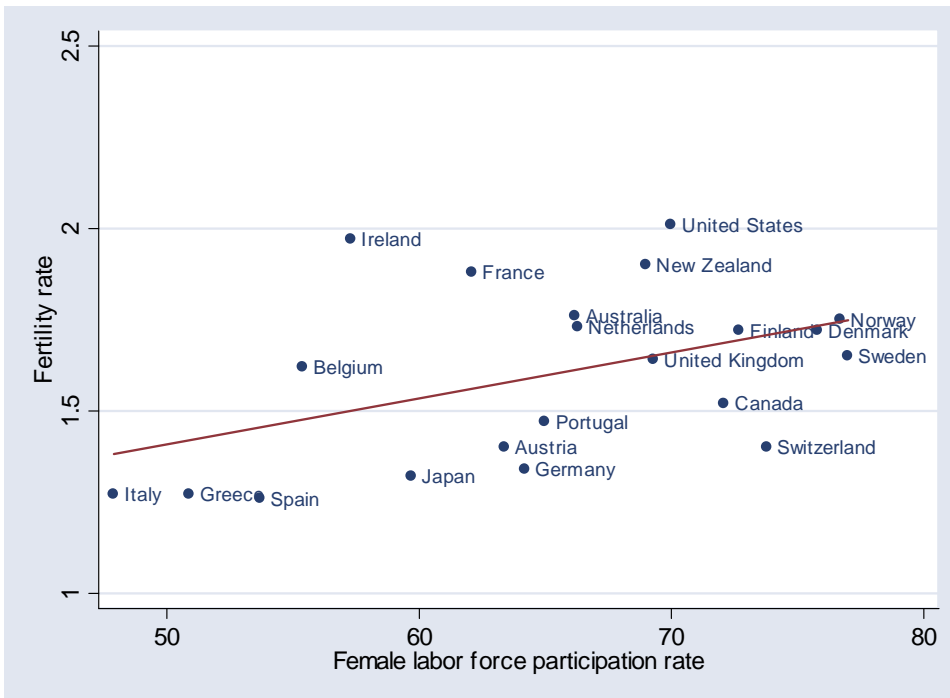
One frequently cited answer is that gender-friendly government policies that make it easier for women to balance family and career can stem or even reverse the decline in fertility (Esping-Andersen 1999, MacDonald 2000). But this is hardly the whole story, as we can see from the substantial variation in fertility that government subsidies of childcare and other family services leaves unexplained (see Figure 4.3).

Figure 4.2. The reversal of the relationship between female labor force participation and fertility

a) 1970

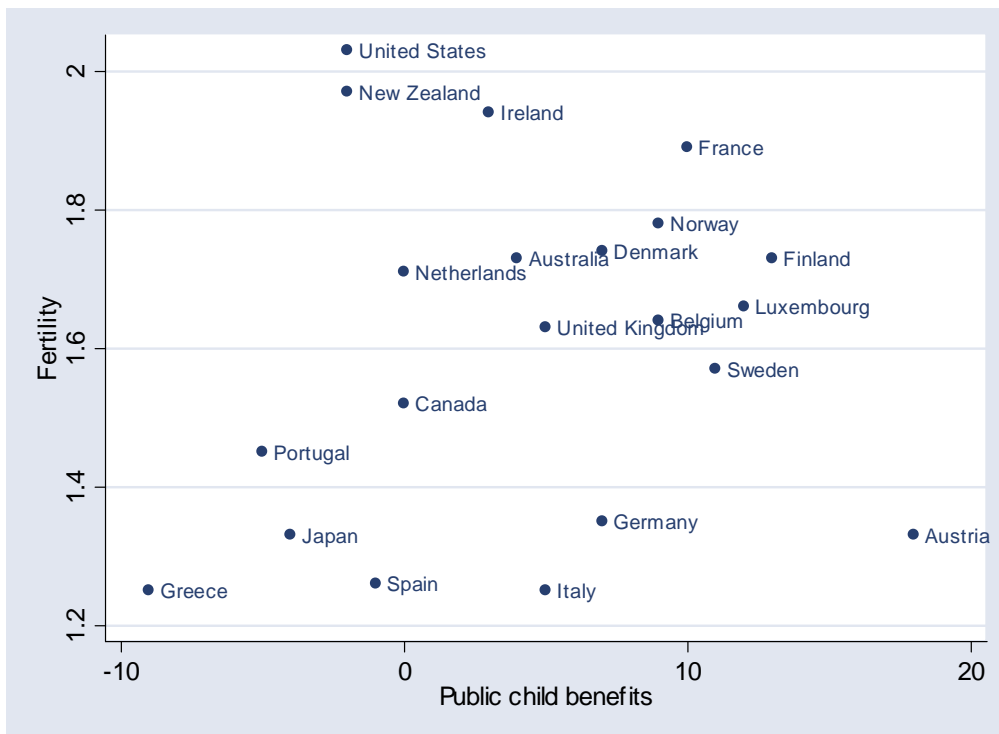


b) 2002



This scatterplot suggests that variation in child care spending has less bearing on fertility levels than one might expect ($r=.13$). Our examination of labor market structures reveals why. First, in countries with highly flexible labor markets, affordable daycare services tend to be available through the market, and women can relatively easily find jobs that can pay for these services (US and New Zealand stand out in the figure). Publicly provided services in these countries will only have an effect at the very low end

Figure 4.3. Fertility as a function of public child support, 2001.



Notes: “Public child benefits” is the mean value of government child support for families with average earnings, as percent of average earnings. Source: Jonathan Bradshaw. 2005. “Child Benefit Packages in 22 Countries.” Social Policy Research Unit, University of York.. “Aggregate fertility rate” is the number of children born to women aged 15-49. Source: OECD *Factbook 2006: Economic, Environmental and Social Statistics*. OECD.

of the wage scale. Secondly, government subsidies for child care and other family work provide only a partial explanation: increasing women's ability to supply their labor will be of limited effect in labor markets organized around long term contracts and specific investments in human capital that make career interruptions costly to the employer. Austria, Germany and Italy, for example, have generous subsidies for child families, yet exhibit low fertility rates. As we have argued, as long as women are more likely than men to take time off to rear children or take care of sick and aging family members, females are actuarially more costly employees than their male counterparts. The resulting "statistical discrimination" need not be buttressed by unflattering gender stereotypes to be devastating to women's employment opportunities.

To be sure, publicly provided daycare helps reduce the problem because it shortens career interruptions and gives women more flexibility in balancing work and career. But child care does not eliminate the problem because women are still more likely than men to leave work for child birth and caring for sick children or elderly parents. In jobs where there is a premium on continuous careers, this means that employers are less likely to invest in the human capital of women. In response, women shift their career investment towards (more general skills) occupations with high job flexibility. Where those jobs are in short supply, the desire of women to have active careers forces them to sacrifice family by having fewer children. The only effective way to deal with this problem, we argue, is for the state to create or subsidize jobs that are highly flexible in terms of hours and career interruptions. This conclusion reserves a large role for government intervention, a role we suggest is warranted and indeed

required to address the large distributional consequences of social norms that underwrite the traditional sexual division of labor.

Females have been drawn into the paid labor market in growing numbers. As we showed in the previous chapter, the shift to post-industrial economies has increased the demand for female labor by lowering the male breadwinner premium and lowering the costs of career interruption. In many countries, moreover, an increased risk of divorce gives women an additional reason to invest in market skills as a hedge against post-divorce poverty and a weak bargaining position in the family in the meantime (Edlund and Pande 2002). In still other countries where neither the labor market is women-friendly enough to serve as a pull, nor divorce laws are lax enough to push women into the labor market for insurance against poverty in the event of divorce, we find evidence of a demonstration effect. When forced to choose between staying at home to have babies or straining against intimidatingly heavy and low glass ceilings, women in these countries are increasingly opting for the latter because they see women elsewhere succeeding professionally. Indeed, these are the countries with the lowest fertility in our sample because low divorce tends to be associated with a heavily male-dominated labor market.

4.2. Women and the Labor Market

Chapter 3 suggested that two factors are critical in accounting for the dramatic increase in female labor force participation in the postwar decades. First, the rise of the service sector has drawn women into the workforce in great numbers. Second, higher divorce rates appear to have motivated many women to earn their own income as a hedge against post-divorce poverty. But even in countries where neither of these pull and push factors are present to a significant degree, women seem to be cuing off the behavior of

women elsewhere. Although their behavior may seem maladapted to their incentive structures, their collective reduction in fertility is raising alarm in governments around the world about the impending pension crisis or immigration headache as the indigenous workforce continues to shrink. Even if more for fiscal concerns than about female welfare, the fertility bust is forcing governments to think of ways to help women better balance family and career.

4.2.1 Demand for female labor

If the industrial revolution's labor saving devices made it possible for women to compete more equally with men, the service sector has even more dramatically reduced the advantages of male size and muscle power. In addition to the drop in the male brawn premium, another factor contributes to the striking correlation between the proportion of the service sector in a nation's economy and the rate of female labor force participation (recall Figure 2.1. and 2.3).

Many service sector jobs require general rather than specific skills, resulting in a smaller liability from a woman's difficulty in committing to long, uninterrupted tenure. Firms gain less from returns on human capital investment in the sorts of service sector jobs where learning-by-doing and accumulated experience is less vital to labor productivity. Notice that the specificity of skill is a separate matter from the level of skill. A nurse, for example, may be highly skilled, but a nurse's skills are fairly general, mobile across hospitals, and likely to remain valuable following a few years' break from the workplace. This contrasts with manufacturing jobs in coordinated market economies, where each industry and even each firm has its own production and management techniques in which constant and small adjustments are an integral part of competitive

firm strategy.⁶⁹ Females, given the expectation of their work discontinuity on account of family work, are less valuable to employers that make use of specific skills to increase labor productivity (Estevez-Abe 1999, Estevez-Abe et al. 2001).

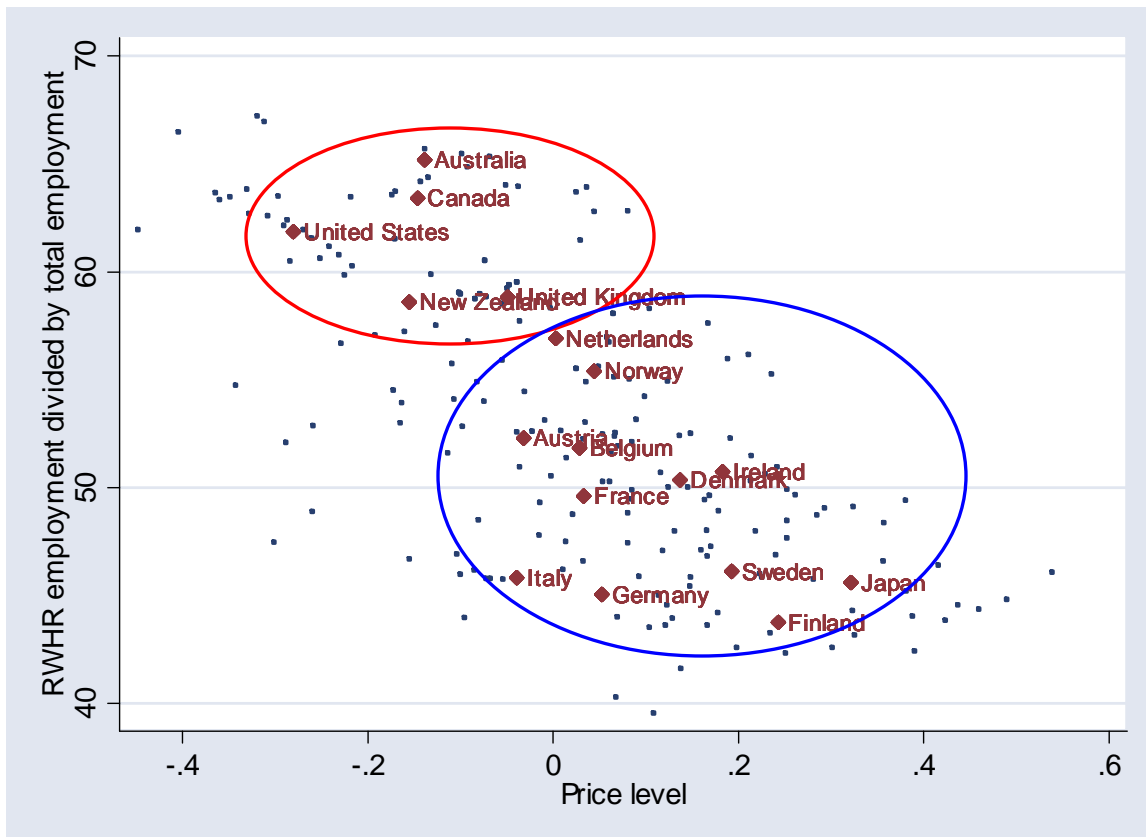
The demand for female labor has therefore grown with the rise of general skills jobs in the service sector that do not penalize employees who are not expected to stay on the job beyond a few years. Liberal market economies have deindustrialized relatively quickly because labor markets are unprotected and firms are free to move out of manufacturing or relocate manufacturing operations overseas in pursuit of cheaper labor. At the same time deregulated labor markets have allowed wages and prices to drop quickly in lower-productivity services. Coordinated market economies have developed modes of production around long term, specific investments in human capital, which, together with wage-setting systems that have kept skilled wages relatively low, have had the consequence that manufacturing remains a larger proportion of the overall economy. In addition, the high employment protection and compression of wages that is associated with specific skill production has significantly retarded the expansion of jobs in personal and social services, which tend to rely on flexibility and often low wages (Iversen 2005). This has pushed wages and prices up in services.

Figure 4.4. illustrates the pattern. It shows domestic price-levels, which is largely a function of prices in non-traded service, on the x-axis, and employment in a low productivity services -- retail, wholesale, hotels and restaurants (RWHR) -- as a share of

⁶⁹ Logically, investment in firm specific skills may be firms' response to politically mandated long term labor contracts, or the preference for long term contracts can reflect firms' commitment to incremental production methods. The Varieties of Capitalism literature has taken the latter position but it is an empirical question that is beyond the scope of this paper to explore. Suffice it now to say that the former argument implies that partisan commitments protects specific skills jobs beyond their economic value, whereas the latter predicts a shift towards shorter labor contracts with the rise of the service sector.

total employment in RWHR and manufacturing on the y-axis.⁷⁰ With the exception of Ireland (which has relatively centralized wage bargaining) the liberal market economies cluster at one end (circled by a red line), exhibiting low price-levels and a high share of RWHR employment, while the opposite pattern holds for coordinated market economies (circled by a blue line).

Figure 4.4. Prices and employment in retail, wholesale, hotels and restaurants (RWHR) as share of manufacturing employment, 1990s.



Notes: The price level is the log of the inverse of the real exchange rate, using the US dollar as the reference currency, *minus* the effect of GDP/capita on the real exchange rate. Positive values imply higher prices on non-traded good relative to the US dollar.

⁷⁰ The price level is measured as the log of the inverse of the real exchange rate, using the US dollar as the reference currency, *minus* the effect of GDP/capita on the real exchange rate (because prices are a positive function of development). Positive values imply higher prices on non-traded good relative to the US dollar. Because prices do not differ much on traded goods, they are largely a measure of the prices on services.

As we discuss in more detail below, among coordinated market economies, Scandinavia is an exception in total service employment because of a large public service sector. Governments in these countries have also taken a more active role in reallocating labor across sectors.⁷¹

4.2.2. Divorce Risk

Compared to a 14.6% average divorce rate for OECD countries in 1970, nearly one in two marriages ended in divorce by 2005. Against the background of high divorce levels, we expect that women are more likely to enter the workforce, holding constant demand for female labor. Unable to rely on marriage as an insurance against poverty, more women in high-divorce societies will “self insure” by earning an income on their own.

The high correlation—0.9— between divorce rates and female labor force participation rates fairly screams a causal connection, but note that the causal arrow can go the other way as well: two career families are not taking full advantage of gains from division of labor, which means that the non-economic benefits from the marriage have to be larger to sustain those families. As the outside options of women improve, the bargaining space inside the marriage shrinks. Economically self sufficient women can abandon marriage without the economic hit that dependent women would have to endure, leaving fewer marriages to survive those utility calculations.

⁷¹ The Danish government, for example, has spent enormous sums relocating workers from uncompetitive meat packing plants and such to a whole range of service sector jobs.

4.2.3. Demonstration Effects

Demand for female labor and increased divorce risk are demonstrable factors in female labor market entry. More puzzling is why women try so hard to enter the workforce in countries where the demand for female labor is low and where divorce is relatively hard and rare. In those countries, notably Ireland, Italy, Japan, and Korea, women seem to be responding to hostile labor markets not by giving up on career prospects and settling for a traditional motherhood role, but by trying even harder at the expense of childbirth. These countries have among the lowest female labor force participation rates in the OECD, but their fertility rates are also at the bottom of the charts.

Demonstration effects are related to the broader question of cultural change or the evolution of stereotypes. In Chapter 2 we argued that parents adjust their socialization and investment strategies depending on whether females can secure a better livelihood by marrying well or educating themselves for remunerative careers of their own.

Demonstration effects are an interesting subset of value change, in that females may not only be unwilling to stay within inherited norms when opportunities for advancement present themselves, but they may be unwilling to wait for those opportunities before trying to secure them anyway. Another way to phrase this is that women's expectations about what career opportunities they can reasonably expect to have in the labor market are influenced by the opportunities they observe women having in other countries. Media exposure to high profile women in other societies may make women impatient for similar opportunities for professional success, providing an inspiration to strive harder for workplace advancement than the objective incentives would seem to warrant. Contrary

to the “opportunity cost thesis” in which opportunities for remunerative work translates straightforwardly into less time for babies, fertility among developed nations is positively related to ease of employment and career advancement for women.

4.3. Data and measurement

We model fertility as a function of individual traits such as age and education, sectoral differences (occupational group; public versus private), and macro-level variables at the country level, such as the economy’s predominant skill system and the level of public service provision.⁷² The individual-level data are from most recent Luxembourg labor force surveys (LES), which are from the late 1990s or 2000 with the exception of the Nordic countries where the latest available surveys are from 1990. Among the rich democracies, on which we focus, there are data for 13 countries: Austria, Belgium, Britain, France, Germany, Greece, Ireland, Netherlands, Norway, Spain, Sweden, Switzerland, and the United States (Canada and Finland had to be excluded because of lack of data on fertility). We focus on fertility among women aged 18-45 but compare the results to men. Fertility is measured as the number of children in the respondent’s household.⁷³ While this number includes children born to women other than the respondent, the error will be small and unlikely to be systematically related to

⁷² Pooling data across levels requires that we take into account the dependence of observations within clusters. We therefore use the multilevel modeling approach, which is explained in detail in Appendix A for Chapter 3. The general setup is

$$(1) \quad y_{ij} = \beta_{0j} + \sum_{r=1}^R \beta_{rj} x_{rij} + \sum_{s=1}^S \varphi_{0s} z_{sj} + \varepsilon_{ij}.$$

where y is the dependent variable (fertility), x_r are individual-level explanatory variables (indexed by r), and z_s are country-level predictors (indexed by s). Individuals are indexed by i , and countries by j . We will also test cross-level interactions ($x \times z$), but we can ignore these for now.

⁷³ In the cases of Finland and Switzerland this information is not available. Instead, we used the number of persons in the household, minus 1 for singles or divorced and minus 2 for married couples. The resulting variable is correlated with number of children in the household at .?? (among countries where both variables are available);

any explanatory variable. The average number of children per woman in our sample is slightly above one, whereas we know that women in these countries on average have 1.7 children at the time of the surveys. The simple reason is that we are examining a cross-section of women at different ages. To facilitate the interpretation of the results we multiply the estimated effects by 1.6 to get numbers that are comparable to the standard definition of fertility (average number of children born to each woman).

At the individual level we use sector of employment and occupation as the key independent variables. Sector refers to whether the respondent is employed in the public or private sector, whereas occupation refers to ILO's ISCO-88 classification at the 1-digit level. The idea is that the trade-off between career and family is less steep for women employed in the public sector and in occupations relying on general skills and flexible employment contracts. Occupations requiring highly specific skills and full time commitments should not be conducive to balancing work and family. Note that the effect on fertility (if any) could be either a result of women in particular occupations responding to a steeper tradeoff by having fewer children, or it could be a result of women with less intense preferences for children self-selecting into occupations where this is a comparative advantage. Both mechanisms are consistent with our political economy argument, and we would not expect either to be of particular salience for men since they are rarely primary caretakers.⁷⁴

We have two micro-level indicators of whether jobs are conducive to women combining work and family. The first is the incidence of part-time employment; the other

⁷⁴ Sector of employment is only recorded for people currently in employment, which means that those women who have temporarily exited the labor market for family reasons are excluded. These women are likely to come disproportionately from flexible types of employment, which will cause the effects of sector and occupation to be underestimated. But any bias will weigh against our hypotheses.

is the skill specificity of particular occupations. Part-time employment is simply the share of respondents who say they are in part-time jobs. Skill specificity is an individual-level variable based on the ISCO-88 occupational classification coupled with labor force data. It measures the specialization of skills in different occupations, following Iversen and Soskice (2001) and Cusack et. al. (2006).⁷⁵

At the macro level we distinguish between countries with production systems that emphasize specific skills and long job tenures, and hence tend to “penalize” women for having children. As in the previous chapter we measure these differences by an index that combines information on average firm tenure rates and vocational training activity.⁷⁶ Because both workers and employers want to reap the long-term benefits of specific skills investments, and because workers with such skills will find it harder to move around, firm tenure rates tend to be longer for workers with highly specific skills. Vocational training does not necessarily imply greater attachment to individual firms, but such training nevertheless represents investments in human capital that are more specific to particular jobs than those acquired through general education. Such investments again place a premium on continuous careers, and children interfere with such continuity. Combining firm tenure rates and vocational training activity gives a good summary measure of salient differences in national skill systems.⁷⁷

While economies that rely heavily on specific skills are likely to have steeper trade-offs between work and family for women, this effect is attenuated by deliberate

⁷⁵ Because long educations increase the time it takes to establish a career, and therefore tend to reduce fertility, skill specificity is not here measured relatively to total skills as is in Iversen and Soskice (2001).

⁷⁶ Specifically, vocational training intensity is the share of an age cohort in either secondary or post-secondary (ISCED5) vocational training. *Source*: UNESCO (1999). Tenure rates are the median length of enterprise tenure in years, 1995 (Norwegian figure refers to 1991). *Sources*: OECD *Employment Outlook*, 1997, Table 5.5. For Norway: *OECD Employment Outlook*, 1993, table 4.1.

⁷⁷ Estevez et al. 2001; Iversen 2005

policies aimed at reducing the effect. As many countries in Europe experience growing fiscal strains as a result of low fertility and an aging population, active family policies are likely to become more important – not just as a response to political demands, but also as an economic imperative. The key for the success of such policies in today’s world is not that they subsidize of families with children – a strategy that, as noted, has met with limited success when attempted -- but rather that they empower women to pursue careers without having to the sacrifice family. This means spending on high quality, full time childcare, and the creation, or subsidization, of flexible, general skills jobs in the public sector.⁷⁸

4.4. Findings

Detailed regression results are presented in Table A4.1 in Appendix A. At the individual level these confirm some well-established facts about the determinants of fertility. First, fertility rises with age at a progressively slower rate until the equilibrium number of children is reached – a number that depends on the other variables in the equation such as family status and education. Secondly, singles have fewer children than married couples, and, thirdly, a long education also reduces fertility -- about 200 fewer children for every 1000 women with a high education (compared to women with a low education). The education effect is partly because a long education delays the time of the first child, and partly because the opportunity costs of having children rise with education. It is notable in our results, however, that the effect of education is similar for

⁷⁸ We measure both effects of public sector by calculating government spending on goods and services (excluding defense), as a share of GDP. In practice, the bulk of non-military government purchases are for social services that are either (in large measure) provided *by* women, or *for* women. The public consumption data are from OECD, *National Accounts, Part II: Detailed Tables* (Paris: OECD, various years), and the military spending data are from the International Institute for Peace and Conflict Research, *World Armaments and Disarmament: SIPRI Yearbook*, 1995.

men, despite the fact that men rarely assume the role as primary caretakers and consequently face a smaller career penalty from having children. We surmise that people with high education pursue a different “investment” strategy in their offspring than those with low education. It is a well-known fact that there is a strong class bias in higher education, and this may reflect that highly educated parents spend more time and financial resources to ensure the educational success of their children. The likely consequence is that more effort will be concentrated on fewer children.

While age and education impact fertility in a similar way for men and women, this is not true for sector of employment or occupation. What is immediately apparent from these results is that occupation or sector of employment makes little difference for men, whereas for women it is quite important. Among 1000 women in the public sector, we find an estimated 70 more children than among 1000 women in the private sector, controlling for age, education, and marital status. This translates into a predicted fertility rate of 112 (since the actual number of children among women aged 18-45 has to be multiplied by 1.6 to get a predicted fertility rate). Among men, on the other hand, there is a slightly *negative* effect of public sector employment on their number of children (though it is not significant). Overall, the differences in the number of children among men in different sectors and occupations are small and do not display any systematic pattern, which suggests that they capture differences in the composition of the labor force of each occupation that our control variables fail to capture. If so, we can get a more accurate picture of the effect of occupation on female fertility by subtracting the estimated numbers for men from the estimated numbers for women. In other words, we use the number of children among males in each sector/occupation as a reference to gauge the net

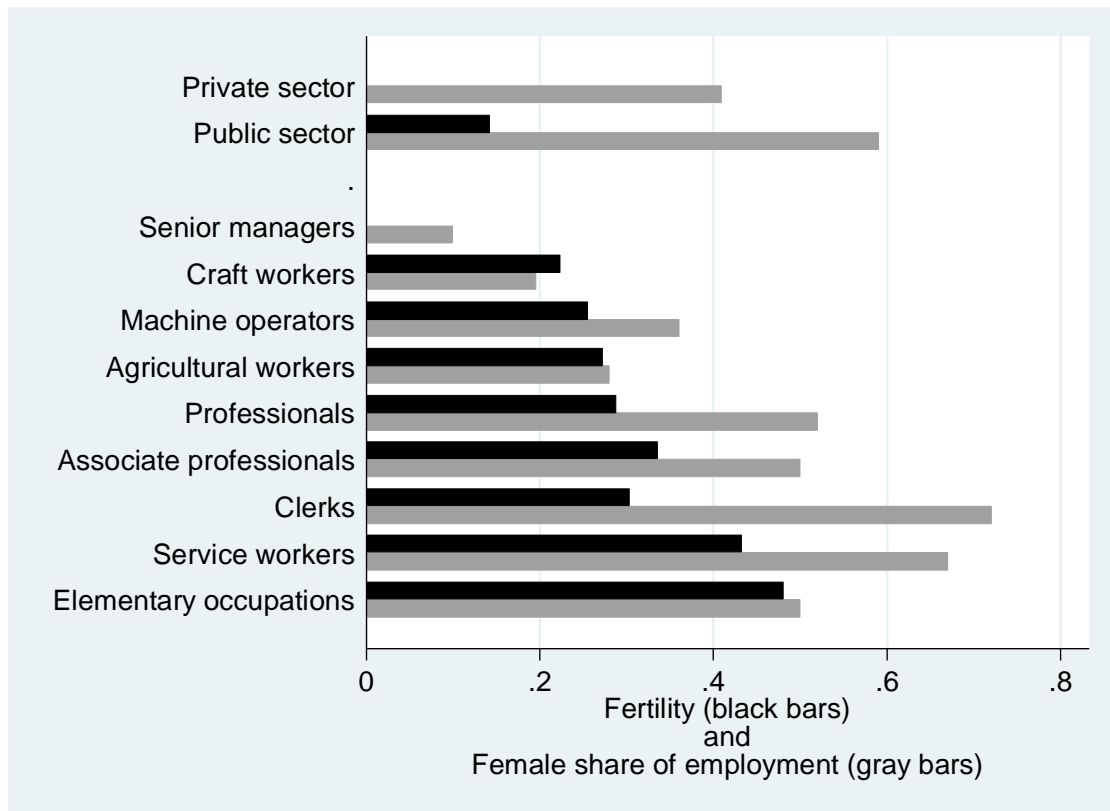
effect of sector and occupation on female fertility. In the case of public sector employment, the net effect of employment in this sector (as opposed to the private sector) is to raise the number of children for females by 89, which translates into a predicted gain in the fertility rate of 142. This is shown as the top black bar in Figure 4.5.

While this number may not seem particularly striking, it is important to keep in mind that public sector jobs include both civil servants and workers employed in welfare services. The former type of public sector job is found everywhere and is not likely to be particularly conducive to combining career and family. Indeed, career bureaucrats have traditionally been men working full time in a hierarchical organizational structure that rewards seniority and hence the accumulation of long tenures. The public sector jobs that have come to be dominated by women, and offer much more flexibility, emerged only with the rise of the welfare state, although the extent to which this is true varies a great deal across countries.⁷⁹ We have more to say about this below. For now simply keep in mind that the effect of public sector employment covers very different types of workers (from senior civil servants to daycare workers).

Using the same methodology for the occupations, which cover both the private and the public sector, and using fertility among senior managers as the reference group, the other black bars in Figure 4.5 show the estimated fertility rates among women in different occupations (again relative to men in those occupations). Estimates are all above the 0-line, which means that women always have more children in these occupations than in senior management. The occupations have been ordered from top to bottom so that they exhibit increasing levels of part-time employment, which is also correlated with the share of women in each occupation (which are shown by gray bars).

⁷⁹ Esping Andersen, of course, pointed this out long ago. 1990, 1999.

Figure 4.6. Fertility, occupation, and share of women comparison



Notes: Fertility is the estimated additional number of children per woman in a particular sector (private sector is reference group) or occupation (senior managers is the reference group), assuming that women aged 18-45 will eventually end up with the average number of children per woman in the 13 countries for which we have labor force surveys (1. times the number of actual children in the surveyed 18-45 age group). The estimates are based on the results in model (1) and (2) in Table A4.1 in Appendix A. These estimates control for age (plus age squared), family status (single), and education (medium and high compared to low). To control for unobserved characteristics of workers in each sector and occupation we measure number of children among women relative to the number of children among men in each sector/occupation. The occupations are ordered from top to bottom so that the incidence of part-time employment is increasing.

Part-time employment is a measure of employment flexibility, and it is also closely related to the specificity of human capital investments required in different occupations, so moving from top to bottom in the graph entails increasing the general skills intensity of jobs.

From this it is apparent that fertility is notably higher in general skills occupations with a high incidence of part-time employment – especially service and sales workers,

and elementary occupations. The estimated average fertility rate for women in these sectors is .456, or 456 children per 1000 women, higher than for women who are in higher managerial positions. Since these are also the occupations that disproportionately employ women, the explanation for sector differences in fertility is clearly related to the explanations of labor market gender segmentation. Agriculture turns out to be a bit of an outlier of an outlier if we examine the results for men and women separately (see Table A4.1 in Appendix A) since it turns out that both men and women in this sector have more children than what one might expect from the nature of agricultural production, which hardly offer a lot of employment flexibility. It is tempting to explain this as a result of more traditional family values in the countryside, as we suggested in Chapter 2.

The rest of our regression analysis adds country-level variables for type of labor market and amount of government spending to gauge the effects of macro-level variables (see model 3 and 4 of Table A4.1 in the appendix). We focus on the role of skill system and government consumption, and because these vary across countries only, we omit the (perfectly collinear) country-specific intercepts. In effect, we assume that these intercepts are a function of differences in the macro-level institutional variables. In so far as this assumption is tenable, the results show that countries with production systems that rely on specific skills have lower fertility rates than countries with production systems that rely more on general skills. Going from the country in our sample with the most general skills system (US) to the one with the most specific (Belgium) reduces the number of children by about 160 for every 1000 women. But the effect for men is actually the opposite, although not as strong (about 90 *more* children).

At first blush this difference between men and women seems puzzling but the explanation turns out to be quite simple. The reason is that male respondents are in large part recording the choices of their spouses, who may or may not be working. Female respondents, on the other hand, are all working at least part-time since we had to exclude women outside the labor market to record an occupation. And so, in most cases, are their spouses. If we compare working to non-working women in the child-bearing age, it turns out, unsurprisingly, that the latter have 270 more children per 1000 women (these are for the 18-45 age group sample). Hence, what the positive effect of specific skills systems for men shows is that female labor force participation is relatively low in these systems, and that male respondents therefore are more likely to be married to women who are not working, but have more children. What is clear, however, is that for women who have chosen to participate in the labor market, specific skills systems extracts a higher “sacrifice” in terms of the number of children. As more women want to have careers this effect will become more important.

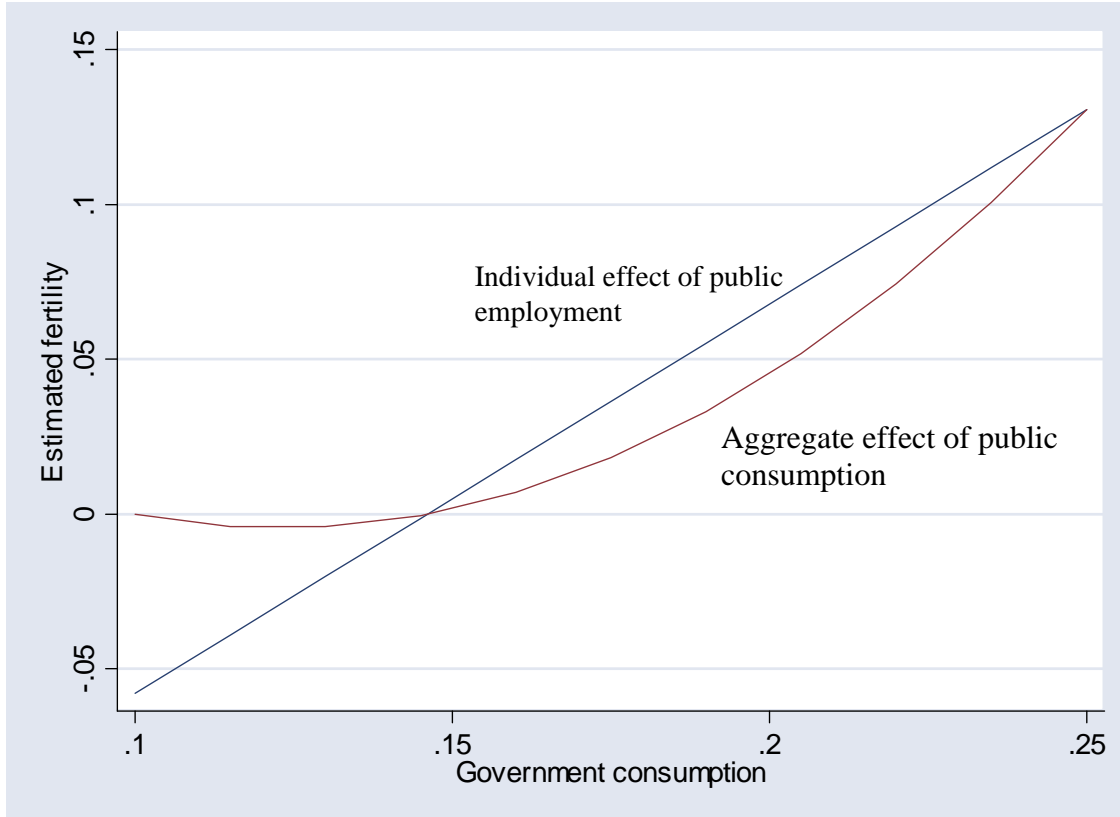
Now turn now to the role of government spending on public consumption. At relatively low levels of spending most dollars will go to pay the salaries of career bureaucrats who keep the wheels of the state apparatus running. As noted above, these tend to be males in long-term employment, and there is no reason that such spending should have any beneficial effects for women. At higher levels of spending, however, more resources will go into the provision of social services (daycare, care for the elderly, schools hospitals, etc), which tend to entail more female employment on more flexible terms. The effect of public employment on fertility is therefore contingent on the level of government spending, and we capture this by including a cross-level interaction between

sector of employment (at the individual level) and government consumption (at the national level).

Figure 4.6 shows the estimated individual-level effect of public employment at different levels of public consumption. At low levels of spending, the effect of public employment is actually to reduce fertility among women. Presumably, women who compete for jobs in the civil service cannot afford also to have large families. But as government spending rises, the effect of public employment becomes positive – presumably because jobs are increasingly in public services where the career-family tradeoff is less steep.

The figure also shows the aggregate effects of government consumption on fertility, assuming that spending as a percent of GDP is proportional to the share of the workforce employed in the public sector. At first more spending has a (slightly) negative effect as more women take up public sector jobs, but at around 15 percent of GDP (approximately the level in Ireland) the effect of additional spending is to raise fertility, and at the highest recorded level of spending (Sweden), predicted fertility is about 120 children per 1000 women higher. As explained in the appendix, because we are using cross-sectional data (with the number of children per household as the dependent variable), this figure should be doubled to get the predicted life-time rate of fertility per woman. This number, about 240 children more per 1000 women, would be enough to lift most low fertility countries in Europe above the threshold for population sustainability.

Figure 4.6. Government consumption and fertility



Yet it must be noted that a larger public service sector also means that more women will be in work, and this has the effect of *reducing* fertility. The cross-cutting effects of public sector employment on fertility is evident from the results for males in column (4). For men in the private sector, rising government consumption is associated with smaller families because their spouses are more likely to work and therefore have fewer children. This is not true for men in the public sector, however, perhaps because they are also more likely to be married to women in the public sector, who tend to have more children. On balance, it is clear that for working women a large public sector is associated with higher fertility. As more and more women want to have careers,

facilitating their ability to do so without making large sacrifices in terms of family is therefore the best bet to raise fertility rates to the sustainable population equilibrium. In countries such as Germany this may not seem like an obvious solution because the German state bureaucracy has been so dominated by predominantly male civil servants. A service-based welfare state works according to a completely different logic.

4.5. Labor Markets and Fertility: The Cases of the U.S., Japan, Germany, and Sweden

The quantitative results of the previous section suggest that gender-friendly labor markets promote fertility, and that public sector spending can generate a demand for female labor when the private sector is otherwise hostile on account of a premium on continuous careers to which females cannot commit. In this section we narrow our focus to a few country cases to check the logic suggested by the aggregate analysis.

Sweden and the US, so unlike in many respects, both have relatively high fertility by the standards of rich democracies, and we have provided an argument for why this is so. The general skills nature of the US economy gives firms less reason to discriminate against women in the expectation that they will interrupt their careers for family work. Although the Swedish manufacturing sector is organized around specific skills, the large size of its public sector has created an enormous pool of general skills jobs to which women have flocked. Although the demand for female labor was generated differently in the two countries, the effect in both countries is the same, to relieve women of the need to expend extra effort to succeed in the work place. In Germany and Japan, where the workplace is less naturally conducive to female success, females in large numbers have

shown themselves willing to forgo childbearing rather than to give up on remunerative work. The result is stunningly low rates of aggregate fertility.

Female labor force participation rates in the four countries in 1961 were not strikingly different; nor were their rates of fertility. By 1990, however, Sweden and the US had significantly outpaced Germany and Japan in both. In the US, the service sector economy has driven the rise in female labor force participation. Clerical jobs not only drew in ever larger numbers of women into the workforce, but also heightened women's educational aspirations that in turn allowed subsequent generations of women to move into other areas of the economy.⁸⁰ The narrowing of the male-female wage gap since 1980 has been attributed to the narrowing of the education gap.⁸¹

The important influence of clerical sector expansion on the American married women's labor force participation contrasts with the Japanese experience, where expansion of clerical work, and the service sector more generally, has not linked to an exponential growth in female labor force involvement.⁸² Much clerical work in Japan remains embedded in career ladders in internal labor markets open only to men.⁸³ Although Japanese employers are not required by law to maintain long term labor contracts as in many European welfare states, top tier Japanese firms have organized corporate structure and competitive strategies around competition for scarce labor. Life time employment and seniority advancement, labor market practices that may sound culturally quaint, were adaptations to rapid economic growth after World War II when locking in labor into long term careers with a firm made good economic sense. The

⁸⁰ Claudia Goldin 1990.

⁸¹ Blau and Kahn 2005; Goldin 1990; O'Neill and Polacheck 1993; Brinton 2007.

⁸² Brinton 2007.

⁸³ Brinton 1993; Brinton 2007.

consequences for females, though unintended, were dramatic. Females were considered a bad employment bet because of the expectation that they would interrupt their careers for child birth and rearing during their peak years of productivity. Instead, firms counted on females to stay at home to manage households from which male employees would be largely absent, for the successful worker was expected to be available for work and after-work socializing until the wee hours. To cope with the economic swings that sometimes brought profits perilously close to the high fixed cost of long term labor contracts, firms employed core male workers in clerical work on a regular basis, and hired females as the part time buffer force that could be expanded and contracted as necessary. As a result, clerical and service work, though expanding as a percentage of the economy, were never feminized in Japan to the same extent as in the United States.⁸⁴

Germany and Sweden are examples of European coordinated market economies in which labor protections are, unlike Japan, politically mandated and statutorily required. In one sense, the wage compression and protection from dismissal characteristic of European welfare states have a beneficial effect on working women, insofar as females tend to cluster at the lower end of the wage distribution. The median female wage is at about the 30th percentile of male wages in both the U.S. and in Sweden, but the difference take home pay between men and women in Sweden is considerably smaller in absolute terms because of the narrower wage spread.⁸⁵ As we and others have noted, however, the inadvertent but demonstrable effect of discouraging female employment swamps the salutary effects on wages. Unless there is demand for female labor in compressed wage

⁸⁴ Brinton 2007.

⁸⁵ Blau and Kahn 1996.

systems, there will be fewer females to take advantage of the higher wages at the lower end.

The comparison between Sweden and Germany bears out the crucial role of the Swedish public sector in compensating for the private sector's anemic demand for female labor. Under successive left-labor coalitions, the Swedish government expanded public sector employment steadily from the 1970s, accounting for much of the growth in female workforce presence.

This is one of the most notable accomplishments of the political left in Sweden. Although the social democracy traditionally had its stronghold in the mostly male industrial working class, it was able to expand the coalition to include women entering the labor force in large numbers in the 1960s.⁸⁶ The coalition was built on a continued commitment to high employment protection and compressed wages, but a simultaneous willingness to expand public services in the face of sluggish private provision. Right parties objected to the pervasive impact of unions on the labor market, but they could not break the power of the unions and were reluctant to expand the size of the service state instead. This in effect meant that the right had no credible alternative to the social democrats, and it suffered at the polls as a consequence.

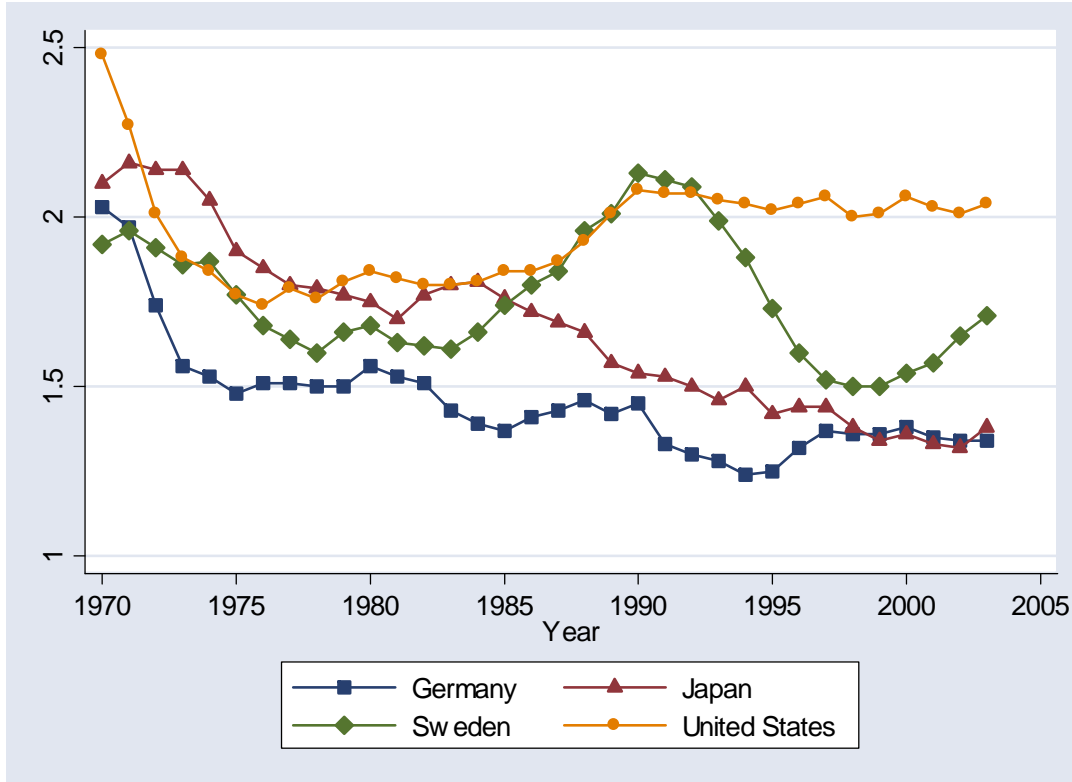
Germany, by contrast, was constrained by ideologically alternating coalitions in government and by an independent central bank to keep its public sector small, at least by Scandinavian standards. The commitment of Christian democracy to a traditionalist view on women and the family, coupled with its historical capacity to attract a sizable share of the industrial working class by endorsing the social market economy (high job and social protection), meant that it was very difficult to build a majority coalition behind a rapid

⁸⁶ Huber and Stephens 2000.

expansion of public services. In retrospect, perhaps the social democrats could have drawn the support of large number of women by aggressively pushing such policies, but they were too concerned with holding on to its blue collar supporters, who had a credible exit option in the CDU, and they were obsessed with proving their fiscal “responsibility” to the Bundesbank as well as to the pivotal liberal center party, which was passionately committed to market solutions and simultaneously the king-maker in coalitional politics. With less of its economy socialized and a larger percentage of its public sector employees as career bureaucrats than as service providers, Germany has not drawn women into the workforce through government expansion.

The consequences for fertility became visible by the 1980s as demand for female labor in Sweden outstripped that in Germany (see Figure 4.7). While fertility in Germany continued its downward slide, Swedish women proved more willing than their German counterparts to have children. The reason, we suggest, is that Swedish women were less worried about the effects of child care leave on their careers. If employers do not bear a cost for their employees’ discontinuous careers, they do not need to pass along the penalty to their employees.

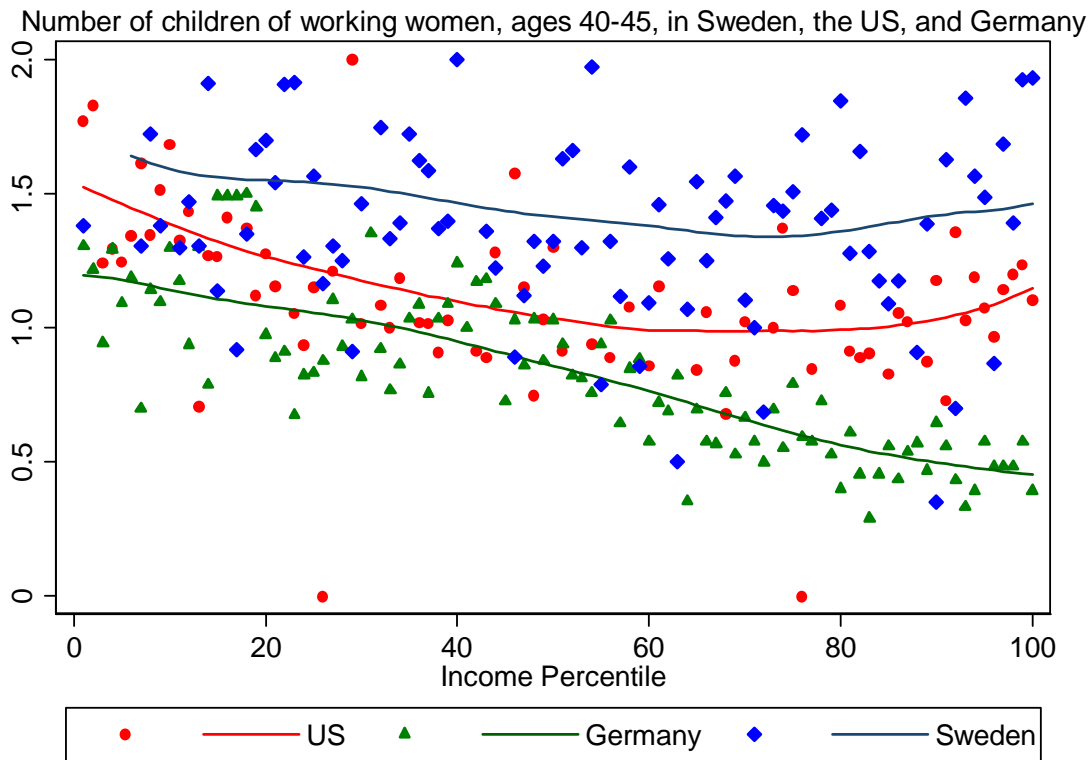
Figure 4.7. Fertility rates in Germany, Japan, Sweden, and the US.



If career interruption comes at an economic cost, women with high incomes ought to have fewer children, and women with fewer children ought to have higher incomes. Figure 4.8 captures the “mommy penalty” in the U.S., Germany, and Sweden.⁸⁷ As we would expect, the tendency for higher income earning women to have fewer children is more pronounced in Germany than in the U.S. or in Sweden. The data here understate the difference, for there are fewer German women in managerial positions than in the U.S. or in Sweden (if we include public sector management) in the first place.

⁸⁷ Because Japan does not participate in the Luxembourg Income Survey, data on fertility by income are not available for Japan.

Figure 4.8. Fertility of working women in Sweden, the US, and Germany, by income



4.6. Conclusions

Among rich democracies, fertility is higher where it is easier for women to balance family and career. But the political economy of fertility is not simply a matter of government subsidies to families. It is about the structure of labor markets and production systems, and the effect that public policies can have on these. Labor markets may be women-friendly in an inadvertent way, as in liberal market economies, where the absence of labor market protections reduces the premium attached to career continuity that only men can credibly promise. By unhinging the risk of career discontinuity from quitting a job for the sake of children and home, liberal market economies give females a chance to compete more fairly with men. The U.S. is a relatively high fertility country despite

paltry government spending on childcare, because the fluid labor market weakens employers' incentives to discriminate against women, allowing many women to balance family and career without Herculean effort. There are, of course, two sides to the liberal market economy solution to gender equality, for the intra-gender wage disparity that permits career women outsource much "family work" to low wage women leaves 25% of American children in poverty and substandard childcare.

Germany, Japan, and Sweden are all examples of coordinated market economies in which long-term labor contracts and specific skills investment discourage employment of women in the private sector. Although German labor unions are vastly stronger than Japan's, Germany shares with Japan the distinction of being at the bottom of the world's league tables in fertility because the center-left coalitions in Germany have neither expanded the public sector sufficiently to make up for the private sector's anemic demand for female labor, nor has the German government undertaken to bribe firms to hire women who might otherwise be more costly human capital investments in the long run. But labor markets may be women-friendly in a deliberate, policy-enhanced way, as in Scandinavia. Private sector employers in Scandinavia may be as loathe to hire and to promote women as employers in other coordinated market economies, as evidenced by the striking segmentation of women in public sector jobs. The Scandinavian difference is that governments are sufficiently large to absorb a large proportion of the female working population. Fertility in Scandinavia, as exemplified by the Swedish case in our study, is buoyed by substantial employment of women in the public sector.

The “Dutch Model,” which increases access to part time employment, is sometimes raised as another, more market friendly, way to help women balance the challenges of family and work. The Dutch 2000 Act on Adjustment of Working Hours gives employees the right to shorten or increase work hours on request if they have been employed for at least one year.⁸⁸ Unlike the postwar Japanese model, in which part time jobs were low paying and insecure, under the Dutch Model employers in principle pay part time workers as much as full time workers, provide full benefits on a pro-rated basis, and give workers significant discretion over their work hours.⁸⁹ Part time work is not relegated to low skill segments of the economy, but have become widespread in professions such as law and medicine as well.

The Dutch Model was not, of course, designed to help women. It can be traced to the “Accord of Wassenaar” of November 1982 when employers and unions in the coastal town of Wassenaar sought to end years of fraught industrial relations by signing an agreement to restrain wages in exchange for working time reduction.⁹⁰ This flexible labor arrangement became more widespread and part time jobs grew substantially in the Netherlands during the 1980s and 1990s as employers sought to wriggle out from an entrenched system of job security that is typical of coordinated market economies.

The Dutch case raises two important and related questions. One is whether it is possible to expand part time employment without undermining the livelihood of Dutch workers generally. In fact, regulation of part-time and temporary employment has been liberalized in many European countries, with the sole exception of France. Unions fear, however, that the move to flexible work could generate a majority coalition in favor of

⁸⁸ Kenjoh 2007.

⁸⁹ Gustafsson, Kenjoh, and Wetzels 2001

⁹⁰ Scharpf 2000

wholesale deregulation, with the result that wage and income inequality could grow rapidly along the model of liberal market economies.⁹¹

The second question, more central to our current theme, is how part time employment would affect the plight of women in particular. Flexible work contracts may be at least a partial policy substitute for the expansion of public sector employment boosting demand for female labor, but it also potentially comes with the cost of a dual labor market with women in inferior jobs. Unless production technologies and processes change sufficiently to reduce the advantages of specific skills, or unless social mores change such that men are as likely as females to reduce their work hours, part time employment could become a proxy for the low wage, general skills “mommy track.”

Denmark may be a case that illustrates both the limits and possibilities of reducing employment protection. Job projection has always been relatively low because of the many small firms that have resisted long-term labor contracts, but the government has made up for the short fall from the private sector by providing generous unemployment benefits and other protection. Denmark’s “flexicurity” system is now held up as another “model,” but in fact, jobs for women are still primarily in the public sector. To change the sexual division of labor at home so that women are no more burdened than their male counterparts with family work, seems both reasonable but still far away.

In a world suffering from environmental degradation, overcrowding, and xenophobia, it may seem perverse to muse about fertility in rich democracies. Our concern is not to provide a template for governments seeking to avoid future workforce shortages by increasing native population growth without resorting to immigration.

⁹¹ Uwe Becker 2005.

Rather, our interest in fertility is solely as a barometer of female constraint and opportunity. When the day comes that women can take for granted the possibilities of balancing family and career in a way that men currently do, fertility will become a social and fiscal issue rather than a measure of gender inequality.

Appendix A Regression results

The regression results reported in Table A4.1 are used to generate Figures 4.5-4.7 in the text). All models are estimated using multi-level, maximum likelihood regression with countries as clusters and assuming normally distributed errors. Model (1) and (2) include a full set of country dummies (not shown), while Model (3) and (4) exclude country dummies. The reference groups for the dummy variables are: i) private sector for the public sector dummy; ii) low education for the educational dummies; iii) senior managers for the occupational dummies. The reported adjusted R-squared is based on OLS regression.

Table 4.1. Political economy determinants of fertility among men and women, aged 18-45.

	Micro-level results		Multi-level results	
	(1) Women	(2) Men	(3) Women	(4) Men

Age	0.20*** (0.05)	0.02 (0.04)	0.20** (0.05)	0.02 (0.04)
Age*Age	-0.0029*** (0.0007)	-0.0002 (0.0005)	-0.0029*** (0.0008)	-0.00002 (0.00005)
Single	-0.74*** (0.05)	-1.01*** (0.03)	-0.74*** (0.05)	-0.99*** (0.03)
Medium education	-0.09* (0.05)	-0.11* (0.05)	-0.04* (0.02)	-0.13*** (0.03)
High education	-0.20 (0.12)	-0.13 (0.10)	-0.13* (0.07)	-0.17*** (0.05)
Public sector (<i>PS</i>)	0.07*** (0.02)	-0.02* (0.01)	-0.06* (0.03)	-0.08 (0.04)
Gov't consumption (<i>GC</i>)	-	-	-0.03 (0.07)	-0.17*** (0.04)
<i>PS x GC</i>	-	-	0.28*** (0.06)	0.15** (0.07)
Specific skills system	-	-	-0.16** (0.06)	0.09 (0.06)
<i>Occupations:</i>				
Professionals	0.15*** (0.03)	-0.03* (0.02)	0.14*** (0.03)	-0.03 (0.02)
Associate professionals	0.13*** (0.04)	-0.08*** (0.02)	0.13*** (0.04)	-0.06*** (0.01)
Clerks	0.11** (0.04)	-0.08*** (0.02)	0.12*** (0.04)	-0.07*** (0.02)
Service workers	0.29*** (0.09)	0.02 (0.04)	0.30*** (0.08)	0.02 (0.03)
Agricultural workers	0.24** (0.09)	0.07* (0.03)	0.22** (0.08)	0.06* (0.03)
Craft workers	0.16** (0.05)	0.02 (0.03)	0.18*** (0.04)	0.02 (0.02)
Machine operators	0.17*** (0.03)	0.01 (0.03)	0.19*** (0.03)	0.02 (0.02)
Elementary occupations	0.33*** (0.08)	0.03 (0.03)	0.34*** (0.07)	0.04 (0.02)
Adj. R-squared	.20	.25	.20	.25
N	92192	107455	92223	109912

Key: **: Significant at a .01 level; *: significant at a .05 level. Notes:

Chapter 5

Political Preferences

5.1. Introduction

Economic modes of production, by increasing or reducing the premium on a household sexual division of labor, have powerfully circumscribed women's choices in historic time. In the highly interventionist politics of the modern world, however, an exclusive focus on economic structures is likely to miss a big part of the story. Government policies--particularly those that influence the demand for female labor--also have an enormous effect on women's lives.

The possibility of a gender gap in political preferences emerges when marriage contracting is incomplete and termination of the contract is an ever present possibility. In this case spouses will have conflicting preferences over who receives family benefits, and they will differ over any policies that affect their outside options. This is so not merely, or even primarily, because they could be forced one day to take the outside option, but also, as we have argued, because outside options affect the current bargaining power inside the family. Not only does such bargaining power help determine who will have more influence over everyday family decisions, but it also affects the division of household labor (Chapter 3) and gender norms (Chapter 2).

Government policies may have countervailing effects on women's work opportunities, and some are surely inadvertent. Government policies that protect industrial jobs can, as a side effect, depress labor market opportunities for women because incumbent labor tends to be disproportionately male. On the other hand,

government spending on childcare and elderly care and public sector service jobs can offset the weak private sector demand for female labor. As long as the job-enhancing effects of government intervention predominate—though this is not always the case-- women who work outside the home, or who want insurance against the consequences of divorce, should vote to the left of working men because they value the government spending that make their jobs possible. At-home women may not necessarily do so because public policies that facilitate female independence do so in part by taxing males who are the bread-winners in more traditional families. In this case the Becker common preference model applies (in effect as a borderline case of the general bargaining model).

We have also argued that demand for female labor undermines patriarchal norms, freeing women to be more equal participants in many aspects of life. If women recognize that patriarchal values bind them with invisible ribbons, as it were, they should and favor government policies that increase the demand for female labor and, by extension, release women from unquestioned servitude. As we argued in Chapter 2 the causal logic also moves in the opposite direction, reinforcing norm change. Parents who seek to strengthen the position of their daughters in the labor market will be inclined to teach their sons and daughters gender equality at home, and will be pre-disposed to favor educational policies that incorporate such equality into the public school curriculum.

As we have argued women are generally at a disadvantage when competing for jobs with men because they are expected to leave the labor market for purposes of child birth and rearing.⁹² Employers will therefore be reluctant to invest in skills of women, and young women are likewise hesitant to build up substantial employer-specific assets

⁹² Mincer 1958, 1978; Polachek 1975, 1981.

or even invest in the education that is needed for a specific skills type of job since these may be forfeited with the birth of their first child.⁹³

How great the motherhood disadvantage is, however, depends on the nature of skills that employers are seeking.⁹⁴ If such skills are highly specific to firms, or even to industries, and if a substantial part of training is paid by the employer, there is a strong disincentive to make these investments in female employees where the average time horizon is comparatively short. This is reinforced by women's own decisions because they are disinclined to invest in specific skills for which they are at a disadvantage. Women are therefore more likely than men to invest in general skills and/or in skills that are less prone to deteriorate when not used for some period of time. If women choose to invest in skills, they should choose skill sets that are perennially in demand and that can be updated relatively easily following labor market absences. It is the emergence of these types of jobs in services that have made it possible for women to specialize in marketable, as opposed to household-specific, skills. Yet, their relative abundance varies systematically according to the type of production regime, or variety of capitalism – a logic that is simply a specific application of our general mode of production argument.

Females sort themselves into different kinds of jobs from males to avoid taking a hit in pay or promotion prospects with employers who value work continuity and learning on the job. Women have a comparative *disadvantage* in specific labor market skills just as they have a comparative disadvantage in hard manual labor. Economies that place a premium on specific skills therefore put women at a disadvantage compared to economies that emphasize general skills, in which women are at an equal footing with

⁹³ Anderson, Binder, and Krause, 2006 – check.

⁹⁴ Estevez-Abe 1999 and Estevez-Abe et al. 2001.

men if we assume that labor is not physically highly challenging and that women do not have a strong absolute advantage in household skills.

Countries differ in the degree to which their labor markets utilize specific skills. For a variety of reasons, some countries have specialized in forms of production that use specific skills intensely while in other countries employers invest minimally in their workers for a more fluid labor force.⁹⁵ These differences in production strategies are reinforced by institutions that accompany them, in particular strong unions and centralized collective bargaining institutions. Unions protect workers with specific skills, in part through public policies such as employment protection legislation, and centralized bargaining suppress the supply of service sector jobs at the lower end of the productivity and wage distribution. Our argument implies that women in more flexible labor markets are typically better able to compete on an equal footing with men in the labor market because investments in skills are mostly borne by workers rather than by employers--say, through college education--and because general skills do not depend on staying with a particular employer for a long period of time. This implies that, everything else being equal, female labor market participation tends to be lower in specific skills systems.⁹⁶

As we argued in Chapter 3, however, these effects can be mediated by social and economic policies deliberately designed to counter them. In particular, the extent to which the government supports the ability to form an independent household, especially through publicly provided services such as daycare, and through employment for women in these services, it can compensate for the exclusion of women from good jobs in the

⁹⁵ Hall and Soskice 2001; Iversen 2005.

⁹⁶ Institutions that protect private sector specific skills, such as high job security, seniority pay, and generous employer-financed benefits, tend to reinforce insider-outsider divisions, and since women are more likely to be outsiders, they are at a greater disadvantage compared to more flexible labor markets where low protection encourages investment in general skills.

private labor market.⁹⁷ The Scandinavian countries are prime examples here, having attained high female participation rates by creating a large, and heavily feminized, public sector.⁹⁸ This, then, implies a role for democratic politics in affecting the bargaining power between the sexes, and this in turn suggests that policy preferences between the sexes should diverge. Universal suffrage turns gender politics into a potential independent variable in explaining power between the sexes.⁹⁹ As a result, the conflict of interest within the household can also be manifested in the form of a gender gap in partisan preferences.

5.2. The “Old” Gender Gap

Women’s move to the left in rich democracies is striking, because women typically voted to the right of men in these countries only a few decades ago.¹⁰⁰ In countries where the demand for female labor is limited—or for women with limited economic opportunities in any country-- women are *more* likely than men to be socially conservative despite the unflattering roles their conservatism gives them to play. As we suggested in Chapter 2, the reason is that, for women for whom the marriage market is the principle way to secure a livelihood, they seek to shore up the sanctity and strength of family values. Once committed to the life of a married woman, that marriage is best that binds securely and for which obligations are taken seriously by the man as well as by the woman.¹⁰¹ An interesting example of this is Islamic fundamentalism, which places

⁹⁷ Esping-Andersen 1999; Orloff 1999.

⁹⁸ Note that the private sector in Scandinavia is a characteristically specific skills economy. One can view the large services component of the public sector counteracting the effects of the private sector specific skills economy, or as pulling the Scandinavian economies into a general skills direction. Although they are analytically equivalent, we adopt the former approach only for ease of presentation.

⁹⁹ Lott and Kenny 1999.

¹⁰⁰ Inglehart and Norris 1999, 2002; Studlar, McAllister, and Hayes 1998.

¹⁰¹ Islamic fundamentalism article.

serious restrictions on female behavior but also commits husbands to take care of their wives. In Islamic countries with limited demand for female labor, women are more likely than their male counterparts to hold fundamentalist views. Families are presumably careful to socialize their daughters to hold traditional beliefs when their daughters have only the marriage market to rely on for their livelihoods. Once married, a woman is better off with a devout husband than one who does not take seriously his religious obligations to family.

5.3. The New Gender Gap

Starting in the late 1970s in the United States and Scandinavia, and some years thereafter in many other western countries, women have begun moving out of sync with their husbands in their voting behavior, often voting to the left of men in aggregate.¹⁰² Women are more likely than their male counterparts to support activist government across a range of economic policies.¹⁰³

In economic efficiency models of the family there is no room for men and women to favor different public policies. *Families* will differ over social policies depending on their position in the age and class structure and the like, but individual family members will favor policies that maximize the welfare of the household, and these are the ones that enable a complete division of labor and maximize the income of the male breadwinner. Men and women are therefore assumed to have more or less identical preferences.

There are several competing explanations for “the modern gender gap,” where women’s preferences and voting patterns appear to be moving to the left. Some scholars argue that women are more altruistic than men, and they therefore favor more welfare

¹⁰² Iversen and Rosenbluth, 2006; Iversen, Rosenbluth, and Soskice, 2006.

¹⁰³ Alvarez and McCaffery 2000; Greenberg 2000; Ladd 1997; Shapiro and Mahajan 1986.

spending.¹⁰⁴ But this argument is a static one that fails to explain the change in voting behavior over recent decades. Other scholars have pointed out that women are more likely than men to be economically vulnerable.¹⁰⁵ But survey research suggests that women throughout the wage distribution are more likely to vote left than their male counterparts.¹⁰⁶ Class status is not capturing the whole story, although this account implicitly assumes – correctly we believe -- that the aggregate welfare of the household is not all that matters.

One way to move beyond the notion that gender conflict is simply an expression of class conflict is to consider that high divorce rates leave all women at a higher risk of income loss than before, and that women are therefore voting for more redistribution even before they receive it, as a form of insurance.¹⁰⁷ Using variation in divorce rates across U.S. states and some European countries, Edlund and Pande derive a measure of “divorce risk” and find that it corresponds with the likelihood of women voting farther left than their socio-economic status warrants.

If women vote left as insurance against post-divorce poverty, we would expect that women staying out of the work force are at the greatest risk and hence most likely to vote left. Instead, however, the data suggest that women in the work force are more likely to vote left than housewives.¹⁰⁸ This suggests that the insurance argument is

¹⁰⁴ Conover 1988; Welch and Hibbing 1992; Gidengil 1995

¹⁰⁵ Tedin 1994; Sears and Citrin 1982

¹⁰⁶ Goertzel 1983; Carroll 1988; Inglehart and Norris 1999; 2002

¹⁰⁷ Edlund and Pande 2001.

¹⁰⁸ Greenberg 2000

missing something important, since working women have already reduced their economic exposure to the possibility of divorce.¹⁰⁹

The data suggest to us an alternative, or at least complementary, explanation based on household bargaining: working women gain bargaining power at home from the partial socialization of family work such as child care and elderly care, and these are precisely the sorts of policies that parties on the left are more likely to espouse. The logic is that with some of her family burden lifted by the public purse, a woman is better able to invest in her marketable skills. By raising her level of economic independence closer to her husband's, a wife reduces her stake in keeping the relationship going closer to his level. As we argued in Chapter 3 we should observe more equal shares of family work in the household, not only because the government is undertaking part of it, but also because a woman is less willing to give up increasing amounts of her time to keep the marriage from dissolving.

But there are reasons for women in traditional marriages not to be swayed by the bargaining logic and vote with their husbands rather than their working sisters. If a woman has invested heavily in household-specific skills her opportunities in the labor markets are correspondingly low, and her material welfare will be tied up with the job security and income of the male breadwinner. Policies that favor the male breadwinner are therefore also policies that benefit women who are more or less completely dependent on their husbands. This is where the Becker model is useful. Precisely because the division of labor is more or less complete in traditional households, these can in effect be treated as unitary actors with a single utility function (as Becker does).

¹⁰⁹ One could argue, of course, that there is a selection effect here: only the women who feel at the greatest risk will seek outside employment; and that their resulting outside remuneration only partially offsets their perceived risk.

Consequently when a woman has sunk all her investments into household-specific skills, paid employment options will always be relatively unattractive, and so are costly policies to pay for daycare and public employment. If divorce cannot be ruled out, insurance policies for these women will tend to focus on the responsibilities of ex-husbands – especially alimony and child support. It is when women make serious investments in marketable skills that the division of household labor itself becomes contested, and this is true as well of public policies that affect this division. There is thus a “tipping point” beyond which it makes sense for women to support public policies that improve opportunities to engage in paid employment, even if this undermines the income and protection of core, skilled, male workers with whom they may be married. The lower the investment in household-specific skills, the more reason women have for favoring public policies that diverge from men’s preferences.

The logic can be more formally developed in the form of a network or strategic complementarities game, which is illustrated in Figure 5.1. On the y-axis we have the probability of an individual woman, i , entering the labor market, which is correlated with investing in marketable as opposed to household-specific skills. On the x-axis is the expected share of women participating in the labor market. Assuming that individuals are identical, in equilibrium the probability of an individual entering the labor market must equal the share of women in the labor market (the 45-degree line). The reason that the entering the labor market is a *game* is that a woman’s propensity to do so is affected by whether other women do. There are three reasons for this. The first is a purely economic one. As more women enter the labor market the demand for services, and hence female labor, will increase. This raises the opportunity costs of not working. The

second effect goes through divorce rates. As more women enter the labor market, the gains from the gender division of labor fall. Since one of the principal gains from marriage is the division of labor, as in the Becker model, the probability of divorce rises. Higher divorce rates in turn make it less desirable to invest in household-specific assets, which make entry into paid employment more desirable. We have shown elsewhere that there is in fact a tight empirical relationship between female labor force participation and divorce rates in OECD countries.¹¹⁰ The third reason is changes in gender norms. As we argued in Chapter 2, as more women enter the labor market and divorce rates rise, caring parents will be more likely to teach their daughters values that will help them succeed in the labor market. When these girls reach adulthood they will be more likely to enter paid work.¹¹¹

We think it is sensible to assume that the probability of participation follows the cumulative standard normal distribution, which means that the relationship between (expected) female labor force participation and probability of entering is S-shaped as shown in Figure 5.1. Starting from the left in the figure and focusing on the bottom curve, even when other women are not expected to work there is some incentive for women i to do so. Some jobs for women will always be available, and even if divorce is not a concern there are “life-cycle” incentives for women to participate in paid employment, entering the labor market before children are born and after they leave the household (as described in the original Becker model). Higher expected levels of female labor force participation will increase the propensity to participate for purely economic reasons, but as long as the traditional family is protected as an institution through

¹¹⁰ Iversen, Rosenbluth and Soskice (2005).

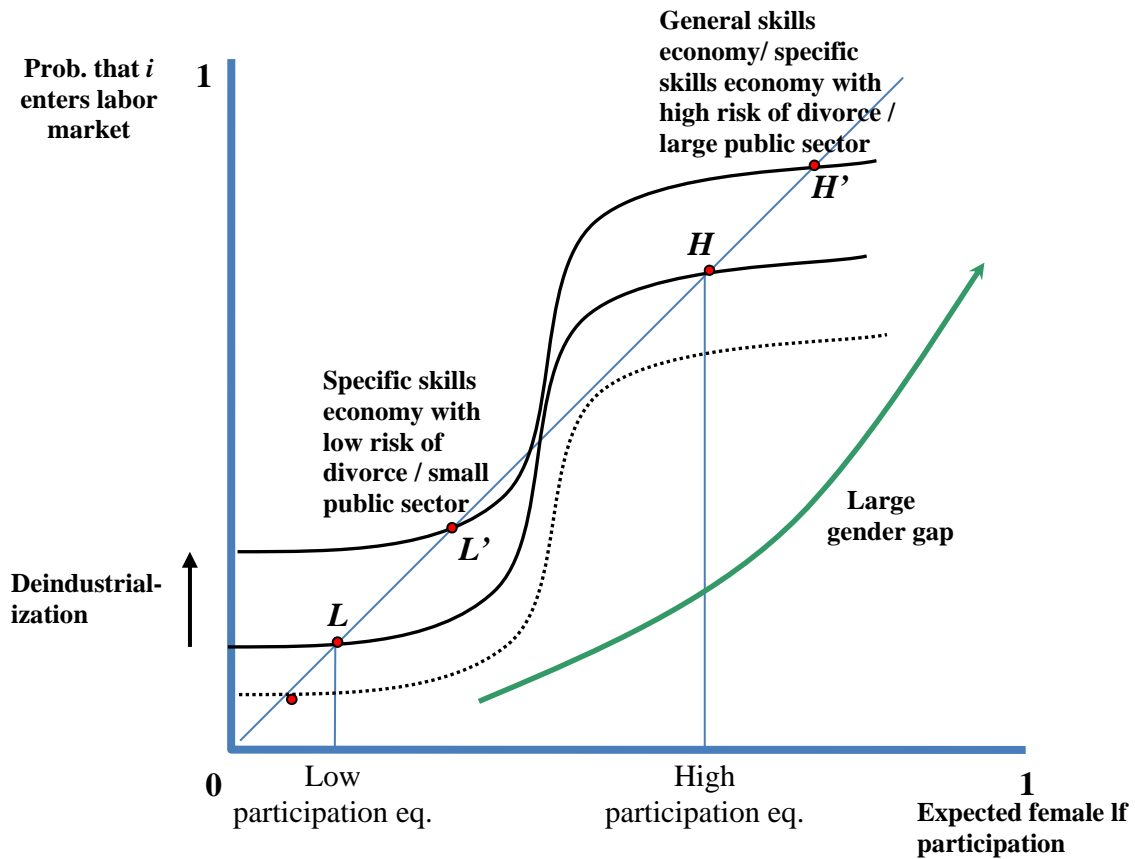
¹¹¹ In principle this requires a dynamic representation of the game, but the effect can be indirectly captured by a higher propensity of a woman to participate when others do.

legislation and inter-generationally transmitted gender norms, the effect will be modest. At some point of female participation, however, divorce rates will start to rise and gender norms will begin to change accordingly, prompting many women to enter the labor market. This is a steep upward-sloping part of the S-curve. When the probability of entering the labor market reaches a very high level, additional labor market participation by other women will again only have modest effects on divorce rates and norms. This is the top, flat part of the curve.

Note that there is a low and a high participation equilibrium in this model. The L-equilibrium loosely speaking corresponds to the Becker model, while the H-equilibrium loosely speaking corresponds to the bargaining model (although, in fact, the entire setup presupposes a bargaining framework). In the L-equilibrium only the small minority of women who are working are likely to have preferences for public policies that diverge sharply from those of males. The majority of women who do not work will have “conservative” views on family policy. The distribution of preferences is the opposite in the H-equilibrium where most women will work, or want to work, and favor policies that improve their outside options. The traditional family will be defended by only a small minority. As we move from low to high equilibria, we thus expect the gender gap to rise.

It is entirely conceivable that the S-shaped “response” function only intersects the 45-degree line at one point, and that this corresponds, roughly speaking to pre-service economy that Becker was describing. But it is our contention that the “modern” gender gap has emerged as a result of the rise of the service economy, and the emergence of a high-participation equilibrium. At the same time, we maintain that distinct equilibria prevail in countries with different economic institutions and social policies. The rise

Figure 5.1. The game of female labor market entry



of the service economy can be described as an upward shift in the S-shaped “response” function, as illustrated in the figure. The increase in the supply of service sector jobs raises both the low and the high equilibrium, corresponding to a universal rise in female labor force participation. But it is still possible for countries to fall into distinct equilibria (indicated by L' and H'). Following the analysis in Chapter 3, some countries continue to have notable lower female labor force participation and divorce rates than others, and we should expect these “L-equilibria” countries to be associated with a smaller gender gap. As we have argued, countries that specialize in production that requires intensive use of specific skills disfavor female participation in the economy.

As we have also stressed, the welfare state is an important source of employment for women precisely because so many of the jobs replace caring functions that are otherwise provided “for free” in the family. The importance of public employment is particularly salient in specific skills countries where it can compensate for reduced opportunities for women in the private labor market. A large public sector may therefore push specific skill countries into the high equilibrium outcome in Figure 5.1. Public employment is consequently also a matter of potential gender conflict.

But the most obvious matter of preference divergence between men and women, perhaps, is publicly subsidized daycare. Since women are much more likely to end up as primary care givers, their welfare is disproportionately affected by the availability of high quality, low-cost daycare. Men may prefer to spare the public purse and hence their tax bill if their wives are default child care givers. The same is true for women who depend heavily on a male breadwinner, which, again, is more likely in some countries rather than others. This logic also applies to public care for the elderly and the sick because it helps women escape some of their traditional duties and thereby permit more time to be spent in paid employment.

Support for redistribution and social insurance obviously does not come from women alone. Any person with an income below the mean is likely to prefer at least some redistributive spending. And when an insurance motive is added to the model, those exposed to greater risks will also demand more spending. One key source of such risks is the transferability of workers’ skills. The harder it is to transport skills from one job to another, the greater the importance of income protection through social insurance programs (guaranteed health care, pensions, unemployment benefits, job security, etc).

The key implications of our argument is that women at any given level of income and skill specificity will prefer higher social protection than men, but that the magnitude of the difference depends on the national skill system and the size of the public sector. The gender gap will be magnified by an indirect effect through income in-so-far as women earn less than men. On the other hand, the effect is reduced to the extent that women invest more in general than in specific skills. An interesting corollary of this argument is that women should be more supportive than men of public investment in general education. Inexpensive access to good formal education presumably benefits women disproportionately because they have a comparative advantage in general skills.

5.4. Empirical Analysis: Data and Measurement

To test our hypotheses we first turn to the 1996 International Social Survey Program (ISSP) on the role of government. These data contain a number of questions about government spending and social policy as well as information on the key independent variables. We have complete data for 10 advanced democracies at (Australia, Britain, Canada, France, Germany, Ireland, Norway, New Zealand, Sweden, and United States). Subsequently we will also discuss some evidence on gender norms from the 1994 ISSP survey on the family used in Chapter 3.

Unfortunately the 1996 survey does not ask questions that speak directly to policies that differentially affect men and women. There are no questions, for example, about spending on childcare or care for the elderly, and many of the other spending questions – about pensions, unemployment, etc. -- are not clearly related to gender conflict. Three questions, however, address the role of the government in providing job opportunities, and we have argued that this is an important determinant of women's

employment opportunities outside the family, as well as their bargaining power within it. It ought to be a matter of gender conflict. The three questions ask whether the government should a) finance projects to create new jobs, b) reduce the working week to produce more jobs, and c) be responsible for providing jobs for all who wants to work. Respondents could express different levels of support or opposition, and we combined the answers into a single public employment support index, which ranges from 1 (strong opposition) to 5 (strong support).

The second dependent variable is declared affiliation or support for a left or center-left party.¹¹² Although this variable does not directly capture differences in policy preferences, left parties tend to be more supportive of policies that would promote gender equality, and the measure has the advantage of being clearly politically salient. If women are indeed seeking a more active role for the government in securing gender equality, it is reasonable to expect that left support will be greater among women (the average support among all respondents is 43 percent). The variable is coded 1 for center-left, and 0 for center-right, support. Parties classified as left in each country are listed in Appendix A.

The gender gap in preferences is modeled simply as the difference in preferences between men and women, estimated by a gender dummy variable (1=women, 0=men). To test whether the gender gap varies across groups and countries, we interact this variable with labor force participation, marital status, risk of divorce, and skill system. Labor force participation is measured as in Chapter 3 (full-time employed are coded 1, part-time employed 0.5, less than part-time employed 0.25, and those who consider

¹¹² One could also focus on declared voting choices, but expressed support for a party arguably captures a more stable underlying preference that are not affected by short-term political issues for which we have no measures.

themselves homemakers or who are retired are coded 0). The skill system is again measured as a function of firm tenure rates and vocational training activity. Unlike the 1994 data used in Chapter 3, however, there is no variable that allows us to gauge the risk, or perceived risk, of divorce at the level of the individual. Instead we use national divorce rates, defined as the percentage of marriages ending in divorce.¹¹³ In 1996 these rates varied from 10 in Ireland to 67 in Sweden. Because it eases the interpretation of the results, the variable is standardized to vary between 0 and 1. In addition, we distinguish between those who are married and those who are not. One might sensibly expect that unmarried people demand more social protection because they are unable to pool risks within the family. But this should be particularly true of women who tend to be in more vulnerable labor market positions. One can loosely think of being unmarried as a realized risk of having to rely on outside options.

In addition we control for several of the variables used in Chapter 3: age, education, retirement, religiosity, Catholicism, and income (defined the same way). We also add a variable for unemployment, as well as one for the skill specificity of individuals. As explained above, women have less of an incentive than men to invest in specific skills, and such skills tend to increase the demand for social protection. We therefore need to compare men and women with similar skill sets. The variable is based on information on the general education and occupation of the respondent.¹¹⁴

5.5. Empirical Estimation and Results

The starting point is the same general multilevel model outlined in the Appendix to Chapter 3. We begin at the individual level and examine how the gender gap varies

¹¹³ The data are from “Society at a Glance: OECD Social Indicators” OECD 2001.

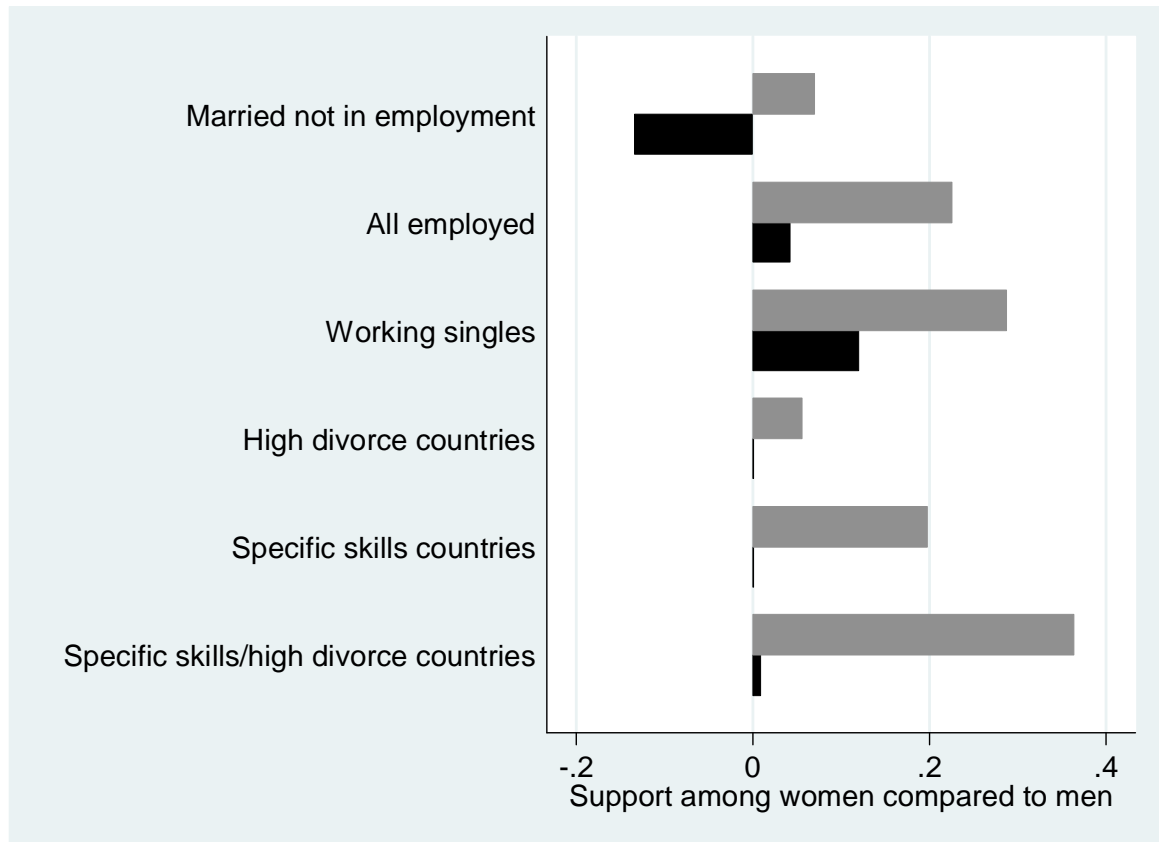
¹¹⁴ The variable is adopted from Iversen and Soskice (2001).

across those who are in and outside of the labor market, and those who are married and those who are not. Figure 5.2 illustrates the substantive results for public employment (the detailed results are reported in columns (1) and (2) of Table A5.1 in Appendix B, and in columns (5) and (6) for left partisanship).¹¹⁵ In interpreting these it is important to note that all regressions use country-specific intercepts so that every contextually-specific factor that may affect changes in policy away from the status quo have been controlled for. What interests us here is the gender gap in preferences for change -- including differences in that gap across countries. We are *not* trying to explain cross-national difference in the overall level of support for change.

Comparing the gap for different sub-groups it is evident that there only exists a statistically significant net gender gap in preferences for public jobs provision, not for left party support. The gap in support for public employment policies is quite large, however, with women in all cases being considerably more supportive. The net difference across all groups is equivalent to about 21 percent of a standard deviation on the dependent variable. Unfortunately, it is very hard to give substantive meaning to this number because we do not know how any particular level of agreement with any of the questions map onto actual (changes in) budgetary commitments. We do know, however, that gender is one of the best predictors of preferences as measured by support for public employment policies, and there is a statistically significant gender gap on this variable in each one of our 10 countries. In so far as there are politically meaningful differences in voter policy preferences – and we have every reason to expect that there are – gender is therefore a key variable in explaining these.

¹¹⁵ The results for left partisanship are based on binomial logistic regression.

Figure 5.2. The gender gap in support for public employment policies (black bars) and the political left (gray bars).



Notes: Predicted gaps are based on the multilevel regression results reported in Table A5.1. in Appendix B. The gap in support for public employment policies is measured as standard deviations on the dependent variable. The gap in support for the left is measured as the probability of women voting left minus the probability of men voting left.

The same is not true for true of support for the left, where gender differences in the sample as a whole are small. In part, at least, this is because parties offer packages of policies that do not clearly map onto interest conflicts between men and women, we return to this issue below, but it is also in part because the net number disguises notable differences across sub-groups of respondents. Thus, among those who participate in the labor market, women are considerably more likely than men to support expansive

employment policies and left parties. The same is the case for singles (or more precisely “unmarried” since some will likely be in relationships). In fact, married women outside the labor market (represented by the top two bars) are only marginally more likely than men to support public employment, and they are in fact about 13 percent *less* likely than men to support left and center-left parties. After controlling for age, income, etc, married housewives are thus quite conservative -- a fact that makes good sense in terms of the theory and helps explain why countries with a traditional family structure and low female labor force participation tend to exhibit small gender gaps. This is the case represented by the low participation equilibrium in Figure 5.1.

The other relationships that emerge from the regressions (not shown in Figure 5.2) are the negative effect of income, as predicted by a simple Meltzer-Richard redistribution argument, and the positive effect of individual skill specificity, as predicted by the asset model of social policy preferences. General education, however, does not play any independent role. Skills and income are less salient in explaining support for the left (although the effects are in the right direction and usually significant), whereas religiosity, but not Catholicism, assumes a more important role as a significant negative predictor of support for left parties. The negative relationship between religion and left support jibes well with the predictions of Roemer’s multidimensional model of distributive politics.¹¹⁶ Religion does indeed appear to reduce support for the left.

The other results reported in Figure 5.2 (based on models 3 – 4 and 7 – 8 in Table A5.1. in Appendix B) exploit another possibility in multilevel modeling: cross-level

¹¹⁶ Roemer (1998).

interactions.¹¹⁷ Specifically, we have argued that the gender gap may vary according to the probability of divorce, which varies across countries and can only be measured at that level in our data, and we have also suggested that the gap is likely to be particularly large in specific skills countries when divorce rates are high (since women are more disadvantaged in the private labor market when the emphasis in production on specific skill is high). Whether the effect of specific skill systems is positive or negative after control for divorce is hard to know because we cannot specify the location of the “tipping point” ex ante. This is especially true since there is a feedback effect of demand for a large public sector on female labor force participation, and hence preferences (we will add public sector employment to the analysis below, although it creates obvious problems of endogeneity). For now we simply note that as divorce rates rise, the likelihood that the gap is larger in specific skill economies also rises.

It turns out that the estimated parameters for the cross-level interactions are correctly signed, but in the case of left partisanship they are weak and statistically insignificant. Support for public employment, on the other hand, is quite strongly dependent on especially skill specificity, although the parameters are imprecisely estimated – partly a result of multicollinearity. In the version where the national-level variables are interacted – which best reflects our theoretical argument – the gender gap is significantly different across countries with different combinations of divorce rates and skill systems. Where divorce rates are high and/or skills tend to be specific, the gender gap is larger (see the last two bars in Figure 5.2.)

¹¹⁷ In the Steenbergen and Jones’ (2002) setup explained in the appendix to Chapter 3, the variation in the some individual-level parameters, indexed by q , can be modeled as a function of R national-level variables,

$$z_{rq} : \beta_{qj} = \gamma_{q0} + \sum_{r=1}^R \gamma_{qr} z_{rj} + \delta_{qj},$$

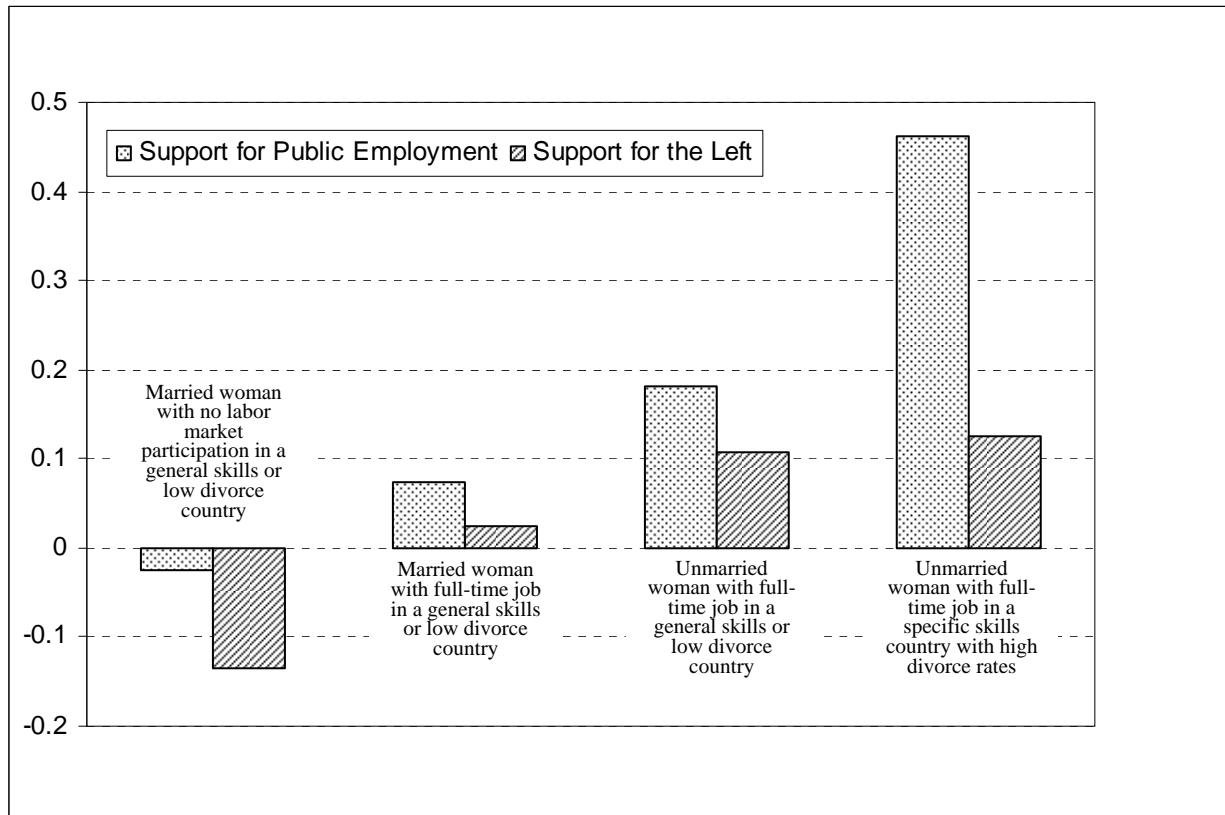
An intriguing question is why the divorce rate is not more important in accounting for the gender gap in partisanship. The fact that women who work or who are not married are significantly more likely to support the both left and public employment, clearly suggests that concern for outside options is important. But it appears that the political right is quite successful in attracting the support of some women by advocating “family values” that may be seen as a way to reduce divorce and enhance women’s security within the traditional family. Our data cannot help us sort this out, but it is an issue that future research should address.

Figure 5.3 provides a graphical summary of the range of estimated results for different sub-groups in different national systems. For each of four different combinations of marital status, labor market participation, divorce rates, and skill system the figure shows the gender gap in support for public employment policies and left parties. As before, the gap is measured in standard deviations on the dependent public employment variable, and as the probability of supporting a left or center-left party. We see that a married woman outside paid employment living in a country with low divorce rates, or a general skills economy, may well be more conservative in their political preferences than men. Certainly that is the case in terms of left party support. With labor market participation, however, preferences for a more active government intensify, and unmarried women are also notably more “left-leaning” than men. At least for preferences over employment policies the gender gap is particularly large in specific skills countries with high divorce rates. Here married women in paid employment are estimated to be nearly one half a standard deviation more supportive of an active role of the government in employment creation than men, and they are notable more likely to support a left or

center-left party than men (13 more likely compared to 13 percent *less* likely when women are married, not working, and living in a general skills or low divorce country).

The results are thus broadly consistent with the argument that the gender gap varies across countries according to divorce rates and labor market conditions. In fact the cross-country differences are greater than what is readily apparent in Figure 5.3 because labor force participation rates vary across countries, and we know that paid employment makes women more “left-leaning.” In 1996 (the year of the survey), for example, female labor force participation was 49 percent in Ireland but 74 percent in Sweden. For 25 percent of women in these countries, therefore, the predicted effect on preferences would be equivalent to the difference between the first and second set of bars in Figure 5.2. In terms of the probability of supporting the left among these women, this difference translates into a 16 percent higher probability in Sweden. No wonder the Swedish social democrats are reluctant to give in to perceived pressures to cut back on the public provision of welfare services.

Figure 5.3. The gender gap in support for public employment and Left parties



Notes: The bars show the predicted difference between men and women in their support for public employment policies and left parties, where a positive gap means greater support among women. The gap in support for public employment is measured in standard deviations of the dependent variable. The gap in support for the left is measured in differences in the probability of voting for a left party.

5.6. Norms and the Two Equilibria

We can extend the analysis to gender norms, which, like public policy preferences, should vary with labor force participation and the other variables we have identified. Norms are captured by two questions in the 1994 survey, which ask respondents to indicate their level of agreement with statements that represent traditional views on gender roles and the family. One reads “a man's job is to earn money; a

woman's job is to look after the home and family"; the other "when there are children in the family, parents should stay together even if they don't get along." A factor analysis shows that these items have the highest loadings on an underlying dimension that can reasonably be interpreted as capturing more or less "traditionalist" views on the family and gender roles. We combined the variables in a simple index that varies from 1 (most traditionalist) to 5 (least traditionalist).

Since the dependent variable does not refer to change, these questions can also reasonably be used to tap differences in norms across countries, not just across individuals. We can therefore use the skill system, government consumption, and their interaction as predictors, whereas in the preferences regressions in Table 5.1 the effects of these variables are absorbed into the country-specific intercepts. The full regression results are shown in Table A5.2 in Appendix B. Here we focus exclusively on the relationships between skills, government consumption, and norms (see Table 5.1), which allows us to capture the two equilibrium outcomes in Figure 5.1 very neatly. Where possible, we compare the results to those for preferences for public employment, which we have estimated on the 1994 data using a similar model (second column in Table A5.2. in Appendix B).

The first row in Table 5.1 shows the estimated values on the norms indexes for each combination of values on the skill and government consumption variables (using their minimum and maximum). *Level* refers to the absolute support for particular norms, while the gender gap is the difference between men and women.¹¹⁸ Each entry is shown in terms of number of standard deviations on the dependent variable (which is roughly

¹¹⁸ We cannot show results for "level" in the case of preferences because differences across countries are absorbed by the country dummies.

equal to the difference between two answer categories, such as “agree” and “neither agree, nor disagree”). Positive numbers mean that the average responses in a cell deviate towards less traditionalist (or more “egalitarian”) views, while negative numbers mean that the average responses deviate toward more traditionalist views. The cell representing general skills and low government consumption is used as the comparison group (and therefore set to 0).

Table 5.1. The relationship between skill system, size of public service sector, and individual norms and preferences

		Size of public service sector				
		Small		Large		
		Norms	Preferences	Norms	Preferences	
Skill system	General	Level	0	-	0.09	-
		Gender gap	0.51	0.34	0.45	0.18
	Specific	Level	-1.20	-	0.39	-
		Gender gap	-1.36	-0.61	0.92	0.63

Notes: Based on multilevel regression results from Table A5.2. in Appendix B. Entries are measured as proportions of standard deviations on the dependent variable. The cell representing general skills and low government consumption is used as the comparison group (=0).

Note that norms in specific skills systems without large public service sectors deviate strongly in a traditionalist direction compared to the reference cell (the difference is 1.2 standard deviations). By contrast, specific skills countries with large public service sectors exhibit non-traditionalist values, even compared to general skills systems that also have large public sectors. As in the network game presented in Figure 5.1, this suggest distinct equilibria where specific skills systems with the least favorable labor market opportunities for women are associated with the most traditionalist values, while general

skills systems and specific skills systems with a large, feminized public service sector – both more conducive to women’s labor market participation -- exhibit more egalitarian gender and family norms. Norms, economic structure, and policies, in other words, are complements.

This conclusion is supported when we look at the gender gap in norms and preferences. A positive number here means that women are less traditionalist than men and that they favor a greater role for the government in generating employment. What is immediately apparent when looking at these numbers is that women in specific skills systems with a small public sector are very traditionalist compared to men, at the same time as they are not very favorably disposed towards an expanded role for the state. As argued above, this makes good sense in terms of an equilibrium since if women are heavily dependent on a male breadwinner for their welfare, they may rationally support traditional family values and refrain from supporting policies that will raise taxes on male insiders. By contrast, women are less traditionalist than men in general skills systems and in countries with a large public sector. Having already established a foothold in the labor market, women are thus much less beholden to traditional family and gender roles. And where the public sector (as opposed to the market) is critical in maintaining and improving their outside options, they are strongly in favor of expansionary public employment policies.

The critical insight from this analysis is that public policies can notably affect the economic opportunity structure, and hence halt or accelerate the transition away from patriarchal norms. Because norms, preferences, and policies are complements, once changes get under way they can be sudden and wide-ranging. Gender and family norms

were fundamentally reshaped in a few decades in Scandinavia, for example. We suspect that changes of similar proportions are about to erupt in countries in southern Europe and perhaps East Asia – which are thus far holdouts for traditionalist views on women and the family. Our hunch comes from the reversal of the relationship between female labor force participation and fertility that we documented in the previous chapter. This relationship has turned positive in recent years, causing a fertility crisis in countries where (paradoxically) most women are still at home. To us, this suggests a growing desire by women to have careers, which runs up against traditionalist family policies that reduce women's opportunities in the labor market. This is a sign of an emerging disequilibrium which will only be resolved when public policies adapt and improve women's access to paid employment. When that happens, our argument implies, significant changes in norms will follow.

5.6. So What?

Our results turn on their heads some claims that are sometimes made about the gender and political preferences. Orloff (1993, 1999) and O'Connor, Orloff, and Shaver (1999), for example, strongly suggest that women are most disadvantaged in countries, such as those in southern Europe and East Asia, where female labor force participation rates are low, stratification on the labor market high, and the distribution of domestic work very unequal. If access to paid work and the ability to form autonomous households are fundamental interests of women, as Orloff and others argue, one would expect gender conflicts to be most intense in these countries. Yet, these are countries in which the policy preferences of men and women appear the most *similar*, and where there does not appear to be a strong gender gap in electoral politics. An explanation for this puzzle is

that the family as an institution is heavily protected through labor market conditions, and reinforced by legislation and norms against divorce. The likelihood of a first marriage ending in divorce in Italy is less than one in 10—even lower than the 1950s United States. In addition, female labor force participation rates are very low, which also help to align the interests of men and women.

Another controversy surrounds the role of the public-private sector division in Scandinavia. According to some, this division—which concerns issues of public sector size, relative pay, and public sector job protection—has emerged as a salient cleavage in electoral politics. But, as Pierson points out, since men in the private sector tend to be married to women in the public sector, there is no compelling reason that spouses should quibble over issues of relative pay (2000, 807). At the end of the day, the income of both spouses simply adds to family income. But this logic only applies when husband and wife have few reasons to concern themselves with outside options. And since pay in the public sector is financed by taxing the private sector, policies affecting relative pay are a perfect example of an area where gender conflict is likely to be intense.

A third puzzle concerns the persistent and widespread tendency of women to be less likely than men to support global economic integration. In a very careful empirical paper, Burgoon and Hiscox (2004) suggest that the “gender gap” in trade preferences might reflect economic illiteracy of women compared to men, and that the trend towards education equality might, in time, eliminate the gap. Our analysis of the political gender gap, which includes a control for education, invites skepticism about this conclusion. We expect that the gender gap in trade preferences reflects, as we have suggested, a greater likelihood that women are employed in the public sector. Whether or not it is sensible to

think that economic integration will hurt public employment, it seems that both men and women tend to think that this is the case, suggesting that the gap is due to differences in policy preferences rather than in macroeconomic theorizing.

5.7. Conclusions

If patriarchy can be thought of as female resignation, the gender voting gap reflects a feisty dissatisfaction with the status quo. In rich democracies, working women rely on government services, and in some cases government employment, to maintain their bargaining position in marriage. Because of democracy and universal suffrage, coupled with the rise of state power, gender relations have become politicized. The gender gap in policy preferences suggest that many women are hoping to use the democratic state to make them more egalitarian still.

The availability of policies to promote gender equality bodes well for women in poor countries for whom the wait for the arrival of the service economy seems intolerably long. In Indian village councils, a quota system for female and lower caste representation sets up a natural experiment to see what happens in village councils with female representation, apart from the factors that would have led voters to choose female delegates in the first place. In the Indian case, councils led by women are more likely to reflect female voter preferences, such as for clean drinking water and passable roads.¹¹⁹

That's the good news. Less encouraging is the systematic under-representation of women in all democracies, save in a few Scandinavian countries. In the next chapter, we

¹¹⁹ This is specifically true in West Bengal, where drinking water and roads are higher priorities for women than for men. In Rajasthan, where women are less concerned about roads, female representation is not correlated to road investment. Chattopadhyay and Duflo 2004: 1411 ff.

examine the reasons for lagging female political representation, as well as the reasons for its variation across democracies.

Appendix A
Parties coded as left or center-left

<i>Australia</i>	Greens, Labour
<i>Britain</i>	Labour
<i>Canada</i>	Communists, NDP, Bloc Quebecois, Greens
<i>France</i>	Communists, Socialist Party
<i>Germany</i>	PDS, SPD, Greens
<i>Ireland</i>	Worker's Party, Sinn Fein, Democratic Left
<i>Norway</i>	Labor, Socialist Left
<i>New Zealand</i>	Red Alliance, Labour
<i>Sweden</i>	Alliance, Labor, Socialists
<i>United States</i>	Democrats

Appendix B
Multi-level determinants of individual policy preferences and norms

Table A5.1. The Gender Gap in Social Preferences and Left Party Support

	Public employment				Left partisanship			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	0.174*** (0.032)	0.057 (0.041)	-0.039 (0.111)	-0.022 (0.050)	0.154 (0.133)	-0.552** (0.222)	-0.896 * (0.467)	-0.563* (0.304)
Female x Labor force participation	-	0.113** (0.037)	0.115** (0.048)	0.124** (0.050)	-	0.729*** (0.188)	0.753*** (0.191)	0.731*** (0.191)
Female x unmarried	-	0.066** (0.029)	0.064** (0.029)	0.062** (0.030)	-	0.315** (0.111)	0.312** (0.112)	0.314** (0.113)
Female x divorce	-	-	0.046 (0.14)	-	-	-	0.007 (0.006)	-
Female x skill specificity	-	-	0.162 (0.125)	-	-	-	0.006 (0.373)	-
Female x divorce x skill specificity	-	-	-	0.298** (0.117)	-	-	-	0.038 (0.482)
Labor force participation	0.077 (0.045)	-0.017 (0.044)	-0.032 (0.048)	-0.041 (0.050)	0.514** (0.214)	-0.049 (0.292)	-0.071 (0.303)	-0.052 (0.296)
Unmarried	0.057*** (0.016)	0.024 (0.023)	0.025 (0.023)	0.026 (0.023)	0.175* (0.091)	0.011 (0.106)	0.013 (0.104)	0.011 (0.103)
Income (log)	-0.003*** (0.001)	-0.003*** (0.0005)	-0.003*** (0.0005)	-0.003*** (0.0005)	-0.003 (0.002)	-0.003* (0.002)	-0.003* (0.002)	-0.003* (0.002)
Individual skill specificity	0.100*** (0.023)	0.100*** (0.023)	0.099*** (0.022)	0.098*** (0.023)	0.240** (0.083)	0.246** (0.084)	0.242** (0.084)	0.246** (0.083)
Age	-0.001 (0.002)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.002 (0.005)	0.001 (0.006)	0.001 (0.006)	0.001 (0.006)
Education	-0.013 (0.020)	-0.013 (0.020)	-0.015 (0.020)	-0.015 (0.020)	0.080 (0.081)	0.079 (0.080)	0.078 (0.080)	0.078 (0.080)
Retirement	0.066	0.018	0.005	0.0002	0.120	-0.149	-0.164	-0.150

	(0.056)	(0.052)	(0.061)	(0.061)	(0.288)	(0.309)	(0.305)	(0.302)
Unemployment	0.197** (0.081)	0.156* (0.086)	0.141* (0.061)	0.135 (0.082)	0.628 (0.420)	0.427 (0.410)	0.417 (0.411)	0.425 (0.410)
Religiosity	-0.012 (0.009)	-0.012 (0.009)	-0.011 (0.009)	-0.011 (0.008)	-0.121* (0.051)	-0.122* (0.050)	-0.122** (0.049)	-0.122** (0.049)
Catholic	-0.019 (0.105)	-0.016 (0.104)	-0.017 (0.105)	-0.017 (0.104)	-0.261 (0.293)	-0.252 (0.293)	-0.257 (0.295)	-0.253 (0.293)
No of countries	10	10	10	10	10	10	10	10
N	7460	7460	7460	7460	5793	5793	5793	5793

*Key: *** p<.01; ** p<.05 ; *<.10 . Note: The entries are maximum likelihood estimates with estimated standard errors in parentheses. Left partisanship was estimated using binominal logistic regression. All models have country-specific intercepts (not shown).*

Table A5.2. Determinants of norms and preferences compared

	Norms (non-traditional / “liberal”)	Preferences (More public employment)
Number of dependents	-0.04*** (0.01)	-0.00 (0.01)
Age	-0.02*** (0.001)	-0.003* (0.001)
Education	0.14*** (0.02)	-0.10*** (0.02)
Religiosity	-0.10*** (0.01)	-0.02** (0.01)
Catholic	0.17** (0.05)	0.03 (0.07)
Female	0.52*** (0.05)	0.25** (0.08)
Skill specificity	-1.03** (0.36)	-
Public sector	0.27 (0.39)	-
Public sector * Skill specificity	1.13 (0.79)	-
Female * Skill specificity	-0.36** (0.12)	-0.44** (0.18)
Female * Public sector	-0.33** (0.11)	-0.10 (0.26)
Female * Public sector * Skill specificity	0.74** (0.21)	0.80 (0.46)
N	12460	10227
No of countries	12	11

Key: *** p<.01; ** p<.05 ; *<.10 . *Note:* The entries are maximum likelihood estimates with estimated standard errors in parentheses. The model for preferences uses country-specific intercepts (not shown).

Chapter 6

Gender and Political Careers: A Comparative Labor Market Analysis of Female Political Representation

6.1. Introduction

Females are strikingly underrepresented in the world's legislatures, though the variation among rich democracies is enormous, ranging from 9% in Japan and 14% in the US at the low end, to parity in Sweden at the high end. These examples are illustrative of a pattern, for the prevailing wisdom is correct that proportional representation systems are friendlier to successful female candidacy than district systems. Indeed, in Japan, 6.3% of the parliamentarians elected from single member districts are females, compared to 13.3% elected from party lists on proportional representation ballots. Though 13.3% is still low by world standards, it is double the district line-up returned by the same voters in the same election, and the current electoral system has only been in place since 1994. Clearly, cultural preferences leave substantial variation unexplained.

Exactly how proportional representation rules help the cause of female candidates, however, is only dimly understood. In this chapter we suggest an explanation that centers on how electoral rules and other factors shape the labor markets in political careers across countries. The demand for female representation is powerfully influenced by how effective political party leaders, and indirectly voters, expect female candidates will be. Even in the absence of discriminatory social norms and a voter preference for male politicians, personalistic electoral rules should hurt the electoral chances of female candidates by placing a premium on seniority, career continuity, and individual clout in a way that centralized, party-centered systems do not. By a political analogue to Say's

Law, if the demand for female legislators is lower, the supply of qualified female candidates will also be lower. Those who do run are as competitive as male candidates, because they have somehow managed to compensate for institutional disadvantages. But they are a relatively small number.

By contrast, in electoral systems where candidates are elected in large districts and votes are cast for political parties as opposed to individual candidates, party labels (and policy reputation) rather than individual qualities become the deciding factor. Voters still care about the competency of the party as a whole, of course, but such competency will be much closer associated with party leaders than with individual candidates. And because the critical resource of the party is the party label, party leaders will be more concerned with party discipline than with seniority and cultivating strong candidates. Indeed the latter may be viewed more as a threat to the party leadership than as an electoral resource. For rank-and-file candidates, being able to commit to long hours and continuous, uninterrupted careers is not a particularly valuable asset in the competition for a spot on the candidate list.

The difference between electoral system and female representation may be stronger if it were not for the fact that majoritarian electoral rules tend to be associated with labor markets that permit the rise of a larger pool of female managers with leadership and managerial experience who may be able inspire voter confidence in their political acumen. Proportional representation systems, by contrast, are associated with production systems that may foster fewer female private sector managers. But large state PR systems are likely to foster women in labor union management and women with a strong interest in promoting public sector employment. The available supply of women

with politically relevant talent and experience is therefore uneven across electoral systems, but it strikes us as unlikely that this is the personnel bottleneck that some observers may suppose it to be. Where the labor market for politicians is female-friendly, the supply should be forthcoming, but probably somewhat muted in specific skills economies without large public sectors. There may also be an effect of production systems on the *demand* for females that follows from our previous analysis and that we discuss more below. Basically, female candidates may be better able to make credible commitments to “female” issues, and insofar as these are politicized, this may offset other disadvantages. The challenge is to identify the structural limits on the demand for female representation, depending on whether or not career interruption hurts political effectiveness in a given political system. It is ironic, and casts a large shadow on cultural arguments, that majoritarian systems can at once be associated with the most female managers in the private sector but perform so dismally in female political representation. While at first blush this may also seem to run counter to our labor market structure argument – ie, that some general skills economies perform poorly while some specific skills economies perform well – this not the case if one applies the same logic to the market for politicians.

6.2. The Market for Politicians

When effective candidates have to develop long-term ties to their constituents and to other politicians, women are at a disadvantage. Some will, of course, make the necessary sacrifices, but women are less likely to do so and statistical discrimination – the use of gender as a cue for your vote when information is incomplete -- will magnify the problem because parties cannot know the true types, at least among first-term

candidates. The bias is affected by two related factors. First, single member districts, or similar electoral rules that emphasize close ties to constituencies, place a premium on long tenure because the effectiveness of legislators in delivering goods to their constituencies depends on membership in important committees and the ability to make credible bargains with other politicians, both of which are a function of seniority and the prospects of reelection. Because men can more credibly commit to long and continuous careers they are more likely to be elected and reelected, which increase their legislative effectiveness, and hence their reelection chances. Second, weak parties mean that individual candidates cannot rely on the party label to lift them above the electoral threshold. Instead, they have to cultivate a personal following that again puts a premium on seniority and the accumulation of political capital.¹²⁰ In turn, weak political parties are associated with presidential systems where the ability to hold on to executive power does not depend on strong party discipline. Strong parties are instead mostly found in parliamentary systems, except where a single party has such a dominant position that it does not depend on strict discipline (as in the case of the Italian Christian Democrats of the Japanese Liberal party before the 1990s).

PR with large districts, or smaller districts where votes are pooled across candidates, produces a very different dynamic that is more conducive to female representation. There is little incentive for individual candidates to cater to local constituencies, and the party label becomes much more important in winning elections than the appeal of individual candidates. Likewise, programmatic parties will place more value on candidate loyalty to the party's platform, which motivates them to nominate and promote politicians with relatively little independent political power – often with an eye

¹²⁰ Carey and Shugart 1995.

to the symbolic value of adhering to norms such as gender equity. Voters always want effective candidates, of course, but what an effective candidate is depends on the political system. Where the party label is of great electoral consequence, women are in no particular disadvantage since representatives (at least the backbenchers) are mostly asked to simply promote policies and vote for them when bills are sent to the floor. Parties can thus respond relatively easily to demands for gender equality, though perhaps less so at the leadership level.

In slightly more formal language, imagine the following two-stage candidate selection game. In the first (nomination) stage, political party leaders select candidates among the available pool of potential candidates to represent their party in the next election. Parties seek to maximize their policy preferences, which is a function of voter support, party discipline (that is, whether MPs toe the party line), and effectiveness in legislative bargaining. In the second stage, voters cast their vote for either party programs or individual candidates depending on the electoral system. Voters prefer candidates/parties who are i) close to their own policy preferences, and ii) reliable (do what they say they will do), and iii) effective in legislative bargaining.

The electoral system constrains the choices of voters and candidates. At one extreme, in closed list systems with a single national district, the party must present a single platform and there is no scope for voters to vote for individual candidates who can deviate from that platform. In this situation, voters care only about the distance between their own policy preferences and the party platform, and its effectiveness in advancing it. Any post-election deviations from the platform are a source of uncertainty and a reason not to vote for the party. Anticipating this, the party will put a premium on party loyalty

in choosing candidates, whereas effectiveness in legislative bargaining will be a function of the ability of the party leadership to leverage its legislative weight in coalition bargaining with other parties. The result is that the characteristics of rank-and-file candidates become largely irrelevant, except for their willingness to toe the party line.

In this institutional setting voters choose parties because of their ability credible to commit to a desired policy platform (the first stage), and parties in consequence choose candidates to make sure they can deliver on the electoral promises that they make. Assuming that women are no less loyal than men on average, and if both genders are equally capable of credibly committing to certain policies, there is no reason to expect a gender bias in the selection of candidates.¹²¹

Candidate-centered systems, such as single member districts (SMD) or the single non-transferable vote (SNTV) system once in place in Japan, are very different because whether a candidate gets elected is likely to depend, at least in some measure, on his or her ability to deliver policies that are favorable to the district. And insofar as individual candidates become guarantors for the pursuit of constituency interests, voters cannot ignore the legislative effectiveness of candidates. Nor, by implication, can the party leadership. Effectiveness in turn derives from innate abilities as well as the bargaining power that comes with being able to never leave the negotiation table, accumulated knowledge about arcane committee procedures, and the opportunity to cultivate a reputation for making credible threats and promises that comes with seniority and uninterrupted political careers. Key to understand inequality in representation is that men

¹²¹ The only other potential concern of the leadership in this game will be that enough potential future leaders are recruited to maintain the party's image among voters as competent. But this requires far-sightedness, and it may easily be outweighed by concerns about recruiting overly ambitious candidates who might challenge their own leadership.

on average have an advantage in accumulating political bargaining power, and hence the ability to deliver constituency goods, because men everywhere enjoy lower average responsibility in caring for young children, elderly parents, and in carrying out other family-related duties. This male advantage is what is known to produce inequalities in private labor markets that rely heavily on specialized skills and long tenures,¹²² and there are no reasons to suspect that political labor markets should be different.

The implication is not that male candidates are more likely to win elections than female candidates. Since voters have information about the past effectiveness of incumbents, they rationally choose these without regard to gender. The same is true for rookie candidates as long as voters can reasonably assume that parties will pick the best candidates. Since parties have an electoral incentive to do so, this is a rational expectation in the game. But by the same token this implies that parties choose candidates for open seats in a manner that discriminates against women. Specifically, the party will pick those candidates who are close to the party platform and show good potential for being effective in legislative bargaining and for cultivating a personal following. Parties cannot predict the future effectiveness of young candidates with certainty, and therefore rely in some measure on imperfect proxies. In particular, they know that men are on average more likely than women to have uninterrupted political careers and to be able to sacrifice family in a manner that is required to build up reputation with constituencies, fellow politicians, and bureaucrats. For this reason, they are more likely to choose men among equally qualified candidates in terms of ability and policy compatibility. The more electoral success relies on ability to cultivate a personal following and curry favors with others, the greater the bias.

¹²² Estevez-Abe et al. 2001, Estevez-Abe 2006

The gender bias in the candidate selection process increases the less the party is concerned with party discipline. When party discipline is important for maintaining government power, the discretion of individual legislators may have to be contained. Through some discretion is clearly desirable from an electoral point of view, too much can cause the governing party to lose critical votes in the legislature. This is an aspect of parliamentary systems, and much less of a concern in presidential systems where government power does not depend on maintaining a majority in the legislature.¹²³

Another complicating factor is that women may be better able credibly to commit to policies that advance the position of women. As in the case of competence, there is an incomplete information problem in terms of voters being confident that the party will implement its policy platform. This may create a gender bias to the extent that issues are gender specific and female candidates can more credibly signal their support for policies that help women balance family and career. If such policies become salient enough for a significant number of women to determine their vote, while the same is not true for men, parties have an incentive to field more female candidates as a way to capture this new group of female “swing” voters. It is plausible that this dynamic is particularly likely to emerge in countries with labor markets that put women in a distinct disadvantage. In turn, these countries are also the ones that tend to have PR electoral systems.

It is the paradox of welfare states that proportional representation systems tend to suppress private sector female labor force participation, despite the boost to female wages from wage compression, because strong unions tend to create labor markets that penalize career interruptions.¹²⁴ The coordinated market economies typical of proportional

¹²³ Persson and Tabellini 2005

¹²⁴ Estevez-Abe 1999, Iversen and Rosenbluth 2006

representation systems tend to organize production in a manner that make use of long-term labor contracts and specific human capital investments that lose value when broken off by periods of child rearing or other family responsibilities.¹²⁵ Firms respond by avoiding hiring or promoting women, and females for their part are less likely to seek jobs that require the long term, specific investments to which they have difficulty committing.

Government policy, and specifically the hiring of females in public sector jobs, can offset weak private sector demand for female labor, as in the case of the Scandinavian countries. As we showed in Chapter 5, the gender voting gap is in fact the largest in countries with the largest public sectors, because in these women owe to the government not only supplemental help in managing the family-career juggling act, but their very jobs.

Majoritarian electoral systems, in contrast to proportional representation systems, tend to undergird liberal market economies in which labor is forced to adjust to market exigencies more or less on its own and potentially quite frequently. While devastating to the people losing their jobs, fluid labor markets inadvertently help females by reducing employers' incentives to invest in long-term human capital. The demand for female labor in the private sector is higher in proportion to male job insecurity, shorter tenure rates, less restrictive hiring and firing rules, and corporate reliance on mobile, general skills for which there is no or little penalty associated with career interruption. Because women have the market, rather than government policies, to thank for the relatively level playing field they experience, they have less of an interest in pushing for interventionist

¹²⁵ Cusack et al. (2007) provide an account of the historical origins of the linkage between PR and organized capitalism.

government policies that subsidize female employment. Because they are redistributive, such policies are more likely to be seen as matter of class than gender politics. Though women in LMEs may benefit from policies that further shifted the burdens of family work away from women *and* increased income equality (women in LMEs still face a significant gender wage gap), the intra-gender wage inequality in LMEs makes this sort of collective action extremely unlikely. Women at the top of the income ladder have at their disposal private sector alternatives—often supplied by low-paid female workers—to tax-funded childcare and other services.

6.3. Empirical Analysis: Large-N Country Results

Our empirical analysis falls into two parts. In the first we test the institutional hypotheses on data from 23 advanced democracies beginning in 1945 or at the inception of democracy if later. The dependent variable is the share of seats in national legislatures held by women, using legislative sessions as the unit of observation. Since nearly all the institutional variation is cross-national, the effects of these institutions mainly show up as differences across countries. We do however also consider possible explanations for the cross-time trends, and we show that structural forces of change that have driven up female representation everywhere, especially female labor force participation, have been powerfully conditioned by the design of electoral institutions.

In the subsequent section we take advantage of differences in electoral institutions within some countries -- either across electoral tiers or across time -- to explore whether these appear to affect representation as we would expect. We can exploit this variance as “natural experiments” to test whether women in the same political system do better under some rules rather than others. While the results for a small number of cases can always

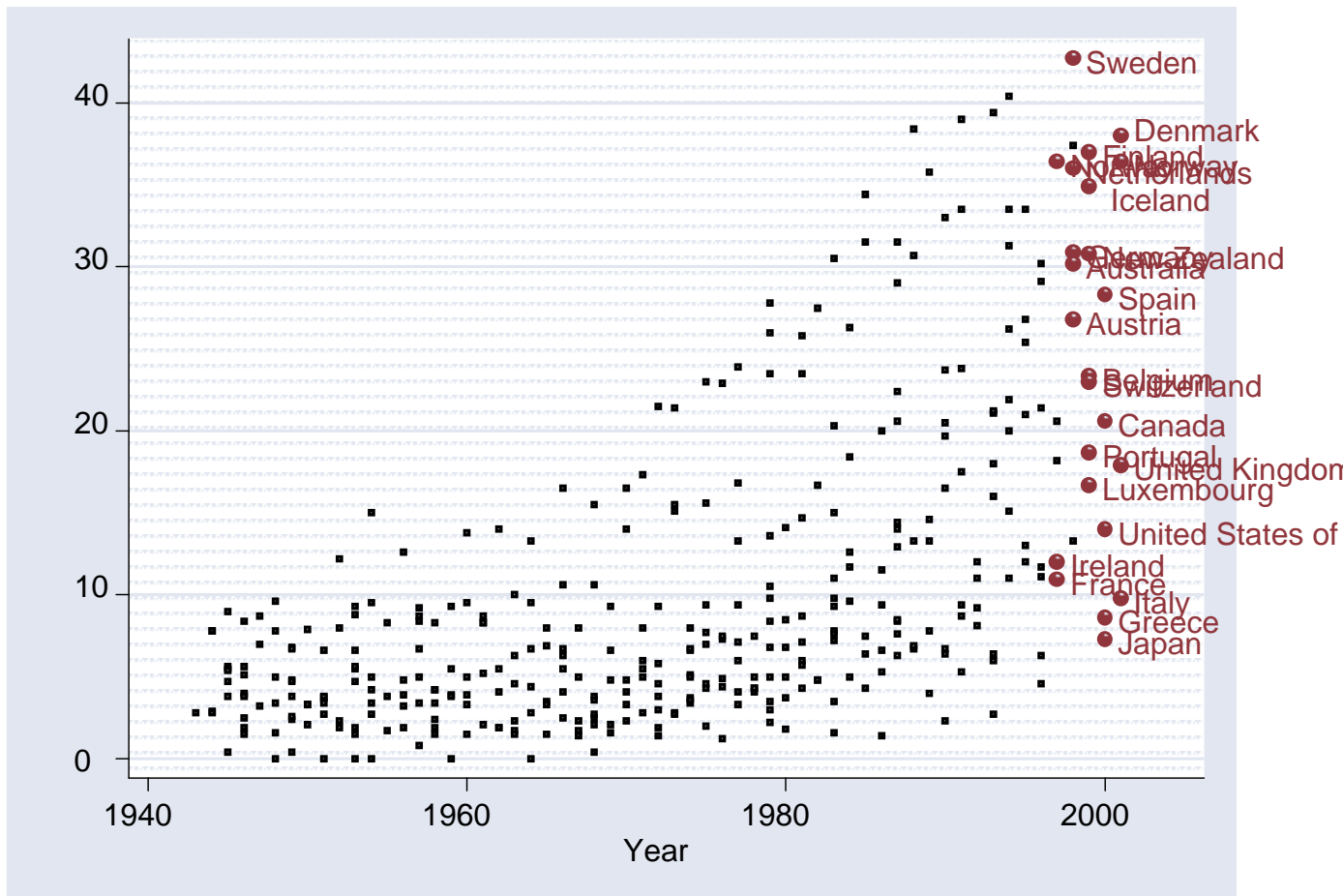
be challenged on grounds that they are not representative, they can significantly improve our confidence in the causal relationships that are assumed in the large-N analysis.

6.3.1. Large-N Results

Figure 6.1 shows the share of female seats in the lower house of national assemblies across 23 democracies and approximately 55 years. One is struck by a notable rise in representation over time from an average of about 5 percent immediately following the war to about 25 percent around 2000. But the cross-national differences are also large, and they have been increasing sharply over time. Thus, whereas the range is less than 10 percent in the first observations after the war, in the most recent the female share of representatives varies from a mere 7 percent in Japan to near parity in Sweden.

Clearly the inter-temporal variance cannot be explained by changes in political institutions, which have been modest and quite recent where they have occurred, but it is entirely possible that institutional differences have attenuated or magnified the forces of change that have caused female representation to rise everywhere. Along with others we have emphasized two key forces of change in this book. One is entry of women into paid employment caused by the postwar economic boom and the rise of services (as well as the associated rise in divorce rates and public provision of daycare). As women enter the labor market they become part of networks and organizations (such as unions) where they are more likely to be exposed to political discussion and advocacy, which in turn encourages interest and involvement in politics. Some will also acquire skills through

Figure 6.1. Female share of legislative seats in 23 democracies, 1945-2000.



their work that can be applied in political careers. Although the number of women who end up running for national office is very small, most are recruited among those who are active in the labor market, so representation will likely rise with labor market participation. There may be a significant knock-on effect as women increasingly complete university degrees to prepare themselves for the labor market, which are important assets for launching successful political careers. So the share of employment held by females should correlate with the share of females in the legislature.

The second force of change the rise of service employment. The breakdown of patriarchal values during the past half century that we have documented in this book is closely linked to the rise of services because these do not depend on physical strength and typically rely more on general than on firm or industry-specific skills. Since specific skills disadvantage women -- who cannot as easily commit to uninterrupted careers -- and since most services rely on social rather than manual skills, postindustrialization has been a big boon for female labor force participation. But it has also had the effect of equalizing power between the genders and accelerating changes in gender norms. Because women compete on a more equal footing with men for jobs in services than in either manufacturing or agriculture, it has improved women's bargaining position in the family and encouraged caring parents to emphasize values in daughters that emphasize equality. Like boys have been for centuries, girls are increasingly taught to be assertive, acquire a good education, and prioritize financial independence. While these values certainly do not lead most women to seek political careers, they do tend to augment the pool of women from which political candidates will be recruited, and voters are less likely to be prejudiced against female candidates.

The importance of labor market participation and the rise of services for female political representation can be easily ascertained in a model where we control for all cross-national differences using country-specific intercepts (or fixed effects). The results shown at the top of Figure 6.2 are based on Prais Winsten estimates with panel-corrected standard errors (Beck and Katz 1995) and correction for first-order autocorrelation (the detailed regression results are reported in Table A6.1 in the appendix). The numbers are based on the post-1960 period where we have complete data for all variables and

countries. The predicted effect of a one percent change in the female share of the labor force is to increase female representation by .41 percent in the long run. The effects of a one percent increase in service sector employment are even larger: .74 percent. This implies a 18 percent increase in representation as a result of the actually observed rise in female and service sector employment between the early 1960s (or the first year of democracy) and the late 1990s, which is equal to the actually observed average increase in representation.¹²⁶ Service employment appears to have been a particularly important factor, although it is of course highly collinear with female employment.¹²⁷

The rest of Figure 6.2 shows the effect of political-institutional variables. Since these are constant (or vary very little) over time we substituted them for the otherwise perfectly co-linear fixed effects. Our attention centers on two measures of electoral systems.¹²⁸ One is the size of electoral districts, standardized by dividing by the number

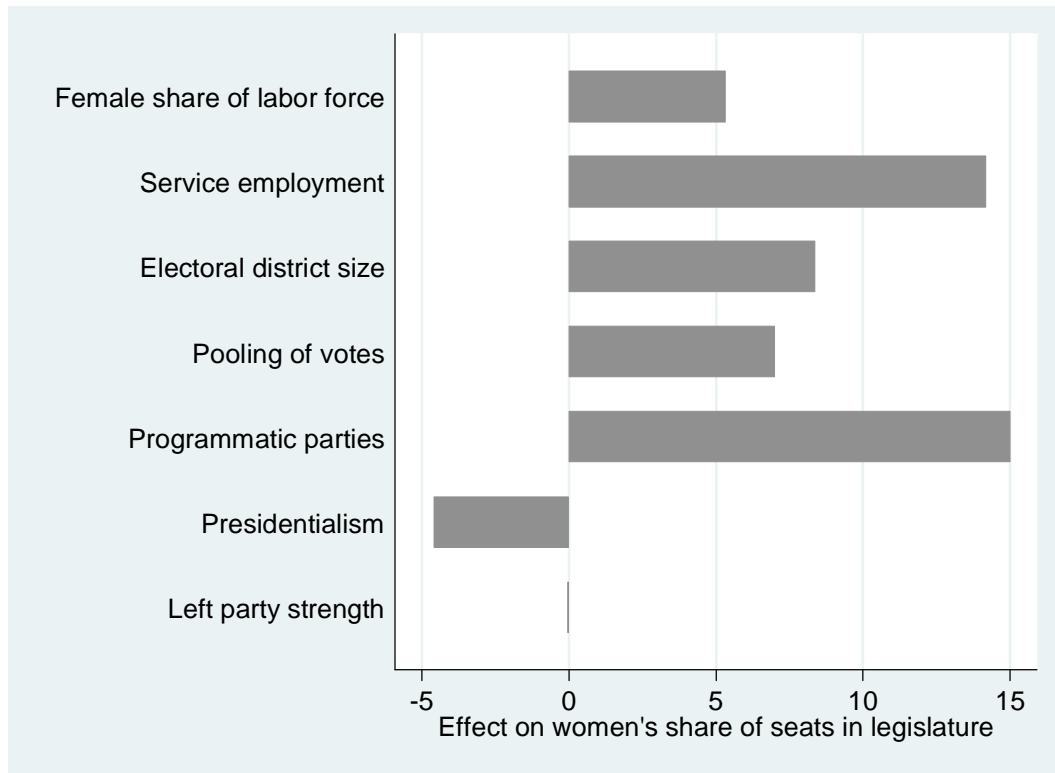
¹²⁶ We also tried an alternative model specification where a lagged dependent variable is used to remove first-order serial correlation (shown in column 2 of Table A6.1). In this formulation the predicted long-run effects of a one percent change in the female share of the labor force and a one percent increase in service sector employment are to raise female representation by .78 and 1 percent. The average changes in female employment and service employment between the 1960s and 2000 now translate into a 26 percent increase in representation, which is “too large” compared the actually observed change of 18 percent. A well-known source of this problem is that the lagged dependent variable can bias the results if it captures effects other than first-order serial correlation (which arises in our data primarily because incumbents are slow to be replaced). The Prais Winsten regression avoids this problem.

¹²⁷ For the other results reported in Figure 6.2 we have substituted GDP per capita for service employment because we have data for all 23 countries on the former variable, but only for 21 countries on the latter. The correlation between the two variables is high (.77), and none of the results are notably affected by using GDP per capita instead of service employment. The long-run predictions are also very similar (see column 3 in Table A6.1 for details). To maximize country coverage, and since we are primarily interested in the effects of political institutions, we therefore use GDP per capita in the rest of the analysis.

¹²⁸ Carey and Shugart (1995) developed a ranking of countries according to their assessment of the effects of a variety of electoral system attributes on the incentives of candidates to cultivate a personal vote. Their ranking is obviously relevant to our explanation, but it is based on a large number of (implicit) discretionary decisions about the importance of different variables, which can be contested. We prefer to keep the salient dimensions of the electoral system separate and let the data speak about salience. In the end, the composite variable we construct below is correlated with their ranking at a .85 level. We should also note that we are not directly using two of Carey and Shugart’s variables: one they call “vote” and refers to “whether voters cast a single intra-party vote instead of multiple votes or a party-level vote”, and one they call “ballot” and refers to whether parties control candidate access and position on a party list.

There is practically no variance on the former variable in our sample. We discuss the relationship between the variables we use and the ballot or list variable below.

Figure 6.2. Determinants of female representation in 23 democratic legislatures, 1960-2000.



Notes: Effects are calculated based on the regression results reported in Table A6.1 in Appendix A. The effects of female share of labor force and service employment is the estimated effect of the average changes in these variables observed between early 1960s and early 2000s.

of seats in the national assembly. The Netherlands is the only country in the dataset that treats the entire country as a single electoral district. In this case the value for the district size variable is therefore 1. As the number of candidates elected from each district shrinks, so does the electoral size variable – approaching 0 as we move towards a large number of single-member districts. In cases where the electoral system has more than one tier, the measure is an average district magnitude across tiers weighted by the share of seats elected from each tier.

District size has a very obvious effect on the electoral strategies of political parties that is important to our story. Whereas it makes good sense to field candidates in SMD systems who can cater effectively to local interests, if the electoral district is the nation as a whole specialization of candidate appeals makes little sense. Even if a party caters to regional interests, or to other narrowly defined constituencies, individual candidates represent the party platform as opposed to their own local or personally cultivated constituencies. In turn, as the focus shifts from individual candidates to party platforms, voters lose interests in the attributes of the former and vote on policies and leadership competency instead.

Another electoral feature that affects the extent to which voters choose parties according to individual candidate qualities as opposed to party platforms is pooling of votes across candidates. If the votes for a candidate which exceeds the required number are transferred to other candidates from the same party, voting for a candidate is also in part a vote for the party. This forces voters to pay attention to the party label in addition to individual candidates. How much depends on the specific rules. If votes can only be pooled among sub-sets of candidates, it still makes sense to pay a lot of attention to individual candidate qualities. If votes are pooled across all party candidates in a district, the party label comes to dominate the qualities of individual candidates in voting decisions, and the party will in consequence choose candidates more because of their ideology and loyalty to the party than their qualifications for cultivating a personal following. We code the variable 1 if votes are pooled across all candidates in a district, 0 if no pooling is allowed, and $\frac{1}{2}$ if pooling is across subsets of candidates.¹²⁹ As in the

¹²⁹ This follows Carey and Shugart (1995), and the implementation of their coding scheme by Johnson and Wallack (2006).

case of the district magnitude variable, if there is more than one tier in the electoral system, the measure is an average across tiers weighted by the share of seats elected from each tier.¹³⁰

The effects of the two electoral variables are in the predicted direction and quite strong. Moving from the smallest to the largest electoral district increases the female share of seats in the legislature by an estimated 8 percent, while going from a system with no pooling of votes to one with pooling across all candidates increases female representation by 7 percent. As it turns out, the effects of the two variables can be almost fully captured by a simple additive index, which we have labeled “programmatic parties” (which may be contrasted to “candidate-oriented” parties) in Figure 6.2. The estimated total effect of this variable is roughly the same as the sum of the two component variables. Specifically, going from an electoral system with the fewest incentives of parties to compete on party programs (SMD with no pooling) to one where these incentives are the strongest (a single national district with pooling across all candidates) raises the predicted representation of women by 15 percent, all else equal. This difference between electoral systems is greater than the average representation of women in legislatures, which is only 12.2 percent.

¹³⁰ The pooling variable in our sample of countries is almost identical to distinguishing between list and other types of electoral systems (a distinction we used in the theoretical discussion and is captured by what Carey and Shugart in their coding scheme refer to as “ballot”). Where there is no pooling, there is typically no party list. The sole exception is Japan before the electoral reforms in 1994. Here parties made up lists of candidates, but votes for each candidate were not transferable to other candidates (i.e., no pooling). As a result, candidates from the same party had a strong incentive to differentiate themselves from each other, and a vote for any candidate was not primarily a vote for the party platform. For our purposes the incentives to cultivate a personal following in the SNTV system is captured by the pooling variable, not by a variable distinguishing between lists and no lists. There is also an exception to the rule that no-list systems do not use pooling: Luxembourg. In this system candidates run on party platforms, but parties do not make up their own lists. However, since votes are pooled for each party, voters cannot ignore party platforms and the system in effect works very much like a typical European list system. The key for our purposes is therefore again the pooling. Excluding Japan and Luxembourg, the correlation between pooling variable and a list variable is .89, and it is perfect ($r=1$) if the ambiguous cases between 0 and 1 on the pooling variable are omitted.

The analysis also includes controls for presidentialism and the share of seats in the legislature that are held by left parties.¹³¹ As we noted in the theoretical section, there are long-standing arguments that presidentialism reduces the incentives of parties to enforce adherence to the party label since government power does not depend on maintaining a majority in the legislature. This increases the scope for, and presumably electoral salience of, individual legislators who can strike deals with other legislators through log-rolling and other deal-making. And, indeed, presidential systems have 4-5 percent fewer female representatives, all else being equal, than parliamentary systems. Yet, it must be cautioned that since the only two countries in our sample with genuine presidential systems are France and the US, the presidentialism variable is simply a dummy for those two countries. But both political systems are certainly known to have comparatively weak parties.

While one may reasonably have expected parties on the left to be more sensitive to gender equality, and while that may be true in particular cases, the effect of having higher left party representation is weak and in fact the opposite direction of the expectation. Left parties may have had beneficial indirect effects on female representation through especially female labor force participation -- which is partly linked to “women friendly” policies such as public daycare provision that we discussed in the previous chapter -- but they do not appear to have contributed much to improving gender equality in the legislature by advancing women farther through their own ranks than other parties.

¹³¹ The latter variable is from the Cusack-Engelhart (2002) dataset on political parties.

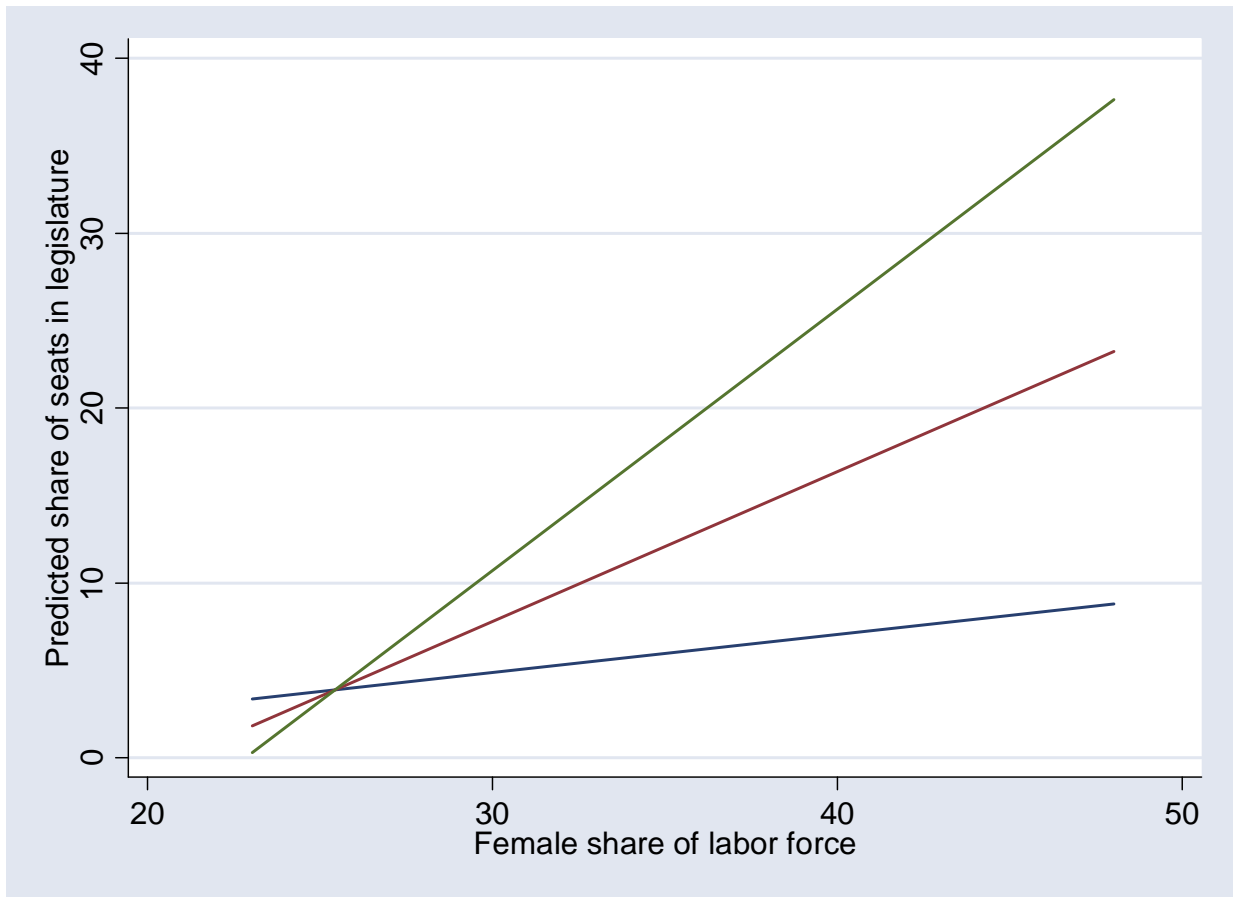
The final set of results (models (6) and (7) in Table A6.1) combine the structural forces of change with the cross-national institutional differences.¹³² In one formulation we reintroduce the fixed country effects, but we retain the institutional variable (“programmatically parties”) as an interaction term with female labor force participation. All the variance in the dependent variable that can be accounted for by our explanatory variables is now inter-temporal, and what the institutional interaction variable tells us is whether pressure for change (represented by an increasing female share of the labor force) is accommodated or hindered in different institutional settings. Indeed, it turns out that institutions do matter. The rate of change in representation in response to higher female employment is almost three times higher in systems with strong incentives for programmatically parties than when these incentives are weak (the coefficient on the female labor force variable rises from .37 to .98). This is confirmed if we omit the country fixed effects and re-introduce the programmatically party variable as an independent predictor. The results are illustrated in Figure 6.3.

The figure shows women’s predicted share of seats in the legislature as a function of female labor force participation (restricted to the in-sample range), for different values on the programmatically party variable. At low levels of female labor force participation, electoral institutions do not matter much, and we could have anticipated this from Figure 6.1, which started this section. Immediately following the Second World War there is little variation in female representation, and women were largely outside the labor market. As they gradually enter into paid work, the variance in representation across countries rises. The reason for this divergence, we have suggested, comes down to differences in the design of political institutions, especially electoral rules. Where these

¹³² We use a methodology proposed by Blanchard and Wolfers (1999).

motivate parties to compete mainly on programmatic differences in policies, women fare far better than where parties delegate a lot of power and discretion to individual candidates. In the former countries, political gender equality is quickly catching up with economic equality: gender parity in employment is associated with more than 40 percent female representation. In the latter countries, female representation has trouble breaking above 10 percent. The US is a case in point. Although women have moving towards parity in terms of their share of jobs, they trail men in Congress by a daunting 14-86 margin. By contrast, women in Sweden have reached virtual parity in both spheres, even though Swedish women started out with fewer than 8 percent of seats in the legislature after the war.

Figure 6.3. Women’s predicted share of seats in legislature as a function of female labor force participation and programmatic parties.



Note: The lower line is for candidate-oriented party systems, the top line is for programmatic-oriented party-systems.

6.4. Female Representation in Five Countries with Variation in Electoral Rules.

Our analysis of cross-national data showed how electoral systems requiring large personal investments in constituency service and reputation disadvantage female candidates. This disadvantage need have no connection to attitudes towards women more generally, but can be explained by parties’ and voters’ expectations —similar to the statistical discrimination employers employ in CME labor markets — that females are more likely to interrupt their work, perhaps daily, and interrupt their careers, perhaps for

years at a time, to care for their families. In political systems where politicians are expected to “bring home the bacon,” voters want representatives whose loyalty and attention is undivided by that other home.

Although the cross-country results are consistent with our claims, they still leave open the possibility that national attitudes towards gender may influence voting behavior independently of the systemic challenges to female political careers posed by different electoral environments that we have emphasized. Adding fixed effects to the model increased the explained variance by 15-20 percent, and we cannot be sure that the effects attributed to the mostly invariant electoral rules are not due to unobserved cross-cultural differences.

We can get at the problem of national culture by exploring variation within five countries: Germany, Italy, Japan, New Zealand, and the US. Because the variation is intra-country, these cases allow us to hold constant cultural values that might color vote choice. They also help exclude the possibility that the low number of female representatives in some countries are due to outright discrimination in the nomination process. The first four cases have mixed electoral systems that allow us to compare the performance of women in contests governed by different electoral rules, and in three cases (Italy, Japan, and New Zealand) there is variance over time that can be treated as “natural experiments.” All changed their electoral rules in the 1990s for reasons that were almost certainly unrelated to issues of gender inequality. The US is also a useful case for us, not only because of the availability of data at different levels of government, but also because relatively high levels of female labor force participation, even in the ranks of senior management, suggest openness to female leadership. The mismatch

between women's high visibility in the economy and their low political profile in the US presents a genuine puzzle for arguments that emphasize cultural dispositions about gender roles. We exploit differences in career continuity and professionalization across levels of government in the US, given that turnover tends to be higher in local than in national government. If our argument about office-specific investments is right, we expect women to be more disadvantaged at higher levels of government where terms tend to be longer than for lower office.

6.4.1. Germany, Italy, Japan, and New Zealand: Laboratories of Natural Experimentation

Countries with mixed electoral systems provide periodic snapshots of the likelihood of females to get elected, holding constant everything but the type of seat being filled for office. For our purposes, the perfect natural experiment would be for each voter to have two ballots, one for each of two types of seats that epitomize the extreme cases of personalistic and party competition. We would expect any given voter, irrespective of his or her gender biases and prejudices, to be less likely to vote for female candidates for district-based seats in which seniority and career continuity are more important for office performance than in list seats that are controlled by the party leadership and where the party label is much more important to voters. Party leaders and candidates, knowing the premium on career continuity in district-based systems, respond to the demand by disproportionately supplying men in those positions.¹³³

No such perfect experiment exists, because party discipline, which in mixed systems is the product of some weighted average between two types of party back

¹³³ The female candidates who *are* nominated for district-level seats are likely to be competitive equally competitive with men. They are simply fewer. This follows from the assumption that parties are trying win elections.

benchers, reins in the personalism of district-based candidates.¹³⁴ Specifically, when there is a need for party discipline in one type of seat that constrains the freedom of candidates in the other type of seat, voters in the latter have to pay more attention to the party label, which reduces the male advantage in those seats. Nonetheless, different electoral incentives persist to some degree across two types of seats in Germany, Italy, Japan, and New Zealand, providing approximations of the experiment conditions we have in mind.

In each of these countries, the share of women winning representation on lists is 8-16% higher than the share from districts. Since the average female share of seats is always significantly below 50 percent, this difference translates into a much higher probability that a woman will be nominated and elected in a list-based seat. In Germany, for example, the proportion getting elected in list seats is more than twice that of constituency seats. This is a striking difference, given that district-based candidates in mixed systems are constrained by the rest of the party in the degree to which they can run personal electoral machines.

Germany offers the most comprehensive evidence for our thesis since the dual-ballot system has been in place since the end of the Second World War. German voters are confronted with two ballots, one for the local single-member constituency (coded 0) and one for a party list (coded 1), where the overall allocation of seats is proportional to the number of list votes. This unique electoral system enables us to run regressions that are analogous to those used to generate the electoral system results in the previous section. Model (1) in Table 6.1 explains female representation as a function of the share

¹³⁴ We assume here a principal-agent model of political parties, in which back benchers delegate authority to the front bench depending on how well their individual electoral chances are served by strengthening party coherence and discipline.

of women in the labor force, left party strength, and seat type; Model (2) adds an interaction between female share of the labor force and seat type.¹³⁵ Since GDP per capita is almost perfectly co-linear with the female share of the labor force ($r = .98$), we had to drop it (and the presidentialism variable is obviously no longer relevant). Like before we run a cross-section time-series model on the data, were the two district types are treated as sections.

The results are very similar to those for the cross-national sample. Female participation in paid employment also raises women's share of seats in the legislature, and women are much more likely to be elected in a party list seat than in a single-member constituency seat. The average estimated difference between the two seat types is 11.4 percent, which is equivalent to 85 percent of the average representation of women in the German legislature. This is slightly smaller than the effect of electoral institutions we found in the cross-national analysis (125 percent), but it is obviously still a very sizable effect.

¹³⁵ For ease of interpretation, the lowest value for the female share of the labor force variable has been set to 0. This means that the effect of the list variable when the female labor force share is at its minimum is simply the parameter on the list variable.

Table 6.1. District type and female representation in Germany, 1945-2005. Standard errors in parentheses.

	(1)	(2)
Female share of labor force	2.44*** (0.35)	1.86*** (0.45)
Left party strength (percent seats controlled by left)	0.225** (10.72)	0.227** (10.17)
Party list seat (as opposed to constituency seat)	11.39*** (3.14)	5.04 (4.43)
Female share of LF x Party list	-	1.18* (0.62)
R-squared	0.818	0.847
N	30	30
Rho	0.70	0.70

Key: * : p<.10; ** p<.05; *** p<.01 (two-tailed tests)

The findings for the interactive model, where the effect of changes in female labor force participation is conditional on the type of seat, are also very similar to the analogous findings for the cross-national regression (Figure 6.3 above). When women make up the smallest observed share of the labor force, the difference in seat type is fairly small (5 percent), whereas for the highest observed share the difference is large (18 percent). Just as countries with PR institutions and strong programmatic parties are more sensitive to the economic mobilization of women, so is the representation of women in the list seats of the German two-ballot system when compared to the constituency seats. The pattern is identical that illustrated in Figure 6.3 above except that the effects are somewhat smaller – precisely as predicted by the electoral system and party discipline arguments. The only notable other difference in the results is that left parties are associated with a somewhat higher, and statistically significant, representation of women (whereas there is no effect in the cross-national sample). Since the main non-socialist

party is the Christian Democrats, it is conceivable that this is an effect of a more conservative view on women by that party.

In the cases of Italy, Japan, and New Zealand, since mixed electoral systems were only introduced after 1994 (abolished again in 2005 in Italy), the number of legislative sessions is too small to replicate the German regression analysis. Instead, Table 6.2 simply shows the average differences in the share of women elected in different types of seats in each country, including Germany for comparison. In every case, and in fact in every election (there is a total of 11 under mixed rules), the share of women elected from list seats exceeds the share of women elected from constituency seats. The difference is modest in the case of the Italian Senate, though still 31 percent of the average representation of women.

Table 6.2. Percent women elected to the national legislature by type of seat (Italy, Japan, New Zealand)

	List seats	Constituency seats	Difference
Italy	10.4	7.8	2.6
Japan	11.2	4.4	6.8
New Zealand	37.8	22.5	15.3
Germany	19.5	7.6	11.9

Note: Legislative assembly coverage: Italy: 1994, 1996, 2001; Japan: 1996, 2000, 2003, 2005; New Zealand: 1996, 1999, 2002, 2005.

It is hard to think of an explanation for the pattern in Table 6.2 without recourse to differences in the incentives built into the electoral rules. The German pattern could perhaps be attributed to special circumstances that existed after the Second World War

though it is not clear which, or why these would have persisted. But the mixed systems that were introduced very recently in the other three countries show the same tendency.

One conceivable explanation might be that the nomination process for constituency seats has greater input from local politicians who are more socially conservative than national politicians. But if this were true, the difference between list and constituency seats should disappear in urban districts where voters are socially liberal. That is not the case. Instead, the results add up to strong evidence, we think, of lower voter demand for, and lower party and candidate supply of, female representatives in the kind of seat in which long term constituency service is vital for electoral success.

We can further explore the effects of electoral design by examining how female representation in the legislature responds to institutional reform. The change we would expect in the three cases where such reforms occurred is simply the difference across seat type recorded in Table 6.2 times the share of total seats elected under a new formula, where the direction of change depends on whether the reform is from a candidate-oriented system toward a party-oriented system, or vice versa. For example, in the case of New Zealand about 44 percent of the 120 MPs have been elected on party lists starting with the 1996 election. The rest have been chosen through the old SMP method. Since the (average) difference in female representation between the two systems is 15.3 percent (see Table 6.2) we would therefore expect the net effect of electoral reforms to be an increase in female representation of $0.44 * 15.3 = 6.7$ percent. This is the figure shown in column (2) of Table 6.3. The actual increase was 13.9 percent (column 1). Much of this gap, however, can be accounted for by the fact that other factors affecting female representation also changed. Although we do not know the identity of all these factors in

each case, we can use the cross-national results to predict their effect based on observed changes in the share of the labor force that is female, changes in per capita income, and changes in the representation of left parties in the legislature – while assuming that electoral institutions remain the same. This is the estimated counter-factual in column (3) (based on Model (7) from Table A6.1 in the appendix). In all cases we use the means for the post-reform period and compare the numbers to the means for the equivalent number of legislative assemblies before the reform.

In the case of New Zealand the total predicted change in representation from electoral reforms and exogenous factors (11.2) is very close to the actual observed change (13.9). In the other two cases there is either “too little” or “too much” observed change compared to the prediction. Thus, while improvement in female representation in Italy has been very slow, the predicted change is actually slightly negative because of electoral reforms that are disadvantageous to women. It is noteworthy, however, that with the return to a pure PR list system in 2005 – and this time to a system without preferential voting -- women’s representation in the Senate almost doubled (from 7.9 to 13.7 percent). Structural forces of changes are clearly driving up the number of women elected to national office in Italy, but they have almost certainly been subdued by the “majoritarian” interlude from 1994 to 2005.

The pattern in Japan is the mirror image of Italy. Here electoral reforms should have benefited women, and the same should be true for the notable increases in incomes and growing female labor force participation. Yet actual changes have been less impressive: 5.6 compared to the prediction of 8.5. But it takes time to reach the equilibrium, and if we look at the period since the electoral reforms, women

representation in the Diet has in fact increased sharply from 3.7 percent in 1993 to 9 percent in 2005 – more than a doubling. If we compare the last observation under the new rules to the last on the old rules – under the assumption that changes take time as a result of incumbency advantages – actual changes (noted in parentheses in column 1) are closer to the predicted (6.3 versus 8.5). Such convergence between observed and predicted changes can also be seen in the other two cases. All in all, the cross-time evidence from the three cases clearly supports the cross-seat evidence.

Table 6.4. Actual and predicted change in female representation as a result of electoral reform.

	(1) Actual change	(2) Predicted effect of electoral change	(3) Predicted effect of other variables	(4) Total predicted change (2)+(3)
Italy	2.5 (1.7)	-1.9	1.7	-0.2
Japan	5.6 (6.3)	4.1	4.4	8.5
New Zealand	13.9 (11.0)	6.7	4.4	11.2

6.4.2. The US: Levels of Government and the Effects of Turnover Rates

Women in the US are represented in greater numbers at lower levels of government, and the number of female politicians shrinks on the way up the political pyramid.¹³⁶ One might infer from this that Americans are ready for women to represent them in local or state office but not in national government where more is at stake. Our argument, instead, is that lower political offices in the US are more like general skills

¹³⁶ Uhlaner and Lehman-Schlozman 1986, Cox 2000

labor markets where labor markets are fluid and the probability of career continuity is of lesser advantage. Local and state legislative jobs are characterized by high turnover compared to House and Senate seats. Relatively few politicians settle into careers on the city council, but plan to keep moving up the ladder. For political positions characterized by short-term careers, a female candidate who might quit in a few years to raise her children or to care for elderly parents is not dramatically different than a male candidate with sights on higher office or a private sector career.¹³⁷

Female politicians in the US seem to have internalized the logic of political labor markets, for they self-select into offices with higher turnover. The result is dramatic attrition of females on the way up the political pyramid, as incumbents have fewer lures to move them along and political tenure grows longer. In 2006, 15.4% of the US House of Representatives was female, compared with 22.8% female in state legislatures. Lower down at the county and town level, the percentage of women tends to be even higher. In New Jersey, for example, which has no women in the Congressional delegation, 27.7% of local commissioners were women. The pyramidal structure of female representation is similar in England, where 19.7% of the House of Commons is female compared to 27% of local councils.¹³⁸

The contrast with the proportional representation systems in Europe is striking. There, party leaders choose candidates to higher office for party loyalty rather than voters

¹³⁷ Our argument is similar to Uhlaner's and Lehman-Schlozman's, who found that females tend to raise less campaign money because they are more likely to be running as challengers rather than as incumbents. "Donors behaved like bookmakers—what mattered was which horse would cross the finish line first, not whether it was a filly or a colt" (Uhlaner and Lehman-Schlozman 1986: 43). Gaddie and Bullock (1997) and Smith and Fox (2001) found that female candidates do well in open seat elections that they contest. But we note that females do not put themselves forward for open seat elections in numbers equal to male candidates, and we attribute this reticence to the importance of district-specific investments in the US system, in which male candidates have a decisive advantage.

¹³⁸ "Accounts of Feminism Among Women Local Councillors in England," *Women's Studies International Forum*, 26, 4: 345.

choosing them on the basis of district loyalty and visibility, with the result that career interruption need not pull female politicians out of the cue for higher office. Rather than the pyramid we find in the US and UK, the structure of female representation in Sweden, for example, is a column: 45.3% in the national parliament, 47.3% in county councils, and 42.4% in municipal councils.¹³⁹

6.5. Conclusions

Given that women have been subjected to unfavorable stereotyping and second class treatment for as long as history has kept track, outright discrimination would seem a reasonable explanation for why women are less likely than men to get elected to political office. We might expect that a shift in societal values towards greater gender egalitarianism would contribute both to a rise in female labor force participation and in female political representation at the same time. In rich democracies, particularly in the post World War II decades, women have indeed cut into male hegemony in labor markets as well as in politics. The correlation between the two phenomena is consistent with “demand side” theories that stress general attitudinal changes, and with “supply side” theories about the relevance of labor market skills and experience for political candidacy.

While there is much truth to these stories about changes in voter reception of female candidacy, the correlation between female success in labor markets and in politics fails to account for enormous cross national variation in female political representation. In some countries, such as in Scandinavia, female labor force participation and female

¹³⁹ See http://www.scb.se/templates/Product_12337.asp, and “Local Government Sweden Fact Sheet,” http://www.sweden.se/upload/Sweden_se/english/factsheets/SI/SI_FS527_Local_Government_in_Sweden/FS52vLowres.pdf.

political representation are powerfully correlated, whereas in other countries, such as the US, the slope of the curve is much flatter.

Our explanation for the gender gap in representation is very simple and uses the same logic for political careers that we know drives gender inequality in other careers. When jobs require uninterrupted tenures and long inflexible schedules, women are at a distinct disadvantage. Political parties in advanced democracies may have an ambition to encourage gender equality in representation, but just like firms competing in product markets they are sometimes constrained by electoral competition to put up candidates who are in a strong position to produce specialized constituency goods that require a long tenure and round the clock presence. The pool of qualified candidates for that type of job over-represents men, whether that job is in politics or in private enterprise. By contrast, where parties mainly compete on party labels there is no reason to prefer male over female candidates, at least for filling rank-and-file positions in the party. Ideological commitment and party loyalty are general qualities that do not differ systematically by gender.

The case of the US, where the ascent of women into middle management is not matched by female success in politics, illustrates our argument. American labor markets are characterized by an abundance of general skills jobs, for which women are competitive. The same is not true of Congressional jobs. The reason, we have argued, is that the personalistic qualities of the American political system causes the same cast of characters—the American public—to make considerably less egalitarian choices in the ballot box than in the market place.

**Appendix A:
Cross-national regression results**

Table A6.1. The determinants of female representation in 23 democratic legislatures, 1960-2000. Standard errors in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female share of labor force	0.41** (0.10)	0.18* (0.07)	0.62** (0.09)	0.83** (0.09)	0.82** (0.08)	0.37** (0.10)	0.22** (0.12)
Service employment as pct of working age pop.	0.72** (0.09)	0.23** (0.05)	-	-	-	-	-
GDP per capita ('000 dollars)	-	-	0.50** (0.06)	0.36** (0.06)	0.37** (0.06)	0.50** (0.06)	0.44** (0.06)
Electoral district size	-	-	-	8.36** (1.41)	-	-	-
Pooling of votes	-	-	-	6.98** (0.85)	-	-	-
Presidentialism	-	-	-	-4.59** (1.08)	-4.43** (1.07)	-5.67** (2.47)	-3.04** (0.93)
Left party strength (percent seats controlled by left)	-	-	-	-0.04* (0.02)	-0.04* (0.02)	-0.03 (0.02)	-1.13 (1.95)
Programmatic parties	-	-	-	-	7.36** (0.69)	-	-1.53 (1.26)
Female share of LF x Programmatic parties	-	-	-	-	-	0.29** (0.04)	0.64** (0.08)
Lagged dependent variable	-	0.77*** (0.06)	-	-	-	-	-
R-squared	0.878	0.949	0.874	0.681	0.682	0.895	0.714
N	244	241	266	249	249	249	249
Number of countries	21	21	23	23	23	23	23
Fixed effects	Yes	Yes	Yes	No	No	Yes	No
Correction for AR-1	Yes	No	Yes	Yes	Yes	Yes	Yes
Rho	0.47	-	0.49	0.78	0.76	0.47	0.64

Key: *: p<.05; **: p<.01 (two-tailed tests)

Chapter 7

Conclusions

7.1. Introduction

Women, given that they make up half of the human race, are a heterogeneous group of people with as much to divide as to unite them. It would be inappropriate to write a book about them at all if it were not for a striking similarity in social attitudes towards women's roles throughout most of the world and over most of human history. A woman is to be a faithful wife and a good mother. Faithful husband and good father rank high on the list for men in most societies as well, but come lower on the male list than for females, and are invariably preceded by other mandates such as to be strong, brave, and successful in the world of men.

We do not wish to be read as saying that women are poor and oppressed while men are joyful and triumphant. The pressures on males to be strong, brave, and successful themselves constitute a heavy psychic burden, no doubt contributing to the shorter male life span. In addition to being vulnerable to modern stress-related diseases, men have always been more likely to die in war and from work-related injuries. Our point is rather that the long standing economic division of labor in which females stay at home while men work in the world has the effect of weakening women's bargaining power at home, and of creating social norms that reinforce male dominance in most spheres of human life.

In modern democracies, the starkly gendered division of labor is crumbling and gender equality is now the only politically correct stance on the subject. But there is still considerable variation in equality in practice, and understanding that variation provides

leverage on the remaining inequality. We hope for a time when a book such as this one is categorized as history, but that time has not yet arrived.

7.2. Summarizing the Argument

Patriarchy, we have argued, is the combined result of myriad strategic decisions by parents to socialize their daughters for the marriage market rather than for the labor market in light of an economic system for which marketable female labor is not as productive as male's. Most of these decisions were undoubtedly not strategic at all, at least in the sense of conscious efforts to maximize utility. Rules of thumb that work for one generation get passed along to subsequent ones, and as long as they work, tend to become enshrined in moral and religious teachings. Put economically, social norms about gender roles enabled people to economize on information about choices over education, marriage, and work, and to help them avoid making potentially costly errors.

The resulting enormous differences in the allocation of social resources across the sexes were out of all proportion to the small average difference in physical size between the sexes. There were surely many egregious cases of inefficient use of resources, where strong women stayed at home while weak men struggled with ox and plow. But social norms are most powerful when they are generalized as rules, and so the trade-off was made. There were also many efficiency-improving variations on the theme, such as where a weaker division of labor emerged under conditions of land abundance. The brawn advantage weakens with land abundance because the labor inputs are a smaller piece of the equation and raises the marginal product of labor. But on balance, we suggest, the gendered division of labor became ubiquitous because it was efficient,

creating gains from trade within families when technology was not an available substitute for brawn.

The power of norms to outlive the economic circumstances from which they sprang is most visible when the arrival of technology is met, as in the case of Victorian England, with a retrenchment of gender roles. Analogously to the staged celebration of political absolutism after the French Revolution, those threatened by a blurring of traditional gender roles sought to draw the lines between the sexes even more firmly. Moral and religious education added to the tensile strength of social norms by attaching cosmic significance to what otherwise might have been simple economic choices. Although efficiency is a tough competitor to beat in the very long run, moralizers and other incumbents have been able to manipulate social norms for an effective eternity for any given generation of women.

Changes in the relative productivity of male and female labor under different modes of economic production explain the broad arc of gender socialization by way of changes in the bargaining power of women inside the home. Demand for female labor confers on females the ability to leave unsatisfactory marriages, which in turn translates into women's bargaining leverage within the household. The rise of the service economy has set in motion an avalanche of changes as more women enter the labor market, divorce rates increase, and girls are taught independence over subservience. We have optimistically proposed that these changes mark a shift towards a more gender-egalitarian equilibrium, but we have also suggested that they are accompanied by a growing gender gap in political preferences as well as unsustainable low fertility rates. In addition, subtle differences in labor market conditions across modern democracies explain another

striking pattern. In economies dominated by long term labor contracts, the expected productivity of female labor is discounted by the probability that females will leave the job before the employer has reaped the full value of its investment in their human capital. As a result, female labor force participation is lower in these countries, except where large public sectors—as in Scandinavia—account for a large portion of female employment. There are in fact multiple gender equilibria corresponding to distinct varieties of capitalism.

Female bargaining power, measured in our empirical investigation by the proportion of household work they do over and above what is predicted by labor market participation alone, is stronger in countries with fluid labor markets, and where public sector employment is large enough to offset the negative effects of long term contracts on female employment in the private sector. Where barriers to divorce cut off a possible marital exit, demand for female labor has a muted effect on female bargaining power.

In rich democracies, the same factors that confer household bargaining power on women also have a positive effect on fertility. We interpret this to mean that women would like to “have it all” as long as having children does not block their possibilities of accumulating human capital in the labor market. Trying to boost fertility with a campaign of pro-family rhetoric and incentives is likely to have precisely the opposite effect as intended. This is an important lesson to democracies in especially southern Europe and East Asia where traditionalist views on women and the family are increasingly in conflict with the desire of, and opportunities for, women to have independent careers. We surmise that this tension will eventually translate into a significant gender gap in voting and a shift in government policies. Indeed, this may

already be playing itself out in a country like Spain where the Zapatero government has taken on the Catholic Church over issues of family policy and where women voted disproportionately for the incumbent socialist party.

But female bargaining power in the family does not always have the effect, as one might expect, of also boosting female political representation. While it is true that higher levels of female labor market participation creates a gender voting gap between male and female voters that parties may try to exploit by fielding female candidates, the nature of the political labor market itself blocks such a simple connection between potential demand and supply of female candidates. As with labor markets in the economy, political labor markets characterized by long term contracts—or a premium on seniority—disadvantage female candidates. In electoral rules where personal political clout is an important asset, relatively few females can match males' unfettered ability to accumulate political capital early and continuously through their careers. In proportional representation systems, where party loyalty supplants individual visibility in importance, women are able to compete on more equal footing and do far better in electoral races.

7. 3. New Research Frontiers

An analysis based on the interaction of household bargaining with modes of production explains some mysteries, but opens up still others for future inquiry. We speculate about three of them here briefly: the processes of norm formation and change; the effects of representation by female politicians; and the possibilities of squaring gender equality with global economic competition.

The line we draw between the relative productivity of male versus female labor on the one hand and gender norms on the other runs through a complex series of

individual cognitive processes, interpersonal bargaining (explicit or implicit), intergenerational socialization, and macro-social adaptations that are only dimly understood in modern social science. We find indirect evidence that strategic opportunities motivate families to steer their children in response, but we know far less about how family decisions agglomerate into community-wide normative structures, and still less about when individuals are willing to be guided by societal rules of thumb rather than to evaluate strategic circumstances on their own.¹⁴⁰ Our model of norm change assumes that, when faced with attractive enough opportunities, people will endure social opprobrium to reap economic benefits, but we have only a vague idea about the exchange rate between economic gain and social disfavor, and what factors shape this exchange rate across societies and for types of people. The fertility crisis in a range of countries with entrenched patriarchal norms illustrates the point. It seems to suggest a profound shift in female preferences in favor of having careers over families despite the centrality of the family in religious and cultural norms. No one could, or did, predict how women would choose in this tradeoff (even though we can identify factors that affect the severity of the tradeoff).

Political representation is second important area of inquiry which we only scratch on the surface. We have a fairly well-developed idea of why female political representation varies, but we understand less well the consequences of female representation and by what mechanisms. If representatives are good agents of their voting constituents, only the voters' preferences should matter and not the personal preferences of the representative. While there is some evidence that female-led town

¹⁴⁰ David Hume, David Lewis 1965, Chwe 2001. But these posit, rather than establish, the cognitive processes involved.

councils in India press for different outcomes than male-dominated councils, it is not clear why the male-dominated councils are unresponsive to the needs of half of their voters, and if that result would be replicated elsewhere. There is a host of questions embedded here: how is the representation of “women’s interests” affected by the competitiveness of elections, the quality of information, the self-awareness of women as voters, the priority of women-specific issues among other electorally salient issues. When are female politicians more likely to share the preferences of women voters? Which preferences? Of which women? If female representatives are chosen by parties to capitalize on the gender voting gap, when are female politicians at a critical mass to affect policies? How would the number of women in parliament matter apart from the parties’ electoral strategies?¹⁴¹ A deeper understanding of these questions will provide a better roadmap for formulating and implementing more gender-friendly policies, including the vexing question of quotas.

The third issue we have raised but not settled is whether gender equality is consistent with economic globalization. Is gender equality efficient? A precise answer to this question would require more data than are currently available to evaluate the costs and benefits for all societal actors of abandoning a gendered division of labor. Even if we had the data, we would then struggle to choose an algorithm for calculating the result, since political philosophy offers no universally agreed metric for weighing inter-personal utilities.

We are left with the less elegant but more manageable task of considering the trade-offs entailed in making different policy choices. Liberal market economies managed to

¹⁴¹ These questions are at the heart of the debate about descriptive representation as a remedy to the insufficiency of substantive representation. Judith Squires 1996; Andrew Rehfeld 2006; Jane Mansfield.

achieve relatively high gender equality, surely inadvertently, by keeping labor markets fluid in ways that did not put women at a disadvantage against men. Class inequality is the greater problem than gender equality in those countries. There are more female managers in those economies than in the more generous welfare states, but income inequality is stark among women as well as among men. It is also true that women tend to cluster in the low skill jobs at the bottom of the wage dispersion. In the past the family compensated for this inequality to some extent because higher earning males were more likely to marry lower-earning females. This pattern has reversed that economically successful men now are much more likely to marry equally successful women, increasing the inequality in the distribution of family income. This trend is magnified by a higher probability of low income females ending up as single mothers. The challenge in these countries with short term job commitments is therefore to improve the life chances of men and women without means, and especially low-income single parent families, by increasing opportunities for skill acquisition and retraining as necessary.

Scandinavian countries tackled gender equality without sacrificing class equality, also inadvertently. Expanded public sectors created enormous demand for female employment while also providing social insurance against poverty. Whether large public sectors are consistent with economic competition and integration depends in part on whether the voting publics are willing to pay taxes out of wages in order to keep corporate taxes at globally competitive rates, and so far they have been more or less willing to do that. Without doubt this is facilitated by centrally-coordinated wage setting systems which facilitate wage solidarity and keep up wages in low-skill services that are sheltered from international competition while holding down wages in internationally

traded goods and services. This produces relatively highly-priced services (partly reflected in taxes), but is fully compatible with high international competitiveness when coupled with public investment in training.¹⁴²

The Coordinated Market Economies of continental Europe and Japan unintentionally hurt women when they protected labor from lay-offs, because women cannot compete with men in committing credibly to human capital accumulation over long careers. Although female political representation tends to be higher in these countries than in the district-based systems of Liberal Market Economies, gender-friendly policies have not yet made much of a dent in many outcomes of concern to women, such as female employment, the gender wage gap, male share of household work, and the ability to have children without negative career effects. Adverse labor market conditions amount to an uphill battle that women have not yet won in many of the most developed countries in the world. But as the fertility crisis suggests, this may not be a sustainable situation. If women are not having children because they want careers, rising demand for government policies that facilitate female labor force participation, if our results are correct, cannot be far behind.

In all of these rich democracies, demand for female labor is potentially as high as demand for male labor. No longer is brawn a consideration, and foregoing female brains to reach lower in the male barrel is an economic cost. The reason that long term labor contracts hurt females—in private sector labor markets in Europe and Japan, and in politics in district-based electoral systems—is simply because women are still doing a disproportionate amount of the family work. As long as females are the default caregivers, they face an uneven playing field.

¹⁴² See Iversen and Soskice (2008) for a formal exposition of the logic.

7.4. Conclusions

Patriarchy is gasping for breath in the developed world, but it is still with us. In the developing world where the primary sector still dominates the economy, patriarchy is alive and well. The good news for women is that economic development generates a demand for female labor and thereby gives them exit options to oppressive relationships. But this is cold comfort for the many women facing decades before their economies reach that stage of development. In democracies in the developing world, female voters may seek government help in bearing the costs of family work, but many of those countries have electoral rules that make it exceedingly difficult for women to attain office in the first place. Those that do struggle to build coalitions in favor of the measures needed to overcome the extremely adverse market conditions that women face in poor democracies.

Life for women is getting better, but women are not yet equal citizens. Until it becomes a commonplace that fathers are as responsible for the care of children and home as mothers, markets will discriminate against women. Although this is more true in labor markets characterized by long term contracts than elsewhere, it is true to some degree everywhere. It is time for men to share the same burdens and joys of family work. Judging from mortality statistics, less pressure to be strong, brave, and successful might do a man good.