

Huber, Evelyne; Stephens, John D.; Bradley, David; Moller, Stephanie; Nielsen, François

**Working Paper**

## The Welfare State and Gender Equality

LIS Working Paper Series, No. 279

**Provided in Cooperation with:**

Luxembourg Income Study (LIS)

*Suggested Citation:* Huber, Evelyne; Stephens, John D.; Bradley, David; Moller, Stephanie; Nielsen, François (2001) : The Welfare State and Gender Equality, LIS Working Paper Series, No. 279, Luxembourg Income Study (LIS), Luxembourg

This Version is available at:

<https://hdl.handle.net/10419/160951>

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# **Luxembourg Income Study Working Paper Series**



**Working Paper No. 279**

**THE WELFARE STATE AND  
GENDER EQUALITY**

**Evelyne Huber  
John D. Stephens  
David Bradley  
Stephanie Moller  
François Nielsen**

**Revised June 2004**

# The Welfare State and Gender Equality

Evelyne Huber, John D. Stephens, David Bradley, Stephanie Moller, and François  
Nielsen

University of North Carolina

This draft, June 2004. Revised version of Luxembourg Income Study Working Paper  
No. 279, September 2001.

## The Welfare State and Gender Equality

### ABSTRACT

We examine the determinants of (1) pre tax and transfer rates of relative poverty among single mothers, (2) reductions in single mothers' poverty rate due to taxes and transfers, and (3) women's wages relative to spouses' wages, and their connection to the three worlds of welfare capitalism. The Luxembourg Income Study (LIS) archive yields an unbalanced panel with 71 observations on 15 countries. The principal determinants of pre tax and transfer poverty are industrial employment and women's part time employment, and of poverty reduction due to taxes and transfers they are left government, constitutional veto points, and welfare generosity. The relative wage of women in couples is a function mainly of female labor force participation, part time work among women, and women's mobilization.

Over two centuries or so of industrial development, the average situation of women with respect to fertility, family roles, political participation, and access to education and to occupations outside the household has changed enormously (Nolan and Lenski 1999:311-321). A reasonable case can be made that the status of women is more nearly equal to that of men in advanced industrial societies than it has ever been in history. Despite the general trend of increasing equality between men and women it is undeniable that many economic, political, and cultural inequities remain. Furthermore, indicators of gender inequality vary conspicuously among industrial societies, even among those rooted in similar Western European cultural traditions (e.g., Blau and Kahn 1995 for wage ratios; Kenworthy and Malami 1999 for political representation).

The purpose of this study is to examine the determinants of the economic position of women in advanced industrial societies in the late 20<sup>th</sup> century, as it varies across societies and over time. We make distinctive contributions both theoretically and empirically. Theoretically, we bridge the concerns of the literature on women's dependence within the family (Sorensen and McLanahan 1987; Bianchi, Casper, and Peltola 1999) and those of the literature on women's dependence on the family (Orloff 1993) by focusing on women's earnings relative to those of their husbands and on women's capacity to sustain autonomous households above the poverty level. Both of these factors, the importance of women's monetary contribution to the household and women's exit options shape the bargaining power that women have within the family (Hobson 1990). So far, these concerns have been dealt with in two separate bodies of literature, studies of women's economic position within the household (Sorensen and McLanahan 1987; Bianchi, Casper and Peltola 1999; Van Berkel and De Graaf 1998; Stier and Mandel 2003) and studies of gendered effects of welfare states (Orloff 1993; O'Connor 1996; Sainsbury 1999; Esping-Andersen 1999). Studies of women's economic position within the household have focused primarily on individual and household level variables, that is, they have used gender differences in demographic characteristics and labor market participation to explain temporal or cross-national variation in women's relative economic position and, with very few exceptions, have ignored macro-level variables.<sup>1</sup> Studies of gendered effects of welfare states have raised doubts about the usefulness of mainstream typologies (e.g. Esping-Andersen 1990) and theories of welfare states to explain gender specific characteristics and outcomes (Sainsbury 1996).<sup>2</sup> We demonstrate that political and policy variables and welfare state regime types have powerful direct effects on women's economic position outside of marriage and indirect effects on their economic position within marriage.

Empirically, we provide the first pooled cross sections and time series analysis of pre tax and transfer poverty and reduction in poverty among single mothers through the tax and transfer system and of women's earnings relative to those of their husbands. We also develop a new measure for women's mobilization based on women's participation in non-religious organizations, a factor that previous work and our analysis show to be an important determinant of welfare state development in general and "women friendly" policies in particular. Thus, we contribute a new quantitative comparative study of the determinants of "women friendly" or

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<sup>1</sup> The exception is Stier and Mandel (2003); their macro level variables are maternity leave and child care arrangements.

<sup>2</sup> In their study of married women's dependency in nine countries, Bianchi, Casper, and Peltola (1999) find support for the Esping-Andersen typology.

gender egalitarian policies and outcomes based on a sufficient number of cases to be the basis for generalization, adding to a corpus of research that already includes broad based qualitative comparisons (O'Connor, Orloff, and Shaver 1999; Stetson and Mazur 1995) besides a few quantitative studies (Hill and Tigges 1995; Wilensky 1990; Huber and Stephens 2000).

The dependent variables are calculated from micro data available in the Luxembourg Income Study (LIS) archive, which yield 47 observations for the married women's dependency variable and 71 observations for the poverty variables for 13 and 15 advanced industrial countries, respectively. In the case of poverty among single mothers, the LIS data also allow us to calculate the rate of poverty before and after taxes and transfers, so we can investigate the extent to which government action through the tax and transfer system is responsible for reducing poverty. Hence, we analyze three dependent variables: (1) pre tax and transfer poverty rates among single mothers, (2) reductions in single mothers' poverty rate due to taxes and transfers, and (3) women's wages relative to spouses' wages. For poverty levels, we follow the convention of comparative studies in using relative, rather than absolute, poverty.

To anticipate our empirical results, we note at the outset one dominant theme in our findings: the economic position of women in advanced industrial societies appears to be determined to a very large extent by the type of "welfare world" or welfare state regime (liberal, Christian democratic, or social democratic welfare state) to which a society belongs. However, the social and political antecedents of the three gendered regimes of welfare capitalism are more complex than those Esping-Andersen (1990, also see Huber and Stephens 2000) found in his original analysis of the development of these three regime types. He found that the strength of different political blocks is the primary factor explaining countries' clustering into the three groups: The social democrats have been dominant in the Nordic countries; the Christian democratic parties have been the single most influential political force in most continental European countries; and the secular center and right parties have dominated government in the Anglo-American world.<sup>3</sup> We confirm that these political alignments directly or indirectly via their influence on welfare state generosity strongly influence governmental reduction of poverty among single mothers and thus that the conventional ordering of (increasing) regime generosity (liberal – Christian democratic – social democratic) holds with regard to reduction of poverty among single mothers and post tax and transfer poverty. However, not only do women's wages as proportion of both spouses' wages follow a different ordering (Christian democratic – liberal – social democratic), but the determinants of this outcome, though strongly correlated with welfare state regime type, are only partially and indirectly connected to partisan composition of governments. The influence of women's mobilization, which is strongest in social democratic countries and weakest in Christian democratic countries (see Table 2 below), helps explain the ordering on the married women's economic dependency variable, but even here some of the influence is indirect, via the employment and occupational structures of the regimes, as

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<sup>3</sup> See Table 2 below for the conventional placement of countries in the three worlds. It should be noted that, following Esping-Andersen (1990, e.g. see Castles and Mitchell 1993, Korpi and Palme 1998, Huber and Stephens 2001), most welfare state typologies classify countries by their policy characteristics, not by the social and political antecedents of the types. Thus, both France and Austria are classified as Christian democratic (Huber and Stephens 2001) or conservative (Esping-Andersen 1990), despite the fact that the Austrian Social Democrats edge the Christian Democrats in terms of years in government and the French Christian Democrats were absorbed in the Gaullist Block after the demise of the Fourth Republic and consequently France has experienced very few years of Christian democratic government.

characterized by female labor force participation and female part-time employment. Thus, women's earnings relative to their husbands' have to be understood by taking into account the interaction of the welfare state regimes with the labor market regimes in which they are embedded.

### Hypotheses

We expect the determinants of pre-tax and transfer poverty among single mothers, poverty reduction through taxes and transfers, and wives' earnings relative to those of husbands to be largely distinct. Therefore we present separate literature reviews and hypotheses for the three dependent variables. We expect poverty among single mothers to be related to overall levels of poverty in a society. The higher overall poverty, the greater the likelihood that single mothers will live in poverty; and the more efficient the welfare state in reducing overall poverty, the more likely that single mothers will be lifted above the poverty line through the tax and transfer system. However, this association is far from perfect, both because single mothers have a greater probability of being poor than the general population, and because some states use policies specifically targeted at single mothers. Accordingly, we draw on the general literature on determinants of poverty and poverty reduction (Moller et al. 2003), as well as on gender specific theories.<sup>4</sup>

### Determinants of Pre-Tax and Transfer Poverty among Single Mothers

#### *Control Variables*

Our variables of interest are the political and policy variables, but in order to establish a baseline we begin with a number of control variables that Moller et al. (2003) found to be significant in their analysis of pre tax and transfer poverty and poverty reduction among the working age population and that are relevant for single mothers. In addition, we include other control variables important for single mothers.<sup>5</sup> Many of our control variables affect inequality also, and inequality is relevant for relative poverty, in so far as any factor that increases inequality by inflating the bottom of the income distribution should also produce greater poverty.<sup>6</sup>

*Education:* Higher levels of education among women lead to greater labor productivity, greater earnings potential and thus less poverty. Increasing levels of education also

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<sup>4</sup> Other authors have looked at the gender-poverty gap, that is, differentials of poverty rates of women and men (Casper, McLanahan and Garfinkel 1994). However, since we are interested in the capacity of women to sustain autonomous households above the poverty line, the overall size of the population below this line is relevant for us. Therefore, it is important to understand the macro level variables that decrease poverty in general as well as poverty among single mothers in particular.

<sup>5</sup> In a previous version of this article, we included a full set of the control variables used in studies of cross-national differences of poverty levels, and the results were essentially the same (identifying reference to 2002 conference web site).

<sup>6</sup> When we refer to poverty in this section, we mean pre tax and transfer poverty.



increase the supply of skilled and professional workers and thus reduce the income gap between skilled and unskilled workers (Lecaillon et al 1984; Nielsen and Alderson 1995; Simpson 1990; Tinbergen 1975). Another research tradition emphasizes the particular effectiveness of strong systems of vocational education in increasing skill levels at the bottom of the educational distribution; strong vocational education should therefore be associated with less inequality and less poverty (Estevez-Abe et al. 2001).

*De-industrialization:* Advanced industrial societies have seen a shift in employment from industrial manufacturing to the service sector. Women have disproportionately acquired jobs in this sector. Since the service sector generally has lower average wages and greater wage inequality than the manufacturing sector, one would expect this shift to lead to a rise in inequality and poverty (Alderson and Nielson 2002; Bluestone and Harrison 1982; Esping-Andersen 1999; Gustafsson and Johansson 1999). Thus, larger proportions of employment in manufacturing should be associated with less poverty.

*Unemployment:* Increasing unemployment raises pre-tax and transfer poverty because employees who lose their jobs suffer a steep decline or total loss of income. Moreover, high levels of unemployment create a reserve army of unemployed and thus may depress real wages and let those at the bottom of the distribution fall into poverty (Gramlich and Laren 1984; McFate, Smeeding, and Rainwater 1995).

*Female Labor Force Participation and Volume of Work:* The effects of increasing female labor force participation on overall levels of inequality and poverty are debated in the literature, largely because of uncertainty concerning effects of participation on the incomes of couples (e.g. Thurow 1987; Cancian, Danziger, and Gottschalk 1993; Nielsen and Alderson 1997; McFate 1995). However, in the case of single mothers, that is, mothers who head an autonomous household, increasing female labor force participation should lower poverty. In societies where a greater proportion of women work, it is more likely that single mothers are working also and thus have a wage income. The frequency of part-time work again has an ambiguous effect on poverty among single mothers. Wide availability of part-time work increases women's labor force participation and thus increases the probability that single mothers have a wage income. However, if we assume that greater frequency of part-time work also means that single mothers who do work are more likely to work part-time rather than full-time, then the positive effect may be neutralized, because part-time work in many cases is insufficient to lift a single mother out of poverty. In other words, in societies where part-time work is common, some single mothers may work who would not work at all if full-time work was the only option, and some of them may be lifted out of poverty by their wage income. By the same token, some single mothers may only work part-time who otherwise would have worked full-time, and for some of them their wage income will be insufficient to lift them out of poverty. So, if we control for women's labor force participation, we would expect the frequency of part-time work to have a positive effect on poverty among single mothers.

*Male – Female Wage Gap:* In all advanced industrial societies, women on average earn less than men, but the size of the wage gap varies across societies and has been generally declining over time (Blau and Kahn 1992, 1996, 2001; Gornick 1999). A larger wage gap means a greater likelihood that women, single mothers among them, work for low wages

that leave the lowest paid below the poverty line. Thus we expect that a larger wage gap is associated with higher poverty among single mothers.

*Wage Coordination:* Harmonization of wage-setting processes among unions, business, and the government is associated with lower wage dispersion, lower income inequality, and a lower female/ male wage gap (Alderson and Nielsen 2002; Blau and Kahn 2001; Iversen 1996; Kenworthy 2001; Rueda and Pontusson 2000; Wallerstein 1999). Accordingly, we expect it also to be associated with lower poverty among single mothers.

### *Politics*

*Left Government:* We expect of course the main effect of government on poverty to flow through taxes and transfers. Nevertheless, there is consistent evidence that incumbency of left-wing parties is associated with lower wage inequality, even when union density and wage coordination are controlled for (Pontusson et al. 2002; Rueda and Pontusson 2000). Left-wing governments typical of social democratic welfare states tend to promote minimum wage and active labor market policies that lower inequality and poverty. They also support policies that increase women's labor force participation, such as the expansion of public social service employment and enabling part-time work, and reduce the gender wage gap, which should result in lower poverty among single mothers (but see further discussion below).

*Christian Democratic Government:* Christian democratic governments typically protect the traditional family and traditional gender roles for women. They do not promote women's labor force participation and increases in the volume of women's work. They generally are not concerned with policies to reduce the gender wage gap either. Thus, we expect Christian democratic government to have a negative or no direct effect on poverty among single mothers (see below).

*Women's Mobilization:* Organization is a source of power, and we know that strong women's organizations in collaboration with strong left-wing parties have been able to establish effective state agencies in charge of promoting women's interests (Hobson and Lindholm 1997; Jenson and Mahon 1993; Lewis and Åstrom 1992; O'Connor, Orloff, and Shaver 1999; Sainsbury 1999; Stetson and Mazur 1995). Huber and Stephens (2000, 2001) and Sorensen (2004) argue that it is not simply membership in feminist organizations but a broader process of women's mobilization in existing unions, parties, and other organizations that promotes gender egalitarian policies. Accordingly, we expect higher levels of women's mobilization as indicated by organizational membership to be associated with lower poverty among single mothers. Parallel to left incumbency, we would expect most of this effect to operate through welfare state expenditures, but other policies such as non-discrimination legislation can also have an effect on lowering poverty.

### *Policies*

*Welfare State Generosity:* We argue that social policies such as active labor market measures and public day care increase the probability that single mothers will work and that thus welfare generosity may reduce pre tax and transfer poverty. Critics of the welfare state have contested this, arguing on the contrary that generous transfers to working-age people

actually increase pre-tax and transfer poverty because they create disincentives to work and foster reliance on transfers. In the case of single mothers, the critics would argue that generous welfare states encourage women to have and raise children in autonomous households that are poor before taxes and transfers. Let us note that previous studies have failed to provide evidence in support of the link between the welfare state and disincentives to work (Atkinson and Mogensen 1993) and the link between welfare generosity and before tax and transfer poverty (Moller et al. 2003).

*Family and Maternity Allowances:* In the case of single mothers the welfare state may indeed increase pre tax and transfer poverty by offering paid maternity leave. Single mothers who take paid maternity leave obviously have no pre-transfer income from work and thus are poor before taxes and transfers. Note that the expected positive effect of this variable on poverty should not be interpreted as an unintended negative consequence of the policy. It is an intended consequence because the benefit is designed to enable women to stay at home with their newly born babies.

## Determinants of Reduction in Poverty among Single Mothers

### *Control Variables*

Again, we begin with a number of control variables selected according to the same rationale as for the analysis of pre tax and transfer poverty among single mothers. Their primary effect should be on pre-tax and transfer poverty among single mothers, but they may also have an effect on poverty reduction.

*Vocational Education:* According to Estevez-Abe et al. (2001) strong systems of vocational education are associated with the prevalence of firm-specific skills among employees. This makes employees less mobile and thus more vulnerable to unemployment, which in turn generates stronger demands for generous welfare state transfers and welfare state services. Single mothers can also be assumed to benefit from these transfers and services.

*Unemployment:* Unemployment can be seen as a need variable. Where welfare state entitlements are effective in keeping the unemployed out of poverty, higher levels of unemployment will result in more poverty reduction.

*Wage Coordination:* Wage coordination is highly correlated with corporatism, that is, tripartite policymaking by government and highly centralized labor and business associations. Indeed, it is often used as an indicator of corporatism. Corporatism in turn is strongly associated with generous welfare states (Hicks 1999; Swank 2002) and with poverty reduction among the working age population (Moller et al. 2003).

### *Politics*

*Left and Christian Democratic Government:* Long-term incumbency of both left (mainly social democratic) and Christian democratic parties is associated with higher levels of taxes and transfers (Huber and Stephens 2001). Left parties promote welfare states with a more

redistributive profile than Christian democratic parties and thus lower income inequality more effectively (Bradley et al. 2003). Welfare states built under left governments are more service-oriented and generally more gender egalitarian than welfare states built under Christian democratic governments (Huber and Stephens 2000). They provide more support for employment of mothers with young children than Christian democratic welfare states, though Christian democratic welfare states provide more such support than liberal welfare states (Ferrarini 2003; Gornick, Meyers and Ross 1997). Christian democratic parties support traditional family patterns, for instance, by directing family allowances to the father and supporting stay-at-home mothers (Bussemaker and van Kersbergen 1999; Ferrarini 2003; Wennemo 1994). As a result of these factors, we expect both left and Christian democratic incumbency to lower poverty of single mothers, but left incumbency to have a stronger effect.

*Women's Mobilization:* As noted above, women's mobilization, particularly working with and through left parties, has been associated with women-friendly policies. Accordingly, we would expect greater reduction of poverty among single mothers where women's mobilization is high.

*Constitutional veto points:* We agree with statist and new institutionalist theorists that a country's constitutional structure is an important determinant of welfare state development (Skocpol and Amenta 1986) and thus of the extent of redistribution through the tax and transfer system. An important aspect of the constitutional structure is the presence of "veto points," that is, points in the political process at which legislation can be blocked. A relatively large number of veto points in a country's constitutional structure depresses welfare state expansion, as it enables relatively small groups to obstruct legislation (Bradley et al. 2003; Huber, Ragin, and Stephens 1993; Huber and Stephens 2000, 2001).<sup>7</sup> The extreme types are represented by, on the one hand, the unicameral, unitary parliamentary systems of Scandinavia in which the party or coalition of parties with a single seat majority in the national legislature can pass any policy it desires, and, on the other hand, the strongly bicameral, federal, presidential system of the United States, in which legislation may not only find itself blocked by either house or the president, but may not even be under full control of the federal government. We expect that polities with more veto points will be associated with less poverty reduction.

## *Policies*

*Welfare State Generosity:* Previous studies have demonstrated that the welfare state is an important determinant of poverty reduction in general (Moller et al. 2003), and we expect it to be a crucial determinant of poverty reduction among single mothers as well. Larger welfare states have lower post-transfer poverty rates (Burtless, Rainwater, and Smeeding 2001; Kenworthy 1999; Kim 2000; Korpi and Palme 1998; McFate et al. 1995). Cross-sectional research has also shown that they distribute more income and reduce poverty to a greater extent (Goodin et al. 1999; Kenworthy 1999; Kim 2000).

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<sup>7</sup> The logic of the argument about veto points indicates that it could work in the reverse direction during attempts at welfare retrenchment; that is, many veto points might retard retrenchment and few veto points might facilitate it. Although some case study evidence supports this view (Bonoli and Mach 2000; King and Wood 1999; Huber and Stephens 2001), in quantitative studies the negative effect of veto points on welfare generosity swamps any negative effect this variable might have on retrenchment, even in an era of retrenchment (Swank 2002).

*Family and Maternity Allowances:* The extent to which taxes and transfers reduce poverty is determined not only by their overall amount but also by their distributive profile, i.e. the distribution of welfare spending among different types of benefits, and the resulting impact on different categories of the population. If we had a perfect measure of the distributive profile of taxes, transfers, and public services, we would expect the effect of political variables to disappear. However, the LIS data do not include the value of services, for instance, nor do we have a measure for the redistributive profile of the tax system. Thus, we expect the political variables that are important for the formation of the size and profile of the welfare state to have an effect on poverty reduction among single mothers even controlling for welfare state generosity. The composition of welfare state transfer expenditures provides an approximation to measuring welfare state structure. In the case of poverty reduction among single mothers, the proportion of transfers going to child, family, and maternity allowances should be a good predictor of a favorable distributive profile and of poverty reduction.

### Determinants of Women's Earnings as Proportion of Both Spouses' Earnings

As we pointed out in our introductory remarks, with few exceptions, the quantitative studies of married women's economic dependency have focused on individual and household level demographic and labor market characteristics, thus we are breaking new ground with our focus on societal level variables. There is no standard literature from which one can draw a set of control variables to form a baseline for the political and policy variables that are the focus of this study. Thus, we develop hypotheses from related literatures.

In Tables 2 and 6, we group related variables and order them, in so far as possible, in the order that they stand in the causal chain affecting our dependent variable. The variable groups at the bottom of Table 2 and to the right in Table 6 are the proximate causes of the dependent variable. The variables in the groups further up in Table 2 and to the left in Table 6 may show no direct effects on the dependent variable in the final equation but nonetheless may have indirect effects through their effect on variables lower down or to the right. After discussing Table 6, we discuss these indirect effects as they help explain why our cases cluster so clearly into Esping-Andersen's three worlds of welfare capitalism. We will begin with a discussion of the proximate causes.

#### *Proximate Causes*

*Female Labor Force Participation, Hours Worked, and Gender Wage Gap:* In addition to studies of the determinants of married women's earnings as a proportion of both spouses' earnings, there have been a number of studies of the determinants of components of this measure. As Gornick (1999: 212, also 227) points out in her discussion of a similar measure, women's share of total labor market earnings<sup>8</sup>, her measure (and ours) is a composite indicator which "aggregates gender differences in employment rates, hours worked, and wages". There is a large literature on women's labor force participation and employment and smaller but

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<sup>8</sup> Gornick's variable includes both married and unmarried persons.

significant bodies of literature on the other two topics.<sup>9</sup> In addition, there are works on closely related topics, such as mothers' employment (Harkness and Waldfogel 1999; Meyers, Gornick, and Ross 1999; Stier, Lewin-Epstein and Braun 2001; Waldfogel 1998) and gender segregation of occupations (Anker 1998). Logically, one would expect women's employment, the volume of women's work, and the gender wage gap to be the proximate causes of women's earnings as a proportion of both spouses' earnings. We expect the other variables to operate through female labor force participation, hours worked and the gender wage gap, and thus we expect direct effects on the dependent variable only to the extent that we are unable to measure these three variables accurately.

Part time work, measured here as the percentage of women working part time, has ambiguous effects on wives' earnings relative to husbands' because it figures both on the demand and supply side as a factor that increases women's employment.<sup>10</sup> That is, where part time work is widely available, more women (perhaps especially mothers) may be willing to work. Thus, while it is true that if one holds women's labor force participation constant, lower hours of work on the part of women as compared to men will increase the earnings gap, the availability of part time work contributes powerfully to increase women's labor force participation, which may more than offsets the effect of part time work on the gender earnings gap. This phenomenon can be seen in the experience of the Nordic countries since the 1960s and the Netherlands more recently.

### *Policies*

*Welfare generosity:* Studies have identified a number of policies that enable or facilitate women's employment (e.g. day care, uninterrupted school days, labor market regulations, maternity leave, individual taxation). A number of authors have mapped variation across countries on these policies,<sup>11</sup> and Gornick, Meyers, and Ross (1997) present a comprehensive index of policies that, as Daly (2000) points out, increase the supply of women workers. Unfortunately, there is no comprehensive time series on these policies that we can draw on for this study; instead, we again use welfare state generosity as a crude proxy. .

### *Labor Force and Demography*

*Public and Private Service Sector Employment:* Daly (2000) represents the consensus in the field in arguing that high levels of public and private service employment are favorable to high levels of women's employment.<sup>12</sup> On the other hand, compared to industry and agriculture, service employment is more likely to be part time. Thus, holding the level of women's employment constant, we might expect service employment to be negatively related to

<sup>9</sup> Gornick (1999) and Gornick and Meyers (forthcoming) cover all three topics. On women's labor force participation, see Daly (2000), Korpi (2000), Orloff (2002), and Schmidt (1993). On the volume of work, see Blossfield and Hakim (1997), Daly (2000), and Gornick and Jacobs (1996). On gender pay differentials, see Blau and Kahn (1992, 1996, 2001), Harkness and Waldfogel (1999), and Rosenfeld and Kalleberg (1990, 1991).

<sup>10</sup> As our discussion of operationalizations will make clear, there are no data for the volume of work done by women in the LIS archive.

<sup>11</sup> For recent efforts, see, for example, Ferrarini (2003), Kilkey (2000), Korpi (2000), and Orloff (2002).

<sup>12</sup> These labor force characteristics in turn are in part, arguably in large part, the products of policies of governments with different political orientation and of varying labor market institutions (see below).

the dependent variable. Moreover, private service employment tends to be lower wage than either industrial or public service employment, and incomes are more unequally distributed. Thus, one would expect private service employment in particular to be positively related to the gender wage gap and, once the level of women's employment is controlled for, negatively related to married women's wage proportion.

*Youth Population:* We hypothesize a negative relationship between youth proportion of the population and the outcome variable because larger families reduce the propensity of women to enter the labor force full time and in particular to pursue a demanding and well paid career.

### *Politics*

*Left Incumbency:* Parties of the left have increasingly become the main proponents of gender equality, along with women's movements. Even before a full commitment to gender equality, the social democratic policy of expanding public health, education, and welfare services furthered women's interests as it increased the demand for women's labor in these heavily female occupations (Huber and Stephens 2000). With the development of an explicit commitment to gender equality, left governments have passed policies extending maternity and parental leave, day care, elder care, statutory rights to a shortened workday for parents, etc. We hypothesize strong effects of left government on women's employment. Once labor market institutions are controlled for, we expect moderate effects of left government on the gender pay gap directly due to anti-discrimination and affirmative action legislation and indirectly via low wage dispersion due to minimum wage laws. The effect on the volume of work is ambiguous: On the one hand, left governments have enabled part time work to facilitate women's employment. On the other, they have enabled working mothers to increase working hours with employment friendly policies, such as day care.

*Christian Democratic Incumbency:* In contrast to the intermediate position they held in terms of single mothers in poverty, the Christian democratic welfare states rank lowest on our measure of women's relative earnings (see Table 3 below), despite the fact that social policy for mothers' employment is actually more generous in Christian democratic than in liberal welfare states (Gornick, Meyers, and Ross 1997). We contend that this is in large part due to Christian democratic social policy, such as child care allowances for stay at home mothers, school days with long interruptions, and low levels of public provision of day care and other health, education, and welfare services, all of which depress the volume of paid work performed by married women. In addition, regulatory economic policies, such as high minimum wages and curtailed opening hours for retail establishments depress demand for female labor. Due to the relatively low levels of wage dispersion and the high minimum wages, the wage determination system still delivers male breadwinner wages even at the low end of the distribution, that is, sufficiently high wages to keep families with one full time worker out of poverty. By the same token, high wages at the bottom impede the development of low-wage private service sector jobs, a source of employment for women in liberal welfare states.

In contrast, women's employment levels are intermediate in liberal welfare states, despite low levels of public policy support for women's employment, due to a combination of "employment forcing" and "employment facilitating" factors (Gornick 1999: 230). Employment forcing factors include low pay for the unskilled and low or no family allowances, which combine to make mothers' employment essential to keep families above the poverty line. Employment facilitating factors include anti-discrimination legislation and affirmative action programs, which can be attributed to the relatively strong women's movements in these countries (Gornick 1999:230, O'Connor, Orloff, and Shaver 1999). Part time work is facilitated in liberal countries by deregulated labor markets.

*Women's Mobilization:* For the same reasons cited in our previous discussion, we hypothesize that women's mobilization will be positively related to married women's earnings as a proportion of both spouses' earnings. As in the case of left government, we expect a strong relationship of women's membership in organizations to women's employment and the gender wage gap and an ambiguous relationship to volume of work, since women's movements press to expand part time work but also for policies that enable women to increase the time of work if they so choose. We expect the impact of women's mobilization to be stronger than that of left government because left parties have other constituencies than women and the interests of those constituencies sometimes conflict (e.g. unions on part time work) or compete for resources (e.g. extending maternity leave vs. extending paid vacation).<sup>13</sup>

In the case of poverty reduction, we argued that there would be no direct party effects if we had highly accurate measures of policy. While this is largely the case with this dependent variable, we might expect "ideological effects" of party strength and women's mobilization on women's employment and the volume of work. That is, where women's mobilization and left parties are strong and Christian democratic parties are weak, one might expect more women (and men) to adopt a gender egalitarian ethic and thus more women to enter the labor force and work more hours.<sup>14</sup>

*Constitutional Structures:* We hypothesize a negative relationship between constitutional veto points and our outcome variable for the reasons discussed above.

#### *Labor Market Institutions and Outcomes*

*Wage dispersion:* Early work on the gender wage gap (e.g. Rosenfeld and Kalleberg 1990) focused on employment, family policies, and occupational segregation as primary determinants of the gender gap in hourly wages. In a series of articles, Blau and Kahn (1992, 1996, 2001) show that wage dispersion among males is such an important determinant of cross-national differences in the gender wage gap that it swamps all alternative explanations. Quite simply, since women are concentrated in low paying occupations in all countries, where wage differences between low and high paying occupations are small, gender differences will also be small. Thus we expect wage dispersion to be negatively related to married women's relative earnings.

<sup>13</sup> The example in the text is taken from the debates in Swedish Social Democracy at the time of the 1988 election, when the women's organization favored extending maternity leave while the unions favored extending paid vacation.

<sup>14</sup> We thank xxxx yyyyyy for pointing this out to us.



*Wage coordination, Union Density, and Union Contract Coverage:* Wallerstein (1999), Rueda and Pontusson (2000), and Pontusson, Rueda, and Way (2002) demonstrate that wage coordination/bargaining centralization, union density, and union contract coverage are powerful predictors of reduced wage dispersion and thus should have an indirect negative effect on the gender wage gap. Blau and Kahn (2001) confirm this and additionally show that union coverage has a direct effect in reducing the gender wage gap even when controlling for wage dispersion.

The relationship of union strength to gender labor market equity is ambiguous because, though unions promote the interests of low wage workers, they have also been defenders of the male breadwinner wage and have opposed part time work and other measures, such as extended hours for retail stores, which encourage women's employment. The move of unions in the Nordic countries to drop their opposition to part time work was one factor behind the increase in part time work and women's labor force participation there (Klausen 1999: 275), as it was later in the Netherlands (Visser and Hemerijck 1997). Conversely, continued union opposition to part time work is certainly one reason for the low levels of women's labor force participation in the rest of continental Europe (Klausen 1999).

### Measures of Dependent and Independent Variables

#### *Dependent Variables*

The measures of poverty among single mothers and of women's share of earnings relative to those of their husbands come from the Luxembourg Income Study (LIS) database, which provides the most comparable income and earnings data available across a large number of OECD countries.<sup>15</sup> LIS collects data from national micro data (i.e. survey data based on individual level data rather than macro aggregates) sources and harmonizes the data sets to make income comparisons across countries and over time possible. Currently, there are survey data available for 25 countries, and over time points ranging from 2 years to 8 years per country. LIS data are arranged by waves, with the first starting in the late 1970s and the most recent wave in the mid to late 1990s. The LIS surveys provide the best available comparable cross-national, over time data source for income in OECD countries. In a comparison of reported income data (from surveys, the source of LIS data) with external aggregates (e.g. national accounts, income tax data), the OECD found that ratios of survey-based data to national accounts based data normally fall in the 80-90% range (OECD 1995). In other words, the advantages one gains by using survey data (i.e. detailed demographic information), rather than national accounts, does not seem to come at a high cost in terms of data quality for income. Even national aggregate data sources change over time, due to altering of the sampling method, question formulation, etc. The LIS project draws on a variety of micro data sources – income surveys, administrative and income tax records, panel studies, expenditure surveys, and labor force survey supplements – to create income and demographic variables at both the household and individual level.

We constructed four measures: pre tax and transfer poverty among single mothers, post tax and transfer poverty, reduction in poverty effected by taxes and transfers, and

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<sup>15</sup> See <http://www.lisproject.org/> for a general introduction to the LIS database and a complete list of countries, years, and variables available in this rich data source.

women's earnings as a proportion of both spouses' earnings (see Tables 1, 2, and 3). The pre tax and transfer poverty calculations are based on market income, as is the measure for the proportion of a woman's earnings. Market income is the total income from wages and salaries, self-employment income, property income, and private pension income. The post tax and transfer poverty measure is based on disposable personal income. Disposable personal income includes all market income, social transfers, and taxes.<sup>16</sup> Both market income and disposable income figures were bottom coded at 1% of mean income and top coded at 10 times the median income, adjusted for the number of children. We did not exclude market incomes with a value of zero but did exclude disposable personal incomes with a value of zero. Because we are using an income concept based on households, adjustments had to be made for household size. Equivalence scales are used to adjust the number of persons in a household to an equivalent number of adults. If one chooses not to use an equivalence scale, one ignores the economies of scale resulting from sharing household expenses and assumes that each additional equivalent adult (or child in this case) in a household has the same "cost" as other members of the household. We chose a commonly used scale of the square root of the number of persons in the household (see OECD 1995 for a discussion of equivalence scales). The poverty level was set at 50% of median income. This is the conventional level used in studies done by the OECD (OECD 1995). Moreover, all comparative studies of poverty use relative poverty levels. We define a "single mother" household as one in which there is a female head of household and children under 18 years of age are present. We chose not to restrict the sample further by excluding other adults in the household.<sup>17</sup> While including other adults (and their income), it picks up on private adaptations that female heads of household may choose to deal with the fiscal stress of single motherhood.

{Tables 1, 2, and 3 about here}

### *Independent Variables*

The operationalization of the control variables is in most cases straightforward and explained in Tables 1 and 2. Some additional comments are in order regarding decisions on a few measures. A conventional measure of education used in studies of poverty and inequality is secondary school enrollment as a percentage of the population of secondary school age. We measure female secondary education in this fashion. We prefer vocational education, measured as the percentage of an age cohort in either secondary or post secondary vocational training (following Estevez-Abe et al. 2001; data made available by Torben Iversen), because it is a much better measure of average skill levels in a society and particularly of skill levels in the lower half of the distribution. The best data available on skill levels are from the OECD literacy study (OECD/ Statistics Canada 2001) that tested random samples of the adult population of a number of countries with tests on document, prose, and quantitative skills. Vocational education is much more closely related to skill levels of the bottom 5 and 25%, and to the percentage of those scoring at the minimum level considered necessary to work in the information society, than secondary school enrollment.<sup>18</sup> The vocational education data were available at a given time

<sup>16</sup> See <http://www.lisproject.org/techdoc.htm> for a summary of LIS income variables.

<sup>17</sup> Note that LIS treats co-habiting couples as married couples, so the additional adults are not male partners of the single mother.

<sup>18</sup> Analysis done by the authors with cross-sectional data available for 14 of the countries in our sample.

point for only 59 of the 71 cases; for the remaining cases, we have substituted the mean value for the country in question.

Public sector service employment is measured as civilian government employment as a percentage of the working age population; this is reasonable because the overwhelming majority of civilian government employees are in services. Private sector service employment is measured as total service employment minus civilian government employment, again as a percentage of the working age population.

The first of our labor market institutions variables is union density, measured as union membership as a percentage of total wage and salary earners (Ebbinghaus and Visser 1992). The second is wage coordination, for which we use Kenworthy's (2001) measure in which a higher score indicates stronger wage coordination. The third is contract coverage, measured as the percentage of the workforce covered by collective contracts (OECD 1997). Following Blau and Kahn (2001), we measure wage dispersion as the ratio of the median income to the income of the 10<sup>th</sup> percentile of full-time male wage and salary earners. For Denmark and Norway, the data were not separated out by gender, so we used the data for both genders, which is highly correlated (.95) with the 50:10 ratio for men in the countries for which we have the data broken down by gender.

Our key political variables are incumbency of left and Christian democratic parties, women's mobilization, and constitutional structure. We measure incumbency by coding left-party government share and Christian democratic party government share, as "1" for each year that these parties were in government alone, and as a fraction of their seats in parliament of all governing parties' seats for coalition governments, from 1946 to the date of the observation.

The feminist literature on comparative social policy argues that feminist movements have had a substantial impact on social policy outcomes. Unfortunately, there are no good comparable data on strength of feminist movements across countries, much less both across countries and through time within countries. In fact, it is not even clear what should qualify as a feminist or "gender equality movement" (O'Connor, Orloff, Shaver 1999: 199-200). For instance, social democratic women's organizations were once primarily women's support groups for the parties but transformed themselves into "gender equality movements" at differing speeds and points of time over the past four decades in almost all advanced industrial countries. Thus, we find it preferable to measure women's mobilization in the form of women's organizational membership, or the extent to which women are members of non-religious organizations. Membership in such organizations is a valid indicator of women's mobilization because it captures the extent to which women are actively participating in public life.

Comparable data on participation by women in organizations for the 14 countries in our data set are available from the World Values Surveys (Inglehart 1997), which asked respondents to list organizations in which they are members. But the WVS have data for only 31 country/year data points between 1981 and 1997 and often not for the year for which the LIS data exist. However, the measures we developed from the World Values Surveys were highly correlated with the proportion of women in the lower house of the national legislature, which is available in an annual time series from the end of World War II to 2000 (Inter-Parliamentary

Union [IPU] 1995).<sup>19</sup> The notion that women's mobilization both within and outside political parties should be reflected in larger proportions of female legislators has face validity. One weakness in this link is that electoral rules strongly influence the proportion of female legislators. In proportional representation systems, parties can more easily increase the proportion of women in their parliamentary delegation by changing the gender composition of their lists of candidates. As citizens in these systems tend to vote for parties, not candidates, more women end up being elected. In single-member district systems, the strong incumbent advantage also works against increasing the representation of women, as the overwhelming majority of incumbents are men. Thus, women's movements of equivalent strengths will produce more women representatives in proportional representation systems.<sup>20</sup>

We developed two different measures of women's organizational membership: the percentage of women in at least one nonreligious organization, and the percentage of women in at least one political or union organization. We excluded religious organizations, reasoning that these were unlikely to favor gender egalitarian social policies. To deal with the two distortions just mentioned we regressed the two measures of women's organizational membership on women in parliament (results not shown), an indicator for proportional representation and an indicator for the last World Values Study wave. The fit was very good in both equations with an  $R^2$  of .82 for the total membership variable and .76 for the union and political organization membership variable. We then calculated the predicted value of women's organizational membership for the country/years of the LIS using the coefficients for women's parliamentary representation, the proportional representation indicator, and a constant.<sup>21</sup> In the case of percent membership in any nonreligious organization, the equation was:

$$\text{Membership} = 30.39 + 1.58(\text{women in parliament}) - 16.36 (\text{proportional representation})$$

Because we expect that policy would reflect the long-term strength of women's organizational membership and not any sudden increases in participation by women in organizations, we calculated the cumulative average of each of the two membership variables. This procedure makes these variables consistent with long-term measurement of the cabinet variables. Since the two measures of women's mobilization performed almost identically in the analyses, we report only the results for membership in any nonreligious organization.

Our measure of constitutional structure is an additive index of federalism (none, weak, strong), presidentialism (absent, present), bicameralism (absent, weak, strong), and the use of popular referenda as a normal element of the political process (absent, present). Thus, a high score indicates high dispersion of political power and the presence of multiple veto points in the political process.

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<sup>19</sup> The 1996-2000 data are available at the IPU website (<http://www.ipu.org/english/home.htm>).

<sup>20</sup> An additional problem specific to the World Values Survey Data is a wording change in questions on organizational membership in the last wave of the survey (mid 1990s). It is clear that this change inflated organizational membership because reliable aggregate membership data for union density, for example, show that the lower figures from the early waves were more accurate.

<sup>21</sup> Because the last wave indicator measured error in the World Values Study last wave data, it was excluded from the prediction equation.

We have two measures for the welfare state, one tapping overall generosity, and the other one structure. Our measure of welfare state generosity is strongly conditioned by the nature of the LIS data. The LIS post tax and transfer income data measure disposable cash income. No effort was made to estimate the redistributive effects of the provision of free or subsidized public goods, a dimension of the welfare state on which the social democratic welfare state is most distinctive. Thus, variations in the funding and delivery of social services have no obvious effect on the measures of reduction in poverty and post tax and transfer poverty that we can calculate from the LIS data. Our measure of welfare state generosity, "Taxes and Transfers", is the sum of the standard scores for total taxes as a percentage of GDP and transfer payments as a percentage of GDP (see Table 1). We standardize the two measures in order to weigh them equally. This variable only measures the magnitude of welfare state effort. To tap structural characteristics of the welfare state relevant for the degree to which governments reduce poverty among single mothers, we calculate the proportion of total transfers that are devoted to child, family, and maternity allowances.

For proximate causes in the married women's dependency analysis, we measure the volume of work with the percentage of working women who work part-time. The male-female wage gap is measured as the ratio of the median income of female full-time employees to male full-time employees. There are no data for Denmark and Norway, so we do not include this variable in our general analysis but test it and comment on it separately. Female labor force participation is measured by females in the labor force as a percentage of females aged 15 to 64.

For the analysis of poverty, fifteen of the eighteen large advanced industrial countries that have been democracies since World War II and constitute the standard set of countries analyzed in welfare state studies are included in the analysis. New Zealand and Japan are excluded, as there are no LIS surveys for these countries. The Italian LIS data contain no information on pre tax and transfer poverty. For the analysis of married women's dependency, data for the dependent variable is not available for Austria, Italy, and Ireland, so there are thirteen countries in that analysis. The omission of these cases does not introduce any systematic bias as they represent different types of welfare state regimes. The average values for the period 1982-1997 for the dependent variables and some of the independent variables are listed by country grouped by welfare state regime in Table 3.<sup>22</sup>

## Methods.

### Unbalanced Panel Data and Correlated Errors

We use an unbalanced panel data set with 71 (47) observations on 15 (13) countries, with countries providing different numbers of observations according to data availability. There are a

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<sup>22</sup> We exclude the earlier waves and the most recent waves so that the data in the table come from a comparable time period for all countries.

minimum of two and a maximum of eight observations per country. The time span between observations is irregular, varying across countries and time points. A central problem in estimating regression models from panel data is that the assumption of independence of errors across observations is unlikely to be satisfied. As a result OLS produces incorrect standard errors for the regression coefficients (Greene 1993).

There are several strategies to deal with correlated errors in panel data. One approach assumes serially correlated errors within each unit (country) obeying a unit specific autoregressive process (which may optionally be constrained to be the same across units). This approach requires what Stimson (1985) calls temporally dominated time-series of cross-sections, i.e., data structures consisting of relatively few units observed over many equally spaced time points (Beck and Katz 1995:635-4; Beck 2001). The small number of time points and irregular spacing of observations in our data set preclude this approach.

Another approach is to estimate a random effect model (REM) in which the error term contains a unit-specific component that differs across units but is constant over time for a given unit. Such an error structure would arise if unmeasured unit-specific causes, such as systematic measurement differences or other overlooked aspects of the social and cultural makeup of a country, affect the dependent variable in the same way at each point in time over the period of the data. The stable unit specific component implies that observations for the same unit at different time points are all correlated by the same amount,  $\rho$ . The REM strategy is feasible with our data; one attractive feature of REM is that it allows estimating the value of  $\rho$ . But REM requires relatively strong assumptions (such as equal correlations among errors within units) and may not be optimal given the small size of the sample.

Because it is not substantively essential in this study to measure  $\rho$ , we adopt an alternative estimation strategy that addresses the correlation problem while requiring a minimum of assumptions on the behavior of the errors. We combine OLS estimation of the regression coefficients, which provides consistent estimates of the regression coefficients, with the use of a *robust-cluster* estimator of the standard errors. The standard (i.e., non-cluster) Huber-White or "sandwich" robust estimator of the variance matrix of parameter estimates was discovered independently by P. Huber (1967), White (1980) and others (see Long and Ervin 2000 for a detailed description). It provides correct standard errors in the presence of any pattern of heteroskedasticity (i.e., unequal variances of the error terms) but not in the presence of correlated errors (i.e., nonzero off-diagonal elements in the covariance matrix of the errors). The robust-cluster variance estimator is a variant of the Huber-White robust estimator that remains valid (i.e., provides correct coverage) in the presence of *any* pattern of correlations among errors *within* units, including serial correlation and correlation due to unit-specific components (Rogers 1993; see also Sribney 1998; StataCorp 1999: 256-260). Thus the robust-cluster standard errors are unaffected by the presence of unmeasured stable country-specific factors causing correlation among errors of observations for the same country, or for that matter any other form of within-unit error correlation.<sup>23</sup>

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<sup>23</sup> Long and Ervin (2000) find that the alternative robust estimator HC3 proposed by MacKinnon and White (1985) performs better than the standard Huber-White robust estimator in small samples in the presence of heteroskedasticity. However HC3 is not defined for clustered data and not impervious to correlated errors within clusters. Thus HC3 is not suitable for our data.

The robust-cluster estimator of the standard errors is only impervious to correlations of errors *within* clusters. It requires errors to be uncorrelated *between* clusters. The latter assumption might be violated if unmeasured factors affect the dependent variable in all units at the same point in time. Global economic fluctuations could produce such contemporaneous effects. To evaluate the potential impact of such unmeasured period specific factors we re-estimated the models with indicator variables for the 1980s and for the 1990s; the baseline category corresponds to the 1970s and includes two observations from the late 1960s. None of the two indicators reached significance in any of the models (for any dependent variable or estimation procedure), suggesting that period-specific effects are not present.

### Model Building Strategy

We specified regression models by successively introducing substantively related sets of independent variables. With each model we conducted an F-test of the joint significance of all variables with non-significant individual coefficients (at  $p < .10$ )<sup>24</sup> to see if they could be safely dropped from the model. When using robust standard errors, the degrees of freedom of the F-test of joint significance are in principle equal to the number of clusters (countries). We relied instead on the more conservative F-test using degrees of freedom equal to the total number of data points, which is more likely to conclude that the variables in a subset are jointly significant and thus must be kept in the model.

### Results

Table 4 shows the results of the regressions for pre tax and transfer poverty among single mothers. Models 1-3 regress the dependent variable on the controls, the political variables, and policies respectively. Model 4 presents the results of the regression with all variables significant at the .1 level or better in the first five models, and model 5 presents the reduced equation. Our F test for the joint significance of the dropped variables in model 3 revealed that we could not drop welfare generosity and thus we retained it in model 4. The  $R^2$  in model 5 shows a good fit, with the model explaining over one-half of the variation. As expected, the higher levels of working women who work only part time is associated with greater proportions of single mothers in poverty. Part time work alone (in the absence of transfers) is insufficient to raise single mother families above the poverty line. Higher levels of vocational education and industrial employment are associated with lower levels of pre tax and transfer poverty. The effects of industrial employment and part time work are very robust as they appear as significant causes of poverty in the REM estimates and the OLS estimates in the Appendix as

<sup>24</sup> With one exception, our hypotheses are directional, so we use one tailed tests. In the case of the impact of welfare generosity on pre tax and transfer poverty, we have opposing hypotheses, so we use a two tailed test. When our directional hypotheses are incorrect and a variable would have been significant had we specified the opposite relationship, we keep that variable in the model.

well. Vocational education is not significant in the REM estimates but female labor force participation is.

(Table 4 about here)

As we mentioned above, we had no data on the gender wage gap for Norway and Sweden. In the analysis without these two countries, we found that the measure of the gender wage gap, the ratio of women's to men's median wage for a full time employee, was significant in the expected positive direction in the final equations with all three estimation techniques (not shown). Wage coordination did appear in the final equation when the gender wage gap was added to the model, which indicates that the effects of wage coordination operate indirectly through the gender wage gap, as Blau and Kahn's (2001) work suggests.

We found the lack of robust positive effects of female labor force participation on pre tax and transfer poverty among single mothers to be surprising. An examination of the figures for the two variables in Table 3 suggests the reason for this. Note that pre tax and transfer poverty among single mothers is very high in all countries but particularly in the liberal welfare states. By contrast, female labor force participation is relatively high in most of the liberal welfare states and very high in the social democratic welfare states. It is apparent that paid employment is insufficient to get single mothers out of poverty. In social democratic welfare states, this is probably due to the prevalence of part time work among single mothers. In liberal welfare states, it is probably due to the combination of part time work and high levels of wage dispersion. Even full time work is insufficient to pull single mothers out of poverty if it is extremely low wage work.

Table 5 shows the results of the regressions for reduction in poverty among single mothers from pre to post tax and transfers. Models 1-3 regress the reduction in poverty among single mothers on the control variables, the political variables and the policies respectively. Model 4 presents the results of the regression with all variables significant at the .1 level or better in the first three equations. Model 5 presents the reduced equation. Though [constitutional structure is not significant in model 4, dropping this variable significantly reduces the explanatory power of the model \[F\(3, 64\)=3.15; p=.03\]. Thus, this variable is included in the reduced equation.](#) The fit of the model is extremely good, as the final model explains three quarters of the variation in the dependent variable. The results for welfare state generosity, left government, and constitutional veto points were significant not only in Table 4 but also in the REM and OLS estimates in Appendix C. These three variables alone explained 72% of the variation in poverty reduction (results not shown). The positive relationship of wage coordination also appears in the OLS estimates but not in the REM estimates.

(Table 5 about here)

Generous welfare states are clearly effective in reducing poverty among single mothers through transfers, which are partially captured in our aggregate measure of welfare state generosity. Indeed, this variable alone accounts for 43% of the variation in reduction in poverty. However, our measure of welfare state generosity does not capture the composition of transfers, that is, it does not identify how much of the total goes to single mothers versus, say, to people on early pensions, etc.. The strong effect of left incumbency indicates that social democratic



governments structure welfare state transfers in a way that is favorable for single mothers, which is fully consistent with the general tendency of social democratic welfare states to spend higher amounts on the non-aged and to invest in human capital. Our measure of composition of transfers, the percentage of total transfers accounted for by child or family allowances, apparently does not capture transfers directed specifically at single parents well enough, as it is not significant in any of the estimations. The significant negative effect of constitutional structure, independent of its effect on welfare state generosity suggests that power dispersion makes it particularly difficult to structure welfare states in ways favorable to single mothers. The oversized majorities needed in such systems to get important legislation passed are easier to form around programs that benefit large majorities, such as public pensions. What comes as a real surprise is the lack of any significant direct effect of women's mobilization.

Our analysis is further reinforced if one examines the statistical determinants of post tax and transfer poverty. If one combines the independent variables in the final equations in Tables 4 and 5 and then follows the same procedures we have followed in the previous analyses to produce a reduced equation, one finds that only three variables are significant in all estimation procedures, left cabinet, welfare generosity and industrial employment (not shown). Together these variables explained 73% of the variation in post tax and transfer poverty among single mothers. An additional result of interest in this analysis is the fact that, of the labor market and demographic determinants of pre tax and transfer poverty, only industrial employment is in our final equation. In the end, poverty among single mothers is largely politically determined, as left cabinet and welfare state generosity alone explain 66% of the variation in post tax and transfer poverty.

Table 6 presents the results of the regressions explaining women's earnings as a percentage of both spouses' earnings. Models 1-6 show the regressions of the dependent variable on labor market institutions, wage dispersion, the political variables, labor force and demography, policies, and the proximate causes respectively. Model 7 contains all the variables that were significant at the .1 level or above in the first six regressions, and model 8 shows the reduced regression. Again, the fit is very good, with 67 percent of the variation explained. As expected, the two proximate causes for which we have data for all countries, women's labor force participation and part time work, show up in the final equation. It makes a lot of intuitive sense that the more women work and the more they work full time, the greater their contribution to household income will be. The direct statistical effect of women's mobilization on women's wages most likely works via labor market legislation, such as on non-discrimination and comparable worth, and through governmental supply of services, such as day care and after school programs that enable working women to work longer hours, and services such as active labor market policy and skill training that allow women to upgrade their skills. We would hypothesize that a more refined measure of the volume of work would reduce the direct effect of women's mobilization as it would capture the effect mediated by public services that enable women to work longer hours. For instance, in 1988, women who worked part time worked an average of 25 hours in Sweden, 20 hours in the United States, and 17 hours in the Netherlands and the United Kingdom (Sainsbury 1996: 109). We note, however, that women's mobilization did not appear in the final regression in the OLS analysis, thus this result must be considered provisional.

(Table 6 about here)

As we mentioned above, we had no data on the gender wage gap for Norway and Sweden. In the analysis without these two countries, we found that the measure of the gender wage gap, the ratio of women's to men's median wage for a full time employee, did not approach significance in an equation with the other two hypothesized proximate causes of married women's earnings as a proportion of both spouses' earnings (not shown). This is consistent with our finding that wage dispersion among males, which Blau and Kahn (2001) found to be strongly related to the gender wage gap, had no effect on our dependent variable (see model 2).

### Discussion

The previous literature led us to hypothesize that, contrary to the feminist critics of Esping-Andersen (1990), we would find that our gendered worlds of welfare capitalism as indicated by the two ultimate outcome variables, post tax and transfer poverty among single mothers and married women's earnings as a proportion of both spouses' earnings, would correspond to Esping-Andersen's three worlds. The data in Table 3 for these two variables do indicate that this would be the case as does, more strikingly, Figure 1 which contains data from the last complete wave of LIS data. It is perhaps surprising that the forces which shaped the three worlds, partisan government, in Esping-Andersen's and subsequent analyses (e.g. see Huber and Stephens 2001) play a modest role in our final models, with left government having a strong role in determining reduction in poverty (and thus post tax and transfer poverty) and Christian democratic government appearing in none of the final models. A careful reading of our hypotheses will demonstrate that we expected this because we expected the influence of Christian democracy and social democracy (and, by default, the residual category, secular center and right government) to operate through their influence on the welfare state and on women's employment. To complete the picture in conclusion, we trace these causal chains back a step or two to reveal the social and political origins of the three gendered worlds of welfare capitalism. To trace the antecedents of the welfare state, we undertake a re-analysis of Huber and Stephens' (2000, 2001) annual pooled time series data, substituting our measure of women's mobilization for their use of female labor force participation.<sup>25</sup> To trace the antecedents of women's labor force participation, we use both their and our own data sets.

With regard to both poverty reduction among single mothers and post tax and transfer poverty, we emphasized the decisiveness of welfare state generosity and left government in shaping the outcome. To take the process back one step, we analyze the determinants of welfare generosity using the eight measures of welfare state effort presented in Huber and Stephens (2001). Huber and Stephens use female labor force participation as indicator of women's mobilization. This is clearly inferior to our measure, so we replicate their analysis substituting our measure for theirs. In regressions of the eight welfare state effort measures on left cabinet, Christian democratic cabinet, women's mobilization, constitutional veto points (all measured as in this article), and ten control variables, we find that left government, Christian democratic government, and women's mobilization, followed by constitutional veto points are the most consistent and strongest determinants of welfare state effort.<sup>26</sup> The strength of the political variables varies, with Christian democracy being the strongest determinant of the

<sup>25</sup> These data are available on the LIS website  
(<http://www.lisproject.org/publications/welfaredata/welfareaccess.htm>)

<sup>26</sup> These results are available in a 2004 conference paper by the authors available at (insert URL here).

measures of transfers and actually negative on the measure of public services, while social democracy and women's mobilization were the strongest determinants of public services. If we combine this analysis with ours here on poverty reduction and post tax and transfer poverty, one can see that the direct effect of left government via the shaping of the structure of transfers, added to its indirect effects via welfare generosity will result in particularly great poverty reduction and low levels of post tax and transfer poverty in the Nordic countries where social democracy has been the dominant political force. The high levels of women's mobilization serve to further differentiate the Nordic countries. In the case of Christian democratic government, we find only an indirect effect via welfare state generosity, so we expect that countries where Christian democratic government has been frequent, as in many of the continental European countries, to take an intermediate position with regard to reduction in poverty and post tax and transfer poverty, below the Nordic countries but above those countries where both of these political forces have been comparatively weak, as in the Anglo-American countries.

On the other final outcome variable, married women's wages as a proportion of both spouses' wages, we find a different ordering of welfare state regimes, with the Christian democratic regimes taking the bottom position and the liberal regimes in the middle, despite the fact (as we previously pointed out) that in terms of social policies supportive of mothers' employment (e.g. day care, parental leave), the Christian democratic regimes come out above the liberal regimes (Gornick, Meyers, and Ross 1997). As suggested above, the key here is on the demand side, private and public service sector employment. A regression of women's labor force participation on a number of possible determinants showed public service employment, private service employment, and women's mobilization robustly significant and explaining 77% of the variation in women's labor force participation, with public service employment alone explaining 53% (not shown). The direct effect of women's mobilization on women's labor force participation could be either a policy effect (greater support for women's employment via day care, maternity leave, anti-discrimination legislation, affirmative action programs, etc.), an ideological effect (more favorable public attitudes to women's employment) or both.

Based on Huber and Stephens' (2000, 2001) results, we also hypothesized that public service employment would be strongly related to left government and women's mobilization and negatively related to Christian democratic government. Again reanalyzing their annual pooled data in a regression of public service employment with our measure of women's mobilization and including constitutional veto points and ten control variables, we confirm their results with an even stronger effect of women's mobilization. Thus, all three political variables influence our final outcome variable, married women's earnings, indirectly through their effect on public employment which in turn affects women's labor force participation.

With regard to private service employment, our data here show that economic development (measured by per capita GDP) and wage dispersion are positively related and union contract coverage negatively related to the size of private service employment, together explaining 58% of the variation in private service employment. Both Christian democratic and social democratic labor market regimes are characterized by low levels of wage dispersion and high levels of contract coverage, which discouraged the development of a large low wage private sector. Liberal labor market regimes, by contrast, are characterized by high levels of wage dispersion and low levels of contract coverage, which allow the development of a low wage private service sector. This has both a supply and demand side to it. On the demand side, a large

private service sector increases the demand for female employment. On the supply side, the low wages in many jobs in this sector make it essential for both spouses to work in order for the family to stay above the poverty line, an "employment forcing factor" in Gornick's (1999) terminology.

The forgoing argues strongly that, contrary to the contention of many of his feminist critics (with the notable exception of Bianchi, Casper, and Peltola 1999), who have insisted that policies supporting women cut across welfare state regimes and therefore render the regime types useless for an analysis of gendered welfare state dimensions, Esping-Andersen's three worlds of welfare states are in fact closely related to the gendered outcomes examined in this article. As one can see in Figure 1, the countries fall into three distinct clusters. The only overlap is that Belgium is slightly below Norway on the single mothers in poverty dimension. Otherwise the fit is perfect: The social democratic welfare states are highest on women's earnings and lowest on single mothers in poverty; the Christian democratic welfare states are lowest on women's earnings but intermediate on poverty; and the liberal welfare states are intermediate on women's earnings but highest on poverty. With regard to the Norwegian case, though policies supporting working mothers are indeed stronger in France and Belgium (Gornick, Meyers, and Ross 1997), overall Norway has a higher female labor force participation rate, a higher share of women's earnings compared to men's, and only a marginally higher poverty rate among single mothers than Belgium. Thus, Norway is producing overall more gender egalitarian outcomes through its policy mixes than Belgium and France.

Figure 1 about here

However, our analysis indicates that Esping-Andersen (1990) can be criticized on two grounds. First, as Orloff (1993), Lewis (1992) and others note, the dimensions which distinguish his regimes do not take gender into account. This lacuna is partially corrected in Esping-Andersen (1999), in which family and women's roles are brought to the center of the analysis, but even here gender inequality is not a focus of the analysis. Second, his analysis neglects the role of women's mobilization in creating the outcomes. Consistent with Huber and Stephens (2000, 2001), we find that not only were social democratic, Christian democratic, and secular center and right parties, but also women's mobilization decisive in shaping the three regimes. The social democratic regime cannot be understood without understanding the role of women's mobilization in shaping the last stage of its construction, the expansion of public social services and gender egalitarian transfers and taxation policies.

## References

- Alderson, Arthur S. and François Nielsen. 2002. "Globalization and the Great U-Turn: Income Inequality Trends in 16 OECD Countries." *American Journal of Sociology* 107:1244-99.
- Anker, Richard. 1998. *Gender and Jobs: Sex Segregation of Occupations in the World*. Geneva: ILO.
- Atkinson, A.B. and Gunnar Viby Mogensen. 1993. *Welfare and Work Incentives: A North European Perspective*. Oxford, England: Clarendon.
- Beck, Nathaniel and Jonathan N. Katz. 1995. "What to do (and Not to Do) with Time-Series-Cross-Section Data in Comparative Politics." *American Political Science Review* 89 (3):634-647.
- Blau, Francine D. and Lawrence M. Kahn. 1992. "The Gender Earnings Gap: Learning from International Comparisons." *American Economic Review* 82: 533-38.
1995. "The Gender Earnings Gap: Some International Evidence." Pp. 105-143 in *Differences and Changes in Wage Structure*, edited by R. B. Freeman and L. F. Katz. Chicago, IL: University of Chicago Press.
1996. "Wage Structure and Gender Earnings Differentials: an International Comparison." *Economica* 63 (250): S29-62.
2001. "Understanding International Differences in the Gender Pay Gap." NBER Working Paper 8200, National Bureau of Economic Research.
- Blossfeld, Hans-Peter and Catherine Hakim (eds.) 1997. *Between Equalization and Marginalization: Women Working Part-Time in Europe and the United States of America*. Oxford: Oxford University Press.
- Bluestone, Barry and Bennett Harrison. 1982. *The De-industrialization of America: Plant Closings, Community Abandonment, and the Dismantling of Basic Industry*. New York: Basic Books.
- Bonoli, Giuliano and André Mach. 2000. "Switzerland: Adjustment Politics with Institutional Constraints." In Fritz Scharpf Scharpf and Vivien A. Schmidt (eds.) *Welfare and Work in the Open Economy. Volume II. Diverse Responses to Common Challenges*. Oxford: Oxford University Press
- Borjas, George J., Richard B. Freeman, and Lawrence F. Katz. 1992. "On the Labor Market Impacts of Immigration and Trade." Pp. 213-44 in *Immigration and the Work Force: Economic Consequences for the United States and Source Areas*, edited by G.J. Borjas and R.B. Freeman. Chicago, IL: University of Chicago Press.

- Bradley, David, Evelyne Huber, Stephanie Moller, François Nielsen, and John Stephens. 2003. "Distribution and Redistribution in Post-industrial Democracies." *World Politics*. Vol. 55, No. 2 (January) 193-228.
- Burtless, Gary, Lee Rainwater, and Timothy M. Smeeding. 2001. "United States Poverty in a Cross-National Context." Pp. 27-68 in *Understanding Poverty*, edited by S.H. Danziger and R.H. Haveman. New York: Russell Sage Foundation.
- Bussemaker, Jet and Kees van Kersbergen. 1999. "Contemporary Social-Capitalist Welfare States and Gender Inequality." In Diane Sainsbury (ed.) *Gender and Welfare State Regimes*. Oxford: Oxford University Press.
- Cancian, Maria, Sheldon Danziger, and Peter Gottschalk. 1993. "Working Wives and Family Income Inequality among Married Couples." Pp. 195-221 in *Uneven Tides: Rising Inequality in America*, edited by S. Danziger and P. Gottschalk. New York: Russell Sage Foundation.
- Castles, Francis and Deborah Mitchell. 1993. "Three Worlds of Welfare Capitalism or Four?" In Francis G. Castles (ed.), *Families of Nations: Public Policy in Western Democracies*. Brookfield, VT: Dartmouth.
- Cusack, Thomas R. 1991. "The Changing Contours of Government." PIB Paper 91-304. Wissenschaftszentrum Berlin.
- Daly, Mary. 2000. "A Fine Balance: Women's Labor Market Participation in International Comparison." In Fritz W. Scharpf and Vivien A. Schmidt (eds) *Welfare and Work in the Open Economy. Volume II. Diverse Responses to Common Challenges*. Oxford: Oxford University Press.
- Ebbinghaus, Bernhard and Jelle Visser. 1992. "European Trade Unions in Figures." Manuscript. University of Amsterdam, Department of Sociology.
- Esping-Andersen, Gøsta. 1990. *The Three Worlds of Welfare Capitalism*. Princeton: Princeton University Press.
1999. *Social Foundations of Postindustrial Economies*. Oxford: Oxford University Press.
- Estevez-Abe, Margarita, Torben Iversen, and David Soskice. 2001. "Social Protection and the Formation of Skills: A Reinterpretation of the Welfare State." Pp. 145-83 in *Varieties of Capitalism*, edited by P. Hall and D. Soskice. New York: Oxford University Press.
- Ferrarini, Tommy. 2003. *Parental Leave Institutions in Eighteen Post-War Welfare States*. Stockholm: Swedish Institute for Social Research.
- Goodin, Robert E., Bruce Headey, Ruud Muffels and Henk-Jan Dirven. 1999. *The Real Worlds of Welfare Capitalism*. New York: Cambridge University Press.

- Gornick, Janet. 1999. "Gender Equality in the Labour Market." In Diane Saisbury (ed.). *Gender and Welfare State Regimes*. Oxford: Oxford University Press.
- Gornick, Janet C., and Marcia K. Meyers. 2003. *Families that Work: Policies for Reconciling Parenthood and Employment*. New York: RussellSage Foundation Publications.
- Gornick, Janet, Marcia K. Meyers and Katherin E. Ross. 1997. "Supporting the Employment of Mothers: Policy Variation across Fourteen Welfare States." *Journal of European Social Policy* 7: 45-70.
- Gornick, Janet, and Jerry A. Jacobs. 1996. "A Cross-National Analysis of the Wages of Part-Time Workers: Evidence from the United States, the United Kingdom, Canada and Australia." *Work, Employment and Society*. Vol. 10, No. 1 (March) 1-27.
- Gramlich, Edward M. and Deborah S. Laren. 1984. "How Widespread Are Income Losses in a Recession?" Pp. 157-80 in *The Social Contract Revisited: Aims and Outcomes of President Reagan's Social Welfare Policy*, edited by D.L. Bawden. Washington, DC: Urban Institute Press.
- Greene, William H. 1993. *Econometric Analysis*, 2d ed. Englewood Cliffs, NJ: Prentice Hall.
- Gustafsson, Bjorn and Mats Johansson. 1999. "In Search of Smoking Guns: What Makes Income Inequality Vary Over Time in Different Countries?" *American Sociological Review* 64:585-605.
- Harkness, Susan, and Jane Waldfogel. 1999. "The Family Gap in Pay: Evidence from Seven Industrialised Countries." CASEpaper 29, Centre for Analysis of Social Exclusion, London School of Economics.
- Harrison, Bennett and Barry Bluestone. 1988. *The Great U-Turn: Corporate Restructuring and the Polarizing of America*. New York: Basic Books.
- Hernes, Helga Maria. 1987. *Welfare State and Woman Power: Essays in State Feminism*. Norwegian University Press.
- Hicks, Alexander. 1999. *Social Democracy and Welfare Capitalism: A Century of Income Security Policies*. Ithaca, NY: Cornell University Press.
- Hill, Dana Carol Davis, and Lean M. Tigges. 1995. "Gendering the Welfare State: A Cross-National Study of Women's Public Pension Quality." *Gender and Society* 9 (1) 99-119.
- Hirschman, Albert O. 1970. *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, MA: Harvard University Press.
- Hobson, Barbara. 1990. "No Exit, No Voice: Women's Economic Dependency and the Welfare State." *Acta Sociologica* 33: 235-50.

- Hobson, Barbara and Marika Lindholm. 1997. "Collective Identities, Women's Power Resources, and the Construction of Citizenship Rights in Welfare States." *Theory and Society* 26: 475-508.
- Hsiao, Cheng. 1986. *Analysis of Panel Data*. New York: Cambridge University Press.
- Huber, Evelyne, and John D. Stephens. 2000. "Partisan Governance, Women's Employment and the Social Democratic Service State." *American Sociological Review* 65: 323-42.
2001. *Development and Crisis of the Welfare State: Parties and Policies in Global Markets*. Chicago: University of Chicago Press.
- Huber, Evelyne, Charles Ragin, and John D. Stephens. 1993. "Social Democracy, Christian Democracy, Constitutional Structure and the Welfare State." *American Journal of Sociology* 99 (3): 711-49.
1997. Comparative Welfare States Data Set, Northwestern University and University of North Carolina. (<http://lissy.ceps.lu/compwsp.htm>).
- Immergut, Ellen. 1992. *The Political Construction of Interests: National Health Insurance Politics in Switzerland, France, and Sweden, 1930-1970*. New York: Cambridge University Press.
- Inglehart, Ronald. 1997. *Modernization and Postmodernization: Cultural, Economic, and Political Change in 43 Societies*. Princeton, NJ: Princeton University Press.
- IPU (Inter-Parliamentary Union) (1995) "Women in Parliaments 1945-95: A World Statistical Survey" Geneva
- Iversen., Torben.. 1998. "Wage Bargaining, Central Bank Independence and the Real Effects of Money." *International Organization* 52 (3).
- \_\_\_\_\_. 1996. "Power, Flexibility, and the Breakdown of Centralized Wage Bargaining: The Cases of Denmark and Sweden in Comparative Perspective." *Comparative Politics* 28:399-436.
- Jenson, Jane. 1986. "Gender and Reproduction: Or, Babies and the State." *Studies in Political Economy* 20: 9-46.
- Jenson, Jane and Rianne Mahon. 1993. "Representing Solidarity: Class, Gender and the Crisis in Social-Democratic Sweden." *New Left Review* 201: 76-100.
- Kenworthy, Lane. 2001. "Wage-Setting Measures: A Survey and Assessment." *World Politics* 54:57-98.
- \_\_\_\_\_. 1999. "Do Social-Welfare Policies Reduce Poverty? A Cross-National Assessment." *Social Forces* 77:1119-39.



- Kenworthy, Lane, and Melissa Malami. 1999. "Gender Inequality in Political Representation: A Worldwide Comparative Analysis." *Social Forces*. Vol. 78, No. 1 (September) 235-269.
- Kilkey, Majella. 2000. *Lone Mothers Between Paid Work and Care: The Policy Regime in Twenty Countries*. Aldershot: Ashgate.
- King, Desmond, and Stewart Wood. 1999. "The Political Economy of Neoliberalism: Britain and the United States in the 1980s." In Herbert Kitschelt, Peter Lange, Gary Marks, and John D. Stephens (eds.) *Continuity and Change in Contemporary Capitalism*. New York: Cambridge University Press.
- Kim, Hwanjoon. 2000. "Anti-Poverty Effectiveness of Taxes and Income Transfers in Welfare States." *International Social Security Review* 53:105-29.
- Klausen, Jytte. 1999. "The Declining Significance of Male Workers: Trade Union Responses to Changing Labor Markets." In Herbert Kitschelt, Peter Lange, Gary Marks, and John Stephens (eds.), *Continuity and Change in Contemporary Capitalism*. New York: Cambridge University Press.
- Korpi, Walter. 2000. "Faces of Inequality: Gender, Class, and Patterns of Inequalities in Different Types of Welfare States." *Social Politics*. Vol. 7, No. 2 (Summer) 127-191.
- Korpi, Walter and Joakim Palme. 1998. "The Paradox of Redistribution and Strategies of Equality: Welfare State Institutions, Inequality, and Poverty in Western Countries." *American Sociological Review* 63:661-87.
- Koven S. and Sonia Michel (eds.) 1993. *Mothers of the New World: Maternalist Politics and the Origins of the Welfare State*. New York: Routledge.
- Kuznets, Simon. 1955. "Economic Growth and Income Inequality." *American Economic Review* 45:1-28.
- Lecaillon, Jacques, Felix Paukert, Christian Morrisson, and Dimitri Germidis. 1984. *Income Distribution and Economic Development: An Analytical Survey*. Geneva, Switzerland: International Labour Office.
- Lewis, Jane. 1992. "Gender and the Development of Welfare Regimes." *Journal of European Social Policy* 2 (3) 159-73.
- Lewis, Jane and Gertrude Åström. 1992. "Equality, Difference, and State Welfare: Labor Market and Family Policies in Sweden." *Feminist Studies* 18 (1): 59-87.
- Lindert, Peter H. and Jeffrey G. Williamson. 1985. "Growth, Equality, and History." *Explorations in Economic History* 22:341-77.

- Long, J. Scott and Laurie H. Ervin. 2000. "Using Heteroskedasticity Consistent Standard Errors in the Linear Regression Model." *The American Statistician*. 54: 217-24.
- MacKinnon, James G. and Halbert White. 1985. "Some Heteroskedasticity Consistent Covariance Matrix Estimators with Improved Finite Sample Properties." *Journal of Econometrics*. 29: 53-7.
- Maioni, Antonia. 1998. *Explaining Differences in Welfare State Development: A Comparative Study of Health Insurance in Canada and the United States*. Princeton: Princeton University Press.
- Mäkinen, Tiina. 1999. "Structural Pressures, Social Policy, and Poverty." *International Social Security Review* 52:3-24.
- McFate, Katherine, Timothy Smeeding and Lee Rainwater. 1995. "Markets and States: Poverty Trends and Transfer System Effectiveness in the 1980s." Pp. 29-68 in *Poverty, Inequality, and the Future of Social Policy*, Edited by Katherine McFate, Roger Lawson and William Julius Wilson. New York: Russell Sage Foundation.
- McFate, Katherine. 1995. "Introduction: Western States in the New World Order." Pp. 367-86 in *Poverty, Inequality, and the Future of Social Policy*, edited by K. McFate, R. Lawson and W.J. Wilson. New York: Russell Sage Foundation.
- Meyers, Marcia K., Janet Gornick, and Katherin E. Ross. 1999. "Public Childcare, Parental Leave, and Employment. In Diane Saisbury (ed.). *Gender and Welfare State Regimes*. Oxford: Oxford University Press.
- Moller, Stephanie, David Bradley, Evelyne Huber, Francois Nielsen, and John D. Stephens. 2003. "Determinants of Relative Poverty in Advanced Capitalist Democracies." *American Sociological Review*. Vol. 68, No. 1 (February) 22-51.
- Nielsen, François. 1994. "Income Inequality and Industrial Development: Dualism Revisited." *American Sociological Review* 59:654-77.
- Nielsen, François and Arthur S. Alderson. 1995. "Income Inequality, Development, and Dualism: Results from an Unbalanced Cross-National Panel." *American Sociological Review* 60:674-701.
- . 1997. "The Kuznets Curve and the Great U-Turn: Income Inequality in U.S. Counties, 1970 to 1990." *American Sociological Review* 62:12-33.
- . 2001. "Trends in Income Inequality in the United States." Pp. 355-85 in *Sourcebook on Labor Markets: Evolving Structures and Processes*, edited by I. Berg and A.L. Kalleberg. New York: Plenum.
- Nolan, Patrick and Gerhard Lenski. 1999. *Human Societies: An Introduction to Macrosociology*. (8<sup>th</sup> edition.) New York: McGraw-Hill

- Norris, Pippa. 1987. *Politics and Sexual Equality: The Comparative Position of Women in Western Democracies*. Boulder: Rienner and Wheatsheaf.
- O'Connor, Julia S., Ann Shola Orloff, and Sheila Shaver. 1999. *States, Markets, Families: Gender, Liberalism and Social Policy in Australia, Canada, Great Britain and the United States*. Cambridge University Press.
- OECD. 1995. "Income Distribution in OECD Countries: Evidence from the Luxembourg Income Study." Social Policy Studies No. 18.
- OECD/HRDC. Organization for Economic Co-operation and Development /Human Resource Development Canada. 2000. *Literacy in the Information Age: Final Report of the International Adult Literacy Survey*. Paris, France: OECD, HRDC.
- Orloff, Ann. 1993. "Gender and the Social Rights of Citizenship: The Comparative Analysis of Gender Relations and Welfare States." *American Sociological Review* 58: 303-28.
2000. "Gender Equality, Women's Employment, and Welfare States." Paper delivered at the meetings of the American Sociological Association, Washington, D.C., August 12-16.
2002. "Women's Employment and Welfare State Regimes: Globalization, Export Orientation and Social Policy in Europe and North America." Social Policy and Development, Paper No. 12. Geneva: United Nations Research Institute for Social Development.
- Pedersen, Susan. 1993. *Family, Dependence, and the Origins of the Welfare State: Britain and France, 1914-1945*. Cambridge: Cambridge University Press.
- Pontusson, Jonas, David Rueda, and Christopher Way. 2002. "Comparative Political Economy of Wage Distribution: The Role of Partisanship and Labor Market Institutions." *British Journal of Political Science* 32:281-303.
- Quinn, Dennis and Carla Inclan. 1997. "The Origins of Financial Openness: A 21 Country Study of Its Determinants, 1950-1988." *American Journal of Political Science* 41: 771-813.
- Rosenfeld, Rachel and Arne Kalleberg. 1990. "A Cross-National Comparison of the Gender Gap in Income." *American Journal of Sociology* 96(1): 69-106.
1991. "Gender Inequality in the Labor Market: A Cross-National Perspective." *Acta Sociologica*. 34: 207-23.
- Rueda, David and Jonas Pontusson. 2000. "Wage Inequality and Varieties of Capitalism." *World Politics* 52:350-83.

- Sainsbury, Diane. 1999. "Gender and Social Democratic Welfare States." In Diane Sainsbury (ed.) *Gender and Welfare State Regimes*. Oxford: Oxford University Press.
- Schmidt, Manfred. 1993. "Gendered Labor Force Participation." In Francis G. Castles (ed.) *Families of Nations*. Aldershot: Dartmouth. 179-237.
- Simmons, Beth A. 1999. "The Internationalization of Capital." Pp. 36-70 in Herbert Kitschelt, Peter Lange, Gary Marks, and John D. Stephens (eds.). *Continuity and Change in Contemporary Capitalism*. New York: Cambridge University Press.
- Simpson, Miles. 1990. "Political Rights and Income Inequality: A Cross-National Test." *American Sociological Review* 55:682-93.
- Skocpol, Theda. 1992. *Protecting Mothers and Soldiers*. Cambridge: Harvard University Press.
- Skocpol, Theda, Christopher Howard, Susan Lehmann, and Marjorie Abend-Wein. 1993. "Women's Associations and the Enactment of Mothers' Pensions in the United States." *American Political Science Review* 87 (3): 686-702.
- Skocpol, Theda and Edwin Amenta. 1986. "States and Social Policies" *Annual Review of Sociology* 12:131-57.
- StataCorp. 1999. *Stata Statistical Software: Release 6.0*. College Station, TX: Stata Corporation.
- Stephens, John D. 1979. *The Transition from Capitalism to Socialism*. London: Macmillan.
- Stetson, Dorothy McBride and Amy G. Mazur (eds.). 1995. *Comparative State Feminism*. Thousand Oaks: Sage.
- Stier, Haya, Noah Lewis-Epstein, and Michael Braun. 2001. "Welfare Regimes, Family Supportive Policies, and Women's Employment along the Life-Course." *American Journal of Sociology* 106 (6): 1731-60.
- Stimson, James A. 1985. Regression in Time and Space: A Statistical Essay." *American Journal of Political Science* 29: 914-47.
- Swank, Duane. 2002. *Global Capital, Political Institutions, and Policy Change in Developed Welfare States*. Cambridge, England: Cambridge University Press.
- Thurow, Lester C. 1987. "A Surge in Inequality." *Scientific American*, vol. 256 no. 5, pp. 30-37.
- Tinbergen, Jan. 1975. *Income Distribution: Analysis and Policies*. Amsterdam, Netherlands: North-Holland.

- Traxler, Franz. 1994. "Collective Bargaining: Levels and Coverage." *OECD Employment Outlook*. July, 167-94.
- Visser, Jelle and Anton Hemerijck. 1997. *A Dutch Miracle: Job Growth, Welfare Reform, and Corporatism in the Netherlands*. Amsterdam: Amsterdam University Press.
- Waldfogel, Jane. 1998. "The Family Gap for Young Women in the United States and Britain: Can Maternity Leave Make a Difference?" *Journal of Labor Economics* 16: 505-45.
- Wallerstein, Michael. 1999. Wage Setting Institutions and Pay Inequality in Advanced Industrial Societies. *American Journal of Political Science* 43:649-80.
- Wennemo, Irene. 1994. *Sharing the Costs of Children*. Stockholm: Swedish Institute for Social Research.
- Wilensky, Harold. 1990. "Common Problems, Divergent Patterns: An 18-Nation Study of Family Policy." *Public Affairs Report* 31 (3): 1-3.

**Table 1. Variable Descriptions, Data Sources and Hypothesized Effects for the Analyses of Single Mothers' Poverty**

		Hypothesized impact on:	
Variable	Description	Pre-Tax/Transfer Poverty	Poverty Reduction
<b>Dependent Variables</b>			
Pre-tax/transfer poverty among single moth	Percentage of households in which the head is a single woman with children with disposable incomes below 50% of the average disposable household income before taxes and transfers. <sup>a</sup>		
Reduction in poverty among single mothers	Proportional reduction in poverty effected by taxes and transfers for households in which the head is a single mother [(1- post-tax/transfer poverty rate ÷ pre-tax/transfer poverty rate)100] <sup>a</sup>		
<b>Independent Variables</b>			
<i>Controls</i>			
Industrial employment	Percent of the labor force in industrial employment. <sup>b,c</sup>	-	N/A
Female education	Female secondary school enrollment as a percentage of the female population of secondary school age. <sup>d</sup>	-	N/A
Vocational education	Percentage of an age cohort in either secondary or post secondary vocational training. <sup>e</sup>	-	+
Unemployment	Percentage of total labor force unemployed. <sup>b,c</sup>	+	+
Female labor force participation	Percentage of women age 15 to 64 in the labor force. <sup>b,c</sup>	-	N/A
Women's part time work	Percentage of working women who are working part time. <sup>f</sup>	+	N/A
Gender wage gap	Women's median income as a proportion of men's median income among full time employees. <sup>f</sup>	+	N/A
Wage coordination/corporatism	Degree of coordination of wage bargaining. <sup>g</sup>	-	+
<i>Politics</i>			
Left cabinet	Scored 1 for each year when the left is in government alone, scored as a fraction of the left's seats in parliament of all governing parties' seats for coalition governments, cumulative 1946 to date. <sup>b</sup>	-	+
Christian democratic cabinet	Religious parties' government share, coded as for left cabinet. <sup>b</sup>	+	+
Women's mobilization	Estimated percentage of women who are members of at least one non-religious organization (see text).	-	+
Constitutional structure (veto points)	Veto points created by constitutional provisions. <sup>b</sup>	N/A	-
<i>Policies</i>			
Welfare generosity	Sum of the standardized values of government revenue as a percentage of GDP and social security transfers as a percentage of GDP. <sup>b,c</sup>	-/+	+
Family and maternity allowances	Percentage of social transfers that are child, family, and maternity allowances. <sup>a</sup>	+	+

Sources: <sup>a</sup>Luxembourg Incomes Surveys (various years); <sup>b</sup>Huber, Ragin, and Stephens (1997); <sup>c</sup>OECD (various years); <sup>d</sup>World Bank (various years); <sup>e</sup>Estevez-Abe et al. (2001); <sup>f</sup>OECD website <sup>g</sup>Kenworthy (2002)

**Table 2. Variable Descriptions, Data Sources and Hypothesized Effects for the Analysis of Married Women's Wages**

Variable	Description	Hypothesized impact
<b>Dependent Variable</b>		
Women's wages as proportion of both spouses wages	Married women's earnings income as a percentage of the aggregate earnings of both spouses. <sup>a</sup>	
<b>Independent Variables</b>		
<i>Labor Market Institution Variables</i>		
Union density	Union membership as a percentage of total wage and salary earners. <sup>b,c</sup>	+
Wage coordination/corporatism	Degree of coordination of wage bargaining. <sup>g</sup>	+
Contract coverage	Percentage of the labor force covered by union contracts. <sup>d</sup>	+
Wage dispersion	Ratio of the median income to the income of the 10th percentile of full-time male wage and salary earners. <sup>b,e</sup>	-
<i>Politics</i>		
Left cabinet	Scored 1 for each year when the left is in government alone, scored as a fraction of the left's seats in parliament of all governing parties' seats for coalition governments, cumulative 1946 to date. <sup>g</sup>	+
Christian democratic cabinet	Religious parties' government share, coded as for left cabinet. <sup>g</sup>	-
Women's mobilization	Estimated percentage of women who are members of at least one non-religious organization (see text).	+
Constitutional structure (veto points)	Veto points created by constitutional provisions. <sup>g</sup>	-
<i>Labor Force and Demography</i>		
Private service employment	Percentage of the population 15-64 in private service employment. <sup>b,e</sup>	+
Civilian government employment	Percentage of the population 15-64 in civilian government employment. <sup>b,f</sup>	+
Young	Percentage of the population under 15 years of age. <sup>b,e</sup>	-
<i>Welfare State</i>		
Welfare generosity	Sum of the standardized values of government revenue as a percentage of GDP and social security transfers as a percentage of GDP. <sup>g</sup>	+
<i>Proximate Causes</i>		
Female labor force participation	Percentage of women age 15 to 64 in the labor force. <sup>g</sup>	+
Women's part time work	Percentage of working women who are working part time. <sup>g</sup>	-
Gender wage gap	Women's median income as a proportion of men's median income among full time employees. <sup>g</sup>	-

Sources: <sup>a</sup>Luxembourg Incomes Surveys (various years); <sup>b</sup>Huber, Ragin, and Stephens (1997); <sup>c</sup>Ebbinghaus and Visser (1992); <sup>d</sup>OECD (1997); <sup>e</sup>OECD original data source; <sup>f</sup>Welfare State Exit Entry Project, Science Center – Berlin; <sup>g</sup>See Table 1 for source.

**Table 3. Mean Values of Key Variables by Country**

	Pre Tax & Transfer Poverty	Post & Transfer Poverty	Reduction in Poverty due to taxes & transfers	Wife's Wage % of both spouse Wages	Female Labor Force Participation	% Women Part Time	Women's Mobilization	Christian Democratic Cabinet	Left Cabinet	Welfare Generosity
<u>Social Democratic Welfare States</u>										
Sweden	48.6	5.9	87.9	41.7	80.0	26.1	43.5	.2	37.8	3.02
Norway	57.2	17.9	68.0	37.7	71.4	39.3	36.5	2.0	33.9	1.18
Denmark	48.4	9.7	80.2	39.5	77.9	30.7	36.9	.3	25.4	2.23
Finland	38.3	5.5	85.4	43.8	71.7	11.0	44.7	.1	19.0	1.39
Mean	48.1	9.7	80.4	40.7	75.3	26.8	40.4	.7	29.0	1.95
<u>Christian Democratic Welfare States</u>										
Austria	43.5	24.1	44.7		62.0	21.5	27.3	18.8	31.4	0.54
Belgium	50.4	11.5	77.8	30.5	52.9	29.4	21.8	24.4	14.3	1.96
Netherlands	70.5	18.1	75.4	19.0	50.3	50.7	30.5	27.6	9.5	3.67
Germany	56.3	32.6	42.5	25.5	55.0	27.9	26.9	20.4	12.3	-0.34
France	46.2	23.7	48.8	26.7	56.7	21.8	31.8	4.0	9.5	1.20
Switzerland	37.3	18.9	47.7	23.9	61.3	43.3	19.4	12.1	10.6	-2.15
Mean	50.7	21.5	56.2	25.1	56.4	32.4	26.3	17.9	14.6	0.81
<u>Liberal Welfare States</u>										
Australia	73.0	49.7	31.8	29.7	59.7	38.7	32.5	.0	14.1	-1.91
Canada	60.5	43.0	29.0	35.9	70.6	28.3	36.3	.0	0.0	-0.88
Ireland	75.6	37.8	50.3		45.8	24.0	21.2	.0	5.0	-0.72
UK	80.0	33.8	57.8	33.6	64.2	40.9	36.7	.0	16.2	-1.46
USA	64.0	52.1	18.7	35.3	68.8	20.5	35.6	.0	0.0	-2.19
Mean	70.6	43.3	37.5	33.6	61.8	30.5	32.5	.0	7.1	-1.43

All data 1982-97



**Table 4. Coefficients from OLS Regressions with Robust Cluster Error Estimates of Pre Tax and Transfer Poverty Among Single Mothers on Selected Independent**

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Control Variables</i>					
Unemployment	.58 (.59)	--	--	--	--
Vocational education	-.34 ** (.12)	--	--	-.25 * (.12)	-.35 *** (.06)
Industrial employment	-77.51 + (47.09)	--	--	-151.80 *** (26.34)	-132.65 *** (28.86)
Female labor force participation	-.20 + (.13)	--	--	-.20 (.18)	--
Women's part time employment	.62 ** (.17)	--	--	.54 ** (.17)	.61 ** (.16)
Female education	.07 (.07)	--	--	--	--
Wage coordination	-.71 (1.43)	--	--	--	--
<i>Political</i>					
Christian democratic cabinet	--	-.17 (.41)	--	--	--
Left cabinet	--	-.36 ** (.12)	--	.11 (.14)	--
Women's mobilization	--	-.03 (.59)	--	--	--
<i>Policies</i>					
Welfare generosity	--	--	-2.40 (1.43)	-1.79 (1.07)	--
Family and maternity allowances	--	--	.12 + (.08)	.04 (.11)	--
Constant	65.98 ** (20.13)	64.09 ** (20.14)	52.22 *** (3.88)	86.59 *** (15.55)	73.94 *** (8.90)
R <sup>2</sup>	.57	.13	.13	.58	.52
test of Dropping Variables, p<.1	F(3,63)=1.05	F(2,67)=0.59	F(1,68)=9.37**	F(4,63)=2.17	

\*\*\* p<.001, \*\* p<.01, \* p<.05, + p<.1; One-tailed test (standard errors in parentheses) N=71.

**Table 5. Coefficients from OLS Regressions with Robust Cluster Error Estimates of Reduction in Poverty Among Single Mothers Resulting from Taxes and Transfers on Selected Independent Variables**

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Controls</i>					
Unemployment	.31 (.51)	--	--	--	--
Wage coordination	4.23 *** (1.06)	--	--	2.89 + (1.71)	2.94 * (1.39)
Vocational education	.81 *** (.15)	--	--	.28 (.28)	--
<i>Political</i>					
Women's mobilization	--	.29 (.53)	--	--	--
Christian democratic cabinet	--	.92 *** (.18)	--	-.17 (.45)	--
Left cabinet	--	.88 ** (.27)	--	.40 + (.29)	.52 * (.20)
Constitutional veto points	--	-5.50 *** (1.32)	--	-1.93 (1.88)	-2.39 * (1.30)
<i>Policies</i>					
Family and maternity allowances	--	--	.03 (.12)	--	--
Welfare generosity	--	--	9.33 *** (1.63)	4.80 ** (1.58)	5.64 *** (.88)
Constant	19.03 ** (6.89)	35.86 * (15.00)	52.00 *** (6.96)	36.87 *** (8.90)	41.39 *** (6.81)
R <sup>2</sup>	.58	.67	.58	.76	.75
test of Dropping Variables, p<.1	F(1,67)=0.39	F(1,66)=0.91	F(1,68)=0.12	F(2,64)=1.52	

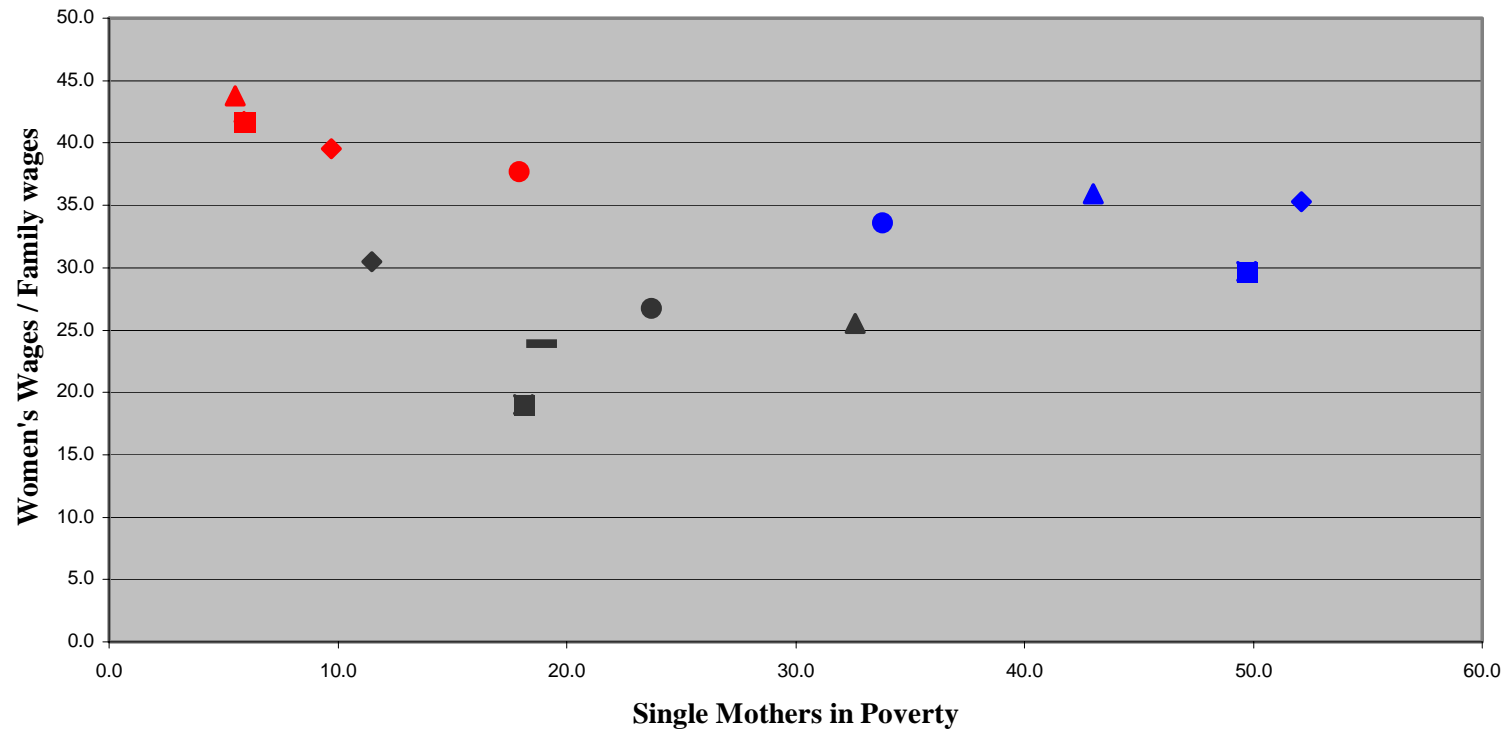
\*\*\* p<.001, \*\* p<.01, \* p<.05, + p<.1; One-tailed test (standard errors in parentheses) N=71.

**Table 6. Coefficients from OLS Regressions with Robust Cluster Error Estimates of Women's Earning as a Proportion of Both Spouses' Earnings on Selected Independent Variables**

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
<i>Labor Market Institution Variables</i>								
Union density	.27 *** (.05)	--	--	--	--	--	.01 (.08)	--
Wage coordination	.01 (.86)	--	--	--	--	--	--	--
Contract coverage	-.20 ^ (.06)	--	--	--	--	--	.00 (.06)	--
Wage dispersion	--	2.67 (4.33)	--	--	--	--	--	--
<i>Political</i>								
Christian democratic cabinet	--	--	-.17 (.18)	--	--	--	--	--
Left cabinet	--	--	.11 (.10)	--	--	--	--	--
Constitutional veto points	--	--	.63 (.57)	--	--	--	--	--
Women's mobilization	--	--	.68 ** (.23)	--	--	--	.33 + (.24)	.33 * (.17)
<i>Labor Force and Demography</i>								
Private service employment	--	--	--	.43 + (.24)	--	--	.08 (.26)	--
Civilian government employment	--	--	--	1.08 *** (.22)	--	--	.06 (.44)	--
Young	--	--	--	.11 (.34)	--	--	--	--
<i>Welfare State</i>								
Welfare generosity	--	--	--	--	.38 (1.13)	--	--	--
<i>Proximate Causes</i>								
Female labor force participation	--	--	--	--	--	.57 *** (.08)	.39 * (.16)	.44 *** (.10)
Women's part time employment	--	--	--	--	--	-.20 ** (.07)	-.17 + (.10)	-.15 * (.07)
Constant	34.33 *** (1.64)	28.90 ** (8.77)	7.34 (8.46)	3.04 (13.00)	33.41 *** (1.80)	2.04 (6.54)	-2.40 (11.87)	-2.48 (6.55)
R <sup>2</sup>	.42	.01	.50	.39	.01	.63	.67	.67
test of Dropping Variables, p<.1	F(1,43)=0.00	F(1,45)=0.50	F(3,42)=1.22	F(1,43)=0.07	F(1,45)=0.42		F(4,39)=0.02	

\*\*\* p<.001, \*\* p<.01, \* p<.05, + p<.1 One-tailed test (standard errors in parentheses) N=47.

**Figure 1 Outcomes for Women, 1982-97**



■ Sweden ▲ Finland ♦ Denmark ● Norway ◆ Belgium — Switzerland ■ Netherlands ▲ Germany ● France ● UK ▲ Canada ■ Australia ◆ USA

# Appendix A. Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
(1) Pre tax/transfer poverty among single mothers	1.00																					
(2) Poverty reduction among single mothers	-.47	1.00																				
(3) Wage gap	-.34	.15	1.00																			
(4) Agricultural employment	-.53	.32	.19	1.00																		
(5) Youth	.31	-.52	-.03	-.07	1.00																	
(6) Female education	-.14	.47	.32	.24	-.45	1.00																
(7) Vocational education	-.38	.77	.01	-.14	-.74	.59	1.00															
(8) Industrial employment	-.24	.09	-.16	-.55	.05	-.49	-.07	1.00														
(9) Unemployment	.07	.06	.05	.03	-.25	.36	.12	-.58	1.00													
(10) Female labor force participation	-.36	.28	.75	.49	-.24	.35	.09	-.17	-.07	1.00												
(11) Women's part time employment	.59	.08	-.53	-.33	-.05	-.05	.16	.00	-.17	-.41	1.00											
(12) Wage coordination	-.40	.60	-.03	-.37	-.38	.09	.57	.30	-.14	-.08	.14	1.00										
(13) Union density	-.53	.79	.42	-.28	-.28	.38	.47	.17	-.02	.47	-.23	.55	1.00									
(14) Union contract coverage	-.38	.68	-.09	-.56	-.39	.25	.59	.22	.10	-.12	.09	.77	.67	1.00								
(15) Christian democratic cabinet	.06	.18	-.55	-.09	-.54	.23	.57	-.14	.21	-.50	.39	.37	-.19	.34	1.00							
(16) Left cabinet	-.32	.78	.30	-.22	-.40	.43	.59	.15	-.19	.45	.07	.58	.84	.64	-.07	1.00						
(17) Women's mobilization	-.18	.27	.68	.11	.10	.29	-.10	-.06	.01	.65	-.44	-.11	.54	.02	-.63	.40	1.00					
(18) Welfare generosity	-.36	.77	.10	-.14	-.56	.48	.71	-.21	.21	.26	.06	.47	.59	.59	.39	.59	.22	1.00				
(19) Family and maternity allowances	.14	.25	-.36	-.70	-.13	-.08	.29	.20	.12	-.51	.48	.46	.15	.68	.38	.22	-.32	.24	1.00			
(20) Wage dispersion	.37	-.79	.10	.48	.45	-.25	-.72	-.29	.12	.06	-.22	-.81	-.68	-.88	-.36	-.79	.02	-.61	-.51	1.00		
(21) Private service employment	.41	-.48	.07	.75	.13	.14	-.30	-.49	-.07	.21	.14	-.53	-.55	-.70	-.04	-.42	-.08	-.39	-.59	.60	1.00	
(22) Civilian government employment	-.41	.51	.55	-.02	-.15	.13	.19	.13	-.23	.73	-.20	.25	.73	.24	-.48	.73	.58	.44	-.07	-.32	-.36	1.00

**Appendix B. Final Models from Alternative Estimates of Determinant of Pre Tax and Transfer Poverty Among Single Mothers**

	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>
Independent Variables	OLS Robust Cluster	OLS	REM
<i>Control Variables</i>			
Vocational education	-.35 *** (.06)	-.22 * (.09)	--
Industrial employment	-132.65 *** (28.86)	-142.51 *** (23.53)	-122.96 *** (30.62)
Female labor force participation	--	--	-.24 * (.14)
Women's part time employment	.61 ** (.16)	.60 *** (.11)	.45 * (.21)
<i>Policies</i>			
Welfare generosity	--	-1.63 + (.84)	--
Constant	73.94 *** (8.90)	73.05 *** (5.75)	81.52 *** (13.35)
R <sup>2</sup>	.52	0.55	0.36

\*\*\* p<.001, \*\* p<.01, \* p<.05, + p<.1; One-tailed test (standard errors in parentheses) N=71.

**Appendix C. Final Models from Alternative Estimates of Determinants of Reduction in Poverty Among Single Mothers Resulting from Taxes and Transfers**

	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>
Independent Variables	OLS Robust Cluster	OLS	REM
<i>Controls</i>			
Wage coordination	2.94 * (1.39)	2.59 * (1.11)	--
Vocational education	--	.22 + (.14)	--
<i>Political</i>			
Left cabinet	.52 * (.20)	.46 ** (.16)	.57 * (.25)
Constitutional veto points	-2.39 * (1.30)	-2.38 ** (.94)	-3.13 * (1.88)
<i>Policies</i>			
Welfare generosity	5.64 *** (.88)	4.52 *** (1.18)	5.12 *** (1.41)
Constant	41.39 *** (6.81)	38.16 *** (4.55)	51.74 *** (6.35)
R <sup>2</sup>	.75	.76	.72

\*\*\* p<.001, \*\* p<.01, \* p<.05, + p<.1; One-tailed test (standard errors in parentheses) N=71.

**Appendix D. Final Models from Alternative Estimates of Women's Earnings as a Proportion of Both Spouses' Earnings**

	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>
Independent Variables	OLS Robust Cluster	OLS	REM
<i>Political</i>			
Women's mobilization	.33 * (.17)	--	.33 * (.16)
<i>Proximate Causes</i>			
Female labor force participation	.44 *** (.10)	.57 *** (.09)	.45 *** (.11)
Women's part time employment	-.15 * (.07)	-.20 ** (.07)	-.16 * (.08)
Constant	-2.48 (6.55)	2.04 (7.07)	-2.82 (7.40)
R <sup>2</sup>	.67	.61	.67

\*\*\* p<.001, \*\* p<.01, \* p<.05, + p<.1 One-tailed test (standard errors in parentheses) N=47.