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**Inequality in the Family:  
The Institutional Aspects of Wives' Earning Dependency**

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# **Inequality in the Family: The Institutional Aspects of Wives' Earning Dependency**

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## **Inequality in the Family: The Institutional Aspects of Wives' Earning Dependency**

This paper examines the effect of family-oriented policies on wives economic dependency within the household. Using national samples of working-age couples in 19 countries (obtained from the Luxembourg Income Study) we employed Hierarchical Linear Models in order to separate the effects of individual and country-level variables on women's economic dependency. We distinguish between two types of policies: those which could potentially challenge the traditional division of labor between the genders (e.g., child-care arrangements) and those which preserve it (e.g. maternity leave). The findings suggest that in general, generous maternity leave and child-care facilities reduce women's economic dependency through their effect on female labor force participation. Similarly, part-time employment reduces women's economic dependency inasmuch as it facilitates the incorporation of women to the labor force. However, among dual-earner families, higher rates of child-care facilities had no effect on women's dependency level, while part time employment increased it. Contrary to our expectations, highly developed maternity leave policies were found to reduce women's economic dependency level. Our findings support the general assertion that increasing the level of women's economic activity improves their standing within the household. Nonetheless, the relatively high levels of women's economic dependency among those who already decided to participate in market work, suggest that in order to increase gender equality within the household, policies should aim not only at facilitating women's employment per se but also at equalizing the conditions under which men and women work.

## **Introduction**

Comparative studies underscore the variation in women's labor market activity and market-generated inequality across industrialized countries. These studies contend that societies have different institutions for incorporating women into paid employment and rewarding them. Some countries have developed strong mechanisms for integrating women into the labor market through family supportive policies while others rely mainly on market mechanisms. However, while family supportive policies have proved significantly to affect women's economic activity and their employment patterns (Esping-Andersen 1990, 1999, Gornick et al. 1998, Daly 2000, Korpi 2000, Stier et al. 2001), it is not entirely clear whether they have managed to change the household division of labor and to reduce inequalities within the family. A striking similarity exists in the gendered division of labor within the family in all countries, in that women -- whether in or out of the labor force -- still do the major share of housework and child-care (Ferber 1991, Bruyn-Hundt, 1996, Hakim, 1997, Anxo and Flood 1998, Orloff 2002).

Most contemporary family policies are aimed at facilitating the employment of mothers by providing women with the necessary conditions to combine work and family. This is accomplished either by direct payment to mothers (and sometimes to fathers) for the period when the children are young (e.g., maternal and parental leave) or by providing good and relatively inexpensive child-care facilities (OECD 2001, 2002). Yet while these "mother-friendly" policies are expected to facilitate women's employment (and indeed do so) some policies might at the same time contribute to the reproduction of gender inequality since they do not seriously challenge the unequal distribution of family responsibilities between men and women. In this paper we propose to distinguish between two types of policies: those which could potentially challenge the traditional division of labor between the genders and those which

preserve it. On the one hand are policies aimed not only at facilitating women's employment but also affecting the distribution of care work between the family and the state. These policies, for example, provide subsidized child-care arrangements thus allowing women to allocate more of their time and effort to paid employment. On the other hand there are policies that assume the primacy of women's familial responsibilities, allow women to take time off employment when the children are young (e.g., through generous maternity leave) or provide other arrangements for reducing the conflict between home and work (e.g., part-time work). We argue that while the latter policies facilitate women's labor force participation rates in most industrialized countries, they also preserve women's position as secondary breadwinners, thus sustaining the economic dependence of women upon their spouses.

The current paper sets out to explore the effects of these two types of social policies, aimed at facilitating women's economic activity, on wives' economic standing **within** the family. Using data from 19 industrial countries, we examine the variation in wives' economic dependency on their spouses and the extent to which institutional characteristics at the country-wide level affect it.

### **Women's economic dependency within the family**

Stratification research focuses largely on gender inequality in the labor market as a way to understand women's position in society. Accordingly, much attention is paid to individual, structural, and institutional factors that affect women's participation in paid employment and their access (or lack of access) to lucrative, well-paid jobs. The position of women within their families, while studied extensively by family scholars, was not always seen as part of the stratification research agenda, although women's position in the labor market reflects, to a great extent, their position within the family.

As Sorensen and McLanahan (1987) contended, “Our understanding of women’s position in society requires us to look not only at individual women’s position in the labor market, but also at their familial position and the resources they derive from it...we suggest that women’s economic dependency on men is an important attribute of stratification systems and an essential force in the maintenance of gender inequality” (p. 663).

Recent literature on women’s position in the labor market emphasizes the effect of family obligations and family arrangements on women’s labor supply, and their patterns of involvement in market work. For example, women tend to interrupt their employment after giving birth (Budig and England 2001); sometimes they “scale back” and move from full-time to part-time employment or change their career plans when the family demands more of their time (Becker and Moen 1999, Stier 1998). Consequently, career interruptions affect women’s market rewards (Budig and England 2001). The way families organize their time and responsibilities, then, determines women’s ability to accumulate resources at any given point of time and along their life course.

Sociologists of the family emphasized the importance of women’s market resources for their power position within the family (Shelton and John 1996; Brines 1994). A major finding is that women participating in paid employment, especially full-time, are able to gain equality in task and time allocation (Stier and Lewin-Epstein 2000). Access to independent resources, such as income from paid work, increases women’s power in two important dimensions, which Hobson (1990) defines as “voice” and “exit”. On the one hand, power accrued from women’s economic resources allows them to affect family decisions, to “have a voice” within the family in matters regarding the organization of the household, including who will take care of children and who will allocate more or less time to market work (Morris 1990;

Brines 1994; Spain and Bianchi 1996). At the same time, access to independent economic resources also allows women to exit the relationship altogether if they do not achieve satisfactory arrangements of time allocation to housework and market work. The interplay between family arrangements and market behavior of men and women plays an important part in explaining gender stratification in society.

Policy concerns regarding gender inequality indeed acknowledge the constraints family obligations impose on women's market participation. Many of these policies are aimed at reducing the burden of family demands and allowing women to allocate more of their time to paid employment by providing good and inexpensive child-care arrangements, or to combine work and family by offering part-time or short-hour employment opportunities. Undeniably, access to market work, hence to an independent income, reduces women's economic dependency upon their spouses and increases their power position at home. The sharp increase in women's economic activity during the last decades resulted in the reduction of wives' economic dependency over time (Sorensen and McLanahan 1987; van Berkel and De Graaf 2000).

However, the rise in married women's labor force participation, while reducing the number of households with wives totally dependent upon their spouses for subsistence, has not necessarily changed the economic relationship in dual-earner households. In most European countries a substantial portion of the female labor force work on a part-time basis (Smith, Fagan and Rubery 1998) and in many countries women earn less than men even though they work full time (Blau and Kahn 1995, Gornick 1999). This is because women tend to be concentrated in female-type occupations, which offer only limited access to high income; they are absent from power positions; and they face different practices of discrimination (Willborn 1991; Persson and Jonung 1998). The costs of women's inferior market position, and their

consequences for intra-household inequalities, are illustrated by Van Berkel and De Graaf (2000) who studied wives' economic dependency in the Netherlands. They found that the dependency rate of women who worked part time was four times higher than the dependency rate of those who worked full time. They concluded that in the Netherlands the high rate of women's part-time employment accounted for their intra-household economic dependency since full-time working wives tended to have an income equal their husbands'. These findings, however, may also indicate that wives married to well-paid men are more likely to work part-time than women married to men with low income. Sorensen and McLanahan (1987) found that only half of the dependency rate in couples in the U.S. could be attributed to wives' labor supply. Working women contributed less than their husbands to the household income because they received lower rates of return for their hours of work. As Hobson (1990) contended, "Differences in husband's and wife's labor market position, as reflected in hourly pay, account for a substantial amount of the dependency level (about fourth in Sweden and about fifth in the U.S.)" (pp. 245-46). While the overall rate of wives' economic dependency has declined over time, mostly through increases in women's labor force participation rates, there is still considerable inequality within families in all industrial countries, due to women's inferior position in the labor market.

### **The effect of policies on women's economic dependency**

Alongside the dramatic increase in women's participation in paid employment, social policies aiming at facilitating mothers' employment and enhancing gender equality in the labor market have been implemented in most Western countries. Yet none of these policies directly targets intra-family relationships, and how far women's economic gains have affected patterns of economic inequality within the family is still an open question.

How can social policy influence the relative income of husbands and wives?

The correspondence between women's labor force participation and wives' economic dependency over time leads to the assertion that policies promoting women's employment reduce the overall dependency rate of women because more women have access to a paycheck as a result of their own paid work. From this point of view, every policy that directly or indirectly increases women's labor supply is expected to reduce wives' earning dependency. But as we mentioned above, the prevalence of part-time work among women, and their disadvantaged position in the labor market, sustain their inferior standing within the household. Insofar as policies do not change women's position in the labor market above and beyond their rate of participation, they will not affect the earning dependency of women in dual-earner households in a straightforward way.

Some aspects of social policies may promote greater economic equality within the family. Among these are policies aimed at reducing gender inequality in the labor market, including those related to equal pay, equal opportunity, and affirmative action. Similarly, national systems of wage protection, related to a high degree of market regulation, unionization, and collective bargaining may contribute to higher gender equality in pay (Blau and Kahn 1995, 2001, Rubery, Bettio, Fagan, and Maier 1997, Almond and Rubery 1998). Similarly, family policies that lead to extended and subsidized child-care facilities may encourage more women to participate in paid employment full time, and enable them to maximize their economic rewards. However, family policies that offer long duration of paid maternity leave may have negative consequences on women's ability to enter high status occupations.

In their comparative study of wives' economic dependency across seven industrialized countries, Bianchi et al. (1999) found that women were less dependent on their spouses in countries that implement policies aimed at supporting women's

employment. Using Esping-Andersen's (1990) welfare regime typology, they found that women's dependency was lowest in countries with a social-democratic welfare regime, which were characterized by high rates of female labor force participation, and generous social programs to support women's employment. The highest level of dependency was found in the conservative countries that promoted a traditional gendered division of labor. Bianchi et al.'s (1999) study, however, did not test directly the effect of social policies on the level of wives' dependency, and could not establish whether policy differences accounted for the variation in dependency across countries.

A closer look at the distribution of wives' dependency's in comparative studies (Bianchi et al. 1999, Hobson 1990) reveals more complicated relationships between policies (or welfare regimes) and wives' economic dependency. For example, generous social programs are available to women in many conservative countries, not only in Scandinavia, while they are absent from the U.S. and Australia. Still, the level of dependency in the U.S. and Australia is lower than in Germany and the Netherlands (Bianchi et al. 1999: 17, Hobson 1990: 240). A comparison of the level of wives' dependency in dual earner couples radically changed Bianchi et al.'s conclusions. First, variation in dependency rates among countries declined considerably. Second, the dependency rate was relatively low in countries representing different welfare regimes, such as Finland and Belgium. Hobson (1990) found that dual-earner couples in Sweden and Norway -- two social-democratic countries -- evinced relatively high levels of dependency, while in the Netherlands and Germany -- two conservative countries -- they demonstrated the lowest (Hobson 1990: 240). These findings lead to the conclusion that the level of wives' economic dependency in dual-earner couples is independent of the rate of women's labor force participation and general support for women's employment. They call for a closer and

more comprehensive examination of the effect of policies on inequality within families in general, and in dual-earner families in particular.

Here we contend that facilitating women's employment often means allowing women to combine work with family responsibilities rather than achieving equality with men in home and market behavior. Implementing policies that encourage women to participate in the labor force often results in a less selective female workforce (Hansen 1995, 1997). Consequently, many women who are less committed to market work join the labor force part time or in occupations that accommodate their familial roles (e.g., short working hours, less demanding tasks). High support for women's employment actually correlates with high levels of occupational sex segregation and low representation of women in managerial positions (Esping-Andersen 1990, Charles 1992, Chang 2000, Wright et al. 1995). These patterns of women's work limit the extent to which policies that encourage women's participation in the labor force can lead to significant change. Family policies, although increasing the participation rates of women, may at the same time preserve the gendered division of labor and maintain gender inequality in the labor market, hence within the family (Hernes 1987, Hansen 1995, 1997, Orloff 1996).

In this study we focus on the effect of different aspects of social policies and women's employment characteristics on wives' economic dependency. We aim at disentangling the effect of the household's and the country's characteristics on the relative standing of women within their households. In particular we ask whether and to what extent social policies aimed at facilitating women's employment contribute to the reduction of inequalities within the household. We differentiate the total population of working-age couples (i.e., households where only one partner participates in the labor force and households where both do) from dual-earner families (i.e., households where both the husband and the wife participate in the labor

force). As argued in past studies, variation in women's participation in paid employment accounts for most of the country-level differences in wives' level of dependency. In this sense, policies that support women's employment and encourage their market participation contribute as well to the reduction of intra-family inequality. As for dual-earner households, we hypothesize that policies that directly affect women's time allocated to the household – such as the availability of child-care -- will reduce women's dependency, as they facilitate their access to high-paying jobs. Policies and arrangements that maintain women's time spent on family responsibilities (such as generous maternity leave and availability of part-time employment) will enhance their dependence on their spouses.

### **Data and Measurement**

Data for the present analysis were obtained from the Luxembourg Income Study (LIS), which serves as an archive for comparable micro-datasets for a large number of industrialized countries. The analyses are based on data obtained from 19 countries and include couple-headed households in which the couples (married or cohabiting) were aged from 25 to 60 years. The countries are Finland, Norway, Sweden, Denmark, Germany, France, Belgium, Luxemburg, the Netherlands, the U.K., Australia, the U.S., Canada, Italy, Spain, Israel, Hungary, the Czech Republic, and the Slovak Republic. The samples were collected between 1994 and 1999, and covered 5,000 to 18,000 households in each country. To this survey we added information at the country level that was collected from various sources, as we detail below.

The analysis focuses on the conventional measure of economic dependency within the household suggested by Sorensen and McLanahan (1987). Accordingly, dependency of partners is expressed as the difference between their relative contributions to the family income:

$$Dependency = [(earnh/earnh+earnw)]-[(earnw/(earnh+earnw))]$$

where *earnh* refers to husband's earnings and *earnw* indicates wife's earnings.

We introduce two types of explanatory variables: household-level variables and country-level characteristics. Following prior studies of wives' earning dependency (e.g., Sorensen and McLanahan 1987; Bianchi et al. 1999) the household-level variables included the couples' relative education; the presence of young children in the household; number of children in the household; wife's age, and age difference between spouses.

We measured the combined education of husbands and wives by differentiating between four types of couples: both have high school or lower education (the reference category); both have post-high school education; only the husband has higher (post-high school) education; and only the wife has higher education. We expected the level of dependency to be lower for highly educated wives, especially those more educated than their partners since highly educated women have access to better paid jobs and a better position in the household, which allow them to determine their time allocation to market work

Children, especially young ones, affect their mothers' employment pattern, so we expected the presence of young children (0-3 years old) to increase the dependency of wives. Similarly, we expected that every additional child would raise the wife's dependency. In addition we controlled for the woman's age and for age differences between the spouses (see Bianchi et al. 1999; Sorensen and McLanahan 1987). An important determinant of women's position within the household is the extent of their labor force attachment. The number of hours women worked compared with their husbands was found to be the most important determinant of wife

dependency (Bianchi et al. 1999; van Berkel and De Graaf 1998; Sorensen and McLanahan 1987). In our study information on the number of working hours was available for only 14 countries<sup>1</sup>. Preliminary analysis based on these 14 countries revealed that an increase in the wife's working hours reduced her economic dependency. However, because married women's labor supply is endogenous to policy, and since we focus mainly on the role policies play in affecting women's economic position, we decided not to include this variable in the analysis.

At the macro level we introduced two components of family policy -- maternity leave and child-care arrangements -- aimed at supporting mothers' employment. Maternity leave was measured as the number of fully paid weeks of leave (data from Gauthier, 1999, Mayers and Gornick 2000); child-care arrangements were measured as the percent of children aged 0-3 in publicly funded child-care institutions (data from OECD 2001, Kamerman 2000). According to our expectations, generous maternity leave would encourage women's incorporation in the labor force because it allowed them to combine work with childbirth. However, prolonged separation from market work might result in a high concentration of women in female-type short-hour jobs that did not necessarily improve women's position within their households. Thus, after controlling for female labor force participation rate, we expected maternity leave to increase the rate of dependency. As opposed to maternity leave, child-care arrangements, especially those for very young children, were expected to reduce dependency by allowing women to take on more demanding (and usually better paid) jobs full time.

In addition to the direct measures of policy, we included two characteristics of the female labor force: female labor force participation rate (for women aged 25 to 60 years) (LIS 1992-1999) and the percentage of women aged 15-64 years in part-time

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<sup>1</sup> In the LIS data: Denmark, Norway, Spain, and the Slovak Republic did not provide data on hours of work.

employment (OECD 2002). These two measures can be seen as a product of different policies, but they have direct effects on the status of women within the family. We expected the rate of female labor force participation to reduce the level of dependency in the total population of working-age couples, though it was not expected to affect wives' dependency in dual-earner households. The rate of part-time employment, however, was expected to increase the level of dependency in dual-earner families, but not in the entire population. On the one hand, a large supply of part-time jobs will increase wives' economic dependency, since women working part-time earn substantially less than their usually full-time employed spouses. On the other hand, to the extent that part-time employment serves as an institutional mechanism to incorporate mothers into paid employment, it may be expected to decrease wives' dependency in the entire working age population.<sup>2</sup>

Aside from the effects of country characteristics on the general level of wives' dependency, we also expected the macro-level policy indicators to interact with the presence of young children in the household. We hypothesized that in countries with high levels of child-care arrangements, children would be less of an obstacle to mothers' employment (see Gornick et al. 1997) so their effect on women's economic dependency was expected to vary between mothers of young children and other women. However, maternity leave was expected to enhance the costs of having children due to its effect on women's employment pattern and types of occupation. We also expected the rate of part-time work to reduce the economic dependency of mothers of young children because they would be able to combine work with family responsibility. However, for women less constrained by family obligations, the rate of part-time employment would enhance dependency because it limited their prospects in the labor market in the long run.

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<sup>2</sup> In preliminary analyses we also included in our models the county's GINI coefficient as a control for the overall level of wage inequality. This variable had no significant effect, so for reasons of parsimony

## Method of analysis

We were interested in the distribution of dependency within countries as well as among them, so we employed multi-level modeling where the dependent variable is the wife's dependency level and both household and structural variables serve as independent variables (Bryk and Raudenbush 1992). By using this type of analysis we were able to model the net effects of each of the two components (household and country level) simultaneously, and to differentiate the effects of household-level characteristics from country-level characteristics on the dependency levels. The two-level model can be represented by a set of equations:

$$(1) \text{ (Dependency level) } ij = \beta_{0j} + \beta_{1j}(\text{Child})_{ij} + \beta X + \varepsilon_{ij}$$

The dependent variable is wife's dependency level in household  $i$  and country  $j$ ;  $\beta_{0j}$  is the intercept, denoting the average dependency level; 'Child' denotes the effect of having young children in the household, coded 1 for households with children younger than 3 years, 0 otherwise ;  $X$  is the vector of other household characteristics (i.e., spouses' relative education and age, number of children), and  $\beta$  is the vector of coefficients associated with these variables.  $\varepsilon_{ij}$  is the error term. This equation allows the intercept,  $\beta_{0j}$ , and the child effect,  $\beta_{1j}$ , to vary (i.e., to be random) across countries, whereas the effect of all other variables is fixed. At the second level, the country characteristics explain these random effects as presented in equations (2) and (3):

$$(2) \beta_{0j} = \gamma_{00} + \gamma Y + v_{0j}$$

$$(3) \beta_{1j} = \gamma_{10} + \gamma Y + v_{1j}$$

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we decided not to include it in our final models.

Where  $\beta_{0j}$  (in equation 2) is the intercept denoting the country's dependency level,  $Y$  represents a set of policy and country characteristics, and  $\gamma$  denotes the respective coefficients.  $\beta_{1j}$  in equation (3) denotes country-level variation in the effect of the presence of young children in the household on the dependency level, explained by the various country characteristics.

## **Findings**

We begin the analysis by presenting the distribution of couple-headed households by the number of providers, in the different countries included in the study. Figure 1 shows that among couple-headed families the male breadwinner household emerged as a minority in most countries. Exceptions are Spain, Italy, and Luxemburg where the majority of couples constitute households where women do not participate in paid employment. In the Scandinavian countries, Denmark, Sweden, and Finland, more than 80% of couple-headed households were also dual-earners, followed by Norway, the Czech Republic, the U.S., and Canada. These findings suggest that the effect of policy supporting mothers' employment on the number of breadwinners is complicated by other factors. The rate of dual-earner households is seen to be high in countries with highly developed policies, such as the Scandinavian countries, but also in countries with little or no support for the employment of mothers such as the U.S. and Canada.

(Figure 1 about here)

Figure 2 presents women's earning dependency in all working-age couple-headed families, and separately in dual-earner households. The figure depicts the overall country variation in the wives' dependency level, but also the role of women's labor force participation in reducing their economic dependency within the household. Not surprisingly, the countries with the highest level of women's dependency are

those in which the proportion of dual-earner households is the lowest: wives' dependency is highest in Spain, followed closely by Luxemburg, the Netherlands, and Italy. Of these countries, only in the Netherlands does the proportion of dual earner households surpass that of the sole male breadwinner families. These findings indicate that wives' economic dependency is highly related to the rate of women's employment, as illustrated in Figure 3<sup>3</sup>.

Whereas female labor force participation rate plays a crucial role in explaining a wife's dependency level, other factors, especially those related to women's employment patterns and their earnings, affect their relative standing within the household: whether they work part-time; their types of occupations; access to managerial positions. - These factors may be important in explaining country-level variation in dependency levels in dual-earner families.

(Figures 2 and 3 about here)

A comparison of the dependency level of the total population with that of the dual-earner households is interesting. First, cross-country differences in dependency level in dual-earner households are smaller than the difference in the entire population of couple-headed households. This finding emphasizes the variation in women's labor force participation rates, in contrast to the similarity in women's work patterns across countries. Second, in most of the Scandinavian countries and Britain the level of dependency within all households and dual-earner households is quite similar. This is partly because the vast majority of households in these countries are dual-earners, although the level of dependency of dual-earners in Britain (0.357) is among the highest in our sample, and in the Scandinavian countries it is among the lowest

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<sup>3</sup> Hungary is an exception; with a relatively low level of wives' dependency and an intermediate level of female labor force participation. A closer look at the Hungarian case reveals that in 12% of the couple-headed households the wife is a solo breadwinner, compared with less than 5% in most of the other countries. Furthermore, in 31% of the dual-earner households in Hungary the wife earns more than her spouse, as against an average of 20% for the other countries.

(ranging between 0.127 in Finland to 0.232 in Sweden). Thus, the similarity between all households and dual-earner households in the rate of dependency could as well result from women's position and earnings in the labor market compared with men. Third, the difference in the level of dependency between dual-earner and all households is most notable in Spain and Italy, two countries with relatively low rates of female labor force participation. This finding suggests that women in these countries are highly (and positively) selected for paid employment.

The overall variation in the level of dependency between countries, and the comparison between all households and dual-earner households, indicate that a complex of factors operates to affect the relative standing of women within their families, above and beyond their labor force participation. For example, the relatively high dependency in countries with high female labor force participation may result from a high level of part-time employment, high sex segregation of occupations, or high level of gender inequality in wages. Similarly, low levels of earning inequality and occupational segregation, as well as high selection of women into full-time employment, may contribute to a reduction in wives' dependency in dual-earner families. Nonetheless, on balance these figures suggest that in countries with high levels of support for mothers' employment such as the Scandinavian countries, (e.g., Korpi 2000, Esping-Andersen 1999, Gornick et al. 1998, Stier et al. 2001) the level of dependency is low. A better understanding of these patterns would require considerations of other country- and household-level characteristics, which might affect the divergent patterns we observed.

#### Household- and country-level determinants of wives' dependency

The second stage of the analysis focused on household- and country-level factors that affect the economic dependency of wives. The analyses were based on the multi-level

models specified above, with wife's earning dependency as the dependent variable. This variable was multiplied by 100 so that the effects of the independent variables could be interpreted as percent change in the level of dependency. The household-level characteristics incorporated in the models included the couples' relative education, the woman's age and the couples' age difference, the presence of young children, and the total number of children in the household. At the country level the models included the two indicators of policy (maternity leave and child-care arrangements); female labor force participation rate, and level of part-time employment. We allowed a random effect of both the intercept and the presence of young children, and explained their variation (i.e., country variation in the average level of wives' dependency and the effect of the presence of young children on the dependency levels) by the policy indicators and the two measures of women's employment. Summary statistics for the variables included in the analysis are presented in Appendix Table A1 (for household-level variables) and A2 (for country-level characteristics). The results of the analyses are presented in Table 1 (for the total population) and Table 2 (for the dual-earner sub-sample).

Turning first to the household level variables in model 1, the findings suggest that women's education has an important effect on their dependency level: as expected, the level of dependency is lower as wives' education increases, especially with those who are more educated than their partners. When the husband is more educated than his wife, her level of dependency is higher by almost nine percent than when their level of education is low but equal (the reference category). This effect points to the importance of women's absolute and relative resources, as depicted by education, due to the relationship between education and earnings. This could also highlight the importance of men's earning capacity in explaining wives' dependency levels; high resources of wives, like low resources of their partners, can explain the

economic dependency levels. A second important variable that affects the dependency level is the presence of children. The higher the number of children in the household, the higher the dependency of women on their partners; each child increases the dependency level by almost six percent. In addition, having young children at home increases the dependency rate by additional 13 percent ( $b=13.020$ ). These findings reinforce the claim that children, especially young ones, extract a high price in their mothers' ability to gain access to independent market resources. The figures also suggest that the dependency level decreases as the wife grows older and also as the age difference between spouses is wider. We interpret the age effect as a product of both the husband's and the wife's economic activity, due to the high correlation between spouses' ages ( $r=0.9$ ). Since men's work activity declines with age, older women in our sample (most of whom were married to even older men) were more likely to be the sole earners, so their dependency level was the lowest. This was especially pronounced in families where husbands were significantly older than their wives since the latter were more likely to be involved in paid employment.

(Table 1 about here)

The first model of Table 1 includes two policy indicators at the country level: weeks of paid maternity leave and the percent of young children in day care. These policy indicators are negatively related to the country's level of dependency, contrary to our expectation. This model suggests that higher support for women's employment reduces their economic dependency within the family. It is reasonable to assume that these policies affect women's position at home through their effect on women's participation in paid employment. As we argued earlier, the female labor force participation rate contributed significantly to the reduction of women's economic dependency; therefore in the second model we introduced this variable directly at the country level. This model (Model 2) shows that indeed the level of dependency was

substantially lower in countries with higher rates of female labor force participation ( $b=-0.725$ ), as expected. Furthermore, introducing the level of women's economic activity reduced significantly the effect of the policy variables, which proved to be insignificant. We conclude that the effect of family policy on wives' dependency rate is mediated through its effect on women's labor force participation. Model 3 adds to the foregoing models the effect of part-time employment. Its inclusion did not change the effect of women's labor force participation on the dependency rate, which remained negative and highly significant. The rate of part-time employment, in contrast, had a positive effect on wives' dependency level, namely as the rate of women's part-time employment rose the level of wives' economic dependency increased as well. As mentioned earlier, part-time employment could reduce wives' dependency inasmuch as it serves as a way to incorporate more women in paid work. Apparently, excluding the rate of female labor force participation from the model (see Model 4) evinced a non-significant effect of the rate of part-time employment. Model 4 captures the contradictory effects of part-time employment on the dependency level, which offset one another. Only after controlling for females' participation rate did the negative effect of part-time employment emerge. Our findings demonstrate once again the detrimental effect of women's part-time employment, with regard to their market position as well as their standing within the family.

The last model (Model 5), which presents our full model of country-level effects and interactions, reveals the complexity of factors that play a role in determining wives' economic dependency. It assumes that the presence of young children in the household affects wives' dependency level differently in different countries, and attempts to explain this diversity by the policy variables and the measures of women's employment. The interaction coefficients indicate that the availability of child-care arrangements, the country's level of females' labor force

participation, and part-time employment clearly affect the costs of having young children in the household. These interaction effects are illustrated in Figure 4. In line with our expectations, in countries that offer higher supply of child-care facilities, the price of having young children in women's dependency level was lower, so the difference between women with and without young children declined. The overall effect of part-time employment is interesting: on the average, it increases women's dependency, because it entails lower earnings by channeling women into marginal jobs (see Model 3). However, it minimizes the price of having children because it allows mothers of young children to participate in paid employment. Consequently, for this group part-time employment actually lowers the dependency levels, whereas it has the opposite effect on women without young children. Lastly, the country's rate of female labor force participation reduced the dependency level especially among women who did not have young children at home. This is mainly because these women were free to allocate more of their time to paid employment. As more women participate in the paid economy, the dependency gap between those with higher constraints on their time (e.g., mothers of young children) and other women increases, emphasizing again the price of having young children in their mothers' employment.

(Figure 4 about here)

While the effect of women's employment on their economic dependency is apparent, we are mainly interested in understanding the effect of policy on the status of working women within their families. Table 2 presents the models that pertain to the dual-earner households. On balance, the effect of the household level variables on the dependency rate is similar in dual-earner and all families, although the coefficients are somewhat lower. This means that while similar household factors affect the relative position of working and non-working women, part of the effect is mediated

by the wives' employment status. An exception is the effect of age: the wife's age and the spouses' age difference changed their direction, from a negative effect in the total population to a positive effect among the dual earners. As noted below, the relatively large age differences in households where the husbands were not working explained the negative effect on wives' dependency levels. But among the dual earners, where age serves as a proxy for work experience, the spouse's age difference (husband age – wife age) indicates the gap between the couples' work experience (in favor of the husband). Thus, as husbands are older (and have probably accumulated more work experience) their income is higher and their wives' dependency level increases. The positive effect of the wife's age captures both cohort differences in the propensity of women to have continuous and full-time employment, and the growing gap between husbands' and wives' work experience due to women's intermitted employment, and the higher returns for men's work experience.

The first model in the table presents the gross effect of the policy indicators on the level of wives' dependency. The results do not support our expectations: increase in the number of fully paid weeks of maternity leave reduced rather than increased the dependency rate. The extent to which countries provide support for child care had no significant consequences for women's position in their families, once they decided to go to work. This basic pattern remained unchanged when the rate of labor force participation and part-time employment were introduced (Models 2, 3, and 4). As expected, overall female employment level had no effect on the dependency rate in dual-earners, while increase in the rate of female-part time employment intensified wives' economic dependency considerably.

(Table 2 about here)

The last model of the table (Model 5), which tests the interaction of the country-level indicators with the presence of young children at home, reveals that

similar to the findings in the total population, the availability of child-care reduced the gap in the dependency level between women with high family demands and those without young children at home. As illustrated in the first panel of Figure 5, in countries with no child-care facilities mothers of young children had a higher dependency rate than other women, but the difference between these groups declines as the country offers better conditions for mothers' employment. It is important to note that the gap between those with and those without young children in the dual-earner population is smaller than it is in all working-age households. This is because child-care arrangements predict women's participation in paid employment in the total population. The effect of part-time work in the dual-earner population is similar for women with and without young children. For the two groups part-time work increased the dependency rate. Among women who have already decided to participate in the market, part-time work can no longer serve as an incentive to work; instead, it indicates women's patterns of work and their market position. Lastly, the rate of female labor force participation increases the dependency rate of women with young children but has no effect on the dependency level of those without them. This variable exemplifies the effect of women's selection into paid employment: in countries with low level of female employment, women are highly (and positively) selected into the labor. In this case, mothers of young children who participate in paid employment are those who have high reservation wage or those who must work because their spouses have low earnings. Their level of dependency is much lower than that of other women. With the increase of women's employment rates the selectivity of women declines, so women who have young children are almost as likely to work as those without high family constraints, but they often work in female-type occupations, which offer the conditions to combine work and family.

Consequently they have lower wages than women with no family constraints, and their dependency within the household is higher.

(Figure 5 about here)

### **Summary and Conclusions**

In most industrialized societies family policies were implemented to facilitate mothers' employment and to increase gender equality in the labor market. Most of these policies are aimed at reducing the conflict between work and family, either by allowing women to take long leaves when the children are young or by providing accessible child-care arrangements. In many countries women were incorporated to paid employment through the availability of part-time jobs, especially during periods of high family demand (Stier et al. 2001). In this paper we distinguished policies aimed at encouraging women's participation in the paid economy on a full time basis from those which while aimed at increasing women's labor force participation assume a traditional division of labor, in which women are perceived as the main caregivers. While the former have a potentially effect on the distribution of paid and unpaid work between the genders, the latter uphold the economic dependency of wives on their spouses.

The findings of our study reveal a complex relationship between family policies and wives' economic dependency. In the whole working age population, generous maternity leave and child-care facilities have an indirect effect on women's position within the household, through their effect on female labor force participation. In countries with well developed policies that facilitate women's participation in paid employment, women had better access to an independent income. However, among dual-earner families, and contrary to our expectations, higher rates of child-care facilities had no effect on women's dependency level, while highly developed

maternity leave policies were found to reduce it. Nevertheless, our findings support the claim that child-care arrangements reduce the price of having children (see also Gornick et al. 1997), most likely since they allow women to maintain their employment and work full time. As we found, in countries with a rich supply of child-care facilities young children ceased being an obstacle to their mothers' access to economic resources.

The effects of women's labor force participation rate and the availability of part-time employment are more complicated. Our findings support the general assertion that increasing the level of women's economic activity improves their standing within the household. Nonetheless, the effect of these variables on wives' dependency level in the total population of working age women differed from their effect among women who already decided to participate in paid employment. Obviously, part-time employment serves as a strategy for mothers of young children to combine work with family demands. From this point of view part-time employment can be seen as a way to reduce women's economic dependency, and indeed in countries with high rates of part-time employment the difference in dependency between mothers of young children and all other women declined. However, our findings suggest that in the long run, part-time employment enhances the dependency of women; for women who already decided to participate in market work, and especially for those who are (relatively) free of child-care and family demands, part-time employment becomes detrimental. For these women, as part-time work becomes a prevalent mode of employment, it also becomes a way to sustain their economic dependency.

Women's labor force participation is the prior and the necessary condition to mitigate the dependency of wives upon their spouses, as clearly shown in Figure 2. However, increasing women's employment rate may have some paradoxical

consequences on their status in the labor market and within the family. As Hansen (1995, 1997) has argued, policies that offer the conditions to incorporate mothers in paid employment manage to reduce the selectivity of working women. Consequently, many mothers prefer to work in female-type jobs that offer the necessary conditions to combine family and work, but also provide limited market opportunities. As mothers' employment becomes universal, more and more women are being channeled to marginal positions, which, in turn, contribute to an increase in their economic dependency. Our findings suggest that to increase gender equality within the household, policies should aim not only at facilitating women's employment per se but also at equalizing the conditions under which men and women work.

## Bibliography

- Almond P. and Rubery J. 1998. "The Gender Impact of Recent European: Trends in Wage Determination". *Work, Employment and Society*, 12(4): 675-693.
- Anxo D. and Flood L. 1998. "Patterns of Time Use in France and Sweden". In: Persson I. and Jonung C. (eds.) "Women's Work and Wages". Routledge. London and New-York. P. 91-121.
- Becker, Penny E. and Phyllis Moen. 1999. "Scaling Back: Dual-Career Couples' Work-Family Strategies." *Journal of Marriage and the Family* 61: 995-1007
- Bianchi Suzanna M. Lynne M. Casper, P. K. P. (1999). "A Cross-National Look at Married Women's Earnings Dependency." *Gender Issues*, summer: 3-33
- Blau F. D. and Kahn L. M., 1995, "The Gender Earning Gap, Some International Evidence", in: Freeman R. B. and Katz L. F. (Eds), "Differences and Changes in Wage Streetcars", The University of Chicago Press.
- Blau F. D. and Kahn L. M., 2001, "Understanding International Differences in the Gender Pay Gap", Working Paper 8200, National Bureau of Economic Research.
- Brines, J. 1994 "Economic Dependency, Gender, and the Division of Labor at Home." *American Journal of Sociology* 100: 652-688.
- Bruyn-Hundt M., 1996, "The Economics of Unpaid Work". Amsterdam: Thesis Publishers.
- Bryk A. S. and Raudenbush S. W. 1992. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Newbury Park, CA: Sage
- Budig, Michelle J. and Paula England. 2001. "The Wage Penalty for Motherhood." *American Sociological Review* 66(2): 204-225
- Chang M. L. 2000. "The Evolution of Sex Segregation Regimes". *American Journal of Sociology*. 105(6): 1658-1701.
- Charles M., 1992, *Cross National Variation in Occupational Sex Segregation*, ASR, 57: 483-502. (8)
- Daly, Mary. 2000. "A Fine Balance: Women's Labor Market Participation in International Comparison." Pp. 467-510 in *Welfare and Work in the Open Economy*, edited by F. W. Scharpf and V. A. Schmidt. Oxford ; New York: Oxford University Press.
- Esping-Andersen G. 1990. "The Three World of Welfare Capitalism". Princeton University Press. Princeton, New Jersey :
- Esping-Andersen G, 1999, *Social Foundations of Postindustrial Economies*, Oxford: Oxford University Press.

Ferber A. F. 1991. "Women in the Labor Market, The Incomplete Revolution". In Willborn S. L. (ed.). International Review of Comparative Public Policy. A Research Annual: "Women's Wages: Stability and Change in Six Industrialized Countries". Vol 3: 39-60.

Gauthier, A. 1996. The State and the Family. Oxford: Clarendon Press.

Gornick J. C., Meyers M. K., and Ross K. E. 1997, "Supporting the Employment of Mothers: Policy Variation Across Fourteen Welfare States". Journal of European Social Policy, 7(1): 45-70.

Gornick J. C, Mayers M.K. and Roos K. E., 1998, "Public policies and the employment of mothers: A cross-national study". Social Science Quarterly 79(1): 35-54.

Gornick J. C. 1999, "Gender Equality in the Labour Market: Women's Employment and Earnings", Pp.210-242, in: D. Sainsbury (ed.) Gender and Welfare State Regimes, Oxford, U.K., Oxford University Press.

Hakim C. 1997. Key Issues in Women's Work. London: Athlone.

Hansen. M. N. 1995. "The Vicious Circle of the Welfare State? Women's Labor Market Situation in Norway and Great Britain". Comparative Social Research, 15: 1-34.

Hansen M.N. 1997. "The Scandinavian Welfare State Model: The Impact of the Public Sector on Segregation and Gender Equality". Work Employment and Society, 11(1): 83-99.

Hernes H. M. 1987, "Welfare State and Women Power: Essays in State Feminism". Norwegian University Press.

Hobson, B. (1990). "No Exit, No Voice: Women's Economic Dependency and the Welfare State." Acta Sociologica 33(3): 235-250.

Kammerman S.B. 2000, "Early Child Education and Care (ECEC): An Overview of Development In the OECD. Countries" ([www//childcare.org](http://www//childcare.org)).

Korpi, Walter. 2000. "Faces of Inequality: Gender, Class, and Patterns of Inequalities in Different Types of Welfare States." Social Politics 7(2):127-91.

Morris, L. 1990. The Workings of the Household. Polity Press.

OECD 2001. Employment Outlook.

OECD 2002 Employment Outlook.

Orloff A. S. 1996. "Gender in the Welfare State". Annual Review of Sociology, 22: 51-78.

Orloff Ann Shola. 2002. "Women's Employment and Welfare Regimes Globalization, Export Orientation and Social Policy in Europe and North America". Social Policy

and Development. Program Paper Number 12, United Nation Research Institute for Social Development. Pp.1-49

Persson I. and Jonung C. (eds.). 1998. Women's Work and Wages. Routledge. London and New-York. Pp. 190-209.

Rubery J., Bettio F., Fagan C., Maier F., Quack S., and Villa P. 1997. "Payment Structures and Gender Pay Differentials: Some Societal Effects". The International Journal of Human Resource Management, 8(3): 131-149.

Shelton Beth A. and D. John. 1996. "The Division of Household Labor." Annual Review of Sociology : 299-322

Smith, M. , C. Fagan and J. Rubery 1998. "Where and Why is Part-time Work Growing in Europe." Pp. 35-56 in J. O'Reilly and C. Fagan (eds.) Part-Time Prospects: An International Comparison of Part-Time Work in Europe, North America and the Pacific Rim. London: Routledge.

Sorensen A. and S. McLanahan 1987. "Married Women's Economic dependency, 1940-1980." American Journal of Sociology 93: 659-87

Spain, D. and S. Bianchi. 1996. Balancing Act: Motherhood, Marriage, and the Employment Among American Women. New York: Russell Sage Foundation.

Stier, H. 1998. Short Term Employment in Transitions of Women in the Israeli Labor Force." Industrial and Labor Relations Review. 51(2): 269-282.

Stier, Haya and Noah Lewin-Epstein. 2000 "Women's Part-time Work and Gender Inequality in the Family." Journal of Family Issues 21 (3): 390-410.

Stier H. Lewin-Epstein N. and Braun M. 2001. "Welfare Regimes, Family-Supportive Policies, and Women's Employment Along the Life-Course". American Journal of Sociology, 106 (6): 1731-60.

Van Berkel, M. and N-D De Graaf 2000. "Married Women's economic Dependency in the Netherlands, 1979-1991." British Journal of Sociology 49(1): 97-117.

Willborn S. L. (ed.). 1991.: "Women's Wages: Stability and Change in Six Industrialized Countries". International Review of Comparative Public Policy: A Research Annual Vol 3.

Wright Erik Olin, Janeen Baxter, Gunn Elisabeth Birkelund. 1995. "The Gender Gap in Workplace Authority: A Cross-National Study". American Sociology Review. Vol 60 (3) 407-435.

**Table 1**

**Multi-Level Models Predicting Women's Dependency Rate,  
All working age (25-60) Couples, in 19 Countries**

<b>Household Level variables</b>	Model 1	Model 2	Model 3	Model 4	Model 5
Wife more educated	-8.311* (0.434)	-8.303* (0.434)	-8.304* (0.434)	-8.312* (0.434)	-8.358* (0.430)
Husband More educated	8.670* (0.404)	8.675* (0.404)	8.671* (0.404)	8.664* (0.404)	8.743* (0.401)
Equal education, BA	-4.751* (0.637)	-4.739* (0.637)	-4.741* (0.637)	-4.751* (0.637)	-4.814* (0.632)
Wife's age	-0.067* (0.024)	-0.067* (0.024)	-0.067* (0.024)	-0.066* (0.024)	-0.067* (0.024)
Spouses' age difference (male-female)	-0.473* (0.045)	-0.474* (0.045)	-0.474* (0.045)	-0.473* (0.045)	-0.462* (0.044)
Number of Children in HH	5.739* (0.165)	5.736* (0.166)	5.736* (0.166)	5.739* (0.166)	5.680* (0.165)
Presence of Children<3	13.020* (0.545)	13.030* (0.545)	13.020* (0.545)	13.023* (0.545)	3.686 (14.8)
Intercept	44.620* (4.867)	84.910* (9.543)	78.840* (9.164)	38.460* (7.255)	80.950* (9.700)
<b>Country-Level Variables</b>					
<b>Effects on Intercept</b>					
Weeks maternity leave	-0.407** (0.244)	-0.228 (0.173)	-0.147 (0.161)	-0.344 (0.243)	-0.185 (0.171)
% children 0-3 in day care	-0.373** (0.214)	-0.142 (0.156)	-0.147 (0.142)	-0.382** (0.208)	-0.056 (0.150)
% Women in Labor Force		-0.725* (0.160)	-0.746* (0.145)		-0.818* (0.154)
% women working part-time			0.230* (0.112)	0.195 (0.174)	0.317* (0.119)
<b>Interaction with "children&lt;3"</b>					
Weeks maternity leave					0.241 (0.259)
% Children 0-3 in day care					-0.739* (0.229)
% Women in Labor Force					0.565* (0.234)
% Women working part-time					-0.808* (0.182)
N (n countries)	80917(19)	80917 (19)	80917 (19)	80917 (19)	80917 (19)

\*p<0.05 \*\* p<0.10

**Table 2**  
**Multi-Level Models Predicting Women's Dependency Rate,**  
**Dual-Earner Couples (25-60) in 19 Countries**

<b>Household Level variables</b>	Model 1	Model 2	Model 3	Model 4	Model 5
Wife more educated	-6.719* (0.317)	-6.719* (0.317)	-6.721* (0.317)	-6.720* (0.317)	-6.683* (0.315)
Husband More educated	5.257* (0.312)	5.256* (0.312)	5.251* (0.312)	5.250* (0.312)	5.251* (0.311)
Equal education, BA	-3.718* (0.444)	-3.718* (0.444)	-3.719* (0.444)	-3.719* (0.444)	-3.580* (0.442)
Wife's age	0.103* (0.019)	0.103* (0.019)	0.103* (0.019)	0.103* (0.019)	0.114* (0.019)
Spouses' age difference (male-female)	0.108* (0.035)	0.108* (0.035)	0.108* (0.035)	0.108* (0.035)	0.106* (0.034)
Number of Children in HH	3.509* (0.130)	3.509* (0.130)	3.510* (0.130)	3.510* (0.130)	3.510* (0.130)
Presence of Children<3	2.749* (0.437)	2.749* (0.437)	2.736* (0.437)	2.745* (0.437)	-23.580* (9.004)
Intercept	22.310* (2.924)	17.880* (8.147)	9.040* (6.108)	11.836* (3.175)	12.770* (6.120)
<b>Country-Level Variables</b>					
<b>Effects on Intercept</b>					
Weeks maternity leave	-0.282* (0.144)	-0.301* (0.147)	-0.188** (0.106)	-0.174** (0.104)	-0.226* (0.106)
% children 0-3 in day care	-0.105 (0.127)	-0.130 (0.133)	-0.135 (0.093)	-0.119 (0.089)	-0.108 (0.094)
% Women in Labor Force		0.080 (0.137)	0.052 (0.097)		0.009 (0.097)
% Women in Part Time Employment			0.329* (0.075)	0.332* (0.075)	0.339* (0.075)
<b>Interaction with "children&lt;3"</b>					
Weeks maternity leave					0.212 (0.149)
% children 0-3 in day care					-0.232** (0.132)
% Women in Labor Force					0.435* (0.139)
% women working part-time					-0.095 (0.111)
N (n countries)	51822(19)	51822(19)	51822(19)	51822(19)	51822(19)

\*p<0.05 \*\*p<0.10

**Appendix Table A1**  
**Household Characteristics in the Total Working Age Population and in Dual-Earner Families, (Couples aged 25-60)**

	All Families	Dual-earner families
Wife More Educated (% Households)	24.9	28.2
Husband More Educated (% Households)	30.2	29.0
Equal Education, Both with BA (% Households)	8.1	9.9
Equal Education, less than BA (% Households)	36.8	32.9
Average Wife's age (SD)	40.9 (8.5)	40.3 (8.0)
Spouses' age difference (male-female) (SD)	2.3 (3.9)	2.2 (3.8)
Average Number of Children (SD)	1.2 (1.12)	1.2 (1.1)
Presence of Children<3 (% Households)	13.7	11.4
N	82157	52,273

## Appendix Table A2

### Means (SD) of Country Characteristics Included in the Analysis

Variable	Definition/Source	Mean Value (SD)
Female Labor Force Participation Rate	LIS 1992-1999	64.2 (15.3)
% Female 15-64 in Part Time Employment	OECD, Employment Outlook 2002	26.3 (14.4)
Weeks of Fully Paid Maternity Leave	OECD, Employment Outlook 2001; Kamerman 2000	18.2 (11.6)
% Children 0-3 in Publicly Subsidized Day Care Institutions	Gauthier, 1999, Mayers and Gornick 2000.	13.8 (13.2)
N		19

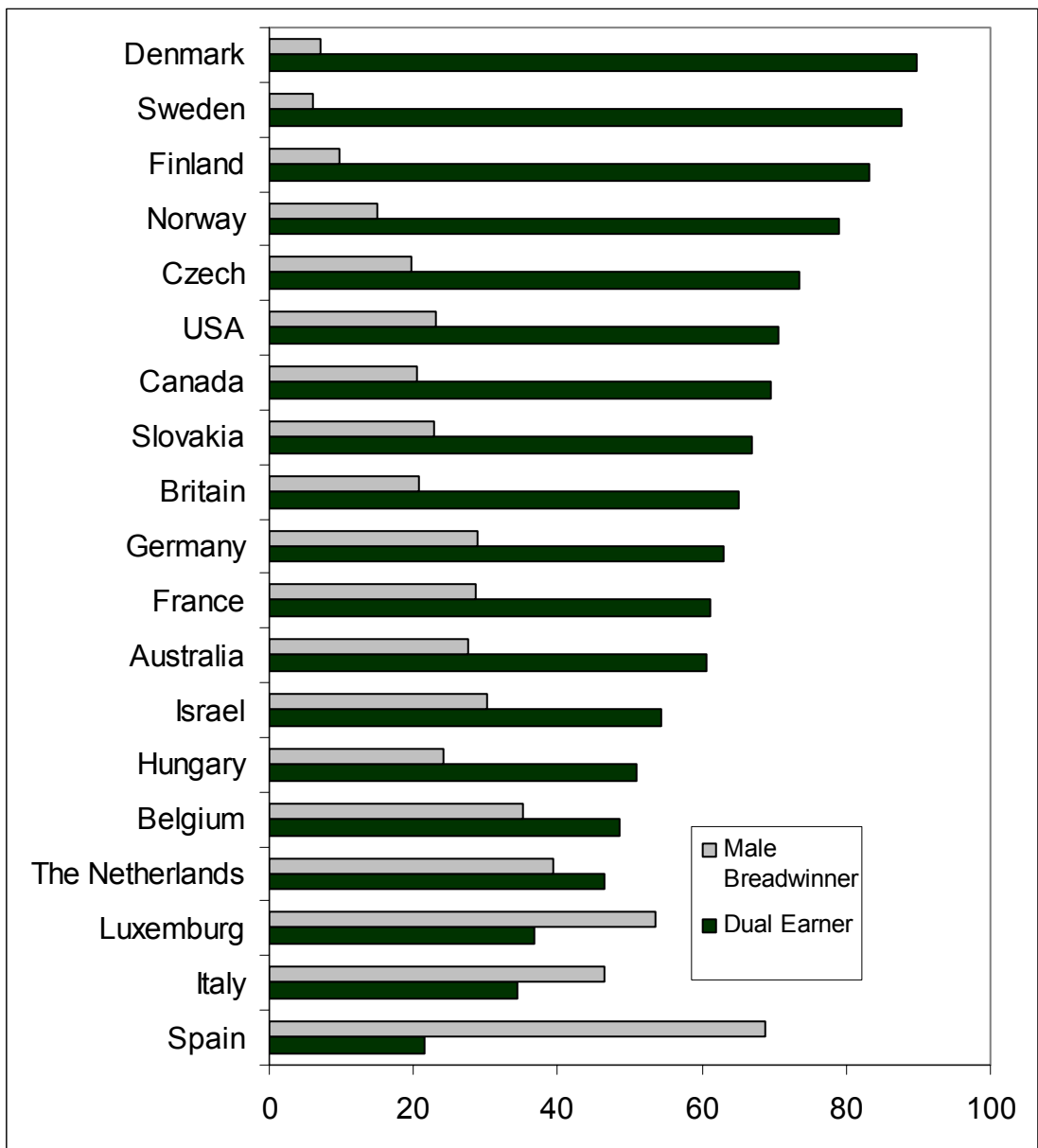


Figure 1. Distribution of Households by Breadwinner Type

Note: the figure does not present households with a female breadwinner and those in which none of the spouses works. Thus, percents for each country do not add to 100.

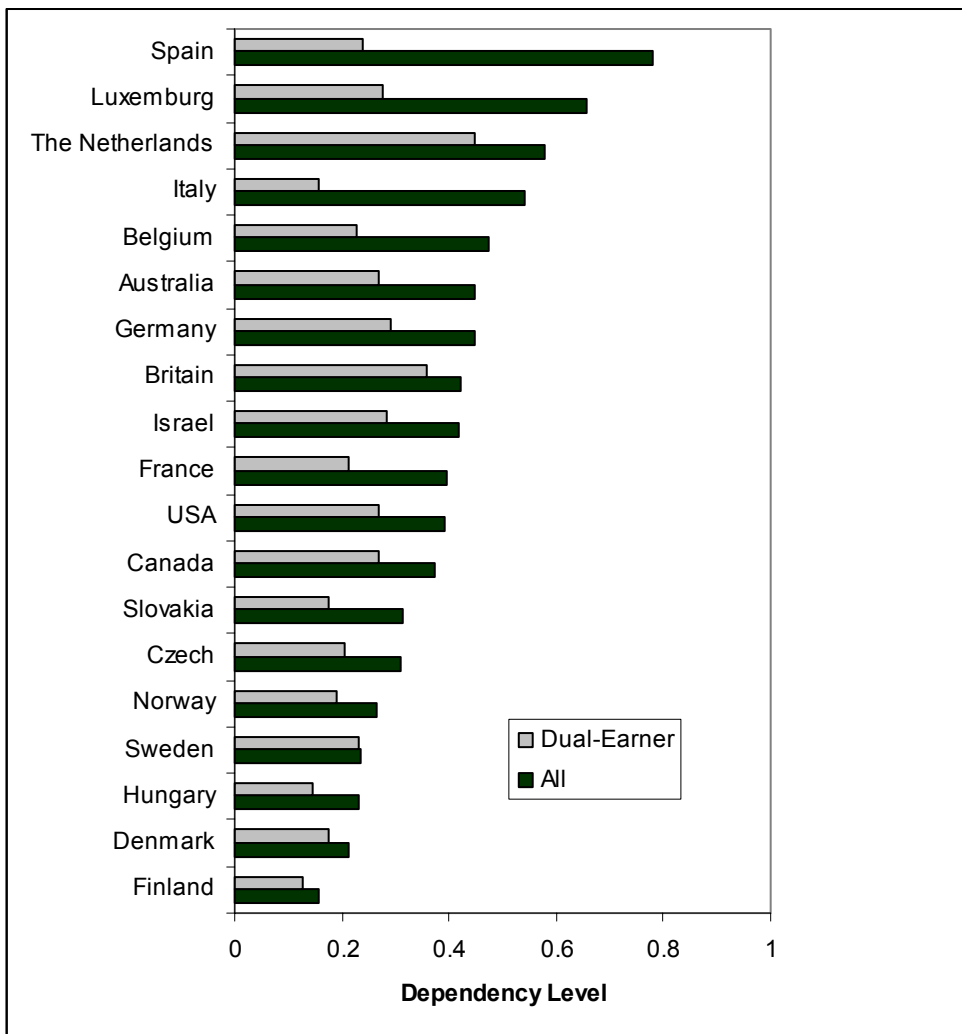


Figure 2. Wives' Earning Dependency by Family Type

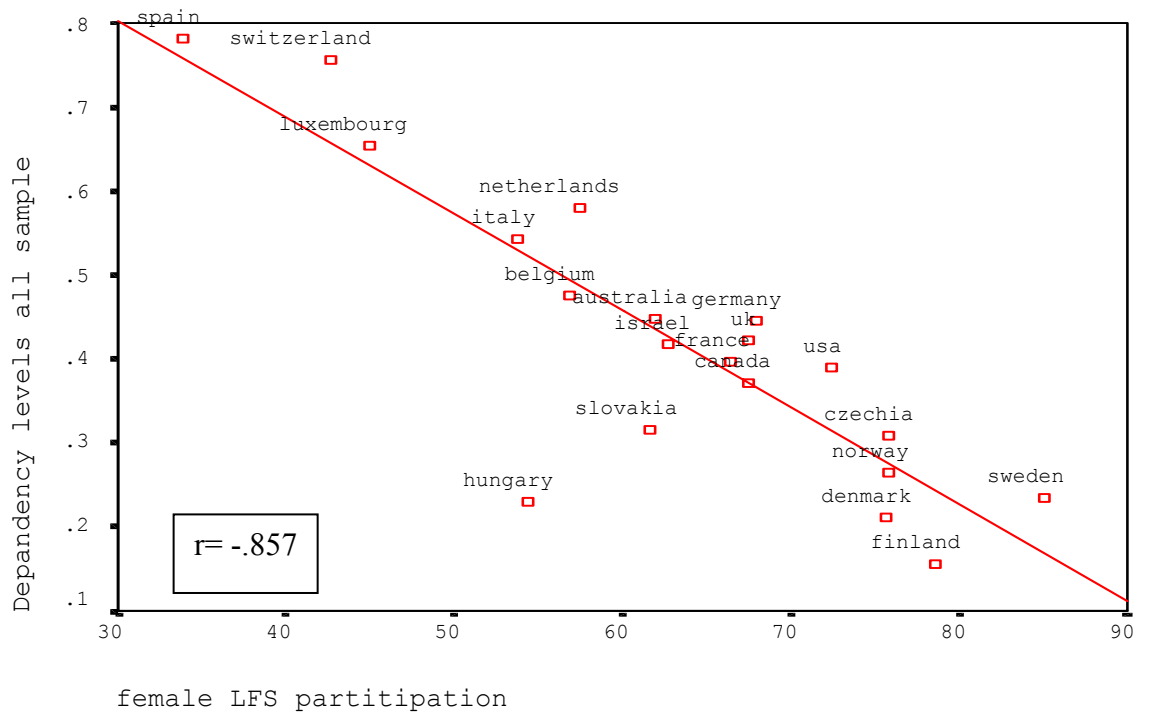


Figure 3. The Relationship between Female Labor Force Participation Rate and the Dependency Level

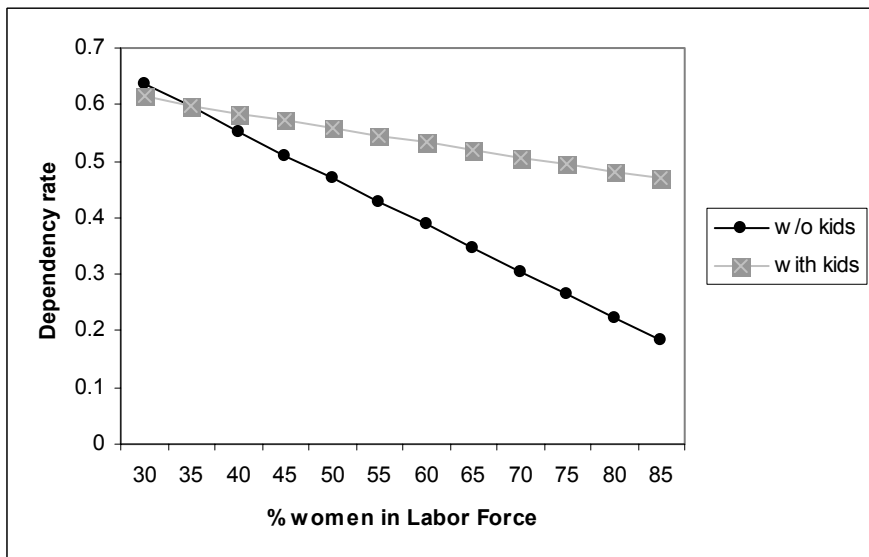
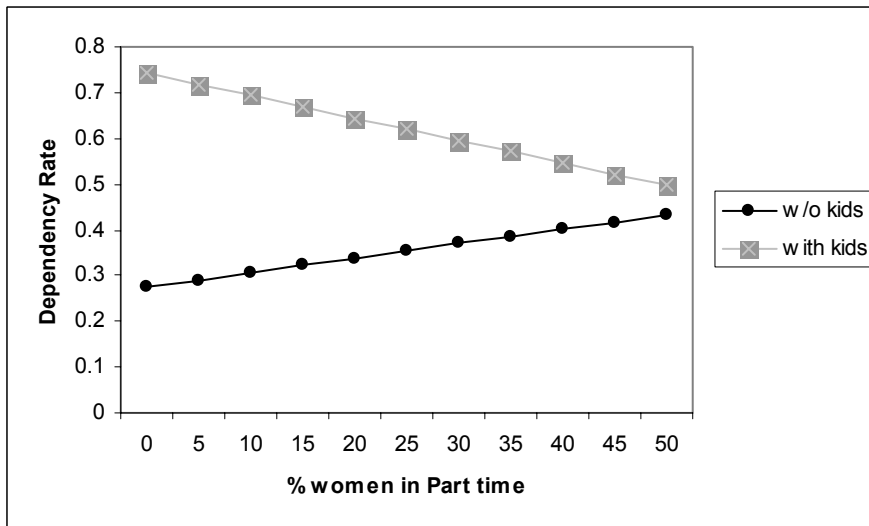
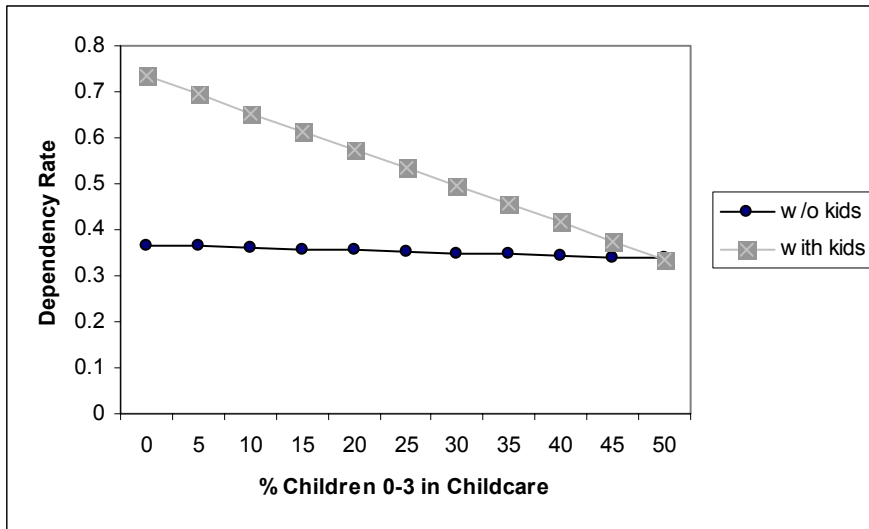


Figure 4. Predicted Dependency Level by the Presence of Young Children and Country Characteristics, All households

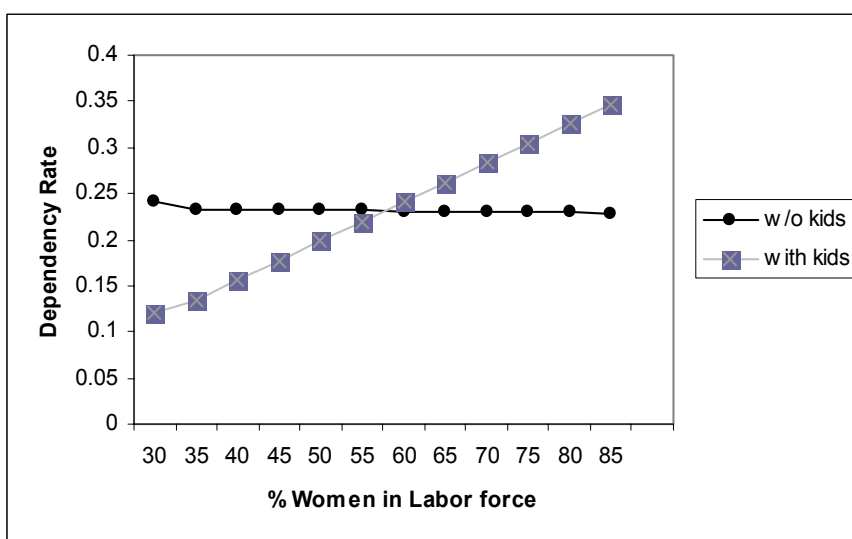
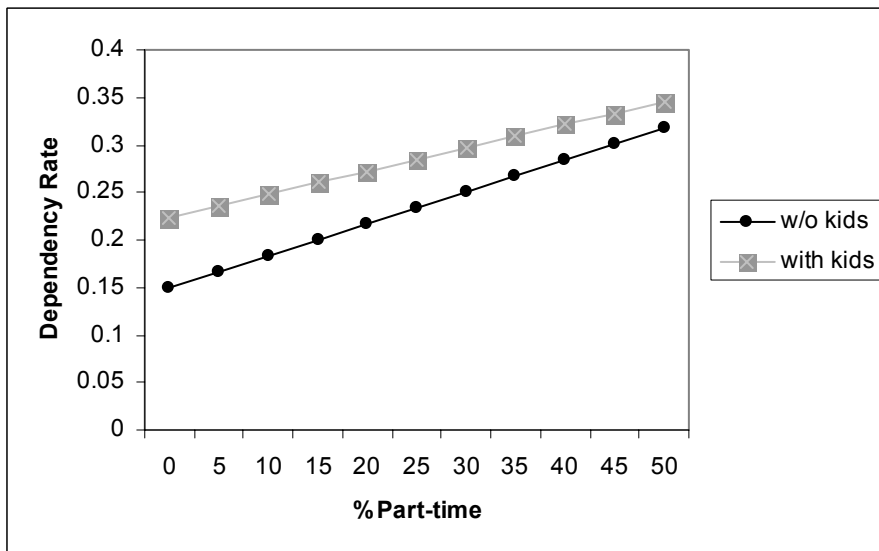
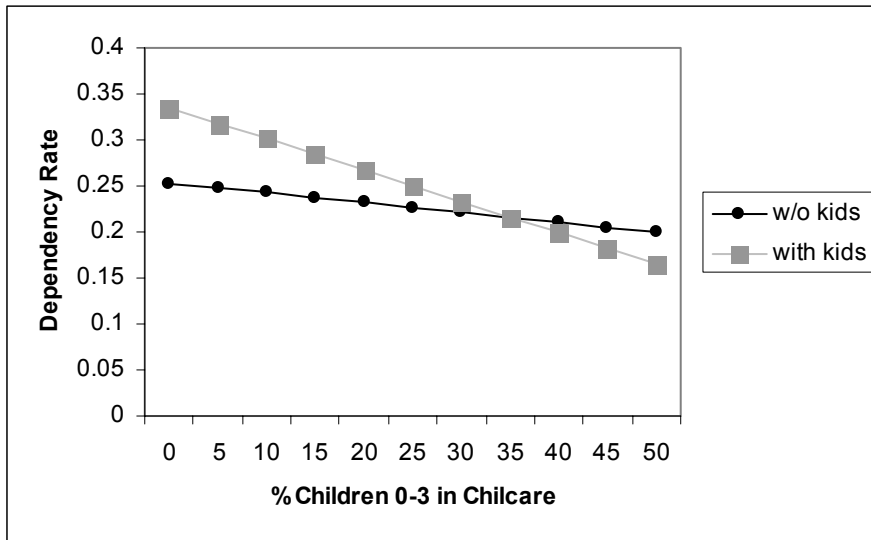


Figure 5. Predicted Dependency Level by the Presence of Young Children and Country Characteristics, Dual-earner Households