

Luxembourg Income Study Working Paper No. 267

**IMPACT OF DUAL CAREERS ON AVERAGE
FAMILY SIZE: COMPARISON OF 11 COUNTRIES**

Lynn Prince Cooke

June 2001

Impact of Dual Careers on Average Family Size: Comparison of 11 Countries¹

by
Lynn Prince Cooke
Nuffield College, Oxford University
l-cooke@northwestern.edu

**Presented at:
Second Demographic Transition in Europe
EURESCO Conference
Bad-Herrenalb, Germany
June 23-28, 2001**

¹ This research was funded in part by a grant from the National Science Foundation supporting an Integrated Research Infrastructure in the Social Sciences (IRISS), hosted at CEPS/INSTEAD in Differdange, Luxembourg.

The dissolution of the sexual division of labour remains, in Hochschild's (1989) words, a "stalled" revolution. While more and more married women participate in paid work, men have not equalized the division of labour by appreciably increasing the time they devote to unpaid domestic tasks. The state can assist in managing this double time burden on women by enabling families to externalize a portion of it via social provisions supporting maternal employment. This paper presents a formal model of family time and resource distribution, women's constraints therein, and the impact the market or social provisions can have in alleviating the strains between production and reproduction. The extent to which the externalization of the burden of care maintains both female labour force participation and family size is then analyzed for 11 countries in the mid-1980s and mid-1990s using data from the Luxembourg Income Study.

1. MODELS OF FAMILY

Economic models have increasingly been used to formalize family relationships ever since Gary Becker's seminal work on the new home economics. His neoclassical frame limits the unit of analysis to the household, with each household maximizing a single utility function. Marriage occurs when the joint household output exceeds that of the component single-person households (Becker 1973, 1974); the sexual division of labour evolves because it is the most efficient means of increasing joint household production (Mincer & Polachek 1974; Becker 1985); and fertility decisions are made by a dynastic head to optimize the number of children versus consumption across generations (Becker and Barro 1988).

Individual needs within the household are satisfied via altruism, wherein decreased consumption of those with more resources is compensated for by their pleasure in increasing

the consumption of other household members (Becker 1981). Altruism does not necessarily connote an equal sharing of resources, but assumes that individual short-falls are accepted as part of the cost of being a member of a family. This is a very strong assumption, requiring the existence of a universal preference for the traditional nuclear family comprised of a male breadwinner, female caregiver and their off-spring over all other alternatives. The rise in married women's employment and the rise in females choosing to be single heads of household suggest that more important dynamics are occurring within the household.

Bargaining theory opens up the black box of the household by allowing for individual utility functions, with game theory applied to the intra-family distribution of goods and services. In a two-person game, as in a family, the outcomes of one person's actions depend on the actions of the other player. Nash bargaining models are used to determine family member strategies, initially applied with the assumption of cooperation among family members. In a cooperative game, players communicate freely and make binding, costlessly enforceable agreements. In these cooperative bargaining models, divorce has been considered the threat point (see, for example, Manser & Brown 1980 and McElroy & Horney 1981).

More recently, noncooperative game theory has been applied to the family. Noncooperative game theory relaxes the assumption that binding agreements are made, instead focusing on self-enforcing strategies that reflect best replies to the other partner's best replies (Lundberg & Pollak 1993; Lundberg & Pollak 1994). Cooperation can be sustained even in a noncooperative game, however, if the game is repeated indefinitely. This requires a credible threat of punishment that reinforces the incentive to cooperate. Lundberg and Pollak (1994) theorise that the threat within the family, short of divorce or pernicious forms of

abuse, is to reduce contributions to the family good. Such a reduction could mean that couples live in less tidy homes. Alternately, families could reduce the number of children.

Presented next is a model of time and resource distribution representing key constraints on women's choices between production and reproduction in a joint household. It is based on theoretical work with Richard Breen in which we are developing a full stylized model of family bargaining. While the full bargaining model will depict the negotiable time allocations within a family, the constraint model presented here focuses on the family burden as assumed fully by the woman or shared with care providers external to the family. The reason for looking first at this constraint model is to ascertain whether female labour force participation and fertility levels can be maintained by outsourcing the burden of care, or whether the comparative evidence suggests that men must indeed assume more of the burden of care.

2. FAMILY TIME ALLOCATION

In a joint household, women and men negotiate the production and distribution of private and family goods. The production of private goods entails labour force participation. An individual has control over those economic resources he or she directly generates and can distribute any portion, none to all, among other family members. A pleasant home and well-raised children are frequently referred to as family goods; however, allocating time to family goods production can be a matter of maximizing either individual or joint utility functions.

Assume all individuals, i , have a total amount of time, T , available to be allocated to work, X , and leisure, L ,

$$(1) \quad T_i = X_i + L_i$$

The choice of family state is budget constrained. In the simplest family state of being single with no children, $s_{c=0}$, time is allocated between work and leisure such that

$$(2) \quad X(w_i) > c(a_i)$$

Where w_i is the wage rate of the individual and $c(a_i)$ is the consumption cost of maintaining an adult. Total individual utility is comprised of the utility from production and the utility from reproduction (including leisure time). In the single-no-children state this is,

$$(3) \quad s_{c=0} = U(X(w_i)) + U(T - X - Y(a))w_L$$

$Y(a)$ is the time cost of maintaining one adult in terms of housekeeping, shopping, preparing meals, etc., whereas w_L is the wage rate of leisure.

In a two-person family² with no children under the sexual division of labour, the total utility for a man in that state is,

$$(4a) \quad U_{M,mc=0} = U(X(w_M) - c(a_F)) + U((T - X)w_L) + U(M)$$

and for the female,

$$(4b) \quad U_{F,mc=0} = U(c(a_F)) + U((T - Y(2a))w_L) + U(M).$$

The male breadwinner in Equations 4a and 4b must cover the incremental economic cost associated with maintaining the wife, $c(a_F)$, but after meeting this, all of his remaining income can be devoted to meeting his own consumption needs and available time can be taken as leisure. For the woman, the private consumption good is only that adult cost provided by the man. Her time is devoted to the time cost of maintaining herself and the man, with any remaining time available for leisure. The utility of the union is depicted by $U(M)$.

² A two-person family comprised of an adult male and female is not the only family configuration possible. Since the interest here, however, is in differentiating between time allocations based on traditional gender roles, this assumption is necessary.

The addition of children in this traditional male-breadwinner family increases the production burden of the man and the reproductive burden of the woman:

$$(5a) \quad U_{M,m+c} = U(X(w_M) - c(a_F) - c(c)) + U((T-X) w_L) + U(M) + U(C)$$

$$(5b) \quad U_{F,m+c} = U(c(a_W)) + U((T- Y(2a)-Y(c)) w_L) + U(M) + U(C)$$

where $c(c)$ is the consumption cost of a child and $Y(c)$ is the time cost of a child, and $U(C)$ the utility derived from the child. Men can meet their incremental family burden by working more hours, X , and reducing leisure time; garnering a higher wage rate, w_M , or reducing the money allocated to covering the consumption costs of the woman or the child. It is clear that if this latter tack were taken, women unable to participate in the labour market would have no choice to but accept the reduced $c(a_F)$ provided to them. Further, women's time devoted to children cannot compensate for sub-optimal allocation to $c(c)$.

As a strategy to hedge against economic risk, then, the sexual division of labour appears quite inadequate. I contend that it did not evolve necessarily due to differing gender preferences for paid versus unpaid work such as claimed by Becker (1985); rather, the dominance of the male-breadwinner household evolved due to differing gender probabilities of success in the labour market. Historically, women had few other economic options. In some industrialized countries, married women were specifically barred from employment (Lewis 1992) even during times when husbands were highly likely to be unemployed (Pedersen 1993).

As women's access to paid labour has improved, they can obtain greater economic independence. This decreases their need to rely on a male breadwinner to hedge against economic destitution (see Breen 1998 for a formal presentation of this), in turn increasing the number of feasible household options. First, women no longer need to marry for economic security. It is even possible for women to have children without being married, either by

choosing this state prior to childbearing or leaving a cohabitative state post-childbearing. Further, if women choose to form traditional households, their greater economic autonomy enhances their relative bargaining position within the family. In addition, as male labour force participation rates in OECD countries have fallen, women's earnings provide a hedge against the rising risk of interruption in a male breadwinner's earnings in even more traditional households.

Thus, women's paid labour force participation enhances both their individual bargaining power within the family and the family well-being, so it is a self-reinforcing strategy. As a self-reinforcing strategy, it is likely to endure. Time, T , however, is constrained, so the optimal family allocation of time and resources to production versus reproduction becomes more complex as women devote more time to paid labour.

Assume the man still does not assist appreciably in the time demands of the burden of care when women enter the labour market, an assumption supported by current empirical evidence (Blossfeld & Drobnic 2001; Coverman & Sheley 1986; Gershuny 2000). Under this scenario, men's utility is identical to that displayed in Equation (5a). What increase are the time and/or economic burdens within a working mother's utility equation:

$$(6b) \quad U_{F,m+ce} = U[(T - ((Y(2a) + Y(c) - Y(o)) - L)(w_F - w_{c,t}) + c(a_F))] + \\ U[(T - Y(2a) - Y(c) - X + Y(o))w_L] + U(M) + U(C)$$

$Y(o)$ is the time cost of family that is saved by either purchasing it in the market or having some portion of it covered by social provisions, and $w_{c,t}$ is the hourly cost of such assistance (w_c if purchased in the market and w_t derived as an hourly tax rate if care is made available as a social provision).

Over the past thirty years, real individual income has declined. Now, women need to participate in the labour force to maintain family wealth levels previously attainable by a

male breadwinner. Holding wealth constant, constraints represented in Equation 6b would predict that average family size should be lower in dual-earner versus single male-breadwinner households. In other words, if achieving a given level of wealth requires more time to be committed to production from both the man and the woman, there is less of the woman's time available for family good production.

The time strains on a dual-earner household can be ameliorated by either purchasing $Y(o)$ from the market or having some of the burden alleviated by social provisions. However, if women's market participation is merely allowing the family to achieve the previous male-breadwinner-only level of wealth, it may be too costly to purchase $Y(o)$ from the market. When market solutions are the only available external resource to alleviate the time demands of 6b, the reduction in average family size within dual-earner households should be larger than in those countries with some social provisions for care.

Social provisions can reduce a given family's additional cost or time burdens of children via social provisions. Gornick and her colleagues (1997) constructed a relative index of social provisions supporting maternal employment for 14 industrialized countries. The index includes policies as of mid-1980 on parental leave, childcare and scheduling of public education.³ France, Sweden, Finland, Denmark and Belgium had the most generous provisions for preschoolers, although relative support for infants versus children age 3 to 6 varies. Norway, Italy, Germany, Luxembourg, the Netherlands and Canada have more moderate support for maternal employment. Weakest social provisions for preschoolers were found in Australia, the UK and the US.

Gornick, Meyers and Ross (1998) then simulate the likelihood that women exit the labour market when they have small children under these varying levels of support for

³ The indices are currently being updated, but results will not be available until later in 2001 or early 2002.

maternal employment. They found that the existence of high child penalties in employment coincides with greater likelihood of female employment interruptions following childbearing. The child penalty for infants was greatest in the UK, followed in rank order by Australia, Norway, the Netherlands, Germany, the US and Canada. Italy alone yielded the only positive and significant coefficient, suggesting mothers with young children are actually more likely to remain employed. Belgium, France and Sweden also had positive, albeit statistically insignificant, coefficients.

An alternate avenue of agency available to women under varying support levels for maternal employment, however, is to reduce childbearing in favor of employment. The extent to which this avenue of gender agency is being taken will be assessed next for those 11 countries where Gornick *et al* found the greatest and least child penalties.

3. METHOD AND DATA

The trade-off between family production and reproduction will be compared in Australia, Belgium, Canada, France, Germany, Italy, the Netherlands, Norway, Sweden, the UK and the US using data from the Luxembourg Income Study (LIS). LIS is an archive of microdata sets from 25 industrialized countries including demographic, labour market, and income data at the household and individual levels, rendered comparable across countries. Since the interest here is in ascertaining changes in fertility among joint households, a sample is selected of those married or cohabitating households where the woman is at risk for childbearing, defined as the female being less than 50 years old.⁴

⁴ Analyses were also run using just legally married couples. In those countries with more cohabitating couples, including them tended to slightly increase the prevalence of dual-earners among the lowest income quartiles. This is consistent with other evidence that suggests younger persons are more likely to cohabit, in turn resulting in cohabitation being correlated with lower earnings earlier in the life course.

As shown in Table 1, female employment has increased in all the countries between 1985 and 1995. Across this same time period, income inequality has also increased in all of these same countries with the exception of Canada (Smeeding 2000). This suggests there are macroeconomic pressures on families, which are predicted in the model to increase the likelihood of women engaging in paid work in order to enhance family well-being. Consequently, two waves of LIS data will be used to compare changes in the prevalence of male-breadwinner versus dual-earner households, as well as family size, in mid-1980 versus mid-1990.

If female labour force participation enhances both individual and family well-being, it should be increasing. As female labour force participation increases, fertility can be adversely affected because of the time constraints modeled in Equation 6(b). To assess this, the dependent variable in the Models 1 and 2 for each time period will be the mean number of children under 18 in households.

The first set of independent variables assess the predicted effects of household budget constraints controlling for women's age. Household financial circumstances are measured with three dummy variables for income quartiles based on disposable household income, less any family allowances:

1. Low Income, those households with disposable income greater than zero but at less than the 25th percentile;⁵
2. Low Middle, those joint households with disposable income between the 25th and 50th percentile;
3. High Middle, those joint households with disposable between 50th and 75th percentile.

⁵ Many of the early surveys used to compile LIS use zero as a missing as well as valid value. To avoid drawing conclusions based on missing observations, household income data was bottom coded to be greater than zero. Doing this changed the quartile cut-off values by less than 0.5 percent.

While some level of wealth is necessary to support a family, the highest income households have historically had smaller families. Consequently, the high-income group (disposable income above the 75th percentile) will be the referent against which the lower income groups are compared.

The traditional pattern of female employment is to enter and exit the labour market depending upon family obligations. As a result, both the youngest and oldest women in the age group of interest are more likely to be employed than women age 25 and 40, and also have fewer young children. Younger women have not yet begun their families, so would have no children; older women are likely to have some children over the age 18. Three dummy variables will be included as controls for women's age groups against a referent of women age 41 to 50. The youngest age category includes females less than 25 years old, predicted to have significantly fewer children. A second dummy denotes women age 25 to 30. These women should have more children than the youngest age group, but probably do not differ significantly from the referent. Women age 30 to 40 are predicted to have significantly more children under 18.

A second model includes a dummy variable for a dual-earner household against a referent of a single male breadwinner. Being a dual-earner household is expected to predict lower average family size given the time pressures on women suggested in Equation 6(b). The extent to which a woman's labour force participation is associated with fewer children is expected to vary across countries depending upon social policy support for maternal employment. Being a dual-earner household is expected to have a larger negative impact on average family size in those countries with the highest child penalty for young children: the UK, Australia, Norway, the Netherlands, Germany, the US and Canada. If social provisions enable women to balance production and reproduction, *ceteris paribus*, the dual-earner effect

on number of children should be smaller and insignificant in Italy, Belgium, France and Sweden, those countries with the lowest child penalties.

The hypothesized dual-earner effect may reflect women's preferences for production versus reproduction. Women's presumed preference for unpaid care work (Becker 1981) was postulated at a time when women's access to the labour market was more restricted. Now that more women have greater access to employment, those that prefer production over reproduction might choose to have fewer children in favor of employment. In this case, even the most generous social provisions will not ameliorate the dual-earner effect, and increases in the magnitude of the effect across time may be revealing a growing portion of women with greater preference for production versus reproduction.

A logistical regression will also be run to ascertain the characteristics of women likely to be second earners in a household at the two time periods for each country. Predictors include variables for women's age, educational attainment, ethnicity of the household head, and number of children. It is important to control for number of children because of the inability to assess causality with cross-sectional data. While in the prior analysis, it is assumed that female employment may result in fewer children, it is equally plausible that having more children makes it more difficult for women to be employed. Thus, the effect of each additional child on the likelihood of a woman being employed is expected to follow the same patterns as dual-earner effects in the prior analysis.

As in the previous regression, age effects will be modeled with three dummy variables for younger women relative to those in the 41 to 50 year old group, the age at which women are most likely to be working since any children they have are older. It is predicted that the youngest age group is more likely to be employed than either women in their late 20s or 30s, the prime childbearing and child-rearing years.

For the likelihood model, the effects of income group will be assessed differently than in the prior regression models. As noted earlier, lower-income women have always been the most likely to be employed, making this category a stable referent across time. In contrast, there are divergent predictions as to the likelihood of employment among women in the highest income group. Women among the highest income quartile are the ones in households with the least economic need for the additional resources of their employment. This would lead to a prediction that such women are less likely to be secondary earners. On the other hand, researchers in the US have found that the rising correlation of wives' and husbands' earnings is contributing to rising income inequality (Cancian, Danziger & Gottschalk 1993), especially among more highly-skilled women (Chiun & Murphy 1996). This would suggest that women in the highest income groups might be more likely to be employed and causing the family to be in the highest quartile. Consequently, I wanted to see how the highest income group effects manifest in the countries.

Dummy variables are constructed at the two extremes of women's educational attainment: one for women attaining primary school or less, and one for schooling beyond secondary level,⁶ against a referent of secondary schooling. Predicted effects of education on the likelihood of partnered women being employed are also divergent along the same lines as income. In neoclassical economic models, women's preference for employment is associated with higher educational attainment, in that women will choose greater human capital investment in expectation of its returns in the labour market (Nerlove 1973), much as was reported above for the 1980s among US women. The human capital model would also predict that once controlling for being in lower-income households, lower-educated women will be less likely to comprise dual-earner households, as their low stock of human capital

would yield the smallest returns. On the other hand, using a rational choice model, Breen and Goldthorpe (1997) suggest that women traditionally pursued post-secondary education as a strategy for finding a better partner, not an investment in human capital. This would lead to the prediction that more highly educated women are less likely to be second earners in a household. An interaction term will also be constructed for highly educated, high-income women to determine the likelihood of employment among these most advantaged women across countries and time.

Finally, different ethnic groups have varying traditions regarding desired family size and maternal employment that might diverge from other family and female employment trends within countries. Where this information is available in the LIS data archive, it will be entered as control dummies (see Table 6 for countries, categories and referents).

4. RESULTS

A. Dual-Earner Effect on Average Family Size

Across the countries, the proportion of male-breadwinner households continues to decline, from an average of 33 percent in mid-1980 to 20 percent in mid-1990 (see Table 2). The relative proportion of each household type within the four income groups has remained stable, with dual-earner households on average economically better-off than male-breadwinner households. Over two-thirds of all dual-earner households have income above the 50th percentile, whereas approximately the same proportion of male-breadwinner households have income below the 50th percentile.

As shown in Table 3, the mean number of children under 18 before controlling for other factors is lower in dual-earner households except in Norway 1986, with the difference

⁶ The analyses were also run using attainment of the equivalent of a bachelor's degree, which did not

generally being statistically significant.⁷ Trends across time vary. The average number of children has declined in both household types in Australia, Canada, the Netherlands, Sweden and the UK. The average number of children has remained the same or increased in both household types in Belgium, Germany and the US. In Italy and Norway, average family size has increased in male-breadwinner households yet fallen further in dual-earner households.

Results of the regression are displayed in Table 4. In most countries, being a lower-income household predicts more children versus the highest income households. This was true for all three lower quartiles at both times in Australia, Germany, the Netherlands and the UK. It was true for the lower three quartiles in mid-1980 in Canada, Italy and the US, but by mid-1990, only those households in these countries with income at the 50th percentile or below had significantly more children under 18 than the highest income quartile. In France and Sweden, this 50th percentile split was true in both mid-1980 and mid-1990. Only in Belgium was the difference in average number of children generally insignificant among the income groups.

The age coefficients reveal fairly consistent trends in timing of children across countries. In the mid-1980s, being a woman less than 25 years of age predicted significantly fewer children in all countries but Belgium and France. This coefficient was negative in all the countries in mid-1990, although the result was not statistically significant in Belgium. For most countries, however, the coefficients were positive and significant for women age 25 to 30 and women age 30 to 40, with the latter being the largest. The exceptions were the Netherlands, where the coefficient for the 25-30 age group was insignificant, and Australia,

substantively alter results reported.

⁷ While the difference failed to reach statistical significance for France 1994, this could be due to the fact that the number of male-breadwinner households relative to dual-earner households was very small. This also eliminated the reference category in the regression for dual-earner households.

where the coefficient for the 25-30 age group was insignificant in mid-1980 and negative in mid-1990.

Yet in those countries where the coefficient for the 25-30 age group was positive and significant across time periods, it tended to be much smaller in mid-1990 than mid-1980 (with changes ranging between -.11 and -.79), except in Italy, the Netherlands and the US where it remained almost identical, and Sweden, where it was only slightly smaller. At the same time, the size of the coefficient for the 30 to 40 year age group stayed more equal across the two time periods. These results suggest that on average, women are delaying childbearing until later in the life course. Data for future time periods are needed to ascertain whether the overall level of family size is remaining constant, or if the youngest cohort analyzed here will have fewer children when they reach the prime family-size age group of 30 to 40.

As predicted, the dual-earner effect tended to be more negative in those countries with higher child penalties, although the relative order differed from Gornick et al's results for mid-1980s. The notable exception was France, with the most negative dual-earner effect for mid-1980s. A working French woman was predicted to have -.62 children less after controlling for the other variables. This was followed by Canada, the UK, Germany, Norway and the US with coefficients between -.57 and -.50. More moderate, but still negative dual-earner effects were found in Australia, Sweden and Belgium, and no statistically significant effect was found in Italy.

For mid-1990, the absolute rankings shifted only slightly, but trends within countries varied. Once cases were excluded for missing income data, an insufficient number of male breadwinner households remained for a comparison group in France, so there is no way to ascertain if the negative dual-earner effect in that country was maintained. The dual-earner

effect became more negative in the UK, the Netherlands, and Italy, with changes in coefficient size between $-.11$ and $-.12$. The coefficient was slightly more negative in Belgium and Germany. The dual-earner effect eased slightly in Australia, Norway and the US, and somewhat more in Canada and Sweden. These within-country trends of the dual-earner effect did not coincide with relative increases in the number of dual-earning households. For example, while the change in the dual-earner effect was the same in the Netherlands and Italy ($-.12$), the Netherlands experienced an increase of 11 percentage points in the number of dual-earning households while the increase in Italy was just one percentage point.

Not included in the regression because of its endogeneity is the impact family allowances may have on average family size. Table 5 presents mean family allowances and maternity benefits for the countries in US dollar equivalents at the time and the proportion of mean household income family allowances represented. These data suggest that, while family allowances may ameliorate part of the cost burden of children, variances in their generosity and changes in their relative generosity over time do not necessarily support maternal *employment*, and do not coincide with the relative sizes of the dual-earner effect. Nor do the more generous allowances coincide with larger average family size. The US, with no family allowances, has on average more children per household than Sweden with the most generous allowance.

B. Likelihood of Being in a Dual-Earner Household

Table 6 reveals that women in the lowest income quartile have the greatest likelihood of being in a dual-earning household and that the likelihood declines as economic status increases. This supports that the decision for partnered women to work is economically

motivated. The evidence presented here does not support the human capital model at either end of the educational attainment scale. Even after controlling for income, the least educated women are far more likely to be employed than those women completing secondary education despite their lower accrued human capital. In addition, where results are statistically significant, the most highly educated women are less likely to be employed except in Italy in mid-1980.

The interaction term between high education and high income was statistically significant in the US in mid-1980, supporting the results found elsewhere and indicating that these women were far more likely to be employed. This is the exception for the countries, however, and not the norm. In the same time period, the direction of the effect was the same in Australia and Canada, but the coefficients were not statistically significant. For the remaining countries, these privileged women were less likely to be employed in the mid-1980s, less likely in general than when just looking at high education alone.

As of mid-1990, even the situation in the US had changed, with the coefficient for highly educated, high income women smaller than it was in mid-1980, and now statistically insignificant despite a much larger sample size. This same group of women in Australia, Belgium, Italy and the Netherlands is also slightly more likely to be employed in mid-1990s, but the coefficients are not statistically significant. In Canada, Germany, Norway, Sweden and the UK, these women were less likely to be employed, although in most cases the difference was again not statistically significant. These results support that women's pursuit of post-secondary education is not necessarily a strategy for enhancing human capital, but predicts a greater likelihood of adhering to the sexual division of labour.

This conclusion is also supported by the results for the youngest partnered women. The traditional pattern of female employment has been that young women work for a period

of time before marriage, and then exit the labour market at either marriage or childbirth, and then return later in the life course after their family obligations have eased. As shown in Table 6, these youngest women are significantly less likely than women age 41 to 50 to be employed in all countries except the UK, and in many cases less likely than any other age group. It could be that these women have started their families by the age of 25, or these women may still be in education and move from that state directly to motherhood.

4. SUMMARY AND CONCLUSIONS

The dissolution of the sexual division of labour within households appears to have stalled as of the mid-1990s for both men *and* women. While more women are participating in the labour market, the motivation appears to be to enhance family economic well-being among the lower income quartiles. As women allocate more time to production and men still restrict their time devoted to care work, the average family size can be expected to decline unless the burden of care can be assumed outside the family by the market or via social provisions.

The findings here suggest that being a dual-earner household in the mid-1990s predicts fewer children in all the countries studied, although the trends within countries across time vary. As of the mid-1990s, the negative dual-earner effect is the smallest in Belgium, Sweden and Italy, countries with more generous social provisions in support of maternal employment. It is most acute in the UK, followed in rank order by Germany, the Netherlands, the US, Norway, Canada and Australia, countries with fewer or no provisions supporting maternal employment.

The fact that the negative effect of being a dual-earner household is smaller in those countries with the most generous provisions supports that welfare regimes can underwrite the

burden of care in order to maintain average family size as well as the additional tax base stemming from maternal employment. Leaving the burden of care to the market does not appear to alleviate time and economic pressures that result in smaller average family size.

But it is not clear that additional social provisions would eliminate the dual-earner penalty completely for two reasons. First, the smaller family sizes may be reflecting women's true preferences for production versus reproduction. Women's presumed preference for unpaid care work was postulated at a time when women's access to the labour market was more restricted. Even now, women encounter wage differentials and family wage gaps that tip relative family resources in favor of women assuming more of these unpaid burdens. Research with panel data is needed in this area, to determine to what extent the smaller family sizes when women choose to work reflect true preferences for production versus reproduction, or the hypothesized economic and time constraints.

Second, while the evidence suggests that externalizing some of the burden of care eases the time and economic pressures on women, it may be that additional relief can only come from within the household. Further research is needed to ascertain whether average family sizes are larger in those households where men devote more time to caregiving and household tasks relative to similar households where the burden of care is managed by the woman or outsourced to external providers.

One intriguing finding is that the most educated and economically privileged women who *could* garner the greatest individual market rewards are less likely to be employed, more likely instead to choose the traditional sexual division of labour. This result casts doubt on whether women wish to achieve economic autonomy or equality, instead suggesting that the interplay between personal and family strategies is more complex. At the same time, while

these high-income households have the greatest time and economic resources, the average family size of this group still tends to be the smallest.

In sum, for most families, female employment is an economic necessity, but one with a reproductive cost that is not fully ameliorated by social provisions. The extent to which this reflects changing women's preferences, or the extent to which men's assumption of more of the burden of care can reverse this trend are still unknown. In addition, highly educated women are less, rather than more, likely to eschew the traditional sexual division of labour, but neither do they pursue greater levels of reproduction. It is clear we must move beyond existing household models of family or individual models of gender to explain family and gender strategies in the modern world.

References

- Becker, Gary S. (1973). "A Theory of Marriage, Part I." *Journal of Political Economy* 81 July/August 1973 (pp. 813-846).
- Becker, Gary S. (1974). "A Theory of Marriage, Part II." *Journal of Political Economy* 81 March/April 1974 (pp. S11-S26).
- Becker, Gary S. (1981). "Altruism in the Family and Selfishness in the Market Place." *Economica* 48, February (pp. 1-15).
- Becker, Gary S. (1985). "Human Capital, Effort, and the Sexual Division of Labor." *Journal of Labor Economics* 3:1 Part 2 (pp. S33-S58).
- Becker, Gary and Robert J. Barro (1988). "A Reformulation of the Economic Theory of Fertility." *The Quarterly Journal of Economics* 103:1 (pp. 1-25).
- Blossfeld, Hans-Peter and Sonja Drobnic (2001). *A Cross-National Comparative Approach to Couples' Careers*. Oxford: Oxford University Press.
- Breen, Richard (1998). "Risk and Recommodification: Towards a Formal Model of Inequality in the Distribution of Risks." Paper presented at the Max-Planck-Institute fuer Bildungsforschung, Berlin, March 1998.
- Breen, Richard and John H. Goldthorpe (1997). "Explaining Educational Differentials: Towards a Formal Rational Action Theory." *Rationality and Society*, 9:3 (pp. 275-305).
- Cancian, Maria, Sheldon Danziger and Peter Gottschalk (1993). "Working Wives and Family Income Inequality among Married Couples." In Sheldon Danziger and Peter Gottschalk, Eds., *Uneven Tides: Rising Inequality in America* (pp. 195-222). New York: Russell Sage Foundation.
- Coverman, Shelley and Joseph F. Sheley (1986). "Change in Men's Housework and Child-care Time: 1965-1975." *Journal of Marriage and the Family* 48 (pp. 413-422)

- Gershuny, Jonathan (2000). *Changing Times: Work and Leisure in Postindustrial Society*. Oxford: Oxford University Press.
- Goldthorpe, John H. (1984). "Women and Class Analysis: In Defence of the Conventional View." *Sociology* 17:4 (pp. 465-488).
- Gornick, Janet C., Marcia K. Meyers and Katherin E. Ross (1998). "Public Policies and the Employment of Mothers: A Cross-National Study." *Social Science Quarterly* 79:1, March 1998 (pp. 35-54).
- Gornick, Janet C., Marcia K. Meyers and Katherin E. Ross (1997). "Supporting the Employment of Mothers: Policy Variations Across 14 Welfare States." *Journal of European Social Policy* 7:1 (pp. 45-70).
- Harkness, Susan and Jane Waldfogel (1999). "The Family Gap in Pay: Evidence from Seven Industrialised Countries." Luxembourg Income Study Working Paper #219.
- Hochschild, Arlie, with Anne Machung (1989). *The Second Shift: Working Parents and the Revolution at Home*. New York: Academic Press.
- Juhn, Chinhui and Kevin M. Murphy (1996). "Wage Inequality and Family Labor Supply." National Bureau of Economic Research Working Paper #5459.
- Lewis, Jane (1992). "Gender and the Development of Welfare Regimes." *Journal of European Social Policy* 2:3 (pp. 159-173).
- Lundberg, Shelly and Robert A. Pollak (1993). "Separate Spheres Bargaining and the Marriage Market." *Journal of Political Economy* 101:6 (pp. 988-1010).
- Lundberg, Shelly and Robert A. Pollak (1994). "Noncooperative Bargaining Models of Marriage." *American Economic Review* 84:2 (pp. 132-137).
- Manser, Marilyn and Murray Brown (1980). "Marriage and Household Decision-Making: A Bargaining Analysis." *International Economic Review* 21:1 (pp. 31-44).
- McElroy, Marjorie B. and Mary Jean Horney (1981). "Nash-Bargained Household Decisions: Toward a Generalization of the Theory of Demand." *International Economic Review* 22:2 (pp. 333-349).
- Mincer, Jacob and Solomon Polachek (1974). "Family Investments in Human Capital: Earnings of Women." *Journal of Political Economy* 82:2, Part II, (pp. S76-S108).
- Nerlove, M. (1973). "Household and Economy: Toward a New Theory of Population and Economic Growth." In T.W. Schultz, Ed., *The Economics of the Family*. Chicago: University of Chicago Press.
- Pedersen, Susan (1993). *Family, Dependence, and the Origins of the Welfare State: Britain and France, 1914-1945*. Cambridge: Cambridge University Press.
- Robinson, John (1988). "Who's Doing the Housework?" *American Demographics* December (pp. 24-28, 63).
- Shavit, Yossi and Hans-Peter Blossfeld (1993). *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*. Boulder, Colorado: Westview Press.
- Smeeding, Timothy M. (2000). "Changing Income Inequality in OECD Countries: Updated Results from the Luxembourg Income Study." LIS Working Paper 252.

-TABLE 1-
Female & Married Woman Labour Force Participation Rates
Selected Countries
1965, 1985, 1995

	% Female Labour Force			% Married Women Working		
	1965	1985	1995	1965	1985	1995
Australia	29 %	38 %	43 %	-	41 %	-
Belgium	31	38	42	-	-	-
Canada	30	42	45	-	-	57
France	35	41	44	-	-	-
Germany	37	40	43	34	-	46
Italy	29	33	35	-	31	32
The Netherlands	-	34	41	-	-	37
Norway	30	44	47	-	66	80
Sweden	37	47	48	42	66	68
United Kingdom	35	42	45	-	-	-
United States	35	44	46	33	47	52

Source: OECD Statistical Compendium 02-2000

-TABLE 2-

(Separate File: Table2DE)

-TABLE 3-
Average Number of Children Under 18
Male-Breadwinner v. Dual-Earner Households
Mid-1980 and Mid-1990

	Male Breadwinner	Dual- Earner	t-statistic
	(N)	(N)	
Australia 1985	1.88 (822)	1.36 (1204)	9.97
Australia 1994	1.76 (683)	1.20 (1621)	10.42
Belgium 1985	1.20 (1081)	1.05 (1795)	3.56
Belgium 1996	1.40 (348)	1.13 (1188)	3.99
Canada 1987	1.89 (516)	1.28 (3579)	11.46
Canada 1997	1.64 (2156)	1.17 (10012)	17.59
France 1984	1.77 (1753)	1.09 (3426)	21.32
France 1994	1.44 (60)	1.30 (4002)	.97
Germany 1984	1.45 (3262)	.86 (4365)	27.52
Germany 1994	1.59 (4190)	.92 (7478)	34.04
Italy 1986	1.30 (5657)	1.26 (3647)	2.06
Italy 1995	1.32 (1491)	1.13 (1728)	5.66
The Netherlands 1987	1.60 (1184)	.82 (751)	15.82
The Netherlands 1994	1.57 (899)	.80 (983)	15.29
Norway 1986	1.52 (1385)	1.53 (148)	.10
Norway 1995	1.75 (491)	1.28 (2242)	8.54
Sweden 1987	1.70 (104)	1.24 (1000)	4.14
Sweden 1995	1.52 (296)	1.09 (3032)	3.07
UK 1986	1.85 (839)	1.16 (1896)	14.93
UK 1995	1.84 (1623)	1.06 (6141)	24.72
US 1986	1.78 (8255)	1.22 (26,047)	37.28
US 1997	1.78 (3592)	1.27 (13,769)	23.45

-TABLE 4-

(Separate file: Table4DE_Age - 6 pages)

-TABLE 5-
Mean Family Allowances and Maternity Benefits by Country
(amounts are in 2000 US dollar equivalents)

	Family Allowance		Maternity		HH Income		Allowance	DE
	Mean	SD	Mean	SD	Mean	SD	% DPIF	Effect (b)
Australia 1985	\$ 587	\$ 547	\$ -	\$ -	\$ 26,861	\$ 10,514	2.19%	-0.37
Australia 1994	\$ 741	\$ 1,382	\$ -	\$ -	\$ 31,102	\$ 18,713	2.38%	-0.33
Belgium 1985	\$ 1,480	\$ 1,653	\$ -	\$ -	\$ 16,205	\$ 7,859	9.13%	-0.28
Belgium 1996	\$ 2,978	\$ 3,129	\$ -	\$ -	\$ 39,440	\$ 22,546	7.55%	-0.32
Canada 1987	\$ 625	\$ 596	\$ -	\$ -	\$ 42,097	\$ 22,024	1.48%	-0.57
Canada 1997	\$ 711	\$ 1,140	\$ -	\$ -	\$ 37,590	\$ 22,177	1.89%	-0.43
France 1984	\$ 1,463	\$ 2,526	\$ -	\$ -	\$ 24,100	\$ 14,368	6.07%	-0.62
France 1994	\$ 1,802	\$ 2,495	\$ 93	\$ 744	\$ 38,368	\$ 24,840	4.94%	na
Germany 1984	\$ 772	\$ 979	\$ 33	\$ 297	\$ 26,382	\$ 13,211	3.05%	-0.54
Germany 1994	\$ 1,002	\$ 385	\$ 385	\$ 1,344	\$ 38,704	\$ 25,708	3.58%	-0.58
Italy 1986 (000)	\$ -	\$ -	\$ -	\$ -	\$ 23,703	\$ 18,031	0.00%	ns
Italy 1995 (000)	\$ -	\$ -	\$ -	\$ -	\$ 26,418	\$ 19,934	0.00%	-0.15
Netherlands 1987	\$ 1,367	\$ 1,420	\$ -	\$ -	\$ 26,794	\$ 12,468	5.10%	-0.46
Netherlands 1994	\$ 1,522	\$ 1,636	\$ -	\$ -	\$ 31,785	\$ 14,884	4.79%	-0.58
Norway 1986	\$ 1,720	\$ 1,392	\$ -	\$ -	\$ 44,995	\$ 21,393	3.82%	-0.51
Norway 1995	\$ 3,114	\$ 2,754	\$ 75	\$ 589	\$ 53,976	\$ 38,269	5.91%	-0.47
Sweden 1987	\$ 1,719	\$ 1,722	\$ 1,458	\$ 3,523	\$ 32,598	\$ 16,406	9.75%	-0.35
Sweden 1995	\$ 1,784	\$ 1,749	\$ 2,301	\$ 4,824	\$ 37,307	\$ 15,976	10.95%	-0.20
UK 1986	\$ 1,111	\$ 973	\$ 149	\$ 693	\$ 23,667	\$ 14,229	5.32%	-0.55
UK 1995	\$ 1,064	\$ 994	\$ 69	\$ 843	\$ 34,998	\$ 26,343	3.24%	-0.66
US 1986	\$ -	\$ -	\$ -	\$ -	\$ 47,371	\$ 27,164	0.00%	-0.50
US 1997	\$ -	\$ -	\$ -	\$ -	\$ 54,087	\$ 42,546	0.00%	-0.48

- Disposable income less family allowances and maternity benefit, all partnered households

**-TABLE 6-
Log-Likelihood of Female Being in Dual-Earner Household**

	Australia		Belgium		Canada		Germany		Italy	
	mid80	mid90	mid80	mid90	mid80	mid90	mid80	mid90	mid80	mid90
N	2938	2339	2876	1654	4934	12388	2106	2421	3754	3156
	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)
Low-Mid	1.25	0.92	0.29	0.28	0.70	0.44	0.43	0.31	0.61	0.72
Mid-High	0.46	0.37	0.07	0.08	0.45	0.23	0.23	0.15	0.11	0.18
High Income	0.20	0.20	0.06	0.10	0.26	0.15	0.13	0.15	0.06	0.08
Female LT25	1.08	0.80	0.07	0.14	0.19	0.73	0.25	0.92	0.43	0.82
Female 2530	1.41	1.17	0.10	0.12	0.23	0.60	0.59	0.72	0.28	0.62
Female 3040	0.79	1.03	0.35	0.35	0.37	0.67	0.46	0.61	0.38	0.58
Low Ed	1.42	2.15	1.36	1.59	1.54	2.02	1.07	0.88	1.14	2.76
High Ed	1.05	1.32	0.78	0.47	0.59	0.93	0.45	0.61	1.58	0.22
HiEd*HiIncome	1.07	1.15	0.35	1.15	1.02	0.69	0.25	0.85	0.82	1.40
Ethnic	1.07	0.89	1.02	0.90	1.18	0.83	1.04	1.83	na	na
# Children	0.71	0.74	0.69	0.69	0.61	0.67	0.48	0.51	0.96	0.80
Overall Predict	69%	74%	77%	81%	87%	82%	67%	72%	73%	74%

	Netherlands		Norway		Sweden		UK		US	
	mid80	mid90	mid80	mid90	mid80	mid90	mid80	mid90	mid80	mid90
N	1687	1941	1956	3624	3901	4658	2687	2373	4445	17570
	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)
Low-Mid	0.33	0.58	0.31	0.10	0.54	0.63	0.50	0.47	0.57	0.37
Mid-High	0.08	0.12	0.23	0.03	0.13	0.25	0.27	0.26	0.44	0.25
High Income	0.04	0.05	0.47	0.03	0.06	0.11	0.25	0.33	0.30	0.23
Female LT25	0.12	0.13	0.48	1.07	0.80	0.75	1.35	1.72	0.56	0.61
Female 2530	0.27	0.26	0.52	0.85	0.56	0.47	1.38	1.74	0.64	0.69
Female 3040	0.33	0.68	0.66	0.81	0.72	0.54	0.95	1.37	0.67	0.84
Low Ed	1.17	1.26	0.92	1.10	na	2.39	1.17	5.88	1.91	1.58
High Ed	0.69	0.59	0.52	0.82	na	0.77	0.93	0.86	0.74	0.78
HiEd*HiIncome	0.61	1.13	0.68	0.51	na	0.53	0.91	0.68	1.43	1.15
Black	na	na	na	na	na	na	na	na	0.54	0.60
Hispanic	na	na	na	na	na	na	na	na	0.98	1.18
# Children	0.58	0.56	0.57	0.60	0.69	0.81	0.61	0.59	0.70	0.71
Overall Predict	77%	75%	95%	87%	91%	91%	74%	81%	77%	80%

Numbers in BOLD statistically significant at $p < .05$

Ethnic Dummy and Referents:

Australia 1980s	Anglo (Australian or UK) v. all other nationalities
Australia 1990s	Australian v. all other nationalities
Belgium 1980s	Wallon v. Flanders or Brussels domicile
Belgium 1990s	Wallon v. Flanders or Brussels domicile
Canada 1980s	Canadian-born v. immigrants
Canada 1990s	English-speaking Canadian-born v. French-speaking and others
Germany 1980s	German-born v. others
Germany 1990s	West German nationals v. others, including East Germans
US 1980s	Two dummies: one for Black, one for Hispanic v. others
US 1990s	Two dummies: one for Black, one for Hispanic v. others

**-TABLE 2-
Male Breadwinner versus Dual-Earner Proportion of Households by Income Quartile
1980s versus 1990s**

	Low Income				Low-Middle				High-Middle				High Income			
	Male BW		Dual-Earner		Male BW		Dual-Earner		Male BW		Dual-Earner		Male BW		Dual-Earner	
	mid80	mid90	mid80	mid90	mid80	mid90	mid80	mid90	mid80	mid90	mid80	mid90	mid80	mid90	mid80	mid90
Australia	14%	19%	7%	8%	44%	39%	18%	19%	28%	27%	34%	34%	14%	16%	42%	40%
Belgium	30%	34%	5%	7%	36%	33%	20%	24%	18%	16%	36%	38%	17%	18%	39%	31%
Canada	30%	38%	18%	13%	33%	31%	26%	24%	24%	20%	29%	31%	0%	12%	28%	32%
France	32%	34%	16%	18%	34%	34%	22%	25%	17%	19%	29%	29%	14%	14%	29%	28%
Germany	23%	29%	19%	7%	32%	28%	25%	20%	24%	18%	28%	32%	20%	21%	29%	34%
Italy	26%	37%	5%	12%	34%	36%	11%	17%	23%	18%	39%	35%	17%	8%	46%	37%
Netherlands	23%	14%	3%	4%	36%	42%	12%	12%	23%	28%	37%	38%	18%	16%	48%	46%
Norway	14%	47%	12%	4%	28%	31%	27%	23%	31%	13%	31%	37%	27%	8%	30%	36%
Sweden	40%	36%	12%	15%	38%	34%	21%	21%	14%	22%	32%	31%	8%	8%	35%	33%
UK	32%	31%	12%	11%	29%	29%	22%	22%	21%	20%	31%	32%	18%	20%	35%	36%
US	31%	39%	16%	15%	27%	25%	26%	26%	23%	19%	30%	31%	18%	17%	29%	28%
Average	27%	32%	11%	10%	34%	33%	21%	21%	22%	20%	32%	33%	15%	14%	35%	35%

Notes:

Income quartiles based on all married households

Proportions based on relative percentage within household type

**-TABLE 4-
OLS Country Results: Average Number of Children Under 18
1980s v. 1990s**

AUSTRALIA									
	1980s Model 1 (N=2023) $R^2=.21$, Adj. $R^2=.21$ SE=1.04 F=90.92 *** (6,2016)			1980s Model 2 (N=2023) $R^2=.23$, Adj. $R^2=.23$ SE=1.03 F=87.74 *** (7,2015)			1990s Model 1 (N=2286) $R^2=.22$, Adj. $R^2=.21$ SE=1.06 F=104.87 *** (6,2279)		
	b	SE		b	SE		b	SE	
Constant	.94***	.05		1.24***	.07		.80***	.04	
Low income quartile	.75***	.09		.60***	.09		.71***	.08	
Low-mid income quartile	.70***	.06		.53***	.07		.59***	.06	
Mid-high income quartile	.38***	.06		.31***	.06		.28***	.06	
Referent: Highest income quartile									
Female less than 25	- .72***	.10		- .70***	.09		- .69***	.10	
Female 25 to 30 years	- .09	.07		- .11	.07		- .21**	.07	
Female 30 to 40 years	.74***	.06		.74***	.06		.79***	.05	
Referent: Female 41 to 50 years				- .37***	.05				
Dual-Earner (v. Male Breadwinner)							- .33***	.05	
BELGIUM									
	1980s Model 1 (N=2876) $R^2=.20$, Adj. $R^2=.201$ SE=.95 F=121.42 *** (6,2869)			1980s Model 2 (N=2876) $R^2=.21$, Adj. $R^2=.21$ SE=.94 F=111.68 *** (7,2868)			1990s Model 1 (N=1536) $R^2=.21$, Adj. $R^2=.20$ SE=1.00 F=65.68 *** (6,1529)		
	b	SE		b	SE		b	SE	
Constant	.38***	.04		.56***	.05		.74***	.06	
Low income quartile	.19***	.06		.02	.06		.13	.09	
Low-mid income quartile	.07	.05		- .03	.05		- .06	.07	
Mid-high income quartile	- .07	.05		- .09*	.05		- .09	.07	
Referent: Highest income quartile									
Female less than 25	.21**	.07		.33***	.07		- .33**	.12	
Female 25 to 30 years	1.04***	.05		1.14***	.05		.27***	.07	
Female 30 to 40 years	1.04***	.05		1.08***	.05		1.05***	.06	
Referent: Female 41 to 50 years									
Dual-Earner (v. Male Breadwinner)				- .28***	.04		- .32***	.07	

***p<.000 ** p<.01 * p<.05

06/20/01

-TABLE 4-
OLS Country Results: Average Number of Children Under 18
1980s v. 1990s

CANADA									
	1980s Model 1 (N=4086) R ² =.15 , Adj. R ² =. 15 SE=1.07 F=118.09 *** (6,4079)		1980s Model 2 (N=4086) R ² =.17 , Adj. R ² =.17 SE=1.05 F=121.93 *** (7,4078)		1990s Model 1 (N=12151) R ² =.13 , Adj. R ² =.13 SE=1.05 F=302.25 *** (6,12144)		1990s Model 2 (N=12151) R ² =.15, Adj. R ² =.15 SE=1.03 F=305.86 *** (7,12143)		
	b	SE	b	SE	b	SE	b	SE	
Constant	.79***	.04	1.28***	.06	.82***	.02	1.22***	.03	
Low income quartile	.37***	.05	.26***	.05	.08**	.03	.08**	.03	
Low-mid income quartile	.32***	.05	.24***	.05	.08**	.03	.08**	.03	
Mid-high income quartile	.14**	.05	.11*	.05	.04	.03	.04	.03	
Referent: Highest income quartile									
Female less than 25	- .52***	.07	- .40***	.07	- .43***	.04	- .43***	.04	
Female 25 to 30 years	.29***	.05	.37***	.05	.20***	.03	.20***	.03	
Female 30 to 40 years	.83***	.04	.87***	.04	.78***	.02	.78***	.02	
Referent: Female 41 to 50 years									
Dual-Earner (v. Male Breadwinner)			- .57***	.05			- .43***	.03	
FRANCE									
	1980s Model 1 (N=4900) R ² =.20 , Adj. R ² =. 20 SE=1.02 F=206.77 *** (6,4893)		1980s Model 2 (N=4900) R ² =.23 , Adj. R ² =.23 SE=1.00 F=207.06 *** (7,4892)		1990s Model 1 (N=4062) R ² =.21 , Adj. R ² =.20 SE=.99 F=174.40 *** (6,4055)				
	b	SE	b	SE	b	SE			
Constant	.49***	.04	1.05***	.06	.77***	.04			
Low income quartile	.48***	.04	.35***	.05	.20***	.05			
Low-mid income quartile	.37***	.04	.30***	.04	.11**	.04			
Mid-high income quartile	.01	.04	.01	.04	- .02	.04			
Referent: Highest income quartile									
Female less than 25	- .01	.05	.03	.05	- .39***	.07			
Female 25 to 30 years	.84***	.04	.88***	.04	.33***	.04			
Female 30 to 40 years	1.11***	.04	1.15***	.04	1.05***	.04			
Referent: Female 41 to 50 years									
Dual-Earner (v. Male Breadwinner)			- .62***	.05					

***p<.000 ** p<.01 * p<.05

-TABLE 4-
OLS Country Results: Average Number of Children Under 18
1980s v. 1990s

GERMANY									
	1980s Model 1 (N=7627) R ² =.17 , Adj. R ² =. 17 SE=.89 F=261.24 *** (6,7620)		1980s Model 2 (N=7627) R ² =.24 , Adj. R ² =.24 SE=.86 F=335.18 *** (7,7619)		1990s Model 1 (N=10960) R ² =.20 , Adj. R ² =.20 SE=.95 F=462.73 *** (6,10953)		1990s Model 2 (N=10960) R ² =.26, Adj. R ² =.26 SE=.92 F=559.26 *** (7,10952)		
	b	SE	b	SE	b	SE	b	SE	
Constant	.61***	.02	.98***	.03	.60***	.02	1.04***	.03	
Low income quartile	.42***	.03	.16***	.03	.54***	.03	.28***	.03	
Low-mid income quartile	.22***	.03	.07**	.03	.38***	.03	.27***	.03	
Mid-high income quartile	.04	.03	- .02	.03	- .03	.02	- .02	.02	
Referent: Highest income quartile									
Female less than 25	- .38***	.05	- .20***	.05	- .44***	.05	- .40***	.05	
Female 25 to 30 years	.46***	.03	.48***	.03	.15***	.03	.17***	.03	
Female 30 to 40 years	.78***	.02	.80***	.02	.88***	.02	.87***	.02	
Referent: Female 41 to 50 years									
Dual-Earner (v. Male Breadwinner)			- .54***	.02			- .58***	.02	
ITALY									
	1980s Model 1 (N=9305) R ² =.16 , Adj. R ² =. 16 SE=.87 F=301.58 *** (6,9298)		1980s Model 2 (N=9305) R ² =.16 , Adj. R ² =.16 SE=.87 F=258.86 *** (7,9297)		1990s Model 1 (N=3182) R ² =.17 , Adj. R ² =.17 SE=.88 F=111.14 *** (6,3175)		1990s Model 2 (N=3182) R ² =.18, Adj. R ² =.18 SE=.88 F=98.09 *** (7,3174)		
	b	SE	b	SE	b	SE	b	SE	
Constant	.69***	.02	.71***	.02	.68***	.04	.79***	.05	
Low income quartile	.34***	.03	.32***	.03	.30***	.05	.22***	.05	
Low-mid income quartile	.34***	.03	.32***	.03	.15***	.05	.08	.05	
Mid-high income quartile	.19***	.02	.18***	.02	.01	.04	- .02	.04	
Referent: Highest income quartile									
Female less than 25	- .21***	.04	- .21***	.04	- .16	.10	- .15	.10	
Female 25 to 30 years	.34***	.03	.35***	.03	.34***	.05	.36***	.05	
Female 30 to 40 years	.78***	.02	.79***	.02	.84***	.04	.85***	.04	
Referent: Female 41 to 50 years									
Dual-Earner (v. Male Breadwinner)			- .03	.02			- .15***	.04	

***p<.000 ** p<.01 * p<.05

06/20/01

-TABLE 4-
OLS Country Results: Average Number of Children Under 18
1980s v. 1990s

THE NETHERLANDS									
	1980s Model 1 (N=1929) R ² =.29 , Adj. R ² =. 29 SE=.94 F=132.30 *** (6,1922)		1980s Model 2 (N=1929) R ² =.32 , Adj. R ² =.32 SE=.92 F=129.70*** (7,1921)		1990s Model 1 (N=1879) R ² =.25 , Adj. R ² =.25 SE=1.00 F=103.54*** (6,1872)		1990s Model 2 (N=1879) R ² =.30, Adj. R ² =.29 SE=.97 F=112.08*** (7,1871)		
	b	SE	b	SE	b	SE	b	SE	
Constant	.63***	.05	.86***	.06	.66***	.06	1.03***	.06	
Low income quartile	.86***	.07	.59***	.07	.62***	.09	.25**	.10	
Low-mid income quartile	.76***	.06	.54***	.06	.52***	.06	.19**	.07	
Mid-high income quartile	.35***	.06	.27***	.06	.27***	.06	.15**	.06	
Referent: Highest income quartile									
Female less than 25	- .86***	.09	- .65***	.09	- .85***	.09	- .58***	.09	
Female 25 to 30 years	- .11	.06	.01	.06	- .10	.07	.06	.06	
Female 30 to 40 years	.76***	.06	.82***	.06	.85***	.06	.91***	.06	
Referent: Female 41 to 50 years									
Dual-Earner (v. Male Breadwinner)			- .46***	.05			- .58***	.05	
NORWAY									
	1980s Model 1 (N=1533) R ² =.21 , Adj. R ² =. 21 SE=.93 F=68.84 *** (6,1526)		1980s Model 2 (N=1533) R ² =.22 , Adj. R ² =.22 SE=.92 F=62.79*** (7,1525)		1990s Model 1 (N=2732) R ² =.22 , Adj. R ² =.22 SE=.98 F=126.84*** (6,2725)		1990s Model 2 (N=2732) R ² =.24, Adj. R ² =.24 SE=.97 F=120.97*** (7,2724)		
	b	SE	b	SE	b	SE	b	SE	
Constant	.83***	.06	1.32***	.12	.73***	.04	1.19***	.05	
Low income quartile	.30***	.08	.26**	.08	.37***	.07	.04	.08	
Low-mid income quartile	.19**	.07	.19**	.07	.26***	.05	.17***	.05	
Mid-high income quartile	.03	.06	.04	.06	.13**	.05	.12**	.05	
Referent: Highest income quartile									
Female less than 25	- .28**	.11	- .26**	.10	- .42***	.08	- .40***	.08	
Female 25 to 30 years	.71***	.07	.72***	.07	.40***	.05	.41***	.05	
Female 30 to 40 years	1.00***	.06	1.00***	.06	1.05***	.05	1.04***	.06	
Referent: Female 41 to 50 years									
Dual-Earner (v. Male Breadwinner)			- .51***	.11			- .47***	.06	

-TABLE 4-
OLS Country Results: Average Number of Children Under 18
1980s v. 1990s

SWEDEN								
	1980s Model 1 (N=1101) R ² =.22 , Adj. R ² =. 21 SE=.96 F=50.44 *** (6,1094)		1980s Model 2 (N=1101) R ² =.23 , Adj. R ² =.22 SE=.96 F=45.25*** (7,1093)		1990s Model 1 (N=3320) R ² =.20 , Adj. R ² =.20 SE=1.00 F=141.52*** (6,3313)		1990s Model 2 (N=3320) R ² =.21, Adj. R ² =.21 SE=1.00 F=123.13*** (7,3312)	
	b	SE	b	SE	b	SE	b	SE
Constant	.81****	.06	1.15****	.12	.83***	.04	1.03****	.07
Low income quartile	.28**	.10	.20*	.10	.30***	.06	.26****	.06
Low-mid income quartile	.24**	.08	.19*	.08	.16**	.05	.13**	.05
Mid-high income quartile	- .04	.07	- .04	.07	- .01	.05	- .02	.05
Referent: Highest income quartile								
Female less than 25	- .56***	.11	- .55***	.11	- .59***	.08	- .59***	.08
Female 25 to 30 years	.41***	.09	.42***	.09	.35***	.05	.36***	.05
Female 30 to 40 years	.92***	.07	.92***	.07	.99***	.04	1.00***	.04
Referent: Female 41 to 50 years								
Dual-Earner (v. Male Breadwinner)			- .35***	.10			- .20***	.06
UNITED KINGDOM								
	1980s Model 1 (N=2687) R ² =.17 , Adj. R ² =. 17 SE=1.06 F=93.97 *** (6,2680)		1980s Model 2 (N=2687) R ² =.22 , Adj. R ² =.22 SE=1.03 F=106.19*** (7,2679)		1990s Model 1 (N=7726) R ² =.16 , Adj. R ² =.16 SE=1.08 F=244.78*** (6,7719)		1990s Model 2 (N=7726) R ² =.21, Adj. R ² =.21 SE=1.05 F=287.86*** (7,7718)	
	b	SE	b	SE	b	SE	b	SE
Constant	.66***	.05	1.14***	.06	.72***	.03	1.32***	.04
Low income quartile	.70***	.06	.50***	.06	.61***	.04	.42***	.04
Low-mid income quartile	.49***	.06	.39***	.06	.36***	.03	.28***	.03
Mid-high income quartile	.21***	.05	.19***	.05	.19***	.03	.18***	.03
Referent: Highest income quartile								
Female less than 25	- .34***	.08	- .35***	.08	- .60***	.05	- .62***	.05
Female 25 to 30 years	.42***	.06	.36***	.06	.11***	.03	.07	.03
Female 30 to 40 years	.87***	.05	.84***	.05	.79***	.03	.73***	.03
Referent: Female 41 to 50 years								
Dual-Earner (v. Male Breadwinner)			- .55***	.05			- .66***	.03

***p<.000 ** p<.01 * p<.05

06/20/01

**-TABLE 4-
OLS Country Results: Average Number of Children Under 18
1980s v. 1990s**

UNITED STATES								
	1980s Model 1 (N=34189) R ² =.12 , Adj. R ² =. 12 SE=1.14 F=753.99 *** (6,34183)		1980s Model 2 (N=34189) R ² =.15 , Adj. R ² =.15 SE=1.12 F=844.42 *** (7,34182)		1990s Model 1 (N=17339) R ² =.09 , Adj. R ² =.09 SE=1.14 F=297.16 *** (6,17333)		1990s Model 2 (N=17339) R ² =.12, Adj. R ² =.12 SE=.1.12 F=332.44 *** (7,17332)	
	b	SE	b	SE	b	SE	b	SE
Constant	.76***	.02	1.17***	.02	.93**	.02	1.36***	.03
Low income quartile	.45***	.02	.33***	.02	.20***	.03	.06*	.03
Low-mid income quartile	.33***	.02	.27***	.02	.10***	.03	.06**	.02
Mid-high income quartile	.13***	.02	.10***	.02	- .04	.02	- .04	.02
Referent: Highest income quartile								
Female less than 25	- .34***	.02	- .28***	.02	- .17***	.04	- .12***	.04
Female 25 to 30 years	.36***	.02	.39***	.02	.33***	.03	.35***	.03
Female 30 to 40 years	.81***	.02	.82***	.00	.78***	.02	.77***	.02
Referent: Female 41 to 50 years								
Dual-Earner (v. Male Breadwinner)			- .50***	.01			- .48***	.02

***p<.000 ** p<.01 * p<.05

06/20/01