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The aim of this paper is to learn how large the differences are in gross and disposable family income across families with children and without children and to what extent these "family gaps" differ across countries. Using data on nine countries from the Luxembourg Income Study database, representing three major types of social welfare regime, we estimate trajectories in gross and disposable family incomes for families following one of several stylized life-courses: marrying or partnering at age 24 but not having children; partnering at age 24 and having one child at age 27; partnering at age 24 and having two children, at ages 25 and 27; and partnering at age 24, having two children at ages 25 and 27, and then living without a partner from ages 30 to 39.

Our work builds on prior work examining differences across countries in gaps in women's earnings across these family types (Sigle-Rushton and Waldfogel, 2004). That work showed that countries clustered according to type of social welfare regime, with the Nordic countries tending to have the smallest family gaps in women's earnings, the continental European countries tending to have the largest gaps, and the Anglo-American countries tending to occupy a middle ground. As important as women's earnings are to their own and their children's economic well-being, they are nevertheless only one component of family income. Most children spend a substantial portion of their childhood living with two parents (Andersson, 2002), and women who are married or partnered will usually benefit from some income brought in by their partner. In addition to partners' earnings, government tax and transfers policies may also offset the costs of children and replace some of mothers' foregone earnings. These factors are likely to play an important role in family economic well-being, but have not been fully considered in prior cross-national research on family gaps

in income between families with and without children. Accordingly, in this paper, we extend prior work by examining family gaps income, using measures of income both before and after tax and transfers.

We focus mainly on women with a medium level of education, who constitute the majority of women in most of our countries, but also provide some results for low-educated and highly-educated women. To briefly preview the results, we find, for women with a medium level of education, a clear clustering of countries by social welfare regime type. In general, family gaps in both gross and disposable family income are smallest in the Nordic countries, intermediate in the Anglo-American countries, and largest in the continental European countries. This clustering is very similar to what we saw when examining women's earnings only (Sigle-Rushton and Waldfogel, 2004), which suggests that differences in earnings between women with different family histories are the major driver in the family gaps in family incomes that we observe here. To the extent that taxes and transfers affect these gaps, they tend to narrow differences across countries – since the Nordic countries' systems are tilted less to families with children and the continental European countries are tilted more.

A. Background

It is well-established that women with children are less likely to work in the labor market than other women or men, and that, when they do work, they tend to work fewer hours and to earn lower hourly wages (Browning, 1992; Waldfogel, 1998). Studies that have examined the cumulative effects of children on women's lifetime earning have found these to be substantial. Yet, there is also evidence that the family gaps in earnings between mothers and other women vary a good deal across countries (Davies and Joshi, 1994; Sigle-Rushton

and Waldfogel, 2004). These cross-country differences suggest that there may be corresponding differences in the relative economic well-being of families with children.

However, most children spend a substantial portion of their time living with two parents (Andersson, 2002). If we are interested in measuring the economic resources of families with children, it is important to take into account men's earnings as well. Besides providing an additional source of income, there are also reasons to believe that men's labor market behavior changes with the birth of a child. Fathers may well increase their labor supply or earnings at the same time that mothers cut back. Although labor market regulations may limit the extent to which they are able (Anxo and O'Reilly, 2000; OECD, 2001), fathers may work more hours or take on a second job when they have children to support (Lundberg, 1988; Cousins and Tang, 2002b). They may also exert more effort on the job in order to earn higher wages. Although the link between fatherhood and men's labor market patterns has not been widely studied, there is some evidence that, in addition to earning a marriage premium, fathers tend to work longer hours and earn higher wages than men who do not have children (Pencavel, 1986; Neumark and Korenman, 1992; Lundberg and Rose, 2000; Cousins and Tang, 2002b). Even if men's earnings increase by only a small amount as their partners' earnings are reduced, it is important to take such changes into account when comparing the overall family income of mothers and childless women.[1] Moreover, such changes may well vary across countries and thus could affect cross-country comparisons.

While taking into account total family earnings is important for understanding the relative economic well-being of families with children, government taxes and transfers may play an important role as well. The need to consider government taxes and transfers in a

1 Whether these effects are causal is open to question, but our main aim in this paper is to describe cross-nationally relative differences in the economic well-being of families with children. For our purposes, we are interested in whether there are gaps and leave explaining them to future research.

cross-country comparison such as ours is readily apparent. The incomes that families have available to spend on children and other family members depend not just on what families earn in the labor market, but also on what governments do through their tax and transfer systems. And, these tax and transfer systems clearly vary a good deal across countries. Families with children frequently receive direct financial transfers or tax allowances, and countries differ substantially in the level and extent of targeting in their child benefit programs (Montanari 2000; Bradshaw and Finch, 2002). Moreover, many countries provide some financial support for couple families with a dependent spouse (Shaver and Bradshaw, 1995). Those countries that tax individuals rather than families (the Nordic countries and the UK) are usually less redistributive towards families with a dependent spouse and children while those that tax families as a unit (like Germany) often redistribute more and discourage female labor market participation (O'Donoghue and Sutherland, 1999; Dingeldy, 2001). Finally, countries differ substantially in their provision of support to single mother families (Lewis, 1997). The Nordic countries have been particularly successful at enabling single mothers to work and at providing reliable child support payments while other countries have historically provided additional (but low) benefits to single mothers so that they could care for their children at home.

Welfare state analysts such as Gosta Esping-Anderson (1990) typically divide industrialized countries into three main regime types: Liberal; Conservative; and Social Democratic.[2] The liberal or residual model, which includes Britain and its former colonies, has welfare states that are characterized by a fairly high reliance on means-tested public assistance programs and a free market approach to the provision of care and personal

[2] See also Sainsbury (1994) and Lewis (1992) whose typology takes gender more explicitly into account.

services.[3] Countries following the Conservative model rely to a larger extent on social insurance programs. The Conservative model, most often found in Continental European countries, is unique in its emphasis on status preservation and subsidiarity. As a consequence, the conservative model tends not only to do more to redistribute resources towards families with children, but to do so in a way that is horizontally rather than vertically redistributive (towards poorer families). This is done in the expectation that economic resources will enable families to provide care and personal services themselves. In contrast, the individualistic social democratic model of the Nordic countries is characterized by its provision of individualized, citizenship-based universal entitlements. Countries following this model tend to put very little emphasis on taxes and transfers as a means of redistribution to families and focus instead on providing care and services that enable labor market participation. Compared to the liberal countries, the social democratic and conservative countries tend to have more fully developed family leave and child care policies than the liberal countries, although child care policies are most comprehensive and well-developed in the Nordic countries (Waldfogel, 1998, 2001; Sigle-Rushton and Kenney 2003).

Prior work on family gaps in mothers' lifetime earnings has found that there is a clear pattern of clustering by regime type, with the Nordic countries having the smallest gaps, the continental European countries tending to have the largest gaps, and the Anglo-American countries occupying a middle position (Sigle-Rushton and Waldfogel, 2004). It is likely that these cross-country differences reflect differences in labor markets and also in government labor market policies and family policies affecting women's labor force participation and

3 Although a range of typologies have been developed, the UK is not usually successfully classified with one model. Indeed, Esping-Anderson (1990) was unable to clearly classify the UK, although in later work the country appeared more similar to what he called "residual" states – a group of countries that was very similar to the liberal countries identified earlier (Esping-Andersen 1999). For this reason, we place the UK in that group.

earnings. It is not clear a priori how taking into account government taxes and transfers would alter that patterning. The Nordic countries, which have relatively generous welfare states, are nevertheless less active than the Continental European countries when it comes to redistributing income from childless families to those with children (the Anglo-American countries tend to fall in the middle on this dimension). Thus, it may be that differences in government tax and transfer policies across countries serve to narrow differences across countries in the magnitude of the family gaps in income.

B. Data

We use data from the Luxembourg Income Study (LIS), a project in Walferdange, Luxembourg that provides comparable microdata from a range of countries. However, since LIS does not collect the data itself, there are some differences across datasets, and sample sizes vary widely.[4] LIS frequently updates its data, so the data we use are very recent. Our sample includes nine Western industrialized countries in the LIS database and includes at least one representative of each regime type. Our nine sample countries (and original data source and year) include Australia (Australian Income and Housing Survey, 1994), Canada (Survey of Consumer Finances, 1997), United Kingdom (Family Resources Survey, 1999), and United States (March Current Population Survey, 2000) from the Anglo-American group of Liberal countries; Germany (German Social Economic Panel Study, 2000) and the Netherlands (Socio-Economic Panel Survey, 1994) from conservative Continental Europe; and Denmark (1997), Finland (Income Distribution Survey, 2000) and Sweden (Income Distribution Survey, 2000) from the social democratic, Nordic group.

4 Further information on LIS is available at the LIS website (http://www.lis.ceps.lu; see also Smeeding, 2001).

C. Methods

Our aim in this paper is to estimate differences in long-term economic resources available to families with children relative to families without children. Because our primary concern is the amount of resources available to children and because when families break down, children usually remain with the mother, we follow the mother's family income trajectory over time.

We are also interested in the extent to which family income gaps differ across countries. But comparing mean income gaps across countries can be misleading when income distributions differ across countries. To address this issue, we use median regression analysis, estimating regressions for family income, both before and after taxes and transfers, for all the women in our samples. The regression parameters are then used to predict the cumulative family income between the ages of 19 and 60 for women who follow one of four stylized life courses.

We focus primarily on three stylized life-course patterns: (1) marry/partner at 24, no children, no divorce or separation, (2) marry/partner at 24, one child born at age 27, no divorce or separation, and (3) marry/partner at 24, one child born at age 25 and a second child born at 27, and no divorce or separation. Unfortunately, the data we use are cross sectional and contain information on current marital status only. Hence, they are not well-suited for examining income gaps by family structure. A single woman's current income is likely to depend on her partnership history and not just her current relationship status. Nonetheless, for illustrative purposes, we consider a fourth stylized life course that includes a spell of single parenthood. This fourth life course is similar to (3) but we also assume that the mother is unmarried (or unpartnered) at age 30 and remains so until age 40. These

estimates must be interpreted cautiously because the gaps in one and two parent families are estimated crudely, and are based on cross-sectional differences in income by family structure.

Before describing the method we use in more detail, it is important to note the limitations of our data, as these influence what we can and cannot include in our regression models. The first limitation to keep in mind is that our data provide no work history, fertility history, or family formation history. We can identify from our data family income (before and after taxes and transfers) over the past year, but we do not know anything about family work patterns in prior years or how long individual family members have been working with their current employer. Thus, we cannot control for work experience or job tenure in our models. The lack of a fertility history means we can only identify mothers when they are co-resident with their children. Once children have left the household, we no longer have information on them. This creates a problem in categorizing older women who do not have children residing with them, as we do not know whether they were mothers in the past or were always non-mothers. For this reason, we do not use data on women beyond the age of 45 in order to estimate family income gaps.[5]

In spite of their limitations, the LIS data are very well-suited to the analysis that we carry out. One important feature of the data is that we have measures of education for each of our countries and here the lack of retrospective data is less problematic, if we assume that completed education does not change much during adulthood. Although the specific details of the education variables vary by country, we are able to use these variables to establish three levels of education for each country. In estimating our earnings equations, we use the

5 As discussed later in the paper, we explored the sensitivity of our estimates to using data only to age 40 instead of age 45, and found that this did not substantially affect the results. A further consequence of the lack of fertility history data is that we cannot use data on women who are not the head of the household, or the spouse or partner of the head, since for those cases we can not identify whether the children belong to the woman or someone else.

woman's educational level to proxy for the family's educational status, and estimate the earnings regression separately by level of education. For our purposes, low education generally refers to those who left school without receiving a qualification that would enable them to enter higher education, e.g., those with less than a high school education in the U.S. Medium education includes those who completed secondary school and may also have completed some higher education, but without receiving a bachelor's degree or equivalent, e.g. those with a high school degree or some college in the U.S. High education includes those with a bachelor's degree or its equivalent, or higher. The distribution of our samples into these three categories is shown in Appendix Table 1. From this table, we can see that in most countries more than half of our sample women are classified as medium-educated. The exceptions are Australia (23%), the United Kingdom (25%) and the Netherlands (44%).

A second important feature of the LIS data for our analyses is the information on income. The datasets provide us with detailed data on annual household income, and we use two different measures as dependent variables in our analysis -- gross income and disposable (net) income. The first measure captures differences due mainly to family members' labor market supply and remuneration.[6] The second takes into account taxes and transfers. Transfers include both government and private transfers so the difference between the two income measures is largely, but not entirely, due to government effort. Thus, a comparison of the first and second measure provides us with information on the extent to which a country's tax and transfer system alters family gaps in income. We note that although income estimates that take into account taxes and transfers provide us with a better estimate of the resources in families with and without children, our measure of disposable income is neither

6 Our measures of income are defined at the level of the household. In the LIS data, a household is defined as all individuals living in the same dwelling. Households can be single individuals, nuclear families or more complex groupingsWe use the terms household and family interchangeably to refer to that unit.

perfect nor entirely comparable. Countries differ, often substantially, in their mix of welfare services. While taxes, tax concessions, and direct transfers are taken into account when we measure disposable income, the value of in-kind services is not.[7] Actual gaps in resources and well-being are probably narrower in countries where the welfare mix is more service oriented. Nonetheless, these are the best estimates we have of differences in disposable income between families.

Finally, the LIS data contain information on the number and age of children in the household. We use these data to distinguish mothers and non-mothers, and to categorize mothers as having one child, two children, three children, or four or more children. We also construct variables for the number of years that has elapsed since the youngest child or children (up to the last four) were born.[8] Means for these variables are shown in Appendix Table 2. We can see from these mean values that there is some variation across countries in the share of women who are mothers, and in the number and ages of their children. Childlessness is relatively rare for women in the United Kingdom and the United States, especially for the low-educated. Childlessness is most common among highly educated women in Canada and Germany. In general, highly educated women have fewer children, but the differences by level of education are not large. The average age of the youngest child is lowest in Canada and highest in Germany.

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7 All countries use their tax systems to fund public education for children. Moreover, the Nordic countries use taxes to provide generously subsidised child care services. The value of in-kind services is likely to vary substantially by country and unfortunately is not included the estimates of disposable income estimates reported below.

8 The one exception here is Australia, for which we know only the number of resident children and the age of the youngest child (thus, we do not know the age of the other children). We note below how this affects our estimates for that country. The Australian data also report ages in bands, so the mid-point of the age group is used.

Using these data, for each income measure, we estimate a median regression for women age 16 to 45 in each country, with separate models for the low-educated, medium-educated, and high-educated, as detailed above.[9] Each income regression takes the general form:

$$y_{ik}^{med} = \alpha + \beta_0(h_i) + \beta_1(a1_i) + \beta_2(a2_i) + \beta_3(k1_i) + \beta_4(k2_i) + \beta_5(k3_i) + \beta_6(k4_i) + \beta_7(tk1_i) + \beta_8(tk2_i) + \beta_9(tk3_i) + \beta_{10}(tk4_i) + \varepsilon_i$$

where

y_{ik}^{med} : median household income of woman *i* of education level *k*, *k*= low, medium, high.

h_i : indicator that equals 1 if woman *i* is head of the household and has no spouse or partner living in the household

$a1_i$: age of woman *i*

$a2_i$: age squared of woman *i*

kj_i : dummy which equal one if woman *i* has j children, *j* = 1, 2, 3 or 4 (top coded)

tkj_i : time since the j youngest child was born to woman *i*.

The predicted median family income of a woman with one child differs from that of a similar woman with no children by β_3 plus the age of the child times β_7. The sign of β_3 is negative if there is a family gap, and the sign and size of β_7 will vary depending on whether and how the gap changes as the child gets older. At the birth of a second child, the change in the predicted income gap is represented by $(\beta_4 - \beta_3)$ plus β_8 times the age of the older child because the variable tk1 is set to zero (the youngest child is now an infant).[10] This

9 We include women beginning at age 16 because for the lowest-educated group, this is the age when women would enter the labor market. But when it comes to the medium-educated and high-educated groups, we do not observe women until later (around age 19 for the medium-educated, and age 22 for the high-educated). For this reason, when we graph earnings for the medium-educated women, we begin with age 19.

10 The exception here is Australia, where we can only model the effect of the youngest child so there are no tk2-tk4 terms.

specification allows but does not require income gaps to decline over time and thus allows for the rate of convergence with childless families (if there is any) to vary with the age and number of children.

The inclusion of the controls for age and age squared are also important. These capture the well-known lifecycle patterns of employment and earnings, which tend to rise through the prime working years and then fall thereafter.[11] Because married and cohabiting partners are generally close in age as well as educational achievement, the fact that we control for the woman's characteristics only should not pose a serious problem. We use only those women aged 45 and younger, because of the concern mentioned earlier that many women beyond that age will have grown children whom we can not identify in the data.[12]

We begin with estimates of gross income. This model allow us to capture the total effects of children on their families' gross income, within education groups – whether those effects work through changes (or pre-existing) differences in family members' labor market participation, hours of work, or hourly wages. It also allows us to estimate how family gaps in median annual income change as children age and as new children are added to the family and labor market supply adjusts to the increased time demands. We then repeat these models for disposable income – income available to the family after taxes and transfers are taken into account. Thus, in these models, the differences between families with children and without children, and between families with different numbers of children and different partnership statuses, will reflect not just differences in family members' earnings but also differences in taxes and transfers.

11 We experimented with several other types of controls for age but found this specification best fit our data.
12 We also experimented with models only to age 40 and found that the results were basically similar to those reported here suggesting that women whose children had left home were not contaminating the sample of childless women.

We use the results from our regressions to predict median annual gross family income and disposable family income for mothers and non-mothers at each age up to the age of 45. For each of the stylized cases and for each income measure (gross and disposable), we predict annual median income at each age and equivalize that income estimate assuming the woman lives in a household consisting of only herself, her spouse or partner (if any) and her children (if any).[13] We further assume that the children leave home at age 18 and so recalculate the equivalency scale 18 years after their birth to reflect a smaller household size. The predicted incomes, measured in adult equivalents, are then summed for each age in order to estimate cumulative annual income to age 45.

In the latter part of the paper, we use estimates of the growth in income by age to extend each stylized income trajectory to age 60.[14] These longer-term predictions assume that median income grows at the same rate for all women regardless of their partnership and fertility history. Our estimated growth rate is based on a simple regression of the form

$$y_{ik}^{med} = \gamma + \delta_0(h_i) + \delta_1(a1_i) + \delta_2(a2_i) + n_i$$

where the explanatory variables are defined as above. This model is estimated for both income measures using all women between the ages of 16 and 70. The predicted values are then used to calculate estimates of income growth at each age from 45 to 60. These growth estimates are then used to estimate family income trajectories, for each of the stylized cases, from age 45 to age 60. Because our assumption that incomes grow at similar rates beyond the age of 45, regardless of family status, are unverified, these results must be viewed with

13 We use the OECD equivalency scale which counts the first adult in a household as 1, additional adults as 0.7, and each child as 0.5. The OECD counts children as those 15 and younger, but for our estimates, we count as children, those who are less than 18.

14 We also experimented with extending the regression estimates, out of sample, to age 60, but this strategy produced results for some countries that we considered implausible.

caution. But they are useful in helping us think about how the family income gaps accumulate over the life course.

These regressions provide a good deal of information about gross and disposable annual incomes and how they differ across families with children and families that are childless. However, it is important to stress that the analyses we present here are primarily descriptive. They indicate the overall magnitude of family income gaps in each country between mothers and other women, and the extent to which these gaps vary across countries. They cannot tell us the reasons for these gaps or for the differences in gaps across countries. There are many ways that families with children may differ from childless families that we do not control for in our models. We cannot assert that in the absence of children, the mothers in our sample would have had the same family income as childless women. If parenthood is negatively selected, the income gaps will over-state the lost income. Conversely, if parenthood is positively selected, the differences we estimate will under-state foregone income.

The use of stylized life courses means that we are, to a large extent, holding constant differences across countries in demographic patterns. The income gaps we estimate are due to differences in income assuming the same occurrence and timing of life course events. In reality, there is a good deal of variation across countries in the timing of partnerships and childbearing and in the stability of partnerships, so readers should bear in mind that our stylized estimates will tend to narrow actual differences across countries by controlling for this very important source of variation in family income gaps across countries.

We should also note that our estimates tell us only about gross family income and disposable family income. Neither provides an adequate measure of the overall economic

well-being of women or their children. Even with a perfect equivalency scale, family income measures only tell us how much income might be available to family members. Without information on how resources are shared within households, we cannot measure actual material well-being. Results from qualitative studies on income sharing within households show that intra-household resource distribution favors men over women and children, suggesting that our use of adult equivalents probably overestimates the amount of resources available to women and children in married or cohabiting families (Wilson, 1987; Pahl, 1989; Vogler and Pahl, 1994; Elizabeth, 2001 Nyman, 2003). Moreover, research on family transfers suggests that monies directed towards mothers are more likely to be spent on children than are monies directed fathers (Lundberg, Pollak and Wales, 1997). We are not able to address these issues in this paper, however, and leave them for future work.

D. Results

Because in most of our countries, the majority of women are classified as medium-educated, we focus largely on the results for this group (we show selected results for the low-educated and high-educated later in the paper). We estimate all incomes in the national currency but present results as relative incomes for comparability.

Gross Income

When we look at gross family incomes, cumulated from age 19 to age 45, there is a clear clustering by regime type and a ranking that is similar to what we found when we looked at mothers' gross earnings only (Sigle-Rushton and Waldfogel 2004). The results, presented in Table , show that the Nordic countries show the smallest cumulative income gaps for each life course. Continuously partnered mothers in Denmark, Sweden and Finland have gross family income that ranges from 74 to 87 percent of the income of gross income of

continuously partnered childless families, depending on the number of children. When a mother of two is divorced or separated as well, the income gaps fall to between 64 and 67 percent of the reference family. In contrast, continuously partnered families with children in continental Europe have gross incomes between 60 and 73 percent of those of childless families, and mothers of two who divorce or separate have gross incomes that are only about half those of continuously married childless families.

Table 1: Median Regression Estimates: Cumulative Gross Family Income of Medium Educated Mothers from Age 19 to 45, Relative to Childless Women with No Dissolution

	Gross Income		
	One child age 27	Two children Ages 25, 27	Two children ages 25, 27 Dissolution
Denmark	0.87	0.77	0.67
Sweden	0.83	0.74	0.64
Finland	0.81	0.74	0.66
United States	0.81	0.72	0.63
Canada	0.79	0.70	0.61
United Kingdom	0.75	0.66	0.57
Australia	0.77	0.60	0.50
Germany	0.73	0.62	0.52
Netherlands	0.72	0.60	0.50

Among the middle ranking Anglo-American countries, the US is most similar to the Nordic countries and Australia to the continental countries. In the US, the families of continuously partnered women with one child have gross incomes that total about 81 percent of the incomes of families of continuously partnered childless women. This is similar to what we see in Finland. When the woman has two children, relative incomes are still high compared to other Anglo-American countries but are somewhat lower than in the Nordic countries.

The similarity of these results for gross household incomes to results from the same datasets for women's earnings only (Sigle-Rushton and Waldfogel, 2004) suggests that the observed differences across countries are strongly related to differences in female, rather than male, patterns of labor market participation. Evidence suggests that men increase their hours of work when they have children while women cut back. Moreover, there is some evidence that men earn a wage premium when they are married and sometimes when they are fathers. But this varies to some extent by country, and given standard male labor market patterns it is unlikely that changes in hours or earnings would be substantial. Fathers in the UK work the longest hours while fathers in the Netherlands work the shortest (Cousins and Tang, 2002a; Rubery, Smith and Fagan, 1998). Both of these countries have fairly large family gaps in gross incomes. In the Nordic countries where the gender gap in earnings is fairly narrow – suggesting limited wage premiums for married men – we see the narrowest gaps in gross family incomes. Similarly, in those countries where mothers work long part-time hours or full-time – the Nordic countries and the United States -- we see the smallest family gaps in gross income. Conversely, those countries where mothers either leave the labor market or work short part-time hours (the UK, Australia, Germany, and the Netherlands) have the largest family gap in gross income.

Gross incomes do not give a complete picture of resources available to different family types because tax and transfer systems can redistribute resources to married families and to families with children (Shaver and Bradshaw 1995; O'Donoghue and Sutherland 1999; Montanari 2000). All countries except the United States provide family allowances or child benefits to help cover the costs of raising children. These transfer benefits, although often modest, should narrow the family gaps we observe in Table 1. Those countries with

more progressive tax systems, by taxing higher incomes more, should work to reduce differences in gross income between (higher earning) childless families and (lower earning) families with children. Moreover, tax systems can explicitly redistribute income towards specific family types. Continental European countries tend to use their tax systems to redistribute money towards married couples (particularly to married couples with a non-working spouse) and to families with children while the Nordic countries have tax systems that do little to redistribute income towards married couples or families with children. The Anglo-American countries tend to fall somewhere in the middle, but in US at least, there is evidence that families at the top and bottom of the income scale benefit disproportionately (Folbre 2001). Once we examine income net of taxes and transfers, we might expect differences between countries to narrow.

Disposable Income

Table 2: Median Regression Estimates: Cumulative Disposable Family Income of Medium Educated Mothers from Age 19 to 45, Relative to Childless Women with No Dissolution

	Disposable Income		
	One child age 27	Two children ages 25, 27	Two children ages 25, 27 Dissolution
Denmark	0.88	0.79	0.70
Sweden	0.85	0.77	0.69
Finland	0.83	0.77	0.71
United States	0.83	0.75	0.67
Canada	0.81	0.71	0.62
United Kingdom	0.79	0.69	0.62
Australia	0.79	0.62	0.54
Germany	0.78	0.69	0.61
Netherlands	0.76	0.63	0.54

Here we take into account taxes and transfers, and as expected family income gaps narrow for each of the stylized life courses that include having children. Nonetheless the

rankings do not change. We still see clear clustering by regime types. Denmark, Sweden, and Finland, all have the narrowest family gaps. At the other end, the two conservative countries have the largest family gaps in disposable income. The Anglo-American countries form a middle group, but once again the United States and Australia form the upper and lower bounds. The US, particularly for mothers with one child, looks more similar to the Nordic countries than do the other three Anglo-American countries. Similarly, Australia looks more similar to the conservative countries than do the other Anglo-American countries.

As we saw with gross income in Table 1, family dissolution between the ages of 30 and 40 increases gaps even further. But differences across countries are substantial. For instance, women in Finland and Denmark who had two children and were single mothers between the ages of 30 and 39 have relative incomes that are higher than women in the UK, Australia, Germany, and the Netherlands who had two children and were continuously married.

While the rankings of the countries have not changed, there are still differences in the extent to which different countries' taxes and transfers reduce income gaps. Figure 1 graphs family gaps in both gross and disposable incomes for women who follow our third stylized life course – who remain continuously partnered and have two children, one at age 25 and one at age 27. This figure demonstrates that those countries with the largest family gaps in gross income are also those whose tax and transfer systems do the most to narrow family gaps as we move from gross to disposable income. The tax and transfer system seems to make even more of a difference when we compare the gross and disposable incomes of women who experienced a long spell of single parenthood. Figure 2 indicates that the income gap for these mothers relative to continuously partnered non-mothers narrows when

we move from gross to disposable income estimates. The only exception is Canada where relative income is roughly similar whether we use gross or disposable income as our income measure. The Netherlands and Australia have tax and transfer systems that seem to do relatively little for single mothers. The Netherlands is noteworthy here because in Figure 1, this country seemed to be doing more to support partnered families with children than most other countries.

The percentage gaps shown in Table 2 translate into substantial amounts in absolute terms. For example, women in the United States who are medium- educated, are continuously partnered from age 24 and have no children have estimated cumulative disposable income of $647,854 per adult equivalent by age 45. Relative to these women, if we differ the life course only by assuming the woman has one child at age 27, cumulative disposable income per adult equivalent falls by $108,584; for a woman with two children it falls by $164,128; and for a woman who divorced or separated between the ages of 30 and 39 the cumulative income loss totals $214,953 per adult equivalent. Moreover, as we move from gross to disposable income, the family gap narrows both because the income of childless families falls and because it falls disproportionately. Consequently, moving from measures of gross to disposable income reduces the family gap by $44,000 in adult equivalent income for women who have one child, by $64,715 for women with two children, and by $86,280 for women with two children who were also divorced or separated.

Extending These Results to Age 60

The changes in family incomes for our stylized life courses are best shown graphically. Figures 3 to 11 plot estimates of disposable family incomes equivalized for household size, for each of our stylized life courses, for each of our countries, beginning with

Denmark in Figure 3.[15] Regardless of life course, women begin working at age 19, and partner at age 24. For women that have two children, income begins to deviate at age 25 with the first birth. Here family income can drop because of changes in family labor supply (women withdraw from the labor force or cut their hours of work after having a child) and also because the household equivalency factor changes to take into account the new child. For all three life courses with children incomes drop at age 27 with a first (stylized life course 2) or a second (stylized life courses 3 and 4) birth. Once again incomes fall both because of changes in absolute income and because of increased household needs. For women whose partnerships dissolve, we see an additional drop at age 30 with the loss of a partner (somewhat offset by reduced household needs). Income for this life course increases again at age 40 when we assume the woman remarries. Finally for stylized life courses 3 and 4, household income increases at ages 43 and 45 as each of the two children leave home when they turn 18. For women who have only one child, we see an increase in household income at age 45 only. These discrete jumps in household income are due entirely to changes in household size and often have rather large effects on income. From age 45, the same growth rates are applied to each group and the resulting trajectories are therefore parallel. Obviously, the extent to which income gaps close as we extend our estimates to age 60 depends a great deal on how accurate our equivalency scales are and how accurate our assumption is of equal income growth rates. Nonetheless, this method reveals systemic differences across countries that are consistent with previous findings. To illustrate, we have plotted the same life courses for all nine countries in Figures 3-11.

In the Nordic countries, Figures 3-5, we see that disposable income falls only moderately when families have children. Income trajectories for families with children are

15 We do not show comparable figures for gross income, in order to save space.

fairly steep and income gaps narrow as children age to such an extent that when children leave home, families who have had children actually have higher equivalized income than childless families. The only exception is one-child families in Finland where equivalized incomes are almost the same as incomes for childless families. Family dissolution reduces income but not substantially. Taken together, we find that extending our estimates to 60 narrows family gaps considerably for the Nordic countries.

We see more diversity in the Anglo-American countries (Figures 6-9). The United States (Figure 6) seems to follow the pattern found in Nordic countries. Here income falls fairly moderately after giving birth and income trajectories increase steeply afterwards. After children leave home equivalized disposable income appears higher than in childless families. As a consequence, family gaps narrow appreciably when our cumulative estimates are extended to age 60.

The results for the other three Anglo-American countries, Canada, the U.K., and Australia, are quite different. In Canada (Figure 7) children do not reduce disposable income as much as in the UK (Figure 8) and Australia (Figure 9), but in all three countries family gaps do not appear to attenuate much over time. For this reason, when children "leave home" disposable income does not usually exceed that of childless families. Consequently, cumulative income gaps to age 60 narrow but not as dramatically.

Finally, the disposable income of families in the continental European countries looks similar to Figures 8 and 9 for the UK and Australia. In both Germany (Figure 10) and the Netherlands (Figure 11), children reduce disposable income substantially and income does not rebound much over time. When children "leave home", income goes up as household needs decline but the resulting income is not much higher than, and in the case of

the Netherlands it remains below the income of childless families. In the continental European countries as well as the UK, marriage and dissolution have very strong effects on disposable income, as well.

These annual predicted incomes, summed to age 60, are shown in Table 3 and Table 4. In Table 3, we compare the cumulative gross income of families with children and families without children; in Table 4, we present family gaps in cumulative disposable income. In both cases, we find that the results parallel what we found in our analyses up to age 45, but with generally narrower earnings gaps than were evident up to age 45. Again, mothers in the Continental European countries do worse relative to continuously partnered, childless women, while mothers in the Nordic countries tend to do best. The Anglo-American countries form a less distinct group, but in general their position is worse than in the Nordic countries and better than in the Continental European. It is important to note that, in all countries, much of the catch-up occurs after 45 so if we were to discount the cumulative earnings, the gaps would be larger.

Table 3: Cumulative Gross Family Income for Medium Educated Women from Ages 19 to 60 Relative to Childless Women with No Dissolution, Median Regression Estimates to Age 45 then Growth Estimates

	Gross Income		
	One child age 27	Two children ages 25, 27	Two children ages 25, 27 Dissolution
Denmark	0.97	0.92	0.86
Sweden	0.92	0.89	0.83
Finland	0.87	0.87	0.82
United States	0.90	0.87	0.82
Canada	0.87	0.83	0.77
United Kingdom	0.82	0.77	0.72
Australia	0.86	0.71	0.65
Germany	0.80	0.75	0.69
the Netherlands	0.77	0.70	0.64

Table 4: Cumulative Disposable Family Income for Medium Educated Women from Ages 19 to 60 Relative to Childless Women with No Dissolution, Median Regression Estimates to Age 45 then Growth Estimates

	Disposable Income		
	One child age 27	Two children ages 25, 27	Two children ages 25, 27 Dissolution
Denmark	0.97	0.95	0.89
Sweden	0.94	0.93	0.88
Finland	0.90	0.91	0.87
United States	0.92	0.91	0.86
Canada	0.89	0.82	0.78
United Kingdom	0.86	0.82	0.77
Australia	0.87	0.73	0.67
Germany	0.86	0.82	0.77
the Netherlands	0.82	0.75	0.69

The gaps are narrower in Table 3 as we extend the estimates to age 60 because we assume the children leave home and in this way, adult equivalent income jumps up as household size falls. Nevertheless, substantial gaps in cumulative income to age 60 are apparent. For example, women in the United States who are medium- educated, are continuously partnered from age 24 and have no children have estimated cumulative gross incomes of $1,331,083 per adult equivalent by age 60. If we differ the life course only by assuming the woman has one child at age 27, cumulative gross income per adult equivalent falls by $137,259 for a woman with two children it falls by $ 170,227 and for a woman who divorced or separated between the ages of 30 and 39, it falls by $246,619. Moving to disposable income closes a good portion of these gaps: our estimates show these women having cumulative disposable incomes of $1,058,823 by age 60 if they were continuously partnered and had no children, $84,128 more than women who had one child at age 27, $92,329 more than women who had two children, and $143,155 more than women who had two children and divorced or separated between the ages of 30 and 39.

Differences by Level of Mothers' Education

The analyses presented thus far all focus on medium-educated women, who typically constitute the largest group of women in our countries. However, it is also of interest to know whether the patterns we observe are similar or different for women with lower or higher levels of education. We present selected results for low- and high-educated women here.[16]

The results for cumulative disposable income to age 45 for low-educated women, shown in Table 5, indicate the same overall pattern of clustering that we saw for the medium-educated. These results provide some evidence of slightly smaller gaps relative to the medium-educated, but also show a surprisingly similar range of relative incomes and generally the same ranking of countries.

Table 5: Cumulative Disposable Family Income for Low Educated Women from Ages 19 to 45 Relative to Childless Women with No Dissolution, Median Regression Estimates

	Disposable Income		
	One child age 27	Two children ages 25, 27	Two children ages 25, 27 Dissolution
Denmark	0.90	0.82	0.73
Sweden	0.92	0.85	0.78
Finland	0.89	0.85	0.79
United States	0.92	0.85	0.76
Canada	0.83	0.73	0.64
United Kingdom	0.81	0.73	0.66
Australia	0.76	0.62	0.54
Germany	0.83	0.66	0.56
the Netherlands	0.78	0.68	0.59

16 We present results only for disposable income, and only to age 45, to save space.

Table 6: Cumulative Disposable Family Income for High Educated Women from Ages 19 to 45 Relative to Childless Women with No Dissolution, Median Regression Estimates

	Disposable Income		
	One child age 27	Two children ages 25, 27	Two children ages 25, 27 Dissolution
Denmark	0.80	0.73	0.63
Sweden	0.78	0.72	0.63
Finland	0.85	0.79	0.71
United States	0.83	0.74	0.68
Canada	0.79	0.71	0.64
United Kingdom	0.74	0.66	0.60
Australia	0.79	0.66	0.58
Germany	0.73	0.63	0.53
the Netherlands	0.84	0.65	0.57

Results for the high-educated are shown in Table 6. Here we find the same overall clustering, but the most striking feature of this table, as compared to the results for medium-educated or low-educated women, is the larger magnitude of the family gaps in several of our countries. In particular, we see notably larger gaps in Denmark and Sweden than we found for the medium-educated in those countries and for women with one child, much narrower gaps in the Netherlands than we found for the medium-educated.

Interestingly, the gaps for the highly-educated women in the US are nearly identical in relative terms to what we found for medium-educated women in that country. Nevertheless, even similar gaps in relative incomes can translate into very consequential gaps in absolute incomes given the high level of incomes for the highly educated. In the US, for instance, a highly-educated woman who marries but has no children is predicted to have a cumulative disposable income by age 45 of $889,342 per adult equivalent. If she has one child at age 27, her cumulative income is predicted to fall to $739,497; if she has two children at ages 25 and 27, her cumulative income falls to $657,628; and if she has two

children and subsequently leaves her marriage or partnership, her cumulative income falls to $608,161.

E. Conclusions

In this paper, we set out to learn about how large the differences are in gross and disposable family income between families with children and without children and to what extent these family gaps differ across countries. Using data on nine countries from the Luxembourg Income Study database, representing three major types of social welfare regime, we estimated trajectories in gross and disposable family incomes for families following one of several stylized life-courses: marrying or partnering at age 24 but not having children; partnering at age 24 and having one child at age 27; partnering at age 24 and having two children, at ages 25 and 27; and partnering at age 24, having two children at ages 25 and 27, and then living without a partner from ages 30 to 39. Our work builds on prior work examining differences across countries gaps in women's earnings across these family types (Sigle-Rushton and Waldfogel, 2004), but extends that work by examining family income, both before and after tax and transfers.

Our results for women with a medium level of education, who constitute the majority of women in most of our countries, point to a clear clustering of countries by social welfare regime type. In general, family gaps in both gross and disposable family income are smallest in the Nordic countries, intermediate in the Anglo-American countries, and largest in the continental European countries. This clustering is very similar to what we saw when examining women's earnings only (Sigle-Rushton and Waldfogel, 2004), which suggests that differences in earnings between women with different family histories is the major driver in the family gaps in family incomes that we observe here. To the extent that taxes and

transfers affect these gaps, they tend to narrow differences across countries – since the Nordic countries' systems are tilted less to families with children and the continental European countries are tilted more.

After taxes and transfers, medium-educated women who partner at age 24 , have two children, and remain partnered have cumulative incomes by age 45 that are only 63 to 79 percent of the incomes of partnered women without children, and if they in addition dissolve their partnership between ages 30 to 39, their relative incomes fall even further, to only 54 to 71 percent of the incomes of partnered women without children. These moderately large relative gaps translate into very large gaps in absolute income. In the US, for instance, partnered women without children have incomes of $647,854 per adult equivalent by age 45, as compared to $483,726 for women with two children who remained partnered and $432,901 for women with two children who were not continuously partnered.

We find similar results when we look at women with low levels of education. When we look at the most highly-educated, we find the same overall patterns as we did for the medium-educated, but with larger gaps in several of the countries. These differences by educational level are intriguing and worth further research.

There are of course many limitations to what we have been able to do with the available data. Most notably, we have not been able to take account of family members' work histories, or their marriage and fertility histories. And, although we take government taxes and transfers into account, we have not included measures of other government activity such as service provision or in-kind transfers. Nor have we been able to get inside the household, to see how resources are shared and allocated within families.

Nevertheless, this work has yielded a few important insights. The first is that countries do cluster, by social welfare regime type, in terms of the magnitude of what we have called the family gap in income – the gap in income between families with and without children. This finding is perhaps not so unexpected, although these are the first analyses to pose the question in this way. The second insight is that these differences across countries are not due so much to the vigor and direction of countries tax and transfer systems but to factors that affect families' gross incomes. The clustering we find by regime type is present in gross incomes and remains once we take tax and transfers into account. This suggests that if we have something to learn from the Nordic countries about how they protect the incomes of women who have children, we should look first to their labor market policies and family policies. This is a useful pointer in thinking about directions for future research.

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Appendix Table 1: Education Distribution by Country, and Classification into Low, Medium, and Highly Educated

			Men	Women	Non-Mothers	Mothers
Australia		Still at School	0.00	0.00	0.00	0.00
	low	No qualifications	0.46	0.59	0.54	0.61
	med	Basic Vocational	0.02	0.07	0.07	0.07
		Skilled Vocational	0.26	0.11	0.11	0.11
		Associate Diploma	0.08	0.05	0.05	0.04
	high	Undergraduate Diploma	0.02	0.05	0.03	0.06
		Bachelor Degree	0.11	0.10	0.14	0.08
		Postgraduate Diploma	0.03	0.03	0.03	0.02
		Higher Degree	0.02	0.01	0.01	0.01
Canada	low	Grade 8 or lower	0.03	0.03	0.03	0.03
		Grade 9-10	0.08	0.07	0.06	0.07
		Grade 11-13, non-graduate	0.05	0.05	0.05	0.06
	med	Grade 11-13, graduate	0.20	0.23	0.21	0.24
		Some post-secondary	0.08	0.10	0.10	0.09
		Post-Secondary Certificate	0.35	0.34	0.33	0.35
	high	University Degree	0.19	0.18	0.22	0.15
Denmark		Other, not defined by level	0.01	0.01	0.01	0.01
	low	First level	0.00	0.00	0.00	0.00
		Second level, first stage	0.31	0.32	0.30	0.34
	med	Second level, second stage	0.51	0.44	0.48	0.41
		Third level, non-university	0.05	0.07	0.04	0.09
	high	Third level, university	0.08	0.13	0.13	0.13
		Post-university	0.05	0.03	0.04	0.03
Finland	low	Pre-primary	0.17	0.15	0.13	0.17
	med	Upper secondary	0.54	0.46	0.51	0.43
		Post-secondary, non-tertiary	0.00	0.00	0.00	0.00
		First stage tertiary 5B	0.15	0.16	0.16	0.16
	high	First stage tertiary 5A	0.13	0.22	0.19	0.24
		Second stage tertiary	0.01	0.00	0.00	0.00
Germany		still in education	0.00	0.00	0.00	0.00
	low	other diploma	0.04	0.04	0.03	0.06
		left school without diploma	0.01	0.01	0.01	0.02
		Hauptschule	0.28	0.20	0.16	0.22
	med	Realschule	0.32	0.42	0.40	0.44
		Abitur	0.11	0.13	0.17	0.10
	high	Fachhochscule	0.12	0.09	0.11	0.07

		Universitaet	0.04	0.10	0.12	0.09
		Foreign University	0.00	0.00	0.00	0.00
Netherlands		not asked	0.05	0.02	0.02	0.02
		unknown	0.03	0.02	0.04	0.02
	low	primary	0.07	0.10	0.06	0.13
		secondary, lower	0.17	0.24	0.19	0.27
	med	secondary, higher	0.45	0.44	0.47	0.42
	high	tertiary	0.16	0.15	0.17	0.13
		postgrad	0.07	0.03	0.04	0.02
		postdoc	0.00	0.00	0.00	0.00
Sweden	low	primary	0.01	0.01	0.00	0.02
		lower secondary	0.14	0.11	0.10	0.12
	med	upper secondary	0.56	0.54	0.50	0.56
		post-secondary, non-tertiary	0.09	0.07	0.10	0.05
	high	first stage tertiary	0.19	0.27	0.30	0.25
		second stage tertiary	0.01	0.00	0.00	0.00
United Kingdom	low	left at 16 or younger	0.61	0.58	0.47	0.62
	med	left between 17 and 18	0.19	0.25	0.27	0.24
	high	left after 18	0.20	0.17	0.26	0.14
United States	low	grade 12 or less, no diploma	0.12	0.11	0.08	0.13
	med	high school graduate	0.32	0.30	0.24	0.33
		some college, no degree	0.19	0.20	0.20	0.20
		associate degree, vocational	0.05	0.05	0.05	0.06
		associate degree, academic	0.04	0.05	0.05	0.05
	high	bachelor's degree	0.20	0.21	0.28	0.17
		master's degree	0.05	0.05	0.07	0.04
		professional degree	0.02	0.01	0.02	0.01
		doctorate	0.01	0.01	0.01	0.00

Appendix Table 2: Distribution of Children and Timing Since Last Birth by Level of Education and Country Women Age 16 to 45

		Number of Children					Mothers:
	Education	None	One	Two	Three	Four+	Average Children
Australia							
	low	0.34	0.21	0.28	0.12	0.04	2.03
	medium	0.37	0.21	0.26	0.11	0.04	1.96
	high	0.43	0.17	0.24	0.14	0.02	2.04
	all	0.37	0.20	0.27	0.12	0.04	2.01
Canada							
	low	0.37	0.27	0.24	0.08	0.03	1.80
	medium	0.38	0.27	0.25	0.08	0.02	1.76
	high	0.50	0.22	0.22	0.06	0.01	1.73
	all	0.40	0.26	0.24	0.08	0.02	1.76
Denmark							
	low	0.38	0.24	0.27	0.09	0.02	1.83
	medium	0.42	0.20	0.29	0.07	0.01	1.82
	high	0.40	0.22	0.28	0.08	0.02	1.83
	all	0.40	0.22	0.28	0.08	0.02	1.84
Finland							
	low	0.36	0.21	0.25	0.13	0.06	2.11
	medium	0.45	0.19	0.23	0.10	0.04	1.99
	high	0.36	0.19	0.30	0.13	0.02	1.99
	all	0.42	0.19	0.25	0.11	0.04	2.01
Germany							
	low	0.31	0.29	0.28	0.09	0.04	1.84
	medium	0.42	0.26	0.25	0.05	0.01	1.71
	high	0.49	0.22	0.22	0.04	0.02	1.73
	all	0.40	0.26	0.25	0.06	0.02	1.75
Netherlands							
	low	0.30	0.18	0.38	0.10	0.04	2.01
	medium	0.43	0.14	0.29	0.12	0.03	2.06
	high	0.48	0.17	0.24	0.09	0.02	1.94
	all	0.39	0.16	0.31	0.11	0.03	2.02
Sweden							
	low	0.32	0.25	0.26	0.11	0.06	2.00
	medium	0.38	0.20	0.28	0.11	0.03	1.97
	high	0.42	0.16	0.30	0.09	0.02	1.99
	all	0.38	0.19	0.28	0.11	0.03	1.99

United Kingdom							
	low	0.24	0.25	0.33	0.13	0.05	1.99
	medium	0.33	0.26	0.29	0.10	0.03	1.86
	high	0.46	0.19	0.25	0.07	0.02	1.87
	all	0.30	0.24	0.30	0.11	0.04	1.94
United States							
	low	0.22	0.23	0.25	0.18	0.12	2.36
	medium	0.28	0.25	0.30	0.12	0.05	2.00
	high	0.43	0.20	0.25	0.09	0.02	1.92
	all	0.32	0.23	0.28	0.12	0.05	2.03

Figure 1: Medium Educated Mothers with Two Children at Ages 25 and 27, No Dissolution: Motherhood Gaps in Gross Income and Disposable Income Cumulated from Ages 19-45

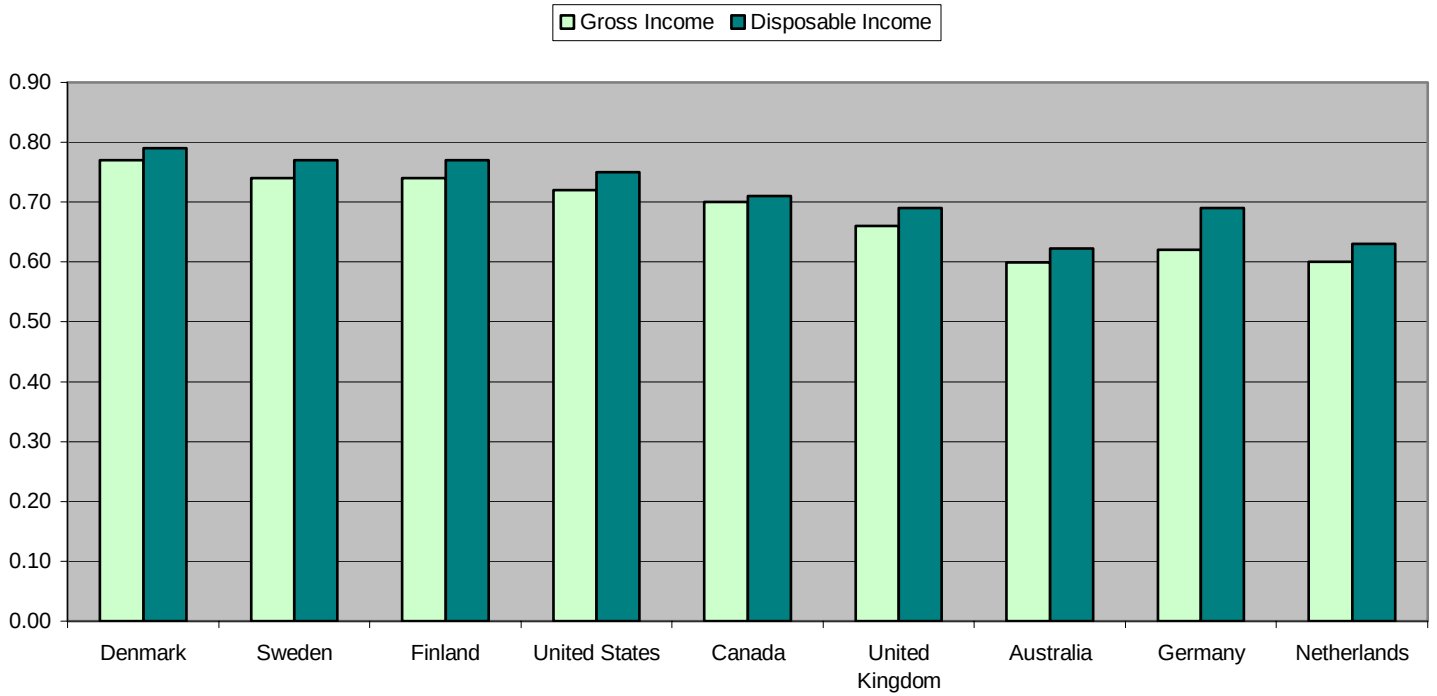

Figure 2: Medium Educated Mothers with Two Children at Ages 25 and 27, Partnered at Age 24, Single Parent from Age 30, and Remarried at Age 40: Family Gaps in Gross Income and Disposable Income Cumulated from Age 19 to 45

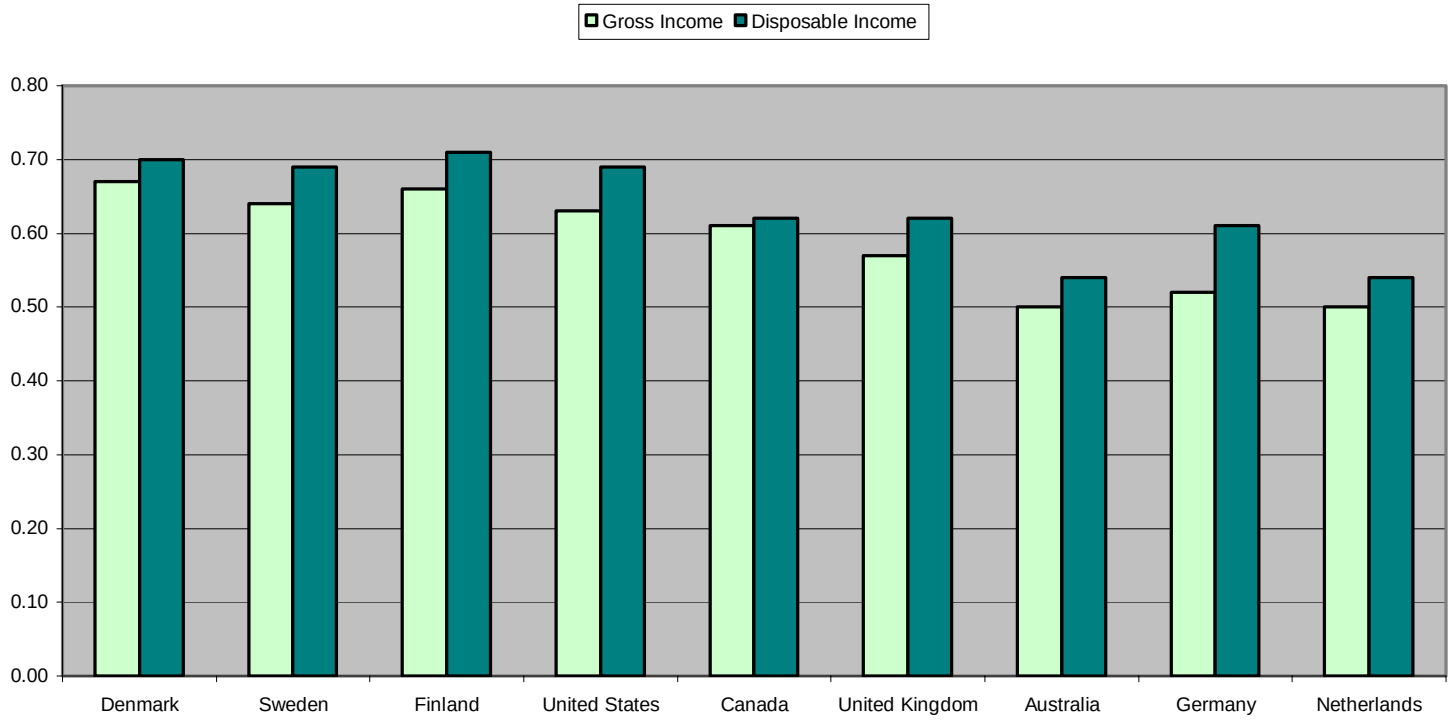

Figure 3: Predicted Disposable Household Income for Medium Educated Women with Different Fertility and Partnership Histories in Denmark: Quantile Regression Estimates, Estimates Equivalised for Household Size to Age 45 and Growth Estimates to Age 60

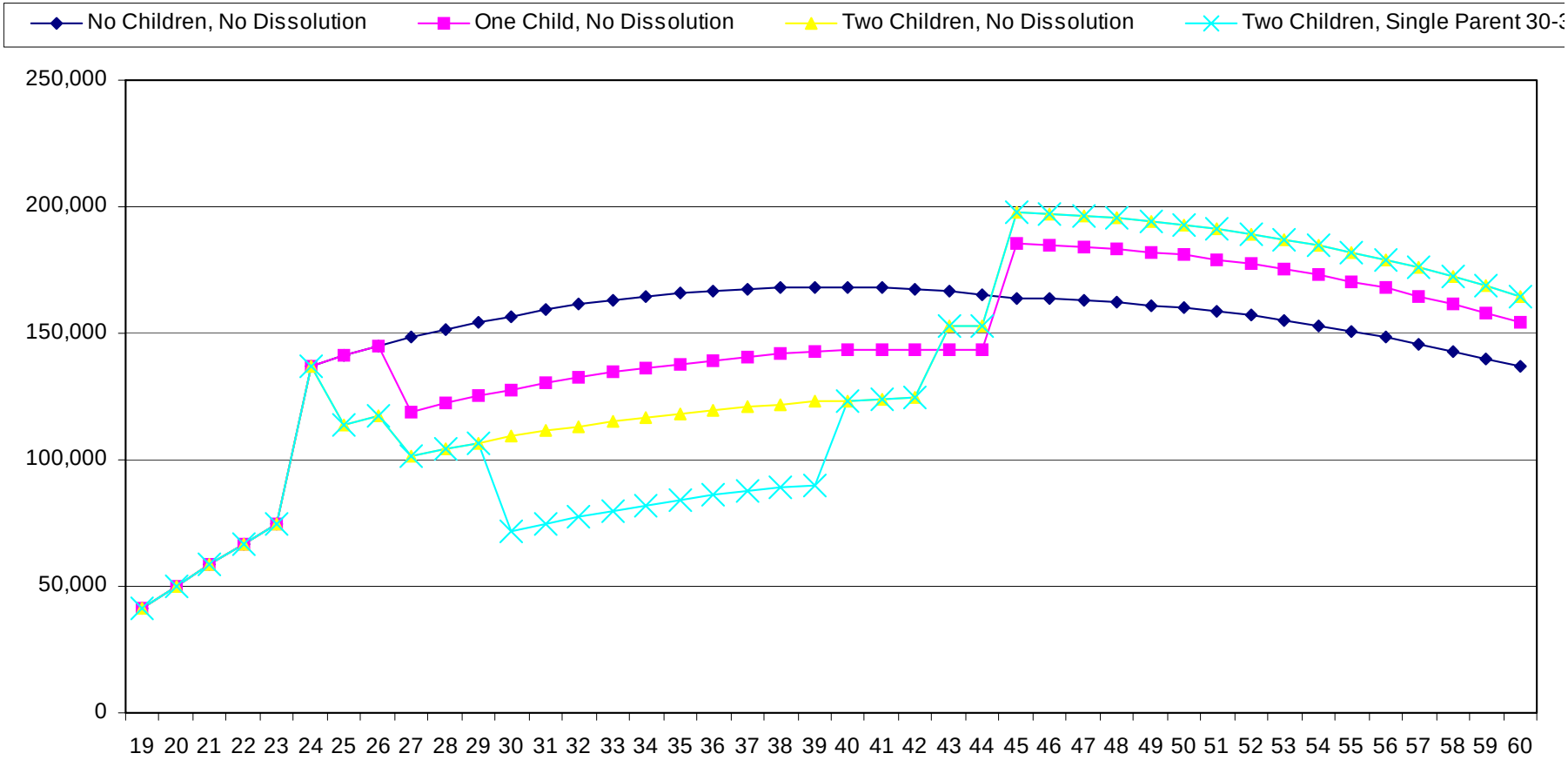

Figure 4: Predicted Disposable Household Income for Medium Educated Women with Different Fertility and Partnership Histories in Sweden: Quantile Regression Estimates, Estimates Equivalised for Household Size to Age 45 and Growth Estimates to Age 60

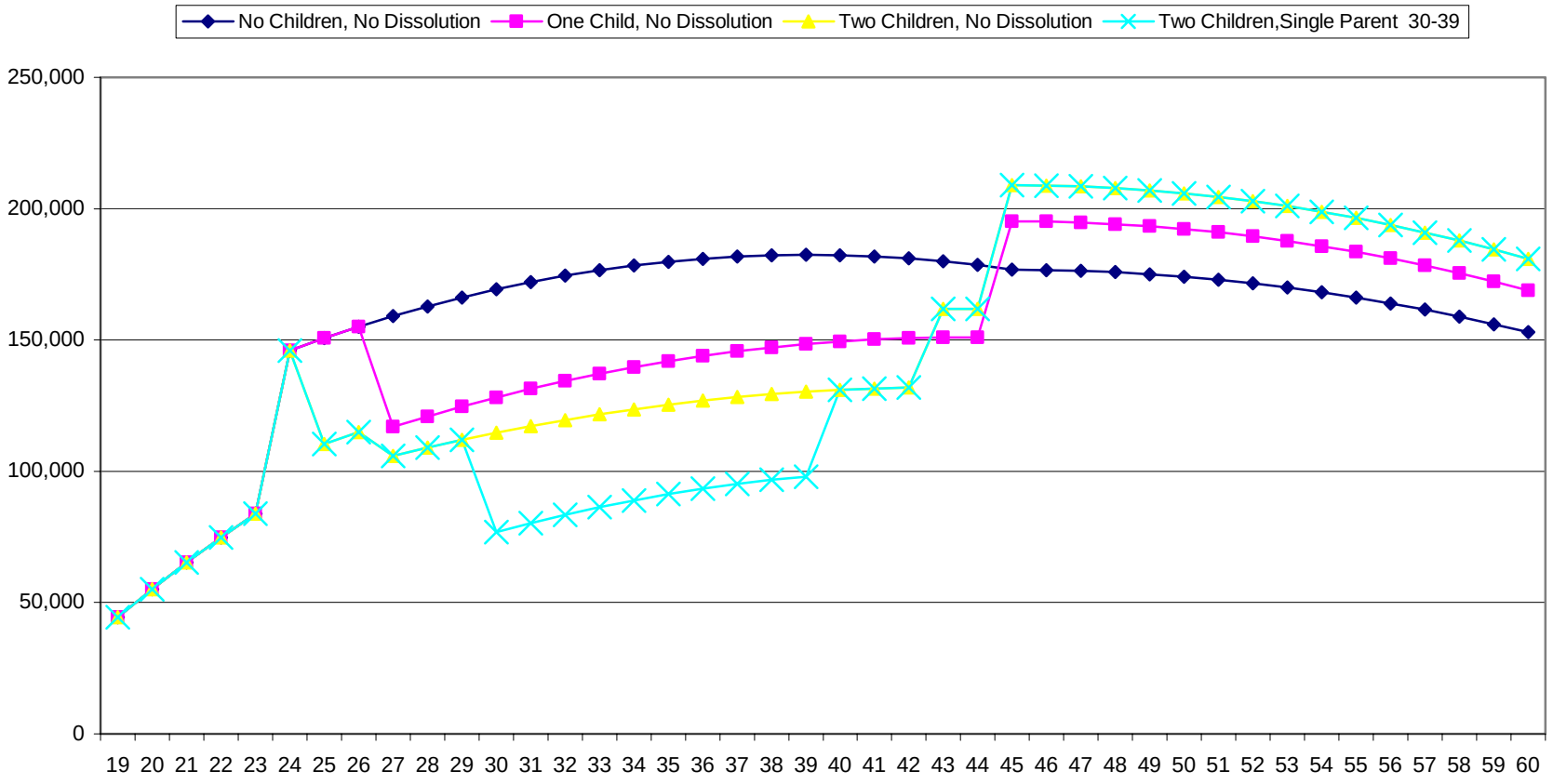

Figure 5: Predicted Disposable Household Income for Medium Educated Women with Different Fertility and Partnership Histories in Finland: Quantile Regression Estimates, Estimates Equivalised for Household Size to Age 45 and Growth Estimates to Age 60

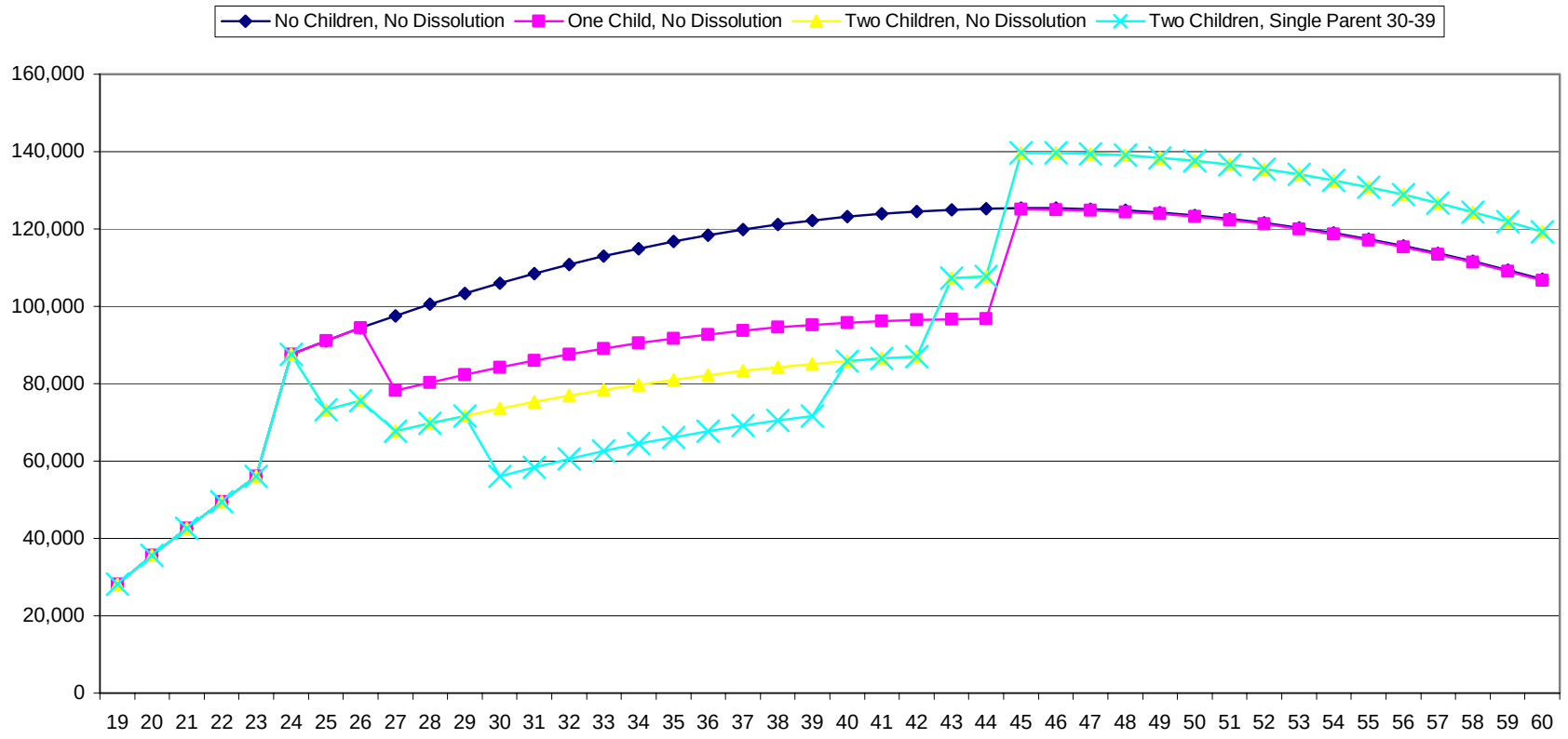

Figure 6: Predicted Disposable Household Income for Medium Educated Women with Different Fertility and Partnership Histories in the USA: Quantile Regression Estimates, Estimates Equivalised for Household Size to Age 45 and Growth Estimates to Age 60

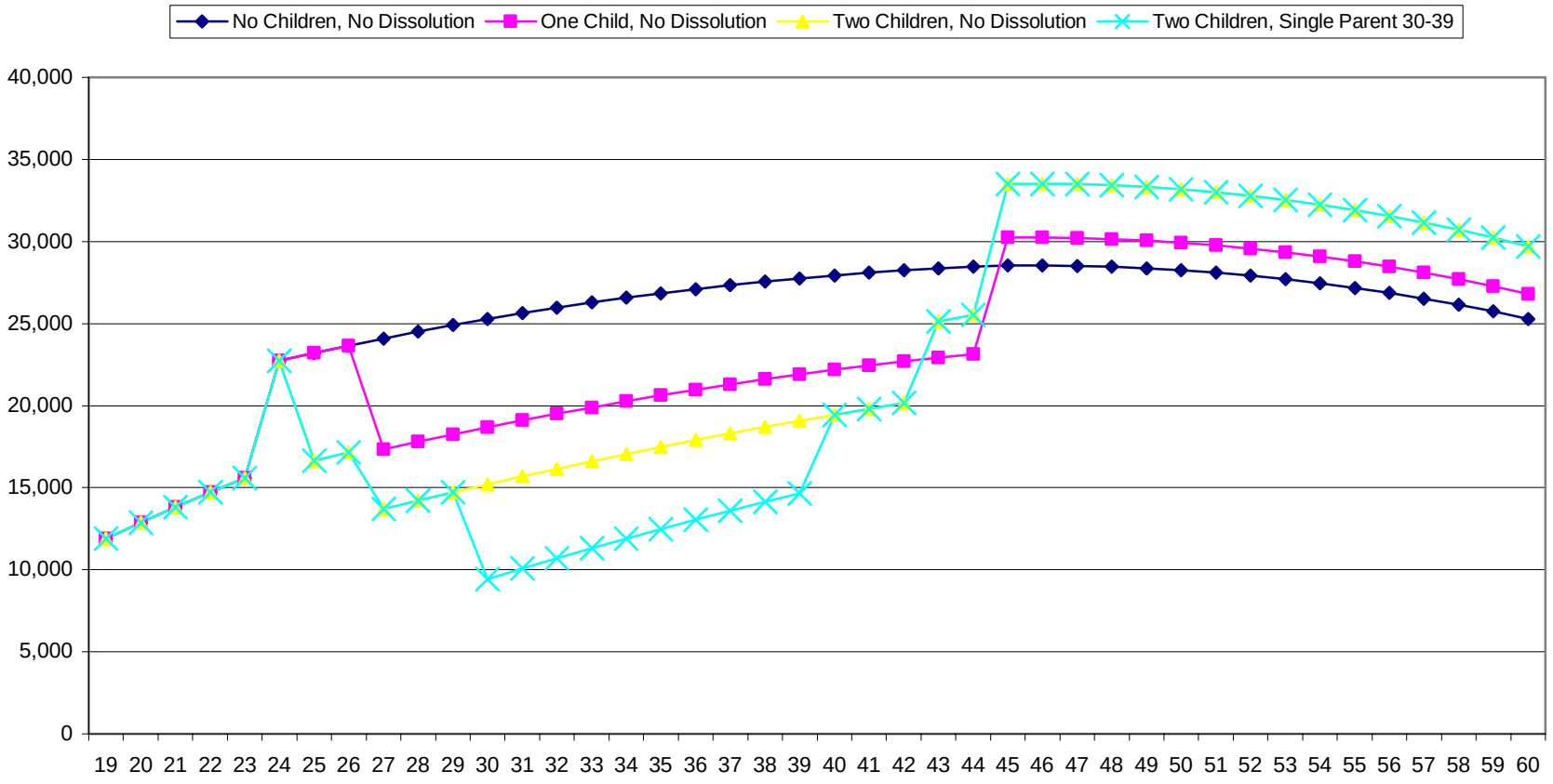

Figure 7: Predicted Disposable Household Income for Medium Educated Women with Different Fertility and Partnership Histories in Canada: Quantile Regression Estimates, Estimates Equivalised for Household Size to Age 45 and Growth Estimates to Age 60

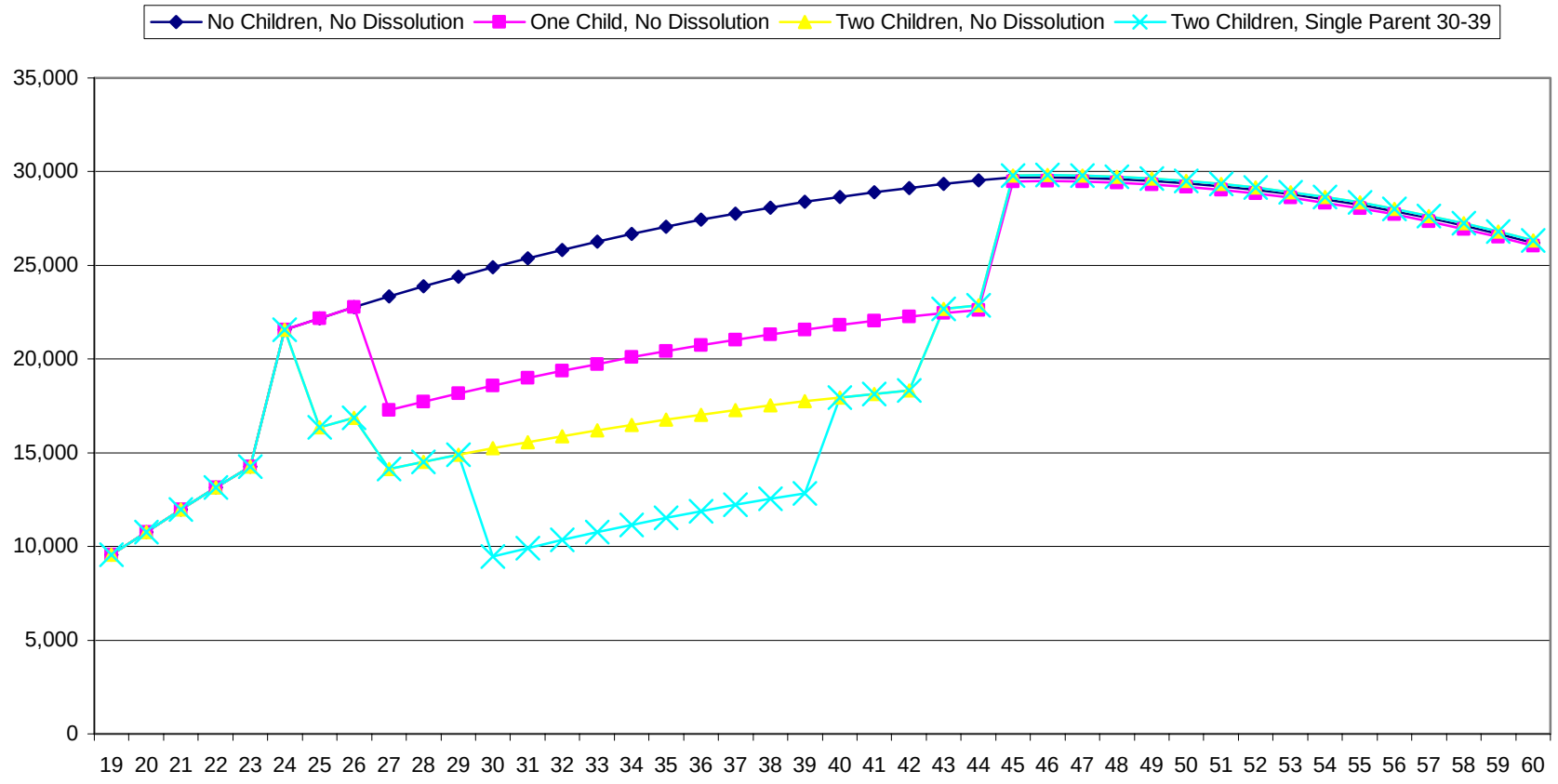

Figure 8: Predicted Disposable Household Income for Medium Educated Women with Different Fertility and Partnership Histories in the UK: Quantile Regression Estimates, Estimates Equivalised for Household Size to Age 45 and Growth Estimates to Age 60

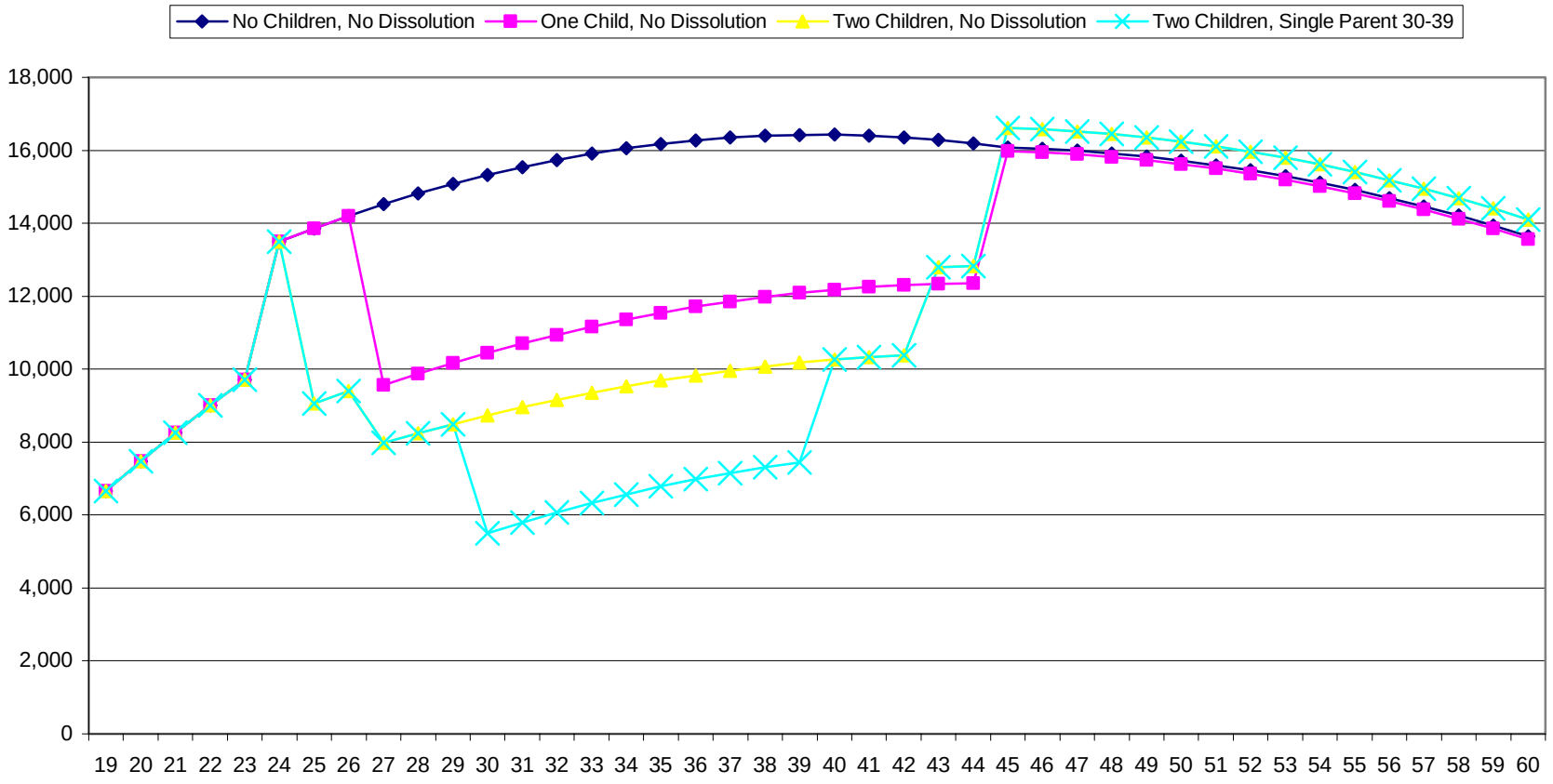

Figure 9: Predicted Disposable Household Income for Medium Educated Women with Different Fertility and Partnership Histories in Australia: Quantile Regression Estimates, Estimates Equivalised for Household Size to Age 45 and Growth Estimates to Age 60

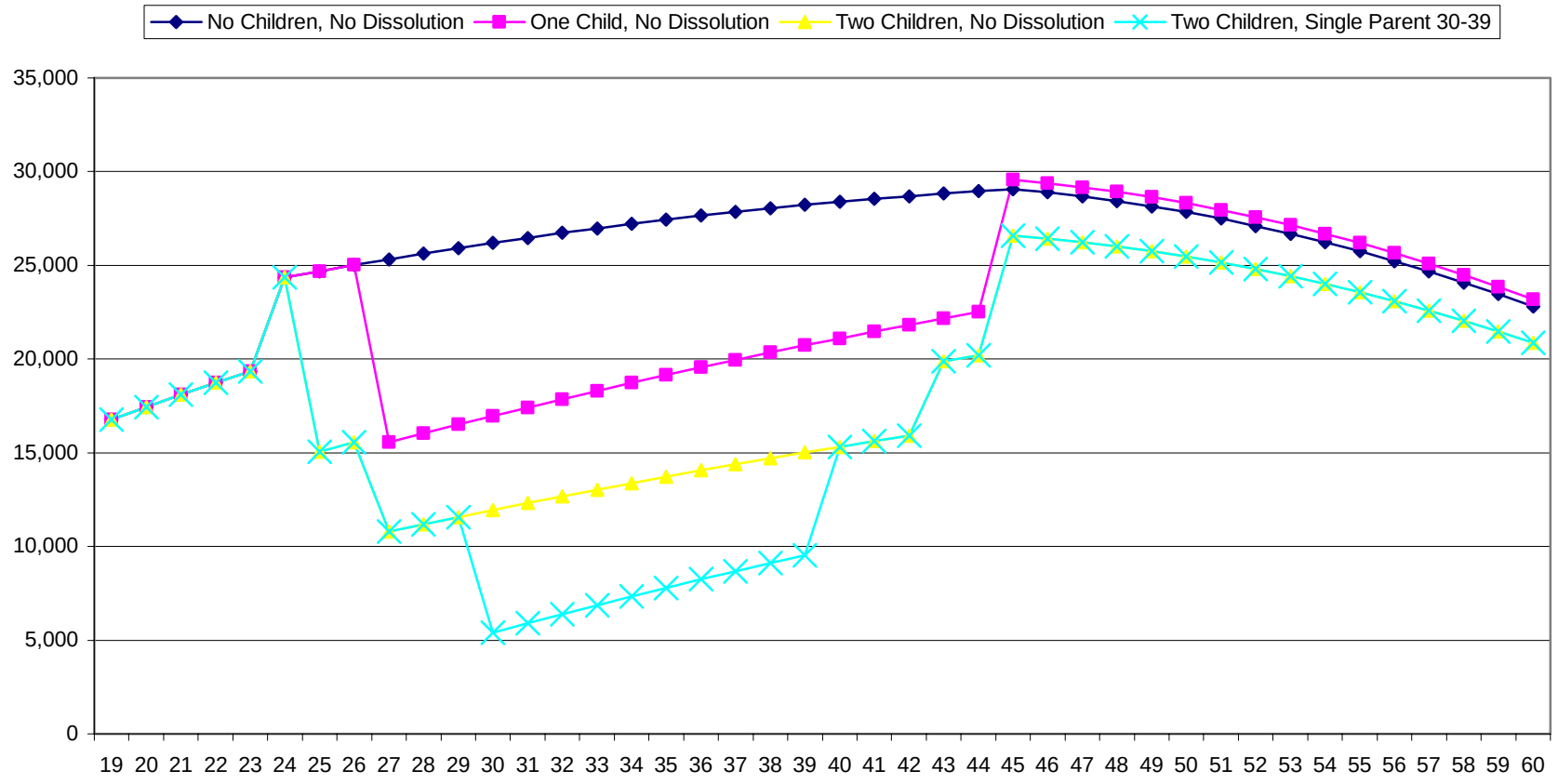

Figure 10: Predicted Disposable Household Income for Medium Educated Women with Different Fertility and Partnership Histories in Germany: Quantile Regression Estimates, Estimates Equivalised for Household Size to Age 45 and Growth Estimates to Age 60

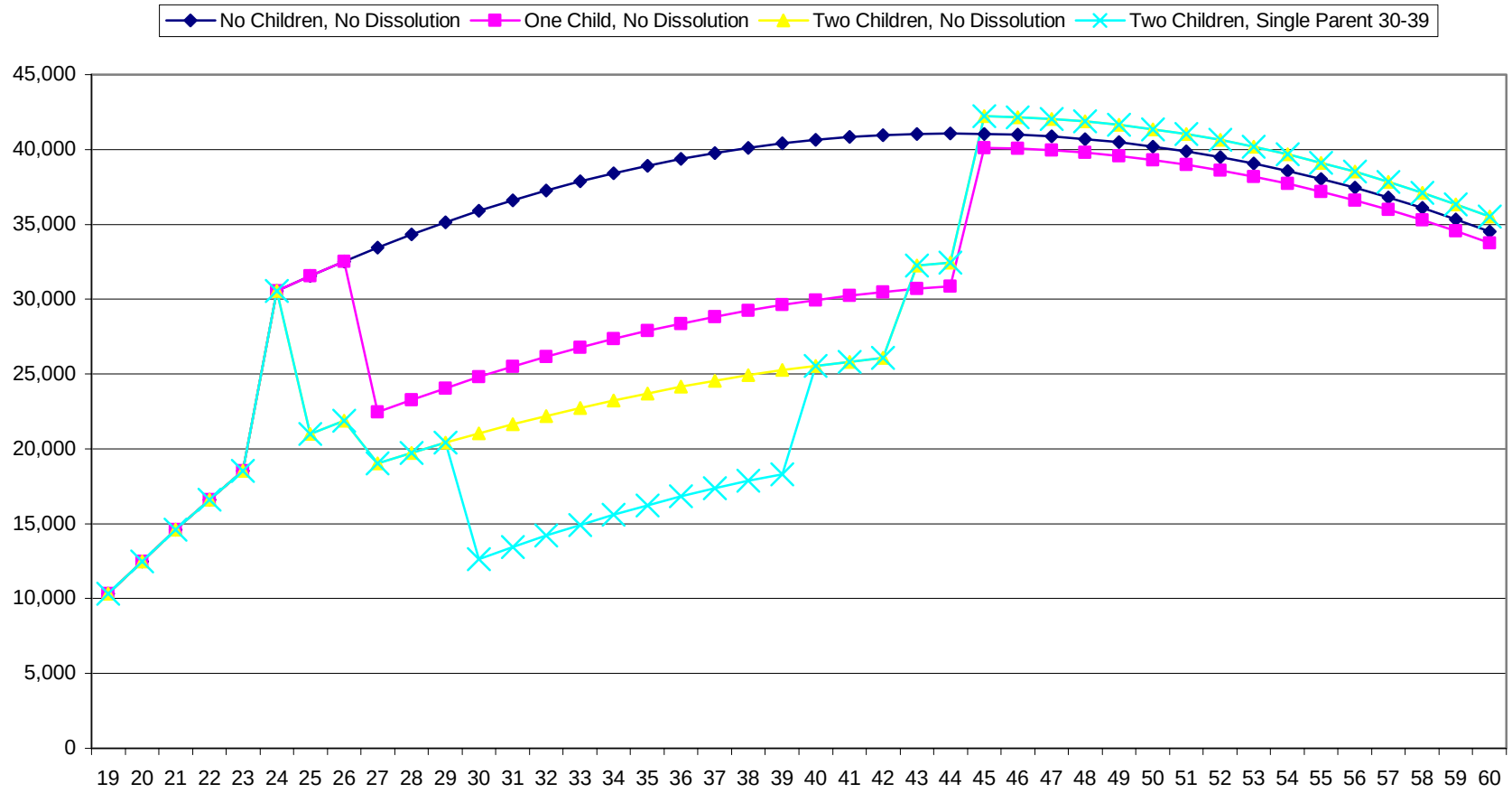

Figure 11: Predicted Disposable Household Income for Medium Educated Women with Different Fertility and Partnership Histories in the Netherlands: Quantile Regression Estimates, Estimates Equivalised for Household Size to Age 45, Growth Estimates to Age 60