Women’s economic outcomes, gender inequality and public policy: findings from the Luxembourg Income Study

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In the past two decades, many researchers have used the Luxembourg Income Study (LIS) data to analyse women’s economic status, or economic gender inequality, across the industrialized countries. Researchers concerned with labour market outcomes have concluded that: (i) women’s labour market status lags men’s in nearly every LIS country and time period; (ii) motherhood is a consequential factor nearly everywhere; while parenthood typically has little effect (or a positive effect) on men’s employment rates and earnings, it weakens women’s everywhere; (iii) against this backdrop of commonality, gendered outcomes vary dramatically across countries; and (iv) variation in policies, or policy packages, explains a substantial share of the observed variation in outcomes. Researchers focused on poverty have found that: (i) in several countries, post-tax-and-transfer poverty is more prevalent among women than men, mothers compared with fathers, and female-headed households relative to male-headed households; (ii) solo mothers everywhere face a heightened risk of low income and/or poverty, especially in the English-speaking countries; (iii) across the LIS countries, single elderly women are also at heightened risk, with the USA standing out as an extreme case; and (iv) cross-national variation in tax-and-transfer policies explains a large share of variation in post-tax-and-transfer income.

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JEL classification: J16 economics of gender, J18 public policy

1. Introduction

In the two decades since the birth of the Luxembourg Income Study (LIS), researchers using the LIS data have produced a large of body of comparative research, much of it focusing on income poverty and inequality. In many of these studies, the central aim is to compare poverty and inequality across countries and/or to capture trends; others focus on the role of public policy in shaping
economic outcomes. Policy analyses in LIS-based income studies generally consider the effects of direct taxes and public cash transfers; data on taxes and transfers are usually taken directly from the LIS microdata. Some researchers incorporate other policy indicators from external data—for example, aggregate social expenditures—to explain variations in poverty and inequality.

Throughout these 20 years, particularly in LIS’s second decade, a number of researchers have turned their attention to one particular area of enquiry: women’s economic status and/or economic gender inequality. Approximately sixty papers based on the LIS data have made women, mothers or gender differentials their central concern. Like the larger body of LIS research, many of these papers—about a third—focus on poverty or low income, with the spotlight on the heightened risks experienced by women, especially those in vulnerable subgroups, such as single mothers and elderly women. Again, like LIS research overall, most papers on women and poverty directly or indirectly consider the effects of tax and transfer policies on the risk of being poor and/or on poverty amelioration.¹

An even larger number of LIS-based studies about women—about two-thirds of the total—primarily concern women’s labour market outcomes. Researchers have used the LIS microdata to study women’s patterns, or gender differentials, with respect to: labour force participation or employment rates; time spent in market work; hourly wages; annual earnings; and—to a limited degree—employment sectors. Not surprisingly, researchers focused on labour market outcomes have assessed the effects of policy factors outside the arena of taxes and transfers. Drawing on a variety of macro-level policy and institutional datasets, LIS researchers have considered the labour market effects of government supports for maternal employment (such as public paid family leave and child care), public sector employment, legal protections for part-time workers, and even immigration policy; a few have considered the effects of political variables, such as women’s share in national legislatures and party composition. Some take a more holistic approach, considering the impact of country membership in various welfare state regimes—for example, Esping-Andersen’s ‘three worlds of welfare capitalism’—or countries’ scores on scales that similarly synthesize overarching welfare state features. In most cases, researchers consider these institutional impacts informally: some simply speculate on an underlying ‘policy story’ when interpreting variation in microdata-derived outcomes, while others present cross-country correlations between policies (or policy indices) and outcomes. Recently, an increasing number of researchers incorporate external policy data directly into their models, using a variety of macro–macro and

¹ The literature review sections in this article (Sections 2 and 3) synthesize papers in the Luxembourg Income Study working papers series, a comprehensive collection of LIS-based research. Many of these papers were subsequently published. For bibliographic citations of the published versions, see http://www.lisproject.org/publications/wherepub.htm.
macro–micro approaches—including, respectively, pooled time-series regressions and hierarchical linear models (HLM).

In the next two sections of this article, I synthesize the main findings from these 60 LIS studies on women’s economic outcomes and economic gender inequality. Section 2 summarizes key findings with respect to labour market outcomes, and Section 3 presents findings on poverty and/or low income. In Section 4, I present some recent empirical findings based on the LIS data—on labour market and poverty outcomes—and offer illustrations of cross-country correlations between policy and outcomes. In both the literature and empirical sections, I focus on studies that incorporate a policy component in the research design. In Section 5, I suggest future lines of related research that could be pursued using the LIS data.

2. Labour market outcomes: employment, hours, earnings and employment sector

The LIS research on gender and the labour market has produced four general findings. First, with a few exceptions, women’s labour market status lags men’s in all LIS countries and at all included time periods. Compared with their male counterparts in their own countries, women are less likely to work for pay, employed women spend fewer hours at the workplace, women earn less (both with and without basic controls) and—in some countries—women tend to work in less remunerative sectors. Second, motherhood is a key factor nearly everywhere; while parenthood typically has little effect (or a positive effect) on men’s employment rates and earnings, it weakens women’s everywhere. Third, against this backdrop of commonality is a remarkable degree of diversity; women’s labour market outcomes vary dramatically across the LIS countries. Fourth, policy seems to matter; variation in a range of policies, or policy packages, appears to explain a substantial share of the observed variation in outcomes.

2.1 Employment rates and hours

Research on women in general and/or wives Working with a variety of mainstream female populations—all women, all working-age women, married women, or

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2 Throughout this paper, I use the term ‘labour market attachment’ to include participation, employment and/or hours spent working for pay. While LIS researchers often report women’s ‘labour force participation’, nearly all have actually measured employment. In reporting other researchers’ findings, I use the term ‘employment’ unless researchers demonstrate that they have actually measured participation (i.e., included the employed and unemployed). Among the papers included in this study, while about half of these researchers use the term ‘participation’, it appears that only Phipps (1993) actually measured participation (using the LIS variable on weeks spent unemployed). Note that ‘employment’ is measured in a variety of ways, sometimes using labour force status variables, sometimes coded from positive earnings in the reference year, and sometimes from positive hours in the reference week.
married mothers—several LIS researchers have found that, in all of the long-time OECD countries (Western and Northern Europe, North America and Australia), women’s employment rates consistently lag those of their male counterparts (Wolff, 1990; Cancian and Schoeni, 1992; Gornick, 1999). Likewise, employed women in all of these countries spend fewer hours at the workplace than do their male counterparts, partly because they are more likely to work part-time and partly because there is a gender gap in hours among full-time workers (Bardasi and Gornick, 2000; Jacobs and Gornick, 2001).

Across the LIS countries, several factors are associated with reducing women’s probability of employment and/or their hours, absolutely or relative to men’s. First and most clearly, having children—especially young children—and having a larger number of children lowers both the likelihood and intensity of women’s employment (Wolff, 1990; Phipps, 1993; Knudsen and Peters, 1994; Gornick, Meyers and Ross, 1996; Harkness and Waldfogel, 1999; Jacobs and Gornick, 2001; Pettit and Hook, 2002)—but not men’s (Gornick, 1999). In addition, nearly everywhere, women’s employment rates and hours rise with their own educational level, suggesting that earnings’ capacity universally affects female labour market behaviour (Phipps, 1993; Knudsen and Peters, 1994; Gornick, Meyers and Ross, 1996, Pettit and Hook, 2002). Other factors—especially marital status and women’s unearned income (or their spouses’ earnings)—have inconsistent effects, both across studies and across countries.

While LIS research indicates that women’s (especially mothers’) labour market attachment lags men’s everywhere, it also reveals dramatic cross-national variation. Several LIS researchers have established that women’s employment tends to be high in the Nordic countries (i.e., Scandinavia and Finland), moderately high in the English-speaking countries (especially in the US and Canada), and somewhat lower in the countries of continental Europe, especially in Southern Europe (Wolff, 1990; Cancian and Schoeni, 1992; Gornick, 1999; Pettit and Hook, 2002). Part of the explanation for this pattern is that children exert smaller negative effects on women’s employment probabilities in the Nordic countries than in the English-speaking and continental countries (Gornick, Meyers and Ross, 1996; Harkness and Waldfogel, 1999).

The intensity of women’s labour market attachment also varies widely, although less systematically by region. LIS researchers have reported long employment hours among women—and/or low rates of part-time work—in a diverse set of countries, including Finland and Italy, followed by the North American countries. In other countries, especially Germany, the Netherlands, and the UK, employed women tend to work much shorter hours relative to men (Gornick, 1999; Bardasi and Gornick, 2000; Jacobs and Gornick, 2001).

 Vulnerable populations: solo mothers and elderly women  A few LIS-based studies have focused on the employment rates or hours of solo mothers, generally within the larger context of assessing risk factors or outcomes related to poverty. Wong,
Garfinkel and McLanahan (1992) compared employment rates among solo mothers and found a pattern parallel to that of married women and women overall—high employment rates in the Nordic countries (i.e., Sweden and Norway), moderately high rates in North America and in France, and lower rates in the UK, Australia and on the European continent. Nichols-Casebolt and Krysik (1995) also report that solo mothers’ labour market behaviour resembles that of most women, in that solo mothers with more education and fewer children are most likely to be working for pay. Other LIS research reveals that cross-national variation in employment carries through to workers’ older years. In his study of retirement patterns, Smeeding (1991) found that women aged 55 to 64—and even those aged 65 to 74—were substantially more likely to be engaged in paid work in Sweden and the United States than were their counterparts in other countries.

Other regions: Eastern Europe and East Asia

A small number of studies on women’s labour market attachment have focused on—or included—countries other than the longstanding OECD countries. In her comparative research on wives’ contribution to household income, Shirahase (2003) focuses on Japan (using a Japanese micro-dataset) and also includes Taiwan (from LIS). She finds that married women in both Japan and Taiwan have relatively low employment rates, fairly close to those reported in Germany and Italy, and substantially below those in the US, the UK and especially in Sweden. In addition, in these two East Asian countries, a far greater share of employed women report being self-employed than in any of the comparison countries, perhaps reflecting barriers to entry in the larger labour market.

Other researchers have included the former state socialist countries of Eastern Europe. In their study of the institutional determinants of women’s labour market attachment, Mandel and Semyonov (2003) find, in 1996, high female employment in the Czech Republic (tied with Denmark and Norway) and, surprisingly, a substantially lower rate in Slovakia (on a par with Australia). In a similar study, Pettit and Hook (2002), reporting on the time period 1994–96, also find comparatively high female employment in the Czech Republic; they report moderate rates in Russia and Hungary, and a considerably lower rate in Poland. Undoubtedly, research is needed on women’s labour market attachment in these regions—especially on trends. New dataset acquisitions by LIS will enable further inquiries of cross-country variation and change in both regions.

Policy impacts

Several LIS studies have assessed the extent to which public policy factors explain cross-national variation in women’s labour market attachment. A number of researchers posit policy explanations for variation that they observe, but without using formal modelling techniques. In their study of household income distributions and hours of work, Anxo and Flood (1999), for example, conclude that individual taxation, common in the Nordic countries, seems to reinforce the dual-breadwinner arrangement, whereas in Germany a tax-splitting system,
combined with high marginal tax rates, strengthens the male-breadwinner model, especially for highly educated and high-income groups. In another example, Jacobs and Gornick (2001), who assess hours of paid work in dual-earner couples, argue that in countries with higher levels of publicly financed child care, the working hours of employed husbands and wives tend to be more equal.

In recent years, LIS researchers have assessed the relationship between policy and women’s labour market attachment somewhat more formally. Gornick, Meyers and Ross (1996) correlated the country-specific effects of having young children on women’s employment probabilities (‘the child penalty’) with country values on policy indices that capture multiple measures of public child care and family leave provisions. They concluded that more than half of the observed cross-national variation in these ‘child penalties’ was explained by policy variation. Using a similar correlational approach, Mandel and Semyonov (2003) constructed a ‘welfare policy index’ that captures the number of maternity leave weeks with full pay, the percentage of preschool children attending publicly financed child-care facilities, and the percent of the workforce employed in the public welfare sector. They then correlated the index with mothers’ labour force participation (proxied by employment) across 20 countries and found a correlation of \( +0.403 \) (\( +0.602 \) for mothers with preschool-aged children). They concluded that ‘the data show that women’s rate of labor force participation tends to rise in places characterized by progressive welfare policies and well-developed public services’ (2003, pp. 19–20).

Using a methodological approach that is new in LIS-based research, Pettit and Hook (2002) estimate hierarchical linear models to assess policy impacts on women’s labour market outcomes within a multivariate context. They find that, controlling for micro- and other macro-level factors, both service sector growth and high levels of public child care are associated with higher levels of women’s employment. They also find a ‘curious’ negative effect for maternity leave—perhaps, they argue, because some countries with historically low female employment nevertheless have generous leave policies.

Finally, employing yet a different approach, Hicks and Kenworthy (2002) use highly aggregated measures of country-level policies and institutions to assess the effects of welfare state regime dimensions on multiple outcomes, including women’s share of the labour market. They classify countries on two dimensions: a ‘progressive liberalism’ scale, where high liberalism is characterized by extensive, universal and homogeneous benefits, active labour market policy, government employment and gender-egalitarian family policies, and a ‘traditional conservatism’ scale, where high conservatism features occupational and status-based differentiation in social insurance programmes and specialized income security programmes for civil servants, as well as generous and long-lasting unemployment benefits, reliance on employer-heavy social insurance tax burdens, and extension of union collective bargaining coverage. Then, using pooled cross-section time-series regressions covering
18 countries during the 1980s and 1990s, they find a significantly positive effect of progressive liberalism, and a significantly negative effect of traditional conservatism, on women’s share of the labour force—providing further evidence that welfare state regime features matter for gender equality in labour market attachment.

2.2 Earnings

Women’s earnings relative to men’s Several researchers have used the LIS data to analyse gender gaps in hourly wages, generally with the twin goals of, one, capturing the magnitude of unadjusted gaps across countries and, two, decomposing the gaps to assess the relative roles of differences in observed characteristics versus unexplained (or ‘discrimination’) components.3

In two early LIS papers, Phipps (1988, 1989) assessed gender gaps in hourly wages across the English-speaking countries and Sweden. She reports unadjusted female/male wage ratios of 0.62–0.64 in Canada, the UK, and the US, and substantially higher ratios in Australia (0.71) and Sweden (0.78).4 Other LIS researchers—Callan et al. (1995), Gornick (1999), and Harkness and Waldfogel (1999)—have found similar results: higher gender wage ratios in the Nordic countries and in Australia and lower ratios in Canada, the US, and the UK. Callan et al. (1995) and Gornick (1999) find that adding human capital controls narrows the cross-country variability. Both find, for example, that controlling for age and education—and, in Gornick (1999), occupation as well—reduces the gender wage ratio in Sweden and raises it in the UK. Overall, substantial unexplained hourly wage gaps persist in all LIS countries.

Other LIS researchers have focused on differences in earnings—generally, annual earnings—between husbands and wives. The central concern in these studies is not with wage discrimination but instead with women’s economic dependence within the family; in most cases, these measures conflate gender gaps in hourly wages with gender gaps in hours worked. Bianchi, Casper and Peltola (1996) compared ‘married women’s economic dependency’ across countries, where dependency is the difference between the two spouses’ shares of their summed earnings. Among dual-earner couples, overall, they find lower levels of dependency in the Nordic countries and higher levels in the English-speaking and continental European countries. Among all couples (including those with wives with no earnings), the

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3 LIS researchers have used a variety of strategies to compare hourly wages. Some use annual earnings and weekly hours, in some cases combined with annual weeks worked, to construct an estimated hourly wage variable. Others compare annual wages among full-time workers, usually controlling for weekly hours.

4 In an interesting extension, Phipps (1988) also calculated distributionally sensitive wage ratios in order to capture gender differences in both wage levels and wage distributions; with this adjusted measure, gender wage ratios in Canada and Australia fall sharply—meaning that women’s wages are less equally distributed than are men’s—whereas the Swedish ratio remains unchanged.
continental European countries (especially the Netherlands) stand out with especially high levels of married women’s dependency—driven upward by the high rates of non-employment among wives in these countries.5

Earnings differentials among women Several LIS studies assess wage differentials among women, which illuminate key factors that depress average female wages, both in the absolute and relative to men’s. In particular, women’s wages are lowered by motherhood status and by engagement in part-time work. Thus two consequential indicators are the wage gap between mothers and non-mothers and between women who are employed full-time and those employed part-time.

Harkness and Waldfogel (1999) assess the wage gap between mothers and non-mothers—what they call the ‘family gap’—and find that it too varies across the LIS countries. Not surprisingly, they find a strong positive correlation across countries between family gaps and gender gaps, that is, women’s wages most lag men’s where mothers’ wages most lag those of non-mothers. In a follow-up study, however, Todd (2001) reports that education acts as a powerful shock absorber with respect to family gaps; in the US and Canada, for example, high educational attainment virtually eliminates the differential between mothers’ and non-mothers’ wages.

Gornick and Jacobs (1994), and Bardasi and Gornick (2000), analyse part-time/full-time wage differentials among women. The part-time/full-time gap is an important differential through the lens of gender because part-time work is almost entirely women’s work in all LIS countries, and because part-time work is prevalent among employed women in a number of LIS countries. Both studies indicate that unadjusted part-time penalties vary widely across countries and that controls for productivity-related factors tend to reduce but not eliminate part-time/full-time gaps. Bardasi and Gornick (2000) find, for example, that unadjusted part-time wage penalties vary from 22% in the US, to 15% in the UK, to about 8% in Germany. (Subsequent unpublished analyses by Bardasi and Gornick also find a small wage premium for women part-time workers in Sweden.) The composition of these part-time/full-time differentials also varies across countries; controlling for age, education, occupation and industry (where available) reduces the US and German gaps only slightly, while the UK differential is nearly eliminated.

These lines of research indicate that factors that are not directly productivity-related—parenthood and engagement in part-time work—appear to depress women’s average wages across several LIS countries. Both of these effects widen the gender wage gap, as parenthood has little to no effect on average male wages (at the individual level), nor does part-time status (as so few men work part-time).

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5 This is underscored by Sørensen (2001), who reports that, in the early–middle 1990s, 40% of Dutch wives had no earnings compared with 9–14% of wives across the four Nordic countries.
Further work is needed to untangle the complex causality underlying these findings.6

Other regions: Eastern Europe and East Asia Once again, a small number of studies present results on women’s wages in countries not among the longstanding OECD members. Callan et al. (1995) included East Germany (as of 1991) in their study of gender ratios in hourly wages. They found a relatively high female/male wage ratio in East Germany—both unadjusted and adjusted—not as high as in Sweden but much higher than the ratio found, for example, in the UK. Brainerd (1997) assessed gender wage gaps, over time, across three former Soviet republics and six Eastern European countries (using LIS data for the Czech Republic, Hungary and Poland, and non-LIS data for the others). She concludes that, following reforms in the 1990s, gender wage gaps narrowed across Central and Eastern Europe. Modest increases in wage inequality depressed women’s relative wages, but those losses were more than offset by gains in rewards to skill and by declines in discrimination against women.

Shirahase’s (2003) comparative study, which includes Japan and Taiwan, assesses wives’ earnings as a share of dual-earner couples’ total earnings. Like Bianchi et al. (1996), Shirahase’s concern is with married women’s economic dependency, not with wage discrimination. She finds that Swedish wives command the largest share of total earnings (53%), followed by Italian wives (44%), German and American wives (33%), and British wives (27%). While Taiwanese wives are only as economically dependent as wives in Germany and in the US (commanding 34% of earnings), Japanese wives take home as little as 23% of dual-earner couples’ earnings—the lowest share among any of these countries. Shirahase attributes the very high level of (employed) married women’s economic dependency in Japan to (a) a high gender wage gap, (b) a pattern of long employment breaks following childbirth, and (c) a high rate of part-time work among married women, especially those who re-enter the labour market after childbearing.

Policy impacts Several LIS researchers assess the role of policy in shaping cross-national variation in gender wage and earnings differentials. While some of the same policy factors that directly affect participation and hours shape earnings as well (e.g., paid maternity leave and public child care), other policies influence earnings more directly—such as wage parity measures and practices that narrow

6 A third wage gap found among women—the gap between immigrant and non-immigrant workers—was reported by Kabrellya (2000). He finds that, among women, immigrants’ wages lag non-immigrants’ in Canada, the US and Germany (by about 5–20%), although they reach parity in Australia. In most cases, the parallel gap among men is of similar magnitude, so this form of wage inequality, while interesting, seems not to contribute to gender inequality.
overall wage spreads. Gornick (1999) finds that variation in overall levels of wage dispersion explains some of the variation in gender wage gaps across countries. She concludes that in countries where gender gaps are relatively unfavourable because overall wage structures are highly unequal (e.g., the US and Canada), policy measures aimed at narrowing the overall earnings distribution would probably be most effective in reducing the gender wage gap. In countries where gaps are larger because women occupy a lower position in the male wage distribution (e.g., Germany, Luxembourg, the Netherlands and the UK), measures that raise women’s pay, specifically, would be more influential.7

Three LIS studies directly model the effects of country-level institutions or policies on various indicators of gender differentials in annual earnings. Like Pettit and Hook (2002), Mandel and Semyonov (2003) use HLM to assess the impact of policy on micro-level outcomes, while controlling for other macro- and micro-level factors. Their independent measure is the index described above—including features of maternity leave, publicly financed child care, and public welfare sector employment—and their dependent variable is the gender difference in annual earnings. They conclude that the effect of their policy index on gender inequality is negative and significant in all equations, ‘indicating that, other things being equal, the prevalence of welfare policy is likely to decrease earnings disparities between economically active men and women’ (2003, p. 16).

Hicks and Kenworthy (2002)—whose methods are described in the previous section—assess the effects of welfare state regime dimensions, using their highly aggregated measures of country-level policies and institutions, on women’s share of labour market earnings. As they report, with women’s share of the labour force (a measure of gender equality in employment rates), they find a significantly positive effect of ‘progressive liberalism’ on women’s share of total earnings, and a significantly negative effect of ‘traditional conservatism’—suggesting that welfare state regime features significantly influence gender differentials in annual earnings. (This dependent measure includes women who are non-earners, so—to some extent—these two findings capture the same effect.)

Finally, Huber et al. (2001) use a method similar to Hicks and Kenworthy’s, and nearly the same dependent measure: wives’ wages as a percentage of the total earned by them and their husbands (or partners). They assess the effects of both country-level labour market institutions and political factors on wives’ share of spouses’ earnings; they find that union density and the share of the lower house of the national legislature that is female both have significant positive effects on wives’

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7 In one detailed study, Manafi (2000) finds that while the magnitude of the gender wage differential is similar in Sweden and Finland, a smaller share of the gap is due to ‘discrimination’ in Sweden. She concludes that this may be due to the fact that Swedish policy has gone further in promoting gender equality in the labour market and encouraging fathers to do more caregiving at home.
share of earnings, while having a Christian democratic cabinet reduces wives’ share. While the causality underlying these effects is not clear—especially the extent to which public policies are intermediate factors—these findings suggest that both labour market and political factors shape gender equality in earnings across the LIS countries.

2.3 Employment sector

A few LIS-based papers on women’s labour market outcomes focus on employment sectors. Gornick and Jacobs (1997) analyse the gendered nature of public sector employment across seven LIS countries. They report that the size of the public sector and the extent of women’s concentration in public employment varies widely across countries. At the same time, they find that, in nearly all countries, public sector workers earn more (on average) than their counterparts in the private sector. The smallest public sector earnings premiums are found in the social democratic countries and the largest in the liberal welfare states. Thus public employment provides relatively few but comparatively high-paying jobs for women in liberal welfare states while, in the social democracies, government jobs are more numerous but pay comparatively less well. The implications for gender equality may intensify over time, at least in some LIS countries, to the extent that fiscal pressures lead to either public sector job losses or wage restraint or both.

Focusing on employment sectors from a different perspective, Bardasi and Gornick (2000) report that the LIS countries also vary in the degree to which women part-time workers are employed in different occupations from their full-time counterparts. Furthermore, they argue, as do other scholars of part-time work, that in several countries the segregation of part-time workers into a subset of occupations is a causal factor underlying part-time/full-time pay differentials. Recent policy developments in several European countries directly address the issue of the segregation of part-time workers. Belgium, Germany and the Netherlands, for example, have joined Sweden in granting some workers a statutory right to shift to part-time status; this legislation is intended to allow workers to shift from full-time to part-time without having to change jobs, employers, occupations, or all three (Gornick and Meyers, 2003). Further comparative research is needed on employment sectors and public policy to clarify the origins and economic consequences of sectoral differences—between men and women, and between part- and full-time workers.

3. Women and disposable income: gender inequality and a heightened risk of poverty and low income

A second large body of gender-related research based on the LIS data considers male/female differentials in disposable income—with much of this work focused
on women’s heightened risk of living in low-income or poor households. More so than in the labour market research, public policy is directly integrated into these studies, partly because the influential role of taxes and transfers in shaping disposable income has long been recognized and partly because major findings about policy effects can be discerned directly from the microdata.

The LIS research on gender and poverty has produced four general findings. First, in several LIS countries, post-tax-and-transfer poverty is more prevalent among women compared to men, mothers compared to fathers, and female-headed households compared to male-headed households. Second, solo mothers everywhere face especially high risks of low income and/or poverty, especially in the English-speaking countries. Third, across the LIS countries, single elderly women also face especially high risks of low income and/or poverty, with the US standing out as an extreme case. Fourth, cross-national variation in tax-and-transfer policies explains a large share of the variation in post-tax-and-transfer income.

3.1 Gender gaps in poverty

The early 1990s brought a first wave of LIS research on gender gaps in post-tax-and-transfer poverty. Casper, McLanahan and Garfinkel (1994) concluded that, in the English-speaking countries—especially the US—and in Germany, women are substantially more likely than men to live in poverty; in contrast, they found no poverty gender gaps in Italy or the Netherlands and, in Sweden, a gap that actually favours women. These researchers concluded that gender differences in some individual characteristics—especially in employment and single parenthood—explain substantial portions of within-country poverty gaps as well as a considerable share of cross-national variation. In contrast, differences in marital status, education and age are much less important overall, partly because within-country gender differences tend to be small.

Wright (1993) and Pressman (1995) also used the LIS data to analyse gender poverty gaps. Wright used poverty measures that are sensitive to the income of the ‘poorest poor’, while Pressman shifted the unit of analysis and compared female-headed with male-headed households. Like Casper et al. (1994), Wright and Pressman both found that women (or female-headed households) are, in fact, more likely to be poor than their male counterparts in some but not all LIS countries. While these three studies found substantially different country-specific results, overall, they concurred that women are considerably more likely to be poor (relative to men) in the US and in the other English-speaking countries—with the possible exception of the UK.

In the later 1990s and early 2000s, a second round of research assessed gender gaps in poverty with an emphasis on the role of public policy. Pressman (2000) revisited his earlier work, working with later data and a larger number of countries, including Taiwan and five transition countries. He compares poverty rates between
female-headed and ‘other’ households to construct a ‘gender poverty gap,’ and concludes that, using this measure, there are gaps—female-headed households are poorer—in 21 of the 23 LIS countries included; Poland and Switzerland are exceptions. Again, especially large gaps are found in the English-speaking countries—and in Russia. Pressman concludes that variations in tax-and-transfer policy explain a major share of the cross-national diversity in both female-headed households’ poverty rates and in gender poverty gaps. Similarly, Rake and Daly (2002) compare average equivalized net income (rather than poverty per se) between female- and male-headed households and find that female-headed households have lower average income everywhere. Female/male household income ratios are lowest in the US and in the UK (0.73–0.74), much lower than ratios reported in Sweden and in Western continental Europe (0.86–0.91). Like Pressman, Rake and Daly (2002) find that variation in taxes and transfers explains a large share of the variability in gender ratios in disposable income. In the US, for example, the gender ratio in market income is comparatively high, but very low once taxes and transfers are taken into account.8

Turning her attention to mothers, Christopher compares the poverty rates of mothers’ and fathers’ (2001b) and also of mothers and all men (2001c). She finds a strong cross-national pattern of heightened poverty risk for mothers compared to all men—everywhere except in Finland and Sweden—and for mothers compared to fathers in all countries that she studied. As in earlier LIS research, Christopher finds the largest gender gaps in the English-speaking countries; mothers in the US are fully 58% more likely than fathers to be poor, after taxes and transfers.

3.2 Solo mothers

In the early 1990s, several LIS studies also focused attention on the high risk of poverty (or low income) experienced by solo mothers (Sørensen, 1990; Gornick and Pavetti, 1990; McLanahan, Casper and Sørensen, 1992; Wong, Garfinkel and McLanahan, 1992). Sørensen (1990) reported that a third of single-mother households in Germany—and over half in the US—had incomes of less than 50% of the median; solo-mother households with three or more children had far higher poverty rates. In contrast, Sørensen found, Swedish single mothers’ poverty rates were very low (7% overall). McLanahan, Casper and Sørensen (1992) assessed women’s poverty in eight countries, comparing the likelihood of poverty across various work-and-family combinations. Virtually everywhere, employed wives without children are the

8 In the gender gap studies that compare female- versus male-headed households—including Pressman, and Rake and Daly—it is somewhat more difficult to disentangle the effects of gender from the effects of family structure. The household-based comparisons fail to account for the well-being of the many women who live in male-headed households; and, while they adjust for family size, they also fail to account for the fact that male-headed households typically have more earners.
least likely to be poor, and solo mothers—especially if not employed—the most likely. Solo mothers in the English-speaking countries experienced the highest poverty rates; among both employed and non-employed solo mothers, the highest rates were reported in the US, followed by Australia and Canada.

A number of LIS researchers have focused on the role that employment and earnings play in solo mothers’ poverty risks, both within and across countries (Nichols-Casebolt and Krysik, 1995; Solera, 1998; Morissens, 1999; Christopher, 2001a). Nichols-Casebolt and Krysik (1995) found that the percentage of (never-married) solo mothers with earnings varied sharply across the four countries they studied, ranging from a high of 63% in France to 53–55% in the US and Canada down to only 34% in Australia. They also found that being employed significantly reduced solo mothers’ poverty odds in all four countries, and that the independent poverty-reducing impact of being employed was greater everywhere than the impact of being a recipient of either child support or public transfers. Solera (1998) reports that varying solo-mother employment rates explain nearly all of the variation in solo mothers’ economic well-being across Sweden, the UK and Italy. In Sweden, in particular, high levels of employment, shored up by strong policy supports, leave Swedish solo mothers far less poor than, for example, their counterparts in the UK. In the UK, the majority of solo mothers have no (or very part-time) labour market attachment and rely instead on social assistance. Christopher (2001a) adds that low wages also matter. In the US in particular, she reports, it is not low employment rates, but the preponderance of poverty-wage jobs that exacerbates US single mothers’ poverty. According to Christopher, compared to their counterparts in other countries, US single mothers who work full-time are among the least likely to work in jobs that pay wages above the poverty line—a finding somewhat at odds with Rake and Daly’s conclusion that it is meagre transfers that are largely responsible for the poor economic status of US female-headed households (at least relative to male-headed households) and not lagging market income.

Recently, LIS researchers have considered the effects of policies outside the tax-and-transfer arena on solo mothers’ poverty. Huber et al. (2001) pooled country/years and modelled the effects of labour market and political variables on a range of gendered outcomes (as described in the section on labour market research above); one of their dependent measures was solo mothers’ pre-tax-and-transfer poverty rate. They find that both union density and having a left cabinet have independent, significant, negative effects on solo mothers’ market poverty. While having a left cabinet seems to operate at least in part by raising solo mothers’ employment rates, the causality underlying these institutional effects is not clear. Beaujot and Liu (2002) assess child poverty in 19 LIS countries, with a central focus on solo-mother households—shedding light on other policy factors that reduce solo mothers’ poverty. Using a cross-national correlational approach, they conclude, not surprisingly, that poverty among the children of solo mothers falls (significantly) as both
public revenue and transfers to households (as shares of GDP) rise. Perhaps more interesting are the conclusions that they draw in other policy arenas: they also find that the children of solo mothers are less likely to be poor in countries where public policy favours joint custody and where governments take a more active role in ensuring child support collections from absent parents.

3.3 Elderly women

In addition, a number of researchers have used the LIS data to analyse the prevalence and causes of poverty among elderly women, comparing older women’s poverty rates to those of women in other countries and/or to their male counterparts (Smeeding, 1991; Doring, Hauser, Rolf and Tibitanzl, 1992; Hutton and Whiteford, 1992; Smeeding, Torrey and Rainwater, 1993; Stapf, 1994; Siegenthaler, 1996; Smeeding and Saunders, 1998).

In one of the first studies of elderly women’s poverty risk, Smeeding (1991) reported poverty rates among elderly persons living in male- versus female-headed households, as of the mid-1980s. He found that, across seven countries, in nearly every elderly age group (55–59, 60–64, 65–74 and 75+), persons in female-headed households were poorer than those in male-headed households. In addition, Smeeding’s findings revealed that elderly women were especially at risk of poverty in the US, where, in all of these age groups, 25% or more persons in female-headed households were poor. Poverty rates among elderly persons in female-headed households were far lower in other countries—for example, 15% or less in all ages groups in Australia, the Netherlands, Sweden, the UK and West Germany.

Smeeding, Torrey and Rainwater (1993), in their eight-country study, further underscore the extreme outcomes seen in the US. They report that more than one-fifth of single elderly women in the US live in homes with income below 40% of the median. Comparing poverty among single elderly women with that of elderly couples and non-aged units, they note that single elderly women in the US are not only the poorest group across these eight countries, but also the only group in any of these countries, with a significantly higher poverty rate than that of their non-aged counterparts.

Not surprisingly, given the elderly’s reliance on pension income, the studies on elderly women’s poverty across the LIS countries typically attempt to link poverty variation with features of national old-age security systems. Hutton and Whiteford (1992), for example, compared household net income across elderly households in four countries: Australia, France, the Netherlands and the UK. Like Smeeding, they found that in each of their study countries, and within all age groupings, net income is lower among elderly women than among their male counterparts—with the exception of two age groups in France where male income is slightly lower. Hutton and Whiteford then linked variation in income levels and in gender ratios
to the nature of the pension systems in these countries. They concluded, interestingly, that overall pension generosity and gender equality do not always go hand in hand. The French system, for example, provides elderly women with comparatively high levels of income (relative to elderly in other countries), but not relative to French men. In contrast, the Australian system provides the lowest income levels but the most gender-equalized. As they note, assessing the income security performance of these pension systems requires identifying multiple objectives.

Siegenthaler (1996) further assesses the economic position of single older women across six countries—the US and five European cases—and links the crossnational variation in economic outcomes to varying institutional arrangements. He concludes his review by identifying characteristics of old-age security systems that are ‘the most suitable for protecting older single women from poverty’ (1996, p. 40). The most protective features, he argues, include a minimum level available to all; a compulsory, complementary, earnings-related second tier (voluntary schemes are associated with higher poverty among single women); and a complementary means-tested system that ‘tops up’ benefits to levels not otherwise reached. The least effective system, he argues, is social assistance, as levels of support tend to be uneven and low, with their ineffectiveness typically compounded by low take-up.

4. Women’s economic outcomes and family policy: an example of recent empirical findings

Gornick and Meyers (2003) used the LIS data to paint an overview portrait of gender equality in the labour market and women’s poverty outcomes across 12 LIS countries, as of the mid 1990s. In addition, they constructed multi-programmatic policy indices capturing the generosity of work–family reconciliation measures—and also family cash benefits—in order to facilitate linking variation in observed outcomes to policy variation. Their empirical research is highlighted in this section.

As of the mid-1990s, gendered labour market and poverty outcomes continue to vary markedly across the LIS countries (see the first two columns of Table 1 for selected outcomes). Among married or cohabiting couples with children, mothers still contribute widely varying shares of couples’ labour market earnings (column 1). Overall, mothers in the Nordic countries command the largest share of family earnings (33–38%), followed by Belgium and France (at 32%), followed by the North American countries (28–31%), and trailed by the UK and the remaining continental European countries (18–19%). Across these countries, solo mothers’ economic well-being varies widely as well (column 2). The risk of post-tax–and-transfer poverty faced by solo mothers—in particular, employed solo mothers—ranges
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from as low as 4–10% in the Nordic countries and Belgium to a remarkably high 45% in the US.

Policy variation is also pronounced across these 12 countries. Gornick and Meyers constructed additive indices capturing the generosity of a package of public policies understood to influence both women’s labour market attachment and poverty (see Table 1, columns 3–4). Index I combines 22 indicators of features of work–family reconciliation policy—including paid family leave, publicly supported child care, the extent to which public school schedules are compatible with parental employment hours, and regulations that limit employment hours. Index II combines these reconciliation measures, with a measure of cash benefit generosity,

### Table 1 Women’s economic outcomes and policy provisions (mid-1990s)

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<th>Selected outcomes</th>
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<td>Mothers’ share of couples’ labor market earnings (%)</td>
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<td>Nordic countries</td>
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<td>Denmark (DK)</td>
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<td>Finland (FI)</td>
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<td>Sweden (SW)</td>
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<td>Continental European countries</td>
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<td>France (FR)</td>
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<td>United States (US)</td>
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Notes: Index I captures the generosity of public paid family leave, public provisions for early childhood education and care, and the compatibility of public school schedules with parents’ employment schedules. Index II captures these work–family reconciliation policies plus the generosity of public cash benefits for families, including family allowances, family support benefits, lone-parent cash benefits and refundable tax credits. The reconciliation policies and the cash benefit policies are equally weighted (each at 50%). See Gornick and Meyers (2003) for data sources and measurement details.
weighting the two components equally. With respect to reconciliation policies, the Nordic countries are clearly the most generous providers, followed by the continental European countries, and then by the English-speaking countries. When we consider the broader policy package—reconciliation policies combined with cash transfers—the countries reorder somewhat. For example, Luxembourg moves up to become the highest provider due to its generous cash transfers, and France’s ranking falls because its cash benefits are less generous, in cross-national terms, than its work–family services.

Is the cross-country variation in gendered outcomes shaped by policy variation? Clearly, while correlation cannot establish causality, the associations between these outcomes and policies suggest that policy does, in fact, matter—to some degree. Figure 1 reports the positive association $(r = 0.42)$ between the generosity of a country’s work–family reconciliation policy package and this summary measure of labour market equality: the share of couples’ total earnings taken home by mothers. Drawing both on this policy-outcome correlation and a large research literature, Gornick and Meyers conclude that generous reconciliation policies do increase labour market attachment among mothers with partners. At the same time, they note that other institutional factors in the English-speaking countries apparently raise women’s labour market attachment to levels above those reported in Germany, the Netherlands and Luxembourg—each of which has more generous

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9 See Gornick and Meyers (2003) for details on data, measurement and index construction. These indices and the data that underlie them are also available on the Luxembourg Income Study website. See the Family Policy Database: http://www.lisproject.org/publications/fampol/fampolaccess.htm.
reconciliation policies that might be expected to render maternal employment more manageable. In the English-speaking countries, a relative shortage of demand for part-time labour and—in the US—the link between employment and health insurance tighten mothers’ ties to paid work. These institutional factors are further reinforced by relatively more accepting attitudes towards maternal employment than those reported in these continental European countries.

Poverty rates among solo mothers are understood to be shaped not just by policies that strengthen mothers’ labour market attachment but also by cash benefits that supplement labour market income (Figure 2). Gornick and Meyers report that, across these 12 countries, there is a substantial negative correlation ($r = -0.70$) between the generosity of a more comprehensive family policy package—including both reconciliation measures and cash transfers for families—and poverty rates among households headed by employed solo mothers. As has been reported frequently in the body of LIS-based research, there is ample evidence that solo mothers’ poverty is influenced by public policy, and Gornick and Meyers’ results provide a recent illustration of that link.

5. Directions for future research

Today, many comparative researchers concerned with women’s economic outcomes and public policy are turning their attention to two hypotheses. The
first hypothesis is that generous ‘family-friendly’ provisions—granted by law or workplace practice—may be raising women’s employment rates in some countries (and possibly their hours) but at the cost of lowering the so-called ‘glass ceiling’ that limits their occupational opportunities and earnings advancement. According to this argument, where these programmes are especially generous, employers discriminate against workers whom they believe are likely to take up these benefits and services; in particular, they restrict potential users’ engagement in the most highly paid jobs and occupations. Thus, as long as work–family reconciliation programmes, such as family leave or the right to work part-time, are taken up overwhelmingly by women—as they typically are—their provision may harm the job, occupational and earnings prospects of employed women. In contrast, in a country like the US, where family-friendly programmes are very limited, women might be comparatively more likely to opt out of employment altogether but, if employed, they are likely to rise fairly high—as employers have reason to expect that their workplace behaviour will resemble that of their male counterparts.

The second hypothesis is that countries that have undergone extreme fertility declines—including, for example, a number of countries in Southern and Eastern Europe—will have to enact and maintain generous work–family reconciliation policies if they are to stem those declines. The argument is that where women find it difficult to blend employment and parenthood—due to weak policy supports and/or other factors that discourage maternal employment—many choose to work for pay and to forgo childbearing (or to have only one child), while others choose parenting and no or limited employment. In these countries, women’s fertility and their employment both tend to be low. Very low fertility is understood to be problematic at the individual level, to the extent that actual fertility lags desired fertility. It is also problematic at the macro level where, in some countries, alarming population forecasts imply dire social and fiscal dislocations in the future. The claim that supportive policies have the potential to raise both women’s employment and fertility is consistent with the positive correlation that has emerged in recent years, across the European countries, between women’s employment rates and total fertility rates. Within Europe, for example, the policy-rich Nordic countries and France report relatively high women’s employment and fertility, whereas both are low in several countries in Southern and Eastern Europe.

While the LIS data are not ideal for analyses of employment quality or of family formation, they can be used creatively to assess outcomes in both of these areas. In fact, recent LIS papers have begun to address both sets of outcomes—not surprisingly, with a focus on policy correlates. Mandel and Semyonov (2003), for example, consider the cross-country correlation between their welfare policy index (described earlier) and multiple indicators of gendered occupational segregation, including a measure of men’s versus women’s odds of holding a managerial position. They
argue that their correlational findings provide ‘support to the hypothesis that gender occupational inequality is more pronounced where the family policy is more prevalent’ (2003, p. 12). Clearly, this line of research calls for further analysis. Likewise, LIS researchers have recently chosen family outcomes as their dependent measures, and have aimed to link those outcomes to institutional factors. Cooke (2001a, b) models factors influencing family size, and Gonzalez (2003) assesses the determinants of the prevalence of single motherhood. While the research on family size is less conclusive (because family size decisions typically precede the independent variables chosen to explain them), the analysis of the determinants of single motherhood seems fruitful.

The next generation of LIS researchers will find ample opportunities to extend nearly two decades of research on the gendered nature of employment, earnings and poverty, and the links to public policy. Those research opportunities will be enhanced by the recent addition of new work–family policy data, at the country level, and the anticipated acquisition of microdata from diverse new countries. LIS researchers concerned with gender would also do well to pursue analyses of the second-order effects of work–family policies on women’s employment advancement and on fertility. Some of these collateral effects are worrisome (e.g., a possible drag on women’s occupational opportunities), while others are socially desirable (e.g., narrowing the gap between actual and preferred family size); in both cases, much more research is needed. While the LIS data are not perfectly suited for the study of these outcomes—both the employment sector and family structure data need vigorous massaging—LIS researchers have already begun to brave the data limitations and others ought to follow suit.

References


