

The effects of policies on intrahousehold gender inequalities: a cross country comparison

Jerome De Henau, Susan Himmelweit, Cristina Santos, Zeenat Soobedar¹

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Abstract: Policies can affect many different gender inequalities. Gender analyses of policies tend to evaluate their effects on gender equality in access to the labour market and on gender roles within households; these have been examined both within and across different welfare state regimes (see e.g. Lewis, 2009). However relatively little attention has been paid to effects on gender inequalities in access to the benefits that households' financial resources bring.

This paper draws on previous research by the authors that found that gender roles, specifically the employment status of members of a couple, including the particular combination of full and part-time employment, to be crucial variables affecting individual access to the benefits that household resources bring. The paper analyses a range of policies of Australia, Germany and the UK to compare their potential effects on intra-household gender inequalities, both through the gendered roles such policies encourage and through the ways in which policies affect the salience of those roles to men's and women's access to household resources.

By comparing three countries, all "strong male breadwinner" societies attempting transition, two with liberal welfare regimes (Australia and UK) and one considered more conservative (Germany) the paper discusses the potential impact on inequalities between individuals within households of policies known to have effects on gender roles, including childcare, parental leave and tax-benefit policies. These three countries have been chosen, not only because of the characteristics of their welfare regimes but also because they all collect good household panel data that can be used for empirical investigation of such intra-household effects, and some comparative results are presented in this paper.

Keywords: intra-household inequalities; family policies; financial satisfaction; gender roles

¹ Economics Department, The Open University, United Kingdom. Contact: Susan Himmelweit, s.f.himmelweit@open.ac.uk; Faculty of Social Sciences, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK.

1. Introduction

Policies can affect many different gender inequalities. Gender analyses of policies tend to evaluate their effects on gender equality in access to the labour market and on gender roles within households; these have been examined both within and across different welfare state regimes (see e.g. Lewis, 2009). However relatively little attention has been paid to the effects of policies on gender inequalities in access to the benefits that households' financial resources bring. This is the focus of the current paper.

These effects may have been neglected in the past may be because many policy makers treat individual access to household resources as a private matter that should be left to households to sort out. However not wishing to interfere in the internal affairs of households does not mean that the effects of such household decision-making can be ignored. If policies have effects on the variables that affect access to household resources, then those policies may exacerbate gender inequalities. Further, if these inequalities have behavioural effects, those policies may be less effective in achieving their goals than if their effects on intra-household access to resources had been taken into account. A well-known example of policy making that already does this is the payment of many benefits for children to mothers on the grounds that income received by the mother is more likely to improve children's welfare. This policy has been adopted in many countries as a way of making state spending on children more effective.

More specifically, this paper investigates whether individual access to household resources is affected by gender roles, specifically by household members' time-use, their labour market status and the time that they spend on housework. If gender roles do have such effects then policy can affect access to household resources in two ways. First it can affect gender roles directly: indeed much work-family policy is designed precisely to have such effects, usually by enabling women to stay in jobs (and in better jobs) when caring responsibilities increase and, to a lesser extent, by enabling men to take a greater share of those caring responsibilities and other domestic work. If gender roles affect access to household resources, then policies that are effective in equalising gender roles should influence any intra-household financial inequalities too. GOT TO HERE

However policy may also affect intra-household financial inequalities in another more indirect way, by influencing *how* gender roles affect differences in access to resources. Sen (1990) suggests that it is not actual but *perceived* contributions to household resources that may affect an individual's access to those resources. Such perceptions can be gendered, so that, for example, the effect on access to household resources of losing a job might differ between the woman and the man in a couple, because the perceived contribution of their employment differs. We might also expect such gender differences in the effects of unemployment to vary across societies: for example, to be smaller in societies in which policies had been successful in making gender roles more equal than in societies where little had been done to enable women to take employment on equal terms with men or men to take an equal share of domestic responsibilities.

Comment [J1]: We could stress the issue that many policy-makers still view the household as a private unit where resources are shared equally or that the sharing of these resources is a private matter and is necessarily optimised by rational adults who know what's best for themselves and their family (something along those lines to emphasize the need to look inside the box as evidence showed that this wasn't true and that inequalities inside hhlds reinforce and are reinforced by inequalities outside hhlds – the usual blurb really :-)

Sue Done by adding previous para and including some material that didn't go well in conclusion before. Better now?

It is difficult, if not impossible, to separate out the effects of specific policy differences and of general attitudes to gender roles in this because policy and attitudes affect each other, producing positive feedback and path dependence (Himmelweit and Sigala, 2004). It is the recognition of such path dependence that has given rise to the notion of different welfare policy and gender regimes (Lewis and Ostner, 1994; Meulders and O'Dorchai, 2007). While we might not be able to assign effects to specific policies or attitudes we may be able to see the overall effects of different welfare regimes on intra-household inequalities. This requires looking at both direct effects on gender roles and more indirect effects on how gender roles matter.

Comment [J2]: Reference?

Sue: Just added one already in the references. Can see if others needed later

Comment [J3]: We could use a reference for this as I think it came from a particular author to look at countries as gender regimes (maybe Lewis and Ostner? or Walby or Sainsbury – could be in Meulders and O'Dorchai book chapter)

Sue: Just added the ones already in the references. Can see if others needed later

This paper will compare different welfare regimes to do just that. It will focus on working-age couples and use the answers that members of a couple give to a question on their satisfaction with household income to give an indication of their relative access to the benefits that household resources bring. Once we control for a number of other possible influences on answers, we work on the not unreasonable assumption that if a factor affects partners' satisfaction with their common shared income differently, this is because that factor affects their relative access to that shared income.

On that basis, we examine the influence that gender roles have on men's and women's satisfaction with their common household income, using household panel data that allows us to control for fixed effects, unchanging differences between individuals that might affect answers to such satisfaction questions (Ferrer-i-Carbonell and Frijters, 2004). And we do so for three countries, Germany, Australia and the UK, whose welfare regimes are similar in some respects but differ in others, to examine the way in which national policy/attitude differences might impact on the way in which gender roles affect access to household resources. These three countries are chosen not only because of their policy differences and the characteristics of their gender regimes, but also because they all have comparable household panel data sets covering the years 2002-7 to use in this analysis.

The structure of this paper is as follows: the next section presents an overview of three main policy domains considered to influence gender roles, childcare, parental leave and tax benefit policies in our countries. It also gives an overview of some employment outcomes and other relevant statistical indicators, such as gender role attitudes. We then explain our methods in section 3 and discuss our results in section 4 before drawing out some implications for the types of policies that might impact on access to household income in section 5.

Comment [J4]: We need to say something about the effect of policies on gender quality/employment incentives etc. from previous studies so we can comment more easily on which policy is likely to be associated with lower access to resources for a particular gender (cost, quality and availability of childcare; length, payment, flexibility, protection and sharing of parental leave periods; amounts, eligibility conditions and means-testing rules of tax credits and benefits)

Sue: I agree but no time to do now

2. Policy affecting gender inequalities in Australia, Germany and the UK

There are similarities and differences in the policy background of the three countries that we are looking at. Classifying welfare states by their effects on the gender division of labour, all three countries have been talked about as "strong male-breadwinner states" (Lewis and Ostner 1994).. However they were male breadwinner states for different reasons.

Comment [J5]: We should emphasize more why we choose to compare three countries that are all breadwinner models (even if they belong to different groups in Esping-Andersen's typology). Less likely to find differences in effects of gender roles overall then. Perhaps we should stress that our goal is to compare male breadwinner countries that differ in the way this model was implemented or something like that.

According to Esping-Andersen's decommodification classification, Germany has a conservative-corporatist welfare state which uses social insurance and assistance to

Sue I have tried to do that through minimal changes. May not be enough.

narrow down the role of the market and relies heavily on the family to provide welfare services supported, if at all, by publically provided family services (Esping-Andersen, 1990). By contrast the UK has a liberal welfare state, focused on the minimal de-commodification of labour with only safety net welfare payments means-tested on household income and largely market provided welfare services (with the notable exception of health care). The Australian welfare state is sometimes classified similarly. However, although all Australian benefits are means-tested, the threshold is relatively high so that it is seen as designed more to exclude the affluent rather than to restrict benefits to the poor, and many social services are provided by non-profit organisations (Castles and Mitchell, 1993).

In Germany after unification social policy was dominated by the former West Germany's active policy of preserving the traditional role of the family as the main provider of welfare (Fleckenstein, 2010). By contrast, in the UK and Australia state policy fostered the male breadwinner model largely through neglect. Family arrangements were treated as private and outside the legitimate domain of policy but lack of social services hindered women's access to the labour market. In all three countries, mothers had a substantially reduced involvement in the labour-force when their children were small and often subsequently too, and if they had a job it was likely to be part-time. Before the mid 1990s, none of these governments intervened much to tackle the causes of such gender inequalities in labour market outcomes beyond banning outright discrimination

However from the mid 1990s all three countries had self declared "third way/neue mitte" governments that adopted a range of labour market activation policies particularly focused on increasing women's employment rates and retaining their skills (Hudson, Hwang and Kühner, 2008). In all countries the main aim was to raise GDP and government revenue rather than promote genders equality. Other aims were to tackle child poverty in UK and Australia and high unemployment in Germany and Australia. In Germany, at least, this was combined with policy makers' desire to increase its very low birth-rate by enabling women to combine motherhood and employment (Fleckenstein, 2010).

These policies took different forms and were adopted at different paces across our three countries, reflecting political changes during the period 1997-2007. In the UK and Australia, tax-benefit policy was the primary instrument used to increase labour force participation and make work pay, especially for "workless households". This was true in Germany too but with a greater concentration of effort on reducing unemployment traps, while providing job-protected family leave and low paid jobs for mothers re-entering the labour force. All three countries were officially committed to promoting female employment, and to that end to helping mothers (and to a much lesser extent, fathers) reconcile employment and family roles. This was promoted through the ideology of "choice" for families, but with differing emphases. In the UK, such choice tended to be seen in traditional gender terms, with mothers being given the choice of different ways of fulfilling their caring responsibilities while men were given the choice to work longer hours. In Australia, the reforms adopted by the liberal government after 1996 explicitly promoted women as main carers and men as main earners (Lewis, 2009; Hill, 2007). In Germany, choice also included fathers' choice to care, but again the policies' aims and impacts were mainly on women.

We consider below what these changes meant about differences between our three countries by the years covered by our data (2002-2007). We do this for three policy areas with important bearing on gender inequalities: childcare, parental leave and tax-benefit policies (including wage subsidies and tax credits) before looking at some data on gender differences in employment outcomes and gender role attitudes.

Childcare

From the mid-1990s, formal childcare use expanded significantly in all three countries; for Germany this was just in West Germany, since in the former East Germany childcare provision was already high (Lewis, 2009; Fleckenstein, 2010; OECD, 2007).

In the UK and Australia, market childcare provision, with a heavy focus on private-for-profit services, was encouraged through subsidies paid to low income parents in employment, not to providers. This marked a significant continuity in the liberal framework of these two countries' welfare states, although seeing childcare as a welfare service for working parents was new, especially in the UK (Daly, 2009).

In Germany, where the changes started somewhat later, after 2003, childcare expansion especially for the under-threes, although modest in scale, marked a clearer break with its conservative traditions (Fleckenstein, 2010, Rling 2010). Unlike in the other two countries, childcare provision in Germany was mainly public with fees, which varied by region, that were generally lower than in the other two countries. The main policy failure in West Germany was the very low level of provision. In 2002, only 2.8% of under threes in the former West Germany received formal childcare, while there were places for 36.9% of the age group in the former East Germany (Spiess, 2008).

In the UK and Australia the problem of childcare provision was not so much availability but cost; childcare fees in both were high by international standards (OECD 2007). The benefit system in Australia reduced the net cost to parents much more than in the UK, where maximum tax credit subsidies in 2002-7 covered only 70% of costs and were heavily tapered as household income increased so that average subsidies were well below the maximum. A much higher proportion of childcare costs was therefore paid by parents in the UK than in other two countries. In Australia much more generous subsidies led to market concentration and oversupply (Brennan et al, 2011). We will come back to the issue of childcare costs in the sub-section on tax-benefit systems.

Parental leave

Statutory provision for parental leave varies considerably between our three countries and illustrates somewhat better their differing priorities and types of breadwinner models. Changes in parental leave provision in the UK were mainly targeted at mothers, providing relatively long but very badly paid maternity leave, while leave available to fathers remained minimal (Lewis, 2009). This reflected the low priority that the UK government gave to enabling gender equality in parental roles.

Germany had quite different leave arrangements. Paid parental leave was available since 1986 in West Germany, initially developed to provide long (though job-protected) periods (up to three years) for mothers to care for their young children. Reforms brought in by the Red-Green coalition in 2000-2001 actively focused on work-life balance for both parents by making leave available to both (at the same time) and improving flexibility by making it possible to combine parental leave with a return to part-time employment or take it over a shorter period of time at a higher replacement rate. However, mothers still took the bulk of parental leave and subsequently often returned to employment with inferior pay and job prospects or did not return to work at all, while fathers' take-up remained low (Erler 2009).

In Australia, there was no universal provision for paid parental or maternity leave by 2007, despite attempts by various groups to improve the system. By 2002, up to one year's job-protected unpaid leave could be shared between parents. Some employers offered paid leave for mothers and, in some cases, fathers. In 2004, an estimated 37% of employed mothers had access to some paid leave through their employer, and 25% of employed fathers (though for a much shorter period) (Alexander et al. 2007). However, the tax-benefit system provided a one-off payment at birth (originally known as the 'Baby Bonus') available to mothers irrespective of their employment status; whose level by 2008 was equivalent to about 35% of average female full-time earnings for 14 weeks (Alexander et al. 2008).

Tax-benefit policies

Alongside parental leave and childcare policies, the tax-benefit system also influences gender roles. A 'dependent partner' trap, disincentivising employment for a potential second earner, can be created by the income tax unit (treatment of couples in the tax system), or by how and on what unit any means-test for out-of-work and in-work benefits operates.

In the UK and Australia individual earnings of each partner were taxed separately. By contrast, Germany still relied on a system of 'income splitting' for married couples that had the effect of raising the marginal effective tax rate of the lower earner (or of a spouse considering returning to employment). A study showed that a move towards an individual taxation system would increase married women's labour force participation significantly (four times as much as the decrease in men's) (Steiner and Wrohlich, 2004).

Comment [S6]: Should say what assumptions are being made about the individual taxation system e.g. a revenue neutral move??

Although Australia and the UK had individual-based income tax systems, tax credits and benefits means-tested on household income (and assets) operated in a similar way to disincentivise employment by raising marginal effective tax rates (METR)². In the UK, in-work benefits, introduced in their most recent form in 2003, were targeted at low income families and tapered away as household income rose. In Australia, family tax benefits, introduced in 1997, provided strong incentives for the mother to stay at home or work very few hours (Hill, 2007). Besides Family Tax Benefit (part A),

² Although household means-testing raises the METR of both partners, payment of an in-work benefit or tax credit is usually triggered by just one person in a household being in employment. For first earners the high METR is then offset by the level of the tax credit itself. This is not the case for the second earner whose employment may also entail childcare fees. In this case having two earners may not be worthwhile for low income families.

means-tested on household income, an additional Family Tax Benefit (part B), for a dependent spouse, was means tested on the lower of a couple's earnings, but paid to the higher earner. These, especially the second, substantially increased the second earner's METR (Blaxland et al., 2009). In Germany, however, child benefits were provided universally at a rate that depended only on the number of children. This was also true of 'child benefit' in the UK, but not of means-tested 'child tax credit', which was worth far more to low income families.

One widely used indicator to assess the combined potential impact of the tax-benefit system on work incentives is the average effective tax rate (AETR) which measures the relative difference in income tax take between two different employment situations. AETRs are a useful tool for assessing how different systems compare in mitigating or reinforcing traditional gender roles (OECD, 2007).

Table 1 illustrates this for our three countries, for the tax benefit systems that they had in place in 2005, for couples where one partner earns the average wage (AW) and the other partner is considering taking a full-time job paid at two-thirds AW, with and without taking account of childcare costs. A high value of the AETR means that a high percentage of any additional income is lost through reduced benefits, increased taxes or childcare fees, with 100% meaning all additional gross income is effectively "taxed away".

Table 1. Net household incomes and net tax burdens of a couple in 2005 and AETRs for a second earner, with and without childcare costs

	Two earners at (100+67)% AW, 2 children			Single earner at (100+0)% AW, 2 children		
	AU	GE	UK	AU	GE	UK
Gross earnings	167	167	167	100	100	100
Social Assistance	0.0	0.0	0.0	0.0	0.0	0.0
In-work benefits	0.0	0.0	0.0	0.0	0.0	0.0
Family Benefits	6.8	8.9	6.9	17.7	8.9	6.9
Housing Benefits	0.0	0.0	0.0	3.0	0.0	0.0
Income Tax	-37.6	-31.9	-27.7	-24.0	-11.5	-17.5
SSC	0.0	-34.8	-14.7	0.0	-20.8	-9.2
Total Net Income	136	109	131	97	76	80
Net tax burden	18%	35%	21%	3%	24%	20%
AETR of second earner with no childcare costs	41%	51%	24%			
Childcare fee	-44.7	-16.0	-47.8	0	0	0
Childcare benefit/rebates	15.1	6.9	4.7	0	0	0
Tax reduction	16.4	0.0	0.0	0	0	0
Other benefits	0.0	0.0	0.0	0	0	0
Net cost of cc	-13.3	-9.1	-43.1	0	0	0
Total net income (net of cc cost)	123	100	88	97	76	80
AETR of second earner taking account of childcare costs	61%	65%	88%			

Source: own calculations based on data from OECD Benefits and Wages 2007

Note: first or sole earner is assumed to earn average wage (AW); potential second earner would earn 67% of AW and if paying for childcare would need this full-time

Without considering childcare, second earners in Germany and Australia lost more than in the UK when taking-up a full-time (relatively low paid) job. This illustrates

the effect of income tax splitting in the German system and of the family tax benefit system (mainly part B) in Australia. However, because of the high cost of childcare in the UK, accounting for childcare costs significantly increased the AETR for second earners who had to pay for childcare to take employment in the UK to make its AETR the highest of our three countries.

Family/employment outcomes over the years 2000s

Policy reforms were implemented in our three countries aiming to improve employment outcomes by addressing (implicitly or explicitly) the problems of work-family balance. None of these countries embraced the fully fledged adult worker model of the Scandinavian social democratic welfare states, though they moved a step closer through introducing policies encouraging women's employment (Fleckenstein, 2010; Ruling, 2010). In practice this meant that in all three countries most families depended on "one-and-half breadwinners" and a large proportion of women were employed part-time, especially mothers with young children (Tables 2 and 3). Table 2 summarises the main changes in employment outcomes in the three countries over the period 1997 to 2007.

Table 2 Evolution of employment indicators 1997-2007

	AU			GE			UK		
	1997	2002	2007	1997	2002	2007	1997	2002	2007
Male employment rate	77%	78%	81%	73%	71%	75%	75%	76%	77%
Female employment rate	60%	63%	67%	56%	59%	64%	63%	65%	66%
Share of women in total employment	43%	45%	45%	43%	45%	46%	46%	46%	46%
% of all women employed full-time	35%	38%	42%	39%	38%	39%	37%	39%	41%
% of all women employed part-time	25%	25%	25%	17%	21%	25%	26%	26%	25%
Usual weekly hours men		41.4	40.7		40.6	40		42.8	41.8
Usual weekly hours women		30.7	30.9		31.4	30.2		31.1	31.4
% PT women involuntary		26.2	24.7		9.3	16.3		5.6	6.5
% PT men involuntary		42	36.9		30.7	27.9		40.3	41.2
Employment rate of mothers of child<6 years old	44%	45%	48%	50%	57%	60%	56%	57%	56%
Gender pay gap (FT)	15%	15%	15%	24%	26%	25%	25%	23%	21%

Source: OECD Employment database and earnings database (online)

The key changes shown in Table 2 are that both male and female employment rates increased in all countries over the period, though women's increased faster, especially in Germany and Australia. In Australia and the UK the increase was in women working full-time, while in Germany it came from increased numbers of women working part-time. However in all countries women worked on average only 75% of the hours of men. Australia had a very high proportion of women working part-time who were doing so involuntarily; the proportion of women in that position in Australia was lower but increased markedly from 2002 to 2007. The employment rate of mothers of children less than six years old was lowest in Australia, while in Germany it rose by 10 percentage points to overtake that of the UK by 2007. We can also see that the gender pay gap (for those working full-time) was highest in Germany at around 25% but considerably lower in Australia at 15%. Only the UK saw a slight decrease in the gender pay gap.

Table 3 summarises other important indicators related to families and employment, though only at single points in time due to lack of comparable time series data.

Table 3. Various indicators of family/employment outcomes, attitudes and birth rates in years 2000s

	AU	GE	UK	year
Mothers' employment rates of				
child <15y	63%	63%	61%	2008
child <3y	48%	56%	54%	2008
child 3-5y		64%	58%	2008
child 6-14y	71%	66%	67%	2008
Incidence of part-time employment among mothers				
child 0-5y	67%	46%	58%	2002
child 6-14y	55%	59%	57%	2002
Employment rates of				
partnered mothers	63%	66%	69%	2007
lone mothers	60%	65%	52%	2007
Couples by employment status				
% both working full-time	20%	14%	21%	2007
% one FT, other PT	41%	42%	40%	2007
% one earner only, FT	26%	32%	27%	2007
% none in work	13%	6%	7%	2007
% other	0%	5%	5%	2007
Enrolment in childcare services				
% children 0-2y (any time)	29%	18%	41%	2008
% children 0-2y (FTE)	18%	14%	22%	2008
% children 3y (any time)	12%	87%	82%	2008
% children 3-5y (any time)	55%	93%	93%	2008
Gender role attitudes (both men and women)				
"Man's job earn / woman's job care"				
% agree	22%	23%	20%	2002
% neither agree nor disagree	22%	16%	18%	2002
% disagree	56%	61%	62%	2002
"Pre-school child suffers if mother works"				
% agree	40%	56%	38%	2002
% neither agree nor disagree	21%	14%	19%	2002
% disagree	39%	30%	43%	2002
Fertility				
Total fertility rate	1.81	1.34	1.8	2005
Desired no. of children (women)	2.50	1.96	2.42	mid-2000s
Desired no. of children (men)	2.40	2.17	1.96	mid-2000s

Source: OECD family database (online)

Notes: household employment types for Australia are proportions of couple households in various types, with and without children (in 2006) while for the UK and Germany it is the proportion of children in various couple household types (in 2007). Gender roles attitudes are for West Germany only.

The main thing to note about mothers' employment rates is that, consistent with Table 2, by the end of our period, Australia has the lowest rate of employment among mothers of pre-school children, and that German rates were slightly higher than those in the UK. By the time children were in school Australian mothers were the most likely to be employed. However, in 2002 mothers of pre-school children in employment were considerably more likely to work part-time in Australia and the UK than in Germany, but for school age children the proportions were similar across the three countries. In all countries there was a much higher incidence of part-time

employment among employed mothers than Table 2 showed for women in general. That German mothers with pre-school children were less likely in 2002 to work part-time than mothers with older children suggest that this might be a cohort effect reflecting the rapid increase that had taken place over the previous five years (see Table 2) in the numbers of mothers of pre-school children in employment.

However, by 2007 lone mothers in the UK, even after ten years of policy focussed on encouraging their employment, were 17 percentage points less likely to be in employment than partnered mothers, while in the other two countries the differences between partnered and lone mothers' employment rates were far smaller. Among couples, in all three countries the one and a half breadwinner family was the most frequent in 2007, followed by the single earner family. Couples with two full-time workers were considerably rarer in Germany than the other two countries, though we should note that the German and UK figures are for just couples with children, while those for Australia include all couples.

In all three countries enrolment in childcare services was low for under twos, though slightly higher in the UK, though hardly so in terms of FTEs. For older pre-school children enrolment in Australia was far behind the other two countries, which both provided publicly funded pre-school places, but only part-time, at least in the UK.

In 2002, attitudes concerning gender roles were slightly less egalitarian in Australia than in the UK and Germany, as measured by proportions disagreeing with the statement 'A man's job is to earn money; a woman's job is to look after the home and family'. However, Germany seems to offer support to more traditional attitudes than Australia and the UK as far as mothers' employment is concerned, with 56% of respondents agreeing with the statement 'A pre-school child is likely to suffer if his/her mother works' and only 30% disagreeing³.

Germany's fertility rate is much lower than that of the other two countries, though interestingly the gap between the total fertility rate and the number of children desired by women is remarkably constant across all three countries, though men's desired number of children varies considerably.

The extent to which the results in Tables 2 and 3 are the product of the policies described above is beyond the scope of this paper. However we can note that, despite significant policy shift towards more activation measures for both men and women (including for parents), in all three countries, these were relatively unsuccessful in the UK. Employment patterns really changed only in Germany through mothers taking part-time jobs (which was already common practice for mothers in the UK and Australia) and in Australia through more women working full-time..

3. Methodology

We are interested in the effects of gender roles on access to household resources, and in what ways policy might influence those effects. Households do not actually share out household income before spending it and much of it is anyway spent on goods

³ By contrast, respondents in East Germany showed much greater egalitarian attitudes toward gender roles, with 75% of respondents disagreeing with the first statement (and 15% agreeing) and 56% disagreeing with the second (and 33% agreeing).

Comment [S7]: Not in the details of what we say but in the general picture we are building up we are muddling up women and mothers. Needs sorting out.

that are consumed together by members of households (household public goods), so there is no direct measure of access to the benefits that household income brings to its members. Instead as an indirect measure of their access, we use answers given by men and women in couples to a question about their satisfaction with their common household income. Variables based on individual financial satisfaction have been used for similar purposes in a number of other studies (e.g. see Bonke and Browning, 2009 and Alessie et al., 2006) though we may be the first to use answers to a question specifically about household income. The question we use is a particularly appropriate one, since the *level* of household income is the same for both members of a couple. So once we control for a number of other possible influences, we can then assume that if a factor affects household members' satisfaction with that same household income differently, this can only be because that factor affects members' *relative access* to the benefits of that income.

We use data from household panel surveys collected in our three countries and harmonised through the CNEF (cross-national equivalent file): the British Household Panel Study (BHPS), the German Socio-Economic Panel (GSOEP) and the Household, Income and Labour Dynamics in Australia (HILDA) survey. In all three surveys, panel members are followed over time and interviews are conducted annually with all adult members of their households. We restrict our sample to households consisting of a couple of working-age with or without dependent children, where the children, if any, have no significant income. We use data from the years 2002-7 during which all three surveys annually asked of all adult members of households the question: "How satisfied are you with your household's income": In the GSOEP and HILDA answers to this question are recorded on a scale 0-10 where 0 means "totally unsatisfied" and 10 "totally satisfied; we rescaled the answers from the BHPS, whose scale runs from 1-7 to make our data comparable.

Besides equivalised household real income, the variables in whose influence we are interested are those relating to gender roles; we use each partner's employment status (part-time employed, inactive, unemployed or disabled, with full-time employed used as the reference category) and hours of housework. We also include some household level variables that are relevant to gender roles: the proportion of household income coming from earnings with a dummy variable to indicate if there are no earnings at all (for most households, benefits are the main or only alternative source of income to earnings) and the number and ages of children to allow for costs, such as childcare, that are not fully covered by equivalence scales, and the time taken to look after them, that is not included in housework hours.

We also control for the proportion of earnings coming from each partner; this is the focus of most studies of intra-household inequalities in access to household income and often found to be significant. Our focus is on the gender roles themselves that give rise to unequal earnings; initial exploratory analysis of our data showed the effect of gender roles to be much more systematic and significant than those of relative earnings. Other controls include each partner's reported overall satisfaction with life, another question asked in all three surveys. We include an individual's own overall satisfaction with life to ensure that our dependent variable is picking up effects that are to do with household income, not spill-over effects from other domains of satisfaction. And we include partners' overall satisfaction with life to control for how concern for the other's well-being might temper each partner's assessment of what

their household income means for themselves. We also include year dummies to control for any relevant macro-economic effects, such as inflation or unemployment rates, that may differ between countries.

By using panel data, we can estimate our coefficients using a fixed effects estimator. Fixed effects estimation allows us to control for the effects of unchanging differences between individuals, such as personality traits that studies have shown to be an important factor in people's differing responses to satisfaction questions, but do not tend to vary much for an individual over time. However, this comes at a cost. Because some of these time invariant characteristics may be correlated with some of our variables of interest, fixed effects regression uses only variations within an individual's responses over time, not variations in responses across individuals.

Comment [S8]: Cristina. I know you don't like this word but it seems wrong to me to say "account for" here since all we do is strip out those effects we can't say about them themselves. Happy to consider an alternative term but would also like to know what you don't like about "control".

Linear fixed effects regression requires that we treat our ordinal dependent variable as if it was cardinal. Alternative fixed effects estimation methods that do not rely on cardinality drop all individuals for whom the dependent variable had not changed during the period, which would reduce our sample, and research comparing different methods using satisfaction data show that results from linear or ordinal fixed effects models produce similar results (Ferrer-i-Carbonell and Frijters, 2004). Using linear fixed-effects regression does not require us to make comparisons of the *level* of satisfaction across individuals within couples, or across different couples; rather we are looking at how factors influence *changes* in those levels. Fixed effects regression will also control for members in a couple caring differently about each other's access to household income, in so far as such unequal altruism is an unchanging aspect of a couple's relationship.

Comment [S9]: Cristina; needs checking again. I took most of what you said but wanted a bit less detail, most of which is now in the footnote, and then a bit more that is in this last sentence. But please check again.

Answers to satisfaction questions are also well-known to be influenced by social comparison with reference groups and individual expectations (Stutzer, 2004). In single-country studies we found that including some variables that could capture social comparison or expectations, such as local unemployment rates, did not much alter the *relative* effects of our main variables on men's and women's satisfaction with their household income much. So, we have not included such variables in this international study, recognising that while social comparison and expectations might have effects in themselves, these are unlikely to be sufficiently different across different members of the same household to affect our results.

Individuals tend to act upon situations when they are not satisfied with them, so we need to be sure about the direction of causation in our model. For example, being in or out of the labour market may be a choice influenced among other things by the difference that taking or giving up a job might make to one's satisfaction. However, it is reasonable to assume that the variable that influences such decisions is not satisfaction with household income *per se* but overall satisfaction: however satisfied or dissatisfied with their household income they are, in deciding on gender roles people make trade-offs between their desire for household income with other factors, such as time with their children and ways of living compatible with their gender role attitudes. By including overall satisfaction as a control we therefore do as much as we can to ensure that the direction of causation is from gender roles to satisfaction with household income, rather than from anticipated satisfaction with household income to gender roles.

Comment [J10]: Yet to clarify as well

4. Results

Table 4 gives the summary statistics of the variables used for our three countries. Note that these are not directly comparable to the population statistics given in Tables 2 and 3 since our sample is restricted to men and women in working-age couples.

Comment [S11]: Does this count as results?

Table 4. Means and derived ratios of variables used in regression analysis: working age couples in Germany, UK and Australia

	Germany		UK		Australia	
	Mean	(Std Dev.)	Mean	(Std Dev.)	Mean	(Std Dev.)
No. of observations	27801		7702		13387	
Satisfaction with household income						
Mean score of men	6.26	(2.06)	6.00	(2.30)	6.43	(2.19)
Mean score of women	6.41	(2.11)	6.11	(2.34)	6.47	(2.22)
Household income						
Equivalised household real income (EUR)	33003	(19533)	33558	(19542)	29087	(17543)
Hh has no earnings at all	2.7%		3.0%		9.7%	
Hh earnings to hhold income (if earnings>0)	84%	(22%)	90%	(20%)	79%	(33%)
Children						
% of hholds with no child (in hhold)	46.4%		45.5%		41.0%	
% of hholds with children 0-4y	8.5%		10.6%		13.7%	
% of hholds with children 5-12y	19.8%		27.6%		23.3%	
% of hholds with children 13y+	25.3%		16.3%		22.0%	
Male employment status						
full-time	77.7%		90.0%		75.7%	
part-time	3.2%		3.4%		6.8%	
inactive	3.1%		1.6%		2.7%	
unemployed	8.3%		2.5%		2.1%	
disabled	7.7%		2.6%		12.8%	
Male part-time in % of men paid work	4.0%		3.6%		8.2%	
Female employment status						
full-time	28.5%		47.7%		31.2%	
part-time	38.3%		30.7%		34.7%	
inactive	19.7%		17.7%		20.7%	
unemployed	8.1%		1.5%		2.2%	
disabled	5.4%		2.5%		11.2%	
Female part-time in % of women in paid work	57.3%		39.1%		52.6%	
Weekly hours of housework						
Man	4.4	(5.0)	5.3	(5.0)	5.9	(6.2)
Woman	16.1	(9.6)	15.3	(10.0)	18.8	(13.7)
Female share of total earnings						
between 0-25%	46.5%		38.8%		35.6%	
between 25-40%	19.0%		22.0%		17.7%	
between 40-60%	20.3%		25.3%		23.1%	
between 60-75%	4.0%		5.9%		3.6%	
between 75-100%	7.6%		5.0%		10.4%	

Comment [S12]: I think children should go after the employment status variables; they were talked about as "we also include above so I think should come later...."

JDH: Do as you like, easy to manipulate the table by switching rows...

Comment [S13]: Why this?

JDH: because you asked for it

Comment [S14]: And this? Because you asked for it

Comment [S15]: Since we are treating these as controls shouldn't they go at the end?

We also need to give results for own and partners satisfaction in general if we include these.

JDH: I would argue that even if they are treated as controls, the should appear in the des stats as it allows the reader to frame the kind of couples we're dealing with (and us to make suggestions for interpretation) so i would leave them in. It does not matter if we've got more des stat than variables used anyway; des stat are always useful I would say. As for overall sat, yes we could include the scores but would need to go back to dataset as Zeenat didn't produce the averages in the des tables she sent.

Comment [J16]: NOT SURE WHAT YOU MEAN

JDH: that later we interpret the significance of German results (and by contrast the non-significance in Australian or UK results) as telling something about Germans but not Britons or Australians whereas it might just be due to sample size. So when we compare countries we should be keeping that in mind.

Sue OK yes will do. Please check that I have.

Source: CNEF (harmonised dataset of BHPS, HILDA, GSOEP), waves 2002-2007

We should note first that the GSOEP surveys a larger number of households than both HILDA and, especially, the BHPS; so we have far more observations for Germany and fewer for the UK. This should be borne in mind when comparing the **significance level** of results from the three countries.

The equivalised real incomes of our Australian sample are slightly lower on average than those of our German and UK samples. More, strikingly Australia has a larger

percentage of households with no earnings at all than the other two countries. For those households with earnings, a lower proportion of household income than in other countries comes from other sources (mainly benefits and child support) in the UK, reflecting its less generous in-work benefits.

The vast majority of men are employed full-time in all three countries, but the rates vary. The UK sample's rate of full-time employment for men is higher than Germany's because of higher rates of unemployment among German men and than Australia's because of higher disability rates (which may reflect differences in policy and administrative categories rather than differences in disabilities across these countries). It is rare for non-disabled men to be economically inactive in all three countries and part-time employment rates for men are low, although at nearly 7% in Australia are more than double those of the UK and Germany.

Women's employment rates show considerably more variation, with almost half of our sample employed full-time in the UK, but much smaller proportions in Australia and, particularly, Germany. The pattern is reversed for part-time employment and making total employment rates similar in Germany and Australia at around 66%, of which a majority employed part-time, while total employment rates in the UK are more than 12 percentage points higher. Moreover, far fewer women are economically inactive in the UK than in the Germany or Australia. Among the three countries, like men, women in Germany are most likely to be unemployed and in Australia to be disabled.

Housework hours confirm that a female home-maker role is the other side of the male breadwinner. In all three countries women on average spend much more time on housework than men. The total amount of housework done by couples in Germany and the UK are similar, but with the distribution even more skewed to women in Germany. In Australia the total amount of time spent on housework is greater than in the other two countries, and compared with the UK this increase is almost entirely due to women doing more. Hours of housework, however, vary greatly within countries for both sexes.

In all three countries, the "male breadwinner" household type, where the female share of household income is less than 25%, is the most common. The highest proportion of those households is in Germany where almost half (46%) are of that type, more than in either the UK or Australia, suggesting, as we saw above, that the male breadwinner model continued to hold greater sway in Germany in our period. Households with a relatively egalitarian distribution of income (40-60% each) make up about a quarter of households in the UK and Australia but only a fifth in Germany. Interestingly, the UK has the smallest proportion of households in which the woman earns more than 60% of household income and considerably fewer in which the woman is effectively the sole breadwinner and earns more than 75%; this is true of 10% of our Australian sample, where the gender wage gap is far smaller than in the UK or Germany. The Australian sample also has 10% of households with no earnings at all, but this is not alone responsible for its low proportion of earnings in household income (72%),

Comment [J17]:

Just for us to bear in mind. One and a half breadwinner occurs when the female share of earnings is about 33% of total earnings so 25% is not exactly fully male breadwinner. We could be more vague about this.

Sue
Should use proper figures by employment status for this but this would need calculating.

compared with the other two countries, because even among those with earnings that ratio is lower in Australia.

Our estimation results are shown in Table 5. For each country and each gender, it gives estimated coefficients for a fixed-effects regression with satisfaction with household income as the dependent variable. The first two columns for each country show results for men and women respectively, while the third shows whether the coefficients of a given factor differ significantly according to whether it is men's or women's satisfaction with household income that is the dependent variable and the direction of that difference. This difference is what we take to indicate that a factor affects relative access to the benefits of household resources.

Following Sen (1990) we would predict that relative access should depend in general on the perceived contributions of each partner, so that those factors that improve one partner's perceived contributions should increase that partner's satisfaction with household income more than their partner's. Factors that improve one partner's perceived fall-back position or their perceptions of themselves as having interests beyond those of their family's should have similar effects. We discuss the predicted effects of each variable below, before giving the effects actually found for each country.

Table 5 shows the direction and significance of comparisons between the estimated coefficients for different countries. For each comparison the first two columns allow us to see if there is any difference in the effects of variables on men's and women's satisfaction with household income. The third column allows us to see the direction and significance of a comparison across countries of the effects of a variable on relative access to the benefits of household resources.

As we would predict log of equivalised household income is positively associated with satisfaction with household income in all countries for both men and women. We have no reason to predict any significant gender difference and we do not find any in any country. The only significant difference between countries is the greater effect of log of equivalised household income on men's satisfaction with household income in Germany than in the UK.

If people feel jobs are relatively secure source of income, they are likely to feel more confident financially the higher the proportion of their household income comes from earnings. As we would predict both men and women in Germany and Australia are significantly more satisfied with their household income when more of it comes from earnings. However that is not true in the UK, suggesting that its more flexible labour market may not induce such feelings of security in earnings.

Table 5. Estimations results of individual satisfaction with household income – Germany, the UK, Australia

	GERMANY			UK			AUSTRALIA		
	Male	Female	Diff.	Male	Female	Diff.	Male	Female	Diff.
Log of equiv. hhold income	0.427*** (0.038)	0.395*** (0.039)	+	0.285*** (0.078)	0.348*** (0.078)	-	0.370*** (0.050)	0.350*** (0.053)	+
Hh earnings to hhold income	0.470*** (0.088)	0.160* (0.089)	+***	-0.024 (0.268)	0.123 (0.267)	-	0.208* (0.108)	0.431*** (0.113)	-*
No. of chi aged 0-4y	0.039 (0.039)	0.037 (0.039)	+	-0.069 (0.057)	-0.130** (0.057)	+	-0.089** (0.044)	-0.143*** (0.046)	+
No. of chi aged 5-12y	0.079** (0.032)	0.100*** (0.033)	-	0.052 (0.056)	-0.008 (0.057)	+	-0.031 (0.043)	-0.061 (0.045)	+
No. of chi aged 13y+	0.013 (0.026)	-0.036 (0.027)	+	0.002 (0.086)	0.052 (0.086)	-	-0.023 (0.044)	0.043 (0.046)	-
Man working part time	-0.397*** (0.074)	-0.247*** (0.075)	-*	-0.570*** (0.147)	-0.217 (0.148)	-*	-0.430*** (0.076)	-0.404*** (0.079)	-
Man inactive	-0.406*** (0.079)	-0.304*** (0.080)	-	-0.412* (0.211)	-0.483** (0.211)	+	-0.526*** (0.115)	-0.392*** (0.120)	-
Man unemployed	-0.803*** (0.049)	-0.569*** (0.049)	-***	-1.450*** (0.171)	-1.434*** (0.171)	-	-0.747*** (0.119)	-0.345*** (0.125)	-***
Man disabled	-0.162** (0.075)	-0.143* (0.076)	-	-0.942*** (0.330)	-1.438*** (0.331)	+	-0.068 (0.067)	-0.057 (0.070)	-
Woman working part time	-0.191*** (0.042)	-0.288*** (0.042)	+*	-0.045 (0.078)	-0.235*** (0.079)	+*	0.031 (0.049)	-0.127** (0.051)	+***
Woman inactive	-0.361*** (0.051)	-0.444*** (0.052)	+	-0.061 (0.109)	-0.358*** (0.109)	+**	0.084 (0.064)	-0.266*** (0.067)	+***
Woman unemployed	-0.415*** (0.053)	-0.692*** (0.054)	+***	-0.206 (0.191)	-0.563*** (0.191)	+	-0.117 (0.111)	-0.709*** (0.116)	+***
Woman disabled	-0.215** (0.088)	-0.275*** (0.090)	+	0.111 (0.249)	-0.914*** (0.250)	+***	-0.023 (0.069)	-0.173** (0.072)	+*
Male hours housework	-0.009** (0.004)	-0.008* (0.004)	-	-0.018 (0.012)	-0.020* (0.012)	+	-0.004 (0.006)	-0.002 (0.006)	-
Male hours hwk squared	0.000 (0.000)	0.000* (0.000)	-	0.000 (0.000)	0.001* (0.000)	-	-0.000 (0.000)	-0.000 (0.000)	-
Female hours hwk	-0.001 (0.003)	-0.007** (0.003)	+*	-0.001 (0.007)	-0.008 (0.007)	+	0.002 (0.003)	0.002 (0.004)	+
Female hours hwk squared	-0.000 (0.000)	0.000 (0.000)	-*	0.000 (0.000)	0.000 (0.000)	-	0.000 (0.000)	-0.000 (0.000)	+
<i>No. of observations</i>	<i>26931</i>	<i>26966</i>		<i>7280</i>	<i>7283</i>		<i>11452</i>	<i>11451</i>	
<i>R-squared (within)</i>	<i>0.135</i>	<i>0.119</i>		<i>0.100</i>	<i>0.103</i>		<i>0.093</i>	<i>0.094</i>	
<i>Number of groups (hholds)</i>	<i>6489</i>	<i>6491</i>		<i>1841</i>	<i>1841</i>		<i>3198</i>	<i>3197</i>	
<i>F-stat</i>	<i>110.2</i>	<i>95.56</i>		<i>20.62</i>	<i>21.53</i>		<i>29.17</i>	<i>29.48</i>	

Source: Authors' own calculations based on CNEF (harmonised file for BHPS, GSOEP, HILDA)

Reference categories: Female earnings share between 40-60%; man working full-time, woman working full-time.

Other controls include female share of earnings (in five categories), year dummies and life satisfaction of both partners.

Notes: 'Diff.' column gives sign and statistical significance of difference between effects on male and female satisfaction.

'+' means effect of variable is to increase the man's satisfaction more (decrease it less) than the woman's

'-' means effect of variable is to increase the woman's satisfaction more (decrease it less) than the man's

*** sig. at 0.01; ** sig. at 0.05; * sig. at 0.1

However, the effect of the share of earnings in household income on each partner's satisfaction with household income may also depend who actually receives the earned and non-earned income. Since we don't have data on which partner receives non-earned income, but we do control for share of earnings, we can predict that the coefficient for the share of earnings in household income should be higher (less negative) for the partner in receipt of the greater share of non-earned income. Since such non-earned income is mainly made up of benefits and child support payments,

which partner this is and the extent of their share is likely to depend on the benefit and child support system of each country.

So not surprisingly the effects on access to household income vary by country. In Germany men’s satisfaction with household income increases significantly more than women’s as the share of earnings in household income increases.. In Australia it is the other way around, and Table 6 shows these differences are significant. This is as we would predict since men receive a larger proportion of income that is not earnings in Australia than in Germany (see section 2 above). This we would interpret as meaning that the benefit system, and specifically to whom benefits are paid, gives men great relative access to their household income in Australia than in Germany. There are no significant gender effects in the UK suggesting that in this respect the UK benefit system lies between that of Australia and Germany.

Table 5. Significance and direction of interaction effects between countries

	UK vs Germany			Australia vs Germany			Australia vs UK		
	Male	Female	Diff.	Male	Female	Diff.	Male	Female	Diff.
Log of equiv. hhold income	_*	-	-	-	-	-	+	+	+
Total earnings to household income	_*	-	-	_*	_*	_*	+	+	-
Hh has no earnings at all	+	****	-	-	****	****	-	-	-
No. of chi aged 0-4y	_*	_*	+	_*	_*	+	-	-	-
No. of chi aged 5-12y	-	_*	+	_*	_*	+	-	-	-
No. of chi aged 13y+	-	+	-	-	+	_*	-	-	-
Man working part time	-	+	-	-	-	+	+	+	_*
Man inactive	-	+	+	-	-	-	-	+	-
Man unemployed	****	+	+	+	_*	-	****	-	-
Man disabled	_*	****	+	+	+	+	****	****	-
Woman working part time	_*	+	+	****	***	+	+	-	-
Woman inactive	****	+	+	****	***	****	+	+	+
Woman unemployed	+	****	+	***	-	***	+	****	+
Woman disabled	+	****	****	_*	+	+	-	****	****
Male hours housework	-	-	+	+	+	-	+	+	-
Male hours hwk squared	+	+	-	-	-	+	-	-	+
Female hours hwk	-	-	-	+	_*	-	+	+	-
Female hours hwk squared	+	+	-	+	-	+	-	_*	+

Source: see Table 5

Notes: Examples of how to read entries:

_* for “Log of equiv. hhold income” in column 1 shows that household income has a significantly greater effect on men’s satisfaction with household income in Germany than in the UK;

**** for “Woman disabled” in Column three means that the difference between the effects of means and women’s satisfaction (i.e. the gain in men’s access to household resources/loss of women’s access) is significantly less in Germany than in the UK.

Children, through their money and time costs, could have a variety of effects on satisfaction with household income and access to it. We control, possibly imperfectly, for costs of children’s consumption by using equivalised income in our estimations. The remaining impact of children on household finances is through the forgone earnings of parents who reduce their hours of employment to care for their child(ren) and/or through the cost of childcare. Since we control for each partner’s employment status and for the proportion of household earnings they contribute, if the presence of children affects men’s and women’s satisfaction with household income differently, this can only be because childcare costs, in both time and money, and the longer-term

financial consequences of reduced labour force participation are born unequally, shifting partners' perceived contributions to household resources (possibly counteracted by any perceived contribution made through time spent caring for the child(ren); time spent on housework is controlled for).

The effects of children on labour market participation are known to be highly gendered, with severe long-term effects, particularly for mothers in Germany and the UK (Sigle-Rushton and Waldfogel 2007). Further, because mothers are the ones who are expected to take time out of employment to care for children, childcare costs tend to be set against the mother's earnings, rather than the father's (Himmelweit and Sigala, 2004). By this logic, except in so far as equivalence scales over-estimate the consumption costs of children for a particular country, we would therefore expect to find that children have a negative effect on parents' satisfaction with household income with more negative effects for women, showing that the presence of children reduces women's access to household income. However since these effects depend on both labour market conditions and childcare availability and costs, we would expect considerable variation across countries.

Comment [S18]: This should really be in the policy section

We find a significant negative effect of pre-school children in the UK and Australia on mothers' satisfaction with household income and a greater effect for women than men, though the difference is not significant in either country. Germany is significantly different from the other two countries and there are no significant effects of young children on the satisfaction with household income of either parent; this may be because childcare, when it is available, is far less expensive⁴, there is much better paid parental leave and/or German parents may be less concerned about the longer-term financial consequences of a mother staying at home to look after her child, since it remains a frequent practice, at least in West Germany. Studies of the costs of motherhood in different countries suggest that they may be wrong to be so unconcerned, especially those who take a long period out of the labour market (Beblo and Wolf, 2002; see also Wetzels, 2007, and De Henau et al., 2007, for a survey). Indeed in Germany, but not in the UK or Australia, the presence of older children (5-12 years old) improves both men's and women's assessment of their household income; we have no explanation of that phenomenon, since total household income is controlled for, except that in Germany receiving much of that income in the form of generous non means-tested family benefits may make the perceived cost of children lower than it actually is and/or the level of in kind benefits for older children could make standard equivalence scales over compensate for their costs.

Comment [S19]: Higher benefits won't do since controlled for

JDH: they're account for only very indirectly by being included in total household income. It might still be the case that the child variables capture the family benefit element of the gross income (following Fran's argument that a pound of earnings is different from a pound of child benefit or a pound of income support) and that German family benefits are more generous, not means-tested, etc, hence the cost of children is perceived as lower. Couldn't it be that? I noticed that for the UK, if you add the proportion of benefits in the total income (and not the proportion of earnings) on top of hh income and children, it reduces the (negative) effect of children. We could try with and without the earnings proportion if we think it is the symmetric image to the proportion of benefits (though it is not entirely).

I have included your suggestion in this as a possible explanation. We could also try what you suggest to investigate this.

Turning to gender roles, the main variables of interest in this paper, these are captured by dummy variables for employment status and weekly hours of housework. For reasons given above with respect to earnings, we would expect longer hours of employment to improve both own and partner's satisfaction with household income.

⁴ We do not know whether it is gross or net childcare costs that are counted against mothers' earnings in how their earnings are perceived within households. Gross childcare fees are far higher in both the UK and Australia than in Germany, but benefit policies in Australia reduce the net cost to parents much more than in the UK.

We would also expect them to lead to greater own perceived contributions to household income, thus greater access to household income and so an increase in own over partner's satisfaction with that household income.

When it comes to own employment status, our results confirm these expectations reasonably consistently across the three countries: both men and women in all countries are more satisfied with their household income when they themselves are in full-time employment, which can be seen by the negative coefficients for working part-time, inactivity, unemployment and disability (full-time employment is the reference category). Table 6 shows that their own unemployment and disability have a significantly more negative impact on both men's and women's satisfaction with household income in the UK than in Germany or Australia⁵. These results may reflect less generous out-of-work benefits in the UK.

Both men's and women's satisfaction with household income is significantly more negatively affected by being their part-time or inactive in Germany than in Australia, despite attitudes being more supportive of mothers doing so in Germany. This suggests that financial pressures, possibly intra-household, are driving this difference. Attitudes in Germany are much more similar to those in the UK and Australia over whether women should contribute financially than over the effects of women working on pre-school children (see Table 3).

Unlike for own employment status, the effect of any gain/loss in income to their household of a change in partner's employment status on own satisfaction with household income is counteracted by the effect of their partner gaining/losing relative access to that income. Women are more satisfied with their household income when their male partners are in full-time employment. Moreover, in the UK, but not in Germany, women's satisfaction with their household income is reduced more by their partners' unemployment than their own; this also applies to inactivity and disability in the UK and to inactivity and part-time working, but not unemployment, in Australia. German women do not conform to this pattern: their satisfaction with their household income depends consistently more on their own than their partner's employment status. However, in all three countries and for all employment statuses, men's satisfaction with household income is more influenced by their own employment status than their partner's, so much so that in the UK and Australia woman's employment status has no significant effect at all on their male partner's satisfaction with household income. That these effects are so asymmetrical may be because the gain in household income is greater for male earnings and/or because a woman's access to household income depends more on her employment status, while a man's access is given by his gender and less affected by his employment status.

⁵ This result for unemployment is interesting since the European Social Survey conducted from 2002 to 2008 shows that the drop in overall satisfaction of the unemployed compared to the employed is much larger in Germany than in the UK (Mohun Himmelweit, 2011). However different methods of analysis were used so the results are not directly comparable but may indicate that our dependent variable is capturing specifically financial effects.

Comment [J20]: Not for women.

Sue I don't see this. Seems to apply to women too re own unemployment and disability. Please check if you still think this is wrong.

Comment [J21]: JDH: but we don't look at the difference in satisfaction, only the differential effect of own and partner's employment status on own satisfaction for each partner

SUE: not sure I understand your comment but have tried possibly to clarify what I meant. Man's sat with household income is due to a) size of household income b) his access to that income. We don't have separate effects but know that the total effect of any variable results from some balancing of effects a) and b). My statement is meant just to be speculative explanation of a found result, as are many others in this section.

Comment [S22]: Significantly ?? I'm not sure we have checked this

JDH: i think at one point you had the results of those tests but it might have applied to other data such as the German-UK comparison. Otherwise I'm not aware we have run any real post-estimation test (but kind of decided not to or no time for it so it could still be done for the publication).

Sue: yes may need to check later

In Germany, however, men's satisfaction with their household income is significantly negatively affected by their partner's less than full-time employment status and Table 6 shows that this is a significant difference between Germany and the other two countries⁶. This may be because the German welfare system provides more generous out-of-work benefits, particularly to parents of small children that are almost exclusively taken up by women, and/or because being a homemaker or working part-time, being more encouraged in Germany, may not reduce women's access to household income to the extent it does in the other two countries. This contrast shows how if women earn much less than men, as they do in all three of our countries, a residual benefits system, like those of the UK and Australia, that allows little de-commodification of labour can be very effective in reinforcing the male breadwinner model. In Germany, where women can and do take paid leave more easily, even though there is still a large gender pay gap, couples are not so exclusively focused on the man's employment status in guaranteeing their household income.

Again as we would expect in all three countries employment status is an important determinant of relative access to household income. Both partners lose access, that is their satisfaction with their household income falls more than their partner's, if they reduce their hours of work, become unemployed, inactive or disabled; though this difference is not always significant. It is significant for men who become unemployed in Germany and Australia and who reduce their hours of work from full-time to part-time in the UK. For women, moving to part-time employment significantly reduces their access to household income in all countries, as does being inactive or disabled except in Germany and becoming unemployed in the UK.

Table 6 does not show very strong differences between countries in the factors affecting access to household resources. We can note however, that women lose significantly more access to household resources when they are inactive or unemployed in Australia than in Germany. This is interesting because both countries had benefits to stay to at home mothers in that period. But the German benefit was more generous and paid to the mother herself, and Germany also had long well-paid parental leave, while the Australian less generous tax credit was paid to the father and there was no statutory paid parental leave. This difference is also found, although it is not significant, between Germany and the UK, where the incentive to take employment (AETR) for a second earner was higher than in Germany, at least for those who did not use state subsidised childcare, and, as we have seen, childcare availability for the under threes was very low in Germany – see Table 1 above. Since housework is also a contribution to household well-being and could reduce costs, one might expect similar effects from hours spent on housework. However long hours of housework can also be a signal of reduced likelihood of contributing through employment in the longer-term (current employment status is controlled for), in which case the effect of longer hours of housework would be negative for both partners and potentially more so for the partner putting in those hours.

Comment [S23]: NB we could sort out the difference between these two explanations if we gave numbers for the difference not just stars.

JDH: not sure what you mean (also sentence is hard to follow, perhaps split in two)

Sue That we could readily quantify effects due to changes in household income (average/sum) rather than changes in access (difference) - old argument. have made minor change in attempt to clarify the sentence. Let me know if not enough.

Comment [J24]: This should be expanded as we need to make a clearer difference between a situation in which couples have male breadwinner characteristics (and German couples are more likely to be like that than Australian and British ones, from our descriptive stats), and when the breadwinner model is not so much valued by the couples themselves (which seems to be the case in Germany more often than in the other two countries as per the results just interpreted). This ties in the policy discussion and German attitudes.

We can't completely rule out sample size in the explanation of significance although here it is more a matter of relative size of effects so not necessarily influenced by sample size – though we haven't shown the tests. Sue on this point. Point is about relative size of effects, need to clarify in next draft.

Sue Interesting point. Not sure this is the right place to make it. Perhaps it should be moved into Section 5 which could be entitled reflections on policy.

Comment [S25]: I need to check if this is true.

⁶ The difference with the UK is significant only for the woman being inactive or working part-time.

In line with this, in Germany both own and partners' hours of housework decrease satisfaction with household income for both men and women, and own hours do so more than partner's, though the difference is significant only for women, indicating reduced access to household resources for women the more housework they do. Such own effects are larger in the UK and smaller in Australia for both sexes, but in neither country are these significant (perhaps for the UK only because of its smaller sample size). Table 6 shows that the difference between Germany and Australia is significant for women's housework hours. In the UK men's housework hours have particularly large negative effects, significant on their partners' satisfaction with household income⁷. This is in line with the greater focus on the man's employment status, even by women, in the UK.

5. Policy implications and conclusion

Our results confirm that in all countries gender roles matter to access to household income, especially those that relate to employment status. As we saw in section 2, in none of our countries was policy designed to promote the more equal gender roles that would result in more equal access to household resources. This means that differences in how policies impact on men's and women's access to resources is largely indirect, a by-product of policies designed to do quite different things. Consequently, the differences that we observe between countries are not likely to be due to any single policy difference, but rather to the effect of a number of different policies, implemented in different ways and through different means, reflecting underlying differences in priorities and ideologies.

One interpretation of our results is that in Germany, unlike the other two countries, a welfare system that helps women stay out of the labour market is lagging behind men's as well as women's expectations that women should contribute financially to their household as couples aspire to higher incomes than can be provided by a single earner. That the effect of women's unemployment on their partner's satisfaction with household income is greater in Germany than in the UK and Australia, and significantly so in the latter case, supports this view. That women's hours of housework have a significantly more negative effect on their satisfaction with household income in Germany than in Australia (though not in the UK) is consistent with this, in that German women may be spending time doing housework that they would rather spend in employment.

Lee et al. (2007) report a sharp rise in gender egalitarian attitudes in West Germany in the early years of the 21st century. Data from the BHPS show an earlier rise in egalitarian attitudes in the UK followed by more stability in the period this study covers (while traditional attitudes continued to become less prevalent). So attitudes were changing more rapidly in Germany than in Australia and the UK, despite (or perhaps because of) a welfare system that encouraged the male breadwinner model. This seems to have been recognised by politicians. For example, reforms to the

⁷ There is almost as large an effect on the man's own satisfaction with household income but, with the small size of the UK sample, this effect, though greater in magnitude than any effect of housework hours in Germany, is not significant.

German parental leave system to improve paternal care incentives and strengthen mothers' labour market attachment had support throughout the political spectrum, when implemented in 2007 (Lewis, 2009).

That said, our review of policies demonstrates intertwined implicit gender biases that impact on intra-household inequalities in all three countries' social policy frameworks. We saw that the residual welfare states of the UK and Australia can in some respects reinforce the male breadwinner family, and its intra-household inequalities, by default even more effectively than a welfare system, like that in Germany, which does so by design.

However, promoting intra-household gender equality is clearly not high in the list of current political priorities, not only because of neo-liberal reluctance to interfere in the private sphere of the family, but also because other goals seem more important. However, as we have seen, nearly all social policies affect either the variables that influence intra-household inequalities or the way in which those variables affect those inequalities. This should be taken into account.

For example, Australian and UK social policies from the late 1990s onwards has been have focused on reducing the number of "workless households", by getting any member of a household into employment, and reducing welfare expenditure by using means-testing to target resources at low income families. Both were seen as vital to the fight against child poverty and had far higher priority than preventing policies having detrimental effects on the long term position of a particular group of adults (namely, women) within their households.

In practice, this meant that the economic dependence of individuals within households was not seen as problematic while the economic dependence of households on the state was, a contradictory position since the gender inequality that results from the former is a major contributor to child poverty. Children's poverty is intimately linked to that of their mother (Lister, 2005) both within intact households and particularly when parents separate, which studies have shown to occur more frequently when access to the benefits of household resources are shared less equally (see Vogler et al., 2008).

This is but one example of how understanding the effects of policies on intra-household inequalities can help not only in devising policies to promote gender inequalities but in ensuring that all policies are effective in meeting their goals. Policy makers ignore such issues at their peril.

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