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Satisfaction with and relative benefit from household resources: Germany across regions and over time, a gendered analysis

Susan Himmelweit¹

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¹ Economics Department, Faculty of Social Sciences, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK, United Kingdom.

E-mail: susan.himmelweit@open.ac.uk

Abstract

This working paper uses measures of satisfaction with household income (SWHI) in the German Socio-Economic Panel (GSOEP), 1992 -2008, and a method developed during a cross-national comparative project to investigate the factors affecting how benefits from their common household income accrue to men and women in male/female couples, particularly the effects of gender roles as captured by partners' employment statuses.

Making a contribution to household resources through employment rather than domestic contributions was found to lead to greater SWHI, both individually and relatively to a partner's SWHI. Further, men's SWHI in both parts of Germany depended more on their own employment status than their partners'. This was not true of women's SWHI in the West, but in the East women were more concerned about their own employment status. In the East, but not the West, women lost out more, in terms of their relative benefit from household resources, from being unemployed than men did.

There was some convergence over time in the effects of the man's and the woman's unemployment. In the West, this convergence was more marked in effects on women's than on men's SWHI. In the East, the effect of men's unemployment on women's SWHI fell, while men became somewhat more concerned when their partner was unemployed. These results are consistent with an increasing egalitarianism in gender role attitudes in the West and the continuation of more egalitarian employment expectations in the East. However, results for the East may also reflect the limit to gender equality where it is does not also involve a shift in gender roles in the home.

Introduction

This working paper uses a method developed during a cross-national comparative project to investigate the factors affecting how benefits from their common household income accrue to men and women in male/female couples. The paper applies this method to data from Germany. It has two aims. Its first is to investigate the determinants of individual and relative benefits within German couples, particularly the effects of gender roles as captured by partners' employment statuses. The second aim is to provide additional validation for the method of analysis.

Our method requires the use of household panel data in which variables are collected over time and can be matched for individuals in the same household. The German Socio-Economic Panel (GSOEP) is particularly useful because it has the largest cross-sectional sample of any household panel survey in the world, allowing the investigation of regional differences within one country, which the sample of other countries' data sets are too small to investigate by our data hungry method. Further the GSOEP has been collected for a long period, from 1984 for the former West Germany and 1992 for the East. This paper will therefore investigate differences between the former East and former West Germany, and make some comments about changes over time – though a full analysis of this would require another paper in its own right.

Methodologically, the GSOEP has another advantage. Our method uses subjective data on satisfaction with *household* income to assess the relative benefits that members of a couple receive from their common household income. Our method relies on the assumption that if a factor affects the satisfaction of household members with their shared household income differently then that factor must be impacting on how much those members individually benefit from that household income. The GSOEP includes another variable, satisfaction with *personal* income, that allows an indirect test of whether that assumption is a reasonable one.

The plan of this paper is as follows. It starts by outlining the context of German reunification and its gendered effects on the labour market in both parts of Germany. We then describe the variables and sample the GSEOP data provides for our investigation, before outlining the methodology the paper uses. The following section examines the extra support provided by some results from the GSOEP. Then we turn to our results, first for Germany as a whole and then broken down into East and West, between which considerable differences are found. The penultimate section gives an example of how changes over time can be interpreted, before the conclusion summarises what has been gained from this analysis.

Background

Modern Germany was formed by the reunification of the former West German Federal Republic (FDR), a fully capitalist economy with close ties to other Western economics and a deeply

conservative welfare state, and the former East German Democratic Republic (GDR), a centrally planned economy in the former Soviet Union's sphere of influence. Inhabitants of the former West Germany made up three quarters of the population of the unified country, and the manner of unification meant that the institutions of the West were largely preserved and applied to the East, albeit it with some adaptations.

The GDR had had a wide range of policies and benefits supporting the employment of mothers, including universal childcare from infancy and shorter working hours for mothers, introduced for pro-natalist reasons because women were expected to stay in the full-time labour force after having children. Shortly before reunification the East German state was paying 80% of the cost of children (Ostner 1998, Lee et al 2007). Although there was support for the idea of gender equality, practice in fact felt short of this with a persistent gender pay gap, occupational segregation and traditionally gendered roles in the home, albeit with substantially support from the state for children during working hours. The employment rate of women at 83%, close to that of men, was the highest in the world (Pritchard, 2003).

By contrast, in 1988 before reunification only 55% of women were employed in the FDR (Pritchard, 2003). West German government policy supported single breadwinner families, with a benefit structure designed to encourage this family form, and mothers of small children were expected to devote their time to raising their families and running their homes. As a deeply conservative welfare state, entitlements were attached to relationships, so women gained access to state benefits and services as mothers, wives or workers rather than as citizens trying to combine roles. The principle of subsidiarity, that the smallest unit took priority in provision, for many years prevented local authorities from providing full-time childcare, because it was allocated to the province of the family (Ostner et al, 2013).

Life therefore changed dramatically for East German women on reunification. They suffered from high rates of unemployment, at 20% in 2002 higher than those for men, and almost double those for men and women in the West. Those who managed to stay employed lost on average one-third of their income due to cuts in child-related benefits alone and the birth rate dropped dramatically with the increasing difficulty of combining motherhood with employment (Kolinsky 1998). Although East German's women's fertility has risen again since then, it is still far below that of West German women (Kreyenfeld, 2003).

Since reunification, differences in employment levels persist with East German women more likely to work full-time and to return to employment more quickly after childbirth (Schenk 2003). In 2003, only 3% of East German wanted to be "housewives" (Pritchard 2003). However, given the high levels of unemployment among East German women, many were in practice taking on an increased share of domestic activities (Beck 2003). Ostner (1993) warned that East German women were in danger of

losing their economic independence. At the same time, attitudes in the West were changing with declining support for a gendered division of domestic roles and a rising rate of women's employment, albeit largely part-time (Lück 2006).

However, analysis of attitudes expressed in successive German General Social Surveys from 1982 to 2004, show that differences in gender role attitudes persist between the two parts of Germany. While younger cohorts are more liberal and egalitarian than older ones in both parts of the country and West Germans have quite rapidly adopted more egalitarian attitudes to gender roles, the egalitarianism of the East has not weakened on average nor shown any sign of doing so in younger cohorts who grew up with more influence from the West (Lee et al 2007).

Data and sample

We use data from the German Socio-Economic Panel (GSOEP) which is a household panel survey, whose panel members are interviewed annually, as are the other members of the household in which they are then living. The GSOEP started in 1984 in West Germany before reunification, and then after reunification added a sample from East Germany from 1992. We therefore do not have data by which we can compare East and West before unification, but we can investigate the differences that remained subsequently.

We restrict our sample to households consisting of male-female couples both of working age (18 - 64 years), with or without children, where the children, if any, have no significant income. We follow those couples so long as they stay together, making our sample an incomplete panel of the answers of 10761 couples over the 17 years from 1992-2008. We use data for both parts of Germany.

The period chosen is the one during which our dependent variable was collected, when all adult members of household were asked: "How satisfied are you with your household's income" with answers to be given on a scale of 0 to 10, where 0 means "totally unsatisfied" and 10 "totally satisfied". Our main explanatory variables of interest are the employment status of both partners in our couples. For these we used four dummy variables for part-time employment, economically inactive, unemployed and long-term disabled, using full-time employment as the reference category.

Methodology

Our method compares answers between members of a male – female couple to a question about satisfaction with household income (hereafter SWHI) as subjective evidence on the extent to which individuals benefit from their shared household resources. The method is explained in detail elsewhere (De Henau and Himmelweit, 2013b).

Briefly, we chose to use SWHI because we were concerned to capture not only the individual consumption benefits of household income, but also other benefits that household income may bring

to individual members, for example, aspects of financial autonomy, opportunities, security, status, and collective expenditure on household public goods. By using an individual subjective measure, we use each respondent's own assessment of how those not objectively commensurable benefits are balanced against one another. Broadly, in line with interpretation of satisfaction measures more generally, we assume that people's SWHI depends on how far their household income allows them to make progress "toward valued goals" (Diener, Suh, Lucas, & Smith, 1999, p. 295).

In a multi-person household, this will depend not only on the level of the household income but also on the extent to which each member can use joint household income to benefit in that way (Vogler, 1998). Given that both members of a couple are assessing the same household income, we assume that if their satisfaction with it moves in different ways, this must be because relative opportunities to benefit from that income have also changed. This can be investigated by examining the factors affecting the difference in a couple's SWHI, controlling for other possible influences on relative satisfaction levels, including unobserved personality traits.

Each partner's satisfaction with household income is therefore modeled as a linear function of a set of independent variables.

For men,

$$S_{jt}^m = \beta_{1m}\mathbf{M}_{jt} + \beta_{1f}\mathbf{F}_{jt} + \gamma_1\mathbf{C}_{jt} + \mu_{1j} + \varepsilon_{1jt} \quad (1)$$

and for women,

$$S_{jt}^f = \beta_{2m}\mathbf{M}_{jt} + \beta_{2f}\mathbf{F}_{jt} + \gamma_2\mathbf{C}_{jt} + \mu_{2j} + \varepsilon_{2jt} \quad (2)$$

where S_{jt}^m and S_{jt}^f record the satisfaction with household income of the man and woman, respectively, in household j in period t . These two equations imply a third for the difference between the man and the woman's satisfaction with household income:

$$S_{jt}^m - S_{jt}^f = (\beta_{1m} - \beta_{2m})\mathbf{M}_{jt} + (\beta_{1f} - \beta_{2f})\mathbf{F}_{jt} + (\gamma_1 - \gamma_2)\mathbf{C}_{jt} + (\mu_{1j} - \mu_{2j}) + (\varepsilon_{1jt} - \varepsilon_{2jt}) \quad (3)$$

The vectors \mathbf{M}_{jt} and \mathbf{F}_{jt} record the employment status of, respectively, the man and the woman in the j^{th} household. The reference category is full-time employment, with dummy variables for part-time employment, economic inactivity, unemployment, and long-term disability. The last three categories are distinguished because they indicate the nonfinancial contributions income that individuals are likely to be making indirectly to household income and/or their opportunity to make future financial contributions (De Henau and Himmelweit, 2013b). In particular, being economically inactive or employed part-time are often statuses adopted because of family responsibilities.

The vector C_{jt} includes a limited number of controls that might have an independent effect on SWHI while being correlated with employment status. The most obvious of these in our main specification is monthly real household income, equalised to allow for costs entailed by the presence of children, and in logarithmic form to allow for the decreasing influence of income on satisfaction found in many studies (e.g. Bonke & Browning 2009, Ferrer-i-Carbonell & Frijters, 2004). We also controlled for the number and ages of children, to allow for their simultaneous effect on parents' employment status and their consumption and child care costs on SWHI (beyond those allowed for by equalising household income). We included annual dummy variables to control for any macroeconomic effects, such as unemployment rates, or policy reforms, that may simultaneously affect employment outcomes and satisfaction with household income.

We also added controls to cope with the subjective nature of our dependent variable (for a list and justification of these see De Henau and Himmelweit 2013b) and estimated all three of these equations using fixed-effects regression to abstract from unobserved time-invariant characteristics, such as personality traits, that might also influence our explanatory variables and therefore bias estimates of their coefficients. By using linear fixed-effects regression to avoid this bias, the model captures only the effect of changes for individuals over time; it therefore results in a lower R^2 than standard linear regression that also exploits differences between individuals (Greene 2011). By modeling how factors influence changes in individual satisfaction levels linearly, our method does assume that changes can be interpersonally compared. However, research comparing different methods of estimation using satisfaction data has shown that linear fixed-effects regression produces results that are close to those obtained using a version of ordinal fixed-effects regression, and considerably closer than estimation methods that take into account the ordinal nature of the dependent variable but not fixed effects (Ferrer-i-Carbonell & Frijters, 2004).

Our method allows us to examine how each partner's contribution influences their own and their partner's satisfaction with their common household income, and investigate and (gender) differences in these. Four types of differences might occur:

- 1) Different types of contributions might influence SWHI differently - so that, for example, paid employment might have a greater impact than domestic activities, for either or both partner. The gender aspect here is that contributions to households are typically unequally distributed by gender, with men, on average, devoting more time to paid employment and women more to housework and child care.
- 2) The influence of a type of contribution on SWHI, in either or both partners' assessment, might depend on the gender of the contributor. For example, men's employment could have more influence than women's if, through social expectations about breadwinning roles, it is seen as indicating more about future prospects and thus a couple's financial security.

Interpreting a change in the difference in partners' SWHI as reflecting a shift in relative benefit from that household income, there are two other (gender) differences that might occur:

3) The effect of positive contribution might be greater on the SWHI of the person making that contribution than on their partner's, which we would interpret as the contributor gaining relatively greater benefit from the effect of their contribution to household resources. For example, the SWHI of an individual moving into employment might increase more than their partner's, because the former gains relatively more benefit from the increased household income that their employment provides. Again, this is relevant to gender if those making the more influential contributions are unequally distributed by gender.

4) The effect of making the more influential contribution might itself vary by gender. Thus for example, a woman might benefit relatively more within their household from the increased household income that her employment provides because her earnings, unlike the man's, are seen more as her own to keep (Bennett, 2013). On the other hand, if men's earnings are seen as inherently more valuable to the household, he may be the one to benefit relatively more.

Validating our method

The GSOEP provides an opportunity, not available using other countries' data sets, for validating some aspects of the method that we are using to assess relative benefit from household resources within a couple. This is because, from 2005, as well as the question on satisfaction with household income, it also asked about satisfaction with personal income, with answers to be given on the same scale as for SWHI. This provides an opportunity to see whether individuals in couples interpret these two questions differently. It also allows us to investigate the extent to which views on household income reflect views on personal income, and whether views on the former are more shared between partners than views on the latter.

In just over half (53 %) their answers, respondents reported their satisfaction with their household income to be at the same level as that with their personal income. Giving the same answer is far more frequent among men (64 % of their answers) than among women, for whom only 40 % of their answers were identical to both questions. As Table 1 below shows the correlation between partners' satisfaction with household income is much greater at 0.67 than the correlation of 0.30 between their satisfaction with personal income.

Table 1 Summary statistics and correlations for satisfaction with household and with personal income (SWHI and SWPI), men and women (Germany 2005-2008)

	Mean	Standard Deviation	Correlation with:			
			Men's SWHI	Men's SWPI	Women's SWHI	Women's SWPI
Men's						
SWHI	6.20	2.19	1.00			
SWPI	6.05	2.38	0.87	1.00		
Women's						
SWHI	6.36	2.24	0.67	0.61	1.00	
SWPI	5.33	2.70	0.41	0.30	0.60	1.00

Table 1 also shows that for both sexes it is their personal income that is on average less satisfactory than their household income, though to a greater extent for women and with more variability, reflecting the greater variation in women's employment situation and earnings, as well as their lower pay on average. Correlations between answers to the two questions, at 0.87 for men but only 0.60 for women, confirmed more connection for men between their household income and their personal income than for women.

Such differences may be because household finances do in practice depend more on the man's income, but there also may be gendered ideological influences on how each partner's income is perceived. An ideological influence in one direction would arise from Sen's suggestion that women see their financial well-being as more tied up with that of their household than men do, though he is primarily discussing households in much poorer countries (Sen 1990). On the other hand, a qualitative study in the UK has shown women to be more concerned about financial autonomy and what money they have "of their own" than men, which would produce an influence in the opposite direction (Bennett & Sutherland, 2011, Bennett et al, 2012). Table 2 shows indicative fixed effects regression results for men's and women's satisfaction with household and personal income regressed on their own and their partners' employment status, for the years in which both variables were available. These are similar to the regressions used throughout our analysis but coefficients are presented for employment status alone (though a similar range of controls have been included)

Table 2 Influences on men's and women's satisfaction with household and personal income (Germany 2005-2008)

	(1)	(2)	(4)	(5)
	Man's satisfaction with household income	Man's satisfaction with personal income	Woman's satisfaction with household income	Woman's satisfaction with personal income
Man's employment status				
Part time	-0.415*** (0.113)	-0.777*** (0.132)	-0.296*** (0.105)	0.077 (0.117)
Economically inactive	-0.396*** (0.120)	-0.939*** (0.154)	-0.430*** (0.125)	0.107 (0.139)
Unemployed	-0.808*** (0.088)	-1.554*** (0.103)	-0.657*** (0.084)	-0.009 (0.098)
Long-term disabled	-0.190* (0.113)	-0.455*** (0.137)	-0.179 (0.125)	-0.079 (0.133)
Woman's employment status				
Part time	-0.242*** (0.064)	0.085 (0.066)	-0.327*** (0.065)	-0.480*** (0.086)
Economically inactive	-0.454*** (0.076)	0.056 (0.078)	-0.513*** (0.078)	-2.513*** (0.122)
Unemployed	-0.444*** (0.085)	0.195** (0.086)	-0.749*** (0.084)	-2.058*** (0.121)
Long-term disabled	-0.094 (0.121)	0.038 (0.131)	-0.204 (0.160)	-0.480** (0.201)
Constant	3.599*** (0.129)	3.464*** (0.135)	4.020*** (0.135)	4.022*** (0.159)
<i>N</i> (observations)	16436	16388	16436	15581
<i>N</i> (groups households)	5218	5217	5218	5121
<i>R</i> ² (within)	0.112	0.123	0.0920	0.130
<i>R</i> ² (between)	0.486	0.488	0.436	0.353
<i>F</i>	65.52	68.47	52.88	61.95

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

As would be expected, for both sexes, own employment characteristics are a greater influence on satisfaction with personal income than on satisfaction with household income; conversely, for partner's employment characteristics a greater influence is shown on satisfaction with household income. In all cases, except with respect to disability, all differences between the two effects are

significant². Indeed, except for men with respect to female unemployment, there are no significant effects of partners' employment status on satisfaction with personal income. That own unemployment and economic inactivity have particularly large effects for women on their satisfaction with her personal income (much larger than for men) suggests that women may indeed be more concerned about having money "of their own" than men are. However, the smaller effect of own part-time employment for women, but not for men, suggests the influence of gender norms and possibly an under-estimation by women of the longer term consequences on earnings of taking part-time employment.

Indeed, the small significant positive effect of female unemployment, and a preponderance of positive though insignificant effects of other types of less than full-time employment on their partner's satisfaction with personal income suggests that social comparison with the partner may be having an influence here, especially for men. A man's satisfaction with their own personal income can be increased by their partner not being in full-time employment, even if his satisfaction with household income is thereby reduced. A similar, but always insignificant result is observed for women, but only when their partners are inactive or employed part-time, not when they are unemployed or disabled.

In terms of our methodology, this shows that people do interpret the two questions differently and confirms that we can take the data that are about SWHI as being specifically about their satisfaction with *household* income. That, as we saw from Table 1, partners' SWHIs are more correlated than their satisfactions with personal income is another piece of evidence in support of that assumption.

² Found by running a similar regression on the difference between the two satisfaction scores – results not shown, but available from the author.

Results for Germany as a whole

We now turn to our results for Germany as a whole. We will use satisfaction with household income as our dependent variable and the employment status of both members of couples as our independent variables of interest. Because we will use fixed effects regression, only data from couples observed more than once can be used. There are 9167 such couples in the sample and Table 3 gives some descriptive statistics for these couples.

Table 3. Descriptive statistics of the main variables of interest

Variable	% or mean	<i>SD</i>
Man's SWHI score	6.21	2.17
Woman's SWHI score	6.36	2.21
Man's employment status		
Full time	78.5%	
Part time	2.5%	
Economically inactive	3.5%	
Unemployed	8.1%	
Long-term disabled	7.4%	
Woman's employment status		
Full time	30.6%	
Part time	32.6%	
Economically inactive	22.2%	
Unemployed	9.4%	
Long-term disabled	5.2%	
Number of children in household aged:		
0 – 4 years	0.20	0.47
5 – 12 years	0.44	0.73
13 – 18 years	0.33	0.61
<i>N</i> (couples)	9,167	

Table 4 shows our estimation results for Germany

Table 4 Influences on men's and women's SWHI and its difference (Germany 1992-2008)

	Man's satisfaction with household income	Woman's satisfaction with household income	Difference (m – f) in satisfaction with household income
Man's employment status			
Part time	-0.530*** (0.063)	-0.468*** (0.057)	-0.062 (0.067)
Economically inactive	-0.626*** (0.053)	-0.531*** (0.052)	-0.096* (0.054)
Unemployed	-0.980*** (0.038)	-0.747*** (0.036)	-0.233*** (0.037)
Long-term disabled	-0.254*** (0.053)	-0.155*** (0.051)	-0.099* (0.055)
Woman's employment status			
Part time	-0.172*** (0.027)	-0.298*** (0.028)	0.126*** (0.029)
Economically inactive	-0.337*** (0.032)	-0.496*** (0.034)	0.159*** (0.035)
Unemployed	-0.421*** (0.034)	-0.712*** (0.036)	0.291*** (0.038)
Long-term disabled	-0.153*** (0.057)	-0.220*** (0.059)	0.067 (0.060)
Log equiv. household income	-0.000 (0.005)	0.005 (0.005)	-0.005 (0.006)
No. children 0 – 4 years	-0.004 (0.023)	0.027 (0.024)	-0.030 (0.025)
No. children 5 – 12 years	0.057*** (0.017)	0.078*** (0.018)	-0.021 (0.018)
No. children 13+ years	0.024 (0.016)	0.002 (0.017)	0.022 (0.017)
Constant	3.188*** (0.076)	3.432*** (0.078)	-0.244*** (0.079)
<i>N</i> (observations)	64474	64474	64474
<i>N</i> (groups households)	9141	9141	9141
<i>R</i> ² (within)	0.158	0.144	0.0314
<i>R</i> ² (between)	0.505	0.469	0.145
<i>F</i>	181.8	167.2	36.11

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Investigating the four types of (gender) difference outlined in the methodology section:

- 1) From the first two columns of Table 2 it can be seen that both men's and women's SWHI is reduced when either is employed less than full-time, and particularly by unemployment. It is reduced more by unemployment than by part-time employment or economic inactivity, the two employment statuses that are often adopted due to domestic responsibilities. It is also reduced less by part-time employment than by inactivity. These results suggest that the contribution to household resources made by employment has more influence on both partner's SWHI than that made by domestic activities – this, as we noted earlier has gender implications, because men are relatively more likely to be making contributions through full-time employment, and women are the ones more likely to be making domestic contributions.
- 2) Comparing the coefficients in the rows for men's and women's employment within each of columns 1 and 2, it can be seen that men SWHI drops by more when it is their own employment status that falls below full-time than if it is their partner's that does. These differences are significant ($p < 0.01$)³. On the other hand, women's SWHI is, if anything, more affected by their partner's employment status than their own (except with respect to disability) though the differences are small and insignificant. This is a clear gender difference.
- 3) Looking at the third column of Table 1 (whose coefficients are just the difference between those in columns 1 and 2) we can see that less than full-time employment reduces a person's relative benefit from their household income (our interpretation of a change in the difference in their SWHIs, a negative sign indicates a reduction in the relative benefit of the man, a positive sign a reduction for the woman). The coefficients take the expected sign, whatever the reason for the less than full-time employment status, and are significant everywhere except for men employed part-time or women who are long-term disabled, both particularly under populated categories.
- 4) The coefficients in the third column are roughly symmetrical i.e. the effects of any employment status are roughly equal in magnitude but of opposite sign for men and women (except with respect to part-time employment, but as noted above there are few men in this category). Indeed there are no significant gender differences in the effects on relative benefits of different employment statuses⁴.

Thus both our hypotheses 1) that employment status matters more than other contributions to SWHI and 3) that it making this more valued contribution affects the relative benefit individuals gain from household resources are supported.

³ Significance test results available from the author.

⁴ Tests, not shown, confirm this.

We also found a significant gender difference in the effect of employment status on SWHI (though not on relative benefit from household resources); men’s employment status had more effect than women’s on men’s SWHI but not vice versa. We had found similar gender effects in the UK and Australia, with also no gender effects in relative benefits from household resources (De Henau and Himmelweit 2013a and 2013b).

Differences between East and West

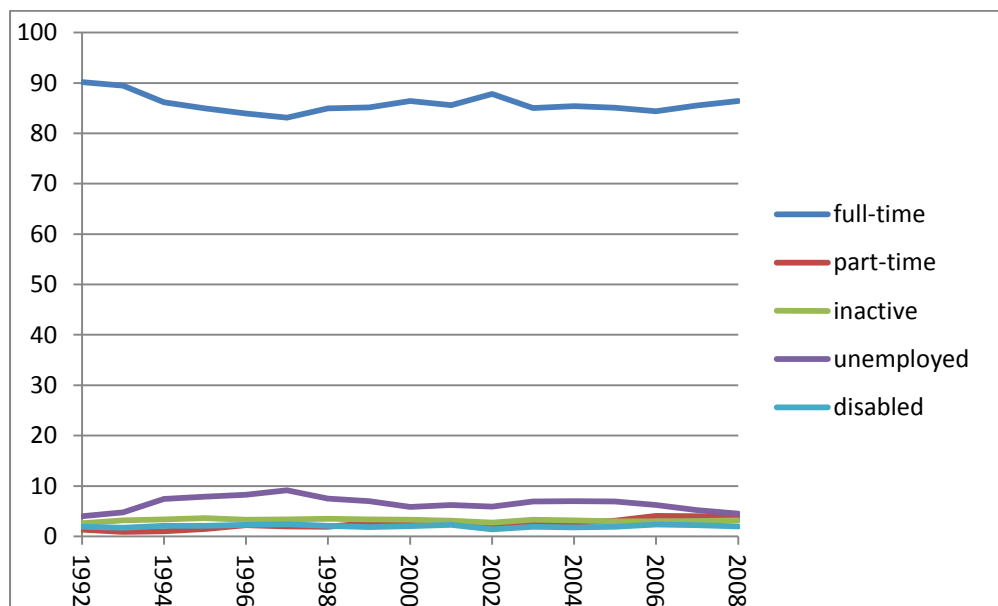
As we have seen, Germany is made up of two parts with different histories with respect to women’s employment. To investigate this in more detail we now examine differences in our results for Germany between East and West.

Employment patterns

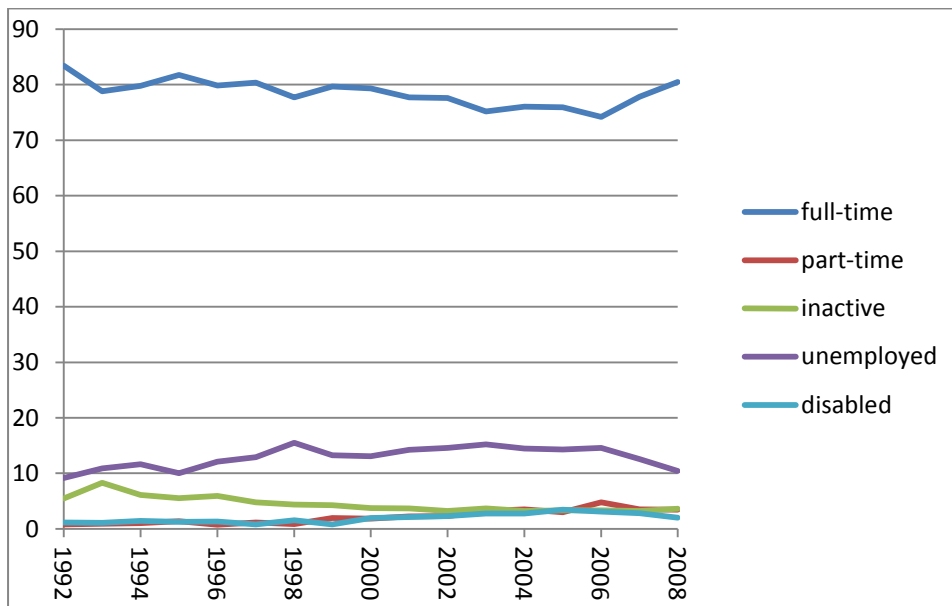
Figures 1 to 4 break down the results given in Table 3 by year and by region to show how the proportions of each employment status shifted in East and West Germany for men and women in the couples in our sample.

Figure 1 Distribution of Men’s Employment status: GSOEP sample

a) West Germany 1992-2008



b)East Germany 1992-2008

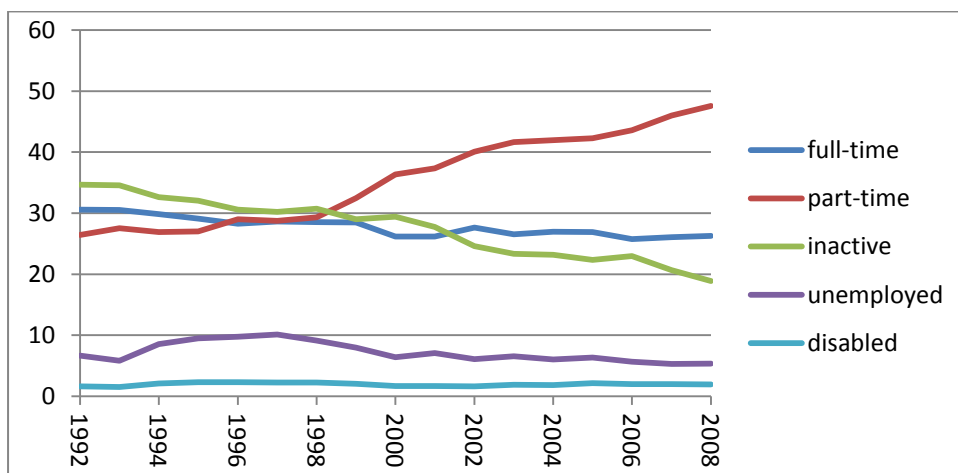


The pattern for men does not vary greatly over time, nor is it so different in the two parts of Germany. Over 75% of men in our sample were employed throughout the period, with rates about 5% higher in West than in East Germany. In both parts of Germany there was a fall in full-time employment rates and a rise in unemployment in the years following unification up until 1998, though in the East the proportion employed full-time continued to fall after that. There has been a fall in the proportion of men who are unemployed since the early 2000s in both parts of Germany though rates remain higher in the East. In both parts there has been a slight rise in the numbers of men employed part-time and a fall in those registered as inactive since 1992. There has been a small rise in the number of long-term disabled, particularly in the East.

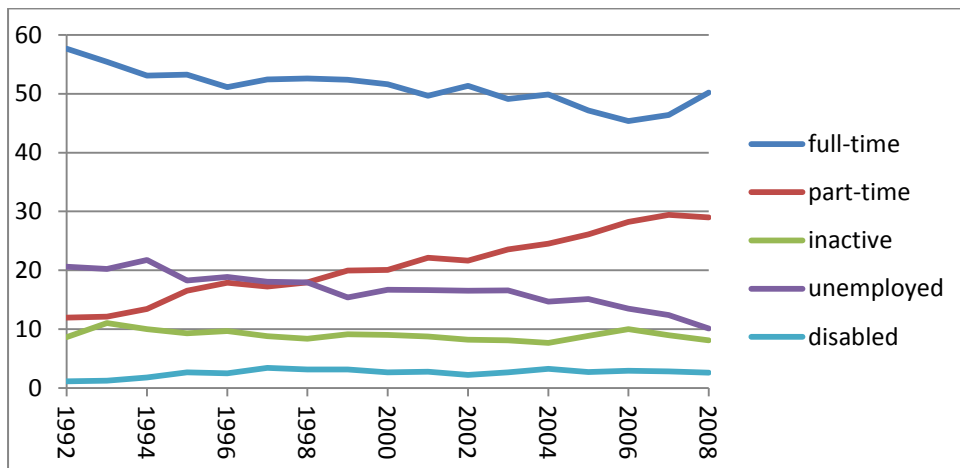
Figure 2 shows that changes in patterns of employment status have been much larger for women.

Figure 2 Distribution of Women’s Employment status: GSOEP sample

a)West Germany 1992-2008



b) East Germany 1992-2008



East Germany always had a far higher proportion of women employed full-time than in the West. In both parts of the country the proportion employed full-time fell after unification but remained about 20 percentage points higher in the East. The most striking trend is the rise in part-time employment among women in both parts of Germany, which outweighed the fall in full time employment. In West Germany the additional numbers of women employed part-time resulted from a fall in those who were economically inactive while in the East they were the result of the numbers of unemployed falling. There had been a sharp rise in the proportions of women employed full time in the West in the very early 1990s, and a corresponding fall in the numbers employed part-time or economically inactive but, as Figure 2 (a) shows, these changes were reversed after unification. Unemployment rates were considerably higher for women than men in both parts of Germany at the beginning of the period but had converged somewhat by the mid-2000s, as did East and West unemployment rates, though they remained higher in the East for both sexes.

Results for East and West Germany

For comparative purposes the results in Tables 5 and 6, estimate results separately for the former East (columns 2 and 5) and former West Germany (columns 1 and 4). The asterisks in columns 3 (for men's SWHI) and 6 (for women's SWHI) indicate what significance can be put on the difference between the coefficients of each variable between East and West Germany (found by running a single regression with regional interaction terms).

Table 5 Influences on men's and women's SWHI in East and West Germany (1992-2008) including significance of East/West difference

	(1)	(2)	(3)	(4)	(5)	(6)
	Man's SWHI			Woman's SWHI		
	West Germany	East Germany		West Germany	East Germany	
Man's employment status						
Part time	-0.537*** (0.075)	-0.522*** (0.118)		-0.502*** (0.065)	-0.374*** (0.121)	
Economically inactive	-0.633*** (0.063)	-0.611*** (0.097)		-0.546*** (0.063)	-0.504*** (0.093)	
Unemployed	-1.068*** (0.050)	-0.849*** (0.059)	***	-0.800*** (0.049)	-0.679*** (0.055)	*
Long-term disabled	-0.261*** (0.058)	-0.199 (0.126)		-0.165*** (0.057)	-0.104 (0.114)	
Woman's employment status						
Part time	-0.179*** (0.033)	-0.149*** (0.048)		-0.277*** (0.035)	-0.308*** (0.052)	
Economically inactive	-0.325*** (0.038)	-0.435*** (0.071)		-0.453*** (0.040)	-0.621*** (0.075)	**
Unemployed	-0.422*** (0.045)	-0.410*** (0.055)		-0.641*** (0.047)	-0.800*** (0.058)	**
Long-term disabled	-0.203*** (0.067)	-0.054 (0.110)		-0.276*** (0.069)	-0.105 (0.110)	
Log equiv. household income	0.000 (0.006)	0.001 (0.011)		0.003 (0.006)	0.017 (0.011)	*
No. children 0 – 4 years	0.013 (0.025)	-0.026 (0.060)		0.035 (0.027)	-0.014 (0.058)	
No. children 5 – 12 years	0.061*** (0.019)	0.075* (0.042)		0.067*** (0.021)	0.124*** (0.039)	
No. children 13+ years	0.015 (0.018)	0.060* (0.033)		-0.011 (0.020)	0.042 (0.035)	
Constant	3.519*** (0.090)	2.379*** (0.146)		3.733*** (0.094)	2.653*** (0.142)	
<i>N</i> (observations)	7,038	2,195		7,038	2,195	
<i>N</i> (groups households)	47781	16693		47781	16693	
<i>R</i> ² (within)	7038	2195		7038	2195	
<i>R</i> ² (between)	0.152	0.179		0.134	0.171	
<i>F</i>	0.455	0.534		0.418	0.515	

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 3 allows us to investigate the first two types of (gender) difference outlined in the methodology section for the two parts of Germany separately:

- 1) As for the country as a whole, in both parts of Germany men and women's satisfaction with household income is reduced when either is employed less than full-time, and more by unemployment than by inactivity or part-time employment. So again the contribution to household resources made by employment has more influence on both partner's SWHI than domestic contributions.
- 2) Comparing the coefficients in the rows for men's and women's employment within each of column, it can be seen that in the East women's SWHI drops by more when their own employment status falls below full-time than when their partner's does, except with respect to taking part-time employment, while men's SWHI in the East and both men's and women's in the West are influenced more by the man's employment status than the woman's. As we saw from Table 4, this gendered pattern holds for Germany as a whole, which is dominated by the highly gendered pattern for West Germany rather than the significantly more egalitarian pattern in East Germany, which had a sample, and a population, only one third that of the West.

The significant differences between the two parts of the country, shown by asterisks in column 3 and 6 of Table 5, are in the effects of male unemployment, which has less negative effects in East Germany on both men's and women's SWHI than in West Germany. On the other hand, both female inactivity and unemployment have more negative effects on women's own SWHI in East Germany than in West Germany (though not on men's SWHI). These results for East Germany are what might be expected from women's much longer history of labour market participation in East Germany, though that men were no more affected by their partner's employment status is consistent with East German egalitarianism not having reached the domestic sphere. That male employment seems to matter more in the West than the East, to both men and women, and female employment more to women in the East than the West, is consistent with the West's attachment to the male breadwinner family form and the East's treatment of both adults as workers.

Table 6 Influences on the difference between men's and women's SWHI in East and West Germany (1992-2008) including significance of East/West difference

	(1)	(2)	(3)
	Difference in satisfaction with household income		
	West Germany	East Germany	
Man's employment status			
Part time	-0.035 (0.077)	-0.148 (0.136)	
Economically inactive	-0.087 (0.065)	-0.107 (0.094)	
Unemployed	-0.268*** (0.050)	-0.170*** (0.057)	
Long-term disabled	-0.096 (0.062)	-0.095 (0.127)	
Woman's employment status			
Part time	0.098*** (0.036)	0.159*** (0.051)	
Economically inactive	0.128*** (0.041)	0.186** (0.076)	
Unemployed	0.219*** (0.048)	0.390*** (0.060)	**
Long-term disabled	0.073 (0.069)	0.052 (0.120)	
Log equiv. household income	-0.002 (0.006)	-0.016 (0.011)	
No. children 0 – 4 years	-0.022 (0.027)	-0.012 (0.062)	
No. children 5 – 12 years	-0.006 (0.021)	-0.049 (0.041)	
No. children 13+ years	0.027 (0.020)	0.019 (0.034)	
Constant	-0.214** (0.096)	-0.273* (0.144)	
<i>N</i> (observations)	47781	16693	
<i>N</i> (groups households)	7038	2195	
<i>R</i> ² (within)	0.0282	0.0417	
<i>R</i> ² (between)	0.143	0.152	
<i>F</i>	22.91	14.76	

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 6 allows us investigate gender differences in relative benefits from household resources across East and West Germany:

- 3) In both parts of the country Table 6 shows that less than full-time employment reduces a person's relative benefit from their household income - our interpretation of a change in the difference in their SWHIs. The coefficients take the expected sign throughout, but are significant for men only for unemployment (i.e. when comparing the two most populated categories of unemployment and the reference category of full-time employment), but for women (who are distributed more evenly across employment statuses) are significant for all statuses other than disability (the least populated).
- 4) In East Germany there is a significant gender difference between the effects on relative benefits of unemployment, with the magnitude of the coefficient giving the effects of women's unemployment at 0.390 more than twice that for the effect of men's unemployment (-0.170)⁵. Women lose out more in terms of relative benefit from household resources from being unemployed than men. There are no other gender differences in the effects on relative benefits of different employment statuses

This gendered effect of unemployment is also the only significant difference in Table 6 between the two parts of the country (shown by asterisks in Column 3). Thus in the East, where women, like men, have for many years been expected to be employed full-time, although the effect of men's unemployment is less severe on SWHI than in the West, women's unemployment has greater effects particularly on her own SWHI. And women lose out significantly more in terms of benefit from their household income from being unemployed than men do. Thus more egalitarian attitudes to women's employment in East Germany seem to have counterproductive effects for women within their own households if they lose their jobs.

Changes over time

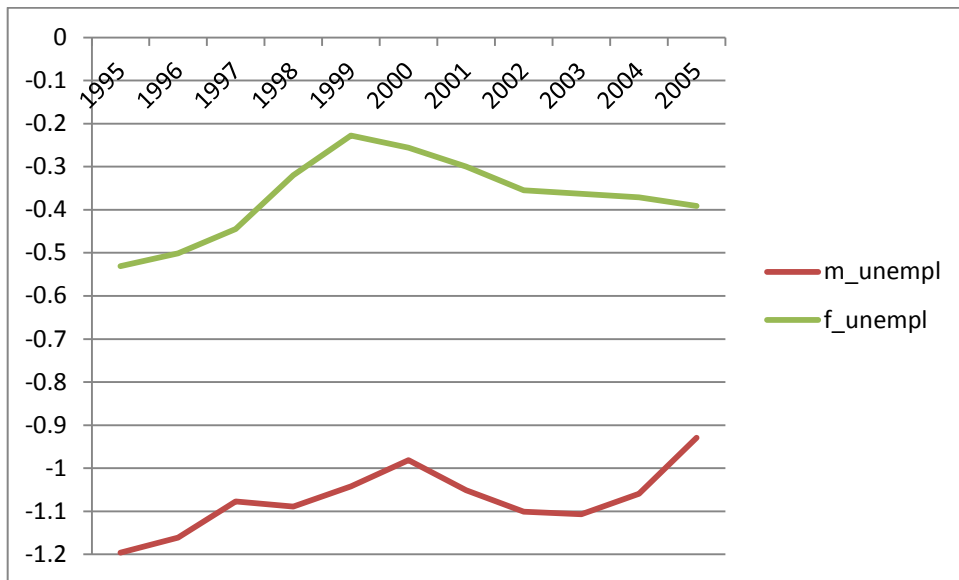
Having data over quite a long period gives us the opportunity to assess whether factors affecting SWHI and relative benefit from household resources changed over time. With four employment statuses for two partners in two parts of the countries to consider and the SWHI of men and women to compare, this requires a paper in its own right. Here we can just illustrate what is possible by looking at the case of unemployment and how its effects on men's and women's SWHI changed over time in both parts of Germany. Using fixed effects estimation, which depends on variation over time, we cannot obtain observations for a single year. Instead we look at changes over time by calculating coefficients over seven year periods centred on each year from 1995 to 2005.

⁵ Tests, not shown, but available from the author, show $p < 0.01$.

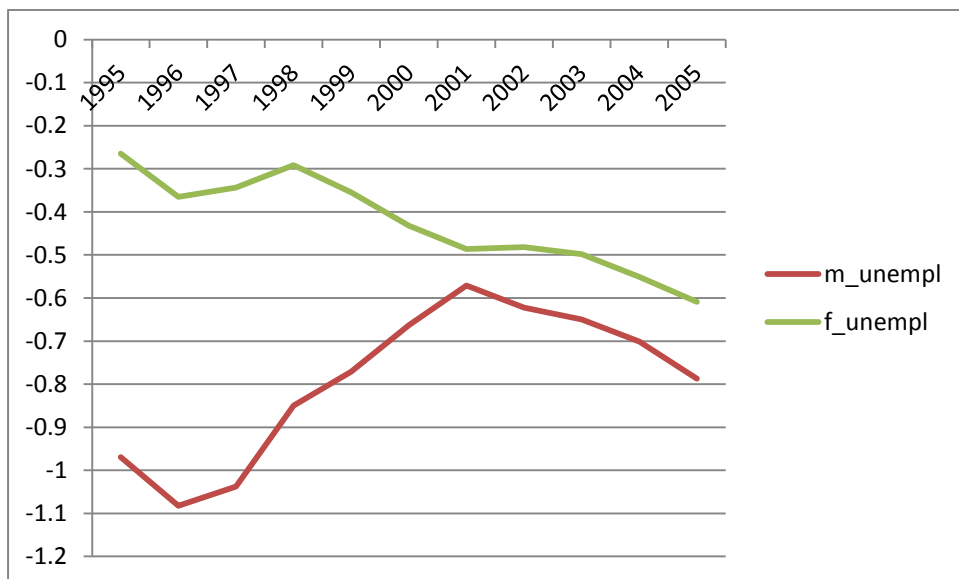
By that method Figure 3 examines how the influence of women's and men's unemployment on men's SWHI changed.

Figure 3 Coefficients for men's and women's unemployment on men's SWHI, over seven year periods

(a) West Germany



(b) East Germany



From these two graphs we can see that men in both countries continued to assess their partner's unemployment as having less severe effects than their own on their SWHI. However that difference reduced very slightly in the West but substantially in the East, where by the 2000s only a small difference remained. Unemployment continued to have less serious effects on men's SWHI in the East than the West.

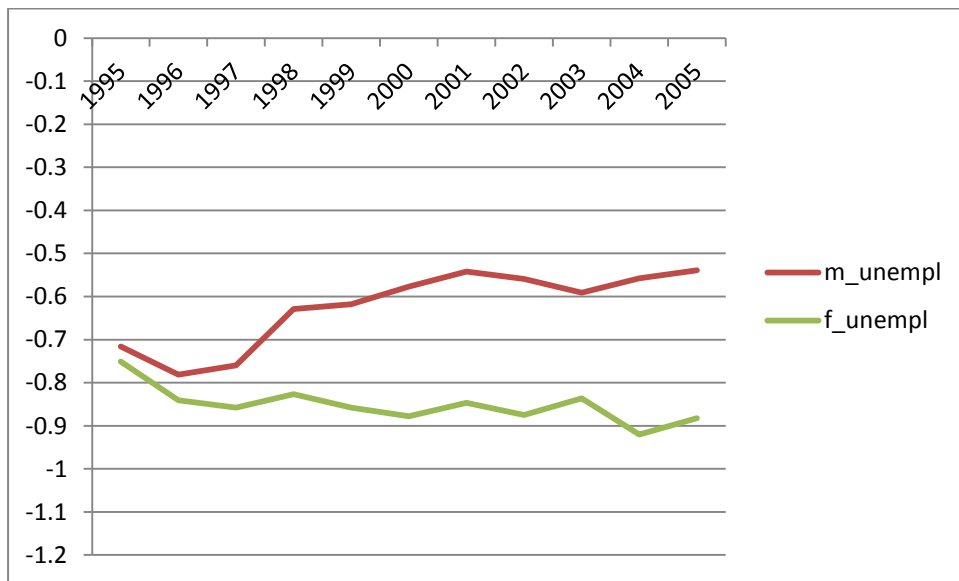
Figure 4 examines the trajectory of the influence of women's and men's unemployment on women's SWHI.

Figure 4 Coefficients for men's and women's unemployment on women's SWHI, over seven year periods

(a) West Germany



(b) East Germany



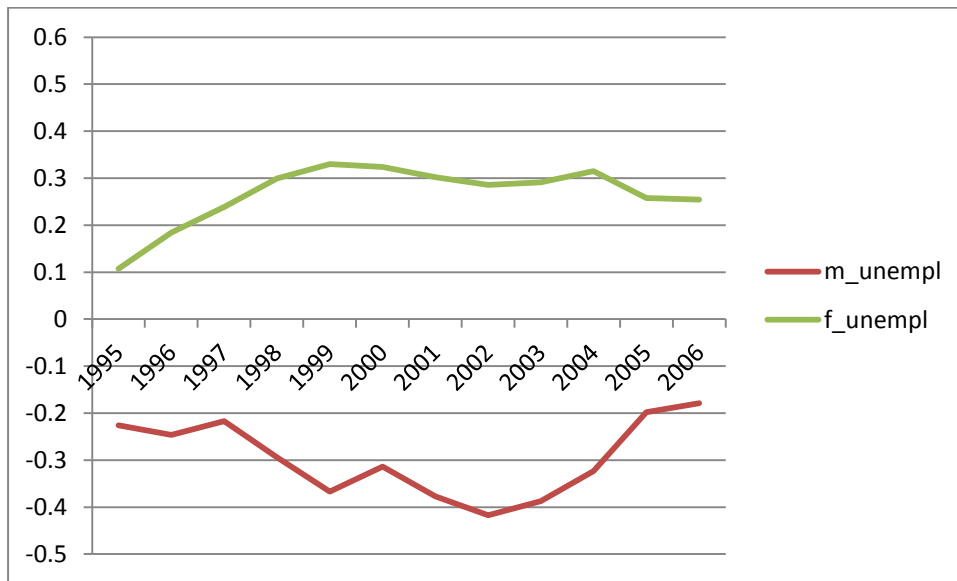
In West Germany, Figure 4(a) shows a definite narrowing of the gap in how their partners' and their own unemployment affected women's SWHI. The difference with Figure 43a) reflects the much sharper increase in egalitarian attitudes for women than men, though women did continue to see their partner's unemployment as more serious than their own. In East Germany, where women always took their own unemployment as the more serious, their partner's unemployment had a diminishing impact

on women's SWHI, while the impact of their own unemployment slightly increases. This former is in line with Figure 3(b) showing men taking women's unemployment more seriously too.

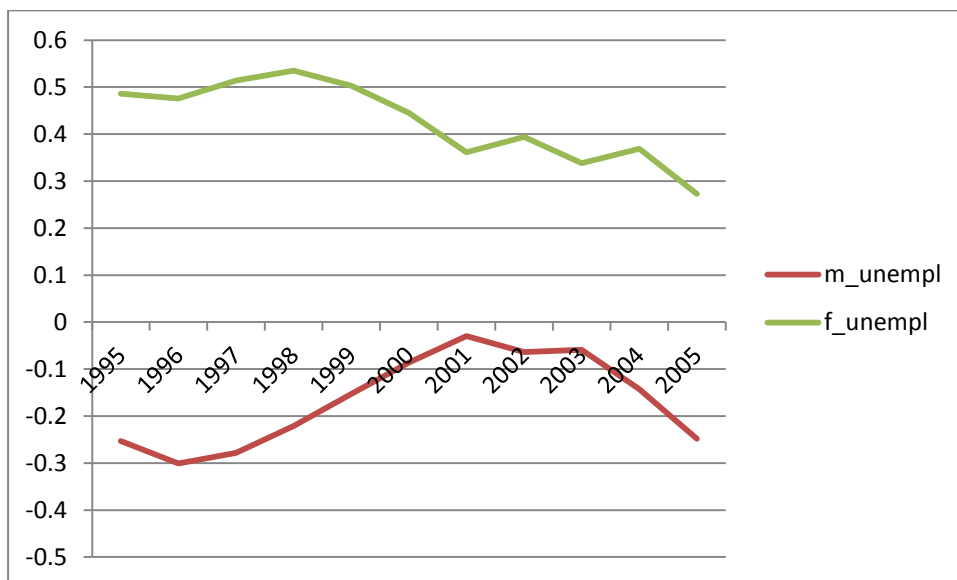
Figure 5 examines changes in the influence of unemployment on relative benefits from household income over time.

Figure 5 Coefficients for men's and women's unemployment on the difference between men's and women's SWHI, over seven year periods

(a) West Germany



(b) East Germany



We measure an effect on relative benefit from household resources favouring men positively and one favouring women in negative terms. In West Germany the lines for female and male unemployment are fairly symmetrical around the horizontal axis, reflecting a lack of gender difference in the effects

of unemployment on relative benefit from household income, which for both sexes increased in the latter half of the 1990s before falling from about 2003/4.

In East Germany, on the other hand, the gender effect noted earlier can be seen by the line for female unemployment being consistently further from the horizontal axis than that for male unemployment. The temporal pattern is not the same as in the West, where the effects of unemployment on benefit from household resources fell until 2001 for both sexes, and then started to rise for men, so that the gender difference reduced a little. This may reflect a small increase in domestic equality in East Germany.

Conclusion

This paper examined how gender roles affected individual satisfaction with household income within male-female couples in Germany 1992-2008. We found that making a contribution to household resources through employment rather than domestic contributions led to greater SWHI, both individually and relatively to a partner's SWHI. We interpreted such relative effects as evidence of greater relative gain from household resources, in other words, that an individual in employment, particularly full-time employment, gains more than their partner does from the resources that employment brings in. We noted that this effect was in practice gendered because men, particularly in West Germany, were more likely to be in employment.

We also noticed some other gendered effects; men's SWHI in both parts of Germany depended far more on their own employment status than their partners'. However in West Germany women's SWHI dropped by more when their partner was no longer employed full-time than when the same happened to themselves. This was not true of women's SWHI in the West, but in the East with its more gender egalitarian employment expectations, women were more concerned about their own employment status. We found that this had contradictory effects for women in the East, in that they lost out more in terms of the relative benefit from household resources when unemployed than men did.

Over time we found some convergence in how much SWHI was affected by the man's or the woman's unemployment. This convergence was more marked in women's than men's views in the West. In the East, men's unemployment diminished in its effect on women's satisfaction, while men became somewhat more concerned when their partner was unemployed. Analysis of the effects of other employment statuses over time is a task for another paper.

These results were not entirely expected. They are consistent with an increasing egalitarianism in gender role attitudes in the West and a continuing more egalitarian attitude to women's employment in the East. However, results for the East may also be reflecting the limit to gender equality if it is does not also involve a shift in gender roles in the home.

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