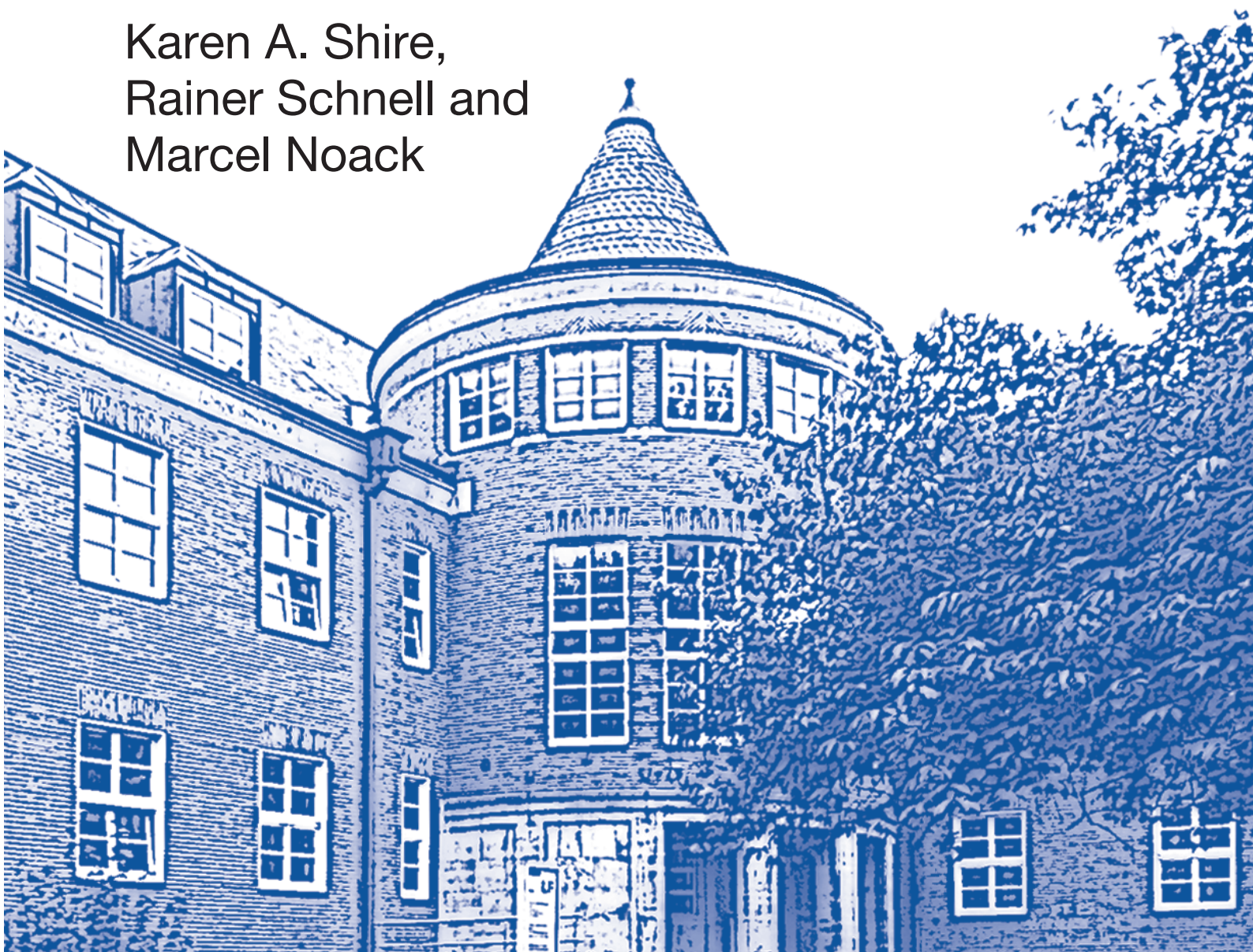


Determinants of Outsourcing Domestic Labour in Conservative Welfare States

Resources and Market Dynamics in Germany

Karen A. Shire,
Rainer Schnell and
Marcel Noack



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Duisburger Beiträge zur soziologischen Forschung 2017-04
doi: 10.6104/DBsF-2017-04

Herausgeber:
Institut für Soziologie, Universität Duisburg Essen
Institute of Sociology, University of Duisburg-Essen
<https://www.uni-due.de/soziologie/>
Juni 2017

Duisburger Beiträge zur soziologischen Forschung
ISSN 0949-8516 (Internet)



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Umschlagbild: Carmen Janiesch, Berlin

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Abstract

Women in conservative welfare states continue to do more unpaid domestic labour than their partners. Many European countries subsidize the outsourcing of routine housework and care labor to market services through tax credits and other measures, with the aim of reducing women's unpaid work. Most research on the determinants of outsourcing replicate gendered exchange-bargaining models, and neglect market factors relevant to explaining the substitution of unpaid labour. The neglect of market factors however, is mainly due to data limitations. Drawing on a new data set in the German Socio-Economic Panel Innovation Study (SOEP-IS) develop models, which include market as well as resource factors in examining the determinants of outsourcing domestic labour. The analyses confirm previous research findings, that households with more resources are more likely to outsource. Thus, the availability of tax credits for household purchases does not seem to encourage households with lower incomes to shift unpaid domestic labour to the market. In contrast to previous research findings based on exchange-bargaining theory, relative resources of women are neither predictors of more or of less outsourcing. Models explaining the gendered division of labour are not necessarily transferable to the study of outsourcing unpaid labour to the market. Previous research in Germany finds that partners revert to traditional gendered divisions of labour when they become parents. We find that the presence of young children increases the probability of outsourcing, suggesting that buying-in services may be a way in which re-traditionalization is averted. Overall, market factors have a strong impact on whether households outsource or not, especially demand for eldercare and the availability of services. Yet most labour available to German households is not supplied by the service sector, but from the black market. The article concludes that future research needs to address the interaction of demand and supply side factors, ideally in cross-national household-level analyses.

Keywords: domestic labour, gender, eldercare, informal employment, migrant domestic labour

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1 Introduction

Domestic service is back (Sarti, 2006), but in a new form. Rather than the full-time butlers and maids of the past servicing wealthy households, paid domestic help today is on an hourly basis, compliments rather than replaces unpaid domestic labour, and is justified by its contributions to improving work-life balance. Long-term trends show increases in women's paid employment together with declines in overall hours spent on housework. Still, women have a larger share of unpaid domestic labour than men, whose contributions to housework have changed very little. Recently many European countries have intervened to alleviate women of domestic labour by legislating policies encouraging households to substitute unpaid housework and care labour with paid services. These policies, including tax credits and vouchers, are especially prominent in the conservative welfare states (Carbonnier and Morel, 2015). In the EU economic policy, outsourcing domestic labour is tied to growth strategies prioritizing higher participation rates for women in the labour force (now set at 75%, the same as for men, in the EU Europe 2020 strategy, EC, 2010). This new "political economy of household services" (Carbonnier and Morel, 2015; Estevez-Abe and Hobson, 2015) aims to expand the availability and use of market services, which "challenges cultural expectations about the responsibility of wives for housework" (Baxter *et al.*, 2009: 3).

Domestic labour research has drawn mainly on theories developed for research about the US – the (then) new household economics (Becker, 1981) and gendered exchange-bargaining theories (England and Farkas, 1986). These theories placed the emphasis on material resources and time constraints in determining who does more unpaid labour in partner households. Important contributions of gendered exchange-bargaining theory have been the focus on resources of women as bargaining capacities in gaining fairer shares of unpaid labour, but also specifying the conditions under which "gender trumps money" (Bittman *et al.*, 2003). The determining impact of differences in gender norms and attitudes are well studied, but also this research has focused mainly on the Anglo-American countries (Bianchi *et al.*, 2000; Kan 2008). An increasing number of studies however, examine country comparative differences in resources, time constraints, norms and expectations in determining the "resilience of this 'traditional' arrangement of domestic labour" (Geist, 2005:23). Persistent cross-national differences emerge in relation to how the 'three worlds of welfare' (liberal-market, social-democratic and conservative welfare regimes) align with variations in societal-level gender equality indicators to determine the gender gap (Geist, 2005; Ruppanner, 2010; Buhmann *et al.*, 2010; Eeckhaut *et al.*, 2014).

Taking a cue from research on the gendered division of domestic labour, studies of outsourcing often use the same determinants (Oropesa, 1993; Bittmann *et al.*, 1999; de Ruijter *et al.*, 2005; Treas *et al.*, 2008; Baxter *et al.*, 2009). This research shows that household resources are important determinants of substitution. The models take only a

limited range of demand factors (typically childcare needs) and household formations (mainly partner households) into account. Two recent collections of research on policy changes within Europe however, point to the importance of variations in the role of states in providing care, especially eldercare, and the private sector organization of service markets as factors determining whether and how much unpaid labour is substituted through outsourcing (Estevez-Abe and Hobson, 2015; Carbonnier and Morel, 2015). With one exception, however (Estevez-Abe, 2015), these are policy or qualitative studies. Quantitative analyses including market determinants are surprisingly neglected, though probabilities of outsourcing clearly depend on the availability of service markets and a supply of service workers. The aim of this article is to study market as well as household resource determinants of outsourcing unpaid domestic labour.

Our knowledge about the development of outsourcing is plagued not only by the narrow set of determinants studied to date, but also by the lack of adequate data about the incidence and intensity of outsourcing and market factors on the demand and supply-side. The analyses presented in this article aim to overcome these limitations in three ways. First, we draw on new household-level data from the German Socio-Economic Panel Innovation Survey (SOEP-IS) initiated and designed by the authors, which allows us to study the determinants of outsourcing in relation to market-relevant factors at the household-level of analysis. The nature of the data means that we are restricted to studying just one conservative welfare state, Germany. Yet the generation of new data on one of the most resilient traditional arrangements of domestic labour in Europe (Orham 2014) contributes to developing broader European comparisons, especially between the conservative welfare states in Europe. Secondly, we examine four routine domestic tasks, and present specific data about the labour supply engaged for each type of domestic service. In relation to labour supply we are particularly interested in the gender and migration composition of the workforce and the prevalence of unregistered (illegal) employment in the domestic services. Third, specifically in relation to household needs, we include indicators of eldercare demand and expand the households studied to include not only partner-households as in previous studies, but also single households, especially important for capturing demand from older singles. These sets of determinants, in addition to established factors like women's and household resources, allow us to better describe the development of outsourcing overall, the labour supply, and to examine independent effects of market demand in relation to the effects of women's and household resources already well established in previous research.

The first section of this article covers previous research and situates the German case in broader European comparisons. Reviewing the state of research on the division of domestic labour and outsourcing we identify areas, where models could be improved. These considerations are formulated into hypotheses that posit the independent effects of relative and household resources, demand and supply-side factors determining which households outsource and how much. In contrast to previous research, the new data we

draw on allows us to examine both the incidence of outsourcing and the intensity (hours purchased), and thus to test whether determinants of outsourcing have the same effects on how much domestic labour is shifted to the market. Overall, the findings show no increase in outsourcing, despite stronger incentives to do so. In explaining which households outsource, the relative resources of women show little effect. Aggregate household income and maximum educational levels positively influence the incidence of outsourcing, but not how much is outsourced. Demand indicators have an independent effect on the incidence of outsourcing, especially eldercare needs, an aspect neglected in previous research on unpaid care labour. Our analysis of market supply shows that households in urban regions and in West Germany have higher probabilities of outsourcing. Moreover, market factors are more important than resources in influencing how much is outsourced. Overall however, the findings suggest an underdeveloped market of service providers in Germany, with most households, regardless of specific tasks outsourced, drawing on unregistered (illegal) employment relations. The findings suggest a mismatch between demand and supply, which we view as contributing to the relatively low overall levels of outsourcing observed.

2 Prior research on unpaid domestic labour and outsourcing in Europe

In Europe, there is not a single country where the mean hours of housework done by women does not exceed the average for men (Ruppanner, 2010: 968, see also Knudson and Waerness, 2008). The conservative welfare states in the EU (Austria, Belgium, France, Germany, the Netherlands) all have similar divisions of paid and unpaid labour in comparison to social democratic welfare states where women have lower shares of unpaid and higher rates of paid employment, as illustrated in Table 1. Given the overall tendency for men not to change their share of housework much when women increase their employment attachments, outsourcing can be expected to play a central role in changing the persistent gender gap in unpaid labour in the conservative welfare states.

Table 1: Gendered Division of Paid and Unpaid Labour in Conservative and Social-Democratic Welfare States in Europe

Country	Mean share HW women (2004)	Mean share HW men (2004)	Empl. Rate women (2015)	Empl. Rate men (2015)	Average working Hrs/mth women (2014)	Average working hrs/mth men (2014)
Austria	.83	.40	67.1	75.1	133	167
Belgium	.80	.35	58.0	65.5	134	160
France	.83	.37	60.6	67.1	140	154
Germany	.78	.38	69.9	78.0	122	154
Nether- lands	.79	.41	69.2	79.0	104	145
Denmark	.71	.43	70.4	76.6	125	131
Norway	.74	.41	73.0	76.5	126	150
Sweden	.71	.48	74.0	77.0	148	165

Sources: mean proportions of HW (housework) by men and women from Ruppanner, 2010: 968, employment rates and average working hours / month from Eurostat 2017 (Gender Statistics).

Policies subsidizing outsourcing aim at improving women's labour force participation by lessening the burden of unpaid household labour. All European conservative welfare countries have legislated some form of subsidy to encourage households to outsource more domestic and care labour (see Carbonnier and Morel, 2015). Since 2000 in Germany, there have been four reforms aimed at expanding outsourcing of unpaid (and informal) labour to market services, the latest in the 2008 Family Support Law (Shire 2015a). German childcare infrastructures have improved in alignment with the EU Barcelona targets for institutional coverage. Most eldercare however, is still partly or wholly a family responsibility (Morel, 2007; Leitner, 2013).

Most studies of gender and domestic labour have not directly examined its substitution, though reductions in working women's shares of domestic labour are usually attributed to some degree of outsourcing (Knudson and Waerness, 2008; Geist, 2005; Ruppanner,

2010). Nonetheless, some of the determinants well-established in domestic labour research have proven useful in studies on outsourcing. An early finding that women's resources as well as overall household resources determine reductions in women's share of unpaid labour (Oropesa, 1993) seems to confirm the common criticism of policies subsidizing outsourcing, that state transfers are likely to benefit only well-off households (Morel and Carbonnier, 2015; Baxter *et al.*, 2009). Yet studies testing exchange-bargaining theory yield more nuanced results for the effects of women's resources. Some studies show that women who earn more than their male partners tend to compensate for their deviation from traditional gender norms by performing a larger share of unpaid domestic labour, a pattern known as "gender trumping money" or "gender deviance neutralization" (Bittman *et al.*, 2003: 193). This is the finding of previous studies testing exchange-bargaining effects on the gender division of domestic labour in Germany. While the share of unpaid housework is not effected by women earning equally or more than men in German households, even those few households where men and women share tasks revert to a traditional division of labour when children are born (Kühhirt, 2012; Schober, 2013; Schulz and Blossfeld 2006).

The comparative literature suggests that traditional gender norms intervene in different ways in bargaining and exchanges about unpaid domestic labour cross-nationally. Gupta (2007) for the US case argues that the single most important factor is women's overall earnings, i.e. success on the labour market, rather than relative income. Ruppaner (2010: 968) shows that in social-democratic welfare states women commit the lowest average hours to housework and the highest average hours to paid labour. In contrast, conservative welfare states locate much of the responsibility for care as well as domestic labour to women, reinforcing the role of men as breadwinners and aligning social policy with the assumption that women are available for unpaid labour in the home (see Ohrem, 2014 on Germany). Geist (2005) finds that men in conservative welfare states have the lowest shares of domestic labour overall, while social democratic countries approach gender equal shares (see also Bühlmann, *et al.*, 2010). When women and men hold egalitarian gender attitudes in liberal and social-democratic countries, their partners share more of the housework, but this does not hold for conservative welfare states (Geist, 2005: 33). Geist (2005: 33) finds that only time constraints (hours spent in paid work) increase the probability of housework being shared in conservative welfare states.¹ Schulz and Blossfeld (2006) to the contrary, find that traditional arrangements grow stronger over the course of a partnership in Germany.

It is unclear however, whether the persistence of norms regarding the specialization of women in unpaid domestic labour operate in the same way to shape decisions about whether to outsource tasks to the market. The 2008 Family Support Law in Germany

¹ The ISSP data analyzed by Geist 2005 is not household data, and there are divergences in survey responses of male and female respondents. Here we refer to the results for female respondents.

explicitly strengthened tax credits for households, which outsource domestic and care tasks to improve the employment chances of women, especially in households with child and eldercare needs (Shire 2015a). These shifts in state support also reflect policy shifts in the promotion of mothers' attachments to employment in Germany, flanked by improvements in childcare infrastructures. Outsourcing presents an alternative to traditional arrangements, taking the onus from men to increase their share of housework, while freeing women of time spent in housework. Thus, outsourcing may even be an acceptable alternative for otherwise traditionally oriented partnerships. This warrants a new look at relative income effects, despite their strong link to compensatory responses in Germany, especially for parents. There is some evidence that relative education of women in Germany contributes to shifting norms toward gender equal arrangements (Schulz and Blossfeld 2006). Relative education of women may improve their bargaining capacity and render outsourcing as an acceptable path to more gender balance in unpaid labour. Following Geist (2009) we also expect that full-time work by women in Germany, already well-established in East Germany, but still departing from traditional gender roles in West Germany, while not a relative resource, is an indication that women give priority to paid work over unpaid labour. Women working full-time may outsource rather than compensate for their deviation from traditional gender arrangements. These variables draw mainly on exchange-bargaining theory (Bittmann et al., 2003; Bianchi et al., 2000), but emphasize the normative as well as rational effects of relative resources.

The first two sets of hypotheses address the effects of women's relative resources and household resources on outsourcing domestic labour to market services.

- | | |
|----------------|--|
| Hypothesis 1: | Relative resources of women will increase the incidence and intensity of outsourcing |
| | |
| Hypothesis 1a: | Households where women have higher incomes will be more likely to outsource. |
| Hypothesis 1b: | Households where women have higher levels of education will be more likely to outsource. |
| Hypothesis 1c: | Households where women work full-time will be more likely to outsource. |
| Hypothesis 1d: | Women who are older than their male partners will be more likely to outsource. |

Inverse relationships between the independent and dependent variables may be evidence of the persistence of the “gender deviance neutralization” thesis, of “gender trumps money”.

Hypothesis 2: Household resources (income, education) increase the incidence and intensity of outsourcing.

We are particularly interested in whether women’s resources have independent effects from overall household resources.

A second aim of the analysis is to examine the effects of market-relevant variables on outsourcing. It may seem obvious, that demand and supply factors determine whether a market alternative is utilized or not, but we know little about which demands are serviced by outsourcing, and how supply-side factors, especially the availability and quality of labour, determine whether and how much domestic labour is outsourced. Previous studies show that parenting and the presence of young children reaffirms traditional gendered divisions of labour in Germany (Schober, 2013; Kühhirt, 2012; Schulz and Blossfeld 2006). Relatively unexplored in the literature to date is the effect of eldercare needs on outsourcing. Schupp *et al.* (2007) find that households with elderly members are more likely to hire domestic helpers than those with childcare needs. Most studies however, are more concerned with the effects of the presence of young children on outsourcing (Baxter *et al.*, 2009; Geist, 2005; Oropesa, 1993). In countries like Germany, where aging is rapid and fertility is low, we expect that demand for market services will be increasingly evident in older households with eldercare needs. Rather than restricting our sample to partner households and households with children, we include single as well as partner households, working age, parenting age and old age households in the analysis to achieve a broader understanding of market dynamics in the outsourcing of domestic services.

A third set of hypotheses address the demand-side of market dynamics for outsourced services. In addition to indicators of the demand for care, we include an indicator for cleaning demand, the size of living spaces. An inverse effect to that hypothesized may be evidence of the persistence of a “re-traditionalisation” of gender arrangements in German households, and the failure of outsourcing as an alternative for reducing women’s responsibility for unpaid care and domestic labour.

Hypothesis 3: Higher demand increases outsourcing unpaid labour.

Hypothesis 3a: The presence of young children will increase outsourcing.

- Hypothesis 3b: The presence of an adult receiving care insurance transfers will increase outsourcing.
- Hypothesis 3c: Households with older members will be more likely to outsource.
- Hypothesis 3d: Households with larger living space will be more likely to outsource.

The least studied factor in outsourcing is the role of the supply-side of service markets, including the availability and quality of labour. These factors have been studied at a societal level of analysis, looking at the availability of a low-wage and migrant workforce in cross-national comparison (Estevez-Abe 2015). We are not aware of any data, which attempts to study the impact of supply-side indicators on probabilities of outsourcing at the household level of analysis. The survey module we draw upon attempts to create a set of supply-side variables, to cover the availability of labour, types of employment contracts, estimates of wages and characteristics of the workforce, including gender and citizenship status. We consider these newly collected measures of supply-side characteristics in several ways. By providing descriptive statistics about household service workers, we give an initial insight into the characteristics of the labour supply. Secondly, as past research on Germany has indicated, the growth of market services has been slow in comparison to neighbouring countries like France and Belgium (Weinkopf 2014). In this light, we may expect available supplies of labour to concentrate in urban regions with larger service sectors overall. Third, East Germany does not share a history of conservative welfare institutions with West Germany (Geissler 2002). Women's employment rates, the availability and use of institutionalized childcare continue to be higher in East Germany. While women's roles in East Germany were based historically on strong norms of gender equality in public life, this "did not result in an adjustment of the expectations towards women's role at home..." and "traditional role expectations for men remained largely unchanged" (Geist 2009, p. 5). Geist finds that while East German women are more likely to be full-time employed and spend less time overall on housework, that the gendered division of domestic labour is the same for East and West Germany (2009, p. 11). Evidence available about outsourcing in the two Germanys suggest that it is less frequent in East Germany than in West Germany; on the supply-side the use of black market labour is also less in East Germany (Prognos 2012, cited in Weinkopf 2014, p. 10 and FN7). The reasons however, are not known. We suspect that the lack of an available supply of native or migrant women available for low hour employment in East Germany may make outsourcing less frequent.

A problem in studying household and market dynamics of outsourcing is the absence of adequate data. The European Social Survey (ESS) module on *Family, work and well-*

being collects data on hours spent in housework, but does not include a measure of outsourcing (Ruppaner, 2010; Bühlmann *et al.*, 2010). The International Social Survey program (ISSP) used in many recent studies includes an instrument for domestic labour, with one response category indicating outsourcing (Geist, 2005; Knudson and Waerness, 2008; Heisig, 2011).² While the ISSP is the most utilized cross-national data set for studying outsourcing, the limited measure and the fact that it is individual-level data means that household dynamics cannot be studied directly (Estevez-Abe, 2015; Geist, 2005). Dutch researchers have collected their own data from an organizational study, but this is restricted to dual-earning households (de Ruijter and van der Lippe, 2009; van der Lippe *et al.*, 2012). Swedish researchers have access to national tax registers, which they have matched with labor market data to explore the impact of outsourcing on employment rates of women (Hallden and Sterberg 2011). To our knowledge, this has not been used, though it might be, to examine the determinants of outsourcing. In lieu of publically accessible tax registers, the only national source to our knowledge for studying outsourcing with data collected at both the individual and household level is the German Socio-Economic Panel (Schupp *et al.*, 2007).

3 Data and Methods

The data is based on a set of survey questions, designed by the authors, detailing outsourcing practices of German households in the 2015 Socio-Economic Panel (SOEP) Innovation Survey (IS) sample. The German SOEP survey program is a longitudinal household survey, based on a random sample of the German population, and conducted annually. The SOEP-IS sample is drawn from previous samples of the SOEP household and individual panel survey series, and includes most modules from the basic SOEP survey series. The aim of the SOEP-IS is to build “a means for studying methodological and particularly thematic research questions that pose an unacceptable risk of refusals” (Richter and Schupp, 2012: 3). In 2015, the SOEP-IS sample included 3,245 households and interviews with 5,126 persons (Boelender and Glemser, 2016: 24-27).

A question about outsourcing domestic labour has been included in the SOEP household survey since 1991 (Schupp, 2002). More recent SOEP waves include questions about outsourcing child and eldercare work, including non-paid informal help by relatives and friends (Schupp *et al.*, 2007: 195). The authors’ module extends these questions in the household survey to capture the extent (number of hours) and nature of outsourcing supply, especially employment form and worker characteristics. The outsourcing module asked respondents whether they utilized paid services or employed help for one of four

² Since the outsourcing response is an alternative to women or men doing a larger or equal share, this question does not indicate intensity of outsourcing. One recent study counts this response as equivalent to an equal gender share of unpaid labor (Geist, 2005: 28).

routine domestic tasks (cleaning, child care, eldercare and gardening). Households engaging domestic services were asked further questions about whether the help is directly employed or contracted from a service provider, number of monthly hours, payment, citizenship status and gender of the workers, and in the case of direct hires, whether the employment relation was formally registered as such or not.

The methodological innovation tested in the outsourcing module was an experimental test of randomized response techniques for sensitive questions, which respondents may be reluctant to answer truthfully. The specific question was about the formal registration of employment versus the use of unregistered or 'black market' workers (in German, *Schwarzarbeit*). The validity of different response techniques was examined by randomly splitting the sample of households reporting hiring of workers, and varying the response technique. The results of the methodological part of this research are reported in Schnell *et al.* (2017). In this paper, we report descriptive results of the question about *Schwarzarbeit* for the half of the sub-sample of outsourcers answering the survey question directly.

The full 2015 SOEP-IS sample of 3,245 was reduced to 2,055 households, mainly due to missing data on income questions and elimination of the few same sex households from the analysis. The analysis of intensity of outsourcing is further restricted to households outsourcing (160 households).

Descriptive Statistics

Respondents were asked to report on their outsourcing over the past 3 months for four tasks performed in private households – cleaning, gardening, childcare and eldercare. The range of tasks include routine housework typically performed by men (gardening) and women (cleaning), and care (childcare at home, and in contrast to most previous studies, elder- and dependent adult care at home). About 10% of the household's surveyed reported outsourcing one or more of the four tasks to market services, similar to the results of previous studies based on the annual SOEP data (Schupp, 2002; Schupp *et al.*, 2007). Overall, there is no evidence of an increase in outsourcing in Germany over the past decade, or since the 2008 Family Support Law increased tax credits for paid services.

Employment and worker characteristics were found to vary across the four task areas, suggesting different market dynamics by service type. These are summarized in Table 2 for the full data set.

Table 2: Incidence, Employment and Worker Characteristics of Outsourced Domestic Labour by Task (reported as percent of surveyed households), n=3,245

	Cleaning	Gardening	Childcare	Eldercare
Incidence (n of households using paid service)	7.6% (245)	2.9% (94)	1.0% (33)	.6% (21)
Employment Characteristics of Household Service Labour				
Directly employed by household	85%	56%	76%	30%
Weekly hours used				
1-10	56%	85%	30%	14%
10-20	35%	8%	30%	41%
>20	9%	7%	40%	45%
<i>Schwarzarbeit</i> *	66%	75%	50%	75%
Worker Characteristics				
% Women	94%	5%	95%	91%
% Non-citizen	42%	12%	19%	25%

*Reports are for the half of the sample answering the question directly, resulting in very small sample sizes for gardening, childcare and eldercare. See Schnell et al. 2017 for a methodological analysis.

Cleaning help and child minders were most likely to be directly hired by households, while eldercare was most often contracted from service providers. This may reflect changes in eldercare insurance improving in-kind payment for use of market services. Except for eldercare, these results demonstrate the importance of households as employers, rather than the use of private or other market service providers in Germany. Both types of care work exhibited the highest overall hours of purchased services, even though these tasks were the least likely to be outsourced.

Across all four tasks, unregistered work (*Schwarzarbeit*) represents half or more of all domestic help hired directly by households. While high overall, the incidence of unregistered work in private households is lower than recent estimates by the Institute of the German Economy Cologne (Enste, 2016). In the largest category of outsourced cleaning, only one third of paid services are legally registered employment relations.

Gender and nationality shape the supply of the paid domestic and care service workforce in Germany. Over 90% of all cleaning and care workers are female, but 95% of gardeners are male. Cleaning has the highest share of migrant workers (42%) as well as women (94%), but overall these results confirm previous research findings that native women are more often engaged than migrants in paid domestic labour in Germany (Shire, 2015b; Estevez-Abe and Hobson, 2015; Gottschall and Schwarzkopf, 2010). A cross-tabulation of *Schwarzarbeit* with nationality (not reported here) shows that native women also dominate unregistered employment. In the case of cleaning, native women are illegally employed in 40 out of a total 105 households, compared to 29 households, which report illegally employing non-native persons. When migrants are employed for cleaning however, the proportions engaged illegally are slightly higher (70%) than for native women (63%).

Dependent and Explanatory Variables

We focus on explaining determinants of the outsourcing of cleaning, and do not analyse outsourcing of care work or gardening further, due to the small number of households in the sample, which outsource these tasks. There are also conceptual reasons, which make the focus on cleaning important. As qualitative research shows (Lutz, 2011) households with young children and elderly members may not outsource care work, but instead outsource cleaning to free up time of care givers for attending to family members. Moreover, cleaning is the area of service work with the highest shares of female and migrant workers, the highest percent of households as employers, and the largest shares of unregistered employment (*Schwarzarbeit*). In contrast to childcare work, public services are not provided for cleaning. In contrast to gardening, the sector of private firms providing cleaning services, while expanding, is still small in Germany in comparison to other European conservative welfare states with tax and voucher systems, which provide higher credits and subsidies for outsourcing (Weinkopf, 2014).

Dependent Variables: The incidence of outsourcing cleaning is operationalized as a dichotomous variable (1=outsourced, 0=not outsourced), and models are estimated utilizing logistic regression. This follows the analytical practices and models in recent studies of outsourcing (for example, de Ruijter and Lippe 2009). The intensity of outsourcing is operationalized as the number of hours of cleaning outsourced per week. Models were estimated using a truncated Poisson regression with 0 as the truncation point.

Independent Variables and Controls: We introduce three sets of variables to test for effects on outsourcing, aligning with the hypotheses presented above. Relative resources of women are measured as the difference between partners' income, education and age. We also include full-employment status of women, relevant in the German context for women's bargaining capacity. Overall household resources are operationalized as total household income and the maximum level of education by any adult member of the household.

The third set of independent variables measure demand-side factors in the market for domestic and care services. Childcare needs are measured as the number of children in the household under the age of six, (pre-school in Germany). Eldercare needs are measured directly by whether an adult receives care insurance payments through the statutory long-term care insurance in Germany, including disabled adults. The age of the oldest adult in the household is also included as an independent indicator of eldercare needs. Finally, the size of the living space measured as square meters is included to indicate demand for cleaning services.

Controls include indicators of supply-side factors (regional differences between East and West Germany, and effects of urban regions, where labour supply may be larger) and controls for different household formations (very aged households, partner versus single household and gender of single households).

All indicators, their operationalisation and descriptive statistics are listed in the appendix to this article.

4 Results

The logistic regression model in Table 3 presents the results on the effects of women's resource advantages, overall socio-economic status of households, estimates of demand-side factors on the probability of households to outsource cleaning, controlling for supply-side indicators and household formation. The logistic regression was diagnosed for multicollinearity and the impact of outliers. All standard measures of goodness-of-fit (AUC, Hosmer-Lemeshow) as well as the pseudo R^2 estimate (McKelvey and Zavoina Pseudo $R^2 = .37$) seem to indicate a good overall fit of the model.

Table 3: Logistic regression of incidence of outsourcing on resources and demand

	B	Se
<i>Woman's relative resources</i>		
Higher Income	-0.000	0.000
Higher Education	0.132	0.090
Female partner working full-time	-0.317	0.297
Higher Age	0.018	0.033
<i>Socio-economic status of household</i>		
Household income	0.000**	0.000
Education maximum	0.227**	0.063
<i>Demand for domestic labour and familial care</i>		
Children under 6	1.143**	0.279
Care insured in HH	1.369**	0.435
Residence size (m2)	0.009**	0.002
Age maximum	0.048**	0.010
<i>Controls (location and household)</i>		
Size of locality	0.191**	0.055
East Germany	-0.725*	0.300
Age maximum 80	0.860**	0.322
Cohabiting or married household	-0.537	0.348
Single male household	-0.218	0.257
Household size	-0.279	0.149
Constant	-8.212**	0.772
n (households)	2055	

se= standard errors; *p<0.05, **p<0.01, Mean VIF 1.610; ROC-Area 0.861

Hosmer/Lemeshow $\chi^2_{df=8}$, groups=10, 13.64, p=.092

Pseudo R² *McFadden* 0.242, Pseudo R² *McKelvey and Zavoina* 0.376

In relation to the first two sets of hypotheses predicting that resources influence outsourcing, the findings show that overall household resources increase the probability of outsourcing. This is true for household educational resources as well as for income. None of the women's relative resource indicators have an effect independent of overall household resources. We also used different measurements of relative resources, but none of the alternatives changed the performance of these variables or the overall fit of the models. We also tested for a curvilinear relation between women's relative income and outsourcing, uncovering evidence of a U-shape relation in bivariate analysis, but which was not sustained in a further multivariate model.

All demand indicators, as hypothesized in the third set of hypotheses, are significant determinants of outsourcing, independent of household resources. Indicators of types of care needs – childcare and eldercare – increase the probability that households will outsource cleaning. The finding for childcare is consistent with models determining shares of domestic labour in liberal market welfare states (Bianchi *et al.*, 2000, Bittmann *et al.*, 1999), but not in conservative welfare states. Prior research on Germany shows, that even households with a more egalitarian pattern of shared domestic labour revert to a traditional gendered division of labour when partners become parents. Our findings on the impact of children on outsourcing suggest, as hypothesized, that outsourcing may be an alternative to a return to traditionalism.

Eldercare has not been studied in previous research. The findings show that eldercare needs are affecting outsourcing. Both indicators of eldercare, receiving insurance premiums and maximum age of adult household members, and the control for households with an adult member over the age of 80, are associated with outsourcing. Size of living space has a weaker, but evident effect as well. Indicators of supply factors included as controls have the hypothesized effects, an indicator of urban regions and households in West compared to East Germany exhibit stronger effects on outsourcing. Finally, differences in household formations have no evident effect.

Given the effect of the control for East and West Germany, we examined the same models separately for each region, with one variation due to lack of variability (only 6 of 382 East German households had a registered care dependent adult, so this variable was eliminated). The model was upheld for West Germany, but none of the determinants predicted the probability of outsourcing in East Germany. Except for a weak effect of relative income, neither educational nor income resources, or any of the demand and supply-side factors predicted outsourcing in East Germany. Given the low incidence of outsourcing in comparison to West Germany, these findings may simply be due to less hiring of help at all by East German households.

For households, which outsource, Table 4 presents results for a model of outsourcing intensity regressed on the same set of variables. The low pseudo R^2 suggests that the sets of indicators are not as strong in explaining variance in intensity of outsourcing.

Table 4: Truncated Poisson regressions of outsourcing intensity (hours outsourced) on resources, socio-economic status, demand and control variables (truncation point = 0)

	Poisson regression	
	B	se
<i>Woman's relative resources</i>		
Higher Income	-0.000	0.000
Higher Education	0.083	0.060
Female partner working full-time	0.073	0.173
Higher Age	--0.013	0.152
<i>Socio-economic status of household</i>		
Household income	0.000	0.000
Education maximum	0.012	0.045
<i>Demand for domestic labour and familial care</i>		
Children under 6	0.041	0.123
Care insured in HH	0.756*	0.365
Residence size (m2)	0.004***	0.001
Age maximum	-0.005	0.008
<i>Controls (location and household)</i>		
Size of locality	0.093**	0.036
East Germany	-0.024	0.230
Age maximum 80	0.095	0.193
Cohabiting or married household	0.013	0.259

Fortsetzung von Table 4 auf der nächsten Seite

Fortsetzung von Table 4

Single male household	-0.005	0.210
Household size	-0.030	0.093
Constant	1.605**	0.616
n (households)	160	
Pseudo R ²	.16	

se = standard errors

*p<0.05, **p<0.01, ***p<0.00

Again, women's resources have weak effects on hours outsourced. While household resources are relevant for whether households outsource or not (Table 3), household income and education levels are not important predictors of how much households outsource. A narrower set of demand and supply factors influence the intensity of market service use. On the demand side, eldercare needs have an effect. Also, as may be expected for cleaning services, the size of the living space influences the number of hours outsourced. The presence and number of children in the household however, does not impact on the intensity of outsourcing. On the supply side, larger available supplies of service labour is associated with outsourcing more hours of help. Only 16 households outsourcing cleaning were in East Germany, making a further inter-regional comparison unfeasible.

5 Discussion

We have theorized outsourcing as a way for women to reduce their responsibility for housework, without increasing the participation of men. In line with prior studies, we have followed models used to explain changes in women's and men's relative shares of unpaid work, to test whether the same factors also influence outsourcing. Previous research on Germany shows that relative resources of women do not have the expected effect on changing shares of unpaid domestic labour. The re-traditionalization thesis in Germany however, has never been tested for the case of outsourcing.

Overall our results show that outsourcing, as an alternative way to reduce women's responsibility for unpaid domestic labour, is not well developed in Germany, and hardly present at all in East Germany. We do find evidence however, that outsourcing may pose an alternative to the pattern of re-traditionalization of domestic labour in West Germany. The presence and number of young children in the household increases the probability

of outsourcing. Previous research has focused almost exclusively on partner households and the presence of children. We include indicators of eldercare needs, and find that these impact on the incidence and intensity of outsourcing. The supply of available labour and services is decisive however, in whether households can and do outsource. As expected, East German households, where the availability of native women willing to work low-hours and of migrant women is known to be lower, are much less likely to outsource than West German households. The size of the locality, a second indicator of available supply, also impacts on the probability of households to outsource. The nature of labour supply was explored descriptively, through a new set of questions on employment contracts and workforce demographics. The descriptive statistics on labor supply indicate that most help is employed or contracted on the black market. Moreover, work is taken up illegally by native as well as non-native women. One explanation for this pattern of supply may lie in the prevalence of households as employers, especially for cleaning services, and the relevant lack of private sector service providers in Germany.

6 Conclusion

The analyses of who outsources and how much yielded two main contributions to the state of the research. First, we find evidence, that determinants of outsourcing are different than determinants of the gendered division of unpaid domestic labor. Women's relative resources seem to have no effect, as they do in explaining changes in shares of unpaid labour. Contrary to the re-traditionalization thesis for West Germany however, the presence of children has a positive effect on outsourcing. Evidence of high demand, especially for child and eldercare, increases outsourcing. Yet the differences between East and West Germany, and the significance of available labour supply, all suggest that German service markets are not developed enough to meet demand.

Our evidence suggests that outsourced labor is being used where there is a demand for it, with well-off households in West Germany having higher probabilities of using services. The descriptive analyses show however, that demand is primarily met through illegal supplies of labour. One recent analysis attributes the use of illegal labour to the "poor morals" of German households (Enste, 2016). Rather than blaming households, we question whether alternative supplies of regular labour are available to meet demand. Policy analyses suggest that government subsidies in the form of tax credits in Germany are still too inadequate for subsidizing formal market services. In other conservative welfare states, reforms have introduced higher tax credits to encourage the development of formalized sectors of domestic service firms. In Belgium, highly subsidized service checks are partly aimed at integrating disadvantaged unemployed into the labor market, and in France higher tax subsidies have stimulated the development of a sector of private service firms. Without a similar private service market to turn to, the capacity of German

households to break through the gender gap in unpaid labour by outsourcing more domestic and care work to the market will remain limited. Future research should include measures of labour supply in studying the determinants of outsourcing. The SOEP-IS 2015 module on outsourcing may provide a model for future survey research on household use of market services. Further, the availability of comparative household data would enable evaluations of the impact of government policies to support the substitution of unpaid domestic labour with market services, especially effects on labour supply and market-making in domestic services.

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Appendix

Descriptive statistics and measurement details of variables (N=2055)

Variable	Description	Mean	SD	Min	Max
Dependent Variables					
Incidence of Outsourcing Cleaning	1= household outsources cleaning 0= household does not outsource cleaning	.07	.27	0	1
Intensity of Outsourcing	Average reported number of hours monthly by households (with an incidence of outsourcing -- 0 values are either non-reports and reporting errors and are eliminated from the analysis)	11.26	10.26	1	75
Independent Variables					
<i>Women's relative resources</i>					
Higher Income	Women's income minus men's income	-409	1237	-17550	11700

Higher Education	Women's educational level minus men's educational level	-.036	.940	-5	4
Classification of Educational Levels					
(0=no certified education, 1= general middle school (Hauptschule), 2= vocational middle school (Realschule), 3=vocational high school graduate (Fachhochschulreife), 4=academic high school graduate (Abitur), 5= higher education under doctoral degree level, 6=doctoral degree; (Note: this simplified categorization was chosen to ease the equivalent coding of East German and foreign degrees).					
Female full-time	Yes=1, No=0	.22	.42	0	1
Higher Age	Women's age minus men's age	-1.05	3.28	-22	21
<i>Socio-economic status of household</i>					
Household income	Net monthly income in Euros	2449	1583	200	15000
Education maximum	Highest education level of any adult household member (same categorization as above)				
<i>Demand for domestic labour and familial care</i>					
Children under 6	Number of children under 6 years of age in HH (pre-school)	.09	.34	0	3
Care Insured in HH	1= A household member has registered dependent care insurance grade (0-3 in the German care insurance system) 0= not receiving care insurance	.02	.14	0	1

Residence size (m2)	Living area in square meters	93.77	47.57	10	600
Age maximum	Maximum age of oldest adult in the household	54	16	19	94
Control Variables					
Size of locality	Classification by population of local community 1= less than 2,000, 2=2,000-5,000, 3= 5,000-20,000 4= 20,000-50,000, 5= 50,000-100,000, 6=100,000-500,000 7= 500,000 or more	4.28	1.83	1	7
German Federal States Dummy	1= Household is in West Germany (excluding Berlin) 0 = Berlin or East Germany	.19	.39	0	1
Age max 80	1= Presence of adult household member over age of 80 0= All adult household members under age of 80	.06	.24	0	1
Cohabiting or married HH	1= yes 0= single households	.37	.48	0	1
Single male HH	1=yes 0= single female household or partner household	.25	.43	0	1
Household size	Total number of household members	1.9	2.2	1	8

