

Labour Market Flexibility between Risk and Opportunity for Gender Equality

Analyses of Self-employment, Part-time Work, and Job Autonomy

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Preface

This manuscript is the framework paper of the dissertation “Labour Market Flexibility between Risk and Opportunity for Gender Equality. Analyses of Self-employment, Part-time Work, and Job Autonomy”. It aims to embed four articles by placing them into a broader context, connecting each of them and drawing overall conclusions on the subject of gendered and flexible labour markets. The four studies are the core of this cumulative dissertation and were conducted according to a research agenda which will be summarized in this framework.

The attachment of the framework paper contains the following articles, which have been published or submitted to peer-reviewed journals:

Study I:

König, S., & Langhauser, M. (2015). Gendered division of housework in Germany – the role of self-employment, relative resources and gender role orientation. *Submitted to the “Journal of Family Research” (Zeitschrift für Familienforschung), under review.*

Study II:

König, S., & Cesinger, B. (2015). Gendered work-family conflict in Germany – Do self-employment and flexibility matter?, *Work, Employment and Society*, 29 (4), 531-549.

Study III:

König, S. (2015). Gender gaps along the earning distribution in paid employment and self-employment in Germany. *Submitted to “European Societies”, under review.*

Study IV:

König, S. (2015). Previous careers, last jobs or families – what determines gendered retirement timing in Germany, Denmark and Sweden? *Submitted to “Ageing and Society”, under review.*

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1 Introduction

Over the last decades, societies, demography, and labour markets changed markedly. From a demographic perspective, the roots of these developments were described as “second demographic transition” (van de Kaa, 1987; Lesthaeghe, 1992). In contrast to earlier centuries, the traditional nuclear family model has become less exclusive and family forms became more diverse with raising divorce rates and lone parenthood. Women’s employment changed from temporary work before marriage to long-term careers. Rising investment in higher education followed and female employment rates increased. Employment and childrearing needed to be reconciled which posed challenges for working mothers. Opportunity costs of children increased, first births are postponed and fertility rates drop. Along with increasing longevity and better health, this leads to rapidly ageing societies which puts high pressure on the financial sustainability of the welfare state in general and the pension systems in particular.

From today’s perspective, however, the developments on women’s role might be rather described by the term of an “incomplete revolution” (Esping-Andersen, 2009). While values have changed, behaviour was partly adapted, but outcomes are still strongly gendered. The focus of my thesis will be on gender inequalities in paid and unpaid work since they play a key role in this changing society. Women partly adapted their behaviour by (re-)entering the labour market, however mostly combined with more career interruptions due to childbirth and childrearing phases. Additionally, the integration of women to the labour market is often located in part-time and precarious jobs.

From a global perspective of market economies, European labour markets have simultaneously undergone several structural changes within the last decades. Employment became less regulated and less standardized, responding to flexibility demands of the global economy. The Lisbon Strategy as a political initiative with far-reaching impact was introduced by the European Council in the year 2000. The main aim on this agenda was to promote growth in Europe in order to build a competitive knowledge-based economy.

The major objectives of the so called European Employment Strategy were

- (i) to promote employability of workers,
- (ii) to foster entrepreneurship,
- (iii) to improve the adaptability and flexibility of workers and companies
- (iv) and to promote equal opportunities for disadvantaged groups with the inclusion of the unemployed, people with disabilities, women and older workers.

An evaluation in 2005 led to some revisions regarding the main objectives. While the quantitative goals of higher employment rates were given priority, the quality and security of jobs appeared to be second order objectives. In the new guidelines, equal opportunities are not explicitly mentioned and gender equality in particular lost relevance. Instead, a life-cycle approach with a focus on work-life balance and active ageing became prominent (European Parliament Committee: Employment and Social Affairs, 2010).

This thesis relates to several aspects of this political agenda by linking the rising integration of women to the flexibilization of labour markets. In order to do this, the mentioned life-cycle approach is useful and necessary to understand the mechanisms behind gender inequality and labour market flexibility. According to Esping-Andersen, the “key issue of gender inequality (like any inequality) lies in life course dynamics” (Esping-Andersen, 2002, p.87). With industrialization, life-courses were standardized into distinct chronological phases of education, employment and retirement. At the same time, clear boundaries were set through the institutionalization of these phases by compulsory schooling and old age insurance systems (Kohli, 1985). Gender roles were clearly attributed and the division of labour within the families were determined by the role of the father as breadwinner and the role of the mother as caregiver (Mayer, 2001). Post-industrial life courses are less standardized and driven by individualization and pluralization of family forms (Inglehart, 1977; Mayer, 2001). However, as Kohli (2007) argues, there are still persistent institutionalized boundaries within modern life courses, e.g. statutory retirement ages. These fixed boundaries can be seen as age discriminating and obstacle in the freedom of choice, contrasting key principles like universalism and individualization.

Female careers are less stable, income inequalities are persistent, part-time work is common among women in many countries and (temporary) housewives can still be

found. Institutionalized life-courses lead to a gender cleavage (Esping-Andersen, 2002) where women often have lower chances to earn favourable lifetime benefits (Allmendinger, 1994; Sørensen, 1991). Earlier sociological theories on life courses mainly focussed on men and typical male careers (Kohli, 1985). More recent literature include discourses on gendered life-courses (e.g. Blossfeld & Hofmeister, 2006; Brückner & Mayer, 2005) and “linked lives” (Blossfeld & Drobnic, 2001) where decisions are made in the context of a partnership, connecting men’s and women’s life courses. Thereby, a family aspect is brought into the classic discussion which was centred around phases of gainful employment (Kohli, 1985; Sørensen, 1991).

Hence, this thesis addresses different phases in life and aims at investigating how labour market flexibility affects gendered life courses. In this publication based dissertation, four studies were conducted to answer the overall research question:

Is flexibility the key to a less gendered labour market, or does it rather foster more traditional roles and gender inequality?

Following the argument of interdependent lives of men and women, this thesis has a focus on phases after education and potentially after family formation. The first two studies specifically focus on working couples, living in the same household. The first study starts with the division of unpaid work among couples, taking flexible employment forms and family characteristics into consideration. The second study expands this household perspective and researches the conflict between work and family life, trying to answer whether more flexible employment increases or decreases this conflict. The third study on gender earning gaps in self-employment and paid employment provides a link to the fourth study. By investigating how self-employment and part-time work is related to earning potentials, the third paper describes the risk for accumulated disadvantages over the life course in flexible employment forms. The last paper closes the circle from a life course perspective by studying gender differences in retirement timing and how those are related to previous careers, last jobs and family characteristics.

Table 1: Titles of the four studies

Number	Title of the study	Short title
I	Gendered division of housework in Germany – the role of self-employment, relative resources and gender role orientation	“housework”
II	Gendered work-family conflict in Germany – Do self-employment and flexibility matter?	“work-family conflict”
III	Gender gaps along the earning distribution in paid employment and self-employment in Germany	“earnings”
IV	Previous careers, last jobs or families – what determines gendered retirement timing in Germany, Denmark and Sweden?	“retirement timing”

Going beyond previous research on gender inequalities at the labour market which often concentrated on part-time work, this thesis expands the investigation to three different forms of flexibility. Besides part-time work, self-employment and working time flexibility shall be investigated in a comparative fashion to get a multifaceted view on gender issues with regard to flexibilization. *Part-time work* is frequently used as a flexibility measure – in particular in Germany – and shall be addressed in all four papers. Furthermore, entrepreneurship as an explicit objective on the Lisbon Agenda deserves particular attention. This employment form is connected to higher work flexibility regarding time, tasks and location (Clark, 2000; Loscocco, 1997). Since this labour market group is often excluded from analyses due to comparability issues or low sample sizes, this thesis aims to shed more light on the case of *self-employment* with regard to gender equality in all four papers. *Working time flexibility* will be discussed as a resource for the individual and as a demand by the employer or the economy. This aspect is often related to the reconciliation of work and family demands and will therefore be particularly investigated in the “family related” papers on the division of unpaid work (study I), the work-life conflict (study II). Working time flexibility can be seen as a double edged sword. On the one hand, if it is controlled by the employee, it can be beneficial for reconciliation of work and family. On the other hand, if it is demanded by the employer, it can be seen as high work demand that is hardly

compatible with other family demands. In this case, it might lead to discrimination and lower career chances for those with family obligations, especially for women.

The integration of women into the labour market was triggered by more flexible and part-time work and increasing self-employment. These employment types are most suitable to combine work and family demands but are at the same time impaired with certain risks, e.g. lower job and income security and lower career chances. It is critically discussed that employment growth fostered by flexible and atypical employment increases income inequality (study III). The criticism of the revised Lisbon Strategy on neglecting job quality and cohesion of disadvantaged labour market groups becomes apparent in this discussion (European Parliament Committee: Employment and Social Affairs, 2010). While standard employment became less and less common and atypical/flexible employment gained importance, the awareness and notion of precariousness of employment spread widely on a European level, however with a time lag (Barbier, 2013). In Germany, the notion of precarious work (*Präkariat*) was hardly used in the 1990s but was frequently referred to after the so called *Hartz* reforms on labour market and unemployment regulations around 2004 and even became “word of the year” in 2006 (Barbier, 2013). Thus, my third study will focus on earning inequalities along the distribution in self-employment and paid employment, taking part-time work into consideration.

Finally, as the Lisbon Strategy seeks to promote employment for older workers, employment flexibility will be discussed in the last paper (study IV) with a focus on flexible labour market exits. At the same time, not only the final exit will be investigated in this paper but also earlier career flexibility is taken into account, i.e. employment interruptions and part-time periods. Applying a life course perspective, diverse forms of labour market flexibility in terms of part-time work or career interruptions can lead to a lower attachment to the labour market. While different types of flexibilization can generate advantages to combine work and family, they might have a negative impact on life-time attachment to the labour market. More flexible careers – whether preferred by the individual, demanded by employers or facilitated by welfare benefits – might lead to disadvantages in the long run. Differences in labour market attainment might therefore limit equal access to social rights (like pension benefits) in the long-term view (Sainsbury, 1996). In many countries, a mismatch for pension

benefits regarding labour market attachment can be found. While labour markets become more flexible, pension benefits are often designed for continuous employment. “The flexibilization of labor markets (Hinrichs & Jessoula, 2012) will thus pose a long-term risk for both public earnings related and private contribution based pension systems. Both the marketization of public pensions and the privatization of funded pensions will negatively interact with labor market flexibilization, thus causing doubts about the long-term social sustainability of the multipillar strategy” (Ebbinghaus, 2015a, p.68). Hence, rising social inequality over the life course due to different forms of employment flexibility are even exacerbated by pension reforms which aimed at the financial sustainability of the pension system (Ebbinghaus, 2015b). If childcare related career interruptions are taken into account for the accumulation of pension benefits, this is only the case for the public pillar (Bridgen & Meyer, 2009). The privatization of pension systems could therefore lead to an additional disadvantage for women.

The institutional context in Germany provides an interesting setting to research both aspects of gendered life courses and labour market flexibilization and will therefore be the subject of analysis in all four studies. Germany is regarded as a conservative welfare regime, supporting the male breadwinner and female carer model instead of a dual-earner model. Hence, women’s lives are strongly linked to the life of their partners. Working women are often only secondary earners while they shoulder the main responsibility for childcare and domestic tasks. Since institutional childcare is rather poor in Germany, flexible work forms like self-employment and part-time jobs might be particularly important for women when they need to reconcile work with family demands. The German labour market, however, is rather rigid and can be considered to follow an insider-outsider logic, leading to lower job security for the outsider group. Women are more likely to belong to this outsider group due to childcare related employment interruptions, posing a risk for lower career success and accumulating disadvantages. Thereby, the link between women’s and men’s lives becomes even stronger.

The next sections shall provide a general overview on labour market flexibilization and the institutional context, both focussing subsequently on the German context. This thesis aims at giving a holistic view on the situation of gender inequalities by applying a life course perspective to the topic of labour market flexibilization.

2 Labour market flexibilization

I want to start by giving a brief definition of different types of labour market flexibility to introduce the specific aspects examined in this thesis. Atkinson (1984) differentiates between four different types of flexibility at the labour market: external numerical flexibility that refers to hire and fire regulations or temporary and fixed-term contracts; Internal numerical flexibility that refers to working time or temporal flexibility; Functional flexibility that refers to task flexibility and how employees can be transferred to different jobs, including aspects of training; And financial flexibility that refers to wage flexibility and differences between workers' wages. These types mainly refer to organizational measures of flexibilization. However, changes in society also lead to flexibility demands by the individual such as individual control over working hours or locational flexibility and different leave schemes in order to adapt their work to their own preferences (Chung, 2006; Jepsen & Klammer, 2004). Thereby, there is a demand side from the labour market and a supply side from the individual which both lead to rising employment flexibilization.

2.1 Developments over the last decades

A de-standardization of employment can be observed after the crises in the 1970s, leading to a shift from the post-war Fordism to Post-Fordism model of capitalism (Holst & Dörre, 2013). The post-war Fordist model was based on standard full-time employment with permanent contracts where employers paid a family wage to their employees. Thereby, the male breadwinner model was fostered where women could rely financially on their husband (Hofmeister et al., 2006). The Post-Fordist model was characterized by less stable employment and less standard work. The European production model was not based on stability any more but rather on instability (Jepsen & Serrano Pascual, 2005) to keep up with economic growth and high demands of the global economy. The organization of work has changed during the last decades due to technological possibilities and the demand for competitiveness in a global economy. New technologies result in a higher productivity with even fewer workers or working hours which led to processes of downsizing and flexibilization within organizations (van Doorne-Huiskes et al., 2005). This includes flexible work schedules, part-time work, temporary contracts, outsourcing of production (to self-employed contractors) and lifelong learning to adapt to changes in consumer and customer demands (Perrons,

1999). As Holst and Dörre (2013) argue, “labour market integration is nowadays increasingly dependent on instantaneous individual activity in terms of flexibility, mobility and entrepreneurialism” (p.133). Hierarchical careers within one organization with precise job descriptions were partly overruled by new forms of careers. Those are characterized by a higher self-responsibility, more individual career goals and a higher variety of career paths. Hence, along with the shift from the Fordism to Post-Fordism production model, there was a shift from organizational capital to “reputational capital” (Kanter, 1993, p. 290) on an individual level. This own human capital was important for application in different jobs and firms in order to meet the flexibility demands of the new economy. In Post-Fordist capitalism, the individual became more responsible for their own employment. Individual flexibility, mobility and entrepreneurialism were important means to deal with uncertainties and to succeed professionally (Holst & Dörre, 2013).

However, along with the de-standardization of employment, precarious jobs and labour market inequality increased. In particular certain labour market groups such as women, low skilled workers, migrants and young people were at risk of precarious employment. In fact, the integration of women into the labour market was strongly driven by the increase of non-standard employment (Holst & Dörre, 2013), leading to a higher risk for income security and lower career chances.

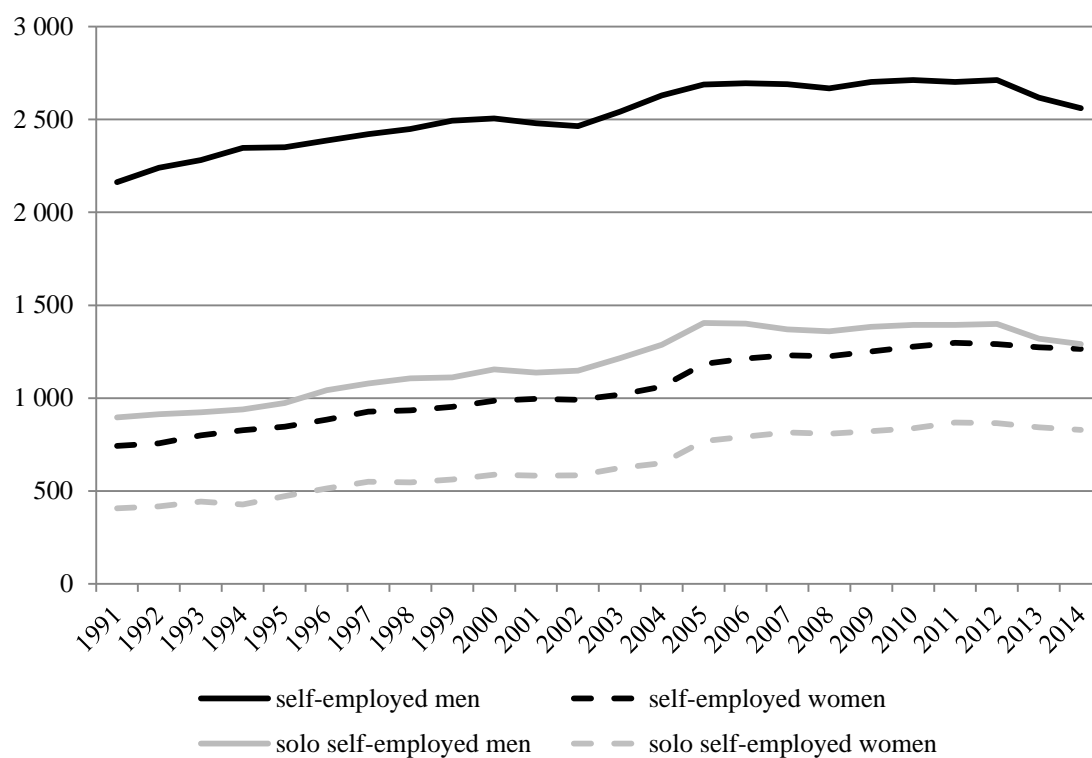
2.2 Labour market flexibilization in Germany

In the context of these changes on a European level, Germany underwent a shift in labour market policies from high status protection to activation with several far-reaching reforms in the beginning of 2000. In order to decrease unemployment, the *Hartz* labour market reforms restricted the eligibility criteria and the duration for unemployment benefits, shifting the responsibility for re-entry into work to the individual. Even though this seemed to be effective with regard to the number of unemployed, their re-entry was often characterised by work at the margins. Hence, non-standard forms of employment rapidly increased in the aftermath of the *Hartz* reforms (see figure 1 and 3). Furthermore, these stricter rules and the shifted responsibility put pressure on those in employment, leading to a higher willingness to accept non-standard work (Holst & Dörre, 2013).

In terms of career stability, in particular female careers were found to be more flexible today. The trend towards higher female labour force participation in Germany was not only found to be related to higher non-standard employment but also to more interrupted careers. While previous cohorts of women were more likely to have shorter careers and drop out completely e.g. after marriage or childbirth, women nowadays are more likely to return to the labour market (after shorter interruptions). In terms of job quality, however, returning to work was related to a higher risk of downward mobility and unemployment especially for younger cohorts (Buchholz & Grunow, 2006).

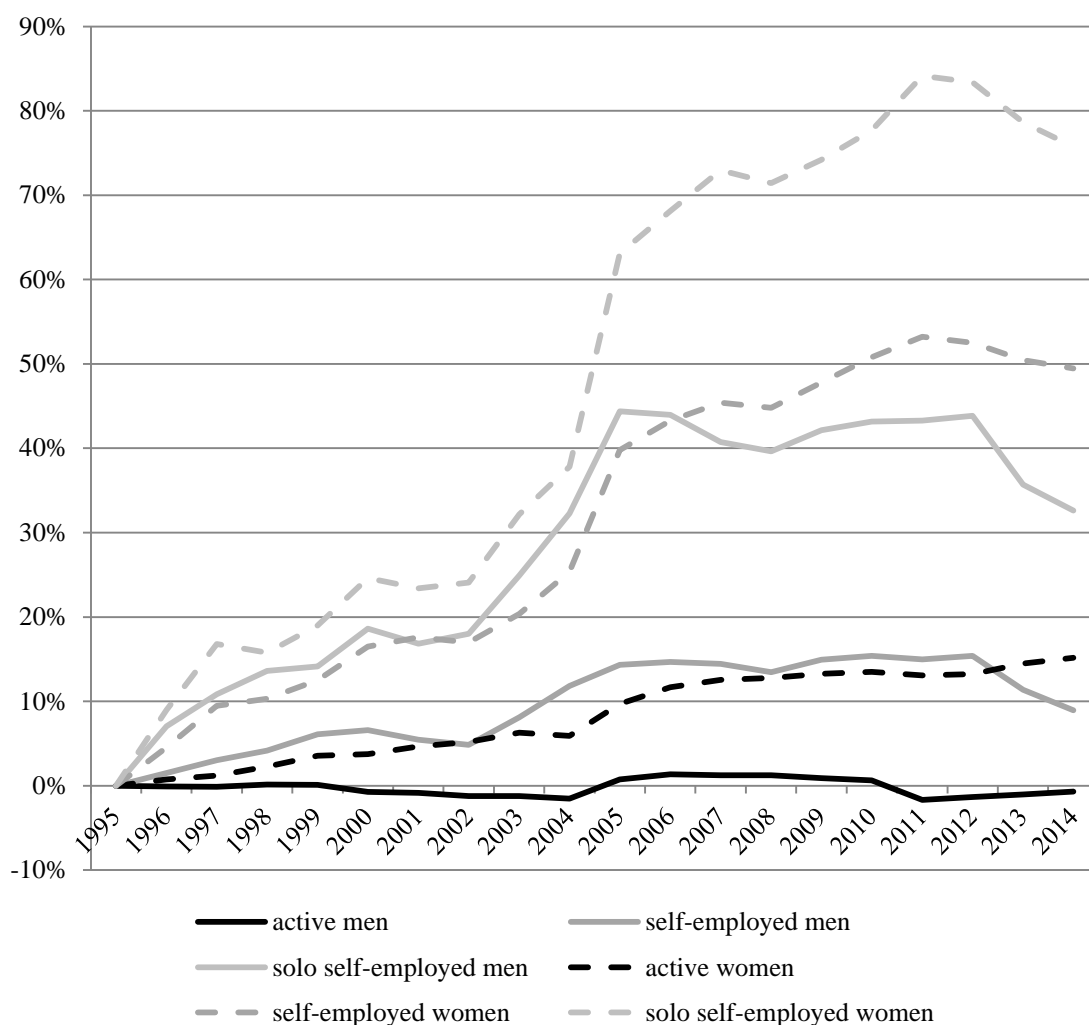
Focussing on self-employment, the rise of this employment type can be observed, in particular for women. In Germany, the number of female self-employed increased by 70 percent from 743 000 to 1.3 million between 1991 and 2014. The comparative numbers for men were 2.2 million to 2.6 million with an increase of 18 percent. The share of self-employed increased around two percent for men and women during this time period. In 2014, around 7 percent of women and around 12 percent of men were self-employed (Eurostat, 2015a). Furthermore, there are large gender differences in the type and quality of self-employment. Women in Germany and many other European countries are much more likely to be solo self-employed than men and women's companies have a slightly lower likelihood to survive (Arum & Müller, 2004).

Figure 1: Self-employment (in 1000) from 1990-2014



Source: Eurostat, 2015a [lfsa_eftpt] Employment by sex, age, professional status and full-time/part-time (1 000)

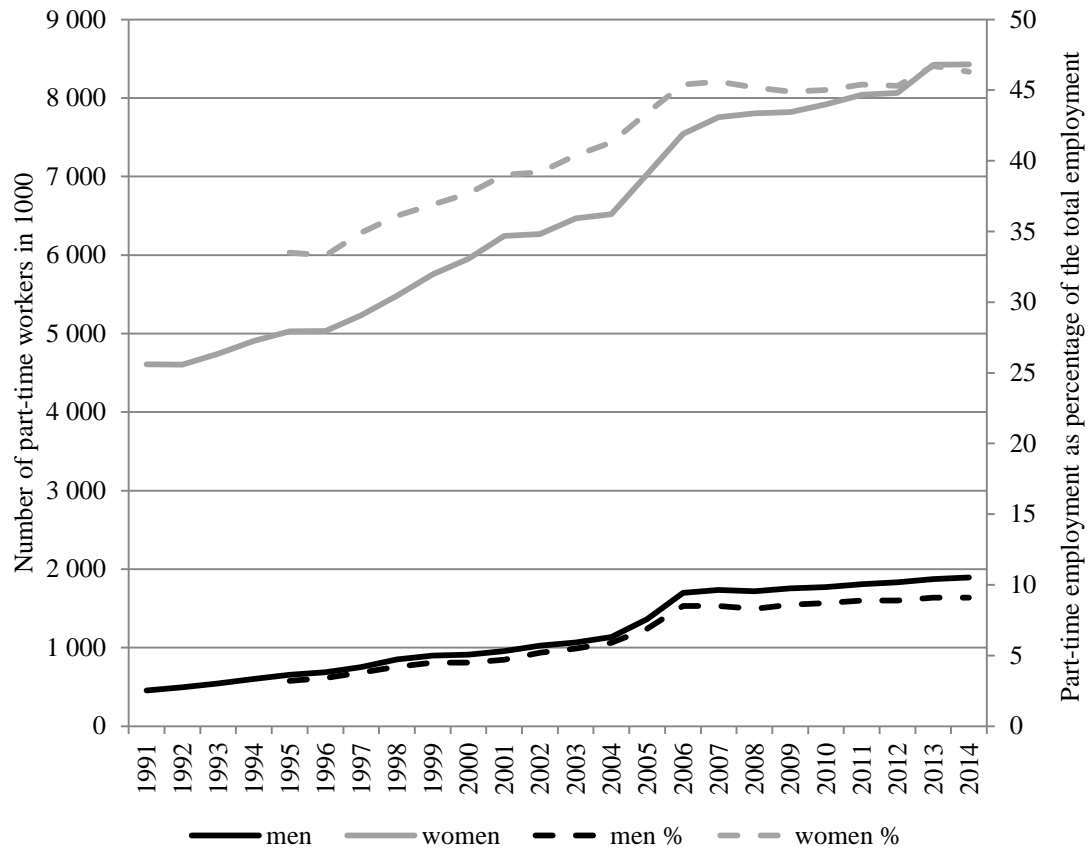
Figure 2: Relative increase of (solo) self-employment since 1995 (Germany)



Source: Eurostat, 2015 [lfsa_efpt] Employment by sex, age, professional status and full-time/part-time (1 000), [lfsa_agan] Active population by sex, age and nationality (1 000)

Along with self-employment, part-time work increased rapidly, particularly for women. While 30 percent of women in Germany were working part-time in 1991, the percentage increased to 46 percent in 2014. Male part-time work started from 2 percent to 9 percent during the same period (Eurostat, 2015b).

Figure 3: Part-time employment from 1990-2014 (Germany)



Source: Eurostat, 2015 [lfsa_efpt] Employment by sex, age, professional status and full-time/part-time (1 000), Part-time employment as percentage of the total employment, by sex, age and nationality (%) [lfsa_eppgan]

Both, self-employment and part-time work show a steep increase in total numbers after 2004 which can be partly related to the *Hartz* reforms. While unemployment benefits were restricted, starting a business was subsidized for those in unemployment (so called *Ich-AGs*, *Existenzgründungszuschuss*, § 4211 SGB III, terminated in 2006). These subsidies were part of the *Hartz* package in 2003.

The period of investigation in this thesis covers the years from 2008 to 2011, when the economic crisis affected employment in various ways across European countries. Some countries cut down full-time employment, leading to an increase of unemployment and involuntary part-time work (Vaughan-Whitehead, 2011). In contrast to other countries in Europe, the increase of unemployment during the recession was relatively small in Germany. This is often related to working time accounts which were used as flexibility measure in times of economic downturns. Trends in part-time work were relatively

stable throughout this period (see Figure 1 and Figure 3) in Germany. Hence, it cannot be argued that this form of employment was a crisis induced flexibility measures that is more strongly related to involuntary part-time compared to the pre- and post-crisis period. In the case of self-employment, the relative increase did not stop during the crisis (see Figure 2). However, it was not stronger than before which indicates that also the trend in this form of employment cannot be directly related to the crisis.

While the gendered component became clear throughout the description of labour market flexibilization processes on the labour market demand side, the following section will take a closer look at gender segregation at the labour market, connecting it to flexible forms of work and employment from a supply side on the individual level.

3 The gendered connotation of labour market flexibilization

Even though labour markets are less gendered today when it comes to participation and educational qualification (Hofäcker, 2006; Hofmeister et al., 2006), gender segregation can still be found within occupations (horizontal job segregation) and job positions (vertical job segregation) (Acker, 1990; Polacheck, 1981; Wright et al., 1995). Both types of segregation lead to gender differences in pay and promotion opportunities (Petersen & Morgan, 2008). To explain these inequalities, social science usually referred to demand side and supply side approaches on an individual level. The supply side refers to differences in preferences and investment in human capital while the demand side describes e.g. employer's hiring preferences or discrimination.

Men and women are often found in different occupations which can be related to different choices in study fields. Men are more often found in mathematics or technical sciences while women tend to choose humanities and education as field of studies (Charles & Bradley, 2009). These different preferences can be explained by socialization and gendered stereotypes of how women and men are typically characterized. The educational or occupational field is chosen by selecting what seems to be typical (England, 1992) or by avoiding atypical fields in order to bypass sanctions (Fenstermaker & West, 2002). Another explanation for different career and occupational choices is given by neoclassical economics (Becker, 1985) where rather the household than the individual is taken into consideration. Women typically engage

more in the family sphere, since they have disadvantages in the work sphere and a lower bargaining power (Lundberg & Pollack, 1996) or since they try to maximize the family utility (Becker, 1991). This gendered division of paid and unpaid work between couples might lead to lower expected productivity of women due to lower (time) engagement in paid work (Glauber, 2008). Thus, accumulating human capital would be less rewarding for women, based on the assumption that their later participation in employment is lower than for men. Women's incentives to invest in (firm-) specific training are also lower when they plan to interrupt their employment to get children (Polachek, 2004). There can be a self-selection of women into different job positions or occupations under the assumption that they give higher priority to certain job criteria that allow them to combine work and family demands and have lower penalties for work interruptions. Hence, women might be over-represented in more flexible jobs and marginal employment.

Some studies investigating compensating differentials (Smith, 1976) hypothesize that women choose jobs which offer certain flexibility in exchange for lower wages, arguing that especially mothers trade high income and good positions for family friendly working conditions. Looking at self-employment, one primary career motivation for both sexes is higher autonomy and flexibility (Barnett & Bradley, 2007; Bowen & Hisrich, 1986; Moore et al., 1992). The self-employed have a higher control over the quantity and distribution of their work (Clark, 2000; Loscocco, 1997) which is an important factor for the reconciliation with family demands (Buttner & Moore, 1997). However, achieving a good work-life balance was found to be specifically attractive for women in their choice for an entrepreneurial career (Carter et al., 2003; Mattis, 2004; Orhan & Scott, 2001; Still & Timms, 2000). Women also tend to balance economic and personal goals more than men (DeMartino & Barbato, 2003; Parasuraman et al., 1996). This might also explain the higher share of solo self-employed among women (see figure 1). This form of employment provides very high degrees of flexibility due to the absence of employee responsibility but is also related to higher risks of failure (Arum & Müller, 2004).

From the labour market demand side, gender segregation is partly explained by statistical discrimination (Becker, 1985). If individual information about productivity is limited, employers might base their hiring or promotion decision on group

characteristics following discriminatory mechanisms. Taking individual preferences aside, employers might assume that women are in general less suitable for higher positions due to their possible higher responsibility for the family (Acker, 1990) and their assumed lower availability for employment. Two different work aspects seem to play a role for the discrimination of women. First, high work demands regarding hours and flexibility are seen as incompatible with high family demands. It can be argued that flexibility demands of the employer bear constraints for balancing work and private life (Brannen & Lewis, 2000). Women, who still carry the main responsibility for care work might have difficulties meeting the high flexibility demands of organizations and thereby also constraining women's career options. Thus, women might be generally discriminated due to "statistical discrimination" of the employer when they are expected to have difficulties following high flexibility demands, leading to higher gender segregation. Second, employers' long-term investment in on-the-job training discriminates women who presumably interrupt their careers for child-rearing (Polachek, 2004; Polavieja, 2008). Studies show that gender differences in training and different gender specific rewards for training are partly due to employers' discriminatory behaviour (Evertsson, 2004). Therefore, discrimination by employers can lead to a "crowding" of women in low cost jobs. This discriminatory behaviour of employers is easier in the Post-Fordist model where employment regulations were less strict and the type of employment could be more freely chosen by employers on cost based calculations (Holst & Dörre, 2013).

To conclude, there is a twofold explanation for increasing labour market flexibility. On the one hand, this trend is driven by the demand side and the potential for labour market success in a global economy. Organizations adapt to growing demands of the global market with flexible work schedules or temporary work contracts. Those can be a burden to employees regarding lower job security and lower control and autonomy in their work. Hence, if flexibility is used by the employer to increase productivity, it bears risks for employees, such as low security or low career chances. These risks might affect women in particular due to their higher responsibility at home. They might be less able to fulfil flexible demands from higher positions or be trapped in flexible forms of employment with lower career chances, such as part-time jobs. This brings us to the second aspect for the increasing trend of flexibilization, the supply side. Flexibility is often needed by employees to combine work and family. This reconciliation became

highly relevant for most individuals with the pluralization of families and the weakening of the male breadwinner model, even though it is argued that women still shoulder the greater responsibility for the household and the family. Thus, individual flexibility might be more important for women nowadays to enable a better reconciliation of family and work life.

Due to this double edged sword characteristic of labour market flexibilization, it can be argued that the same form of flexibility leads to positive outcomes in one life sphere but to a negative outcome in another. To be more precise, work flexibility could facilitate the reconciliation but impede career success. Hence, it is important to look at different outcomes in order to discuss chances and challenges of labour market flexibilization for gender inequalities.

4 The institutional context of gender equality and flexibility

The institutional context plays an important role for issues on gender equality and for flexibility options. This chapter aims to provide an overview on different welfare states in their relation to gender and flexibility before discussing the German case in more detail.

4.1 The institutional context in Europe

To categorize countries according to family and labour market policies, they can be clustered into welfare regimes (see Blossfeld & Hofmeister, 2006; Esping-Andersen, 1990; Lewis & Ostner, 1994). Esping-Andersen (1990) differentiated between three types of regimes in his “Three Worlds of Welfare Capitalism”. Underlying the categorization is the extent of de-commodification, social stratification and the division of responsibilities between the state and the market. The *social-democratic* regime (Scandinavian countries) is oriented towards universalism and egalitarianism and is thereby characterized by high de-commodification and low social stratification. It relies on full employment and high income taxes. Hence, working mothers are strongly supported by a well-developed childcare system, generous parental leave options and employee-friendly working regulations. The *conservative corporatist* regime (Central and Southern Europe) provides less universal benefits and rather maintains social inequalities through contribution-based benefits from previous employment. Looking

through a gendered lens, this system rather supports the male breadwinner and offers only a modest support for working mothers. Care for children under the age of three is scarce and opening hours for preschool care is restricted (OECD, 2014a). To compensate the lack of institutional childcare, part-time work is often used as a flexibility measure, mostly by women (Mayer, 2001). Thus, gender and social class differences are maintained. Compared to Scandinavian countries, work relationships and working hours are also more standardized. In contrast to the central role of the state in these two regimes, the *liberal* regime – found in Anglo-Saxon countries – has a stronger market orientation: labour markets are highly flexible and reconciliation of work and family life is rather covered on a firm level and not on a public policy level. There is little employment protection and regulation (Esping-Andersen, 1990; Hofmeister et al., 2006; Mayer, 2001).

This categorization was criticized regarding underlying gender aspects (Daly, 1994; Lewis & Ostner, 1994; Orloff, 1993). The concept of de-commodification, meaning the independence from the market, focuses on employment. Care work and unpaid labour is not included in this framework. The fact that many women still rely financially on their husband is neglected. Hence, women might be de-commodified by their partner's commodification. Nevertheless, with changing gender roles and activation measures to integrate women into the labour market, women are more and more commodified (Knijn & Ostner, 2002). It is argued that even employed women are often not financially independent through their market labour in general, owing to their lower wages, part-time work and employment interruptions (Daly, 1994). Esping-Andersen's (1999) following book introduced the aspect of de-familialization as a reaction to this critique. This dimension explains the degree to which the welfare state or the market disburden households from care responsibilities which can be seen as a precondition for women's commodification.

Gender segregation at the labour market varies across countries. In the Nordic countries family policy and the institutional context are often directly related to facilitating the reconciliation of work and family and thereby contributing to higher gender equality. However, it has been argued recently that some policies might even increase gender segregation and the gender wage gap for certain groups of the population. This mechanism is named as “welfare state paradox” (Mandel & Semyonov, 2006) and

describes the higher horizontal and vertical segregation in countries with high support for working mothers. The general argument behind this phenomenon is that the better integration of women and mothers in the labour market lead to a lower selection of working women into the labour market which in turn increases the likelihood for employer's discrimination against women. Thereby, high support for working mothers and high integration of women in the labour market potentially increases gender inequality regarding wages and segregation. Thus, the moderate to high occupational segregation in Scandinavian countries was partly explained by post-industrial reconstruction with an integration of women to the labour force by the expansion of the female dominated service sector (Charles & Grusky, 2004). A large service sector was also found to be a disadvantage for women regarding the vertical segregation where greater gender gaps were found regarding authority (Mandel & Semyonov, 2006; Yaish & Stier, 2009). With regard to wages, some studies indicate that policies supporting working mothers increase the gender gap among high-wage workers, while they reduce the gap for low-wage workers (Budig & Hodges, 2010; Mandel, 2012; Mandel & Semyonov, 2005).

While a general flexibilization of European labour markets can be observed, the degree of instability or flexibility varies between different countries and their type of economy. Like the institutional context influences reconciliation by family policies and expenditures, nation-wide employment regulations can also affect individual work demands by different working time regimes (e.g. Chung & Tijdens, 2013). Liberal countries like the US and the UK are characterized by rather flexible labour markets, including low employment protection. The social-democratic countries provide moderate employment protection that is weaker in Denmark and stronger in Sweden. Germany and the Netherlands as conservative countries have a high employment protection. Southern European countries, e.g. Italy and Spain have a strong insider-outsider labour market, leading to a high protection of employed individuals (Buchholz et al., 2006; Hofmeister et al., 2006).

Welfare states like the liberal and the social-democratic regime that provide low or moderate employment protection can be considered as more flexible regarding the occupational system (Hofmeister et al., 2006). On-the-job training or re-training in case of individual employment changes is given high importance (Buchholz et al., 2006) in

promoting flexibility and employability of individuals (Hemerijck, 2002). Regimes with a high employment protection, however, are characterized by rather rigid occupational structures that do not allow for flexible changes across occupations (Buchholz et al., 2006). By providing external resources to combine work and family, the institutional context frames the demands for individuals and labour markets. Indeed, Chung (2011) concludes that family and child expenditures have the potential to facilitate the reconciliation of work and family. In countries where both labour arrangements as well as family policies already promote work-family reconciliation, the effects of individual flexibility on the reconciliation success may be rather low. In more regulated labour markets with modest reconciliation support, however, these flexibility options allow for more individual freedom to balance working hours with family demands. However, in rigid working cultures (Southern or Eastern Europe), flexible work forms are more likely to be used to benefit employers, allowing them to introduce atypical employment at the margins of the labour market and thereby to enhance their own flexibility potential, likely at the cost of their employees (Blossfeld et al., 2011). By way of conclusion, individuals – and especially women – might voluntarily choose flexible work forms in some countries to balance work and family by reducing involvement in employment. In other countries, however, these forms of work might be their only option considering their position as an outsider group within the specific labour market (Mills, 2004).

4.2 The institutional context in Germany

Germany is an interesting case when it comes to gender role orientation and support for working mothers. After 1990, two different systems were unified as a consequence of the German unification. While a strong linkage between the occupational and the educational system was prevalent in both parts due to a common past of the German Democratic Republic (GDR) and the Federal Republic of Germany (FRG) (Rosenfeld & Trappe, 2002), family policies like institutional childcare and gender role orientation differed to a great extent. The GDR provided a broad and affordable institutional childcare that facilitated mothers' full-time work even during early motherhood (Trappe, 1996). Short career interruptions for childbirth were fostered through paid maternity leave and a guarantee to return to the job which led to a strong integration of mothers into employment and qualified jobs and economic independence of women. The welfare

system in West Germany was less supportive for working mothers. The return to the job after maternity leave was not guaranteed and childcare especially for very young children and full-time was scarce, leading to a lower participation of women in the labour force. While part-time work and the expansion of the service sector counteracted the low female employment rate, the situation for women still differed considerably from East Germany (Blossfeld & Rohwer, 1997). Unification led to different changes in both parts of Germany. East Germany adapted to the West German welfare system and resulted in a lower incentive for women to work full-time. As a consequence, women's employment rate decreased for East German women, while it slowly increased for West German women between 1991 and 1997 (Goedicke & Trappe, 2005). Despite the adaption of East Germany to the legal conditions of West Germany, gender ideologies are still different. The combination of a still broader provision of childcare institutions and lower wages for men as well as a lower job security leads to a stronger labour market attachment of women in the Eastern part. Even though part-time work in the East increased, this is often rather related to a lack of available full-time jobs than for reasons of family obligations (Goedicke & Trappe, 2005). The unique case of Germany already illustrates the importance of different family policies and cultural gender ideologies for the division of labour between men and women and the gender segregation in the labour market. Today, Germany is regarded as a conservative welfare regime that still rather supports the male breadwinner and female carer model instead of a dual-earner model. Still in 2010, the childcare enrolment for children under three years old was only 23.1 percent which is markedly below the EU average of 29.0 percent (OECD, 2014a). Regarding parental leave, Germany has 48.8 weeks of full rate equivalent maternity/parental leave with a maximum length of 148 weeks in 2011 (OECD, 2014b). Thus, women are in many ways still at risk to be labour market outsiders. The lack of full-time childcare in many regions makes part-time employment almost necessary and self-employment rather attractive.

5 Summary and hypotheses

Deriving hypotheses from the previous sections for the German context, a simplified table helps to illustrate the argumentation. Generally, the rigid labour market in Germany and the support for the male breadwinner model lead to a high necessity for more flexible work arrangements for working mothers. Women's role as secondary earner is fostered and the responsibility for childcare lies in the family. Non-standard work might be a (necessary) choice in this institutional setting. Whether this choice is due to individual preferences (Hakim, 2004) or due to normative and structural constraints (Crompton & Lyonette, 2005; OECD, 2010; Pfau-Effinger, 2004) is debatable. In both cases, a positive outcome of flexible work forms on the reconciliation of work and family can be expected in Germany.

From the labour market demand side, regulated labour markets offer stronger protection to those in standard employment. This can adversely affect access to this form of employment and push outsiders into marginal non-standard work (Barbieri, 2009; Eichhorst & Marx, 2015). Hence, flexible work forms might lead to more negative outcomes in regulated labour markets (Giesecke, 2006), for example with regard to career success and earnings. However, it can be argued that this depends on the type of employment. While part-time jobs can be expected to lead to lower earnings, self-employment might offer chances to reconcile higher but flexible working hours with family demands.

Table 2: Hypotheses for flexibility at work in Germany

	Regulated labour market	Flexible labour market
Support for working mothers	<p>Institutional childcare can compensate for rigid labour market</p> <p>=> low necessity for non-standard work arrangements</p> <p>=> no negative outcome on earnings</p> <p>=> no positive outcome on reconciliation</p>	<p>low necessity for non-standard work arrangements</p> <p>=> no negative outcome on earnings</p> <p>=> no positive outcome on reconciliation</p>
Support for male breadwinner model	<p>Strong insider/outsider logic</p> <p>High necessity for non-standard work from the demand and supply side</p> <p>=> negative outcome on earnings</p> <p>=> positive outcome on reconciliation</p>	<p>Better integration into the labour market</p> <p>=> less marginal non-standard work arrangements</p> <p>=> less negative outcome on earnings</p> <p>=> less positive outcome on reconciliation</p>



- **Part-time work** => negative outcome on earnings / positive outcome on reconciliation
- **Self-employment** => chance to avoid glass ceiling => positive outcome on earnings? / positive outcome on reconciliation
- **Work autonomy** => not related to earnings / positive outcome on reconciliation

6 Empirical studies

Following this research agenda, four studies were conducted to investigate the influence of flexibility and autonomy at work, and the role of self-employment on labour outcomes of men and women. In line with the linked lives argument and due to the strong dependency of gendered outcomes on family characteristics, all four studies account for this aspect. The first two studies on housework and work-family conflict investigate couples due to the direct dependence on the partner. The third paper on gender earning gaps discusses family related aspects in the light of a theoretical approach of compensating differentials. The fourth paper on retirement timing includes the partnership status and the number of children as control variables in the final model.

This thesis has a focus on Germany, which is particularly interesting regarding the importance of individual flexibility for gender equality. All four papers provide a placement into the specific German context while the fourth paper explicitly compares Germany to Denmark and Sweden. Concluding from the previous literature review, it can be argued that self-employment and individual flexibility might be more important for German women compared to women in Scandinavia where work and family are better reconcilable even in paid employment (see also Mills, 2004).

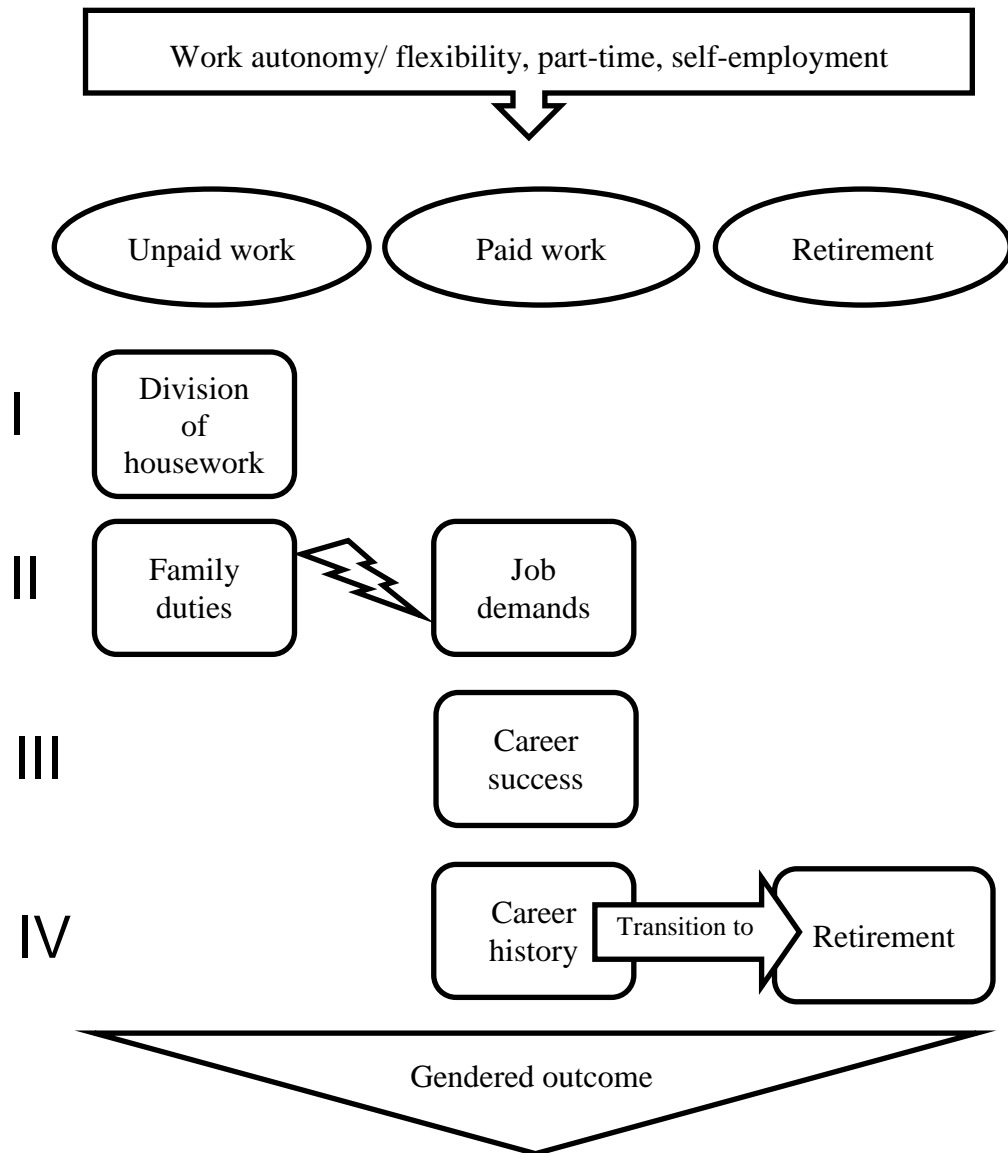
The discussion on gender inequalities at the labour market usually starts with couple's division of paid and unpaid work (e.g. Orloff, 1993). The unequal division of care and housework is seen to cause gender differences at work. Hence, the first study starts by focussing on the overall division of unpaid labour within couples. The motivation to study self-employment and work flexibility relies on the argument that freedom at work leads to higher involvement in unpaid work for women in a conservative context. However, this flexibility trap did not find support in our results. Nevertheless, men with high work autonomy rather engaged less in housework which is not the case for women, leading to a gendered connotation of work autonomy in relation to the share of housework. Taking part-time work as an additional measure of flexible work, the story is somewhat different. Lower working hours compared to the partner are related to a higher housework share for men and women. However, it has to be kept in mind that women are more often working part-time while their partners work full-time.

The main concern from the discussion on the unequal division of labour is the double burden for working women and their resulting problems of reconciling family demands and paid employment. The next study amplified the analysis to paid work, i.e. the conflict between paid and unpaid work. Given the previous results that self-employed men with high work autonomy engage less in domestic work, this study aimed at investigating the conflict between more flexible work forms and family demands. We wanted to find out whether self-employment can be seen more as a resource or as a demand for the reconciliation of work and family and whether this differs between men and women. Contrary to the results on housework, our results do not confirm that self-employment and flexible work are different means for women and men to adapt their work to their family obligations. One interpretation for this difference could be that self-employed men do less housework but more childcare. The results identified self-employment and work flexibility as a resource with regard to time based work-to-family conflicts, but as a demand with regard to strain based conflicts.

While female labour force participation is increasing, labour market outcomes are still strongly gendered. Women's higher responsibility for the family and their work-family conflict are related to lower career chances, leading to a high gender gap in earnings. The insights on the private sphere and the reconciliation with paid work led to hypotheses regarding objective career success which were addressed in a third paper using income data from the EU-SILC (European Union – Statistics on Income and Living Conditions). This study aimed at understanding a puzzling finding from previous literature. While gender earning gaps are theoretically expected to be lower in self-employment, empirical results observe the opposite. Results reveal that the gender gap is particularly high at the bottom of the earning distribution in self-employment, but very low at the top. This suggests that self-employment can be beneficial for some women who have similar work characteristics than men. Still, for the majority of women, self-employment is related to higher gender earning gaps. This can be related to women's higher prevalence to be solo self-employed which accounts for ten percent of the gender earning gap in self-employment. Gender differences in working hours contribute further to the gender gap in earnings. Women's earnings would increase approximately 47 percent if they worked the same hours than men. This is the case in both forms of employment.

To close the circle from a life course perspective, accumulated disadvantages were investigated by a late career outcome. To earn insights on long-term outcomes of these gendered patterns throughout the career, the fourth study focusses on retirement timing by analysing the influence of previous careers and characteristics of the last job. After identifying gender specific risks in self-employment and part-time work with regard to earnings, the last paper focuses on the potential accumulation of these disadvantages for women. In this last study, the mentioned issues on lower labour market attachment through part-time work and family caused career interruptions as well as women's lower earnings (especially in self-employment) are brought together in an analysis of gender gaps in retirement timing. A comparison of the German context and two other countries, namely Denmark and Sweden, is conducted to understand the role of the institutional context. While Denmark and Sweden are rather similar when it comes to gender aspects at the labour market (e.g. Leira, 1992), the particularities of the pension system differs in both countries. Thereby it is possible to link gendered retirement decisions to either gendered labour markets or pension systems. The results indicate that part-time work is a risk for women in Sweden (and in tendency in Germany) with regard to lower accumulated pension benefits. Women with longer part-time periods tend to work longer in later life which is connected to the compensation hypothesis. A high job autonomy before retirement can be seen as a potential resource, allowing for later labour market exits. This is in line with the lower work-family conflict for men and women with high flexibility at work. With regard to self-employment, men and women tend to leave later compared to employees.

Figure 4: Graphical structure of the studies



Source: Own illustration

6.1 Overview on the theories

Gender inequalities are often explained by two different lines of argumentation. One argument rather follows cultural explanations like gender norms / beliefs and identification, while the other argument uses economic explanations.

The role of gender norms is directly investigated in the first study on the division of housework by applying a *normative approach*. This approach explains gender differences by the individual gender role orientation where a traditional role orientation

leads to the female carer and the male breadwinner role (Fenstermaker, 2002). The third study on gender earning gaps aims to elaborate the role of *gender discrimination* (Becker, 1985) by employers, thereby paying explicit attention to typical gender beliefs. Following the belief that women are generally less suitable for high demanding jobs because of their higher demands at home, gender earning gaps can be explained by discrimination by employers. Last, the fourth study on retirement timing tests the *status maintenance hypothesis* which builds upon role identification. Following this argument, individuals with low career attachment leave the labour market earlier, while those with high attachment leave later. A typical case in this argument is the secondary earner in a family with low career attachment who leaves the labour market as early as possible.

Economic theories explain gender inequalities by different resources of men and women. In the first study, the *relative resources and bargaining theory* (Lundberg & Pollak, 1996) assumes that partners bargain their housework share dependent on their resources at the labour market. According to this theory, women with high labour market qualification have high bargaining power to reduce their household tasks. However, their bargaining power depends on their relative resources compared to their partners. Connecting gender roles to economic theories, the *deviance neutralization hypothesis* (Brines 1994; Greenstein 2000) explains the finding where women with higher labour market resources than their male partner still have a higher share of household tasks compared to women with lower or equal resources. This hypothesis describes that the atypical arrangement of a female breadwinner is compensated by adopting rather traditional roles in the family sphere. The second study on work-life conflict uses job resources to explain lower conflicts. It builds upon the Demand-Control-Model by Karasek (1979) and the further developed Job-Demands-Resources-Model (e.g., Bakker & Demerouti, 2007; Demerouti et al., 2001). Both approaches explain job related stress by a balance of job demands and resources, such as job control. One aspect of the fourth study is related to these approaches: job characteristics are linked to retirement timing in Filer and Petri's (1988) work "A Job-Characteristics Theory of Retirement". High demanding and arduous jobs are expected to lead to earlier retirement since they are more difficult to perform in old age. The other aspect in the fourth paper is also related to economical explanations for retirement timing. Contrary to the status maintenance hypothesis, the *compensation hypothesis* argues that individuals with low career attachment throughout their lives need to compensate financial disadvantages by

prolonging their work life in old age (Pienta et al., 1994). The third study on gender earning gaps tests the compensating differential argument (Smith, 1979). Hereby, a lower income is accepted as trade-off for family friendly positions.

Table 3: Overview on the theories

	Topic	Economic explanations	Cultural explanations
I	Housework	Relative resources and bargaining theory	Normative approach
II	Work-family conflict	Job-Demands-Resources-Model	
III	Earnings	Compensating differential argument	Gender discrimination
IV	Retirement timing	Compensation hypothesis	Status maintenance hypothesis

6.2 Overview on data and methods

At the Institute for Small and Medium Sized Business Research (ifm) Mannheim we conducted a primary data collection in the cooperation project „Dual-careers through self-employment?“. The project was financed by the German Federal Ministry of Education and Research and the European Social Fund. Data was gathered by an online and additional Computer Assisted Telephone Interview (CATI) survey in Germany in 2011. The online sample was collected through different career networks. The CATI sample was a random sample including a booster for self-employed individuals. A total of 2,347 respondents (38.1% male) completed the questionnaire. Participants were between 18-76 years (mean=43, SD=10) and obtained rather high educational levels (63.7% with university degree), while 54.2 percent were self-employed. This survey data was explored for the first two studies in order to investigate the share of housework and the work-family conflict among couples with different employment constellations. Ordinary Least-Squares (OLS) regressions were conducted for men and women separately. To estimate the significance of the differences between men and women, additional Wald tests were applied.

The third study was financially supported by a scholarship from the Swedish Institute (SI) and developed at the Swedish Institute for Social Research (SOFI) at the University of Stockholm. For this study, data from the EU-SILC (European Union – Statistics on Income and Living Conditions) was investigated. This household survey was established to provide indicators for social cohesion in Europe, such as the gender income gap. Therefore, it serves as suitable source for exploring gender gaps along the earning distribution in self-employment and paid employment. Due to the low percentage of self-employed and the lower likelihood of this group to respond to income surveys (Church & Verma, 2001), the years 2009 and 2010 are pooled together in order to achieve a sufficient sample size. Methodologically, quantile regressions were used to investigate horizontal segregation (glass ceilings and sticky floors). Additionally, an Oaxaca-Blinder decomposition investigated the importance of vertical segregation, i.e. how much of the gender gap can be explained by occupational field. The unexplained part of the gap and the gender gap after controls from the quantile regressions give indications for possible gender discrimination.

The fourth paper was embedded in the project “Determinants of retirement decisions in Europe, the US and Japan” at the Mannheim Centre for European Social Research (MZES). To analyse retirement timing comparatively across Germany, Denmark and Sweden, the third wave of SHARE was used. SHARE is a longitudinal study that started in 2004 and included 11 European countries. Respondents were age 50 or older, so all respondents have a retrospective history of at least 50 years. The life history interviews in the SHARELIFE project were carried out in the third wave and provide detailed information on the job histories including non-work periods. To minimize recall errors, SHARELIFE implemented an instrument for improving the accuracy of life events, the so called life history calendar (LHC; e.g. Belli, 1998) which is a graphical grid of the life events that is filled during the interview. Data for SHARELIFE was collected between 2008 and 2009 and provides a variety of work and career variables as well as family characteristics, offering a unique opportunity for researching retirement timing with regard to the respondent’s working life history. Unfortunately, only career characteristics were collected in the life history calendar but no changes in family characteristics are observed. To understand the role of prime career histories for the retirement timing, interruptions and part-time periods were considered between the age of 25 and 49. To account for right censoring of observations, an event history

analysis was applied. Log-logistic regressions allowed for marginal effects which facilitate the comparison of the three countries and the two cohorts.

When interpreting the results of this thesis, one has to acknowledge two main caveats. First, despite rising levels of self-employment, this labour market group is still small and difficult to reach in surveys (see Church & Verma, 2001). Our primary data collection had been specifically designed to reach self-employed, leading to sufficient sample sizes even for specific sub-groups (i.e. couples). However, due to the sampling methodology in the online sample, the representativity of the sample is at risk. Controlling for the random sample of the CATI aimed at decreasing the selection bias due to differences in the sampling methods. Even though the EU-SILC data is one of the largest income surveys, pooling two survey waves served as solution to the small sample size problem in my third paper. In my last paper, retrospective careers were investigated, comparing older and younger retirement cohorts. With regard to self-employment, the effects for the older cohort should be interpreted with caution due to low incidence of this employment form.

The second problem is related to the gender aspect of this thesis. Only women in (self-) employment are investigated in all studies. In the case of the retirement paper, also retirees were observed but their transition from employment into retirement was investigated. Individuals who dropped out of the labour market before the age of 50 stay unobserved. Therefore, one needs to be aware of the selection into (self-) employment which is particularly important for women. The discussion of all results in this thesis reflected on the issue to counterbalance underestimation and avoid misinterpretation of the selection bias. Even though the underlying dynamics of these selections are well known, additional selection correction methods (e.g. Heckman selection model) or longitudinal data could be useful for further research.

Additionally, even though all studies were embedded in the particularities of the German institutional context, the data used in all empirical studies did not allow for distinguishing between East and West Germany. Given the different history in both regions, this can be seen as a limitation to the generalizability of the results.

Table 4: Overview on the data and methods

	Topic	Data	Method
I	Housework	Primary data from the project on dual careers and self-employment from 2011	OLS regression Wald tests
II	Work-family conflict	Primary data from the project on dual careers and self-employment from 2011	OLS regression Wald tests
III	Earnings	EU-SILC (Germany) 2009-2010	Quantile regressions Oaxaca-Blinder decomposition
IV	Retirement timing	SHARE (SHARELIFE) retrospective data from 2009	Event history (log-logistic regressions)

6.3 Overview on the results

The following tables show a simplified overview on the results of the four studies with regard to work autonomy, self-employment and part-time work. The tables visualize how different forms of flexibility lead to contrary outcomes for men and women. However, even if the direction of the effect is the same for both sexes, it can still demonstrate a disadvantage for women in general. If, for example, part-time work is related to a higher share of housework for men and women, the higher prevalence of part-time work among all women leads to a disadvantage for women compared to men. Furthermore, due to methodological differences in the four studies, it has to be kept in mind that the stylized overview simply indicates different directions of effects, but does not include information on the significance of the gender difference. Hence, even in case the direction of the effect is the same for men and women, there can still be a significant gender difference.

To get a more detailed insight, all results will be discussed and summarized in the next section.

Table 5: Results on study I (housework)

GERMANY		Housework
Men	Autonomy	-
	Self-employment	- (without controls)
	Part-time	+ (without controls)
	Working hours * self-employment	=
Women	Autonomy	=
	Self-employment	=
	Part-time	+ (without controls)
	Working hours * self-employment	-

“-” negative correlation, “+” positive correlation, “=” no significant effect

Table 6: Results on study II (work-family conflict)

GERMANY		Work-to-family time based	Family-to- work time based	Work-to- family strain based
Men	Autonomy	-	=	=
	Self-employment	=	+	+
	Part-time	-	=	-
Women	Autonomy	-	=	-
	Self-employment	- (without autonomy)	+	+
	Part-time	-	+	-

“-” negative correlation, “+” positive correlation, “=” no significant effect

Table 7: Results on study III (earnings)

GERMANY		Gender gap for earnings	Glass ceiling (higher gender gaps at the top)	Sticky floors (higher gender gaps at the bottom)
Men and women	Self-employment	+	-	=
	Part-time	+	+	- (only after controls)

“-“ negative correlation, “+” positive correlation, “=” no significant effect

Table 8: Results on study IV (retirement timing)

		Retirement timing GERMANY	Retirement timing SWEDEN	Retirement timing DENMARK
Men	Autonomy	=	=	+ (older cohort)
	Self-employment	+	+ (younger cohort)	+
	Part-time	n.a.	n.a.	n.a.
Women	Autonomy	=	=	=
	Self-employment	+ (later cohort)	+	=
	Part-time	=	+ (younger cohort)	-

“-“ negative correlation, “+” positive correlation, “=” no significant effect

6.4 Discussion and summary

To answer my overall research question whether flexibility is the key to a less gendered labour market, or whether it rather fosters more traditional roles and higher gender gaps, one has to distinguish between different fields of work and life. While part-time work and flexibility apparently support the integration of women into the labour market and actually decreases the perceived conflict at home, they seem to limit women's career options and the accumulation of pension benefits throughout their life.

To sum up my conclusions on *self-employment*, several chances and risks can be detected. This type of employment generally seems to facilitate the reconciliation of work and family life which might lead to less interrupted careers for some women. Even though the results show no significant effect of the mid-life career histories on

retirement timing in Germany, it is suggested that career interruptions lead to fewer accumulated pension benefits. Thus, self-employment might bear a chance for some women who become self-employed instead of dropping out of the labour market for some years to have more continuous earnings throughout their careers. For a smaller group of women, self-employment is also a chance for very high earnings. By avoiding employer discrimination and other reasons for the glass ceiling in organisations, self-employment poses an option for highly career oriented women to succeed professionally.

On the risk related side, however, there is strong indication for a larger group in rather precarious self-employment especially among women. Thus, compared to self-employment, paid employment generally offers better and more secure income and thereby also a better accumulation of pension benefits. The results from my third study help to interpret the long-term effects for self-employment in my last paper (study IV). Since women are much more likely to work in precarious self-employment with lower earnings than men, women might generally have to work longer to accumulate a higher pension income. For self-employed men, however, a high identification with their work and favourable working conditions might lead to higher labour market exit ages. Based on data of my fourth paper, this hypothesis cannot be tested. It is, however, strongly suggested from my results on gendered self-employment and should be the subject of further investigations.

An additional risk is the higher strain based conflict in reconciling work and family life and the negative family-to-work spill-over. Self-employment is often directly related to fostering female employment and to a better reconciliation of work and family life. However, my second study highlights the importance of looking at different types of conflict and the direction of the spill-over from both life spheres which are often ignored and the overall conflict is misinterpreted. Even though no ‘flexibility trap’ was found in a sense that self-employed women take over a higher share of housework compared to those in dependent employment (study I), there is indication that self-employment leads to higher availability expectation, potentially regarding childcare related tasks which might increase the conflict (study II). Despite these risks, I think that self-employment (at least in Germany) can be an employment option to avoid the risk of involuntarily dropping out of the labour market (study III). The frequently

reported higher career satisfaction among self-employed combined with better possibilities for reconciliation seems to be an alternative not only for women during their child rearing phases but also for older workers to continue working in later life (study IV).

Instead of promoting self-employment which is impaired with greater risks and insecurities, the positive aspects driving the decision to become self-employed could also be realized in paid employment. From my findings it becomes clear that *flexibility and autonomy* over one's work has similar positive effects as self-employment. For both men and women, higher job flexibility reduces the time based work-to-family conflict. Furthermore, while self-employment increases the negative spill-over from family demands to the work sphere, job flexibility does not have this negative connotation. Work autonomy is rather weakly related to the final age for leaving the labour market into retirement. The results from study IV, however, indicate in line with previous research that job strain rather decreases exit ages, while job resources increase the exit age. Autonomy can be seen as a resource to adapt work around private needs and thereby facilitate old age employment. A gender component can be found for the division of housework: while men take over a significantly lower share of housework when they have high work autonomy, this is not the case for women. To sum up, men in flexible jobs in Germany might increase their work engagement but perceive a lower conflict between the time spent at work and with their family life (study II). Since these men also take over a lower share of housework (study I), one interpretation could be that their partner supports their work by disburdening them from their family duties.

Finally, *part-time* work can also be seen as a double-edged sword. Even though part-time is related to a higher share of housework not only for women but also for men, the higher prevalence of part-time among women fosters the overall gendered division of housework between couples and thereby contributes further to gendered working lives. In line with the results on autonomy and self-employment, part-time work reduces the work-to-family conflict significantly and thereby helps for a better reconciliation. However, it increases the negative spill-over from family to work which is only the case for women but not for men. This indicates that women in part-time possibly let their family life interfere more with their work compared to full-time working women and compared to men, once again highlighting the gendered expectation on family roles

(study II). This is in line with the results from study I in which lower working hours are associated with a higher share of housework. When women have lower working hours compared to their partner (which is the classical one-and-a-half earner model in Germany), they take over a higher share of housework. Women working full-time on the other hand show a lower interference of family with work which indicates that they found an external solution for housework and care responsibilities. In terms of income, it is not surprising that part-time work significantly contributes to the gap between men and women (study III). In line with these strong gender differences due to part-time employment, some effect can be found for retirement timing of part-time working women (study IV). Long part-time periods reduce pension income; therefore women might be at higher risk for lower pensions. Especially in the later cohorts who retired after the pension reforms, women tend to prolong their work lives when they worked part-time for over 10 years. Even though the effect slightly misses significance in Germany, the tendency is already striking. It can be argued that part-time working women have a rather low attachment to the labour market and rely highly on their partners' (pension) income. Hence, they can be expected to leave the labour market even earlier which can be found for older cohorts in Denmark. However, changing gender roles and a stronger integration of women into the labour market on the one hand, and privatization and marketization of the pension systems on the other hand might lead to increasing involuntariness of late work for women with low career attachment.

6.5 Country specific discussion

This thesis applied a German perspective and it is disputable whether the results are applicable to other countries. All four papers reflected on the particularities of the German context which allows or limits drawing conclusions in different country settings. The following section shall provide some expectations for countries which differ with regard to institutional context, i.e. childcare provision and parental leave provision, but also with regard to the prevalence of part-time work among women. Implications for different country settings could also be transferred to inner-country differences of East and West Germany. Even after the unification, childcare provision is better in East Germany and part-time work is less common. Since 1996, there is a legal right for a part-time *Kindergarten* place in Germany, but the differences in institutional care for children under the age of three are still large between East and West Germany

(Goldstein et al., 2010). Only recently, there are changes in the legislation regarding care of the youngest age groups, which will be discussed in the next section in a future outlook.

The interpretation of the results from study I on housework clearly relates gender differences to the specific cultural and institutional context in Germany. While the results on self-employment for German men do not differ from previous results in other countries, the results for women are more diverse. In contrast to results from Sweden (Mångs, 2011), self-employed women in Germany do not divide housework more equally with their partners compared to employed women. This indicates that the relationship between women's employment status on the division of housework depends on the institutional and cultural context, including different opportunities and motivations to become self-employed. In countries where the reconciliation of work and family is easier in dependent employment, self-employed women might be less motivated by reconciliation issues. Other career aspects might be more relevant, leading to a lower share of housework.

Study II on the conflict between work and family also finds rather country specific results for women. In contrast to European findings (Fahlén, 2012), high working hours are related to a significant lower time interference of family demands with work for women in Germany. Given the German context with limited institutional full-time childcare, I interpret this contradictive finding with an out-sourcing of family obligations. Compared to full-time employed women, female part-time workers in Germany have lower work obligations and still shoulder the main family obligations themselves, leading to a higher conflict. This gendered effect indicates persistent traditional roles in Germany and suggests a high double burden for part-time employed women. Hence, in countries with broader institutional childcare, I would not expect that part-time working women have a higher interference of family obligations with their work. With regard to men, the study by Hofäcker and König (2013) indicates that European men have a higher work-life conflict when they have flexibility over their working time, which was also explained by a higher work engagement. However, when analysing this effect in interaction with different welfare regimes it becomes clear that this effect is especially driven by southern European and post-socialist countries. In these countries, flexibility at work is related to a higher conflict for men. The interaction

effect for conservative countries indicates the opposite even though it is not significant for the whole regime. For Germany, however, study II suggests that men perceive a lower conflict when they are more flexible at work.

Similar to the interpretation from study I, the motivation to become self-employed also plays a role for the gender earning gaps (study III). The gender gap is much higher at the bottom of the earning distribution in self-employment which is less the case in paid employment. My interpretation ascribes this finding to the high flexibility in self-employment and the chance to continue working despite high family obligations. When family demands are not reconcilable with paid employment and women would have to drop out of the labour market, self-employment might be an option. However, this often means precarious work with very low earning, leading to a high gap at the bottom of the distribution. Similar to study I, sticky floors should not be as strong in countries where women are not pushed into self-employment due to reconciliation problems in paid employment. A recent study by Andersson Joona (2014) on Swedish self-employed women for example suggests that Sweden differs with regard to the decision to become self-employed for a better reconciliation of work and family commitments. Her study finds that also in Sweden women are more likely to be self-employed when they have young children. However, her interpretation is that these women have a particularly high market orientation since they often work even more hours than employed women. Thus, I would not expect my German findings regarding the gender earning gap in Sweden and other countries with a long tradition of gender equality and an institutional context that facilitates the reconciliation of paid employment and family responsibilities.

The fourth study has the advantage to directly compare different countries. It becomes obvious that the particularities of pension systems play a strong role in determining retirement timing. More generous pension systems with high replacement rates for low earners and lower financial penalties for early exits can prevent monetary need driven late exit. In such pension systems, older workers would not have to continue working to compensate for less accumulated pension benefits. Furthermore, this study allows for interpretation of the support for working mothers. In Germany where working mothers were less supported compared to Denmark and Sweden, I assume that many mothers dropped out of the labour market before reaching retirement. This conclusion is drawn from the effect of the highly selective group of German mothers in this sample who

work significantly longer than non-mothers. Those who stayed in the labour market despite the difficult care situation are supposedly highly career oriented, leading to later retirement. With rising support for working mothers, this group became less selective and the effect is not significant for the later retirement cohorts. Concluding, I would expect this effect in countries with high dropout rates of women after childbirth.

7 Final conclusion and future outlook

This thesis analysed several distinct stages in the life course and different life spheres with divers theories and methods. Thereby, attention is given to a more complex understanding of work and labour market flexibility induced gender inequalities. Furthermore, by investigating different forms of flexibility a more holistic view on the chances and challenges of flexible work on career outcomes is provided. Five main conclusions can be drawn from this dissertation which should be considered in future research and debates on gendered outcomes of work flexibility:

1. Work flexibility might be a necessary tool for better outcomes in one field, while it simultaneously limits successful outcomes in another field. To give an example, while part-time work is related to a lower work-life conflict, it is also strongly related to lower earnings.
2. Different forms of flexibility are related to contrary results. While self-employment can be related to low gender gaps at the top of the earning distribution, part-time work is related to high gaps at the top.
3. Even the same form of flexibility can be related to higher and lower gender inequality with regard to one outcome depending on different subgroups of individuals. While self-employment can be a chance for high earnings to some women, most self-employed women have rather low earnings.
4. The same form of flexibility can be related to different outcomes for men and women. While autonomy at work is related to less housework for men, this is not the case for women, which leads to significant gender difference.
5. And last, flexible work can have opposing outcomes in different countries. This dissertation showed that long part-time periods are related to late retirement in Sweden but early exits in Denmark. Depending on the pension system, part-time

work might lead to high accumulated losses and a need to continue working in one country but not in others.

For my final conclusion and a future outlook, I want to address two different questions. First, is *increasing* gender inequality due to flexibility only a consequence of *decreasing* gender inequality in terms of labour market participation? And second, what does the future look like with regard to changes in institutions, labour markets and gender roles?

As mentioned in the introduction, the integration of women to the labour market was fostered by more flexible work arrangements. Thus, the starting point is decreasing gender inequality in terms of labour market participation. Results from my study on earning gaps suggest that some women might accept very low earnings and precarious work as the alternative is not being employed at all. Also my study on housework suggests this mechanism. High work autonomy is related to lower involvement in housework for men but not for women, thereby increasing gender inequality. When women have high family demands, they might choose employment forms which allow for high autonomy such as (solo) self-employment as an alternative to non-employment. So all in all, these two studies would answer my first question with “yes”.

However, one could also assume the reverse causal direction: decreasing gender differences in terms of labour force participation could also be a consequence of increasing gender inequality at the labour market due to flexibility. The high gender earning gap in flexible employment forms and women’s higher probability to work in precarious jobs might force them to compensate for earning losses by prolonging their working lives. I address this assumption in my fourth paper and find an assimilation of retirement ages of men and women due to women’s prolonged working lives, caused by the need to compensate for previous lower labour market attachment. Hence, gender differences in old age labour force participation decreases. Nevertheless, it has to be pointed out that this trend on “gender equality” is driven by women’s accumulated disadvantages. Since this effect was mainly found in Sweden with a long history of part-time work, it can be expected that this development might become more relevant in other countries in the future. Furthermore, following Ebbinghaus’ (2015b) argument, the privatization and marketization of pensions might reinforce this trend even further, leading to higher risks for inequalities for future cohorts.

This already answered some part of my second question: what does the future look like with regard to changes in institutions, labour markets and gender roles? However, further chances can be expected. One important development in Germany with regard to this thesis is the Federal Daycare Facility Expansion Act (German: *Tagesbetreuungsbaugesetz*) which is effective since 2013. It ensures the right to institutional care for young children and declares the expansion of care facilities (BMFSFJ, 2010). A steep increase in the enrolment of young children in institutional care can be expected in Germany. Childcare related interruptions for more than one year can be expected to decrease. Taking individual preferences aside, increasing possibilities for full-time care might lead to a decrease of part-time work among women. Hence, this could lead to a mitigation of reconciliation related aspects of gender inequality.

In terms of changing gender roles, it can be argued that it takes more time to adjust norms and beliefs. Turning back to Esping-Andersen's (2009) statement of an incomplete revolution, he explicitly concludes that "a revolution implies decisive ruptures in the way that women *and* men go about their lives" (p.172). While this dissertation directly compared men and women, some aspects especially regarding part-time work could only or mainly be observed for women. However, men in future cohorts might face similar conflicts as women nowadays, when they are expected to take over their equal share of housework and childrearing, leading to a lower career attachment for men. Hence, I reason that women as a research subject nowadays might be useful for future research on parents in general who might be faced with similar problems.

8 References

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Attachments

Study I: Gendered division of housework in Germany – the role of self-employment, relative resources and gender role orientation

Gendered division of housework in Germany – the role of self-employment, relative resources and gender role orientation

Abstract

The purpose of this paper is to investigate the division of housework within couples in Germany by taking employment status, relative resources and gender role orientation into consideration. We use a large scale primary data collection that deliberately oversampled self-employed and included questions on role orientation. While self-employment and work autonomy was related to a lower share of housework for men, rather the opposite was true for women. Furthermore, the results indicate that the relative resources and bargaining theory and the time budget approach seem to be less relevant for female self-employed compared to their employed counterparts. Our data allowed for a direct control of the gender role orientation and shed more light on the relationship between relative resources and the share of housework. A traditional role orientation was found to be highly significant for the share of housework for men and women but did not moderate the effect of relative resources. Thereby our study supports the distinct effect of gender role orientation. This can be seen as an important contribution to the ongoing discussion where relative resources are interpreted in the light of gender role orientation.

Keywords: division of labour, gender, relative resources, self-employment, time use

Introduction

Gender inequality regarding the division of housework appears to be very persistent throughout a context of changing labor markets. The rising involvement of women in higher education and paid employment increases the pluralization and individualization of partnerships and families (Blossfeld/Timm 2003). Compared to women's rising involvement in paid work, however, their high share of unpaid work and their main responsibility for the household remains unchanged (Peuckert 2002). This paper analyses primary data collected in Germany and aims to address two research gaps.

First, we investigate the effect of self-employment on the share of housework. Little is known about this relationship and self-employed are often not discussed in previous studies. Our primary data allows us to investigate this special group since self-employed were deliberately oversampled in our study. Furthermore, we are interested in working conditions such as work autonomy. This is motivated by the statement that self-employment leads to higher flexibility and autonomy of paid work and at the same time allows for freedom in the arrangement of the private life sphere (Lauxen-Ulbrich/Leicht 2003; McManus 2001). How this arrangement is made under flexible working conditions is rarely discussed in previous research. It is suggested that – due to the remaining female connotation of childcare and other household tasks – the risk increases for women that a higher flexibility at paid work leads to a higher responsibility for unpaid work instead of freedom from work (Henninger/Gottschall 2005; Wimbauer 2010).

Second, our dataset allows for exploring different explanatory approaches for the division of housework. It hereby fills an important gap, i.e. by including a direct measure for preferences and norms regarding gender roles, which was seen as limitation in previous studies (Kühhirt 2012). Additionally, the dataset includes a variety of work and family characteristics of the respondent and their partner to account for economic explanations.

The institutional context and country specific gender cultures were found to play an important role when it comes to gender equality in time use and the share of household duties performed by men and women (Geist 2005; Hofäcker et al. 2013; Knudsen/Waerness 2008; Treas 2010; van der Lippe et al. 2011). Comparing different welfare regimes (Esping-Andersen 1990), namely the “liberal”, the “conservative” and

the “social-democratic” welfare states, the gender gap in housework was found to be highest in conservative countries and lowest in egalitarian Scandinavian countries. Hence, Germany as a conservative country is an interesting case to study in terms of housework and traditional role orientation. Furthermore, the institutional context in Germany rather fosters women’s secondary role in paid employment. Institutional childcare for under 3-year olds is still scarce, with 80% of this age group not being enrolled in formal childcare at the time of the survey, in 2010 (Eurostat 2014). Part-time work is a common feature to compensate for the lack of (full-time) childcare and to reconcile work and family responsibilities. In 2010, a comparatively high share of 45.5% of German women indicated to work part-time, while only 9.7% of men did so (Eurostat 2014b). Therefore, paid work is strongly gendered in this country context and the division of unpaid work can be expected to be equally gendered. Given the context of a rather rigid labor market in Germany, combined with limited institutional childcare options, self-employment is put forward as possible solution to deal with reconciliation problems of work and family life. The noticeable stronger increase of female self-employment (780,000 to 1.3 mm) between 1991 and 2010 compared to male self-employment (2.3 mm to 2.9 mm) in Germany (Federal Statistical Office 2012) might be related to the need for self-determined flexibility and autonomy at work especially for women. Hence, women in Germany might choose self-employment for a better reconciliation of paid and unpaid work which might affect their share of housework.

The following section shall give a short overview on relevant theories and recent studies about the division of labor within couples, followed by a section on the effect of self-employment. We then illustrate the current situation for self-employed and employed individuals regarding their time use with data from the German Time Use Survey. This section is followed by multivariate regressions with our primary data to give a holistic view on the division of housework between partners.

Explanatory approaches for the division of housework

There are several prominent explanatory approaches for the gendered division of housework. The **normative approach** explains gender differences by the individual gender role orientation: a traditional role orientation leads to the female carer and the male breadwinner role (Fenstermaker 2002). The **relative resources and bargaining theory** (Lundberg/Pollak 1996) assumes that partners bargain their share of household

tasks dependent on their resources at the labor market. According to this theory, women with high labor market qualification have high bargaining power to reduce their household tasks. However, their bargaining power depends on their relative resources compared to their partners. Women can be disadvantaged in this regard since they are usually younger than their male partners (Skopek et al. 2011) which leaves them with less years of work experience. Additionally, differences in education can be found: women tend to search for an equally or higher educated partner, while the opposite is true for men (Blossfeld/Timm 2003). These structural characteristics of couples already disadvantage women in their bargaining power, leaving them with the higher responsibility for the household. Esping-Andersen (2009) identifies women's relative wage as most important influence on their own housework time and their husbands' time. Regardless of any other resources, the **time budget approach** focuses on the time resources (Hill/Kopp 1995): the partner with more hours in paid work has to do/ does less unpaid work. This approach is also generally gender neutral, but indicates a gendered pattern as well. Women, especially in Germany, work more often part-time than men which is partly due to their higher family responsibilities. Our dataset allows for directly testing the moderating effect of the gender role orientation on the other approaches which was not done in previous studies.

H1a: We expect to find a moderating effect of the gender role orientation on the relationship between relative resources / working hours and the division of housework.

Connecting gender roles to the resource theory, previous studies refer to a so called deviance neutralization hypothesis (Brines 1994; Greenstein 2000) to explain the finding where women with higher labor market resources than their male partner still have a higher share of household tasks compared to women with lower or equal resources (Bittman et al. 2003; Evertson/Nermo 2004; Schneider 2011). This hypothesis describes that the atypical arrangement of a female breadwinner is compensated by adopting rather traditional roles in the family sphere, following the “doing gender” approach. Support for this u-shaped relationship between relative income and share of housework was found for women in the USA (Evertson/Nermo 2004; Schneider 2011) and Australia (Bittman et al. 2003) and to some degree in Germany (Haberkern 2007). On a macro level, it was argued that in countries with high gender inequality, women's high relative earnings are considered to be more “deviant” compared to countries with lower gender inequality (Gupta et al. 2010). Accordingly,

one would expect to find an indication for this neutralization hypothesis in Germany, where income inequalities among women are high and high relative earnings of women can be seen as “deviant”.

H1b: We expect to find evidence for the deviance neutralization hypothesis for women in Germany.

Evidence for the deviance neutralization hypothesis was recently criticized by Sullivan (2011) who argues that previous findings on this hypothesis simply pictured low income households and refers to their more traditional gender roles. This criticism can be tested with our dataset by including gender role orientation.

H1c: The deviance neutralization hypothesis should only be relevant for women with a traditional gender role orientation.

Gender arrangements in the context of self-employment

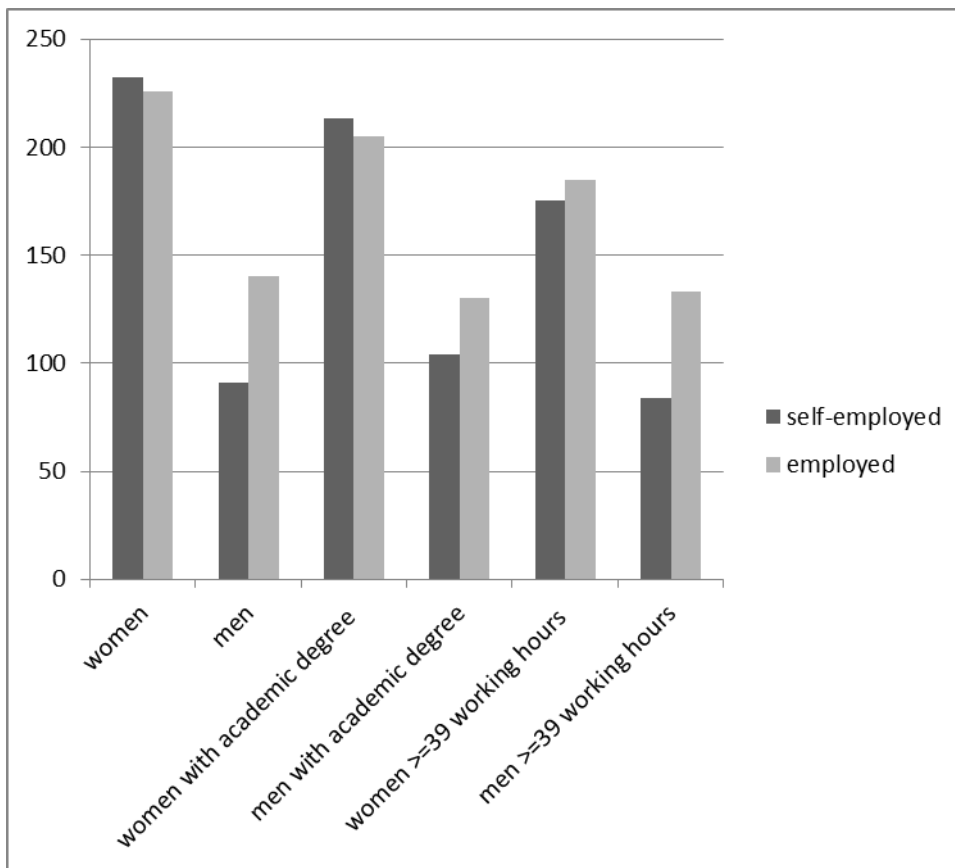
The effect of self-employment on the division of tasks at home is rarely addressed in previous research. The few findings are often rather descriptive, follow a qualitative approach, focus on childcare or are studied in a different institutional context. Results from liberal countries like the USA, UK and Australia indicate that self-employment of either men or women rather fosters traditional division of labor (Baines et al. 2003; Craig et al. 2012; Bell/LaValle 2003; Gurley-Calvez et al. 2009). The effect for men’s self-employment is usually explained by high work commitment and work load, while the effect for women’s self-employment is interpreted by their job motivation to have more time for their children and for a better reconciliation. In a European comparison on childcare, Hildebrand and Williams (2003) found a similar effect for men in all investigated countries: self-employed men did less childcare than their employed counterparts. In contrast, the effect for women varied strongly between countries; for Germany they did not find significant differences in time spent on childcare between employed and self-employed women. However, their study includes only few control variables and no additional explaining variables. In contrast, a study on Sweden suggests that female self-employed spent more time on market work and are more likely to divide housework equally with their partner compared to female wage-employed (Mångs 2011). This indicates that the institutional and cultural context can be important for the relationship between self-employment and the division of housework.

Acknowledging that self-employment is a rather heterogeneous type of employment including solo self-employed individuals and high growth business owners (Carroll/Mosakowski 1987), work characteristics are important to take into consideration. Self-employed often have longer average working hours than employees. For 2011, the German Microcensus reveals that self-employed men (44.2 hours/week) and women (31.8 hours/week) worked remarkably longer than employees (men: 35.4 hours/week; women: 26.7 hours/week) (Federal Statistical Office 2012b). Following the time budget approach, this should lead to a lower share of housework for men and women in self-employment. However, women are also more likely to be solo self-employed than men in Germany and many other European countries and women's businesses have a slightly lower likelihood to survive (Arum/Müller 2004). Furthermore, as previous literature suggests, the motivation to become self-employed has a gendered component. Achieving a good work-life balance was found to be specifically attractive for women in their choice for an entrepreneurial career (Orhan/Scott 2001; Mattis 2004) and a large share of women is motivated by the aspect of higher autonomy (McKie et al. 2013). Hence it could be argued that women who need or want to take over a high share of housework become self-employed or choose jobs with higher autonomy.

H2a: Thus, we posit that self-employment is related to a higher share of housework for women but to a lower share for men.

Given the lack of previous studies in Germany, it is useful to examine data from the German Time Use Survey 2001/02 for a better understanding of self-employment with regard to housework. The data shows clear gender differences regarding the time spent on housework tasks in partnerships. Women spent on average more time (226 minutes per day) on these tasks compared to men (132 minutes per day).

Figure 5: minutes used for housework by employment status



A differentiation by type of employment shows only minor differences between women but strong differences between men. Employed men spent 49 minutes more than self-employed men on household tasks. The same is true for the subsample of full-time working men (working more than 38 hours per week). The difference between both employment types is a bit lower for the subsample with an academic degree (26 minutes difference). For women, the differences between both employment types are marginal. Looking at the gender gap for both types, accordingly, the differences between men and women are much greater in self-employment than in dependent employment. Generally, gender gaps are lower in the two subsamples of full-time workers and those with an academic degree. An interesting switch can be observed for full-time working women. While self-employed women otherwise tend to do rather more housework than employed women, this relationship changes in the full-time sample: in this category, self-employed women spent somewhat less time on housework than their employed counterparts. In conclusion, this data provides a first impression on the total amount of

time spent on housework in Germany and points out that the gender gap in self-employment appears to be higher than in paid employment; mainly owing to the differences between men. This appears to be less the case for individuals working full-time which highlights the importance of working hours for the relationship between self-employment and the division of housework. Little is known about the dynamics of explanatory approaches for the share of housework with regard to self-employment. To test the relationship of the three explanatory approaches with the employment type, we include interaction effects for each approach.

H2b: We assume that (a) high absolute working hours, (b) high relative income, and (c) traditional role orientation are stronger related to a lower share of housework for self-employed women compared to employed women.

Data and method

To analyse the division of tasks within couples we use a primary data collection. The sample was collected by an online questionnaire that was distributed via different career networks. Some of these networks were targeted on self-employed or on women, to increase the share of these two groups. Therefore, our online sample contains proportionally many women, self-employed and higher educated individuals. An additional random sample from a Computer Assisted Telephone Interview (CATI; n=721) expanded the online sample (n=1645) and is used as a control for a sample selection bias of the online sample.

For the following analysis, we exclude individuals without partners and those who had missings on one of the used variables.

Table 9: sample description

	Men			Women		
	Mean	Standard deviation	%	Mean	Standard deviation	%
Age	42,9	10,2		41,1	8,8	
Working hours	49	11,8		38,8	13,7	
Difference of working hours between partners	14,2	17,4		-5,8	15,2	
Monthly net income in 100	30,6	22,1		19,4	15,6	
Share of household income	1,1	1,8		-1	1,8	
Work autonomy	4,1	1		4,3	1	
Traditional role orientation (higher=more traditional)	2	0,8		1,8	0,8	
Self-employed			48.82			50.42
Higher education than partner			20.54			15.41
Children in the household			60.61			61.31
Lower income than partner			36.03			82.75
Higher income than partner and traditional role orientation			39.73			4.02
Higher income than partner and progressive role orientation			24.24			13.23
From online sample			53.87			71.36
N	297			597		

The division of housework was captured with a question on the own share of the total housework. Answers about the own share (compared to their partners) could be given on a scale from 0-100% in 10% steps. The share of the partner was thereby automatically calculated. Hence, any help from a third person was deliberately excluded. To use the share rather than the total amount of tasks as a measure was also

suggested by Geist (2005), since a direct question on the share could provide a more realistic picture of the actual allocation of tasks compared to accumulated time-use tasks. A disadvantage of this kind of measure could be an overestimation of the own share.

Six categories captured the job position: self-employed, public servant, helping family member, employee at the partner's firm, employee, blue-collar worker, and trainee. To indicate if someone is self-employed, we use a dummy-variable. Autonomy at work was asked with an item "work autonomy" which could be rated on a 5-point likert scale on how far the respondent achieved work autonomy in their current position. Weekly working hours were asked as "actual hours worked" and – if applicable – "contractual working hours". To compare self-employed and employees, we use the actual working hours. Income was asked as the average monthly (net-) income for self-employed and employees. Respondents could classify themselves into one of fifteen income-classes. For the analysis, the midpoints of the classes are used. The analysis is restricted to persons who reported their own or their partner's income to be 10.000 Euro at a maximum because of the small number of cases in higher income classes. The educational level is coded as dichotomous variable to differentiate between individuals with and without an academic degree. The respondent's age is computed from the year of birth and is measured in years. A dummy-variable for children indicates if children are present in the household. Role orientation was captured by four items on a 5-point scale and is merged to an index by taking the average of their sum. The items were: "It would be good if there were part time positions also for men so that they can care more for children and household", "I think it is good when men interrupt their career in order to care for children so that women can continue working", "I think it is good to share housework equally between me and my partner", "I think it is good to share family obligations (like childcare and parent-teacher conferences) equally between me and my partner". A higher index value indicates a more traditional role orientation.

Some of the measured variables are used in the analysis as the value of the respondents relative to their partners' value. As a restriction, it has to be mentioned that the information for the partner is given by the respondent which might limit the accuracy.

Difference in working hours are metric variables where negative values indicate that the partner has more working hours while positive values mean the same for the

respondent. Difference in educational degree is a dummy-variable indicating if respondents have an academic degree while their partners do not. Share of household income is the respondent's contribution to the household income in percent, transformed to a scale ranging from -5 to +5. The lower endpoint means that only the partner contributes to the household income while respondents at the upper endpoint earn all of the household income themselves. In our analysis, both partners have an income so all values lay between those extremes. A one unit difference on that scale means a difference of 10 percentage points in the share of household income. To capture additional effects of income differences and gender role orientation, a categorical variable was included with the value 1 if respondent has a lower income than their partner, value 2 if they have a higher income and a traditional role orientation and value 3 if they have a higher income but no traditional role orientation. A traditional role orientation was defined by having an index higher than 2. Last, to account for level-differences in the dependent variable caused by the survey design or mode of data collection, we include a dummy-variable in the regression models indicating whether a respondent belongs to the CATI- or online-sample.

The share of household tasks is investigated by multivariate, ordinary least square (OLS) regressions in two separate models for men and women and gender differences were tested by a Wald test.

Results

Even in our sample with many highly educated women, the division of housework is rather traditional. Women do a significantly higher share (64%) of household tasks than men (36%).

Table 10: linear regression on housework (focus: relative resources)

	Men (M1a)	Women (M1b)	Men (M2a)	Women (M2b)	Men (M3a)	Women (M3b)	Men (M4a)	Women (M4b)
Share of household income	-3,52*** (0,00)	-4,29*** (0,00)			-1,93** (0,00)	-2,15*** (0,00)	-2,45 (0,18)	-2,92** (0,02)
Share of household income (squared)	0,24 (0,34)	-0,14 (0,42)						
Traditional orientation and higher income than partner (ref. lower income)			-14,18 *** (0,00)	-13,39** (0,00)				
Modern orientation and higher income than partner (ref. lower income)			-3,68 (0,18)	-11,67 *** (0,00)				
Difference in working hours					-0,21* (0,02)	-0,46*** (0,00)	-0,22 (0,21)	-0,40* (0,01)
Difference in educational degree					-5,70* (0,02)	-1,82 (0,33)	-4,39+ (0,05)	-1,57 (0,40)
Traditional role orientation							-6,25*** (0,00)	3,15** (0,01)
Traditional orientation and share of household income							0,47 (0,59)	0,54 (0,43)

Table 2
continued

	Men (M1a)	Women (M1b)	Men (M2a)	Women (M2b)	Men (M3a)	Women (M3b)	Men (M4a)	Women (M4b)
Traditional orientation and difference in working hours							0,02 (0,81)	-0,03 (0,71)
Working hours					-0,23* (0,03)	0,10 (0,20)	-0,21* (0,05)	0,08 (0,27)
Age	-0,49*** (0,00)	0,12 (0,13)	-0,50*** (0,00)	0,19* (0,02)	-0,44*** (0,00)	0,09 (0,25)	-0,44*** (0,00)	0,09 (0,22)
Online-Sample	-2,76 (0,24)	-5,70*** (0,00)	-2,45 (0,30)	-5,39*** (0,00)	-2,63 (0,26)	-4,25** (0,01)	-3,25 (0,17)	-3,33* (0,02)
Constant	65,23*** (0,00)	61,10*** (0,00)	69,14*** (0,00)	63,94*** (0,00)	77,69*** (0,00)	56,74*** (0,00)	87,42*** (0,00)	51,37*** (0,00)
Observations	297	597	297	597	297	597	297	597
R^2	0,162	0,188	0,182	0,092	0,248	0,266	0,292	0,279

p-values in parentheses
robust inference

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Results from our first model (M1) show that high relative income is related to a lower share of housework for men and women. However, there is no indication for a u-shaped relationship and our hypothesis H1b does not get affirmed. Hypothesis H1c could not be directly tested due to these unexpected results. However, following Sullivan, we tested in M2 if the relationship of women's higher income on their share of housework is related to their traditional role orientation. Women who earn more than their partner do less housework, irrespective of their traditional role orientation. Again, this indicates that there is no deviance neutralization and that even women with traditional role orientation do less housework when they have higher earnings than their partner. Model 3 and 4 test the moderating effect of traditional role orientation on the effect of relative resources and working hours. Traditional role orientation is strongly related to the share of housework: men take over a lower share of housework and women a higher share. High relative resources and high relative working hours are related to a lower share of housework for men and women, which is in line with previous research. Controlling for role orientation, these effects stay fairly the same (not shown). The interaction effects of

the share of household income and the role orientation / working hour differences are not significant (M4). Hence, a higher share of household income and higher working hours are related to a lower share of housework for men and women, irrespective of their role orientation. H1a can be rejected.

Table 11: linear regression on housework (focus: self-employment)

	Men	Women	Men	Women	Men	Women	Men	Women
	(M5a)	(M5b)	(M6a)	(M6b)	(M7a)	(M7b)	(M8a)	(M8b)
Self-employed	-7,50*** (0,00)	2,22 (0,16)	-13,45 (0,18)	-4,36 (0,36)	-9,09*** (0,00)	2,15 (0,22)	-4,03 (0,49)	-1,12 (0,77)
Working hours			-0,52** (0,00)	-0,52*** (0,00)				
<i>Interaction with self-employment</i>			0,18 (0,38)	0,21+ (0,09)				
Share of household income					-4,20*** (0,00)	-5,22*** (0,00)		
<i>Interaction with self-employment</i>					1,08 (0,44)	1,78* (0,03)		
Traditional role orientation							-7,21** (0,00)	3,08+ (0,05)
<i>Interaction with self-employment</i>							-1,68 (0,55)	1,75 (0,39)
Online-Sample	3,40 (0,13)	-7,31*** (0,00)	3,41 (0,12)	-4,72** (0,01)	1,20 (0,58)	-5,94*** (0,00)	2,18 (0,29)	-5,99*** (0,00)
Constant	41,57** * (0,00)	69,95** * (0,00)	65,54** * (0,00)	87,18** * (0,00)	47,80** * (0,00)	64,68** * (0,00)	56,50** * (0,00)	63,74** * (0,00)
Observations	297	597	297	597	297	597	297	597
R ²	0,041	0,028	0,098	0,113	0,146	0,191	0,150	0,057

p-values in parentheses
robust inference

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Results from table 4 shed more light on self-employment with regard to the division of housework. Without controls, self-employed men have a significantly lower share of housework compared to employed men, while this is not the case for women (M5). However, the effects are not significant after controls in the final model (table 5) where the difference between men and women regarding self-employment is not significant ($\chi^2(1) = 1.18$, $p = 0.2783$). Hypothesis H2a can be rejected. Our results suggest that differences in the type of employment are due to differences in working conditions, i.e. work autonomy and working hours.

High working hours and high relative income is related to a lower share of housework for women. However, an interaction effect with the type of employment reveals that this relationship is less strong for self-employed women compared to employed women. Self-employed women with a high share of income (M6) or high working hours (M7) take over a relatively higher share of housework compared to their employed counterparts. Hence, the relative resource and bargaining theory and the time budget approach seem to be less applicable for women in self-employment. In the final model, these interactions are not significant anymore and are therefore excluded. The relationship of traditional role orientation and the share of housework seems to be independent of the employment type. Thus, the normative approach is also relevant in self-employment. Hypothesis H2b is not supported by the results.

Table 12: linear regression on housework (final model)

	Men	Women
	(M9a)	(M9b)
Self-employed	-1,36 (0,52)	1,42 (0,36)
Work autonomy	-3,71*** (0,00)	0,10 (0,89)
Working hours	-0,11 (0,28)	0,11 (0,16)
Difference in working hours	-0,22** (0,01)	-0,45*** (0,00)
Share of household income	-1,55* (0,02)	-1,85*** (0,00)
Difference in educational degree	-3,34 (0,16)	-1,81 (0,33)
Traditional role orientation	-5,99*** (0,00)	2,57** (0,01)
Children	-0,36 (0,87)	3,45* (0,02)
Age	-0,37*** (0,00)	0,03 (0,73)
Online-Sample	-2,51 (0,29)	-3,47* (0,03)
Constant	95,65*** (0,00)	50,97*** (0,00)
Observations	297	597
R2	0,327	0,286

p-values in parentheses
robust inference

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

The final model (table 4) reveals another interesting aspect with regard to specific working conditions. It was argued that self-employment is related to higher work autonomy which in turn might affect housework. The results show that high work autonomy is related to a significantly lower share of housework for men. Rather the

opposite is true for women and the gender difference is significant ($\chi^2 (1) = 8.32$, $p = 0.0039$). Hence, these results give evidence for the hypothesis that work autonomy is used differently by men and women with regard to their share of housework which is in line with previous research on self-employment and contributes to the open questions on the role of working conditions in this type of employment.

Discussion

Our first aim of this study was to shed light on the relationship between self-employment or work autonomy and the share of household tasks for men and women. We find a gendered effect which can be interpreted as evidence that men with high job autonomy (which is more prevalent in self-employment) might use it for a higher involvement at their work sphere and reduce their housework. Women, on the other hand, are often motivated to choose self-employment for a better reconciliation of work and family responsibilities. Different to men, they do not take over a lower share of housework when they are self-employed. This result is in line with previous research about self-employment from other countries (Baines et al. 2003; Bell/LaValle 2003; Craig et al. 2012; Gurley-Calvez et al. 2009; Hildebrand/Williams 2003) stating more traditional division of housework among couples with at least one self-employed partner. In addition to previous literature, our study shows that – at least for men – work autonomy has a stronger correlation with the division of housework than the actual type of employment. Thereby, our results shed some more light on Hildebrand and Williams' (2003) call for future research regarding the role of flexibility in self-employment. Furthermore, our study contributes to previous literature by testing different explanatory approaches with regard to employment type. Some indications can be found that the time budget approach and the relative resources and bargaining theory are less relevant for self-employed women. Hence, women in self-employment might benefit less from higher income and high working hours with regard to their bargaining power. Another interpretation could be that highly work oriented women with high domestic demands might choose self-employment to combine high working hours with a relatively high share of housework. A longitudinal approach could help to shed more light on this issue. In contrast to results from Sweden (Mångs 2011), self-employed women in Germany do not seem to divide housework *more* equally with their partners than employed women. This indicates that the relationship between women's employment

status on the division of housework can depend on the institutional and cultural context, including different opportunities and motivations to become self-employed. In countries, where the reconciliation of work and family is easier in dependent employment, self-employed women might be less motivated by reconciliation issues but rather by career aspects. Depending on this career choice motivation, self-employed women might rather work full-time which is related to less time spent on housework compared to dependent employed women (see figure 1). The effect of men's employment status, on the other hand, seems to be more homogeneous across countries. On a descriptive level, our study confirms the persistent finding that self-employed men do less housework than employed men. Hence, at least for men, self-employment as job type is possibly impaired by particularly high working hours, high work commitment, and other work characteristics that are related to a lower share of housework.

The second purpose of our analysis was to investigate the gender role orientation and relative resources with regard to the division of housework. Generally, we find a rather traditional picture on the division of housework. Nevertheless, high relative work resources seem to be used by men *and* women to bargain a lower share of housework. In contrast to previous research and theories that suggest a u-shaped relationship between relative income and housework for women (Evertson/Nermo 2004 for the USA; Schneider 2011; Bittman et al. 2003), we do not find a u-shaped effect which is surprising given the rather conservative context of Germany. Our results, however, contributed to the critique by Sullivan (2011) in terms of the importance of gender role orientation. Higher relative income is related to a lower share of housework for women irrespective of their gender role orientation. Concluding, gender role orientation plays an important role for the division of housework. However, it does not seem to moderate the relationship between relative resources / working hours and the share of housework and it is independent of the employment type. Thus, our study contributes to the under researched aspect of gender role orientation with its strong and discrete relationship to the share of housework.

There are several limitations to this study. In contrast to some previous studies, we measure the share of housework and not the amount of time. Therefore, our results are not directly comparable to those studies as suggested by Schulz and Grunow (2007). This limitation might explain gradual differences in the finding of a u-shaped relation between relative income and housework in Germany. While Haberkern (2007) finds that

women with higher positive income differences do more and more housework, our findings do not suggest this u-shape relation. Furthermore, our sample for the multivariate analysis might not be representative for Germany in general, since self-employed and highly educated individuals are over represented. Last, a longitudinal approach would be beneficial for understanding the mechanisms behind the division of housework. In particular, future research could profit from data on changes from dependent employment to self-employment including the underlying motivation to explain gender differences in the division of housework. Specifically under a changing family context like the birth of a child, the impact of self-employment on housework division might differ and should be considered in further investigations.

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**Study II: Gendered work-family conflict in Germany –
do self-employment and flexibility matter?**



Gendered work–family conflict in Germany: do self-employment and flexibility matter?

Work, employment and society

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Abstract

Applying a demands–resource approach, the present empirical study among 1395 individuals researches how flexibility and self-employment affect work–family conflict in Germany. Specifically, gender differences regarding work interference with the family and family interference with work are examined on a strain-based and time-based level. The multivariate results reveal a differentiated but surprisingly non gendered picture of the effect of self-employment and job flexibility regarding work–family conflict. Due to greater flexibility, self-employed people perceive a slightly lower time-based work-to-family conflict while their strain-based work-to-family conflict is higher than among employees. Regarding family-to-work conflict, self-employment leads to a higher level of time-based conflict, possibly because of higher expectations regarding availability. Thus, self-employment can be seen as a demand or a resource depending on the type of conflict. This study therefore contributes to a more refined understanding of the role of flexibility and self-employment in the light of literature on demands and resources.

Keywords

family–work conflict, flexibility, gender, self-employment, strain-based conflict, time-based conflict, work–family conflict, work–life balance

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Introduction

Along with the rising integration of women in the labour market, it has become an increasing concern for individuals and couples to reconcile work and life. Work–life balance is also a focal point of interest and debate in academia and among policy makers (Abendroth and Den Dulk, 2011). Correspondingly, measures for better reconciliation and gender equality – such as leave regulations and the provision of childcare – have become a major policy issue on the European social agenda and for its member states (Ciccia and Verloo, 2012; Fagnani, 2012).

Possibilities to reconcile work and family life still vary according to the national context (Boye, 2011; Hennig et al., 2012). Sufficient childcare adapted to the needs of working parents can facilitate reconciliation, while lower institutional support can result in higher demands for the individual or higher work–family conflict. In Germany, institutional childcare is still below demand (Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ), 2012b). Parents must therefore take more initiative in organising childcare, often requiring greater flexibility at work. Control over the work sphere might therefore be highly beneficial in this context. Since the family sphere is still seen as women's responsibility, women particularly value flexibility at work to avoid work–life conflict (Patterson and Mavin, 2009).

Flexibility and autonomy are the primary motivations for opting for self-employment (Barnett and Bradley, 2007) because self-employment may engender greater freedom regarding when, where and how to work. However, there is still little research on self-employment from a family perspective (Aldrich and Cliff, 2003) and in particular concerning research on work–family conflict among the self-employed.

Based on a demands–resource approach, this large-scale study ($N = 1395$) attempts to answer the following research question: how does self-employment affect the conflict between work and family in Germany? Specifically, how do flexibility and gender influence the work interference with family and the family interference with work among self-employed people compared to employees?

The results enhance our understanding of the increasingly important question of work–family interference among the self-employed compared to employees. In this context, flexibility can be – depending on the type of conflict and in the light of the specificities of the German context – a resource as well as a demand. This finding is supported equally for both genders.

Theoretical background

Work–family conflict: definitions and determinants

Life spans across different and inter-related spheres such as the family and the working sphere. Experiences from each sphere influence the others, possibly leading to conflict. Accordingly, work–family conflict refers to a conflict between roles where pressures from different spheres of life are mutually incompatible (Greenhaus and Beutell, 1985).

Research commonly distinguishes between work-to-family conflict (i.e. the interference of work with the family sphere) and family-to-work conflict (i.e. the interference of family responsibilities with the work sphere) (Carlson and Frone, 2003; Frone et al.,

1992; Greenhaus and Beutell, 1985). This study applies the terms work-to-family and family-to-work conflict for the investigation of incompatibilities between both spheres with a focus on families and not only personal private life. Meta-analyses by Byron (2005) and Michel et al. (2009) and a comprehensive literature review by Shaffer et al. (2011) reveal that family-domain variables are predictors of family-to-work conflict, while work-domain variables predict work-to-family conflict. According to a recent literature review by Bianchi and Milkie (2010) most empirical studies have focused on work-to-family conflict. Additionally, work–family conflict can occur on a time-based level and on a strain-based level. A time-based conflict occurs when individuals do not have enough time to fulfil either role while strain-based refers to a lack of energy and recurring thoughts about either sphere (Greenhaus and Beutell, 1985). This definition implies that conflict occurs when certain resources are lacking and/or different demands exceed a certain level. From a theoretical perspective, a commonly applied approach is the demands and resources approach.

The Demand–Control Model by Karasek (1979) points out that job demands and job control jointly predict the occurrence of individual mental strain. Based on comparative empirical findings, the causal relationship between job characteristics and strain outside the work-sphere is furthermore essential to the model. Karasek (1979) however implicitly acknowledged a wider range of demands and resources. Accordingly, the Job-Demands–Resources Model (Bakker and Demerouti, 2007; Demerouti et al., 2001) claims that demands *and* resources determine job-related stress. Although the Job-Demands–Resources Model exclusively refers to work-related demands and resources – given the bi-directional nature of work–family conflict – a conflict occurs if demands from the family and/or the work sphere compete with and exceed individual resources.

According to Greenhaus and Parasuraman (1999), a high level of involvement in unpaid work leads to a high level of conflict in paid work. Similarly, previous research revealed that children in the household – inducing higher family demands – are associated with a higher level of conflict (Crompton and Lyonette, 2008; Greenhaus and Parasuraman, 1999), particularly for women (Hennig et al., 2012). Martinengo et al. (2010) reveal that younger children – who demand more time – are predictors of family-to-work conflict. As women still tend to be more responsible for childcare than men (Sayer, 2010), regardless of hours worked in paid employment, they work a second shift at home (Asher, 2011; Hochschild, 2003). Thus, household and family responsibilities are *family demands* which potentially increase the family-to-work conflict.

The *work-related demand* that is most often discussed is the number of working hours, possibly causing work-to-family conflict. Long working hours limit the time resources for one's private life (Chung, 2011; Golden and Wiens-Tuers, 2006; Jacobs and Gerson, 2004; Tausig and Fenwick, 2001), while shorter working hours and part-time employment might contribute to a better work–life balance (Borrey, 2005; Crompton and Lyonette, 2008). In a European comparative study, Fahlén (2012) discovers that shorter working hours reduce conflict in both directions; that is, home-to-work and work-to-home. Related to high work demands, job position/level (Crompton and Lyonette, 2008; Steiber, 2009; Tausig and Fenwick, 2001) and educational level (Hofäcker and König, 2013; Jacobs and Gerson, 2004) were also found to increase work–life conflict.

An essential aspect of Karasek's (1979) Demand–Control Model is that control may buffer job demands. Along the same line of reasoning, Bakker and Demerouti (2007), Bakker and Geurts (2004), Demerouti et al. (2001), Parasuraman et al. (1996) and Pocock (2005) interpret individual temporal, spatial and organisational control over the work sphere as a job resource. Relating individual control to work flexibility, Hill et al. (2008: 152) defined workplace flexibility as 'the ability of workers to make choices influencing when, where, and for how long they engage in work-related tasks'. Thus, individual flexibility can be seen as a *job resource* since flexibility allows control over devoting resources to one or the other life spheres. This in turn decreases the likelihood of negative interference. Control in this context can have a buffering effect on job-related demands such as long working hours.

The institutional context for work–family reconciliation in Germany

The institutional context influences possibilities to reconcile work and family life (Boye, 2011; Hennig et al., 2012) and can contribute to gender equality. Until two decades ago, Germany relied strongly on family policies that nurtured the male-breadwinner model of married couples (Fleckenstein and Seeleib-Kaiser, 2011; Klammer and Letablier, 2007). The first reforms in the 1990s concerning leave options and childcare initiated a change from the dominant model towards a modified male-breadwinner model (Fagnani, 2012). Following the 2002 EU-Summit resolution, the second turning point in family policy towards a model of equality for caregivers took place in 2005 (Aisenbrey et al., 2009; BMFSFJ, 2012b; Fagnani, 2012; Fleckenstein and Seeleib-Kaiser, 2011). The *Tagesbetreuungsausbaugesetz* (Federal Daycare Facility Expansion Act) ensures a statutory right to institutional care for infants and the expansion of childcare facilities (BMFSFJ, 2010). It is effective since 2013. The introduction of the *Elterngeld* (parental leave allowance) in 2007, allowed parents to claim 67 per cent of their previous average net income during the 12 months following the birth of a child. When the *Elterngeld* is shared between partners the period can be extended to 14 months, thereby encouraging fathers to take childcare leave (Fagnani, 2012).

Despite these changes towards equal opportunities for both genders in recent years, policy change and measures do not match up to reality. As institutional childcare was still lacking at the end of 2011 (BMFSFJ, 2012b; Hennig et al., 2012), only 21.5 per cent of children under the age of three attended institutions (BMFSFJ, 2012a). Therefore, German women are still more responsible for household chores and childcare. Seventy per cent of all mothers do all the housework (BMFSFJ, 2012b) and 70.6 per cent of women work part-time (Keller and Haustein, 2012). More than half of the women (55%) chose part-time work due to family obligations compared to 9 per cent of men (Federal Statistical Office, 2012b).

Germany exhibits several characteristics that deserve further study. The prevailing lack of external resources for work–family reconciliation in Germany increases responsibility and thereby demands for the individual, resulting either in greater work–family conflict or a trade-off. Therefore, job resources such as job control may be essential to compensate for a lack of welfare resources without compromising the work sphere. Several studies conclude that achieving work–life balance is often accompanied by a

trade-off for women (Daly and Rake, 2003), unless welfare resources allow for gender equality on the labour market (Cousins and Tang, 2004; Tomlinson, 2007). The apparent gendered division of responsibilities and the partial lack of welfare resources in Germany suggest a gendered approach to the subject of work–family conflict.

Self-employment in Germany: demand or resource?

Flexible work arrangements have been increasingly put forward as potential solutions for work–family conflict (Warhurst et al., 2008). Previous research supports this reasoning as job autonomy (Chung, 2011; Russell et al., 2009) and schedule flexibility have been shown to decrease work–life conflict (Chung, 2011; Hill et al., 2001; Hofäcker and König, 2013; Minnotte, 2012; Williams et al., 2008). Accordingly, flexibility has a positive effect on work–life balance (Hill et al., 2001; Parasuraman et al., 1996; White et al., 2003), especially when flexibility is controlled by the individual and not demanded by the employer (Hofäcker and König, 2013).

Self-employment is a heterogeneous category (varying from sole proprietorship to high growth ventures) (Carroll and Mosakowski, 1987) and previous research indicates that one major motivation for opting for self-employment for both sexes is autonomy and flexibility (Barnett and Bradley, 2007; Smeaton, 2003). Compared to paid employment, an entrepreneurial career allows more control over the number of work hours, schedules, work pace and spatial arrangements (Clark, 2000; Smeaton, 2003).

Within this context, Germany exhibits several particularities. For German employees, reconciliation problems are often due to employers' lack of consideration for the needs of families and inflexible work arrangements (BMFSFJ, 2012b). At the same time, self-employment is on the rise in Germany (Eichhorst and Marx, 2011; Federal Statistical Office, 2012b). Results calculated from the latest Micro-census Scientific Use File indicate that only 26 per cent of employed men and 30 per cent of employed women could generally arrange their working time flexibly according to their family demands, compared to 66 per cent of self-employed men and women. The number of self-employed women in Germany has increased proportionally more: from 780,000 to 1.3 million between 1991 and 2010 compared to a rise from 2.3 million to 2.9 million for men (Federal Statistical Office, 2012a). This is possibly related to the gendered division of responsibilities and the need for flexibility and control.

Limited evidence reveals that despite greater flexibility, self-employed workers have a higher overall work–life conflict compared to employees (Parasuraman and Simmers, 2001). Harris et al. (1999) also found a higher level of perceived work–life conflict for entrepreneurs of new ventures compared to white-collar, blue-collar or professional employees. The strong effect of working hours on the occurrence of work–life conflict might explain these findings. Figures from the German Micro-census reveal that self-employed men (44.2 hours/week) and women (31.8 hours/week) worked remarkably longer hours than their employee counterparts in 2011 (men: 35.4 hours/week; women: 26.7 hours/week) (Federal Statistical Office, 2012c).

In conclusion, flexibility as a job-related resource generally appears to decrease work–family conflict. In contrast, limited empirical evidence indicates a *higher* work–family conflict for self-employed people. Yet, expecting higher flexibility, individuals

increasingly opt for self-employment in Germany. However, none of the previous studies differentiated between time- and strain-based conflicts. Specificities in the German context – limited flexibility in employment and little institutional support for childcare – may require individuals to be able to manage actively and control their temporal boundaries between work and home. Against theoretical and empirical arguments on flexibility as a job-related resource, the self-employed are expected to experience less time-based work-to-family conflict.

As discussed before, intense involvement in one sphere can restrict active participation in another. This not only affects temporal but also mental engagement. Baron (1998) argues that entrepreneurs engage in careful and constructive thinking more often than others because of uncertainty and ambiguity in entrepreneurship. Entrepreneurs not only put considerable effort into their ventures but they also identify strongly with their work (Parasuraman and Simmers, 2001). In this context, Perrons (2003) shows that the vast majority of entrepreneurs in her sample from the media sector still think about work when at home. Findings from Markman et al. (2005) indicate that entrepreneurs exhibit stronger regretful thinking about their work than employed professionals. Work from Reynolds and Renzulli (2005) shows that the self-employed are more at risk of feeling overloaded with work. Hence, entrepreneurs not only devote actual working time to their venture but are also confronted with job-related mental demands because of financial, psychic and social risks (Hisrich and Brush, 1985). As a result, one would expect self-employed workers to experience a higher strain-based work-to-family conflict.

Hypothesis 1: self-employment decreases time-based conflict but increases strain-based work-to-family conflict.

Bivariate results from Reynolds and Renzulli (2005) provide a more differentiated picture regarding the direction of interference. Self-employed workers have a lower work–life conflict but a higher life–work conflict compared to employees. According to the authors, the lower interference of work in the private sphere can mostly be explained by the aspect of control and autonomy regarding the temporal and spatial arrangement of work. However, the downside of flexibility in self-employment is that boundaries between life spheres might be more permeable and family demands interfere more strongly in the work sphere, possibly increasing the likelihood of conflict (Ashforth et al., 2000; Clark, 2000; Peters et al., 2009). Furthermore, flexibility needs to be managed (Williams et al., 2008), which may take up time and energy. While self-employed people and flexible employees have to set their boundaries actively to manage demands from the work and the private spheres, more rigid paid employment induces physical and temporal distances between the individual and family/friends (Bach Pedersen and Lewis, 2012).

Families and households are still mainly organised by women. Family-related demands may therefore have different effects among men and women. Gallie and Russell (2009) find that weekly housework hours generally increase the conflict for both sexes. After differentiating by country, in Germany they find this only affects women. Despite the importance of subjective aspects for both sexes, previous research found that achieving a good work–life balance through the freedom and flexibility of

self-employment was specifically appealing for women (Carter et al., 2003; Duberley and Carrigan, 2013; Mattis, 2004; Orhan and Scott, 2001). Once in business, women tend to balance economic goals with personal goals and their personal life better than men (DeMartino and Barbato, 2003; Parasuraman et al., 1996). At the same time, female entrepreneurs spend more time on childcare and housework than female employees (Craig et al., 2012; Craig and Powell, 2012). Concerning work-to-family interference, results by Duncan and Pettigrew (2012) for Canada showed that (schedule) control and job autonomy were associated with less work–family conflict on a time-based level, while Steiber’s (2009) results across 23 European countries showed they improve work–family balance. However, this was only the case for women, which stresses the gendered responsibility for reconciling work and family. Hofäcker and König (2013) come to similar conclusions in their cross-country analysis: working time autonomy reduces work–family conflict for women but increases it for men. Regarding employment status, this study found more work–life conflict among the self-employed. However, after controlling for a variety of work characteristics this result was only significant for men, which reflects Duncan and Pettigrew’s (2012) study.

Family demands interfere more in self-employment and women might use temporal flexibility as a resource to adapt work to their family obligations. The gendered decision to become self-employed, rising self-employment among women and women’s main responsibility for the family in Germany may lead to a gendered effect of self-employment and flexibility on work-to-family and family-to-work conflict.

Hypothesis 2: self-employment and flexibility decrease women’s work-to-family conflict but increase women’s family-to-work conflict to a stronger degree than men’s.

Reynolds and Renzulli (2005) argue that self-employed and employed individuals have the same level of conflict if they have the same level of control over their working time.

Hypothesis 3: after controlling for job flexibility, self-employment does not decrease time-based work-to-family conflict and does not increase family-to-work conflict.

Method and results

Instrument and description of data

Data were gathered by an online survey and a Computer Assisted Telephone Interview (CATI) survey in Germany in 2010. The online sample was collected through different career networks deliberately to oversample highly career oriented individuals and the self-employed. The CATI sample was a random sample including a booster for self-employed individuals. Both samples were matched and a control variable for the sample category was included in the estimations. A total of 2347 respondents completed the questionnaire, including a high proportion of highly educated individuals with long average working hours. Elimination of missing and invalid values and individuals who were not living in a partnership with children substantially reduced the sample to 1395 individuals (see Table 1).

Table 1. Subsample description: limited to individuals in a partnership.

Variable	Mean (SD)	Mean (SD) men	Mean (SD) women	Percentage
Women				59.93
University degree				64.52
Children				61.26
CATI sample				38.06
Self-employed				48.32
Working hours	43.32 (14.28)	49.24 (12.20)	39.36 (14.21)	
Share of housework	54.18 (24.76)	36.50 (21.12)	66.00 (19.41)	
Flexibility	3.76 (1.18)	3.62 (1.19)	3.85 (1.16)	
Age	42.21 (9.47)	43.05 (10.27)	41.66 (8.87)	
Observations				1395

Ordinary least square (OLS) regressions were applied for the multivariate analysis of the data. Compared to logistic regressions, OLS offers the advantage of estimating the level of conflict instead of merely differentiating between the existence of high vs low conflict. Correspondingly, two models – separated by gender – were computed. A Wald test assigned the significance of gender differences between both models.

Measures

Work-to-family and family-to-work conflict (both time-based and strain-based) are the dependent variables in the regression analyses. These variables were administered in line with the items of the European Social Survey on a five-point Likert scale reaching from ‘very often’ to ‘never’. The questions were: ‘How often does your job or career keep you from spending the amount of time that you would like to spend with your family?’ (w–f time-based); ‘How often does your private-life keep you from spending the amount of time you would like to spend on job or career-related activities?’ (f–w time-based); ‘When you are at home, how often do you think about things you need to accomplish at work?’ (w–f strain-based) ‘When you are at work, how often do you think about things you need to accomplish at home?’ (f–w strain-based).

As independent variables, the actual number of working hours and the level of education as work demands were included in the model. To apply a comparable standard regarding working hours for employees and the self-employed, the average number of hours worked per week was used rather than contract working hours. The level of education was incorporated as a binary variable regardless of whether the individual held a university degree.

The share of household responsibilities and the presence of children represent family demands. The share of household tasks was administered as a percentage of all tasks that the individual is responsible for compared to his/her partner. Therefore, the share of both partners always adds up to 100 per cent, excluding external help.

Self-employed and employed people described their occupational status. In a second step, the degree of individual flexibility was included and classified on a five-point scale

Table 2. Descriptive results of independent and dependent variables by gender.

	Mean (SD) men	Mean (SD) women	T-test difference
W–F–Time	3.36 (1.20)	3.24 (1.19)	NS
F–W–Time	2.21 (1.10)	2.39 (1.24)	**
W–F–Strain	3.44 (1.36)	3.55 (1.24)	+
F–W–Strain	2.63 (1.13)	2.77 (1.22)	*

Note: + $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 3. Descriptive results of dependent variables by occupational status.

	Mean (SD) employed	Mean (SD) self-employed	T-test difference
W–F–Time	3.22 (.05)	3.36 (.04)	*
F–W–Time	2.21 (.04)	2.43 (.05)	***
W–F–Strain	3.17 (.05)	3.87 (.04)	***
F–W–Strain	2.70 (.04)	2.73 (.06)	NS

Note: + $p < .10$; * $p < 0.05$; ** $p < .01$; *** $p < .001$.

evaluating work flexibility achieved in the current position. This procedure provides a clear picture of the situation of self-employed workers and of which effects are mainly explained by greater flexibility in self-employment.

Since data were collected in two different ways and our online sample was particularly targeted at career oriented individuals, controls for respective subsamples were included. Finally, results were also controlled for the age of respondents in all our models.

Results

As shown in Tables 2 and 3, women tend to experience more conflict, especially with regard to family-to-work interference. Similarly, self-employed people have more conflict, especially concerning family-to-work time interference and work-to-family strain interference.

Our multivariate models (Tables 4 and 5) indicate that self-employed people have a slightly lower work-to-family time-based conflict (M1 male: $\beta = -0.15$, $p = .16$; M1 female: $\beta = -0.15$, $p = .08$). Including flexibility in the model, the above mentioned effect decreases and becomes insignificant (M5 male: $\beta = -0.07$, $p = .50$; M5 female: $\beta = -0.048$, $p = .56$); that is, self-employed people have a lower work-to-family time conflict mainly *due to* their higher flexibility. Furthermore, self-employed men and women are also confronted with a higher work-to-family strain-based conflict (M7 male: $\beta = 0.41$, $p = .00$; M7 female: $\beta = 0.53$, $p = .00$).

Self-employed people have a higher family-to-work conflict on a time-based level (M2 male: $\beta = 0.20$, $p = .06$; M2 female: $\beta = 0.26$, $p = .00$). Surprisingly, this effect

Table 4. Measurement model – men.

	M1	M2	M3	M4	M5	M6	M7	M8
	W–F–Time	F–W–Time	W–F–Strain	F–W–Strain	W–F–Time	F–W–Time	W–F–Strain	F–W–Strain
Age	0.0043 (0.41)	–0.0095+ (0.06)	–0.0051 (0.37)	–0.0085 (0.11)	–0.0029 (0.57)	0.0094+ (0.07)	–0.0048 (0.39)	–0.0085 (0.11)
University degree	0.18+ (0.09)	–0.025 (0.81)	0.26* (0.03)	–0.084 (0.43)	0.24* (0.02)	–0.022 (0.84)	0.27* (0.02)	–0.082 (0.44)
Working hours	0.037*** (0.00)	–0.0044 (0.37)	0.031*** (0.00)	0.0049 (0.32)	0.035*** (0.00)	–0.0046 (0.36)	0.030*** (0.00)	0.0048 (0.33)
Share of housework	0.0013 (0.60)	0.0034 (0.12)	–0.0057* (0.04)	0.0064* (0.01)	0.00072 (0.76)	0.0033 (0.12)	–0.0058* (0.04)	0.0064* (0.01)
Children	0.078 (0.48)	0.37*** (0.00)	–0.11 (0.37)	0.10 (0.36)	0.080 (0.46)	0.37*** (0.00)	–0.11 (0.37)	0.10 (0.36)
CATI sample	0.20+ (0.08)	–0.21+ (0.07)	–0.056 (0.66)	0.040 (0.73)	–0.23* (0.04)	–0.21+ (0.06)	–0.061 (0.63)	0.039 (0.74)
Self-employed	–0.148 (0.16)	0.20+ (0.06)	0.40*** (0.00)	0.0052 (0.96)	–0.070 (0.50)	0.21+ (0.06)	0.41*** (0.00)	0.0073 (0.95)
Time flexibility	1.67*** (0.00)	2.50*** (0.00)	2.11*** (0.00)	2.49*** (0.00)	–0.20*** (0.00)	–0.010 (0.81)	–0.036 (0.46)	–0.0053 (0.91)
Constant	559	559	559	559	559	559	559	559
Observations	0.149	0.038	0.155	0.023	0.185	0.038	0.156	0.023
R ²	0.138	0.025	0.145	0.011	0.173	0.024	0.144	0.009

Note: p-values in parentheses; robust inference; +p < .10; *p < .05; **p < .01; ***p < .001.

Table 5. Measurement model – women.

	M1	M2	M3	M4	M5	M6	M7	M8
	W-F-Time	F-W-Time	W-F-Strain	F-W-Strain	W-F-Time	F-W-Time	W-F-Strain	F-W-Strain
Age	0.0014 (0.76)	-0.0098* (0.04)	-0.0069 (0.16)	0.022*** (0.00)	0.0018 (0.70)	-0.0099* (0.04)	-0.0068 (0.16)	-0.022*** (0.00)
University degree	0.11 (0.23)	0.15 (0.13)	0.23* (0.01)	-0.062 (0.54)	0.085 (0.34)	0.15 (0.12)	0.22* (0.02)	-0.062 (0.54)
Working hours	0.032*** (0.00)	-0.018*** (0.00)	0.012*** (0.00)	-0.000014 (1.00)	0.029*** (0.00)	-0.017*** (0.00)	0.011*** (0.00)	-0.0000077 (1.00)
Share of housework	-0.00044 (0.85)	0.0041+ (0.06)	-0.00086 (0.70)	0.0063*** (0.01)	-0.00087 (0.68)	0.0042+ (0.06)	-0.0010 (0.65)	0.0063*** (0.01)
Children	0.14 (0.12)	0.76*** (0.00)	0.045 (0.61)	0.22* (0.02)	0.16+ (0.08)	0.76*** (0.00)	0.051 (0.56)	0.22* (0.02)
CATI sample	-0.24* (0.02)	-0.52*** (0.00)	-0.45*** (0.00)	-0.25* (0.02)	-0.31** (0.00)	-0.51*** (0.00)	-0.48*** (0.00)	-0.25* (0.02)
Self-employed	-0.15+ (0.08)	0.26** (0.00)	0.50*** (0.00)	0.065 (0.49)	-0.048 (0.56)	0.24** (0.00)	0.53*** (0.00)	0.065 (0.50)
Time flexibility	1.92*** (0.00)	2.71*** (0.00)	3.12*** (0.00)	3.22*** (0.00)	-0.22*** (0.00)	0.034 (0.30)	-0.082* (0.03)	0.00036 (0.99)
Constant	836	836	836	836	836	836	836	836
Observations	836	836	836	836	836	836	836	836
R ²	0.157	0.197	0.164	0.045	0.198	0.198	0.169	0.045
Adjusted R ²	0.150	0.190	0.156	0.036	0.191	0.190	0.161	0.035

p-values in parentheses; robust inference; +p < .10; *p < .05; **p < .01; ***p < .001.

remains almost constant after controlling for work flexibility. Thus, contrary to our hypothesis that blurred boundaries in self-employment derive from high time flexibility at work, the present results do not confirm this assumption since time flexibility itself does not increase family-to-work conflict (M6 male: $\beta = -0.01$, $p = .81$; M6 female: $\beta = 0.034$, $p = .30$).

Surprisingly, significant gender differences regarding self-employment and flexibility cannot be reported on any type of conflict. Rather, self-employment and flexibility do not lead to greater family interference and less work interference for women compared to men.

In line with previous research (Steiber, 2009), these results also reveal that high work demands increase work-to-family conflict on a time-based level (M5 male: $\beta = 0.035$, $p = .00$; M5 female: $\beta = 0.029$, $p = .00$) and a strain-based level (M7 male: $\beta = 0.030$, $p = .00$; M7 female: $\beta = 0.011$, $p = .00$) for both genders. In line with previous results (Jacobs and Gerson, 2004), we see that holding an academic degree – implying higher work demands – increases strain-based conflict. Regarding family and household demands, the presence of children in the household and a high share of housework increase family-to-work conflict for both men and women.

The results do, however, reflect a gendered picture when examining work and family demands and their effect on different types of conflict. The largest gender gap exists for time-based family-to-work conflict; children in the household increase this conflict for men and women, but the effect for women is significantly higher ($\chi^2(1) = 7.81$, $p = .0052$). The share of household tasks did not reveal any significant gender differences. With regard to work demands, high working hours reduce family-to-work time conflict for women, while the effect is insignificant for men ($\chi^2(1) = 4.85$, $p = .0277$). However, the conflict increasing effect of long working hours is significantly stronger for men than for women ($\chi^2(1) = 11.35$, $p = .0008$) concerning work-to-family conflict on a strain-based level.

One last gender difference occurs for the family-to-work strain-based conflict. Older women have a significantly lower level of conflict, while the age effect for men is insignificant ($\chi^2(1) = 3.39$, $p = .0655$). This finding might reflect an effect of children's age, which tends to correlate with parents' age. Accordingly, younger women – probably with younger children at home – have more strain-based conflict, because they must organise childcare for young children. Therefore the effect of the presence of children in the household is only significant for women, whereas the difference to men's conflict is not significant ($\chi^2(1) = 0.60$, $p = .4371$).

Discussion and conclusion

Building on Karasek's (1979) Demand–Control Model and Demerouti et al.'s (2001) Job–Demands–Resources Model, the present study attempted to offer insights on the effect of being self-employed on various forms of work–family conflict in a gendered context. From a first point of view, as suggested by our descriptive results, self-employed people generally seem to have a higher overall level of conflict when combining work and family. When differentiating the various types of conflicts in our multivariate analyses this picture becomes less definite.

Self-employment lowers the time interference of work with the family sphere because the self-employed benefit from higher working time flexibility. Nevertheless, perceived time flexibility at work must be regarded as a distinct job resource – both in self-employment and paid employment – beneficial to combining work and family demands. In line with Karasek's (1979) reasoning, high flexibility at work is also related to lower levels of strain and thinking about work at home. Low degrees of flexibility might complicate organising and planning work–family reconciliation while individuals are additionally confronted with persistent thoughts at home about arranging their family life around rigid work schedules. This finding complements insights from Hofäcker and König (2013). While they generally found that flexibility increases work–life conflict for men, interaction effects with welfare regimes indicated that this is less the case in countries with a conservative regime, like Germany. Hence, if corporations make work arrangements flexible and adaptable to the individual needs of their employees, they could lower work–life conflict and increase well-being for men and women. Specifically in the German context, it might also be important to change organisational cultures. Given the lack of employer consideration regarding reconciliation issues, managerial support and awareness for the needs of their employees have been found to be more important than the actual use of reconciliation practices (Premeaux et al., 2007).

Regarding other types of work–family interference, self-employed people tend to have more conflict between both spheres. Family and household obligations interfere more in their work than in that of employees. Blurred boundaries caused by working from home or higher availability expectations from family members due to higher work autonomy in self-employment can be an explanation. This effect might be especially pronounced in solo self-employment, where job autonomy is particularly high. For reasons of complexity, the present study did not differentiate between self-employed people working alone and self-employed people who have employees. Limiting the model to one category of self-employment must be seen as a limitation with regard to the generalisability of results across the heterogeneous group of entrepreneurs. However, more complex models indicate that self-employed women working alone have less work-to-family time conflict than self-employed women with employees. Differentiating between organisational characteristics thus opens opportunities for future studies. This would provide a more refined understanding of which aspects contribute to an entrepreneurial career being a demand or a resource.

Although higher strain-based conflict levels among the self-employed appear to be intuitive because the self-employed are thought to identify themselves more with their professions, our findings are new to research literature and have clear implications. Self-employed people do not have contracted work schedules or a fixed monthly income. Instead, they carry the responsibility for success, financial rewards and risks. Given this uncertainty, their thoughts are more likely to revolve around their business resulting in blurred temporal, spatial and mental boundaries. This implies from a theoretical lens that self-employment is a work demand. Control over this demand may be achieved by actively defining boundaries between work and life; for example, have more or less set work-schedules, clearly draw spatial boundaries between home and work as well as manage to set mental boundaries. Thus, with regard to different forms of entrepreneurship, self-employment as a work-related resource may not be a panacea if one cannot benefit

from flexibility. This might be particularly pronounced for high-growth entrepreneurs due to even higher work demands.

The gendered picture reflects prevalent and persisting gender roles in Germany and the contextual embeddedness of the conflict respectively the balance phenomenon. Children in the household significantly increase time-based conflict, especially for women, which reflects their higher responsibility for childcare. Surprisingly, long working hours significantly reduce time interference of family with work for women. This initially appears contra-intuitive, and also contradicts previous findings on a European level (Fahlén, 2012). German women with a high work load may lower their family-to-work conflict by shifting their family responsibilities to someone else; possibly (private) full-time childcare. Compared to full-time female employees, women who work part-time – which is common in Germany – and have fewer work obligations, still shoulder the main family responsibilities themselves and experience a higher level of conflict. Although part-time work has been the main instrument for work–family reconciliation, it appears that this lower job demand does not necessarily lower overall conflict. On the contrary, for women it increases family interference with work. This clearly gendered effect strongly supports the case that traditional roles persist in Germany and suggests a high double burden for part-time employed women. Furthermore, these results highlight that – at least in a context with limited external resources – some work characteristics can reduce conflict on one level (work-to-family interference), but increase it on another level (family-to-work interference). Similarly, self-employment can be seen as a resource regarding work-to-family time conflict, but as a demand for strain conflicts. Consequently, when applying the demands and resources approach to work–family conflict, it is essential to differentiate the various types of conflict. Based on these differentiated results, this study contributes to the existing demands-resources approach to work–life conflict by highlighting opposing directions depending on the type of conflict.

Besides these clear indications for the persistence of traditional gender roles, the lack of significant gender differences regarding self-employment and flexible work might indicate a shift. Thus, contrary to Duncan and Pettigrew (2012), Hofäcker and König (2013) and Steiber (2009), the presented results do not confirm that self-employment and flexible work are different means for women and men to adapt their work to their family obligations. However, the reader should not interpret this result as applying to the German context as a whole, as the sample targeted career oriented women. Furthermore, the statutory right to childcare in Germany by 2013 should improve availability of childcare and might consequently lower family demands on the individual level. Future research could study this possible change.

Another limitation of this study is the low explanatory power, especially of our model for strain-based family-to-work conflict. As previous studies already indicate, strain conflict and family-to-work conflict can only be explained by measurable household and work characteristics to a certain extent. Hence, strain-based conflict may be more complex and future research would benefit from improved instruments to measure it.

To sum up, this study provides a more detailed understanding of work–family conflict, highlighting that the differentiation between all four types of conflict appears to be of value for a refined theoretical perspective of the demand–resource approach regarding self-employment versus employment. Furthermore, the contextual embeddedness of the

different forms of work–family conflict also indicates the value of this distinction. Thus, the present work may provide a springboard to explore effective coping strategies (Ashforth et al., 2000), such as clarifying the spatial boundaries between family and work for self-employed people while blurring work–time boundaries.

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**Study III: Gender gaps along the earning distribution in
paid employment and self-employment in Germany**

Gender gaps along the earning distribution in paid employment and self-employment in Germany

Abstract

Gender earning gaps are frequently found and continuously investigated. However, gender gaps in self-employment are mostly neglected in the discussion. This employment form is expected to show lower gender earning gaps due to better reconciliation conditions and no employer discrimination. Nevertheless, the limited findings consistently suggest even higher gaps in self-employment. This study aims to shed more light on this puzzle by applying an Oaxaca-Blinder decomposition and quantile regressions, using data from the EU-SILC 2009 and 2010 for Germany. It can be detected that earning gaps are particularly high at the bottom of the distribution but lower at the top in self-employment. This is not the case in paid employment and suggests some chances for gender equality for self-employed top earners. Furthermore, the results highlight the importance of part-time work for explaining the gender gap in both employment types and additionally of the gendered prevalence of solo self-employment. Particularly in self-employment, the gender gap that cannot be explained by observable work characteristics is very high and calls for further investigations of this labour market group.

Keywords: Self-employment; gender gaps; glass ceiling; Germany; income

Introduction

Gender gaps in earnings are broadly researched and partly explained by differences in human capital and productive characteristics between men and women. Looking at the development over the last decades, the earning gap narrowed since the 1960s due to a higher educational attainment of women (Weichselbaumer and Winter-Ebmer 2005; Blau and Kahn 2000). Nevertheless, this process slowed down during the last 30 years (Blau and Kahn 2000), possibly due to the unequal division of unpaid work in the family (Datta Gupta and Smith 2002). Women might need to cut down their work effort to meet family responsibilities which leads to an explanation of the gender gap by family characteristics. However, studies frequently show that the gender earning gap is not entirely explainable by observable work and family characteristics. This unexplained gap is often assumed to mirror gender discrimination (Aisenbrey and Brückner 2008; Mincer 1974).

Most previous studies on gender income gaps focus on paid employment and deliberately exclude self-employed because of comparability issues concerning earnings or insufficient subsample sizes. Nevertheless, the group of self-employed is of particular interest with regard to this topic. First, self-employed women are not exposed to employers' discriminatory behaviour. Second, women often aspire self-employment for a better reconciliation of family and work demands. Self-employment offers a higher flexibility to adapt working time to family responsibilities without reducing work effort or turning to less paid part-time jobs. Thus, this type of employment offers some chances for women to avoid reduced earnings. However, the few empirical findings on this issue suggest higher gender earning gaps in self-employment compared to paid employment. This is surprising, given the potential advantages in self-employment.

This paper focuses on the neglected group of self-employed to shed light on gender gaps along the earning distribution in Germany. Furthermore, it aims to explain the earning gap by differences in work characteristics of men and women. Thereby this study shall provide some explanation for puzzling findings from previous research: while earning gaps are theoretically expected to be lower in self-employment, empirical results observe the opposite.

Earning gaps along the distribution

Many studies focus on gender differences in human capital to explain income gaps between men and women, following the *human capital theory*. However, especially when it comes to education, women's human capital is rising and about to be equal with men's (Blau and Kahn 2007; Aisenbrey and Brueckner 2008). Besides education as seed capital for employment, there are, however, still gender differences in the accumulation of human capital over the life span. Following family economic theories, women typically engage more in the family sphere, since they have disadvantages in the work sphere and a lower bargaining power (Lundberg and Pollack 1996) or since they try to maximize the family utility (Becker 1991). Thus, accumulating job related human capital is less rewarding for women, based on the assumption that their participation in employment is lower than men's. Women's incentives to invest in (firm-) specific training are also lower when they plan to interrupt their employment to get children (Polachek 2004).

It is assumed, that a great part of the earning gap between men and women is due to women's higher responsibility for household and childcare (Bryan and Sevilla-Sanz 2008; Hersch 2009). Women's main responsibility for the family is hardly reconcilable with high demanding job characteristics, such as overtime and work travels or even rigid full-time hours (for inflexible and odd hours: Anderson *et al.* 2003; Bonke *et al.* 2005; for travel and training: Stratton 2001). Hence, typical 'female jobs' tend to allow for higher flexibility and part-time options which can be seen as 'mother-friendly' (Budig 2001; England 2005). Trading higher income and better job position for family friendly working conditions is often referred to as *compensating differential argument* (Smith 1979) and serves as explanation for gender gaps at the labour market. Empirically, only weak evidence is found for this argument (Felfe 2011; Budig and England 2001), sometimes depending on the institutional context. Gash (2009) found preferences for lower paid jobs for mothers in the UK, were support for working mothers is weak.

From the labour market demand side of this story, the income gap between men and women is partly explained by *gender discrimination* (Becker 1985). Employers might assume that women are less suitable for higher positions due to their possible higher responsibility for the family (Acker 1990) and their assumed lower availability for

employment. This could lead to a statistical discrimination of women. High work demands regarding hours and flexibility are seen to cause conflict for the reconciliation with high family demands. Furthermore, employers' long-term investment in their employees with regard to on-the-job training discriminate against women who presumably interrupt their careers for childbearing (Polavieja 2008; Polachek 2004). Studies show that gender differences in training and gender different rewards for training are partly due to employers' discriminatory behaviour (Evertsson 2004). Therefore, discrimination by employers can lead to a crowding of women in low cost jobs or in part-time positions.

Both perspectives – the demand and supply side – are biased when it comes to job positions. High work demands can often be found in higher positions and high prestige jobs. On-the-job training or firm-specific skill accumulation is also more important in high-skilled occupations (Goldthorpe 2000), where career interruptions reduce the return of these investments (Estévez-Abe 2005; Polachek 1981). A study by Magnusson (2009) finds that women receive lower wage returns to high prestigious occupations compared to men. She explains this finding by managerial positions, lower employer driven investments in women's training, high availability demands in prestigious jobs and gender differences in wage bargaining.

Thus, attention has to be paid with regard to job position and earnings along the distribution which will be the focus of this paper. Compared to the average earning gap, a higher gap at the bottom of the income distribution is commonly referred to by the term 'sticky floor', while a higher gap at the top is described as 'glass ceiling'.

Looking at gaps between men and women along the income distribution, different results can be found depending on the institutional context. A recent study from Christofides et al. (2013: 87) states that gender gaps and glass ceilings across the 26 investigated countries 'are systematically related to work-family reconciliation policies and wage-setting institutions'. Mandel (2012) finds that in dual-earner supportive Scandinavian countries the gap is larger in higher socio-economic groups compared to all other welfare regimes, measured by educational level and earnings. In contrast, Scandinavian countries have a smaller gap for lower educated and low-earners, especially compared to the conservative regime. She concludes that policies supporting working mothers can reduce the gap for low-wage workers who depend on state support.

For high-wage workers on the other hand, generous state support might be less beneficial since they have financial resources to pay for e.g. private childcare. Generous leave options and public childcare availability might even have a ‘harmful’ effect since it might lead to discrimination by the employer when absence is expected. Nicodemo (2009) concludes from her study that countries with less generous family policies have larger wage gaps at the bottom. Accordingly, sticky floors were found in southern European countries (Nicodemo 2009), while glass ceilings were more prevalent in Scandinavian countries (Mandel 2012).

Additionally, different social policies are also shown to have different effects on gender gaps along the distribution. Halldén (2011) found out that publicly funded childcare decreases the motherhood wage penalty in general, while paid maternity leave is associated with a higher family wage gap, but only for lower skilled women. Her findings limit Mandel’s (2012) conclusions - that support for working mothers increase glass ceilings - to a certain degree and highlight the importance to look at different family support separately.

Germany is an interesting case in terms of the institutional context and shall therefore be investigated in this paper. The presence of young children in the household is assumed to reduce mother’s work effort and their wages since women are mainly responsible for family obligations. Hence, institutional childcare support can release mothers to some degree from their childcare responsibility. Institutional childcare for under 3-year olds is very scarce in Germany, possibly leading to longer interruption after childbirth. Even though the enrolment of this age group is rising from 9 percent in 2003 to 23 percent in 2012, it is far below the EU average (OECD 2014a). The length of parental leave is comparatively long in Germany and also rising from 56 weeks in 1990 to 148 weeks in 2011 with 73 paid weeks (OECD 2014b). Studies have shown that the length of parental leave had a negative impact on subsequent career moves (Evertsson and Duvander 2011) and accordingly earnings. Following Mandel (2012) and Halldén (2011), more generous parental leave options are expected to lead to more pronounced sticky floors. Empirically, both sticky floors and glass ceilings were found in Germany (Christofides *et al.* 2013), while one would theoretically expect stronger sticky floors.

Hypothesis 1: I expect to find stronger sticky floors than glass ceilings in Germany in the raw gap. Since employer discrimination plays a stronger role for high income women, I expect to find stronger glass ceilings after controlling for work characteristics.

Can self-employment be an option for more gender equal earnings?

In 2010, about 10 percent of all working persons are self-employed in Germany and 31 percent are women (Eurostat 2013). Thus, women are less likely than men to be self-employed, partly due to gender segregation in paid employment. Typical female jobs and occupations require less firm-specific skills. Additionally, the lower proportion of women in managerial positions and their higher selection into part-time decreases the chance to accumulate certain knowledge and specific training that is feasible for venture creation (Strohmeyer and Tonoyan 2005). A similar relation can be found for social capital which generally increases the likelihood to become self-employed: women invest less in social capital and are therefore less likely to enter self-employment (Mood and Backes-Gellner 2006). Thus, there might be a capital related selection of women into self-employment where those who are more similar to men regarding previous work characteristics are more likely to become self-employed. With regard to educational levels, the proportion of tertiary educated women is higher in self-employment than in paid employment in Germany (Eurostat 2010). This also mirrors the selection of higher qualified women into self-employment. A study by Mattis (2004) shows that 29 percent of women who left their employment in the private sector to become self-employed specifically mentioned hitting the glass ceiling as reason. Hence, when further career steps are not possible in dependent employment, self-employment can be an option.

On the other hand, some women who opt for self-employment despite lower qualification can generate larger gender earning gaps. Self-employment is particularly attractive for women with regard to reconciliation of work and private life. It offers higher work autonomy and time flexibility than paid employment which gives a promise for better reconciliation. Empirically, women with children are more likely to be self-employed (Gangl and Ziefle 2009; Boden 1999; Carr 1996; Connelly 1992). Furthermore, solo self-employment is more common among women than among men. This type of self-employment without employee responsibilities is connected to higher flexibility but also to a higher risk of exiting self-employment and to unskilled work

(Lohmann and Luber 2004). Gangl and Ziefle (2009) investigated several cohorts in Germany, Britain and the United States and found that motherhood increases the likelihood of the entry into self-employment together with mobility into lower-prestige jobs and typically female occupations. For all countries and cohorts, these types of job mobility were associated with lower wages which would suggest a higher earning gap in self-employment.

A study by Gather *et al.* (2010), using the German Socio-Economic Panel 2007, finds a gender earning gap of 35 percent in self-employment. The equivalent income gap in paid employment was lower (23%). However, this gap is only for full-time work, neglecting the large share of part-time working individuals and neglecting other work characteristics such as solo self-employment as explanation for this gap. Lechmann (2012) also finds a higher earning gap in self-employment (44%) compared to paid employment (36%) for gross monthly earnings in Germany. Some studies from other countries come to similar findings (for Australia: Eastough and Miller 2004; for Spain: Álvarez *et al.* 2003). Following these considerations, the empirical finding of a larger gender gap in self-employment can be expected. However, there are no studies in Germany that try to systematically explain this higher gap with differences in work characteristics.

Hypothesis 2: Due to employers' discriminatory behaviour, I expect to find a larger gender gap in paid employment compared to self-employment that cannot be explained by differences in work characteristics.

The empirical finding of a higher gender gap in self-employment seems contra intuitive for several reasons. First, if gender income gaps are partly explained by reconciliation problems of work and families, the gap should be smaller in self-employment than in paid employment due to a higher flexibility. Second, if women hit a glass ceiling in paid employment due to discrimination by employers, self-employment should be a way to avoid this discrimination. And third, if there is a selection of higher qualified women into self-employment, this should decrease the gender earning gap.

Previous research described this puzzling circumstance and suggested unobserved factors like gender differences in risk taking attitudes or gender discrimination by customers to explain this finding (Lechmann 2012). However, all these counter-

arguments rather address higher qualified women. Following Budig and Hodges (2010) argument, lower qualified women might adapt to reconciliation problems by choosing part-time jobs while higher qualified women can be pulled into self-employment to achieve flexibility without cutting down their working hours and thereby their earnings. Additionally, high qualified women also avoid statistical discrimination for higher positions by opting for self-employment. Empirically, Budig (2006) finds the largest motherhood penalty in earnings for non-professional self-employed, compared to professionals and wage workers. A study by Giesselmann (2015) finds a higher risk of women in Germany compared to the UK to have very low earnings which is related to atypical employment, such as part-time work and self-employment. He concludes that labour market deregulation leads to an increasing integration of women into atypical employment at the periphery of the labour market. Due to activation policies, women are more likely to experience in-work poverty in atypical employment instead of non-work poverty. Therefore, gender gaps at the bottom of the earning distribution are supposedly very high in self-employment. To my knowledge, there are no previous studies emphasizing on gender gaps along the earning distribution in self-employment. I assume that gender gaps in self-employment are particularly high at the bottom but not at the top of the earning distribution.

Hypothesis 3: In contrast to paid employment, I expect no glass ceiling in self-employment.

Data and method

To investigate gender gaps in earnings for the self-employed and employees, this study uses data from the EU-SILC (European Union – Statistics on Income and Living Conditions) which was established to provide indicators for social cohesion, such as the gender income gap.

Due to the low percentage of self-employed and the lower likelihood of this group to respond to income surveys (Church and Verma 2001), the years 2009 and 2010 are pooled together in order to achieve a sufficient sample size.

The sample is restricted to individuals between 17 and 65 who were either employed or self-employed and were working during all 12 months of the income reference period either part-time or full-time. Individuals who switched between their employment

statuses throughout the 12 months were excluded to obtain clear cut samples. For the analysis, I differentiated between the *full-time sample*, where all individuals worked full-time for the full year, and the *working sample*, where part-time workers were included. Due to the low prevalence of men in part-time, analysis for only the part-time sample were not possible. Additionally, individuals with missing values on any used variables are excluded.

For this study, gross cash benefits or losses from self-employment or gross employee cash income measured total earnings for the respective employment type. The dependent variable in this study is the natural logarithm of annual earnings. Using annual earnings instead of hourly earnings is necessary for the setup of this study. Due to the large variance in working hours among the self-employed, hourly earnings would already control for an important determinant of earnings and the raw gap would be underestimated. To get a clear picture on how working hours are related to earnings, this study differentiates between a full-time sample and a working sample. Additionally, working hours are included to explain the gender earning gap. The word ‘income’ is only used when talking about paid employment. Otherwise, ‘earnings’ is used when referring to self-employment or both employment forms.

Information on the employment status is obtained via the main activity throughout all 12 months. The managerial position is included by a dummy for supervisory status in the employed model, and a dummy for solo self-employment (self-employed without employees) in the self-employed model.

Three dummies for the educational level are included. ISCED levels 0-2 are coded as low, levels 3-4 are coded as middle and level 5-6 as high education. For the occupational field, the ISCO-88 is summarized into four groups and included as dummies: (1) unskilled workers (clerks, operators, and elementary occupations), (2) managers and professionals, (3) technicians and associate professionals, and (4) other occupations (craft and related trades workers; service workers, and shop and market sales workers). Armed forces are excluded.

As family background, the presence of a spouse or partner and children up to 18 years in the household are included.

Last, age at the time of the survey and two dummies for the two years of the survey serve as control variables. According to numbers from the OECD employment database (2015), the gender wage gap hardly changed between both years in Germany.

An Oaxaca-Blinder decomposition (Oaxaca 1973; Blinder 1973) is applied to find out the role of gender differences in job characteristics for explaining the earning gap for each employment form. Quantile regressions are used to estimate the gender gaps along the earning distribution and to detect glass ceilings and sticky floors. Standard errors are corrected with a bootstrap estimation for 100 times. A second regression controlled for work and family characteristics to adjust the gender gap. Glass ceilings are defined as having a significant difference (carried out by F-tests) between the highest percentile and the median respectively the 75th percentile which is tested after running simultaneous quantile regressions. Sticky floors are constructed accordingly, testing the difference to the lowest percentile.

Table 13: working sample description (including part-time workers)

	Women		Men	
	Self-employment	Paid employment	Self-employment	Paid employment
N	526	9812	839	10362
Average age	48	45	47	44
Average working hours	35.2	32.1	49.0	42.8
High education	66.7%	43.8%	69.5%	49.6%
Supervisor / with employees	32%	17%	49%	34%
Partner	72%	69%	80%	76%
Children	46%	45%	50%	49%
Part-time (full year)	35%	47%	13%	4%
Unskilled workers	6%	27%	5%	23%
Managers / professionals	44%	19%	43%	29%
Technicians	25%	36%	25%	23%
Other occupations	24%	19%	26%	26%
Median annual earnings in 20 000 Euro (full-time)		30 000	37 000	37 299
Median annual earnings in 15 000 Euro (including part-time)		21 704	34 000	36 708

Results

To investigate the gender gap due to compensating differentials, an Oaxaca-Blinder decomposition is conducted. Thereby, the gap is decomposed into an explained part, which is due to differences in work characteristics of men and women, and a remaining unexplained partⁱ. The output below shows the exponential form of the dependent variable of logarithmic earnings for an easier interpretation, as suggested by Jann (2008).

Table 14: decomposition of the gender gap in annual earnings (paid employment)

	Fulltime sample (N=15074)		Working sample (N=20086)	
	Exp (b)	Robust SE	Exp (b)	Robust SE
men	35119.27***	215.61	33820.58***	218.35
women	26758.1***	226.53	17997.17***	154.68
difference	1.312***	.014	1.879***	.020
explained	1.030***	.008	1.510***	.014
-by working hours	1.032***	.002	1.463***	.011
-by position	1.031***	.002	1.032***	.002
unexplained	1.274***	.012	1.244***	.012

Explained by working hours, managerial position and occupational field

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

The mean annual gross income is 35119 Euros for men and 26758 Euros for women in the *full-time sample* in paid employment. Therefore, the difference is 31.2 percent. Adjusting for gender differences in working hours, supervisory status and occupational

ⁱ The gender gap presented by the decomposition is by definition different from the gender income gap that is often referred to in official statistics. The OECD (2015) defines the gender gap as the difference between men's and women's median full-time earnings divided by men's median full-time earnings. The gap presented here is the raw difference between men's and women's mean earnings.

field, women's income would increase by 3.0 percent. Thus, in the full-time sample, the compensating differential argument is rather weak. A gender income gap of 27.4 percent is unexplained.

In the *working sample* with full-time and part-time workers, the gender difference is much higher with 87.9 percent. An unexplained gap of 24.4 percent remains after adjusting for differences in working hours, supervisory status and occupational field. Women's income would increase by 51.0 percent through an adjustment of these characteristics to men's levels, whereof 46 percent of this increase is due to differences in working hours. This highlights the importance of part-time prevalence for the gender income gap in paid employment and gives some evidence for the compensating differential hypothesis with regard to working hours.

Table 15: decomposition of the gender gap in annual earnings (self-employment)

	Fulltime sample (N=1075)		Working sample (N=1365)	
	Exp (b)	Robust SE	Exp (b)	Robust SE
men	35047.04***	1304.38	31788.58***	1184.16
women	20507.22***	1300.56	13325.96***	777.21
difference	1.709***	.13	2.385***	.17
explained	1.195***	.05	1.613***	.07
-by working hours	1.156***	.03	1.478***	.06
-by solo	1.062**	.02	1.099**	.02
unexplained	1.431***	.10	1.479***	.10

Explained by working hours, solo self-employment and occupational field

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The difference for mean annual earnings among self-employed is 70.9 percent in the full-time sample. An adjustment for differences in working hours, for the prevalence of solo self-employment and for occupational field would increase women's income by 19.5 percent. Solo self-employment accounts for 6 percent of this increase in the full-time sample. A gap of 43.1 percent remains unexplained by these adjustments.

The difference for mean annual earnings among the self-employed is 138.5 percent in the working sample. An adjustment for differences in working hours, for the prevalence

of solo self-employment and for occupational field would increase women's earnings by 61.3 percent. If women worked as many hours as men, their earnings would increase by 47.8 percent. This increase is almost the same as in the working sample in paid employment. The higher prevalence of solo self-employment among women accounts for 10 percent of the gap. A gap of 47.9 percent remains unexplained by the adjustments.

The unexplained gap is higher in self-employment compared to paid employment. Hypothesis 2 is therefore not supported by these results. To explain the higher gap in self-employment, it is accordingly not enough to control for differences in work characteristics. An additional explanation is provided by the results from the quantile regressions.

Owing to the institutional context of Germany with low childcare provisions and long parental leave, glass ceilings and strong sticky floors are expected in paid employment.

Table 16: quantile regressions

	Fulltime sample				Working sample			
	Paid		Selfemployed		Paid		Selfemployed	
	N=15074		N=1075		N=20086		N=1365	
	Raw	Adjusted	Raw	Adjusted	Raw	Adjusted	Raw	Adjusted
q10	.405***	.222***	1.012***	.659***	1.229***	.205***	1.270***	.642***
q25	.292***	.194***	.550***	.407***	.788***	.200***	1.100***	.397***
q50	.218***	.166***	.600***	.328***	.519***	.179***	.818***	.359***
q75	.230***	.184***	.467**	.278***	.414***	.212***	.726***	.310***
q90	.290***	.191**	.387***	.123	.416***	.220***	.545***	.181+
10-25	19.20***	3.54+	6.50*	3.45+	537.66***	0.09	1.32	5.21*
10-50	57.37***	10.35**	4.38*	4.17*	1286.43***	1.34	7.83**	5.09*
50-90	37.41***	3.50+	4.02*	2.13	54.01***	12.82***	8.74**	2.37
75-90	39.29***	0.33	0.58	1.59	0.04	0.87	4.03*	2.19

The adjusted gap controlled for the year of the survey, working hours, age, managerial position, occupational field, education, children and presence of children and a partner.

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Taking a closer look at this gap with quantile regressions, glass ceilings and sticky floors can be observed in the *full-time sample* of paid employment. The differences between the lowest and the middle quantile, respectively between the highest and the middle quantile are highly significant for the raw gap. After controlling for working hours, age, managerial position, occupational field, education, presence of children and a partner and the year of the survey, the effects remain, however less strong and less significant. In the *working sample*, where part-time workers are included, the sticky floors disappear while a highly significant effect remains for the glass ceiling between the 50th and the 90th quantile. Hypothesis 2 is supported in the working sample in paid employment. Sticky floors are stronger in the raw gender gap, but only a glass ceiling can be found after controlling for work characteristics. In the full-time sample, sticky floors remain stronger even after controls.

In the self-employed *full-time sample*, the gaps are much higher but there is no indication for a glass ceiling. In fact, the gap is even lowest in the higher quantiles. After including control variables, some indications for sticky floors remain. The picture in the *working sample* for self-employment is similar which supports hypothesis 3, suggesting that there is no glass ceiling in self-employment after controlling for work and family characteristics.

Discussion and conclusion

Despite rising support for working mothers, female care giving is still fostered in Germany and there is a higher selection into employment. The selection of women into different jobs and positions that are presumably better compatible with family demands explains a significant part of the earning gap. However, the main driving factor in Germany is part-time work in both forms of employment which gives some evidence for the compensating differential argument. Interestingly, an adjustment of working hours leads to a very similar increase of around 47 percent in women's earnings in both forms of employment. Thus, gender earning gaps are similarly related to working hours in self-employment and paid employment. In the case of self-employment, working without employees is an additional strong factor for explaining the gender earning gap. This form of employment offers more flexibility but is related to lower earnings.

The results from the quantile regression allow for a detailed interpretation of income gaps along the distribution in paid employment in Germany. Sticky floors can be found even after controlling for work and family characteristics in the full-time sample. This might indicate a stronger discrimination of women in lower paid jobs compared to the mean percentile that cannot be explained by observable characteristics. Following Halldén (2011), one explanation might be that the option for long parental leave combined with poor public childcare for under 3-year olds leads to a higher statistical discrimination from employers for lower paid full-time employees to reduce the risk of absences. Even though Mandel (2012) argues that employer discrimination should rather affect high earners due to employers' higher costs in case of absence, there are arguments against this statement. Long absences might be more common among lower paid workers, since career orientation and opportunity costs might be lower and private childcare arrangements not affordable. My results suggest that employer discrimination does affect low earners in the specific context of Germany. This highlights the

importance of taking different aspects of the institutional context into account when interpreting gender income gaps along the distribution.

The result that differences from the bottom to the median percentile are not significant after controls in the working sample might mirror the selection of women into employment. Low qualified women at the bottom might opt out of the labour market instead of working for rather low pay in a part-time job. Particularly in Germany, where support for working women is still low, leaving the labour market might be a financially attractive option for low income women, when they have to take care of children.

The existence of a glass ceiling in Germany is well documented (e.g. Christofides *et al.* 2013). The results show that higher gender gaps at the top of the distribution are mainly due to a stronger selection of women in less favourable work characteristics and a higher penalty for having a family since the glass ceiling almost disappears after controlling for observable characteristics in the full-time sample. In the working sample, a highly significant glass ceiling remains between the 50th and the 90th quantile. Since this gap is less strong in the full-time sample, a possible interpretation could be the stronger discrimination of employers to promote part-time workers into better paid positions. This finding sheds more light on the results of the decomposition, where working hours explained a great part of the overall earning gap, potentially because very high earnings are less common in these positions.

Turning to the results for self-employment, the picture of earning gaps along the distribution differs from employed individuals. Gender gaps in self-employment are higher than in paid employment which is in line with previous findings (Gather *et al.* 2010; Lechmann 2012). The gaps at the top of the distribution are, however, even lower than at the mean percentile. Accordingly, no glass ceiling can be found for the self-employed. There are not even significant earning differences between men and women in the highest percentile of the earning distribution after controlling for work and family characteristics. In this sense, self-employment can be seen as a good career option for highly qualified women. Nevertheless, it has to be kept in mind that this finding is only the case for a small proportion of women who do not differ from men regarding their work characteristics.

Sticky floors, on the other hand, are found for the raw and the adjusted gaps in self-employment. In particular for the lowest income percentile, gender earning gaps are very high. This finding is in line with the literature on self-employment as an option to combine family demands and work. It might mirror the selection of less qualified women who choose self-employment as a means for reconciling work and family. Since these gaps are especially strong in the working sample compared to the sample in paid employment, I would go one step further in the interpretation. Women who opt out of the labour market instead of working for low pay in paid employment might consider self-employment as another possible option. This is in line with suggestions by Giesselmann (2015) who finds that in-work poverty for German women is related to atypical employment. In the particular case of self-employment, women might have better chances to combine work and family demands under their own terms. They could adjust their work hours or location according to their private demands instead of dropping out completely.

This interpretation can also help to understand the unexpected finding for the higher unexplained gap in self-employment compared to paid employment. Even after controlling for work characteristics, the unexplained gap is still higher in self-employment. Previous research assumed that this might be due to unobserved differences such as risk taking behaviour or gender discrimination from customers (Lechmann 2012). However, following the interpretation for the high gaps at the bottom of the earning distribution in self-employment, the selection into lower earning segments of self-employment instead of dropping out of the labour market might be an additional explanation.

To conclude, this study sheds more light on the gender gap in self-employment compared to paid employment. While theoretical argumentations suggest a lower earning gap in self-employment, empirical results frequently found higher gaps. From the findings of this study it becomes clear that the gaps are particularly large at the bottom but small at the top of the earning distribution. Therefore, self-employment might be a chance for a small group of high achieving women to avoid statistical discrimination or even to combine family demands with a financially successful career. The overall large gaps in the lower percentiles and also the high unexplained gap on the other hand rather picture a disadvantage for most women in self-employment. These

findings in combination with previous literature also suggest that self-employment might be an option instead of opting out of the labour market. Women's very low earnings in self-employment might be due to adjusted work preferences that are not possible in paid employment.

There are several limitations impaired with this study. Due to complexity reasons, this study does not provide insights into direct effects of family and children. Further research is needed in this regard. A longitudinal approach would be interesting to investigate transitions from paid employment into self-employment or before and after childbirth for further knowledge on the advantages of self-employment regarding reconciliation and career success. Last, the findings are interpreted in the German context which presumably plays an important role for understanding gender gaps and reconciliation issues. Further analyses should apply a comparative perspective to investigate the importance of the institutional settings for earning gaps along the distribution in self-employment.

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**Study IV: Previous careers, last jobs or families – what
determines gendered retirement timing in Germany,
Denmark and Sweden?**

Previous careers, last jobs or families – what determines gendered retirement timing in Germany, Denmark and Sweden?

Abstract

Women often retire earlier than men but live longer, which makes them an important focus group in the debate on active ageing pension system sustainability. Retrospective data from SHARELIFE is used to run an event history analysis on the timing of final employment exit, separately by gender, country and exit cohort. This study aims to disentangle the influence of gendered labour markets and pension regulations with regard to gendered retirement timing by investigating three countries: Germany, Denmark and Sweden. Some indication can be found that women compensate for lower labour market attachment due to long part-time periods by working longer in old age, especially in younger cohorts. This seems to depend on the pension system. In countries with high basic pensions and fewer penalties for early retirement the compensation was found to be less relevant. Furthermore, this study indicates the growing importance of the compensation hypothesis compared to the status maintenance hypothesis of previous careers in relation to retirement timing. Additionally, characteristics of the last job are investigated but do not confirm a clear gendered picture. Job strain rather reduces exit ages while work autonomy tends to be related to higher exit ages. Last, family characteristics play an important role for women's retirement decision, but not for men's which contributes to the explanation of the persistent gender gap.

Keywords: retirement timing, gender, compensation hypothesis, job characteristics, labour market attachment

Introduction

Studying influences on retirement timing with a focus on women becomes more and more important in the discussions on sustainable pensions. Typically, women retire earlier but live longer than men, which makes them an important focus group to address this issue. After reforms in pension systems have taken place in most European countries within the last two decades, the concern had been raised that women might be disadvantaged by these reforms (e.g. Guardiancich 2012). The individualization of pension benefits, the switch from defined benefit to defined contribution and the accumulation of benefits over the life-span aimed at making pensions more sustainable. At the same time, these developments shift economic risks towards the individual and implicitly disadvantage those with lower labour market attachment and shorter working lives which is more prevalent among women (Ebbinghaus and Neugschwender 2011; Brugiavini and Peracchi 2005).

By investigating women's careers and labour market attachment, some insights could be gained for their retirement decision. Women's careers are often characterized by interruptions, part-time employment and lower income which are often not considered in the active ageing debate (Ginn 2003; Foster 2011). It is suggested that pension systems did not adapt to more flexible careers and rising atypical employment, which is both more common among women than among men (Hinrichs and Jessoula 2012).

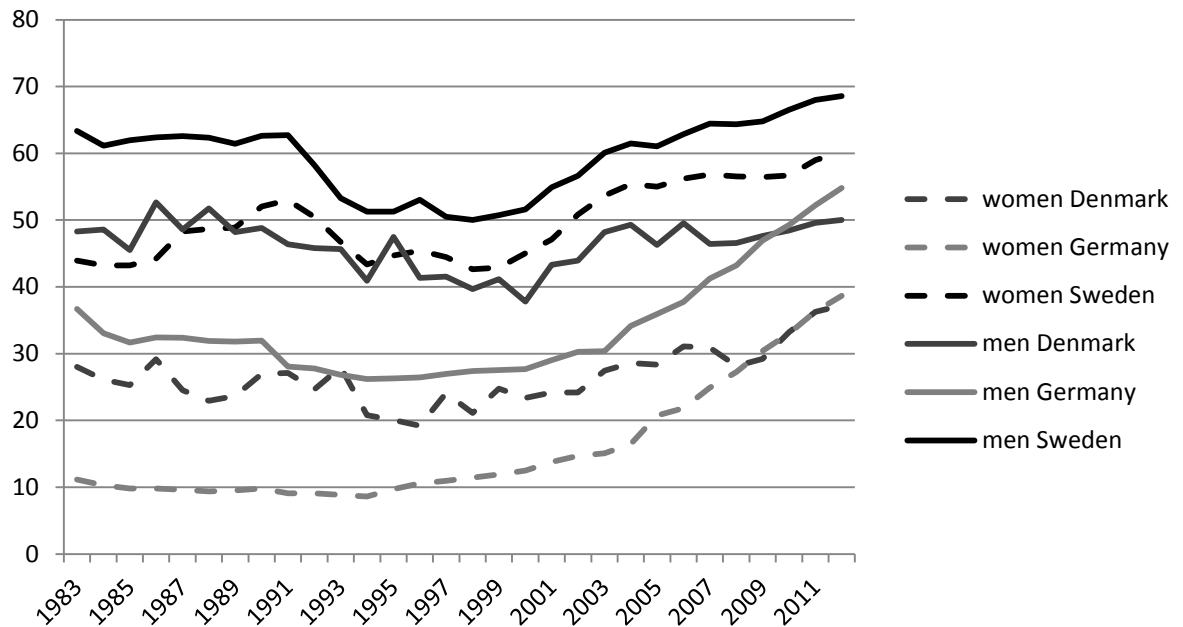
Beside differences in pension systems, this perspective has a clear country specific connotation. Countries with comparatively low gender gaps in employment can also be expected to have lower gender gaps in retirement timing. Analysing career histories and interruptions with regard to the timing of retirement, this approach asks for countries where women have comparatively long working careers. Lyberaki et al. (2010) investigated labour market attachment for women in Europe and found the longest careers in the Nordic countries. Central European countries were close behind the Nordics. In this study, I compare Germany, Denmark and Sweden. While both Scandinavian countries have a long history of gender equality at the labour market, Germany had - and still has - a stronger orientation towards the male breadwinner model. This makes a comparison interesting and follows the call for future research with respect to country specific gender differences in career histories in relation to outcomes in later life (Möhring 2015).

By linking previous career experiences to retirement timing, this study aims to provide a bridge between gender inequality during the life course and gender differences in retirement timing. Beside the effects of career history, I plan to investigate characteristics of the last job which has been proven to affect retirement timing. However, there is a lack of knowledge on whether these characteristics influence women and men differently. Thus, this study aims to disentangle the relationship between career characteristics and work characteristics as influence on retirement timing in a gendered context in Germany, Denmark and Sweden.

Context of retirement timing in Germany, Denmark and Sweden

Throughout the last decades, retirement timing and its context changed markedly. In times of labour market shortage, older workers were frequently either pushed or pulled into early retirement to rejuvenate the workforce (Buchholz, Hofäcker and Blossfeld 2006; Ebbinghaus 2006; Kohli et al. 1991), to stay competitive and adaptive to economic changes (Buchholz et al. 2011), and decrease unemployment (Hofäcker and Pollnerová 2006). These early retirement options had been particularly popular in the 1980s and 1990s in countries with a rigid insider/outsider market, prevalent in Southern and Continental Europe (Hofäcker and Pollnerová 2006). Owing to population ageing and the increasing financial burden of pensions, a reverse trend can be observed since the beginning of 2000 (Ebbinghaus and Hofäcker 2013). The goal is shifted towards maintaining older workers by closing early retirement pathways and raising the statutory retirement age. Additionally, emphasis was placed on private pensions to disburden public expenditure (Ebbinghaus 2006). Instead of giving incentives to retire early with relative low pension income losses during the heydays of early retirement, these losses are comparatively high in many countries after thorough pension reforms. Thereby, public pension systems are less protective regarding inequalities and employment risks in old age. Hence, labour market risks are increasingly individualized (Buchholz et al. 2011). To keep it short, since the end of the 1990s, early retirement pathways were restricted or abolished, eligibility criteria for early retirement pensions were limited and statutory retirement age was increased in Germany to the level of Denmark and flexibilized in Sweden. Thereby, retirement before the age of 65 was financially penalized and longer working lives were incentivized.

Figure 6: Employment rates age 60-64 by gender



Source: OECD (2014). *LFS by sex and age - indicators*

Looking at employment rates of 60 to 64 year old workers by gender, the increase after the turn of the millennium is visible for all three countries. Furthermore, a persistent gender gap in employment rates can be detected, more strongly in Germany and Denmark. Thus women are less likely to be employed at this age since they retired or dropped out earlier.

Labour market attachment, gender and family aspects of retirement timing

Pension benefits are often constructed on a typical lifelong fulltime career. However, atypical employment, career interruptions and phases of unemployment as well as part-time work are increasing and common among women. Following theories of “cumulative stratification”, gender inequality throughout the life course affect financial resources, retirement decisions and extended work life (e.g. O’Rand and Henretta 1999; Raymo et al. 2010; Finch 2013). Several studies related family aspects and career interruptions to retirement timing. However, the direction of this relationship does not offer consistent results. One main reason for this inconsistency might be the role of pension income. While some features of the employment history (e.g. interruptions,

part-time phases) might lead to lower income and thereby the need to work longer to achieve a decent pension income on the one hand, the same features might lead to earlier retirement due to lower labour market attachment on the other hand. Therefore, two different lines of argumentation can be found and will be described in the next sections.

The status maintenance hypothesis

Long and constant work careers might lead to higher retirement age according to the “status maintenance” argument (Hardy 1991). Some studies found affirmation of this thesis where women with more stable and longer labour market participation and fewer or shorter interruptions (Pienta et al. 1994; Finch 2013) as well as women who remain employed during their childbearing years (Henretta et al. 1993; Pienta 1999; Pienta et al. 1994) are more likely to work longer. This is explained by a higher work orientation, more rewarding careers and better negotiating power at the labour market (Finch 2013). Along this line, a French study found that women who had a low attachment to the labour market with long periods of non-employment more often exit the labour market before the age of 60 (Collet et al. 2013).

Marital status and children are often used as a proxy for lower labour market attachment. A study by Hank and Korbmacher (2010) found a higher likelihood for mothers and married women to retire early compared to their childless or unmarried counterparts. For fathers in comparison with childless men on the other hand, this relation is revers. This finding is interpreted with a weaker labour market attachment for mothers and with higher breadwinner responsibilities for fathers.

H1a: Following the status maintenance hypothesis, low labour market attachment leads to earlier labour market exits.

In order to pose country specific hypotheses it is necessary to take the institutional context of the three countries into consideration. It is well reported that Germany is more gender segregated than the Scandinavian countries in terms of labour marked participation. Germany, in contrast to Denmark and Sweden, has a long tradition of the male breadwinner model where women are often only secondary earners. Career interruptions due to childbirth are rather long in Central European countries (Lyberaki et al. 2010) and dropping out of the labour market after the childbirth is also much more

common in (West-) Germany compared to Denmark and Sweden (Brugiavini et al. 2010). Welfare state arrangements mainly rely on a concept of an average life course oriented on labour market participation. Especially in the Nordic countries, the welfare state is based on an active society striving for full employment (Halvorsen and Jensen 2004) and thereby continuous working careers. Pension reforms individualized pension entitlements that are often based on lifelong careers and individual income. Since women's careers are less continuous and gender income gaps prevail due to e.g. labour market segregation and part-time employment, pension entitlements also have a gender component (Ebbinghaus and Neugschwender 2011; Fredriks and Maier 2008).

Additionally, the high necessity for part-time work especially for young mothers and the high part-time rates of women in Germany might contribute to a lower labour market attachment. Accordingly, it could be expected that the largest gender differences in retirement timing can be found in Germany. However, Hank (2004) and Hank and Korbmacher (2010) highlight the possibility that mothers in conservative countries like Germany might be a rather selected group since the drop-out rate is comparatively high and mothers returning to the labour market might be marked by a higher labour market orientation than the average in social-democratic or post-communist countries. Indeed, Hank and Korbmacher (2010) find a stronger association between childbirths and early retirement in the Nordics and the Eastern European countries.

H1b: Low labour market attachment leads to earlier exits in Sweden and Denmark compared to Germany.

The compensation hypothesis

Contrary to the status maintenance hypothesis, an economical argumentation can be found in the literature. It is argued that certain career characteristics – often reflecting family responsibilities – lead to a later retirement age since preferred work positions and status might be achieved later (Raymo et al. 2009) and since they decrease pension income (Bardasi and Jenkins 2002; Evandrou and Glaser 2003; Evandrou and Glaser 2004). Career interruptions (Raymo et al. 2009; Yabiku 2000; Pienta 1999), part-time work (Finch 2013) and atypical employment (Hinrichs 2012) were found to decrease pension income. Thereby they might increase the risk of necessity driven late retirement. Since these characteristics are more common among women's careers due to care

responsibilities, the compensation hypothesis might be more relevant for women to make up for accumulated “opportunity costs” (Pienta et al. 1994). Indeed, career histories were found to have a higher explanatory power for women’s pension income compared to men’s (Möhring 2015). Evidence for this hypothesis regarding retirement timing, however, is scarce. The study by Hank (2004) for West-German women directly investigated the effect of years at the labour market on the retirement timing and finds out that longer careers up to age 50 lead to earlier transition to retirement.

H2a: Following the compensation hypothesis, low labour market attachment leads to later exits.

To sum up these partly contradictory results, it can be argued that unless the financial need is too high, there is rather “status maintenance” for older workers (Hardy 1991) where those who are well attached to the labour market leave later while those who have interrupted careers leave earlier. Hence, the effect of work histories and family characteristics on retirement timing depends on the financial situation and thereby also on the cultural and institutional context.

Different pension systems have the potential to counteract for accumulated losses. A study by Hofäcker (2015) on retirement preferences related the effect of previous unemployment spells to retirement timing in different countries. He finds indication for the compensation hypothesis for men in countries with high employment support (e.g. Sweden and Denmark) who had experienced long-term unemployment. The opposite effect was found for women in countries with low employment support: those who experienced unemployment preferred to retire earlier. For the country cluster including Germany, this study did not find an effect for previous unemployment. However, it might be relevant to look at the particularities of each country.

In Denmark, the replacement rate for low income workers is comparatively high (OECD 2013) partly due to a generous basic pension. The study by Möhring (2015) shows that the impact of career histories on women’s pension income is generally less strong in pension systems with basic pensions. Therefore, the generosity of the Danish basic pensions could prevent women from compensating lower career attachment. In comparison, all three countries offer targeted, resource-tested minimum pensions but the coverage is very low in Germany (2%) and Sweden (1%), while 88 percent of the

Danish population over the age of 65 receive this type of pension. There is an additional contributory minimum pension in Sweden with a higher coverage of 42 percent (OECD 2013). However, this scheme links benefits to continuous contribution over the life time. In addition to generous basic pensions in Denmark, a rather generous early retirement scheme (Danish: efterløn) is still available after the reforms. Hence, the compensation hypothesis can be expected to play only a minor role in Denmark.

Given the male breadwinner context in Germany, women often rely on their husbands (pension) income. In addition, occupational pensions are more common among men than women. Hence, at least on a household level it is argued that women profit indirectly from their partners' pension income (Ebbinghaus and Neugschwender 2011). Therefore, I expect the compensation hypothesis to be less strong for German women.

In Sweden, on the other hand, pension benefits derived from marriage have been suppressed (Anxo et al. 2012). A report on the reformed pension systems in Europe (Natali and Stamati 2013) argues that career interruptions due to childcare and shorter unemployment periods (up to three years) are rather well protected in the Swedish pension system. Pension entitlements in Sweden are not only linked to lifetime earnings but also to other benefit receipts like sickness, unemployment or parental benefits (Anxo et al. 2012). However, a Swedish study finds that after controlling for late career characteristics, especially income at age 60, Swedish women retire later to accumulate more benefits to make up for career interruptions, as suggested by Sjögren Lindquist (2011). A similar study for Germany does not come to this result (Rinklake and Buchholz 2011). Furthermore, according to the report on 'Part-Time Work in the Nordic Region', the pension system in Sweden is more actuarial compared to e.g. the Danish system. The loss in pensions due to part-time work is relatively small in Denmark but higher in Sweden (Lanninger and Sundstroem 2014). Looking at old age poverty risk rates in nine European countries, the study by Ebbinghaus and Neugschwender (2011) finds the largest gender differences in Sweden (even though on rather low levels), where the risk is twice as high for women compared to men. Therefore, I expect the compensation hypothesis to play a role for Swedish women, especially regarding part-time work.

H2b: The compensation hypothesis is less relevant in Denmark and Germany compared to Sweden.

Characteristics of main job and retirement timing

Job characteristics can determine retirement timing since some jobs are more difficult to perform in old age (Filer and Petri 1988). Mental and physical strain is related to unsustainable work, where older workers perceive that they are unable or unwilling to continue their jobs at higher ages (Eurofound 2012). The decision to retire is influenced by an interplay of work and life aspects (De Preter et al. 2013) so it can be argued that characteristics for a better work-life balance could increase retirement age. Occupations with a high share of part-time and self-employed workers often have later retirement ages since they might be less demanding and adjustable to personal changes (Quinn 1977; Filer and Petri 1988). Dissatisfaction with working hours increases the odds that older workers perceive to be unable to continue their job at age 60. This link was found to be particularly strong for women (Eurofound 2012). Flexible work arrangements, like reduced hours and working from home were found to be positively related to the intention to continue employment (Patrickson and Ranzijn 2004). Parry and Taylor (2007) related flexibility and part-time for workers after retirement age to the ability to cope with care responsibilities and health concerns. Also, the self-employed in their study used the ability for flexibility and reduced hours to work across the state pension age. Quinn (1978) found out that workers in low autonomy jobs retire earlier.

With regard to gender, contradictory results can be found in previous literature. Some studies suggest that work features have a stronger influence on women's retirement than on men's with regard to job satisfaction (for the EU: De Preter et al. 2013; for Denmark: Christiansen and Nielsen 2009), stressful jobs (for Sweden: Soidre 2005) and work autonomy and flexibility (for the public sector in Australia: Shacklock et al. 2009). Other studies present contrary results where job characteristics are more important for men's retirement timing with regard to socially-rewarding jobs (for Sweden: Soidre 2005) autonomy (for Norway: Blekesaume and Solem 2005) and job control (for Denmark: Larsen 2008).

H3a: Job resources prolong working life and job demands shorten working life.

The report by Tåhlin (2011) directly describes the connection between low job quality and earlier labour market exit in Sweden. Furthermore, this report states that job quality becomes less important for exiting the labour market, i.e. those with low job quality

were much more likely to exit the labour market in earlier cohorts compared to today. He relates this descriptive finding to the specific Swedish pension context where early retirement via disability pensions was possible for labour market reasons until 1997, with stepwise restrictions to this rule. Hence, I do not expect the same finding for Germany and Denmark.

H3b: Job demands are less important for later retirement cohorts in Sweden compared to earlier cohorts.

Family characteristics

Taking the lower labour market attachment of mothers as reason for earlier retirement aside, another family related factor can play a role for retirement timing. Spending time with friends and family is frequently found to be a reason for retirement (Frieze et al. 2011). Hence, various studies find that in particular women without children and unmarried are often more likely to remain at the workplace (Adams and Beehr 1998; Brougham and Walsh 2005, Szinovacz, DeViney, and Davey 2001, Hank and Korbmacher 2010). Analysing couples' expectations to retire jointly and the realization of joint retirement, Ho and Raymo (2009) find that about a quarter of working couples expect to retire jointly and a similar proportion actually retired jointly. Looking at currently married women, Hank (2004) finds a higher likelihood to retire when their partner already is retired compared women with still working partners which supports the joint retirement hypothesis (Hank 2004). Since typically women are younger than men in a partnership, I expect the effect of joint retirement to be contrary for men's and women's retirement timing.

H4: Having a partner reduces working lives for women, but not for men.

Data and method

To analyse retirement timing comparatively across the three countries, the third wave of SHARE was used. SHARE is a longitudinal study that started in 2004 and included 11 European countries. Respondents were age 50 or older, so all respondents have a retrospective history of at least 50 years. The life history interviews in the SHARE project were carried out in the third wave in the SHARELIFE project and provide detailed information on the job histories including non-work periods. To minimize

recall errors, SHARELIFE implemented an instrument for improving the accuracy of life events, the so called life history calendar which is a graphical grid of the life events that is filled during the interview. Data for SHARELIFE was collected between 2008 and 2009 and provides a variety of work and career variables as well as family characteristics. Thereby it offers a unique setup for researching retirement timing with regard to respondents' life histories.

I use log-logistic regressions on the timing of the final labour market exit. The analysis was separated by country, gender and cohort. The cohort differentiates those who stopped working before the year 2000 and those who stopped afterwards. Given the developments and institutional changes between these cohorts, it seems necessary to divide the analysis accordingly and thereby contribute to previous research.

The respondents' age at their last year of work was used as duration of the dependent variable. Thereby, potentially following years of unemployment were not included. Compared to the age of retirement, this has the advantage that the analysis is irrespective of periods of unemployment before retirement which increase retirement age, even though old age employment is not increased. The failure event was constructed when a person stopped working after the age of 50 and never returned to the labour market. In case a person was observed before the age of 60, the reason for leaving the last job had to be retirement. The sample was restricted to individuals who exited the labour market in 1980 or later and who started working no later than 25. For the regression analysis, the sample was restricted to individuals who stopped working between the age of 50 and 75.

Work characteristics of the main job are included as explaining variables. Work demands were covered by an additive index on job strain which contained the items "work was physically demanding", "work was uncomfortable", "work had heavy time pressure", "work was emotionally demanding" and "work involved conflicts", each ranked on a four point scale. The index ranged from 1 to 18. Work resources were included by a dummy variable on high job autonomy when the respondent scored 3 or 4 on the item "work had little freedom to decide". Self-employment as last job is included with a dummy variable. Last, the educational level was included in three categories.

To differentiate between interrupted and continuous careers, the total working years between the age of 25 and 49 were included. Since part-time periods were rare among men, the duration of part-time working years from 25 up to the age of 49 were only included for women.

Regarding family characteristics, I include the presence of a partner as dummy variable and the number of children as a control variable.

Table 17: Sample description

	Germany		Denmark		Sweden	
	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>
	Mean	Mean	Mean	Mean	Mean	Mean
	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)
Work autonomy	37.8 %	37.9 %	50.7 %	40.1 %	41.2 %	33.5 %
Work strain	8.06 (2.86)	7.41 (3.16)	7.03 (2.51)	7.30 (2.72)	7.52 (2.87)	7.56 (2.87)
High education	30.6 %	27.0 %	31.8 %	42.9 %	17.4 %	25.8 %
Low education	5.7 %	15.9 %	15.0 %	21.6 %	54.3 %	45.4 %
Self-employment	9.5 %	7.3 %	15.2 %	8.0 %	15.1 %	4.7 %
Min 10 years part-time		29.9 %		28.2 %		26.3 %
Work years (25-49 years)	24.73 (1.21)	21.18 (5.41)	24.51 (1.66)	21.93 (5.07)	24.59 (1.31)	21.35 (5.26)
Number of children	1.94 (1.22)	1.96 (1.20)	2.22 (1.23)	2.20 (1.26)	2.39 (1.33)	2.33 (1.22)
Partner	88.4 %	77.2 %	83.8 %	73.2 %	85.8 %	77.4 %

Standard deviation in parentheses

Results

The descriptive results show Kaplan-Meier survival estimates for each country, separated by gender.

Figure 7: Survival estimates by gender DENMARK

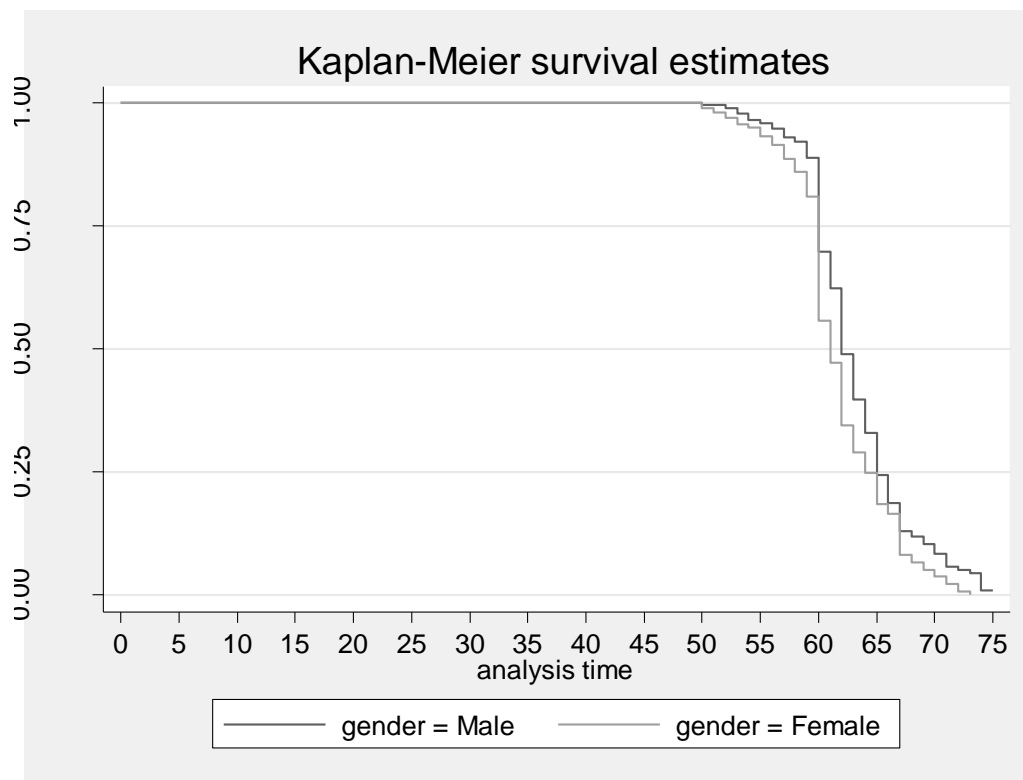


Figure 8: Survival estimates by gender GERMANY

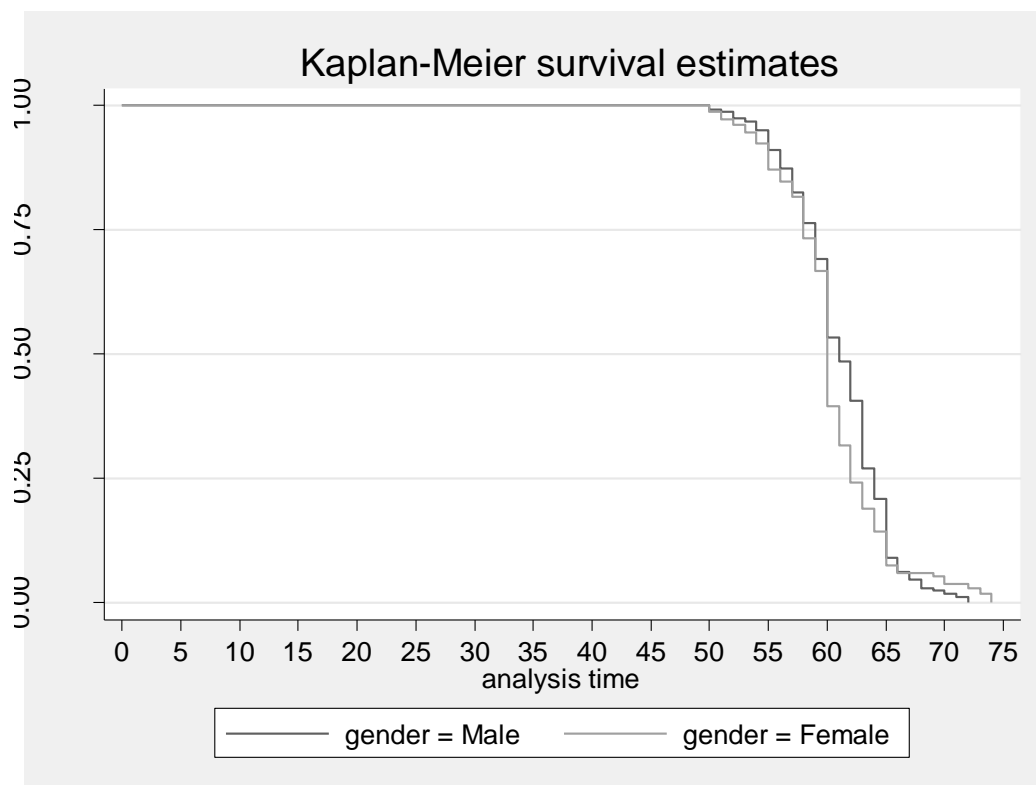
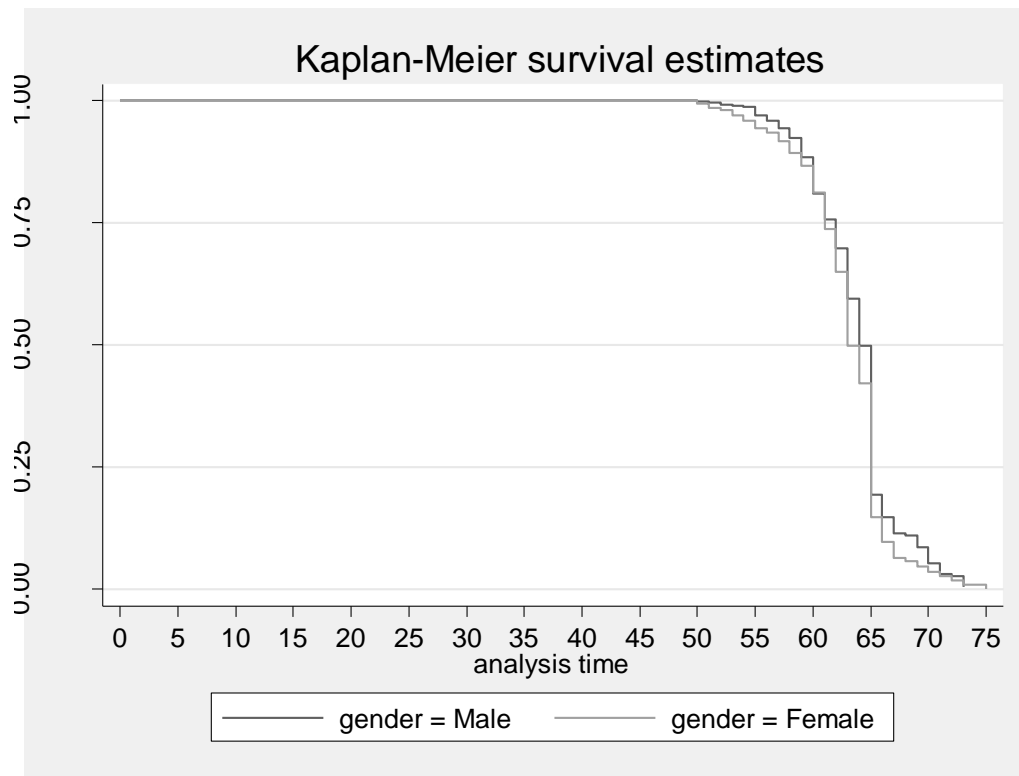


Figure 9: Survival estimates by gender SWEDEN



The graphs picture survival estimates for men and women who left the labour market between the age of 50 and 75. Less than 4 percent leave the labour market after the age of 75, according to the SAHRELIFE data. Due to the high selectivity of this group and the risk of a coding mistake, those are excluded in the analysis. At the age of 60, around 40 percent of German women and more than 50 percent of German men are still at the labour market. In Denmark, 55 percent of women and 70 percent of men are still active after age 60. In Sweden, on the other hand, no gender gap can be found at age 60, when 80 percent of both men and women are still working.

Table 18: Marginal effects after loglogistic regression on labour market exit age (men)

	Denmark		Germany		Sweden	
	Before 2000	After 2000	Before 2000	After 2000	Before 2000	After 2000
Work autonomy (d)	1.051+	.263	.877(+)	-.065	-.245	-.475
Work strain	-.238*	-.460***	-.087	-.127+	-.050	-.171*
High education (d)	-.709	.218	.642	1.305**	1.400+	.080
Low education (d)	.720	.335	-.240	-.190	.875	.001
Self-employment	1.820*	1.465*	3.268**	3.773***	.260	2.937***
Work years (25-49 years)	-.019	-.025	.287	.183	-.411*	-.148
Number of children	.178	.060	-.141	.191	-.018	-.082
Partner (d)	.494	.959(+)	.474	.364	-.315	-.370
<u>Predicted median age</u>	<u>61.61</u>	<u>63.73</u>	<u>59.00</u>	<u>62.78</u>	<u>62.20</u>	<u>65.20</u>
<i>N obs</i>	<i>10586</i>	<i>31942</i>	<i>15171</i>	<i>23232</i>	<i>12764</i>	<i>26571</i>
<i>subjects</i>	<i>172</i>	<i>536</i>	<i>257</i>	<i>387</i>	<i>206</i>	<i>431</i>

(d) dy/dx is for discrete change of dummy variable from 0 to 1

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 19: Marginal effects after loglogistic regression on labour market exit age (women)

	Denmark		Germany		Sweden	
Retired	Before 2000	After 2000	Before 2000	After 2000	Before 2000	After 2000
Work autonomy (d)	.215	-.054	.261	.586	-.485	.471
Work strain	-.312**	-.280**	-.094	-.160*	-.380***	.010
High education (d)	1.874*	.075	1.183+	.988+	.659	1.378***
Low education (d)	2.294**	.270	.326	-.364	.305	.904*
Self-employment	1.047	1.398	.718	4.261**	4.104*	3.801***
Min 10 years part-time	-1.622**	-.678(+)	.494	.830(+)	.018	.648+
Work years (25-49 years)	-.037	-.002	.015	-.033	-.050	-.035
Number of children	-.218	-.124	.336+	.018	-.137	-.175
Partner (d)	-.977+	-1.196*	-2.525***	-1.070(+)	-1.370*	-.956*
<u>Predicted median age</u>	<u>59.97</u>	<u>62.92</u>	<u>57.90</u>	<u>62.17</u>	<u>61.40</u>	<u>64.27</u>
<i>N obs</i>	<i>13477</i>	<i>32055</i>	<i>10931</i>	<i>21338</i>	<i>12633</i>	<i>31346</i>
<i>subjects</i>	<i>225</i>	<i>550</i>	<i>189</i>	<i>365</i>	<i>207</i>	<i>513</i>

(d) dy/dx is for discrete change of dummy variable from 0 to 1

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Women's predicted median age of labour market exit is lower than men's in all countries but the gender gap is lower for those who retired after 2000. Hence, women are catching up according to the predicted median ages. The regression results shed some more light on the reasons for gendered retirement timing and the decreasing difference between men and women.

There is country specific evidence for either the compensation or the status maintenance hypothesis. Danish women seem to leave earlier when they had been working part-time for more than 10 years, thereby following the status maintenance hypothesis (H1a). The opposite effect can be found for part-time working women in Sweden and in tendency in Germany. Swedish women leave significantly later nowadays when they had been working part-time throughout a longer period of their life. The equivalent effect for German women who retired after 2000 slightly misses significance but also rather follows the compensation hypothesis (H2a). In Sweden, the effect for lower educated women provides additional evidence for the compensation hypothesis. Lower educated women leave later than those with medium education which can be interpreted as need to stay longer at work to accumulate higher pension benefits. Both "compensation effects" are stronger in the more recent retirement cohort. Even though there is some weak indication for the compensation hypothesis in Germany, hypothesis H2b can be supported by these findings. Compensating for lower earnings seems to be most relevant in Sweden while no such evidence can be found in Denmark where the particularities of the pension system are rather protective for low earners. Thereby, Danish women with lower attachment (can) leave earlier, following the status maintenance hypothesis. However, this effect becomes less strong in the later retirement cohort and even slightly misses significance. While Danish women in the earlier retirement cohort left the labour market over one and a half years earlier than the predicted median age (59.97 years) when they worked part-time for longer than 10 years, they only leave somewhat more than half a year earlier nowadays. The overall picture in all three countries therefore rather describes the gaining importance of the compensation hypothesis and the decreasing importance of the status maintenance hypothesis for women. This might already contribute to the "catching up" effect in labour market exits of women.

The status maintenance hypothesis 1b – stating that low labour market attachment leads to earlier exits in Sweden and Denmark compared to Germany – is not given strong evidence from the results since Germany and Sweden rather seem to follow the compensation hypothesis. This hypothesis derived from the argument that German mothers (who are expected to have lower attachment) are a rather selected group since many drop out after childbirth. In this regard, it is interesting to look at the effect for the number of children. For the earlier retirement cohort, this effect is significant and positive. Hence, in contrast to mothers in Denmark and Sweden, German mothers left the labour market later when they had more children. This might mirror a higher career orientation for this selective group. In the later cohort, this effect almost disappears which is in line with the trend towards a better integration of women into the labour market.

Turning to the characteristics of the last job as influence on final labour market exit, it can be concluded that job resources rather increase the exit age, while job demands decrease the exit age, providing evidence for H3a. Even though the effect for work autonomy is rather weak and only significant in for Danish men who retired before 2000, additional information from the educational variable points into the same direction. It can be argued that higher educated are more likely to work in occupations with better working conditions, allowing them to work longer. High job strain on the other hand generally reduces the exit age. Looking at Sweden where it was hypothesized that worse job quality reduces exit ages mainly in earlier cohorts, this can only be found for women, partly confirming hypothesis 3b. Hence, the early retirement restrictions for labour market reasons seem to affect women more strongly: while they left the labour market significantly earlier when they had high job strain before 2000, they continue work nowadays despite high job strain. Interestingly, this cannot be found for men. These results shed some more light on the descriptive findings by Tåhlin (2011), indicating that the effect might be driven by the higher proportion of women in later retirement cohorts. No clearly gendered picture can be found regarding the open question whether job characteristics are more important for men or for women. Work autonomy seems to be more important for men in Denmark compared to women, which is in line with Larsen's (2006) results. However, job strain seems to be equally important for men and women in all countries.

Self-employed generally have higher exit ages. I would be reluctant to interpret the effects for self-employment in earlier cohorts, since it is a rather rare phenomenon. However, the effect for the later cohort is very strong, especially in Germany. Self-employed leave the labour market over a year (and up to 4 years) later than employed individuals. This pattern is true for men and women. The interpretation is somewhat difficult since this might be either due to lower accumulated pension benefits or due to good /more flexible working conditions in self-employment, as suggested by Parry and Taylor (2007). It could be argued that women rather need to prolong their working lives when they had been self-employed for a long time, while men profit more from the good working conditions. Women usually work much lower hours when they are self-employed and also have lower earnings. Hence, their employment situation is often more precarious than men's. Further research is needed regarding the voluntariness of labour market exits for female and male self-employed.

Last, family characteristics do not have significant effects on men's labour market exit. For women, the presence of a partner has a strong negative effect in all countries, giving evidence to hypothesis 4. Women with a partner leave earlier which is rather contrary to the results of men and thereby in line with the joint retirement hypothesis. The strongest gender differences regarding the presence of a partner can be found in Denmark. While the effect seems to become less strong and less significant in the later cohort, Danish women with a partner still leave the labour market over a year earlier than women without a partner. Danish men on the other hand leave the labour market almost a year later when they have a partner. Hence these gender differences regarding family characteristics might already account for a large part of the gender gap in labour market exits.

Conclusion

This paper investigated gender differences in final labour market exits by taking jobs, families and career histories into account. While family characteristics, especially the presence of a partner is only relevant for retirement decisions of women, this study highlighted that this determinant is becoming less important for later cohorts. However, even today, women with a partner leave the labour market around one year earlier in all countries. Since this is not the case for men, this family feature contributes to the persisting gender gap in retirement timing.

Regarding job characteristics, no clear gender differences can be found across the three countries. While higher job strain was generally related to lower exit ages, job autonomy is only weakly related to higher exit ages. However, in combination with the interpretation for self-employment and educational level, the positive effect of good working conditions on later retirement should not be underestimated.

This study shed more light on the partly contradictory results for career histories. While some previous studies found indications for a status maintenance hypothesis where long, continuous careers led to later exits, other studies argued with the compensation argument where interrupted careers led to later exits. This paper highlights the importance of the particularities of pension systems with regard to the compensation hypothesis and supports previous findings on pension income (Möhring 2015). Denmark offers rather generous early retirement schemes and has high replacement rates for low earners. Accordingly, the compensation hypothesis was found to be less relevant in the Danish case. In fact, women in this country rather followed the status maintenance principle. Still, a shift can be observed and the status maintenance hypothesis is less relevant for the later cohort. This is in line with the findings of the compensation effect that could be found for women in Sweden and to some degree in Germany. There seems to be a tendency for a weakening of the status maintenance and a strengthening of the compensation hypothesis. This can be attributed to the drastic changes in pension systems where early retirement was financially penalized. The strong increase of employment rates of older workers in Germany and also in Sweden apparently led to an increase of financial need driven later retirement for women. This argumentation finds some more support when looking at the job characteristic. Swedish women with high job strain left the labour market significantly earlier before the reforms which is not the case nowadays. They might need to stay longer despite arduous working conditions. Male careers are much more continuous (with very low variance in terms of total years worked between 25 and 49 years) and part-time work hardly exists. Hence, the decreasing gender gap might be partly explained by career histories since women nowadays (have to) stay longer to compensate for weaker labour market attachment throughout their lives. Furthermore, this study contributes to very recent results on career history and country specific characteristics. While Hofäcker (2015) did not find an effect for women's previous unemployment in a country cluster including

Sweden and Denmark, my results suggest that this could be due to the different pension context, leading to opposing outcomes.

While the relevance of pension systems is supported by the results of this study, country specific regulations regarding the support for working mothers were given only weak evidence. The different effect for the number of children in Germany compared to Sweden and Denmark could indicate a connection with the institutional context of female careers. It is argued that mothers in Germany who return to the labour market and continue working until at least 50 are a rather selective group. The results by cohort nicely show that this is less the case in the later cohort. Female careers in Germany still differ from the Scandinavian context but it can be expected to play a less important role in the future with increasing integration of women to the labour market.

This study provides first indications for the importance of career histories in a changing institutional context. However, in particular the missing effect for the total number of years worked is somewhat surprising given the lower accumulated pension income. There might be several explanations for these weak findings. First, the theoretical argumentation of this paper could explain this finding partly. Since the status maintenance hypothesis and the compensation hypothesis argue in opposing directions for the same scenario, it might be the case that certain groups respond differently, possibly depending on health status and individual or household income. While lower attachment rather leads to earlier exit for some groups according to the status maintenance hypothesis, it might lead to later exits for other groups who need or want to compensate for low previous attachment. This needs to be further investigated. A second explanation for insignificant results might be due to sample selection: women with rather low labour market attachment might drop out before age 50. Thus, I expect low labour market attachment to have a stronger influence on earlier drop-outs especially in countries where women have shorter careers and drop-outs are more likely. Last, the particularities of the welfare state might be an explanation for weak findings of the compensation hypothesis since it is comparatively protective towards shorter interruptions in all three countries. This study would be interesting to replicate for less protective welfare states where I would expect a stronger support for the compensation hypothesis and generally stronger effects for career histories.

Beside the necessary sample selection, this study is impaired by another limitation. The dataset does not provide information on health at the point of employment exit. Last, even though there is information on pension income in the dataset, there are many missings on this variable which strongly reduced my sub-sample sizes and does not allow for complex analysis. Future studies should investigate the influence of career histories and job characteristics under the control of the individual health status and pension income.

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