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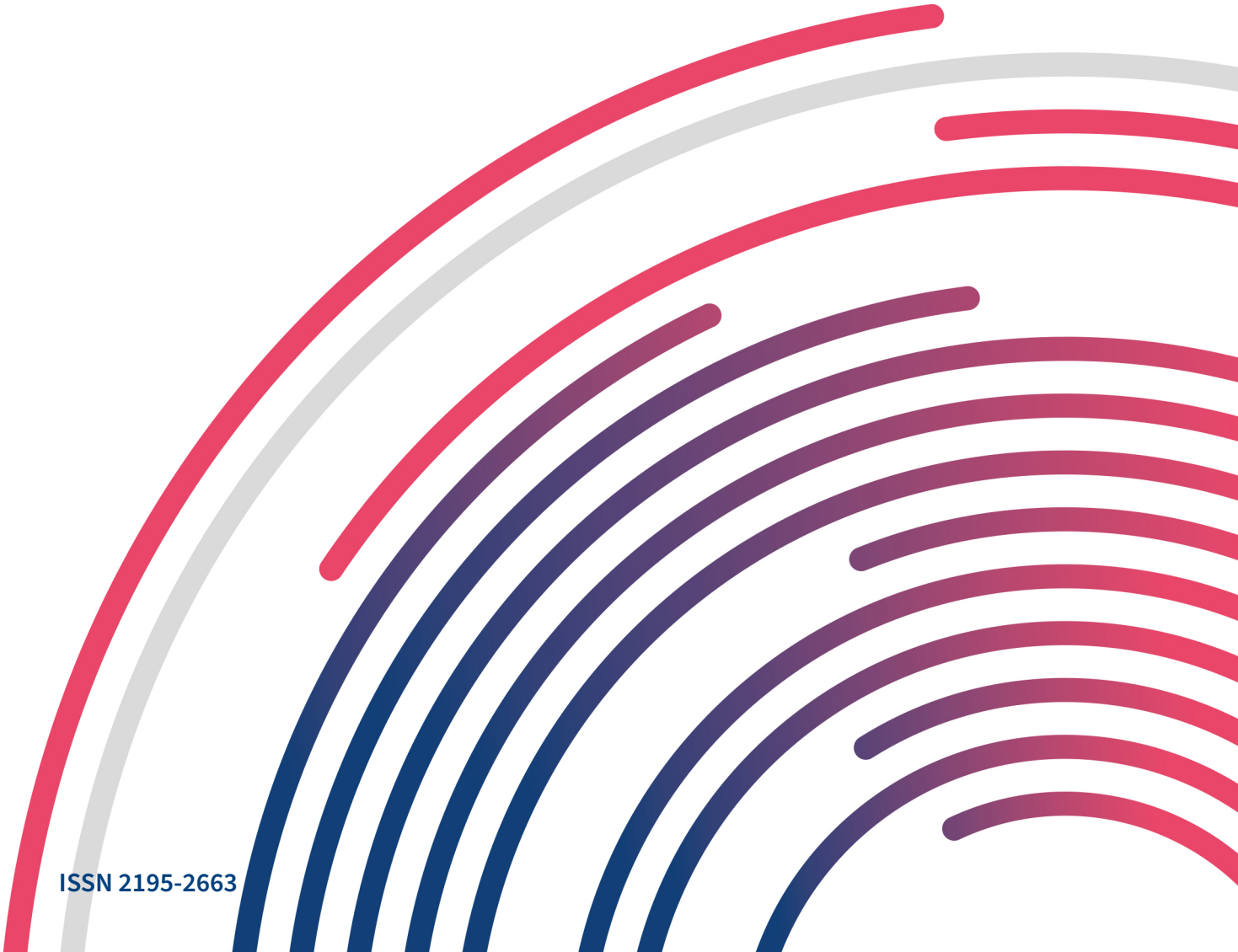
01|2025 What about the men, though? Relative wage opportunities and the persistence of employment gaps in couples

Luisa Hammer



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What about the men, though? Relative wage opportunities and the persistence of employment gaps in couples

Luisa Hammer (IAB und Freie Universität Berlin)

Mit der Reihe „IAB-Discussion Paper“ will das Forschungsinstitut der Bundesagentur für Arbeit den Dialog mit der externen Wissenschaft intensivieren. Durch die rasche Verbreitung von Forschungsergebnissen über das Internet soll noch vor Drucklegung Kritik angeregt und Qualität gesichert werden.

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Contents

Abstract

Gender gaps in employment have narrowed but remain substantial, particularly among couples. To estimate how improved female wage opportunities influence partners' employment choices, I exploit demand-driven wage changes in job tasks and German administrative data. Results indicate women respond positively, albeit at a diminishing rate, to relative wage improvements, while male partners also increase their labor supply in response. Consequently, the work hours gap within couples narrows, but doesn't close and even widens in certain groups. Potential explanations for these patterns building on Becker's household model include comparative advantages for women, and relative income preferences and gender identity norms for men.

Zusammenfassung

Die geschlechtsspezifischen Unterschiede bei der Beschäftigung haben sich verringert, sind aber nach wie vor beträchtlich, insbesondere innerhalb von Paaren. Um abzuschätzen, wie sich verbesserte Lohnmöglichkeiten für Frauen auf die Beschäftigungs- entscheidungen der Partner auswirken, nutze ich nachfragegesteuerte Lohnveränderungen bei Arbeitsaufgaben und deutsche Verwaltungsdaten. Die Ergebnisse deuten darauf hin, dass Frauen positiv, wenn auch mit abnehmender Tendenz, auf relative Lohnverbesserungen reagieren, während männliche Partner als Reaktion darauf ebenfalls ihr Arbeitsangebot erhöhen. Infolgedessen verringert sich die Arbeitszeitlücke innerhalb von Paaren, schließt sich aber nicht und vergrößert sich in bestimmten Gruppen sogar. Mögliche Erklärungen für diese Muster, die auf Beckers Haushaltsmodell aufbauen, sind komparative Vorteile für Frauen sowie relative Einkommenspräferenzen und Geschlechtsidentitätsnormen für Männer.

JEL

D13, E32, J12, J16, J22

Keywords

Gender pay gap, female employment, household specialization, structural change

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1 Introduction

Recent decades have seen improvements in female labor market outcomes and narrowing gender pay gaps, yet disparities persist (Blau/Kahn, 2007; Goldin/Katz, 2002; Olivetti/Petrongolo, 2016). Reasons for these gender differences are manifold. In particular, the disproportionate reward of working long hours appears to be one of the main drivers of the *persistent* gender pay gaps (Goldin, 2014). Further factors are the arrival of children (Kleven/Landais/Søgaard, 2019), the scarcity of affordable substitutes to household production (Cortes/Pan, 2013) or sticky gender roles attitudes (Fortin, 2005). Germany is one of the OECD countries with above-average gender wage gaps (Kunze, 2018) and large gender employment differences: On average, men work 10.7 hours more in the labor market per week (32 percent) than women.[1] Within couples, the gap is even larger with 13.5 hours (39 percent).[2] This also translates into very large earnings differentials between partners – Men's monthly net earnings are on average 1,265 euro[3] (54%) higher than those of the female partner.

At least since the seminal theory of the family by Becker (1973, 1981), it is well-established that it is economically rational for spouses to specialize in the household or in the market according to their comparative advantage, which is mainly determined by spouses' (potential) labor market earnings. Thus, in times when gender wage inequality is very high, (full) household specialization can be utility maximizing. However, as women's wages relative to those of men increase, Becker's model predicts a decrease of the degree of household specialization within partnerships, and hence a decline of the gender gap in market working hours.[4]

There is plenty of research showing that the relative economic stature of men has suffered in recent years. On the one hand, women benefit from task-biased technological change (Black/Spitz-Oener, 2010; Beaudry/Lewis, 2014) and from structural changes such as the expansion of the service sector (Rendall, 2018). Men, on the other hand, are penalized more by negative labor demand shocks, for example through Chinese import competition (Autor/Dorn/Hanson, 2018), or the degree of local robot penetration (Anelli/Giuntella/Stella, 2024). This raises the question as of why gender gaps in employment are so persistent even though women's relative employment opportunities have improved.

Given the predictions of a Beckerian household model, this study aims to investigate the relationship between male and female wage potentials and their impact on labor supply

[1] Average between 2005 and 2019. Source: German Microcensus 2005-2019.
[2] Conditional on employment, the gender gap in weekly work hours is 9.4 hours (23 percent) and within couples 12.3 hours (26 percent).
[3] In prices of 2015.
[4] Assuming that relative household productivities are unchanged.

and gender employment gaps within couples, with a focus on why gender gaps persist despite improving female employment opportunities. Germany presents an interesting case as it has significant regional differences in terms of male and female employment patterns, gender attitudes, wages and earning potentials. This is largely due to the division of Germany between 1949 and 1990, which created different economic incentives, but also opposing institutions and normative values (Boelmann/Raute/Schonberg, 2021; Campa/Serafinelli, 2019; Lippmann/Georgieff/Senik, 2020). By focusing on partnered men and women, one of the groups with the largest gender gaps, this paper contributes to the understanding of the dynamics of gender inequality in employment. Since I am interested in the slowing down of the closing of the gender employment gaps, I estimate linear and quadratic effects of the relative female-to-male wage to capture possible non-linearities.

As wages are only observed for a selected subset of persons who are employed, I construct an exogenous measure of potential wages of all men and women using a Bartik-type instrument (Aizer, 2010; Bertrand/Kamenica/Pan, 2015; Shenhav, 2021). Traditionally, this combines the differential wage growth across industries with the regional segregation of men and women in different segments of the labor market. Additionally, I exploit that task-biased technological change favors women, leading to higher wage growth in female-dominated tasks (Black/Spitz-Oener, 2010). I therefore make a methodological contribution to the shift-share approach and account for the role of tasks within industries. I show that there is substantial variation in the wage growth by task level within industries and that women and men specialize in different tasks within industries. The constructed relative *potential* wage then serves as an indicator of women's wage opportunities relative to those of men in a standard full-time employment. I also show that predicting gender wages exploiting the industry composition only yields very similar predictions for men and women, and thus a relative wage close to 100 percent since it neglects an important part of the within-industry variation in wages. A further advantage of my paper is that I use high-quality German administrative data for the wage measures.

The results show that for women who live in a partnership, an increase of their earnings potential relative to those of the partner by one percentage point increases their hours of paid work conditional on employment on average by 0.17 hours, i.e. by 10 minutes. The positive effect becomes, however, significantly smaller, the higher the level of the relative potential wage. This suggests that while improving female earning potentials may incentivize greater labor force participation among women, the impact becomes less pronounced at higher levels of relative wage equality. Interestingly, men also increase their labor supply in response to relative improvements of their partner's earning potentials, particularly when partnered with highly educated women. The quadratic decomposition suggests, however, that at low levels of the relative wage men's work hours decrease, but the negative effect vanishes at higher levels of the relative wage. Given both adjustments, the within-couple employment gap narrows, but again at a diminishing rate. On average,

the gap remains unaffected, and therefore does not close. In some groups, it even widens significantly. So even if a woman could potentially contribute a high income to the family, the within-couple gap in working hours does not close further. Still, women's incomes rise slightly, whereas men's incomes are unaffected (despite their increase in work hours). Yet, the share a woman contributes to the couple's income increases only at a diminishing rate, which is, again, on average insignificant. Therefore, also the share of couples in which the woman is the secondary earner does not decline.

Altogether, the findings suggest that the more advanced women's integration into the labor market is, the lower the elasticity of female labor supply to changes in the relative wage, at least on the intensive margin. Men, on the other hand, appear to counteract their female partner's improving earning opportunities. Understanding these mechanisms is particularly relevant for policy and taxation since it implies that public policies focusing on labor market returns only have little scope to increase female labor supply further and to reduce gender employment and earning gaps.

The findings on diminishing effects align well with predictions from a Beckerian household model. The reversal of the effects at high levels of gender wage inequality, in particular for men, can only be reconciled with the model if preferences for the own earnings are endogenously formed and depend on the relative wage within couples as was acknowledged for instance by Bertrand (2020), Lundberg (2023) or Cortés/Pan (2023). Such preferences arise, and can in particular change, because of a wish to comply with social categories (Akerlof/Kranton, 2000) such as a "traditional" division of market and household work in a couple.

In sum, I contribute to the literature studying the link between relative female labor market opportunities (e.g., Autor/Dorn/Hanson, 2018; Kearney/Wilson, 2018; Anelli/Giuntella/Stella, 2024), especially of the relative female wage (e.g Shafer, 2011), and female employment. Close to my approach is Shenhav (2021) who estimates the effects of the relative female wage on marriage and total female employment. I add to this by specifically investigating whether the effects of improving relative female wage opportunities are non-linear, and thus more relevant in very gender unequal societies, and by focusing on the group of partnered men and women – the group with the highest gender gaps in employment. Already Huber/Winkler (2019) and Halla/Schmieder/Weber (2020) showed that taking into account the household perspective has important implications when estimating the effects of labor market shocks. My discussion on potential mechanisms further contributes to the literature investigating the impact of gender norms on behavior within couples, especially with respect to the male main-earner norm which affects marital stability and employment choices in couples (e.g., Bertrand/Kamenica/Pan, 2015; Lippmann/Georgieff/Senik, 2020; West/Zimmerman, 1987).

The remainder of the paper is structured as follows. Section 2 describes the data sets, in Section 3 I describe gender inequality in the labor market in Germany. Section 4 discusses the empirical approach. Section 5 reports the results. Section 6 discusses the potential drivers of the findings, and in Section 7 I perform robustness checks and heterogeneity analyses. Section 8 concludes.

2 Data

For the empirical analysis, I combine data from two different administrative German datasets. The main analysis is based on the **German Microcensus** (RDC, 2021). This annual survey draws a representative sample of 1 percent of all German households. Participation is mandatory and only a few questions are answered on a voluntary basis. The number of observations is large, and due to mandatory participation, selective non-response or attrition is not an issue. I use the scientific use file, a 70 percent random sample of the data and all waves from 2005 to 2019[5] for the couple outcomes as well as 1995/96 for the prediction of wage potentials. The dataset, thus, consists of repeated cross-sections- The data includes detailed information for all household members on employment outcomes such as the industry and working hours, education, the federal state, and socio-demographic information for all household members.

The German Microcensus does not contain information on the gross wage or the gross income. Hence, I draw on data from the **Sample of Integrated Labor Market Biographies (SIAB)**[6] to calculate gross wages to study the development of female and male wages over time. The SIAB is a 2 percent random sample drawn from an administrative database which covers all dependent employees covered by social security.[7] In the sample period this corresponds to 85 percent of the German workforce (BA Statistik, 2021).

Lastly, I also rely on the *Qualification and Career Survey* carried out by the German Federal Institute for Vocational Training (Bundesinstitut für Berufsbildung, BIBB, compare Jansen/Dostal (2015)) to predict potential wages as described in Section 4. The dataset includes information on the activities regularly performed by employees on the job. I use data from the survey carried out in 1998 and 1999 which covers 30,000 respondents.

[5] In the years of the Covid pandemic the quality of the survey is limited, so that I decided to stop in 2019.
[6] This study uses the weakly anonymous Sample of Integrated labor Market Biographies (Years 1975-2019). Data documentation can be found in Frodermann et al. (2021).
[7] Civil servants and self-employed persons are not included.

2.1 Samples

Since I am interested in employment outcomes of persons who are in their main employment and partnership phase, I restrict the estimation sample to couples in their prime working age: women aged 22 to 55 years, who are living with their male partner aged 24 to 57 years. I restrict the maximum age of the female partners to 55 years since from that age a possibility to early partial retirement exists, and also the share of retired male partners increases strongly. Generally, I exclude couples in which either of the partners has retired, e.g., due to early retirement. Moreover, I only keep households for which all relevant information for the regressions are available. I provide descriptive statistics in Table A1 for all partnered women, their male partners and the couple households. On average, the female partners are aged 40.6 years old, and 2.6 years younger than their partner. Female partners, on average, have a lower level of formal education, and are less attached to the labor market. The vast majority of cohabiting couples is married (82 percent). On average, 0.99 children aged 0-18 years are living in the couple households. The final estimation sample consists of 995,583 cohabiting couples with two heterosexual partners. The unit of observation is a couple.

For the descriptive analysis, I keep all couples in which both partners are aged 18-60 years, leaving me with 1,167,904 observations.

For the estimation of the potential wages I use the Microcensus waves 1995/96 and the SIAB 2005-2019. I restrict the sample to employed individuals who are aged 18 to 64 years and have valid information on state, educational level, industry and occupation. The final sample consists of 531,913 individuals in the Microcensus 1995/96. The main advantage of this dataset is that it includes civil servants and self-employed, and contains reliable information on the highest educational degree. For the wage measures, measured in the SIAB 2005-2019, I focus on employees who work full-time and who are not in a traineeship, marginally employed or (partially) retired. I use wages of full-time employees to abstract from work hours effects.[8] For the full sample period, this are 9,700,073 person observations to construct the wage shifts in the 975 industry-task-year cells. Since wages above the social security contribution assessment ceiling are censored in the administrative dataset, I impute wages following the imputation procedure laid out in Card/Heining/Kline (2015) and Schmucker et al. (2016).

[8] Given that I use the daily wages of full-time workers I additionally impose the restriction of a daily nominal wage of more than 20€ to reduce measurement error (in prices of 2015).

3 Background: Gender Inequality in Germany

Germany is characterized by significant variation in terms of gender inequality with respect to earnings, employment or gender role attitudes. One of the contributing factors for this is the German division between 1949 to 1990. In this period, East Germany used to form the socialist *German democratic republic* (GDR) and was reunited with West Germany in the *federal republic of Germany* (FRG) only in 1990. As a result both regions were exposed to different institutions from 1949 until 1990. Differences in gender role attitudes between these two regions still persist: persons who grew up in the GDR are significantly less likely to agree with the traditionalist view that "*It is better for all if the husband works and the wife stays at home taking care of the household and the children*" (Bauernschuster/Rainer, 2012).

Moreover, the employment choices of men and women in married or cohabiting partnerships in Germany are highly traditional. Between 2005 and 2019, on average, almost 20 percent of couples practiced full household specialization in a sense that the man is working full-time in the market, whereas the woman is not employed[9]. Roughly one third of couples, on the other hand, does not specialize at all so that both partners work in a full-time employment. As can be seen in Table 1, there are marked differences between East and West German couples. Especially West Germany is characterized by very traditional division of market work. Here, in fact, the dominating pattern is that in almost a third of couples the man works full-time in the market, and the woman is part-time employed. In East Germany, on the other hand, in 44 percent of couples both partners work full-time – almost double of the share in West Germany. It is important to note that the employment behavior of women varies greatly across the regions. So do 78 percent of employed women in East Germany work full-time hours compared to 56 percent in West Germany. While there is hardly any difference between East and West German men: 92 percent in the East and 94 percent in the West work full-time hours.

There are also persistent differences in female employment patterns and in gender earnings inequality. Figure A1 in the Appendix shows the regional dispersion of the relative female-to-male wage across Germany is large. In 1995, the average relative female-to-male wage among full-time employees in West Germany amounted to only 78 percent. It improved, however, by almost 10 percentage points up to 87 percent in 2019.[10] East

[9] Either not in the labor force or unemployed.

[10] For all employees, in 2016 (2006) the unadjusted gender wage gap in East Germany amounted to 7% (6%), while in West Germany women's wages were on average 22% (24%) lower than men's wages (Destatis, 2022).

Table 1: Patterns of Household Specialization in Germany

	East Germany (%)	West Germany (%)	Total (%)
Man and woman full-time	43.39	27.01	30.20
Man full-time, woman part-time	20.30	32.09	29.76
Man full-time, woman no market work	12.76	18.81	18.80
Other	23.55	20.67	21.23
Observations	227,120	940,784	1,167,904

Notes: Sample of couples aged 18-60. Other constellations include men working less than full-time hours. Full-time is measured as working at least 30 hours per week.
Source: Own calculations based on Mikrozensus 2005-2019.

Germany started already at a very high level when the relative wage in 1995 lay around 92 percent and it further increased to 97 percent over the subsequent 24 years.[11] So all regions experienced a positive time trend, but it was strongest in West German states. The lower panel of Figure A1 shows that the East-west divide is still very visible with respect to women's work hours, not however with respect to men's work hours.

Moreover, female employment patterns in East Germany are closer to male employment biographies, with a large share of women working full-time and with relatively short career interruptions after childbirth (Rosenfeld/Trappe/Gornick, 2004). Taking a closer look at the distribution of working hours of women who are partnered with a man who works full-time reveals again great disparities between East and West German couples. The large majority of East German women with a partner working full-time works at least 30 hours per week and less than 5 percent do not work at all. In West Germany, the share of non-working female partners is higher with more than 8 percent. Moreover, the distribution of working hour of West German women is more concentrated along part-time hours (compare Figure A2 in the Appendix).

There is, however, not only strong variation with respect to partner's employment choices between the regions, but also by *'who is living with whom'* as Table 2 shows. 78 percent of German couples match perfectly on their level of formal education, i.e. both partners have the same level of education[12]. In these couples, the male partner, on average, does 15 more hours of paid work per week than the female partner[13]. The difference is smallest in couples in which the woman is more educated. But even in these couples, in which the woman based on her formal degree should have a high earnings potential, the work hours gap

[11] However, the East German economy experienced strong structural shifts after reunification. Hunt (2002) notes that behind the significant decrease in the gender wage gap in East Germany between 1990 and 1994, a crowding out of women, especially low-skilled ones, from employment is hiding.
[12] No degree, vocational degree or university degree. Microcensus 2005-2019.
[13] Conditional on employment the difference still lies at 12.29 hours.

persists, and they consequently, on average, still earn a smaller monthly net income than the partner.

Table 2: Employment of partners by education-match in couples

	Education match			
	Same level (%)	Man higher (%)	Woman higher (%)	*Total (%)*
Women				
Employed	0.77	0.66	0.80	0.76
Work hours[1]	29.17	26.28	31.66	28.96
Men				
Employed	0.91	0.91	0.88	0.91
Work hours[1]	41.19	41.87	40.35	41.24
Couple:				
Hours gap[2]	14.82	20.54	10.32	15.42
Female inc. share[3]	0.33	0.24	0.41	0.32
Total	0.73	0.18	0.09	1,167,025

Notes: Sample of cohabiting couples aged 18-60. [1] conditional on employment. [2] $hours_m - hours_w$ (not conditional on employment, thus can include zeros. [3] Female share of the total household income.
Source: Own calculations based on Mikrozensus 2005-2019.

I now inspect in more depth the relationship between the employment decisions of partners, namely the choice of working hours, and the relative female-to-male wage. The Microcensus contains exact information on the working hours of both partners for a large number of men and women and on monthly net earnings.[14] For a purely descriptive purpose, I construct a simple measure of individual "wages" defined as the monthly net earnings divided by daily working hours.

In Figure A3 in the Appendix, I illustrate the correlation between a couple's relative female-to-male income and working hours, and inspect how this varies along the regional distribution of relative hourly female-to-male incomes within couples.[15] Generally, women's working hours and the relative incomes are positively correlated and the correlation seems to be particularly strong in the middle ventiles. In couples which have a very low or a very high relative income compared to their reference group the positive correlation is less strong – suggesting some kind of quadratic pattern. The working hours of the male partners are negatively correlated with the relative hourly income, implying that a higher share of the woman's income is associated with shorter male working hours. Again, the correlations seem to deviate at the ends of the distribution. For dual-earner couples, the negative correlation coefficient in the top 95th percentile is around a third of the correlation

[14] The German tax-code offers married spouses the chance of income splitting so that both spouses can be taxed in different tax brackets. This biases the net incomes of married partners.
[15] I use annual regional percentiles to abstract from the regional and time dispersion in gender wage inequality.

coefficient in the bottom ventile, even though in the top ventile women contribute an above-average share to the household income.[16]

To conclude, the graphs in Figure A3 suggest that there is a significant correlation between working hours and relative wages in couples. Importantly, the working hours appear to be correlated with the opposite sign for men and women, and for both partners possibly non-linearly. One drawback of the wage information used here is not specific to this dataset, but is a general problem – wages are only observed for persons that do work. A seemingly trivial fact which has far-reaching consequences. I can only observe the correlation of wages and working hours for those who choose to work (or who manage to find an employment or child care). This group may not be generalisable to the overall population, but could be selected on many observed and unobserved factors. Therefore, in the econometric analysis, I use predicted potential wages for men and women, which abstract from individual selection effects.

4 Methods

The goal of the empirical analysis is to test empirically the effect of improving relative female wage potentials on employment outcomes in couples. Since Figure A3 suggests that the relationship might be non-linear in a sense that the effects become smaller as the relative wage rises, I estimate models including linear and quadratic terms of the relative wage. As the relative wages between partners of a couple are endogenous to their employment choices, and wages are only observed *if* partners do decide to work in the formal labor market. I estimate potential wages for all men and women *in a local labor market* using a Bartik-type instrument, and exploit the variation in relative potential wages and employment outcomes of partners across local labor markets in Germany. Potential wages have been shown to be the relevant measure for family formation decisions (Pollak, 2005). The relative potential can be interpreted as a measure of how much the women could earn relative to her partner.

[16] The top relative-income ventile does not on average have the highest household income.

4.1 Shift-share approach

I define the local labor market by state s[17] and education level of each partner e_p[18], and year t. The observed relative wage in each local labor market is likely correlated with state- or education-specific characteristics and the outcome variables themselves. Another problem is that it is only observed for working persons. Therefore, I use a Bartik (1991) type shift-share approach, which exploits labor demand changes across different labor market segments and gender segregation in the labor market, to predict female and male wages in a local labor market. This approach is a popular tool for the estimation of gender-specific wages to reflect gender-specific labor demand changes and not other potentially endogenous characteristics (Aizer, 2010; Bertrand/Kamenica/Pan, 2015; Katz/Murphy, 1992). It exploits that, historically, men and women tend to work in different industries and that the gender-specific industry composition differs by state. The local gender-specific employment share in industry j[19] (*share*) in a sufficiently lagged base year t^0 is then multiplied with national wage changes by industry (*shift*). As base year I pool the years 1995 and 1996 in the Microcensus. I choose a base year t^0 that is sufficiently distant to the estimation period 2005 to 2019 but which is also not too close to the drastic economic restructuring after German reunification (Hunt, 2001). The wage shifts are measured in the SIAB as the national average excluding the state in which the individual resides $w_{jt,-s}$. This alleviates concerns of finite sample bias which arises if one included the own local observations (Goldsmith-Pinkham/Sorkin/Swift, 2020). A nation-wide change in industry-specific wages hence impacts regions very differently, depending on the historical gender-specific industry employment. Figure A4 in the Appendix illustrates the industry composition in the base years 1995 and 1996 by gender. There is, for example, a substantially higher share of men working in the production sector. Women, on the other hand, are concentrated in the sectors retail, education and health.

Given the observed labor demand changes, the predicted wage is, thus, a measure of the potential wage in a standard full-time employment. The potential wage $\hat{w}_{esgt}$ per gender g and education group e in state s in year t is then given as:

$$\hat{w}_{esgt} = \sum_{j} \frac{E_{jesg,t^0}}{E_{esg,t^0}} \times w_{jt,-s} \tag{1}$$

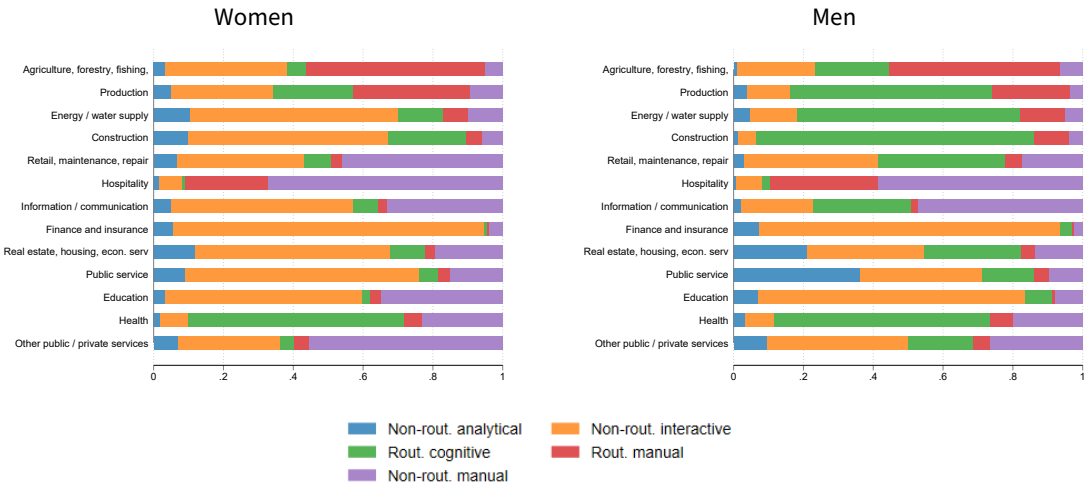
[17] I group the 16 German states into 13 states to account for small population size (Schleswig-Holstein & Hamburg, Lower Saxony & Bremen, North-Rhine-Westphalia, Hesse, Rhineland-Palatinate & Saarland, Baden-Wuerttemberg, Bavaria, Berlin, Brandenburg, Mecklenburg-Vorpommern, Saxony, Saxony-Anhalt, and Thuringia). Unfortunately, the SUF of the Microcensus does not provide regional data on a more granular level.

[18] I distinguish three education categories: no tertiary education, vocational training, and academic education. For the description of the shift-share method, I will abbreviate e_p as e.

[19] I distinguish 13 industries based on *Klassifikation der Wirtschaftszweige* (WZ 93) displayed in Table A2.

I then calculate the relative wage as the ratio between the predicted female wage and the predicted male wage.

Figure 1: Gender Segregation by Task within Industries

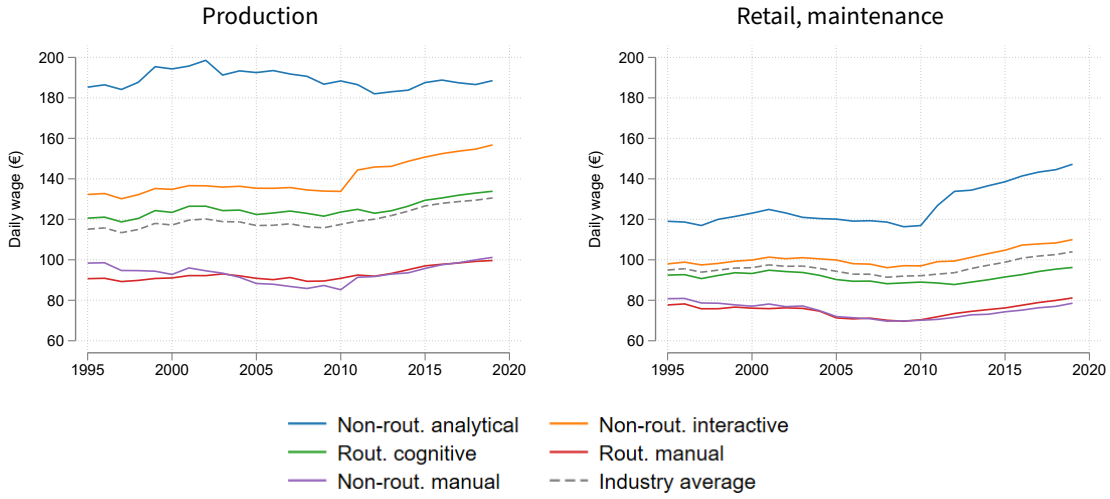


Notes: This figure shows the main task composition within industries by gender in the base years 1995 and 1996.
Source: Own calculations based on Microcensus 1995/96 and BIBB 1998/99.

Accounting for the role of tasks

Aggregate wage growth does not only vary by industry, but it also varies substantially within industries by task level and their different exposure to technological change. According to the hypothesis of task-biased technological change, non-routine tasks are not easy to replace by modern technology and benefit from above-average wage growth. For Germany, Black/Spitz-Oener (2010) show that men and women were differentially affected by these adjustments. As women are over-represented in non-routine analytical and interactive tasks, task-biased technological change benefited women, which eventually supported the catching-up of female wages. In order to capture this variation, I identify the main task per occupation code KLDB 1988 using the *Qualification and Career Survey* carried out by the German Federal Institute for Vocational Training (compare 2). The dataset includes information on the activities regularly performed by employees on the job. I use data from the survey carried out in 1998 and 1999 which covers 30,000 respondents. In line with Black/Spitz-Oener (2010), I assign each activity to one of five categories (non-routine analytical, non-routine interactive, routine cognitive, routine manual, and non-routine manual) as defined in Table A3 and calculate the main task of each occupation. This classification is then added to both the German Microcensus and the SIAB which allows the construction of industry-task cells.

Figure 2: Wage Growth by Task in the Two Largest Industries



Notes: This figure plots the average imputed observed wage by task within the two largest industries. In prices of 2015.
Source: Own calculations based on SIAB 1995–2016 and BIBB 1998/99.

Figure 1 visualizes how the distribution of main tasks varies by gender within the 13 industries. For women, the share of non-routine interactive tasks is substantially higher. This alone, however, does not make my approach superior to using industry variation only. It additionally requires that average wages vary by task within industries. In Figure 2, I show that wage growth differs strongly by tasks within the two largest industries.[20] In production, the most important industry for men, women are over-represented in the most productive tasks – non-routine analytical and non-routine interactive. In the retail sector, the picture is similar as women here disproportionally benefit from the high wages in non-routine analytical tasks. The standard approach uses only the industry-wide average wages, neglecting wage dispersion by task. I, on the other hand, exploit wage shifts by occupation task o within industries j and also consider the initial industry-task employment compositions.[21] The potential wage is then given as

$$\hat{w}_{esgt} = \sum_{j} \frac{E_{jesg,t^0}}{E_{esg,t^0}} \times \sum_{o} \frac{E_{ojesg,t^0}}{E_{jesg,t^0}} \times w_{ojt,-s} \tag{2}$$

where E measures the total employment per group $jesg$ in base year t^0.

[20] In the Appendix in Figure A5, I plot wages by task for all industries.
[21] Shenhav (2021) expanded the original approach by Bertrand/Kamenica/Pan (2015) and included occupations within industries as an additional layer. As was shown by Black/Spitz-Oener (2010), in particular the role of job tasks explain a substantial share of the closing of the gender gap. Therefore, I focus on the main tasks performed per occupation within industry instead.

The first sum captures the *between-industry exposure*, the second sum captures the *within-industry exposure* generated through the task composition within industries in the base year.

For men and women, I predict their potential wage based on education group, state and year. The relative wage is then given by the ratio between the female and the male prediction. As a result, predicted relative wages vary over the 13 states s, 3 female education groups e_w, 3 male education groups e_m and year t:

$$\widehat{RPW}_{e_m,e_w,s,t} = \frac{\hat{w}_{e_w st,fem}}{\hat{w}_{e_m st,men}} \tag{3}$$

I plot the predicted relative wage in Figure A6 in the Appendix by education-match group for the estimation period (2005-2019). The overall pattern follows the upward trend of the observed relative wage. As I am only considering the variation induced through the changes in labor demand of the total variation in male and female wages, the predicted relative wage is higher than the observed relative wage. Using my task-industry shift-share instrument the predicted relative wage on average amounts to 98.3 percent. When I predict the relative wage exploiting only the industry segregation the average size is 99.9 percent. Using the industry variation only predicts pretty similar wages for men and women as a crucial part of the wage variation within industries is neglected (compare Figure 2). Overall, the correlation between the predicted daily wage using the task-industry shift-share (the industry shift-share) and the observed net incomes in the Microcensus data amounts for the female wage to 27 percent (16 percent) , for the male wage to 27 percent (12 percent), and for the relative wage to 10 percent (10 percent).

Identifying assumptions

In this set-up, the variation in the shift-share wages comes from the employment shares per industry-task combination which vary by gender, region, and education group. Interacted with national wage shifts, this generates a differential exposure to a common wage shock – implying that *differential exposure leads to differential changes in the outcome*. To better understand where the variation in the identification strategy stems from, I calculate the annual Rotemberg weights per industry-task cell as suggested in Goldsmith-Pinkham/Sorkin/Swift (2020). The authors show that the Bartik estimator essentially implies using local employment shares as instruments, and so the exclusion restriction should be interpreted in terms of the shares. The Rotemberg weights (Rotemberg, 1983) measure the importance of each industry-task employment share as an instrument in the overall shift-share estimator. Even though I do not use the predicted Bartik wages in an instrumental variable estimation, I follow the argumentation of Goldsmith-Pinkham/Sorkin/Swift (2020) and investigate the exogeneity conditions in terms

of the shares, but focus the attention to those shares with the largest Rotemberg weights. I find that over the estimation period the most important industry-task combinations are *non-routine interactive tasks in the real estate, production and health sectors* for women and *non-routine interactive tasks in the education and production industry* as well as *routine cognitive tasks in the production sector* for men. It would be worrisome if the estimated effects only reflect that time-trends were very different in these industry-task cells. In a robustness check, I therefore show that the results remain essentially unchanged when I exclude these industry-task combinations, and when controlling for specific time trends across areas with different initial employment shares in the industry-task cells with largest Rotemberg weights as suggested in Anelli/Giuntella/Stella (2024). I assess whether the employment shares correlate with other variables in the base year which could affect the outcomes directly, and irrespective of the shifts. Therefore, I analyze the correlation of the industry-task shares with the share of persons with non-German citizenship, the female share, the level of urbanization, and the average age per education-state-cell. I show in Table A4 for the three industry-task combinations with the largest Rotemberg weights that some of these characteristics and the employment shares are indeed correlated, especially for men. However once I include education and state fixed effects, almost all covariates become insignificant. Nevertheless, I decide to not only use a wide set of fixed effects in the final regressions, which should absorb partly these correlations, but I also add the correlated variables as time-varying control variables.

Additionally, I test for significant pre-trends in table A5. To do so, I replicate the regressions outlined in chapter 4.2 for the main outcomes measured in the years 1997 to 2004. As as a measure of exposure to the growth in the relative wage, I use the difference in the predicted relative wage between 2019 and 2005. For women and the important work hours outcomes, the estimates are all insignificant. Only for the employment of male partners, the results suggest that male partners that were exposed to higher growth rates of the relative wages in the 2000s had lower employment rates in the years 1997 to 2004. But the results point to no significant pretrends.

4.2 Estimation strategy

The goal of the study is to test how a rising relative potential wage affects partner's employment. Specifically, I investigate whether it affects them linearly, or whether the effects become smaller or larger at a higher level of the relative wage. The outcomes of interest can be grouped into two main categories: (1) employment outcomes of female partners and their male partner and (2) within-couple employment differences. (1) comprises an indicator for employment participation, the number of weekly working hours

and weekly working hours conditional on employment.[22] The former measure of working hours codes working hours in case of non-participation as zeros and hence combines participation margin and intensive margin, whereas conditional working hours measure only the pure intensive margin. (2) measures the difference between the man's and the woman's work hours and the percentage gap. The gaps are estimated for all couples as well as for dual-earner couples, only.

I estimate two regressions: In Equation 4, I regress outcome Y_i on the relative potential wage $\widehat{RPW}_{e_m,e_w,s,t}$. In Equation 5, I regress outcome Y_i of each couple i on the relative potential wage $\widehat{RPW}_{e_m,e_w,s,t}$ and the square of the relative potential wage $\widehat{RPW}^2_{e_m,e_w,s,t}$.

$$Y_i = \alpha_1 + \beta_1 \widehat{RPW}_{e_m,e_w,s,t} + \delta_{1,t} + \epsilon_{1,s} + \zeta_{1,s\times t} + \eta_{1,e_m\times e_w} + \theta_{1,e_m\times e_w\times s} + \iota_{1,isc_w} + \kappa_{1,isc_m} + \lambda_{1,a_w} + \mu_{1,a_m} + \nu_{1,agegap} + \pi_{1,gap\times matchtype} + \rho_{1,q} + \sigma_1 X_i + \omega_{1,i} \tag{4}$$

$$Y_i = \alpha_2 + \beta_2 \widehat{RPW}_{e_m,e_w,s,t} + \gamma \widehat{RPW}^2_{e_m,e_w,s,t} + \delta_{2,t} + \epsilon_{2,s} + \zeta_{2,s\times t} + \eta_{2,e_m\times e_w} + \theta_{2,e_m\times e_w\times s} + \iota_{2,isc_w} + \kappa_{2,isc_m} + \lambda_{2,a_w} + \mu_{2,a_m} + \nu_{2,agegap} + \pi_{2,gap\times matchtype} + \rho_{2,q} + \sigma_1 X_i + \omega_{2,i} \tag{5}$$

The coefficient of interest β_1 measures the average effect of an increase of the relative potential wage by one percentage point (pp). Coefficients β_2 and γ do instead constitute the total marginal effect of the relative potential wage defined as

$$\frac{d\, Y_i}{d\, \widehat{RPW}_{e_m,e_w,s,t}} = \beta_2 + 2\, \gamma \widehat{RPW}_{e_m,e_w,s,t} \tag{6}$$

Hence, the marginal effect in Equation 6 depends on the size of $\widehat{RPW}_{e_m,e_w,s,t}$, and, depending on the size and sign of γ, implies increasing, null or decreasing marginal effects.

It is important to note that the education-match-state-cells which are used in the shift-share approach may not only have different compositions of the local labor markets into industries and tasks, but might also differ in unobserved characteristics. To ensure that such unobserved differences are not falsely attributed to the predicted potential wages, I include fixed effects $\theta_{e_m\times e_w\times s}$ for these education-match-state-cells.

Apart from that I control for a number of fixed effects to absorb unobserved fixed differences, namely by year (δ_t), interview quarter (ρ_q), state (ϵ_s), state-by-year $(\zeta_{s\times t})$,

[22] Working hours are measured as the contractually agreed working hours.

education-match ($\eta_{e_m \times e_w}$), education indicator[23] of the woman (ι_{isc_w}) and of the man (κ_{isc_m}), age of the woman (λ_{a_w}), and of the man (μ_{a_m}), an indicator (ν_{agegap}) for whether the woman is more than 3 years older than the man, the man is more than 3 years older than the woman, or that they are roughly of the same age. I also allow for the age gap effects to differ by education match ($\pi_{gap \times matchtype}$). For example, couples in which the woman has a higher level of formal education, and is also older than the man, might respond very differently to the relative wage than "standard" couples in which the man is at least as educated as the women and is at least around the same age.

In my preferred specification, I add a vector X_i which contains individual and couple control variables: being born in West Germany, partner being born in West Germany, being married, German nationality, partner has German nationality, living in an urban area, an indicator for having children aged 0 to 3 / 4 to 6 / 7 to 18 years living in the household, the total number of children under 18. Since the Microcensus dataset consists of repeated cross-sections, I cannot include couple fixed effects. Standard errors ω_i are clustered by state.

5 Results

I begin by estimating Equation 4 and 5 to analyze the employment behavior of men and women who live in a cohabiting partnership.

Employment of female partners

I find no significant effects of the relative potential wage on the participation margin of the female partners in panel A of Table 3, on average. The quadratic specification in column (2) shows, however, that the probability that female partners are employed increases significantly as their relative potential wage rises. Yet, this is offset by a reduction of the positive effect at higher levels of the relative wage. The total average effect as measured in column (1) is therefore a null effect. The same pattern is confirmed for working hours in column (3) and (4). Here, however, the total average effect is positive and significant at the 5 percent significance level. Conditional on employment of the woman, the average linear effect on working hours is statistically significant at the 1 percent level and positive: a rise of the relative potential wage by 1 percentage point (pp) raises the female partner's work hours by 0.17 hours, i.e. 10 minutes. Applying the quadratic specification suggests again that the effect of a higher female-to-male potential wage is positive, but that it decreases

[23] International Standard Classification of Education 97 (ISCED-97)

Table 3: Employment outcomes of partnered women and men

	Employed		Working hours[1]		Cond. working hours[2]	
	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic
	(1)	(2)	(2)	(4)	(5)	(6)
Panel A: Female partners						
Rel. Potential Wage	-0.001	0.037***	0.189**	1.396***	0.173***	0.912**
	(0.003)	(0.011)	(0.089)	(0.405)	(0.044)	(0.406)
Rel. Wage × Rel. Wage		-0.000***		-0.006***		-0.003*
		(0.000)		(0.002)		(0.002)
Mean of the Dependent Var.	0.76		22.21		28.89	
Standard Deviation	0.42		16.33		12.44	
R^2	0.17	0.17	0.26	0.26	0.23	0.23
Observations	995,583	995,583	995,583	995,583	765,987	765,987
Panel B: Male partners						
Rel. Potential Wage	0.006***	-0.009	0.380***	-0.730	0.144***	-0.410
	(0.001)	(0.013)	(0.082)	(0.682)	(0.033)	(0.295)
Rel. Wage × Rel. Wage		0.000		0.005		0.003*
		(0.000)		(0.003)		(0.001)
Mean of the Dependent Var.	0.92		38.34		41.4	
Standard Deviation	0.25		13.72		8.86	
R^2	0.08	0.08	0.11	0.11	0.05	0.05
Observations	995,583	995,583	995,583	995,583	923,024	923,024

Notes: Regressions based on Equation 4 and 5. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. [1] In case of non-employment, working hours coded as zero. [2] Conditional on employment.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

significantly as the relative wage rises. This underlines that looking at the insignificant linear coefficient as in column (1) only can be misleading since it neglects what is happening along the distribution of relative wages.

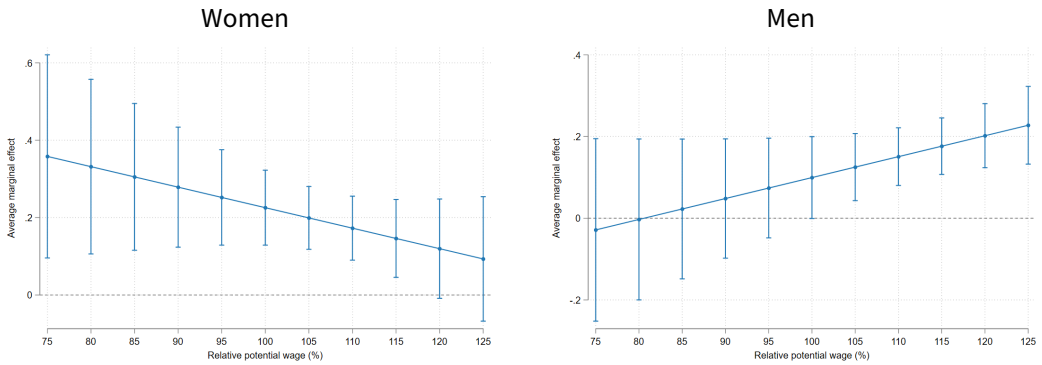
Employment of male partners

I then investigate the employment behavior of the male partners in panel B of Table 3. The estimations show that a higher female-to-male wage potential also has significant effects on the employment of the male partners. An increase of the relative potential wage by 1 pp significantly increases the employment probability by 0.6 pp. The quadratic specification

does not find significant effects. The relative wage also has a highly significant positive effect on the working hours of the male partners. This also holds when restricting on employed men, only. When decomposing the adjustments into a linear and a quadratic adjustments, the estimations suggest that at low levels of the relative wage, the male partners reduce their work hours if they are employed. At higher levels of the relative wage, their work hours do, however, on average rise. The positive adjustment of men's work hours at high levels of the relative wage is significant at the 10 percent significance level. This positive adjustment appear to outweigh the reduction so that on average male work hours rise as the female partner's earnings potential increases relative to that of the man..

Female vs. male effects

Figure 3: Average marginal effects on work hours



Notes: This figure shows the average marginal effects for different levels of the relative potential wage as defined in Eq. 6 using the quadratic specification from Eq. 5. The dependent variable measures the work hours conditional on employment. *Source:* Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Figure 3 plots the average marginal effects defined in Eq. 6 along the distribution of relative wages. They are obtained using the quadratic regression from Eq. 5. It illustrates that the marginal effect of the relative wage on work hours for women stays significantly positive as long as the relative wage lies below 120 percent. For male partners, at low levels of the relative wage, the marginal effect is not significantly different from zero. But as soon, as it exceeds 100 percent the effect turns significantly positive. These patterns suggest that women at "low" levels of the relative wage on average increase their work hours, but that the effects becomes increasingly smaller. Men, on the other hand, only start to react to the relative potential wage when it becomes "too large".

Employment differences within partnerships

Finally, I want to understand whether these individual employment patterns affect the degree of household specialization within couples. Therefore, I estimate the effect of a rising relative wage on the absolute differences between the working hours of the man and the woman in a partnership, and the hours difference relative to the male partner's working hour, that is the hours gap in percent. In columns 1 to 4 of Table 4, I include all couples and in columns 5 to 8 only those couples in which both partners are employed.

Table 4: Employment differences within partnerships

	Hours diff.[1]		Hours gap (%)		Cond. hours diff.[1]		Cond. hours gap[1] (%)	
	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rel. Potential Wage	0.191*	-2.126***	0.000	-0.068***	-0.049	-1.499***	0.001	-0.072***
	(0.100)	(0.677)	(0.003)	(0.016)	(0.058)	(0.434)	(0.002)	(0.022)
Rel. Wage × Rel. Wage		0.011***		0.000***		0.007***		0.000***
		(0.003)		(0.000)		(0.002)		(0.000)
Mean of the Dep. Var.	16.1		0.41		12.8		0.24	
Standard Deviation	20.2		0.67		14.9		0.67	
R^2	0.17	0.17	0.11	0.11	0.21	0.21	0.07	0.07
Observations	995,583	995,583	923,024	923,024	726,646	726,646	726,646	726,646

Notes: Regressions based on Equation 4 and 5 for all women who live with their partner in the same household. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. [1] Difference = average hours of the male partner minus average hours of the female partner; [2] Conditional on employment of both partners.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

The results show that the relationship between the relative wage and the within-couple working hours differences / gaps is highly non-monotonic. The within-couple difference in working hours declines significantly as the relative wage rises, but at a decreasing rate. The overall, average effect in column (1) suggests that as the potential wage of women relative to men increases by 1 pp, the within-couple hours difference widens by 0.19 hours. Taking into consideration adjustments on the participation margin, the hours difference and percentage gap in dual-earner couples are on average not affected (columns (5) and (7)). Yet again, the quadratic specifications show that indeed at lower levels of the relative wage the gap shrinks, but this negative effect becomes smaller as the relative wage rises, and in sum adds up to a null effect. The same pattern is found for the percentage hours gap. This means that in dual-earner couples on average the hours gap does increase by 0.5 pp as the relative wage rises by 1 pp.

Altogether, the estimations show that both partners appear to react non-linearly to the relative potential wage. Surprisingly, the effects seem to be very important for the male

partners, and also they react positively to improving female wage opportunities. This means that the hours gap between the partners does not close. On the contrary, the difference in work hours can even widen.

6 Potential mechanisms

It seems to contradict economic intuition that employment gaps within couples do not close, but even widen as the earnings potential of women relative to those of men increases. So what might explain this *irrational* behavior? In the following, I derive hypotheses based on a Becker-type model of the household.

6.1 Household-specialization according to Gary S. Becker

The seminal economic theory of the household by Gary S. Becker models marriage as a place for household specialization, which generates a marital surplus if one partner specializes in home production while the other specializes in market work (Becker, 1973, 1981) .[24] It provides a good explanation for the non-linearity of these patterns.

Assuming a unitary household, each individual of a couple derives utility from joint consumption, i.e. through own and partner's labor income, a joint household good h as well as from the match quality q_{ij}. The individual total time budget, which is normalized to 1, is split into household production h_i and market work $1 - h_i$. The household good is modelled as a strictly concave function $h(h_i, h_j) = \beta_i log(\alpha_i h_i + \alpha_j h_j)$. The preference for the household good, e.g., children, is measured through β_i, the household productivity is summarized in α_i. Both parameters may differ between the spouses. Also, partners may put a different weight on the own relative to the partner's consumption, which is measured through δ_i. One can also think of δ_i as a measure for the weight an individual puts on the own career. The utility in a marriage for each partner $i \in \{f, m\}$ is then given by

$$V_i(w_i, w_j, q_{ij}) = \max_{0 \leq h_i \leq 1} [\delta_i(1 - h_i)w_i + (1 - h_j)w_j + \beta_i log(\alpha_i h_i + \alpha_j h_j) + q_{ij}] \quad (7)$$

[24] Other factors that contribute to the marital surplus include economies of scale, consumption-based benefits through the shared consumption of household goods or joint investments into children (Weiss, 1997).

Time allocation

When married, spouses have to decide how to allocate their time between market and household work. Spouses maximize the marriage utility, taking the partner's time choices as given. The time allocation decision is defined by the comparative advantage of the spouses in market production compared to household production: $\frac{\delta_f w_f}{\alpha_f} \lesseqgtr \frac{\delta_m w_m}{\alpha_m}$. When the male and female partner do not differ w.r.t. their household productivity, i.e. $\alpha_m = \alpha_f = \alpha$ and both fully evaluate their consumption, i.e. $\delta_f = \delta_m = 1$, this simplifies to the relative female-to-male wage $w_f \lesseqgtr w_m \equiv \frac{w_f}{w_m} \lesseqgtr 1$, which measures the *absolute advantage in market work*. It follows that when $w_f < \alpha < w_m$, it is rational that the wife fully specializes in the household. If $\alpha < w_f < w_m$, it is optimal that she works part-time in the market for $1 - \frac{\beta}{w_f}$ hours. Only when $w_f \geq w_m$ should the wife work full-time hours.

Comparative statics: a rise of the (relative) female wage

I will briefly summarize the models predictions for a rise of the female wage when the male wage remains constant. This increases the probability that the female market wage exceeds the household productivity *linearly*. This trespassing would encourage some women to withdraw from full household specialization and to work at least part-time in the market. For working women equation 8 shows that market hours increase as the female wage rises, but at a diminishing rate.

$$\frac{d\,(1 - h_f^*)}{d\,w_f} = \frac{\beta}{w_f^2} \tag{8}$$

A man's decision to work is affected by the female wage solely through the comparative advantage, i.e. through the comparison between the relative female-to-male wage and the household productivities. If the female wage exceeds the male wage, it would be rational for the man to decrease market work hours and to partially specialize in the household, or even to fully specialize in the household if $w_m < \alpha < w_f$. Hence, the probability that a man chooses to (at least partially) specialize in the household increases, and market work hours in this case should fall.

Hence, the model predicts the opposite adjustments for male and female partners: average market hours of male partners fall as the (relative) female wage rises, work hours of female partners increase, but at a diminishing rate. This, in sum, should then also be reflected by the within-couple gap in working hours – closing strongly as the relative female wage rises, but slowing down as the wage gap shrinks.

Taken together, assuming that male and female partner do not differ in their preferences and household productivity and that the only difference lies in their market wages, the household model provides a good explanation for the non-linearity of these patterns for partners, it does however not explain why the effects reverse at very high levels of gender wage equality.

6.2 Equalizing wages

So far it was assumed that the male and female partner differed only in the market wage offer, but hold otherwise the same preferences and household productivities. Yet, if a man and a woman receive the same market wage, different choices of market hours in the simple model can only arise through differences in the remaining parameters, which I will discuss in the following.

6.2.1 Household productivity

If women were more capable of child rearing or cooking than men ($\alpha_f > \alpha_m$), this would at any level of the female wage reduce women's comparative advantage in market work. Nowadays, a large range of substitutes for home production is readily available, such as external child care (e.g., Cascio, 2009), electric appliances (de V. Cavalcanti/Tavares, 2008), or food deliveries. The rising importance also in jobs producing home production substitutes is actually fostering female employment growth in the U.S (Cerina/Moro/Rendall, 2021). These factors should reduce the importance of household productivity, and help attenuate existing gaps in household productivity.

Hence, a higher household productivity of women relative to men could explain why convergence is slow. It does not help, however, to reconcile the observation that a rising relative wage only decreases the within-couple gap in work hours at low levels of the relative wage.

6.2.2 Gender-specific preferences for the household good

Another explanation would be that men and women evaluate the household good differently. One could think of the household good as children from which partners derive some utility (or disutility). The higher value a person puts on the household good through weight β_i, the fewer market work hours it will supply: $1 - \frac{\beta_i}{w_i}$. If women do for instance evaluate the household good higher than men, i.e. $\beta_f > \beta_m$, this would explain why women

increase their working hours only at a slow rate as the female wage rises. Men and women could hold different values about the household good, because household work or the upbringing of children is a woman's domain as viewed by the society, or because women enjoy it more, i.e. it is an intrinsic preference (compare Cortés/Pan, 2023). For the U.S., Cortés/Pan (2019) show that having a higher availability of low-cost substitutes for household production generally reduces gender earnings gaps, suggesting that household production is a binding factor for women. It is unclear however, whether this binding effect for women is due to a higher relative household productivity, a higher evaluation of the household good or due to expectations imposed by society. Moreover, there is evidence that partners can adjust their beliefs about gender roles in the household and in the market, for instance during the COVID-19 lockdown, especially men (Boring/Moroni, 2023).

Given that household preference of partners are stable, this would be a further factor explaining why the closing of the gender gap is slow, not however why it decreases at a diminishing rate.

6.2.3 Gender-specific preferences and norms for market work

The last factor in the household model which could explain different hours choices of partners even if both have the same wage potential are different preferences for the own career relative to the partner's career: $\delta_m \lessgtr \delta_f$. A strong career preference $\delta_i > 1$ places a higher value on the own labor market income. Then, the comparative advantage $\frac{\delta_f w_f}{\alpha} \lessgtr \frac{\delta_m w_m}{\alpha}$ is determined by the evaluated wage ratio $\delta_f w_f \lessgtr \delta_m w_m$. Hence, it could be possible that even though the female wage is higher than the male wage, the husband evaluates his own income much higher ($\delta_m > 1$), so that the comparative advantage would be biased towards male market work. The same would happen if a woman devalues her own income ($\delta_f < 1$).

There is evidence that these preferences are not stable but themselves dependent on the relative wage. Bertrand/Kamenica/Pan (2015) and Bittman et al. (2003) show that a violation of the male breadwinner norm, i.e. the notion that the man has to earn the main share of the family income, can result in lower female employment and / or higher female housework investments.[25] Recently, Lippmann/Georgieff/Senik (2020) demonstrated that once the wife earns more, she reduces her labor supply in West German couples, not however in East German relationships. This suggests, that the wish to comply with certain social categories, here a more traditional division of earnings within a partnership, could become so strong that partners can achieve a desired traditional split of labor earnings only

[25] There is some dispute in the literature as to whether the 50 percent-threshold in the household's income distribution is really due to norms or rather a result of institutional frameworks such as collective agreements or through co-working spouses (Hederos Eriksson/Stenberg, 2015; Zinovyeva/Tverdostup, 2021).

by reducing female working hours or by increasing male working hours, despite higher female wages. Such a behavior rationalizes well with the identity framework of Akerlof/Kranton (2000) in which noncompliance with the prescribed behavior for a social category is costly.

As pointed out in section 3, Germany consists of two regions which differ significantly with respect to gender equality in wages and employment but are also known to differ in gender role attitudes (Bauernschuster/Rainer, 2012; Lippmann/Georgieff/Senik, 2020). East Germany is the more gender egalitarian region on these dimensions. To investigate whether there is evidence for such differences across Germany w.r.t. the relative potential wage, I perform a heterogeneity analysis for East and West Germany in Table A6. I find that, indeed, it is women in West Germany who react non-monotonically to a higher relative wage by increasing work hours at low levels of the relative wage, but the effect becomes smaller as the relative wage rises. Even though the quadratic effect are only *borderline* significant with p-values of 0.12. I interpret this as suggestive evidence. In East German couples, women unambiguously increase their work hours as the relative potential wage rises. This result is also in line with the results from Lippmann/Georgieff/Senik (2020). This suggests that women only reluctantly increase their working hours in West Germany, possibly by discounting the own labor income at high levels of the relative wage. Men, on the other hand, on average react similarly in both East and West Germany. In both regions, men's work hours rise as the relative potential wage of women improves. Especially, in West Germany, the quadratic decomposition highlights that relative female potential wage gains are counteracted by reducing male work hours only at low levels of the relative wage. This could be driven by putting a higher weight on the own career, i.e. labor income, as women's earnings potentials rise.

Such adjustments of partner's work hours could enable couples to keep a male main-earner relationship despite higher female wage potentials. Therefore, I inspect more closely how earnings potentials of women relative to men translate into realized net earnings. In Table A7, I show that overall a higher relative wage does slightly raise women's labor incomes. Men's incomes, on the other hand, are not affected. Even though the negative point estimates point towards a reduction. When looking at the distribution of earned incomes in the couples, it becomes clear that the share that the female partner contributes to the couple's household net income is also not changed. Decomposing it into the linear and quadratic reactions, I find that there is a significant positive but diminishing effect on the female income share. Eventually, also the share of couples in which the woman earns more than the man, thus is not the secondary earner, is not affected. In dual-earner couples, however, for the probability that the woman earns more than the man there is a positive but diminishing reaction to a rising relative earnings potentials, resulting in a null effect. This suggest that overall, couples avoid to live in a partnership in which the man is the secondary earner despite good earnings prospects for the woman. Beyond that it

implicates that the total household income also does not benefit from improved female earning potentials. In sum, the adjustments of the partners' working hours (women working longer hours, and men working longer hours, too) ensure that the possibly desired split in the within-couple earnings distribution is preserved – however, at the cost of no gains in household income.[26]

To understand better to which wage potential the partners are actually reacting to, I regress employment outcomes on the potential wages of each gender in Table A8. The non-monotonic response of female work hours indeed reacts with a positive but diminishing effect on the female potential wage. Male wage potentials do not play a significant role. The labor supply of male partners rises when male potential wags rise, but at a diminishing rate. On average, however, male labor supply declines with higher male wage potentials, suggesting a backward-bending labor supply curve. On the other hand, their labor supply rises with improving female wage opportunities. Hence, the effects for female work hours are mainly driven by reactions to their own potential wage, whereas men appear to react negatively to increases in own earnings potentials, but positively to improvements in wage opportunities of their female partner.

Such dynamic income preferences which could be driven by gender-specific identity categories explain well, on the one hand, the slowing down of the closing of the within-couple gender gap. On the other hand, it also provides an explanation as to why the closing of the gap does not only slow down but reverses into a widening as the earnings potential of women relative to men becomes very high.

I cannot identify whether the observed reactions are the result of intrinsic preferences, in a sense that women prefer to be the secondary earner and to work shorter market hours than the partner, or whether these observed preferences are endogenous to gender specific stereotypes and expectations as pointed out by Bertrand (2020). But dynamic gender-role-conforming career preferences provide a useful explanation to explain the observed patterns.

[26] I only observe *net* incomes of the partners which could be severely biased by income splitting. Typically, the woman in Germany is using the less favorable tax category if the couple applies income splitting (Bach et al., 2013). Given that I still find a positive effect on women's net incomes, and a zero effect on men's incomes, I interpret this as strong evidence that the actual effect on gross earnings is likely to be even larger. The estimates, hence, are likely to just measure a lower-bound estimate.

7 Heterogeneity Analyses and Robustness

7.1 Robustness

First, I report the estimation results for specifications using different sets of fixed effects in table A9. The signs of the estimated coefficients if significant do not vary. In particular the results for the male partners and the couple gaps do not change upon using additional fixed effects. The estimations for the female partner's intensive margin are slightly more sensitive. Then, I conduct multiple robustness checks to investigate the validity of the empirical approach and report results in Table A10. First, I test the sensitivity of the results to different model specifications. In panel B, I add indicators whether the female and male partners were employed in the previous year and whether their main "occupation" was housewife / man to take into account path dependencies of the current decisions. The individual employment history has a high explanatory power. But the coefficients of the relative wage and their levels of significance is virtually unchanged. In panel c, I exclude the individual control variables such as children, foreign nationality, and being born in West Germany. Still, the main results remain robust. In panel D, I add dummies for the local annual decile of the relative earned household income to see whether economic necessity could explain the effects. Yet, the results remain virtually unchanged. Moreover, since the estimation results could be driven by the the sectors with the largest Rotemberg weights,[27] I test whether the exclusion of these task-industry cells affects the results in Panel E. The qualitative results remain the same. Only, for women the exclusion of these task-industry cells seems to make a difference since without them the quadratic specification for work hours conditional on employment is now highly significant. Additionally, to further investigate the sensitivity of the shift-share wage, I add time-trends that differ across areas with different degrees of initial employment shares of these industry-task combinations.[28] Qualitative findings remain robust, yet, the level of significance increases. In the baseline estimation I use the *current* relative potential wage as explanatory variable. Since it is possible that the relative wage takes some time to affect partner's employment decisions, in panel G, I show the results for using the relative wage lagged by one year as main explanatory variable. For the female partners, the lagged relative wage estimates that the level of significance for the quadratic effects on the work hours conditional on employment decreases. For the male partners, on the other hand, the level of significance of the quadratic effects on working hours increases so that the linear as well as the coefficient are

[27] Compare section 4.1.
[28] I construct the differential time trends by interacting year dummies with quartiles of the share of employment in these industry-task combinations in the base year.

significant at the 10 percent and 5 percent level respectively. Also, it finds that the within-couple gaps widen for all couples as well as in dual-earner couples significantly. In panel H, I additionally add the relative potential wage lagged by five years. The inclusion does not affect the estimated effects of the current relative wage very much. However, especially for the female partners the relative wage lagged by five years is an important explanatory factor, too. The estimated effects carry the same signs as those of the current relative wage. For men that earlier relative wage does not play a significant role. This points to the possibility that path dependencies play an important role for employment decisions.

Reassuringly, the results remain robust to the various robustness analyses. My results provide robust evidence that the effect of an increasing relative female wage on employment choices in couples depends on the level of local gender equality in potential earnings.

7.2 Which pattern do the effects follow?

In my baseline estimations, I investigate whether employment choices of partners react in a quadratic patterns towards changes in the relative potential wage. Now, I inspect further non-linear specifications in table A11. When I measure the relative wage in logs in panel I, I find a significant positive effects of female work hours conditional on employment. Also the effects on the employment of male partners are significantly positive. The logarithmic specification thus suggests a positive but decreasing effect on male employment. It is hard to reconcile this result with economic theory. Also it seems rather to capture the same total average effect which is being estimate using the linear specification. Using a cubic instead of a linear or quadratic specification almost never yields significant results. An important exception are the working hours of the male partners conditional on employment. Here, the linear coefficient is significantly negative, the quadratic coefficient is positive, and the cubic coefficient is again negative. This suggests that male partners at the tails of the distribution again react differently.

To inspect this more closely, I also run estimations investigating responses at different points of the relative wage in table A12. First, I check whether the response to the relative wage differs depending on whether the relative wage lies above the equal-earning-potential (compare section 6.2.3). For women, this makes no difference. For men, however, this point matters. If the relative potential wage amounts to at least 100 percent, male partner's likelihood to be employed and work hours increase significantly. For those below, there is no effect. As a result, the within-couple hours gap also only widens in couples with a relative wage above 100 percent. For these others, it closes significantly.

7.3 Corroboration of results using observed couples' relative incomes

So far, all estimations used the predicted ratios between female and male potential earnings as a measure of relative income opportunities in couples. Now, I want to corroborate the results using the observed relative incomes in couples in table A13. For the whole sample, the effects of the relative incomes in the couples is highly significant for all outcomes and all specifications. For women, all coefficients have the same signs as the regressions using the relative potential wage – there is a positive but diminishing effect of the relative income. For men, the estimations find that a higher relative female income is associated with fewer working hours. Therefore, on average, also the within-couple hours gap is lower in couples with higher relative incomes.

The positive, diminishing effects of the relative income on female partner's employment and negative, but diminishing effects on male partner's employment align well with my main results. They do, however, have several limitations. First of all, the relative income is a more meaningful measure in couples in which at least one partner, or ideally both are working. Moreover, the coefficients are very hard to interpret since the outcome variable, working hours, is also implicitly part of the variable of interest. Working hours constitute the labor market income. Lastly, the realized labor market incomes are driven by many other selection processes that are not addressed here and cannot be fully absorbed by the fixed effects. So these estimates simply measure associations, but are likely to also carry part of the underlying story.

7.4 Further heterogeneity analyses

Generally, one of the most important determinants of female labor supply is motherhood. Female and male employment patterns and earnings suddenly start to diverge significantly after the birth of the first child (Kleven/Landais/Søgaard, 2019; Jessen, 2021). It is plausible that mothers are more responsive to changes in their relative earnings opportunities, particularly given their low baseline employment. Childless women, on the other hand, are less restricted in their labor supply and, thus, likely to have already adjusted to their individual optimal employment. To investigate whether the relative wage is more relevant in the presence of children, I perform a heterogeneity analysis in Table A17. The results show that indeed it is only mothers who experience a significant positive but diminishing effect of the relative wage. However, for their male partners the picture is reversed. Fathers react strongly linearly on improving female wage opportunities through longer work hours. Childless men, on the other hand, react in a convex pattern. As a result only the hours gap in couples with children widen.

Besides the differences in culture between East and West Germany investigated in Table A6 (in Section 6), couples might also differ in their responses to relative earnings opportunities given their level of education. In table A18 the results for a heterogeneity analysis by level of education of the female partner are displayed. For the woman's employment, relative earnings opportunities only matter for women with no tertiary degree. And in this case it increase labor supply on the extensive and intensive margin. For their male partners, it is especially the partners of very highly educated women that increase their only labor supply if the woman's relative earnings opportunities improve. This is also the only group in which the within-couple hours gap conditional on employment widens significantly. For the educational level of the male partner, the differences are not so pronounced (compare table A19).

I now want to see whether couples differ depending on whether their match is more standard or not. Therefore, I first look at couples who differ by the type of education match in table A20: couples in which the man has the higher level of formal education, both have the same level, or the woman has the higher level. The concave reaction of the female work hours are not relevant for any of the groups. For the male partners, the significant convex response is driven by more common types of matchings, i.e. by cases in which the man is either more or equally educated as the woman. Also, male work hours increase significantly only in couples in which the woman is either equally or higher qualified than the male partner. This relates very well to the results for female partners with a university degree in table A18 since among female partners who have a university degree (17 percent) more than a third (36 percent) has a higher level of formal education than the partner.

7.5 What about the singles?

Becker's theory of the household only predicts adjustment of partners in a marriage (or cohabiting partnership). In table A22, I investigate whether single women's and men's employment choices react to the relative potential wage[29]. And indeed, single women react similarly as partnered women with a positive but diminishing effect on improving relative wage opportunities. Also their labor incomes rise, on average, as their relative earnings opportunities improve. Single men's employment choices, on the other hand, are not affected by the relative potential wage. Interestingly, however, their average labor incomes decreases significantly as relative female-to-male wage opportunities improve. That single women only "reluctantly" increase their work hours could be driven by a desire to signal attractiveness as in Bursztyn/Fujiwara/Pallais (2017).

[29] I measure the relative wage as the average relative wage given the own education level.

7.6 Selection into partnership

Lastly, selection into *cohabiting* partnerships may pose a problem to the estimation strategy since in that case I would not use a *random* sample. Therefore, I investigate the effect of the relative potential wage on the likelihood that a woman or a man is living in a cohabiting partnership in table A23. For women, a higher relative wage is significantly correlated with a higher likelihood to be living in a cohabiting relationship in the presence. For men only the probability to be married is significantly but negatively correlated to the relative wage. It is important to note, however, that the relative wage is measured in the current period, but the decision to move together with a partner was likely formed and realized years ago. This limits the meaningfulness of these results. Table A24 displays the characteristics of men and women by partnership status. Not surprisingly, women who do not live in a cohabiting partnership are younger, have less children, are more educated, are more active in the labor market and earn higher incomes than those women who are in cohabiting partnerships. Men who do not live in a cohabiting partnership are also younger. But the selection on employment seems to work in the opposite direction to those of women: ”single” men are less active on the labor market, earn lower incomes and are less educated than partnered men. Hence, the sample of partnered men and women is not generalizable to the overall population of men and women. Still, the estimations measure the effects of a rising relative potential female-to-male wage in cohabiting couples given their selection into a cohabiting partnership.

8 Conclusion

Over the past decades, female employment outcomes have improved and gender gaps in terms of earnings and employment narrowed. However, the convergence seems to have stalled, despite technological advances which tend to favor the skill set of women (Goldin/Katz, 2002). In this paper I analyze the effect of a higher relative female-to-male potential wage in Germany using different datasets from administrative sources.

Taking into account the improving wage opportunities of women relative to men due to technological change, I find that the relationship between the relative wage and household specialization is non-monotonic. While a higher relative wage increases female labor supply, the effect is diminishing as the relative wage rises and, on average, insignificant. Men, on the other hand, increase their labor supply on average, even though at low levels of the relative wage they decrease their work hours. In sum, this leads to a stagnation or even widening of the hours gap in couples as the relative wage rises, and also the probability that

a woman is not the secondary does not increase significantly. So female wage opportunities matter for women's employment decision. But they also matter for men, so that the gaps do not close.

This is particularly relevant for public policy aiming to improve female labor market outcomes by focusing on labor market return only. Effects for women with children appear to be limited rather by other factors, such as restrictions to affordable child care or flexibility at the workplace. Men, on the other hand, seem to counteract female wage gains by increasing their own labor supply, possibly due to an idea that a man should be the main earner. Yet, this behavior hurts the overall family (income).

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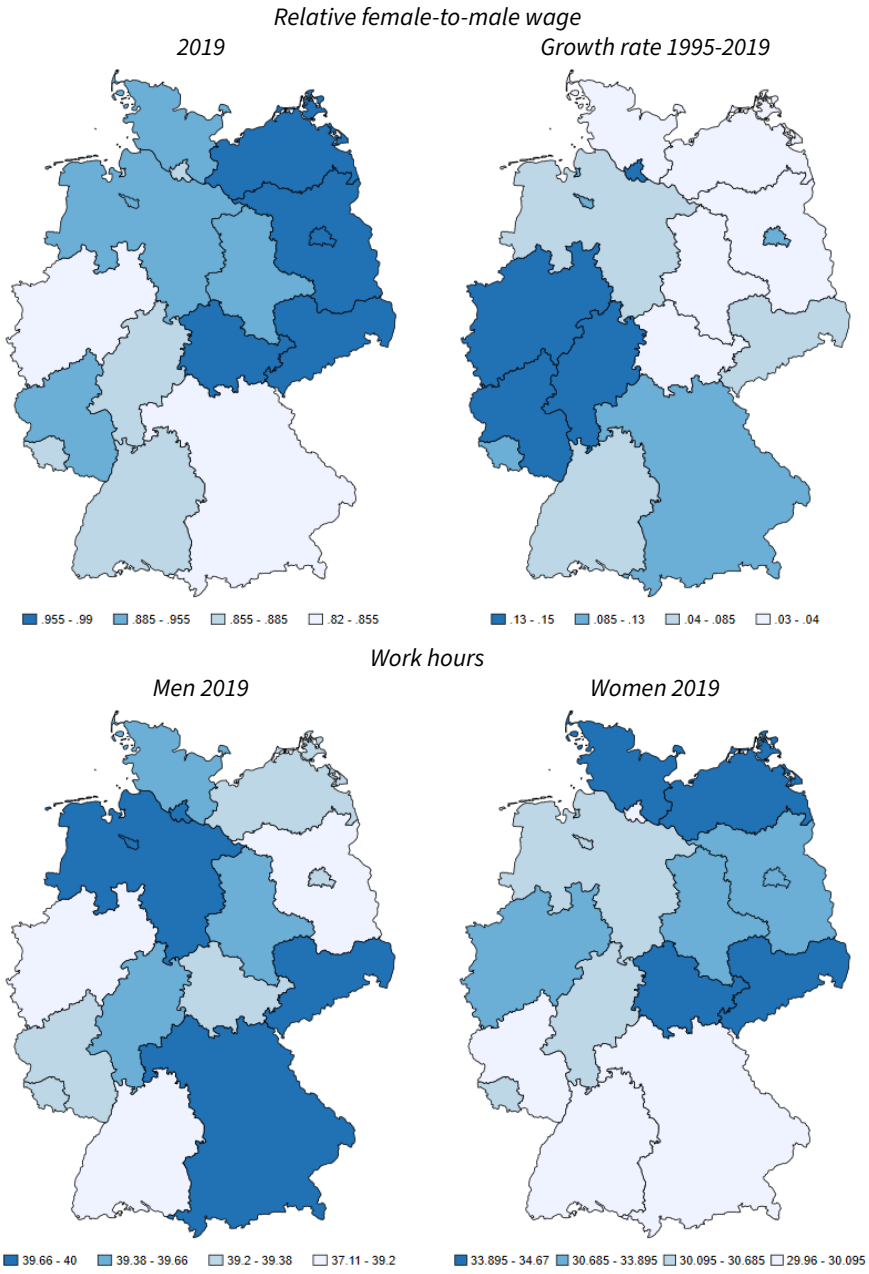
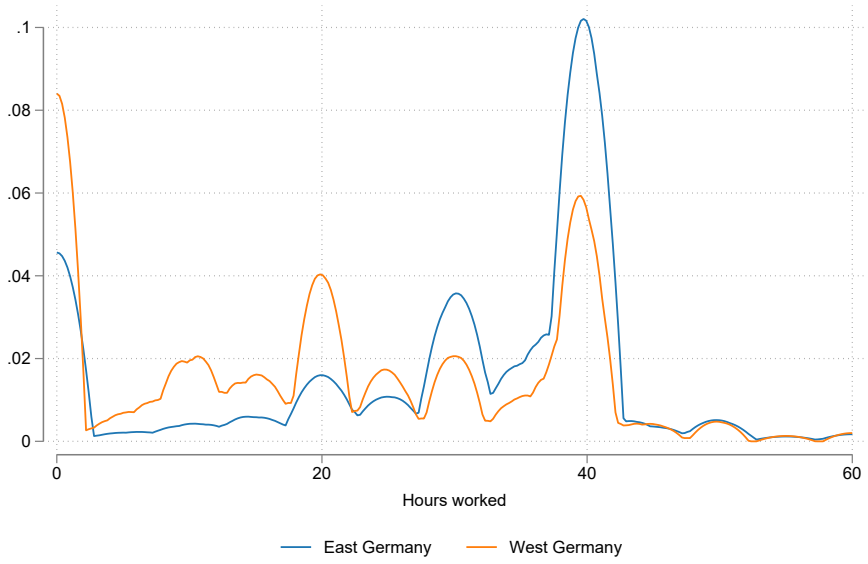
Appendix

Figure A1: Regional variation in gender equality



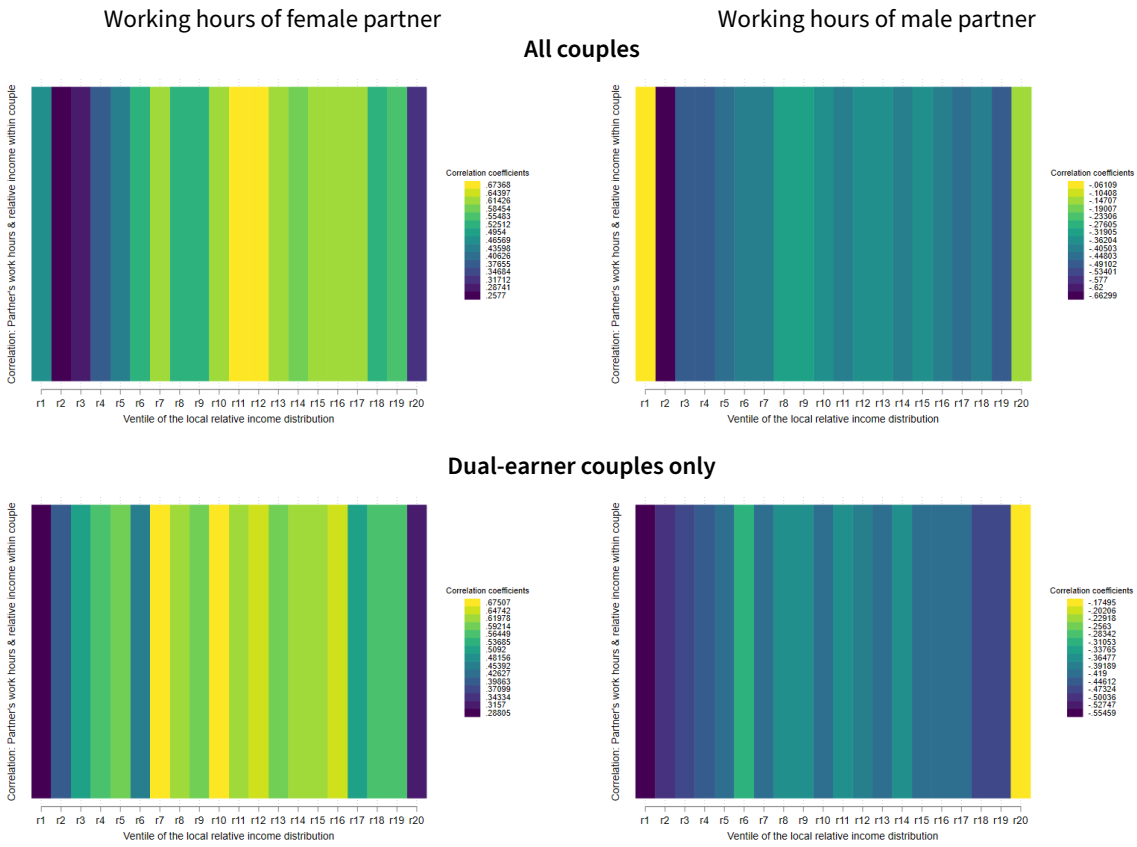
Notes: This figure shows the relative female-to-male gross daily wage. The sample includes full-time dependent employees aged 18-64 years. Work hours of individuals aged 18-64 conditional on employment.
Source: Own calculations based on SIAB 1995–2019 and Microcensus 2019.

Figure A2: Working hours of women partnered with a full-time working man



Notes: This figure shows the distribution of contractually agreed working hours of women in a partnership with a man in full-time (hours $>= 30$) employment. Both partners are aged 22-60 years. Density plot based on epanechnikov kernel with a bandwidth equal to 1.
Source: Own calculations based on Microcensus 2005–2019.

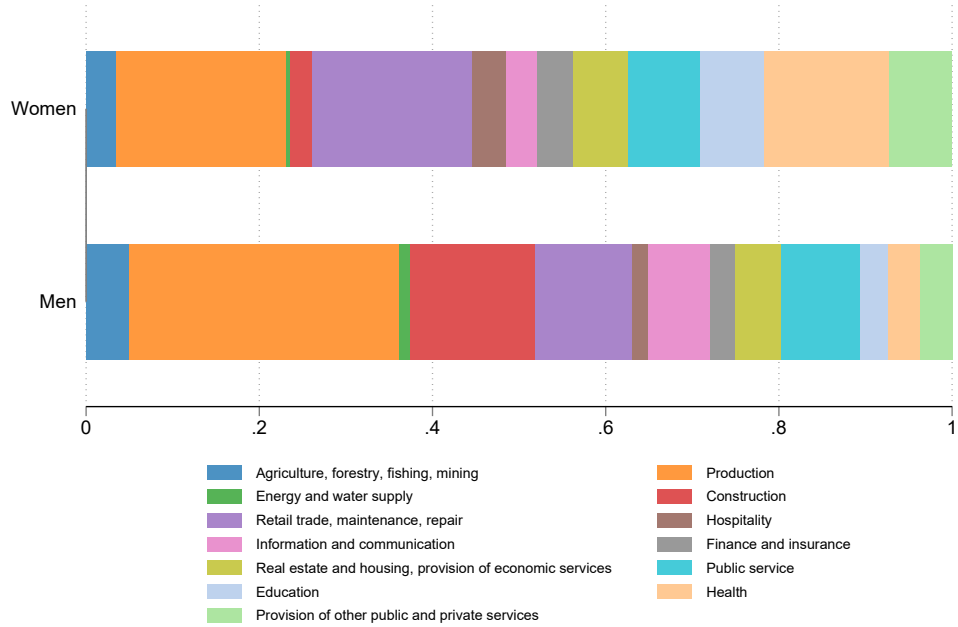
Figure A3: Correlation between working hours of partners and relative female-to-male income within couples across the regional relative wage distribution



Notes: Ventiles of the relative female-to-male hourly net income within couple distribution by year and state. The correlation coefficient measures the correlation between the relative female-to-male income within a couple and the working hours of the partners within the regional relative-wage ventile. Average number of couple observation per ventile: 35,000 (30,000 for dual-earner couples).

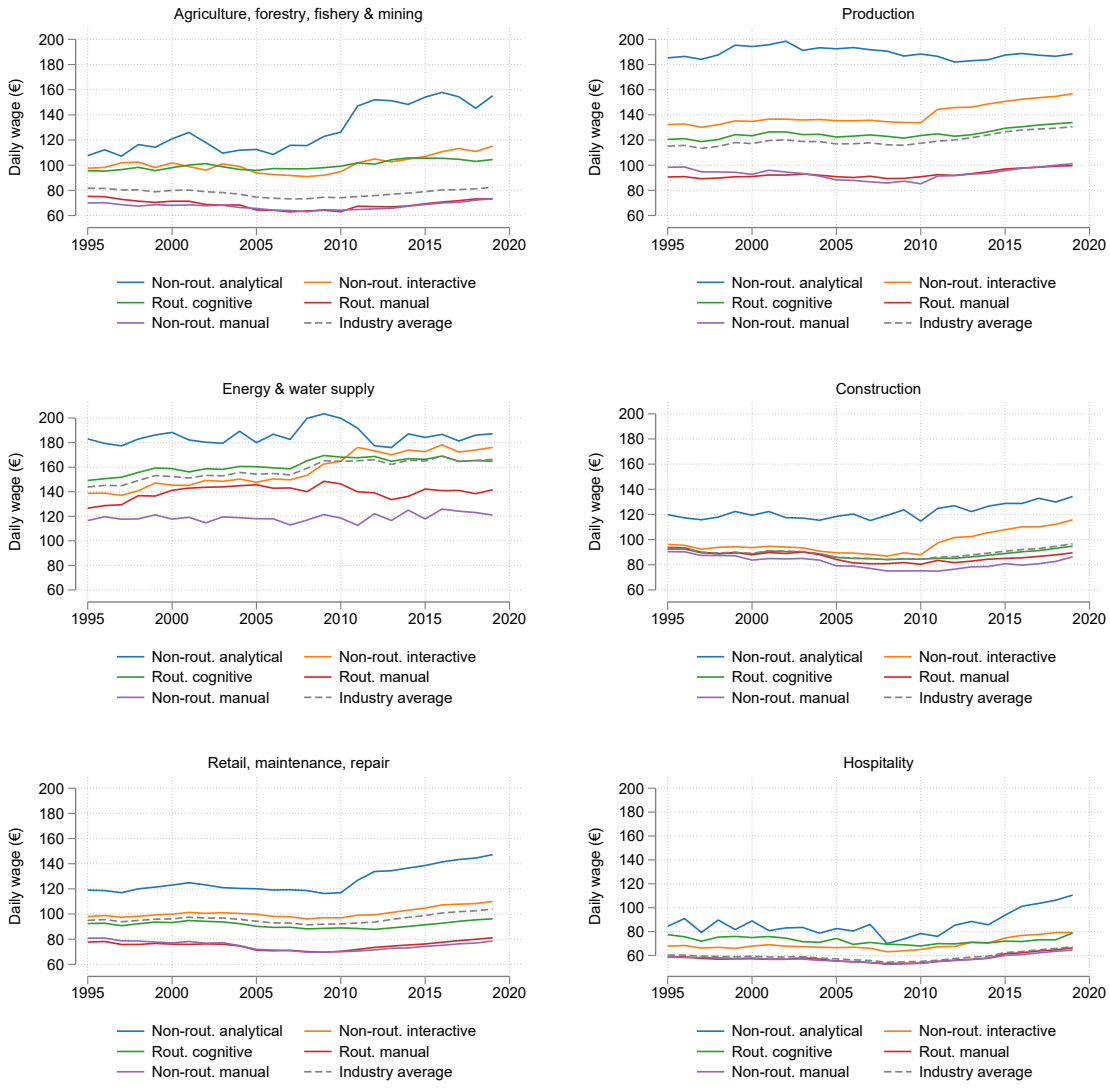
Source: Own calculations based on Microcensus 2005-2019.

Figure A4: Industry composition by gender in 1995 and 1996



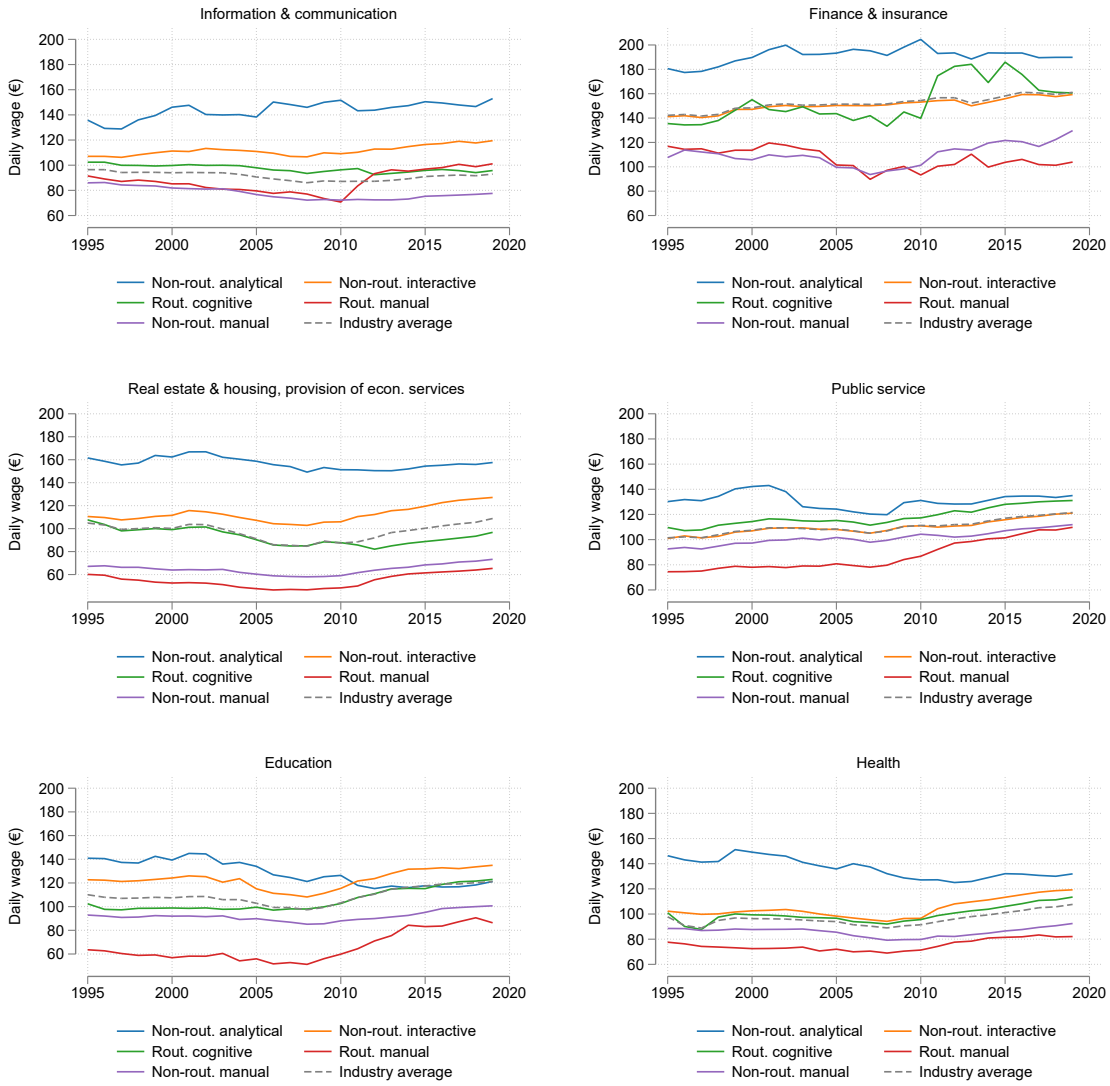
Notes: This figure shows the industry composition by gender in 1995 and 1996 based on the classification in Table A2. Sample of persons aged 18-64 with non-missing information on the relevant variables.
Source: Own calculations based on Microcensus 1995/96.

Figure A5: Wage growth by industry-task combination



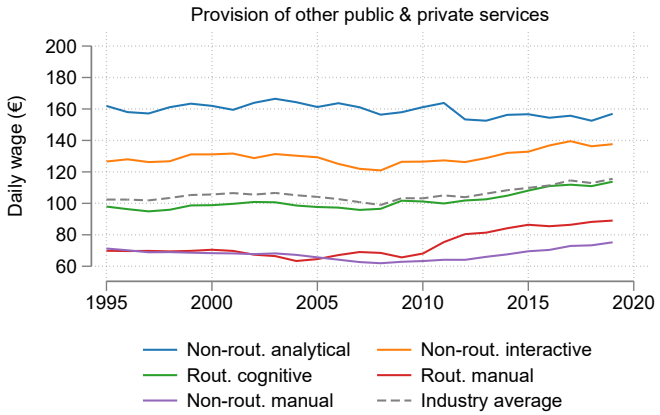
Notes: These figures plot the average imputed observed wage by task within industries. In prices of 2015.
Source: Own calculations based on SIAB 1995–2019 and BIBB 1998/99.

Wage growth by industry-task combination cont.



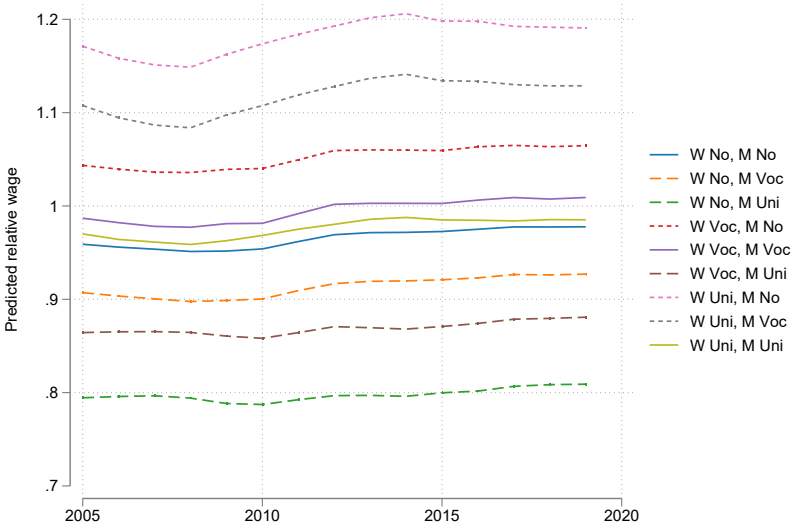
Notes: These figures plot the average imputed observed wage by task within industries. In prices of 2015.
Source: Own calculations based on SIAB 1995–2019 and BIBB 1998/99.

Wage growth by industry-task combination cont.



Notes: These figures plot the average observed wage by task within industries. In prices of 2015.
Source: Own calculations based on SIAB 1995–2019 and BIBB 1998/99.

Figure A6: Predicted relative wage



Notes: This figure plots the average predicted relative wage based on eq. (2) separately by education-match groups. No = no tertiary degree, Voc = vocational degree, Uni = Academic Degree; W = woman, M = man.
Source: Own calculations based on Microcensus 1995/96, SIAB 2005–2019 and BIBB 1998/99.

Table A1: Descriptive statistics

	Mean	Minimum	Maximum	s.d.
Female partners				
Age in years	40.56	22.00	55.00	8.61
No tertiary degree	0.14	0.00	1.00	0.35
Vocational degree	0.69	0.00	1.00	0.46
Academic degree	0.17	0.00	1.00	0.37
Employed	0.77	0.00	1.00	0.42
Number of hours working (normally)	22.21	0.00	98.00	16.34
Employed in the previous year	0.70	0.00	1.00	0.46
Housewife in the previous year	0.16	0.00	1.00	0.36
Real income	1118.17	0.00	2, 0881.67	1035.64
Observations	995,586			
Male partners				
Age in years	43.14	24.00	57.00	8.54
No tertiary degree	0.10	0.00	1.00	0.30
Vocational degree	0.69	0.00	1.00	0.46
Academic degree	0.21	0.00	1.00	0.41
Employed	0.93	0.00	1.00	0.26
Number of hours working (normally)	38.35	0.00	98.00	13.72
Employed in the previous year	0.86	0.00	1.00	0.35
Houseman in the previous year	0.00	0.00	1.00	0.07
Real income	2,479.47	0.00	20881.67	1814.75
Observations	995,586			
Couple households				
Age difference (man - woman)	2.58	-30.00	34.00	4.25
Both around same age (+/-3)	0.60	0.00	1.00	0.49
Man at least 4 years older	0.35	0.00	1.00	0.48
Man at least 4 years younger	0.05	0.00	1.00	0.22
Both have same level of education	0.73	0.00	1.00	0.44
Man has higher degree of education	0.17	0.00	1.00	0.38
Woman has higher degree of education	0.10	0.00	1.00	0.29
At least 1 child aged 0-3 living in household	0.18	0.00	1.00	0.38
At least 1 child aged 4-6 living in household	0.09	0.00	1.00	0.29
At least 1 child aged 7-18 living in household	0.31	0.00	1.00	0.46
Number of children in household	0.99	0.00	12.00	1.04
Married	0.82	0.00	1.00	0.38
West Germany	0.81	0.00	1.00	0.39
Real household income	3,604.10	0.00	20881.67	2260.60
Observations		995,586		

Notes: The sample includes partnered women between 22-55 years and with non-missing information on the relevant variables (education, state, partner info). Male partners are aged 24-57 years. The means of the binary variables refer to the shares. Incomes in prices of 2015 (€).
Source: Own calculations based on Microcensus 2005–2019.

Table A2: Definition of industries

Industry name	WZ 93 code
Agriculture, forestry, fishery & mining	011-051, 101-145
Production	151-372
Energy & water supply	401-410
Construction	451-455
Trade, maintenance, repair	501-527
Hospitality	551-555
Information & communication	601-642
Finance & insurance	651-672
Real estate & housing, provision of economic services	701-748
Public service	751-753, 990
Education	801-804
Health	851-853
Provision of other public & private services	900-930, 950

Notes: Industry classification based on *Klassifikation der Wirtschaftszweige 93* (WZ 93).
Source: Klassifikation der Wirtschaftszweige 93.

Table A3: Definition of tasks

Task measure	Activities
Non-routine analytical	Researching, analysing, designing, sketching
Non-routine interactive	Negotiating, lobbying, coordinating, organising, teaching, training, selling, buying, advising customers, advertising
Routine cognitive	Calculating, bookkeeping, measuring length/weight/temperature
Routine manual	Operating or controlling machines, equipping machines
Non-routine manual	Repairing or renovating houses/machines/vehicles, restoring art/monuments, serving or accommodating

Notes: Task classification following Black/Spitz-Oener (2010) based on the Qualification and Career Survey.
Source: BIBB 1998/99

Table A4: Correlation between industry-task shares and characteristics

	Female industry-task cells with largest Rotemberg weights		
	Real estate / non-routine interactive	Production / non-routine interactive	Health / non-routine interactive
Non-German nat.	0.0003	-0.0013*	-0.0007
	(0.0004)	(0.0007)	(0.0007)
Female share	-0.0008***	0.0001	-0.0012**
	(0.0003)	(0.0005)	(0.0005)
Average age	0.0030	0.0013	0.0084***
	(0.0018)	(0.0031)	(0.0031)
Urban share	-0.0001*	0.0002*	-0.0000
	(0.0001)	(0.0001)	(0.0001)
R^2	0.23	0.16	0.45
Observations	78	78	78
	Male industry-task cells with largest Rotemberg weights		
	Education / non-routine interactive	Production / non-routine interactive	Production / routine cognitive
Non-German nat.	0.0054***	0.0008*	-0.0041**
	(0.0008)	(0.0004)	(0.0016)
Female share	-0.0057***	-0.0015***	0.0026**
	(0.0006)	(0.0003)	(0.0012)
Average age	0.0138***	0.0061***	0.0034
	(0.0039)	(0.0018)	(0.0075)
Urban share	0.0002	0.0002**	0.0009***
	(0.0001)	(0.0001)	(0.0003)
R^2	0.63	0.52	0.24
Observations	78	78	78

Notes: This table reports the correlation between the shares of different industry-task combinations in 1995 and 1996 with other characteristics in the same years. Non-German nat.: share of persons with non-German citizenship, Urban: share district size $>= 100,000$ inhabitants. Each column uses as dependent variable the employment share of the indicated industry-task cell.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A5: Investigating pre-trends

	Female partners		Male partners		Couples	
	Employment	Cond. Work hours	Employment	Cond. Work hours	Hours gap	Cond. Hours gap
Relative wage exposure	0.019	-0.202	-0.027*	0.357	0.018	0.026
	(0.021)	(0.676)	(0.014)	(0.387)	(0.084)	(0.082)
R^2	0.00	-0.01	0.03	-0.00	-0.01	-0.01
Observations	144	144	144	144	144	144

Notes: The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 1997–2004. The variable relative wage exposure measures the change in predicted relative wages from 2005 to 2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Source: Own calculations based on Microcensus 1995/96 & 1997–2004 , SIAB 2005–2019 and BIBB 1998/99.

Table A6: Heterogeneous effects by East vs. West Germany

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
East Germany												
Rel. Potential Wage	0.013***	0.101*	0.358***	0.223	0.016***	0.050	0.239***	0.782	-0.016***	-0.092*	-0.009**	-0.027
	(0.002)	(0.050)	(0.072)	(0.632)	(0.002)	(0.053)	(0.075)	(0.452)	(0.005)	(0.049)	(0.004)	(0.059)
Rel. Wage × Rel. Wage		-0.000*		0.001		-0.000		-0.002		0.000		0.000
		(0.000)		(0.003)		(0.000)		(0.002)		(0.000)		(0.000)
West Germany												
Rel. Potential Wage	-0.004	0.032***	0.118**	1.123*	0.004***	-0.018**	0.134***	-0.658**	0.005*	-0.077***	0.004**	-0.091***
	(0.003)	(0.010)	(0.055)	(0.611)	(0.001)	(0.008)	(0.031)	(0.274)	(0.003)	(0.015)	(0.002)	(0.018)
Rel. Wage × Rel. Wage		-0.000***		-0.005		0.000**		0.004***		0.000***		0.000***
		(0.000)		(0.003)		(0.000)		(0.001)		(0.000)		(0.000)
Mean West	0.69		28.61		0.89		40.9		0.45		0.31	
Mean East	0.72		33.61		0.82		40.35		0.28		0.17	
R^2	0.09	0.09	0.11	0.12	0.07	0.07	0.05	0.05	0.05	0.05	0.04	0.04
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The effects per group are measured by interacting a group dummy with the relative wage.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A7: Partners' realized labor income

	Average net incomes						*Income shares: all couples*				*Income shares: dual-earner couples*			
	Woman's labor income		Man's labor income		Household income		Woman's income share		Woman earns more[1]		Woman's income share		Woman earns more	
	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic	Linear	Quadratic
Rel. Potential Wage	10.331**	-34.427	-4.108	-44.119	0.660	-5.075	-0.001	0.021***	0.000	0.015	0.000	0.018***	0.001	0.021*
	(3.662)	(39.421)	(8.201)	(45.891)	(15.193)	(84.532)	(0.001)	(0.006)	(0.001)	(0.010)	(0.001)	(0.005)	(0.001)	(0.011)
Rel. Wage × Rel. Wage		0.206		0.184		0.026		-0.000***		-0.000		-0.000***		-0.000*
		(0.177)		(0.198)		(0.332)		(0.000)		(0.000)		(0.000)		(0.000)
Maximum		83.7		119.9		96.2		101.8		112.1		110.3		115.2
R^2	0.23	0.23	0.09	0.09	0.21	0.21	0.08	0.08	0.22	0.22	0.26	0.26	0.24	0.24
Observations	947,791	947,791	947,791	947,791	827,032	827,032	827,032	827,032	965,445	965,445	953,162	953,162	995,583	995,583
Mean	1118.17		2479.47		3604.09		0.32		0.14		0.35		0.15	

Notes: Regressions based on eq. 4 and 5 for all women who live with their partner in the same household. The sample includes women aged 22 and 51 with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Average net labor market incomes (real 2015 value). Woman's share of total couple's net income. [1] Woman earns more than 50% of total couple's household labor income.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A8: Effects of gender-specific potential wages

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
Female potential wage	-0.003*	0.015***	0.068*	0.686***	0.001	0.009***	0.033**	0.258***	0.002	-0.020***	0.001	-0.017***
	(0.002)	(0.005)	(0.035)	(0.117)	(0.001)	(0.002)	(0.014)	(0.059)	(0.001)	(0.005)	(0.001)	(0.006)
Male potential wage	0.001	-0.011**	-0.007	-0.206	-0.006***	0.002	-0.121***	0.350***	-0.003	0.028***	-0.005***	0.026***
	(0.001)	(0.005)	(0.044)	(0.118)	(0.001)	(0.004)	(0.018)	(0.115)	(0.002)	(0.005)	(0.002)	(0.005)
Fem. wage × fem. wage		-0.000***		-0.002***		-0.000***		-0.001***		0.000***		0.000***
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
Male wage × male wage		0.000**		0.001		-0.000**		-0.001***		-0.000***		-0.000***
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
R^2	0.17	0.17	0.23	0.23	0.08	0.08	0.05	0.05	0.11	0.11	0.07	0.07
Observations	995,583	995,583	765,987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646

Notes: Regressions based on eq. 4 and 5. The predicted wages are lagged by one year. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A9: Fixed effects specifications

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
Year, state, year × state												
Rel. Wage	0.006***	0.020***	0.179***	-0.146	-0.000***	-0.006*	-0.058***	-0.624***	-0.010***	0.001	-0.007***	0.012*
	(0.001)	(0.004)	(0.015)	(0.116)	(0.000)	(0.003)	(0.004)	(0.059)	(0.001)	(0.003)	(0.000)	(0.006)
Rel. Wage × Rel. Wage		-0.000***		0.002**		0.000*		0.003***		-0.000***		-0.000***
		(0.000)		(0.001)		(0.000)		(0.000)		(0.000)		(0.000)
R^2	0.14	0.14	0.19	0.19	0.04	0.04	0.02	0.02	0.09	0.09	0.05	0.05
Observations	995,583	995,583	765,987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646
Year, state, year × state, education-match, education-match × state												
Rel. Wage	0.000	0.028**	0.187***	0.647	0.006***	-0.002	0.122***	-0.081	-0.003	-0.034**	-0.002	-0.038
	(0.002)	(0.012)	(0.040)	(0.401)	(0.001)	(0.013)	(0.035)	(0.284)	(0.003)	(0.016)	(0.002)	(0.023)
Rel. Wage × Rel. Wage		-0.000**		-0.002		0.000		0.001		0.000*		0.000
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.15	0.15	0.20	0.20	0.07	0.07	0.03	0.03	0.09	0.09	0.06	0.06
Observations	995,583	995,583	765,987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646
Year, state, year × state, education-match, education-match × state, female age, male age												
Rel. Wage	0.000	0.033**	0.180***	0.825*	0.006***	-0.000	0.122***	-0.081	-0.003	-0.039**	-0.002	-0.042*
	(0.002)	(0.012)	(0.048)	(0.413)	(0.001)	(0.013)	(0.033)	(0.284)	(0.003)	(0.017)	(0.002)	(0.023)
Rel. Wage × Rel. Wage		-0.000***		-0.003		0.000		0.001		0.000*		0.000
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.16	0.16	0.21	0.21	0.07	0.07	0.03	0.03	0.10	0.10	0.06	0.06
Observations	995,583	995,583	765,987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646
Year, state, year × state, education-match, education-match × state, female age, male age, female ISCED, male ISCED												
Rel. Wage	-0.001	0.037***	0.175***	0.922**	0.006***	-0.010	0.144***	-0.418	0.000	-0.069***	0.001	-0.073***
	(0.003)	(0.011)	(0.044)	(0.402)	(0.001)	(0.013)	(0.033)	(0.295)	(0.003)	(0.016)	(0.002)	(0.022)
Rel. Wage × Rel. Wage		-0.000***		-0.003*		0.000		0.003*		0.000***		0.000***
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.17	0.17	0.23	0.23	0.08	0.08	0.05	0.05	0.11	0.11	0.07	0.07
Observations	995,586	995,583	765,990	765,987	995,586	995,583	923,024	923,024	923,024	923,024	726,649	726,646
Year, state, year × state, education-match, education-match × state, female age, male age, female ISCED, male ISCED, female age × male age												
Rel. Wage	-0.001	0.037***	0.175***	0.881*	0.006***	-0.009	0.146***	-0.400	0.000	-0.067***	0.001	-0.071***
	(0.003)	(0.011)	(0.044)	(0.419)	(0.001)	(0.013)	(0.033)	(0.300)	(0.003)	(0.016)	(0.002)	(0.022)
Rel. Wage × Rel. Wage		-0.000***		-0.003		0.000		0.003*		0.000***		0.000***
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.17	0.17	0.23	0.23	0.08	0.08	0.05	0.05	0.11	0.11	0.07	0.07
Observations	995,583	995,583	765,987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646
Year, state, year × state, education-match, education-match × state, female age, male age, female ISCED, male ISCED, age gap category , age gap category × education gap												
Rel. Potential Wage	-0.001	0.037***	0.173***	0.912**	0.006***	-0.009	0.144***	-0.410	0.000	-0.068***	0.001	-0.072***
	(0.003)	(0.011)	(0.044)	(0.406)	(0.001)	(0.013)	(0.033)	(0.295)	(0.003)	(0.016)	(0.002)	(0.022)
Rel. wage × Rel. Wage		-0.000***		-0.003*		0.000		0.003*		0.000***		0.000***
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.17	0.17	0.23	0.23	0.08	0.08	0.05	0.05	0.11	0.11	0.07	0.07
Observations	995,583	995,583	765,987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646

Notes: Regressions based on eq. 4 and 5. Each regression also includes fixed effects for quarter of interview. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A10: Robustness checks

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
A. Baseline												
Rel. Potential Wage	-0.001	0.037***	0.173***	0.912**	0.006***	-0.009	0.144***	-0.410	0.000	-0.068***	0.001	-0.072***
	(0.003)	(0.011)	(0.044)	(0.406)	(0.001)	(0.013)	(0.033)	(0.295)	(0.003)	(0.016)	(0.002)	(0.022)
Rel. wage × Rel. Wage		-0.000***		-0.003*		0.000		0.003*		0.000***		0.000***
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.17	0.17	0.23	0.23	0.08	0.08	0.05	0.05	0.11	0.11	0.07	0.07
Observations	995,583	995,583	765,987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646
B. Employment history												
Rel. Potential Wage	0.001	0.033***	0.168***	0.979**	0.004***	0.005	0.146***	-0.321	-0.001	-0.057***	0.001	-0.067***
	(0.001)	(0.008)	(0.049)	(0.376)	(0.001)	(0.009)	(0.032)	(0.293)	(0.002)	(0.016)	(0.002)	(0.022)
Rel. wage × Rel. Wage		-0.000***		-0.004**		-0.000		0.002		0.000***		0.000**
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.55	0.55	0.25	0.25	0.32	0.32	0.06	0.06	0.21	0.21	0.10	0.10
Observations	995,583	995,583	765,987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646
C. No covariates												
Rel. Potential Wage	-0.001	0.038***	0.161**	0.842	0.007***	-0.008	0.152***	-0.409	0.001	-0.071***	0.001	-0.070***
	(0.003)	(0.012)	(0.061)	(0.515)	(0.001)	(0.013)	(0.032)	(0.297)	(0.003)	(0.016)	(0.002)	(0.022)
Rel. wage × Rel. Wage		-0.000***		-0.003		0.000		0.003*		0.000***		0.000***
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.09	0.09	0.11	0.11	0.07	0.07	0.05	0.05	0.05	0.05	0.04	0.04
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649
D. Control for household income												
Rel. Potential Wage	-0.002	0.043***	0.173***	1.071**	0.005**	-0.006	0.148***	-0.342	0.000	-0.074***	0.001	-0.073***
	(0.003)	(0.010)	(0.057)	(0.455)	(0.002)	(0.013)	(0.029)	(0.263)	(0.003)	(0.017)	(0.002)	(0.022)
Rel. wage × Rel. Wage		-0.000***		-0.004*		0.000		0.002*		0.000***		0.000***
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.21	0.21	0.25	0.25	0.14	0.14	0.08	0.08	0.11	0.11	0.07	0.07
N	995583	995583	765987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646
E. Without top-3 Rotemberg weight industry-task cells												
Rel. Potential Wage	-0.003*	0.041***	0.052	0.501	-0.001	-0.013*	-0.029	-0.335	-0.000	-0.056***	-0.003**	-0.048***
	(0.001)	(0.005)	(0.044)	(0.386)	(0.000)	(0.007)	(0.019)	(0.215)	(0.001)	(0.013)	(0.001)	(0.015)
Rel. Wage × Rel. Wage		-0.000***		-0.002		0.000*		0.001		0.000***		0.000**
		(0.000)		(0.001)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.17	0.17	0.23	0.23	0.08	0.08	0.05	0.05	0.11	0.11	0.07	0.07
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649
F. Rotemberg weight time-trend												
Rel. Potential Wage	-0.003	0.058***	0.107	1.137**	0.008***	-0.020*	0.126***	-0.669**	0.002	-0.095***	0.002	-0.087***
	(0.003)	(0.010)	(0.067)	(0.488)	(0.002)	(0.011)	(0.038)	(0.249)	(0.003)	(0.016)	(0.002)	(0.023)
Rel. Wage × Rel. Wage		-0.000***		-0.005**		0.000**		0.004***		0.000***		0.000***
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649
R^2	0.17	0.17	0.23	0.23	0.08	0.08	0.05	0.05	0.11	0.11	0.07	0.07
G. Relative wage lagged by one year												
Lagged Rel. Potential Wage	-0.002	0.027*	-0.004	0.332	0.005***	-0.010	0.100***	-0.496*	0.005*	-0.042***	0.005*	-0.047***
	(0.002)	(0.013)	(0.045)	(0.247)	(0.002)	(0.013)	(0.027)	(0.270)	(0.003)	(0.011)	(0.003)	(0.015)
Lag Rel. Wage × Lag Rel. Wage		-0.000**		-0.002		0.000		0.003**		0.000***		0.000***
		(0.000)		(0.001)		(0.000)		(0.001)		(0.000)		(0.000)
Observations	995,583	995,583	765,987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646
R^2	0.17	0.17	0.23	0.23	0.08	0.08	0.05	0.05	0.11	0.11	0.07	0.07
H. Add lag of relative wage by 5 years												
Rel. Potential Wage	0.000	0.040***	0.119	0.652	0.008***	0.000	0.192***	-0.218	0.002	-0.060***	0.004	-0.059**
	(0.003)	(0.011)	(0.072)	(0.405)	(0.002)	(0.015)	(0.029)	(0.302)	(0.004)	(0.017)	(0.003)	(0.024)
Rel. Wage × Rel. Wage		-0.000***		-0.002		0.000		0.002		0.000***		0.000**
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
Lag 5: Rel. Potential Wage	0.002	0.047***	-0.118*	0.375	0.005**	0.002	0.105***	0.304	0.004*	-0.040**	0.007***	-0.022
	(0.002)	(0.012)	(0.057)	(0.328)	(0.002)	(0.008)	(0.030)	(0.229)	(0.002)	(0.017)	(0.002)	(0.016)
Lag 5: Rel. Wage × Rel. Wage		-0.000***		-0.002		0.000		-0.001		0.000**		0.000
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
Observations	995,583	995,583	765,987	765,987	995,583	995,583	923,024	923,024	923,024	923,024	726,646	726,646
R^2	0.17	0.17	0.23	0.23	0.08	0.08	0.05	0.05	0.11	0.11	0.07	0.07

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 and 51 with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019.

Table A11: Non-linear specifications

	Female partners		Male partners		Couples	
	Employment	Cond. Work hours	Employment	Cond. Work hours	Hours gap	Cond. Hours gap
Log of relative wage						
Log Rel. Potential Wage	0.014	20.278***	0.604***	13.681***	-0.140	-0.082
	(0.268)	(4.949)	(0.167)	(3.789)	(0.281)	(0.192)
Observations	995,583	765,987	995,583	923,024	923,024	726,646
R^2	0.17	0.23	0.08	0.05	0.11	0.07
Cubic specification						
Rel. Potential Wage	0.017	1.348	-0.145	-4.295**	-0.192	-0.324*
	(0.090)	(4.395)	(0.093)	(1.952)	(0.148)	(0.167)
Rel. Wage × Rel. Wage	0.000	-0.008	0.001	0.041**	0.002	0.003
	(0.001)	(0.042)	(0.001)	(0.019)	(0.001)	(0.002)
Rel. Wage × Rel. Wage× Rel. Wage	-0.000	0.000	-0.000	-0.000*	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R^2	0.17	0.23	0.08	0.05	0.11	0.07
Observations	995,583	765,987	995,583	923,024	923,024	726,646

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 and 51 with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A12: Reactions along the wage distribution

	Female partners						Male partners						Couples					
	Employment			Cond. Work hours			Employment			Cond. Work hours			Hours gap			Cond. Hours gap		
Rel. Potential Wage	-0.000	0.008**	0.007	0.247***	0.367**	0.688***	0.002*	0.001	-0.006	0.062	-0.018	0.136	-0.004	-0.016***	-0.021***	-0.006**	-0.018***	-0.028***
	(0.003)	(0.003)	(0.006)	(0.050)	(0.146)	(0.174)	(0.001)	(0.003)	(0.006)	(0.037)	(0.077)	(0.200)	(0.003)	(0.004)	(0.004)	(0.003)	(0.004)	(0.007)
Interaction with indicator for relative wage $\geq 100\%$																		
RW $\geq 100\%$ × Rel. Wage	-0.000			-0.082*			0.005***			0.096**			0.005			0.008**		
	(0.002)			(0.046)			(0.001)			(0.042)			(0.003)			(0.003)		
Interaction with indicator for quantiles just around relative wage of 100%																		
RW 90-98% × Rel. Wage		-0.008**			-0.123			0.002			0.088***			0.010**			0.010**	
		(0.004)			(0.155)			(0.002)			(0.028)			(0.005)			(0.004)	
RW 98.1-102% × Rel. Wage		-0.007*			-0.012			0.001			0.117			0.006			0.003	
		(0.004)			(0.124)			(0.004)			(0.091)			(0.005)			(0.006)	
RW 102.1-125% × Rel. Wage		-0.009***			-0.210			0.005*			0.150**			0.017***			0.019***	
		(0.003)			(0.125)			(0.003)			(0.060)			(0.005)			(0.005)	
Interaction with indicator for 5% intervals of relative wage																		
RW 85.1-90% × Rel. Wage			0.001			-0.374			0.010*			-0.121			0.008			0.014
			(0.008)			(0.218)			(0.005)			(0.192)			(0.007)			(0.009)
RW 90.1-95% × Rel. Wage			-0.019**			-0.824**			0.011			-0.169			0.024***			0.024***
			(0.007)			(0.332)			(0.008)			(0.217)			(0.007)			(0.007)
RW 95.1-100% × Rel. Wage			-0.002			-0.367*			0.010*			-0.028			0.014**			0.022**
			(0.006)			(0.198)			(0.005)			(0.189)			(0.005)			(0.007)
RW 100.1-105% × Rel. Wage			0.004			-0.369*			0.020***			0.127			0.011***			0.024***
			(0.006)			(0.186)			(0.004)			(0.191)			(0.003)			(0.005)
RW 105.1-110% × Rel. Wage			-0.009			-0.663***			0.012*			-0.041			0.028***			0.036***
			(0.007)			(0.190)			(0.006)			(0.202)			(0.005)			(0.006)
RW 110.1-125% × Rel. Wage			-0.008			-0.478**			0.013**			-0.004			0.020***			0.024***
			(0.006)			(0.185)			(0.006)			(0.175)			(0.006)			(0.007)
R^2	0.16	0.16	0.16	0.22	0.22	0.22	0.08	0.08	0.08	0.05	0.05	0.05	0.10	0.10	0.10	0.07	0.07	0.07
Observations	995,583	995,583	995,583	765,987	765,987	765,987	995,583	995,583	995,583	923,024	923,024	923,024	923,024	923,024	923,024	726,646	726,646	726,646

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The effects per group are measured by interacting a group dummy with the relative wage. The relative potential wages range from 75-125%. The reference group is always the group with the lowest relative wages.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A13: Employment regressions using observed couple's wage information only

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
	Relative income in couple											
Relative Income	0.000***	0.000***	0.008***	0.014***	-0.000***	-0.000***	-0.006***	-0.011***	-0.001***	-0.002***	-0.001***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Rel. inc. × Rel. inc.		-0.000***		-0.000***		0.000***		0.000***		0.000***		0.000***
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
Observations	938,589	938,589	721,880	721,880	938,589	938,589	878,836	878,836	878,836	878,836	692,409	692,409
R^2	0.18	0.19	0.26	0.27	0.10	0.11	0.07	0.07	0.19	0.22	0.14	0.17

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 and 51 with non-missing information on the relevant variables in the years 2005-2019. The relative income is measured as the ratio between the female and the male net monthly income in a couple. Also zero incomes are included. Standard errors clustered by state. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Source: Own calculations based on Microcensus 2005-2019.

Table A14: Heterogeneous effects by having child aged 0-3 years

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
No child aged 0-3 years												
Rel. Potential Wage	-0.002	0.047***	0.155*	0.879	0.007***	-0.002	0.116***	-0.565	0.003	-0.074***	0.002	-0.069***
	(0.002)	(0.008)	(0.074)	(0.620)	(0.002)	(0.011)	(0.034)	(0.365)	(0.003)	(0.016)	(0.002)	(0.023)
Rel. Wage × Rel. Wage		-0.000***		-0.003		0.000		0.003*		0.000***		0.000***
		(0.000)		(0.003)		(0.000)		(0.002)		(0.000)		(0.000)
At least one child aged 0-3 years												
Rel. Potential Wage	0.007	0.030	0.305**	0.881	0.005*	-0.037	0.291***	0.112	-0.013*	-0.061	-0.008	-0.079
	(0.005)	(0.038)	(0.116)	(0.794)	(0.003)	(0.027)	(0.038)	(0.314)	(0.007)	(0.040)	(0.008)	(0.054)
Rel. Wage × Rel. Wage		-0.000		-0.003		0.000		0.001		0.000		0.000
		(0.000)		(0.004)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.14	0.14	0.13	0.13	0.07	0.07	0.05	0.05	0.07	0.07	0.05	0.05
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The effects per group are measured by interacting a group dummy with the relative wage.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A15: Heterogeneous effects by having a child aged 4-6 years

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
No child aged 4-6 years												
Rel. Potential Wage	-0.001	0.033**	0.188***	0.988*	0.007***	-0.006	0.159***	-0.427	0.001	-0.068***	0.001	-0.071**
	(0.003)	(0.012)	(0.064)	(0.563)	(0.001)	(0.013)	(0.033)	(0.298)	(0.004)	(0.020)	(0.003)	(0.028)
Rel. Wage × Rel. Wage		-0.000***		-0.004		0.000		0.003*		0.000***		0.000**
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
At least one child aged 4-6 years												
Rel. Potential Wage	-0.000	0.080**	-0.002	0.506	0.005	-0.029	0.087	-0.138	-0.001	-0.093	0.002	-0.084
	(0.006)	(0.029)	(0.082)	(0.433)	(0.003)	(0.021)	(0.056)	(0.841)	(0.009)	(0.057)	(0.010)	(0.074)
Rel. Wage × Rel. Wage		-0.000**		-0.002		0.000*		0.001		0.000		0.000
		(0.000)		(0.002)		(0.000)		(0.004)		(0.000)		(0.000)
R^2	0.09	0.09	0.13	0.13	0.07	0.07	0.05	0.05	0.05	0.05	0.04	0.05
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The effects per group are measured by interacting a group dummy with the relative wage.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A16: Heterogeneous effects by motherhood of child aged 7-18 years

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
No child aged 7-18 years												
Rel. Potential Wage	-0.001	0.032*	0.112*	0.596	0.007***	-0.010	0.213***	-0.009	0.002	-0.068***	0.002	-0.064**
	(0.003)	(0.017)	(0.063)	(0.520)	(0.002)	(0.016)	(0.035)	(0.258)	(0.004)	(0.020)	(0.004)	(0.027)
Rel. Wage × Rel. Wage		-0.000*		-0.002		0.000		0.001		0.000***		0.000**
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
At least one child aged 7-18 years												
Rel. Potential Wage	-0.001	0.038**	0.214**	0.792	0.004**	0.001	0.013	-1.179**	-0.001	-0.045	0.002	-0.062
	(0.003)	(0.018)	(0.094)	(0.811)	(0.002)	(0.012)	(0.045)	(0.451)	(0.005)	(0.038)	(0.005)	(0.045)
Rel. Wage × Rel. Wage		-0.000**		-0.003		0.000		0.006**		0.000		0.000
		(0.000)		(0.004)		(0.000)		(0.002)		(0.000)		(0.000)
R^2	0.10	0.10	0.14	0.14	0.07	0.07	0.05	0.05	0.06	0.06	0.05	0.05
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The effects per group are measured by interacting a group dummy with the relative wage.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A17: Heterogeneous effects by motherhood of child

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
No child												
Rel. Potential Wage	-0.002	0.041***	0.164**	1.185*	0.009***	0.006	0.188***	-0.108	0.006	-0.078***	0.003	-0.071**
	(0.002)	(0.008)	(0.075)	(0.624)	(0.002)	(0.013)	(0.042)	(0.334)	(0.006)	(0.024)	(0.005)	(0.030)
Rel. Wage × Rel. Wage		-0.000***		-0.005		0.000		0.001		0.000***		0.000**
		(0.000)		(0.003)		(0.000)		(0.002)		(0.000)		(0.000)
At least one child												
Rel. Potential Wage	0.002	0.041**	0.209***	0.783*	0.005***	-0.017	0.115***	-0.624*	-0.005	-0.065***	-0.001	-0.077***
	(0.004)	(0.017)	(0.054)	(0.380)	(0.001)	(0.014)	(0.029)	(0.303)	(0.004)	(0.019)	(0.003)	(0.020)
Rel. Wage × Rel. Wage		-0.000**		-0.003		0.000		0.003**		0.000**		0.000***
		(0.000)		(0.002)		(0.000)		(0.001)		(0.000)		(0.000)
R^2	0.13	0.13	0.22	0.22	0.07	0.07	0.05	0.05	0.10	0.10	0.07	0.07
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The effects per group are measured by interacting a group dummy with the relative wage.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A18: Educational level of female partner

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
No tertiary degree												
Rel. Potential Wage	0.014*	0.116**	0.936**	4.442*	0.008	0.013	0.222	1.708	-0.015	-0.082	-0.018	-0.057
	(0.007)	(0.048)	(0.385)	(2.146)	(0.007)	(0.045)	(0.219)	(1.388)	(0.013)	(0.058)	(0.018)	(0.099)
Rel. Wage × Rel. Wage		-0.001*		-0.020		-0.000		-0.009		0.000		0.000
		(0.000)		(0.013)		(0.000)		(0.007)		(0.000)		(0.001)
Vocational degree												
Rel. Potential Wage	-0.004	0.051*	0.103	-0.335	0.008**	-0.079***	0.088	-2.030***	0.001	-0.088**	-0.001	-0.082**
	(0.006)	(0.025)	(0.101)	(0.808)	(0.003)	(0.019)	(0.061)	(0.265)	(0.006)	(0.032)	(0.005)	(0.033)
Rel. Wage × Rel. Wage		-0.000*		0.002		0.000***		0.010***		0.000**		0.000**
		(0.000)		(0.004)		(0.000)		(0.001)		(0.000)		(0.000)
Academic degree												
Rel. Potential Wage	0.001	-0.036	0.077	-0.661	0.010***	-0.127***	0.244**	-4.067***	0.009	-0.170***	0.013*	-0.251***
	(0.003)	(0.030)	(0.087)	(0.822)	(0.001)	(0.024)	(0.089)	(0.886)	(0.006)	(0.048)	(0.006)	(0.066)
Rel. Wage × Rel. Wage		0.000		0.003		0.001***		0.017***		0.001***		0.001***
		(0.000)		(0.003)		(0.000)		(0.003)		(0.000)		(0.000)
R^2	0.09	0.09	0.11	0.11	0.07	0.07	0.05	0.05	0.05	0.05	0.04	0.04
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The effects per group are measured by interacting a group dummy with the relative wage.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A19: Educational level of male partner

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
No tertiary degree												
Rel. Potential Wage	0.017**	-0.093*	0.686***	-3.800**	0.010**	-0.079*	0.115	-1.665	-0.025*	0.110	-0.020	0.035
	(0.006)	(0.045)	(0.135)	(1.371)	(0.004)	(0.041)	(0.224)	(1.608)	(0.013)	(0.100)	(0.020)	(0.145)
Rel. Wage × Rel. Wage		0.000**		0.018***		0.000*		0.007		-0.001		-0.000
		(0.000)		(0.006)		(0.000)		(0.006)		(0.000)		(0.001)
Vocational degree												
Rel. Potential Wage	-0.006**	0.052**	0.056	1.517*	0.003**	0.046**	0.131***	0.556	0.005	-0.106***	0.003	-0.111**
	(0.002)	(0.019)	(0.062)	(0.749)	(0.001)	(0.017)	(0.043)	(0.434)	(0.004)	(0.030)	(0.004)	(0.042)
Rel. Wage × Rel. Wage		-0.000**		-0.006*		-0.000**		-0.002		0.000***		0.000**
		(0.000)		(0.003)		(0.000)		(0.002)		(0.000)		(0.000)
University degree												
Rel. Potential Wage	-0.011**	0.198***	0.019	3.013**	0.001	0.002	-0.009	1.014	0.004	-0.150***	-0.003	-0.037
	(0.005)	(0.017)	(0.107)	(1.078)	(0.001)	(0.016)	(0.061)	(0.702)	(0.003)	(0.026)	(0.004)	(0.037)
Rel. Wage × Rel. Wage		-0.001***		-0.016**		-0.000		-0.005		0.001***		0.000
		(0.000)		(0.006)		(0.000)		(0.004)		(0.000)		(0.000)
R^2	0.09	0.09	0.11	0.11	0.07	0.07	0.05	0.05	0.05	0.05	0.04	0.04
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The effects per group are measured by interacting a group dummy with the relative wage.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A20: Heterogeneous effects by type of education-match

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
Man has higher level of formal education												
Rel. Potential Wage	0.000	-0.051***	0.057	0.261	0.005**	0.002	0.126*	-0.171	-0.013**	0.021	-0.014***	-0.042
	(0.003)	(0.017)	(0.062)	(1.109)	(0.002)	(0.016)	(0.071)	(0.527)	(0.005)	(0.030)	(0.004)	(0.031)
Rel. Wage × Rel. Wage		0.000**		-0.001		0.000		0.002		-0.000		0.000
		(0.000)		(0.006)		(0.000)		(0.003)		(0.000)		(0.000)
Both have the same level of formal education												
Rel. Potential Wage	0.001	-0.099***	0.097	-0.019	0.004**	-0.034*	0.078	0.124	-0.006	0.167**	-0.006	0.122
	(0.003)	(0.019)	(0.056)	(0.715)	(0.002)	(0.017)	(0.051)	(0.469)	(0.005)	(0.077)	(0.004)	(0.073)
Rel. Wage × Rel. Wage		0.001***		0.001		0.000**		-0.000		-0.001**		-0.001
		(0.000)		(0.003)		(0.000)		(0.002)		(0.000)		(0.000)
Woman has higher level of formal education												
Rel. Potential Wage	0.005	0.067***	0.279***	1.618***	0.007***	0.041**	0.201***	1.173**	0.008*	-0.002	0.012***	0.032
	(0.003)	(0.012)	(0.051)	(0.409)	(0.001)	(0.016)	(0.027)	(0.484)	(0.004)	(0.030)	(0.004)	(0.035)
Rel. Wage × Rel. Wage		-0.000***		-0.006***		-0.000*		-0.004*		0.000		-0.000
		(0.000)		(0.002)		(0.000)		(0.002)		(0.000)		(0.000)
R^2	0.17	0.17	0.23	0.23	0.08	0.08	0.05	0.05	0.11	0.11	0.07	0.07
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649

Notes: Regressions based on eq. 4 and 5. Gap in formal education between partners is measured by their ISCED code of education. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The effects per group are measured by interacting a group dummy with the relative wage.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A21: Heterogeneous effects by type of age difference

	Female partners				Male partners				Couples			
	Employment		Cond. Work hours		Employment		Cond. Work hours		Hours gap		Cond. Hours gap	
Man is at least 4 years older												
Rel. Potential Wage	0.000	0.015	0.156	1.681	0.006***	0.008	0.047	-0.423	-0.005	-0.077**	-0.007*	-0.107**
	(0.003)	(0.021)	(0.143)	(1.096)	(0.002)	(0.016)	(0.033)	(0.461)	(0.004)	(0.035)	(0.003)	(0.049)
Rel. Wage × Rel. Wage		-0.000		-0.007		-0.000		0.002		0.000*		0.000*
		(0.000)		(0.005)		(0.000)		(0.002)		(0.000)		(0.000)
Both are around the same age +/- 3 years												
Rel. Potential Wage	-0.002	0.052***	0.164***	0.689*	0.007***	-0.016	0.209***	-0.372	0.005	-0.066***	0.006**	-0.052**
	(0.003)	(0.011)	(0.037)	(0.333)	(0.002)	(0.013)	(0.037)	(0.385)	(0.003)	(0.018)	(0.002)	(0.023)
Rel. Wage × Rel. Wage		-0.000***		-0.002		0.000		0.003		0.000***		0.000**
		(0.000)		(0.002)		(0.000)		(0.002)		(0.000)		(0.000)
Man is at least 4 years younger												
Rel. Potential Wage	-0.003	0.030	0.276	-2.821***	0.007*	-0.005	0.149	-0.871	-0.005	-0.044	-0.008	-0.040
	(0.006)	(0.044)	(0.224)	(0.947)	(0.004)	(0.028)	(0.120)	(1.415)	(0.009)	(0.077)	(0.007)	(0.076)
Rel. Wage × Rel. Wage		-0.000		0.014***		0.000		0.005		0.000		0.000
		(0.000)		(0.004)		(0.000)		(0.006)		(0.000)		(0.000)
R^2	0.09	0.09	0.11	0.11	0.07	0.07	0.05	0.05	0.05	0.05	0.04	0.04
Observations	995,586	995,586	765,990	765,990	995,586	995,586	923,027	923,027	923,027	923,027	726,649	726,649

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 to 55 and male partners aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The effects per group are measured by interacting a group dummy with the relative wage.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A22: Effects of relative wage for singles

	Employment		Work hours		Cond. Work hours		Real net income	
Single women								
Rel. Wage	-0.005*	0.060***	-0.208*	5.188***	-0.051	4.971***	12.132**	-76.070
	(0.003)	(0.016)	(0.104)	(1.012)	(0.097)	(0.738)	(5.473)	(63.966)
Rel. Wage × Rel. Wage		-0.000***		-0.024***		-0.022***		0.395
		(0.000)		(0.005)		(0.003)		(0.281)
R^2	0.11	0.11	0.15	0.15	0.09	0.09	0.26	0.26
Observations	514,095	514,095	514,095	514,095	397,203	397,203	498,490	498,490
Single men								
Rel. Wage	-0.000	0.002	-0.013	0.146	-0.008	0.108	-0.701*	-6.944
	(0.000)	(0.008)	(0.009)	(0.361)	(0.006)	(0.178)	(0.399)	(15.178)
Rel. Wage × Rel. Wage		-0.000		-0.001		-0.001		0.032
		(0.000)		(0.002)		(0.001)		(0.080)
R^2	0.09	0.09	0.12	0.12	0.09	0.09	0.20	0.20
Observations	565,453	565,453	565,453	565,453	439,722	439,722	543,015	543,015

Notes: Regressions based on eq. 4 and 5. The sample includes women aged 22 to 55 and men aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Being single is defined as not being in a cohabiting relationship. The relative wage is measured as the average relative wage given the own education level. The regressions include year, quarter, state, state-year, state-education, ISCED97 and age fixed effects, and control for urban neighborhood, German nationality, and being born in the FRG. Real net monthly labor market income in prices .
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A23: Likelihood to be living in a cohabiting partnership

	Women		*Men*	
	Cohabiting partnership	Marriage	Cohabiting partnership	Marriage
Rel. Potential Wage	0.009***	0.011***	-0.000	-0.000*
	(0.002)	(0.002)	(0.000)	(0.000)
R^2	0.11	0.18	0.13	0.19
Observations	1,654,316	1,654,306	1,667,619	1,667,590

Notes: The sample includes women aged 22 to 55 and men aged 24-57 years with non-missing information on the relevant variables in the years 2005-2019. Standard errors clustered by state in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The relative wage is measured as the average relative wage given the own education level. The regressions include year, quarter, state, state-year, state-education, ISCED97 and age fixed effects, and control for urban neighborhood, German nationality, and being born in the FRG. Real net monthly labor market income in prices .of the female partner; [2] Conditional on employment of both partners.
Source: Own calculations based on Microcensus 1995/96 & 2005–2019, SIAB 2005–2019 and BIBB 1998/99.

Table A24: Characteristics by partnership status

	Living without partner	Living with partner	Difference	Significance
Women				
Age	36.71	41.23	-4.53	0.00
	(10.54)	(8.89)		
West Germany	0.79	0.81	-0.02	0.00
	(0.41)	(0.39)		
No tertiary degree	0.14	0.15	-0.01	0.00
	(0.35)	(0.36)		
Vocational degree	0.68	0.69	-0.01	0.00
	(0.47)	(0.46)		
Academic degree	0.18	0.16	0.02	0.00
	(0.39)	(0.36)		
Employed	0.77	0.75	0.02	0.00
	(0.42)	(0.43)		
Cond. work hours	34.43	29.16	5.27	0.00
	(11.08)	(12.53)		
Real income	1408.12	1106.63	301.49	0.00
	(942.12)	(1035.49)		
Has at least one child	0.20	0.47	-0.28	0.00
	(0.40)	(0.50)		
Number of children	0.28	0.80	-0.52	0.00
	(0.64)	(1.01)		
N	556,378	1,304,378		
Men				
Age	38.04	43.44	-5.39	0.00
	(10.14)	(8.77)		
West Germany	0.77	0.81	-0.03	0.00
	(0.42)	(0.40)		
No tertiary degree	0.14	0.11	0.03	0.00
	(0.34)	(0.31)		
Vocatonal degree	0.69	0.69	-0.00	0.00
	(0.46)	(0.46)		
Academic degree	0.17	0.20	-0.03	0.00
	(0.38)	(0.40)		
Employed	0.78	0.91	-0.13	0.00
	(0.42)	(0.28)		
Cond. work hours	39.00	41.34	-2.34	0.00
	(10.22)	(9.05)		
Real income	1597.24	2422.61	-825.37	0.00
	(1255.21)	(1781.25)		
N	608,982	1,259,487		

Notes: The sample includes women aged 22 to 55 and men aged 24-57 years in the years 2005-2019. The level of significance gives the p-value for a t-test.
Source: Microcensus & 2005–2019.

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