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Hermes, Henning; Krauß, Marina; Lergetporer, Philipp; Peter, Frauke; Wiederhold, Simon

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Henning Hermes, Marina Krauß, Philipp Lergetporer, Frauke Peter, Simon Wiederhold https://doi.org/10.18717/dppqhz-s102

Authors

Henning Hermes

ifo Institute – Leibniz Institute for Economic Research at the University of Munich

Marina Krauß University of Augsburg

Philipp Lergetporer

Technical University of Munich, TUM School of Management, and ifo Institute – Leibniz Institute for Economic Research at the University of Munich

Frauke Peter

German Centre for Higher Education Research and Science Studies (DZHW)

Simon Wiederhold

Halle Institute for Economic Research (IWH) – Member of the Leibniz Association, Department of Structural Change and Productivity, Martin Luther University Halle-Wittenberg, ifo Institute – Leibniz Institute for Economic Research at the University of Munich, and Hoover Institution, Stanford University E-mail: simon.wiederhold@iwh-halle.de Tel +49 345 7753 840

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Halle Institute for Economic Research (IWH) – Member of the Leibniz Association

Address: Kleine Maerkerstrasse 8 D-06108 Halle (Saale), Germany Postal Address: P.O. Box 11 03 61 D-06017 Halle (Saale), Germany

Tel +49 345 7753 60 Fax +49 345 7753 820

www.iwh-halle.de

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The Causal Impact of Gender Norms on Mothers' Employment Attitudes and Expectations*

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Abstract

This field experiment investigates the causal impact of mothers' perceptions of gender norms on their employment attitudes and labor-supply expectations. We provide mothers of young children in Germany with information about the prevailing gender norm regarding maternal employment in their city. At baseline, over 70% of mothers incorrectly perceive this gender norm as too conservative – the most pronounced misperception among the various gender norms we examine. Our randomized information treatment improves the accuracy of these perceptions, significantly reducing the share of mothers who perceive gender norms as overly conservative. The treatment also shifts mothers' own labormarket attitudes in a more liberal direction. Leveraging the fact that we assessed attitudes in a prior survey, we show that specifically the shifted attitude is a strong predictor of mothers' future labor-market participation. Consistently, treated mothers are more likely to plan an increase in their working hours, particularly those with existing support to facilitate their employment.

Keywords: gender equality, gender norms, maternal employment, randomized controlled trial

JEL classification: C93, J16, J18, J22

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1. Introduction

Gender inequalities in paid and unpaid work remain a fundamental challenge, even in highly developed countries like Germany. It is well established that the arrival of children persistently reduces mothers' labor-market attachment by increasing care-related work at home (see, e.g., Kuziemko et al., 2018; Andresen and Nix, 2022a,b). A key question is why women continue to bear the primary burden of child care and reduce their labor supply upon becoming mothers, despite having caught up to—or even surpassed—men in educational attainment and labor-market outcomes prior to parenthood. One plausible explanation is that parents' behavior is shaped by actual or perceived gender norms. Indeed, across countries, greater gender inequality in labor-market outcomes is strongly positively correlated with more conservative norms regarding maternal employment (Steinhauer, 2018; Kleven et al., 2019). However, very little is known about the malleability of (perceived) gender norms among mothers themselves, and how they affect mothers' labor-market behavior.

We study the causal effect of correcting mothers' misperceptions of gender norms on their attitudes towards maternal employment and their labor-supply expectations. Our sample comprises mothers of children around age three—a sensitive period for maternal labor-market trajectories making this a particularly relevant population for studying the influence of norms that speak directly to their situation. Previous research shows that the magnitude of the "child penalty"—the labor-market impact of parenthood on women relative to men—is closely tied to prevailing gender norms regarding mothers (Kleven et al., 2019; Kleven, 2024). While this suggests that addressing gender norms may improve mothers' labor-market success (Bertrand et al., 2015; Blau and Kahn, 2017), identifying a causal link is difficult because norms are often deeply rooted in societies (Alesina et al., 2013), highly persistent, and typically lack exogenous variation. To overcome this identification challenge, we leverage the fact that individuals frequently misperceive prevailing norms. Providing factual information to correct such misperceptions enables us to causally examine how aligning perceptions with actual norms influences labor-market-relevant outcomes (Bursztyn and Yang, 2022; Bursztyn et al., 2023).

We conduct a randomized field experiment with 451 mothers of children aged 2.5 to 3.5 years in two German cities. Germany offers a particularly interesting setting for studying gender norms and mothers' labor-market behavior: First, while pre-parenthood gender gaps in the labor market are relatively small, post-childbirth inequalities between mothers and fathers are among the largest in OECD countries (Kleven et al., 2019; Ilieva and Wrohlich, 2022; OECD, 2023). Second, Germany is among the countries with the most conservative gender norms regarding maternal employment (ISSP, 2016; Gambaro et al., 2023).

Our experimental design involves two consecutive surveys conducted with the same mothers. The first survey collects detailed information on mothers' gender attitudes (i.e., their personal views on gender roles) and their perceptions of the prevailing gender norms in their city (i.e., their beliefs about the average attitudes of other mothers in their environment).¹ To obtain a comprehensive picture of actual and perceived gender norms, we examine not only norms related to maternal and paternal labor supply, but also norms concerning the division of housework, child care obligations, and earnings. This approach helps identify norms that are both (i) potentially misperceived and amenable to an information treatment, and (ii) strongly predictive of mothers' actual labor-market choices.

In the second survey, conducted nine months later, we implement a randomized information treatment to correct misperceptions about the gender norm that was both the most strongly misperceived and most closely linked to maternal employment in the first survey. We then estimate treatment effects on mothers' perceptions of gender norms, their personal attitudes, and their labor-supply expectations.

Our descriptive analysis of the first survey reveals substantial misperceptions across multiple domains of gender norms, with mothers frequently overestimating the conservativeness of prevailing norms. The degree of misperception varies widely across norms: while perceptions of norms about paternal labor supply and unpaid work are relatively accurate, norms concerning maternal labor supply are strongly misperceived. The most misperceived norm concerns the statement, *"Mothers with children below the age of 3 should not work."* Only 17% of mothers in our sample agree with this statement (the actual norm), yet they believe that, on average, 40% of other mothers in their city do (the perceived norm). Put differently, 71% of mothers perceive the norm in their city as more conservative than it actually is.² Notably, this particular gender norm is strongly correlated with actual labor-market participation—both contemporaneously in the first survey and when using baseline norms to predict labor-market outcomes in the second survey—highlighting its relevance for understanding mothers' labor-supply decisions. The norm's strong predictive power for labor-market outcomes, combined with its widespread misperception, makes it an ideal target for our information treatment.

In the second survey, we implement a randomized treatment that informs mothers about the actual level of agreement with the statement concerning maternal labor supply in their city. This treatment significantly shifts mothers' perceptions: it reduces the likelihood that mothers believe that their reference network (i.e., friends and acquaintances) agrees with the statement by 7.8

¹Following Bursztyn et al. (2023), we distinguish between "attitudes" (mothers' own normative views), "norms" (average attitudes among respondents), and "perceptions" (beliefs about others' average attitudes, i.e., about norms). These attitudes and perceptions are also sometimes referred to as "personal normative beliefs" and "normative expectations," respectively (Bicchieri, 2006).

²Leveraging the panel structure of our survey, we find that both attitudes and misperceptions regarding this norm are highly persistent across both survey waves within individuals.

percentage points (pp), corresponding to a 27% decline relative to the control-group mean.³ The treatment also improves the accuracy of incentivized perceptions about the share of women in Germany who agree with the related statement "*When a mother works, her children suffer*." In the control group, 53% of mothers overestimate the share agreeing with this statement; the treatment reduces this likelihood by 19 pp.

Next, we study how the treatment affects mothers' own attitudes towards maternal employment. The treatment significantly reduces mothers' level of conservativeness, lowering the likelihood that they agree with the statement that mothers with children below age 3 should not work by 6.6 pp—a 25% decrease compared to the control-group mean. Consistent with rational information-based updating (Bleemer and Zafar, 2018), this effect is especially pronounced among mothers who overestimated the norm's conservativeness prior to the treatment and among those with low confidence in their pre-treatment beliefs. The treatment is also particularly effective for mothers with moderate pre-treatment attitudes—those whose views on various aspects of gender roles were neither strongly conservative nor liberal in the first survey.⁴

Finally, we examine how the treatment affects mothers' labor-supply expectations, eliciting how many hours they plan to work one year after the survey. The treatment increases the likelihood that mothers intend to expand their current working hours by 7.4 pp (18%). While the effect is large in magnitude, it is rather imprecisely estimated (p = .095). The effect is concentrated at the intensive margin—that is, among mothers already employed, likely reflecting that adjusting hours within existing jobs is easier to plan and forecast than re-entering employment. In line with this, we observe no treatment effect on mothers' interest in job counseling at the local employment office—an option more relevant for those seeking employment than for those looking to increase hours. Treatment effects on mothers' labor-supply expectations are stronger among mothers with access to child care and those with partners actively involved in caregiving. They are also stronger among mothers whose own mothers worked full-time during their adolescence, suggesting that exposure to progressive role models during these formative years may amplify responsiveness to information about gender norms. To validate the behavioral relevance of labor-supply *expectations*, we leverage the panel nature of our data to show that baseline expectations strongly predict realized future outcomes: 88% of mothers who had planned to return to work within a year at baseline

³Shifts in perceptions about one's reference network are particularly consequential, as norms within these close circles are most influential for behavior (e.g., Bicchieri and Dimant, 2022).

⁴Additional analyses shows that the information treatment does not alter mothers' beliefs about how working fulltime would affect other key life outcomes, such as family income, career prospects, personal well-being, or child development. This suggests that the treatment does not shift "best-practice considerations" (Grewenig et al., 2020), the idea that social norms act as heuristics or practical guidelines for behavior aimed at achieving desired outcomes (see, e.g., Cialdini and Goldstein, 2004).

(when children were aged 0--1) were either employed 18 months later (72%) or were on paid parental leave (16%).⁵

In sum, our results demonstrate that providing accurate information about prevailing gender norms regarding maternal employment causally influences not only mothers' perceptions of gender norms, but also their own gender attitudes and labor-supply expectations.⁶ These findings generalize to the broader population of mothers with young children in Germany, as confirmed by propensity score weighting using weights from a representative sample. All key findings—except for the effect on labor-supply expectations—remain statistically significant after correcting for multiple testing and employing randomization inference.

Our paper contributes to several strands of the economic literature. The descriptive evidence we provide in the first part of the paper adds to the literature of norm misperceptions (e.g., Bursztyn and Yang, 2022). While prior studies often assume that economic behavior is influenced by a single norm (Panizza et al., 2024), we consider a broader set of norms—concerning parental labor supply, the division of care, housework, and earnings—all of which may affect labor-supply considerations.⁷ We demonstrate that the considered norms related to maternal labor supply differ considerably in both conservativeness and degree of misperception. This suggests that the effectiveness of information interventions to address norm misperceptions depends on which specific norm is targeted.

Our experimental findings contribute to the literature on gender norms as a driver of gender gaps in the labor market (see Olivetti et al., 2024, for a recent overview). While prior studies typically examine women more broadly or the general population, our focus on mothers allows us to capture the group most directly affected by family-related labor-market decisions. Existing research shows that women's labor-market outcomes are shaped by their social or cultural backgrounds (Fernández et al., 2004; Fernández, 2007; Fernández and Fogli, 2009; Alesina et al., 2013; Olivetti et al., 2020; Boelmann et al., 2024), and these patterns are often interpreted as reflecting the importance of social norms. Yet such interpretations mostly rely on indirect evidence, as women's social or cultural backgrounds—usually proxied by the cultures in which they grew up—

⁵Paid parental leave in Germany requires prior employment, so mothers on leave were likely employed before childbirth.

⁶We view our findings as a proof of concept, demonstrating that mothers' actual and perceived gender norms, which have shown to be important for labor-market trajectories, are malleable. We do not claim that our specific light-touch intervention is able to *directly* affect labor-supply decisions, as these are shaped by numerous factors beyond social norms (see our discussion in Section 6).

⁷Our holistic approach aligns with the notion of "norm pluralism" proposed by Panizza et al. (2024), which posits that different normative views can coexist, raising the question of which competing norms ultimately dominate behavior. Their focus is on varying normative views in population subgroups (e.g., Democrats and Republicans) regarding one specific norm domain (e.g., the appropriateness of same-sex relationships). We extend this idea to multiple domains of norms.

encompass a diverse array of customs, beliefs, and collective experiences beyond specific gender norms. A smaller set of studies employ direct survey-based measures of gender norms and document correlations with women's labor-market outcomes (Fortin, 2005; Giavazzi et al., 2013; Fortin, 2015), though few focus explicitly on mothers (Steinhauer, 2018; Kleven et al., 2019). Our work complements this largely descriptive literature by providing experimental evidence that correcting perceived gender norms can causally affect mothers' employment attitudes and expectations.

Closest to our work, a few recent experimental studies investigate how providing information about prevailing gender norms affects outcomes related to female labor supply. Bursztyn et al. (2020) show in the context of Saudi Arabia's male guardianship system that correcting married men's perceptions of norms about female labor supply increases their likelihood of allowing their wives to join the labor force.⁸ Focusing on maternal employment norms, Cortés et al. (2024) find that providing norm-related information leads a representative sample of U.S. residents to make less conservative recommendations about mothers' labor supply in hypothetical scenarios. Similarly, Grewenig et al. (2020) show that, upon receiving information about maternal and paternal labor-supply norms, both boys and girls reduce their expected labor supply when they envision themselves as future parents. Importantly, these studies provide information to secondary parties—such as husbands, adolescents, or the general population—rather than to the individuals directly subject to the norms, that is, mothers. Our study complements this research by examining how providing (accurate) information about gender norms affects mothers of young children, whose labor-supply decisions are the direct object of these norms.

By studying the effects of correcting misperceptions of gender norms among mothers with young children on the cusp of re-entering the labor market, we also contribute to the literature on child penalties. It is well established that gender gaps in the labor market typically emerge following childbirth (see, e.g., Bertrand et al., 2010; Angelov et al., 2016; Kuziemko et al., 2018; Kleven et al., 2019), yet the underlying causes of these penalties remain incompletely understood. Recent evidence indicates that child penalties are not biologically determined (e.g., Kleven et al., 2021; Andresen and Nix, 2022b), but instead shaped by socialization. We demonstrate that social norms play a causal role in the emergence of child penalties. The fact that these gender norms are often misperceived as overly conservative and can be corrected through targeted information highlights the potential of such interventions to mitigate the negative effects of childbirth on women's careers.⁹

⁸Under the male guardianship system, women must obtain permission from their male guardians—typically husbands or fathers—for major life decisions. This system does not exist in Western countries, with such customs abolished in Germany in 1957 (Grewenig et al., 2020).

⁹Growing descriptive evidence highlights the extent to which gender norms are misperceived. For instance, Bursztyn et al. (2023) compare actual and perceived gender norms regarding (i) women's right to work outside the home

The remainder of the paper is structured as follows: Section 2 provides institutional background on gender norms and maternal labor supply in Germany. Section 3 describes our sample. Section 4 presents descriptive results on actual and perceived gender norms. Section 5 outlines our experimental design and reports treatment effects. Section 6 concludes.

2. Institutional Setting: Maternal Labor Supply, Gender Norms, and Child Care in Germany

We examine gender norms and labor-market outcomes in Germany, a particularly relevant setting for several reasons: While large child penalties are observed globally (Kleven et al., 2019, 2023; Hermes et al., 2024), mothers in Germany experience one of the highest child penalties among OECD countries (OECD, 2017; Kleven et al., 2019). Among parents of children under three in Germany, only 36% of mothers are in paid employment, compared to 87% of fathers. This gap is even more striking for full-time employment: just 11% of mothers, versus 83% of fathers, work full-time, resulting in a gender gap of 72 pp (BPB, 2021). These disparities persist as children grow older. For instance, even when the youngest child is 15 to 17 years old, the gender gap in full-time employment remains substantial at 54 pp (BPB, 2021). The primary reason for these gaps is that mothers typically assume primary child care responsibilities, reducing participation in paid work.

However, Germany implemented and expanded family-friendly policies to alleviate the need to combine work and family life over the past decades. Paid parental leave (*Elterngeld*) is provided for the first 12 months (14 months if each parent takes at least 2 months), offering parents a compensation of approximately two-thirds of their pre-childbirth income. If both parents work only part-time, this paid leave period can be extended up to 32 months (*Elterngeld Plus*). Moreover, the German parental leave system offers an unpaid job-protected leave period of 3 years (*Elternzeit*) after childbirth. In practice, the take-up of these parental leave policies is unevenly distributed between mothers and fathers: Unpaid parental leave is taken almost exclusively by mothers. For paid parental leave, three out of four recipients are mothers. Even if fathers take paid parental leave, their leave duration is much shorter than for mothers (3 months for fathers vs. 14 months for mothers, Destatis, 2022). Thus, for mothers in our sample with children around 3 years, the unpaid job-protected leave period is coming to an end, and only some mothers could still be on leave.

At the same time, gender norms in Germany are very conservative, especially for mothers with young children. According to the International Social Survey Programme (ISSP, 2016), 90% of Germans believe that mothers with children below school age should not work more than part-

and (ii) support for female leadership across 60 countries. Brosch et al. (2024) document regional gaps between actual and perceived norms related to the labor supply of mothers and fathers within Germany.

time, with 23% believing these mothers should not work at all and 67% believing they should work part-time. Among the 41 countries surveyed by the ISSP (2016), Germany ranks in the top tercile for conservatism in gender norms. This conservative view on maternal employment remains even today: Gambaro et al. (2023) show that also in 2021, still more than 60% of Germans believe that mothers with a child below 3 years should work part-time.¹⁰

Labor-market participation for mothers with young children in Germany is closely tied to access to child care. While many parents face challenges securing slots for children under three (Hermes et al., 2024), over 90% of children aged three and older are enrolled in child care (*Kindergarten*), potentially enabling mothers to return to work or increase their working hours (Destatis, 2024). However, most mothers do not transition to full-time employment as their children grow older. The prevalence of part-time work among mothers is exceptionally high in Germany relative to other OECD countries (OECD, 2020; Müller and Wrohlich, 2020; Ilieva and Wrohlich, 2022).¹¹ At the same time, mothers frequently express a desire to work more than they currently do (Mueller et al., 2018; Geis-Thöne, 2021). We examine whether (misperceived) gender norms are an additional factor influencing mothers' intended labor-market participation.

3. Sample

Our analytical sample consists of 451 mothers with children aged around three years, residing in the German federal state of Rhineland-Palatinate. We sampled these mothers from birth registry data of two medium-sized cities; initial recruitment into the sample was done door-to-door and with face-to-face interviews. We conducted a total of four surveys with these mothers, creating a comprehensive panel dataset (see Appendix Figure A1 for the timeline of the surveys). One of the advantages of using this panel is that participants were already familiar with the study and have a high level of trust in the team of researchers conducting it. In the following, we describe the two most recent surveys, which are most relevant to this paper. For exposition, we refer to these surveys as "first survey" and "second survey" throughout. However, some control variables are drawn from the earlier surveys (see Appendix Table B1 for an overview).

The first survey, conducted in spring 2020, used computer-assisted telephone interviews to collect data on mothers' gender attitudes and perceptions of various gender norms (see Section 4 for the survey wording). We employed a team of interviewers that received intensive training for con-

¹⁰For historical reasons, gender norms in East Germany are less conservative than in West Germany (EVS, 2011; Boelmann et al., 2024). Since our experiment is conducted in two cities in Rhineland-Palatinate, a federal state in West Germany, it is reassuring that gender norms in this region are consistent with those observed across West Germany overall (Brosch et al., 2024).

¹¹Part-time work is widespread in West Germany, where our study takes place. Accordingly, child penalties are substantially larger in West Germany than in East Germany (Lim and Duletzki, 2024).

ducting the interviews. Mothers received 20 EUR for participating in the survey. One objective of this survey was to elicit the actual gender norm among these mothers. We do so by asking mothers about their attitudes regarding different statements about gender roles and aggregate their answers on the city level. An additional purpose of this survey was to examine mothers' perceptions of gender norms in their cities to investigate whether mothers misperceive gender norms and whether these misperceptions vary depending on the type of norm.

In the second survey, conducted in winter 2020, we implemented the information provision experiment via an online survey. Following the collection of sociodemographic information, we reassessed mothers' perceptions of the gender norm regarding maternal employment. Mothers in the treatment group were then informed about the actual gender norm in their city (see Section 5.2 for details). Note that an online survey provides an ideal setup for this type of information experiment, since we could present visual information to a random subset of participants. Mothers were pre-randomized into treatment and control groups using the following stratification variables: city of residence, employment status, migration background, and a dummy indicating whether they had perceived gender norms in their city as overly conservative in the first survey. After the treatment, we collected data on (i) mothers' perceptions about gender norms held by their friends, acquaintances, and women in Germany more broadly, (ii) their own gender attitudes, and (iii) their labor-market plans. Mothers were paid 15 EUR for participating in the survey and had the opportunity to earn an additional EUR 5 during the survey.

Conducting two surveys enabled us to carefully design the information experiment in the second survey by leveraging insights gained from the first. The first survey provided precise data on actual gender norms in the two cities, allowing us to measure whether gender norms were misperceived — an essential prerequisite for an effective information experiment. Additionally, it revealed which gender norms and attitudes were correlated with labor-market outcomes (in fact, we can show this both contemporaneously and for outcomes measured nine months later in the second survey; for details, see Figure 2 and Appendix Figure C1). We chose the gender norm that was most misperceived and most strongly correlated with maternal employment for the information treatment in the second survey.

Table 1 summarizes the pre-treatment characteristics of our analytical sample (see Appendix Table B1 for details about the variables). The upper panel of Table 1 reports pre-treatment outcomes for mothers' perceptions of gender norms, their attitudes towards employment, and their labor-market participation. To measure perceptions of gender norms, we asked mothers how many out of 100 mothers with children aged 2–3 years in their city they believed agreed with the statement: *Mothers with children under 3 years should not work*. On average, mothers estimated that 40 (first survey) and 41 (second survey) out of 100 would agree with the statement. In reality, only 17% of mothers agreed with the statement, meaning the majority of mothers (71% in the first

survey and 75% in the second) overestimated this share, perceiving their environment as more conservative than it actually was.¹² Regarding pre-treatment employment, mothers in our sample work on average 14 hours per week (counting the 45% of mothers who do not work with zero hours).

The middle panel of Table 1 shows sociodemographic characteristics of mothers and their children. On average, mothers are 34 years old, and their children are approximately 35 months (three years) old. About 36% of mothers do not have a college entrance degree ("Abitur") and 32% have a migration background (i.e., were not born in Germany). The average net household income per month is 3,440 EUR. Additionally, 24% of mothers have a younger child than the target child, with these younger children being, on average, 10 months old. About 6% of mothers are pregnant at the time of the interview.

In 98% of households, the mother serves as the primary caregiver, while in 42% of households, the mother's partner contributes at least one hour of child care per week. Furthermore, 52% of mothers participated in a previous intervention (see Hermes et al., 2024, for details); while we always control for this prior treatment status, its inclusion does not affect our results. Additionally, the proportion of mothers who participated in the previous intervention is evenly distributed between our treatment and control groups.

The lower part of Table 1 summarizes the strata variables used in the randomization. These include maternal employment from the first survey (56%), migration background (32%), city of residence (69% live in City A, 31% live in City B), and whether mothers overestimated gender norms in the first survey; as mentioned above, 71% did.

The following section presents descriptive findings from our first survey about maternal gender attitudes and perceptions of gender norms. Section 5 discusses the stability of norms across survey waves and presents the experiment conducted in the second survey, detailing the treatment, empirical strategy, and results.

¹²In Section 4 and Table 2, we present additional descriptives on perceptions and attitudes regarding other aspects of gender roles.

	All	Control	Treatment	$\Delta(3)$ -(2)	p-val for (4)	Observations
	(1)	(2)	(3)	(4)	(5)	(6)
Pre-treatment outcomes						
Statement: Mothers with children below the a	ige of 3 sh	hould not work				
First survey:						
Agreement (1:Yes, 0: No)	0.165	0.141	0.191	0.050	0.176	405
Agreement, missing	0.102	0.100	0.104	0.003	0.912	451
Perception of agreement	0.397	0.398	0.397	0.001	0.947	406
Perception of agreement, missing	0.100	0.105	0.095	-0.010	0.718	451
Second survey:						
Perception of agreement	0.406	0.392	0.420	0.028	0.202	451
Mothers' working hours (0 if not working)	14.35	14.89	13.78	-1.11	0.442	444
Mothers' working hours, missing	0.016	0.013	0.018	0.005	0.674	451
Sociodemographic characteristics						
Age of mother (in years)	33.64	33.64	33.65	0.01	0.973	436
Age of mother, missing	0.033	0.026	0.041	0.015	0.398	451
Age of child (in months)	34.76	34.43	35.10	0.674	0.043	451
Mother has no college entrance degree	0.364	0.345	0.383	0.038	0.404	451
Household income	3440	3500	3377	-122	0.519	437
Household income, missing	0.031	0.026	0.036	0.010	0.549	451
Mother has younger child	0.242	0.249	0.234	-0.015	0.717	451
Age of younger child (in months)	9.61	9.56	9.66	0.100	0.934	107
Age of younger child, missing	0.004	0.004	0.005	0.000	0.982	451
Mother is pregnant	0.060	0.057	0.063	0.006	0.779	451
Mother is maincarer	0.980	0.974	0.986	0.013	0.334	451
Father is involved in child care	0.424	0.430	0.419	-0.011	0.815	451
Family participated in previous intervention	0.517	0.546	0.486	-0.059	0.208	451
Strata variables						
Mother works (first survey)	0.557	0.555	0.559	0.004	0.933	451
Migration background	0.317	0.310	0.324	0.014	0.745	451
City A	0.687	0.686	0.689	0.004	0.934	451
City B	0.313	0.314	0.311	-0.004	0.934	451
Overestimator (first survey)	0.709	0.698	0.721	0.024	0.598	406
Overestimator, missing	0.100	0.105	0.095	-0.010	0.718	451

Table 1: Analytical Sample (Mothers): Descriptives and Balancing Tests

Notes: Table reports means of pre-treatment attitudes, perceptions, and labor-market outcomes, as well as sociodemographic characteristics of mothers in our analytical sample. Most of the variables come from the first or the second survey, for a detailed overview of the collection dates see Appendix Table B1. Column (1) reports means for the full sample, Column (2) for the control group, and Column (3) for the treatment group. Column (4) shows the difference between the means of the treatment and control groups, and Column (5) shows the p-value of a two-sided t-test which tests the null hypothesis that the means in Columns (2) and (3) are equal. First Survey: Agreement (1:Yes, 0: No) is a dummy equal to one if the mother agrees to the statement Mothers with children below the age of 3 should not work in the first survey, zero otherwise. First Survey: Agreement, missing is a dummy equal to one if the mother did not participate in the first survey (n = 43) or the mother did not answer the question (n = 3), zero otherwise. First Survey: Perception of agreement is mothers' perception of the share of other mothers in their city agreeing to the statement: Mothers with children below the age of 3 should not work in the first survey. In our regression, we do not explicitly include this variable. However, one of our stratification variables (see below) is a binary indicator of whether the mother overestimated the proportion of other mothers who agreed with this statement. First Survey: Perception of agreement, missing is a dummy equal to one if the mother did not participate in the first survey (n = 43) or the mother did not answer the question (n = 2), zero otherwise. Second Survey: Perception of agreement is mothers' perception of the share of other mothers in their city agreeing to the statement: Mothers with children below the age of 3 should not work in the second survey. Mothers' working hours (0 if not working) indicates mothers' hourly working hours in the second survey. Mothers' working hours, missing is a dummy equal to one if the mother did not answer the question (n = 7), zero otherwise. Mother has no college entrance degree is a dummy equal to one if the mother has no college entrance degree ("Abitur"), zero otherwise. Household income is the net monthly household income in EUR. Household income, missing is a dummy equal to one if the household income was not reported (n = 14). Mother has younger child is a dummy equal to one if the mother has a child younger than the focus child. Mother is pregnant is a dummy equal to one if the mother is pregnant at the time of the survey. Mother is main caregiver is a dummy equal to one if the mother is the main caregiver of the child, zero otherwise. Father is involved in child care is a dummy equal to one if the father spends at least one hour per week in caregiving for the child, zero otherwise. Family participated in previous intervention is a dummy equal to one if the family participated in a previous intervention (see Hermes et al., 2024, for details). Mother works is a binary variable equal to one if the mother reported working at the time of the first survey, and zero otherwise. In cases where the mother did not provide information on her current working status, we approximate it using her reported pre-birth working status (n = 43). Migration background is a dummy equal to one if the mother was not born in Germany, zero otherwise. City A / City B indicates in which of the two sample cities the mother lives. Overestimator is a binary indicator of whether the mother overestimated the proportion of other mothers who agreed with the statement: Mothers with children below the age of 3 should not work in the first survey (allowing for a range of 0.5 standard deviations around the actual value). In our stratification, we did not allow for a range of 0.5 standard deviations around the true value, resulting in eight more mothers overestimating the conservativeness in their environment. Overestimator, missing is a binary variable indicating that the mother did not participate in the first survey.

4. First Survey: Gender Attitudes and Perceptions of Gender Norms

4.1. Pre-Treatment Gender Attitudes

In the first survey, we assess mothers' gender attitudes by asking whether they agree (yes/no) with the following statements:

- 1. Mothers with children below the age of 3 should not work.
- 2. Mothers and fathers should divide the housework equally.
- 3. A woman should earn at most as much as her partner.
- 4. Mothers and fathers should equally share caring obligations for the child.
- 5. Fathers with children below the age of 3 should work at most part-time.
- 6. Mothers with children below the age of 3 should work at most part-time.
- 7. Fathers with children below the age of 3 should not work.

This approach allows us to capture attitudes towards maternal and paternal labor supply, gender equality in earnings, and the division of household and childcare responsibilities between parents. Column (1) of Table 2 reports the share of mothers agreeing with each statement.¹³ The findings reveal that mothers hold relatively conservative attitudes towards maternal full-time employment (63% agree with statement 6) but relatively liberal attitudes towards maternal employment overall (only 17% agree with statement 1).¹⁴ This contrast is reflected in mothers' pre-treatment behavior: while 54% of mothers work, only 19% work full-time in the first survey.

Regarding statements about fathers, few mothers believe that fathers should reduce their working hours: 21% agree that fathers with children under 3 should work at most part-time, and only 3% of mothers agree that fathers should not work at all. Interestingly, a large majority of mothers endorse equality in unpaid work, with 87% agreeing that housework should be shared equally and 79% agreeing that childcare responsibilities should be divided equally. This finding highlights the multiplicity of norms, as most mothers advocate for shared unpaid work while simultaneously supporting (at most) part-time paid employment for mothers. Finally, only 12% of mothers agree

¹³These results are based on the subset of the analytical sample (second survey participants) who also took part in the first survey (about 400). Results are nearly identical when analyzing the full first survey sample (about 440 participants, see Appendix Table C1).

¹⁴Compared to the attitudes from the ISSP (2016) reported in Section 2, our sample displays somewhat more liberal views (in the ISSP 23% of Germans agree that mothers with children below school age should not work). This discrepancy likely reflects that the ISSP includes the entire population, whereas our sample focuses on females, who are directly affected by these norms (Geis-Thöne, 2021). Indeed, as Gambaro et al. (2023) shows, females hold much more liberal gender norms than males. Additionally, as gender norms have become more liberal in recent years, the eight-year gap between the ISSP data and our study may also (partially) explain this difference. Data from the Generation and Gender Survey further confirms that the German population has become more liberal over time: While in 2012 about 35% agree with the statement *A pre-school child is likely to suffer if his/her mother works* (ISSP, 2016), in 2021, only 16% of Germans agree with the statement (GGP, 2021).

	Share agreeing (1)	Perception of agreement (2)	Δ(2)-(1) (3)	Distribution of $\Delta(2)$ -(1) underestimated $\ $ correct $\ $ overestimat (4)	
1. Mothers with children below the age of 3 should not work (1: Conservative)	0.17	0.40	0.23	0.13 0.16	0.71
2. Mothers and fathers should divide the housework equally (0: Cons.)	0.86	0.69	-0.17	0.12 0.31	0.57
3. A woman should earn at most as much as her partner (1: Cons.)	0.12	0.29	0.17	0.20 0.2	9 0.51
4. Mothers and fathers should equally share caring obligations for the child (0: Cons.)	0.79	0.69	-0.10	0.20 0.3	1 0.49
5. Fathers with children below the age of 3 should work at most part-time (0: Cons.)	0.21	0.27	0.06	0.29	0.37 0.34
6. Mothers with children below the age of 3 should work at most part-time (1: Cons.)	0.63	0.59	-0.04	0.53	0.17 0.30
7. Fathers with children below the age of 3 should not work (0: Cons.)	0.03	0.18	0.15	0.38	0.62

Table 2: Mothers' Own Gender Attitudes and Perceptions of Gender Norms

Notes: Table shows mothers' own gender attitudes and their perceptions of the prevailing gender norms for seven statements regarding gender roles. Column (1) shows the share of mothers agreeing to the statements. Agreeing with statements 1, 3, and 6, as well as disagreeing with statements 2, 4, 5, and 7 indicate conservative attitudes. Column (2) shows mothers' perceptions about the share of other mothers in their city agreeing with the statement. In Column (3), positive values for statements 1, 3, and 6, and negative values for statements 2, 4, 5, and 7, indicate that mothers, on average, perceive their environment as more conservative than it actually is. Column (4) shows the distribution of the differences between Column (2) and Column (1). The light gray bar shows the share of mothers who underestimate the conservativeness around them. The dark gray bar shows the share of mothers whose perceptions are correct (allowing for a range of 0.5 standard deviations around the actual value). The black bar indicates the share of mothers who overestimate the conservativeness around them. Statements are ordered based on the share of mothers who overestimate the conservativeness of other mothers (in descending order).

that women should earn at most as much as their partners. We define the share of mothers in each city agreeing to these statements as the actual, prevailing gender norm in the city.

Our panel dataset also enables an analysis of correlations between mothers' sociodemographic characteristics and their gender attitudes. For this analysis, we construct a gender attitude index based on responses to the seven statements. The index ranges from 0 to 1, where 0 represents the strongest possible liberal attitudes towards the seven statements, and 1 represents the strongest possible conservative attitudes.¹⁵ The left panel of Figure 1 shows clear differences in attitudes based on mothers' characteristics. Mothers with a university degree have much more liberal attitudes than those without. Similarly, mothers who worked full-time before the birth of their child exhibit more liberal attitudes. Conversely, mothers with a younger child and those with a migration background have more conservative attitudes compared to mothers without these characteristics. No significant differences are observed based on partnership status or the age of the child.¹⁶

¹⁵Agreement with statements 1, 3, and 6 indicates conservative attitudes, while agreement with statements 2, 4, 5, and 7 reflects liberal attitudes. To calculate the gender attitude index, we recode statements 2, 4, 5, and 7 accordingly.

¹⁶The right panel of Figure 1 is described in Section 4.2.

Figure 1: Correlates of Maternal Characteristics and Mothers' Gender Attitudes/Perceptions of Gender Norms



Notes: Figure shows the correlations between mothers' sociodemographic characteristics and their own gender attitudes (left panel) and perceptions of gender norms (right panel). Both, attitudes and perceptions, are measured by an index summarizing the seven statements. To construct the index, we divide the reported perceptions for each statement by 100 to standardize them on a scale from 0 to 1; this normalization is not necessary for attitudes, which are already provided on a binary scale. These values are then summed across the seven statements, and the total is divided by 7 to compute the average. The resulting index ranges from 0 (indicating extremely liberal attitudes or perceptions) to 1 (indicating extremely conservative attitudes or perceptions). For a definition of the maternal characteristics variables, see Appendix Table B1. The dark gray circles represent bivariate correlations between the characteristic of interest and attitudes or perceptions, while the light gray diamonds represent multivariate correlations that account for all other characteristics as controls. Horizontal lines indicate the 95% confidence interval.

But do these attitudes matter? How predictive are these gender attitudes for mothers' labormarket outcomes? We explore this question by examining the relationship between mothers' own attitudes and labor-market outcomes in the first survey. Figure 2 illustrates the correlations between agreeing with various statements and employment (both general and full-time).



Figure 2: Correlates of Gender Attitudes and Labor-Market Participation

Notes: Figure shows correlations between mothers' own gender attitudes and their labor-market outcomes in the first survey. The left (right) part of the figure shows the correlations with working in general (working full-time, i.e., working hours ≥ 30). Note that agreement with statements 1, 3, and 6, and disagreement with statements 2, 4, 5, and 7 indicate conservative attitudes. The dark gray circles represent bivariate correlations between the gender attitude of interest and the realized labor-market outcome, while the light gray diamonds represent multivariate correlations that account for all other gender attitudes as controls. Horizontal lines indicate the 95% confidence interval. Appendix Figure C1 shows correlations between mothers' gender attitudes in the first survey and their realized labor-market outcomes in the second survey.

Agreement with the statement "*Mothers with children below the age of 3 should not work*" is strongly negatively correlated with both general employment and full-time employment in the first survey. The same is true for the statement "*Mothers with children below the age of 3 should work at most part-time*," albeit with a somewhat weaker correlation. Likewise, the statement "*Mothers and fathers should divide the housework equally*" is positively correlated with (full-time) employment.¹⁷ These relationships, while purely correlational, are substantial: For example, agreeing with the statement "*Mothers with children below the age of 3 should not work*" is associated with a 32 pp lower likelihood of being employed and a 12 pp lower likelihood of working full-time, controlling for all other statements.

¹⁷The remaining statements show no significant correlations with (full-time) employment.

Leveraging the panel nature of our data, we also find that gender attitudes from the first survey are highly predictive of realized labor-market outcomes in the second survey, conducted nine months later (see Appendix Figure C1). Overall, these findings underscore the relevance of gender attitudes regarding maternal employment—in particular, the attitude used in our treatment—for mothers' actual labor-market participation.

4.2. Pre-Treatment Perceptions of Gender Norms

After eliciting mothers' own attitudes regarding the seven statements about gender roles (see Column (1) of Table 2), we also assess their *perceptions* of how many other mothers in their city agree with these statements, capturing their second-order beliefs about prevailing norms. Specifically, we ask mothers how many out of 100 mothers with children aged between 2–3 years in their city they think would agree with each of the seven statements. Column (2) of Table 2 shows mothers' perceptions about the share of other mothers agreeing with each statement. Column (3) displays the difference between the actual share of mothers agreeing and mothers' perceptions of this share.¹⁸ Column (4) further shows the distributions of these differences: the light gray bar indicates the share of mothers with accurate perceptions (defined as being within 0.5 standard deviations of the true value, see Bursztyn and Yang, 2022), and the black bar indicates the share of mothers of other mothers.

The accuracy of mothers' perceptions varies across the statements. The share of mothers with correct perceptions is highest for statements regarding paternal labor supply (37% for statement 5 and 62% for statement 7). This higher precision likely reflects the rarity of scenarios where fathers reduce their labor supply in Germany. For instance, while nearly 90% of fathers work when the child is under three, only about 7% work part-time (BPB, 2021). Mothers also show relatively accurate perceptions for statements about equal sharing of housework or childcare obligations, and about the distribution of earnings within the household, with shares of 31%, 31%, and 29%, respectively.¹⁹

Examining the statements related to maternal labor supply reveals a strikingly different pattern. Only a small share of mothers—16% for statement 1 and 17% for statement 6—have accurate perceptions of the prevailing norm. This high level of misperception is not related to the actual share of mothers agreeing to a statement: while only 17% of mothers agree with statement 1, 63% agree with statement 6. Instead, it seems that mothers struggle to accurately evaluate their environment when it comes to prevailing gender norms about maternal labor supply. One possible explanation

¹⁸Positive differences for statements 1, 3, and 6, and negative differences for statements 2, 4, 5, and 7 indicate that, on average, mothers perceive their environment as more conservative than it actually is.

¹⁹See dark gray bars in Column 4 of Table 2.

is that while gender norms regarding overall maternal labor supply have recently become more liberal in Germany, actual (full-time) employment rates among mothers remain low, creating mixed signals about the true norm.

The distribution of perceptions also differs strongly between these statements. For instance, only about 30% of mothers perceive their environment as too conservative regarding the statement that *mothers with children under 3 years should work at most part-time*. However, 71% of mothers overestimate the conservativeness of their surroundings regarding the statement that *mothers with children under 3 years should not work*.

Given the limited correct perceptions and substantial overestimation of conservativeness, our subsequent information intervention focuses on the statement: *Mothers with children under 3 years should not work*. This choice is further justified by the strong correlation between agreement with this statement and actual labor-market participation in the same survey, as well as its predictive power for labor-market participation in the second survey (see Figure 2 and Appendix Figure C1).

Similar to the previous section, we examine the correlations between mothers' sociodemographic characteristics and their perceptions of gender norms. To do so, we construct a similar index as before that measures mothers' perceptions of agreement with the seven statements. This perception index also ranges from 0 to 1, where 0 indicates the strongest possible liberal perceptions of the seven statements and 1 indicates the strongest possible conservative perceptions.²⁰ The right panel of Figure 1 (in Section 4.1) reveals that mothers with a university degree and mothers with a younger child have more conservative perceptions of gender norms. For the other maternal characteristics—such as child's age, pre-birth full-time employment, having a partner, or having a migration background—we find no notable differences in perceptions of gender norms.

5. Second Survey: Information Experiment

5.1. Stability of Attitudes and Perceptions

In the second survey, we again elicited beliefs and (some) attitudes from the first survey, allowing us to study their development and stability over time. Since we elicited these gender attitudes *after* the treatment (see Section 5.2 below), we only use responses from the control group to investigate the intertemporal stability of maternal attitudes. Specifically, in the second survey we again gathered responses to statements 1, 3, and 4 (see Table 2 in Section 4.1).

²⁰As for the gender attitude index, perceptions of agreement with statements 2, 4, 5, and 7 are recoded so that a higher perceived share of agreement always reflects more conservative perceptions.



Notes: Figure illustrates the stability of attitudes between the first and second survey regarding the statement: *Mothers with children under the age of 3 should not work.* The front-right and back-left bars represent the percentage of mothers whose attitudes remained stable across the two surveys. The back-right bar shows mothers who shifted from a conservative attitude in the first survey to a liberal one in the second, while the front-left bar indicates those who moved from a liberal to a conservative attitude.

Generally, we observe a high level of stability in attitudes, alongside a modest shift toward more conservative views. On average, about 80% of mothers in the control group consistently agreed or disagreed with each statement across surveys, with "consistency rates" of 79%, 84%, and 74% for statements 1, 3, and 4, respectively. For the gender norm targeted in our treatment, Figure 3 shows that while most mothers responded consistently across surveys, the share moving from liberal to conservative (16%) is larger than the share moving in the opposite direction (5%).²¹ This shift is also reflected in the average rate of agreement with the statement, which increases from 17% in the first survey to 27% in the second survey (in the control group). The observed modest conservative shift aligns with recent evidence from several countries documenting a fallback to more traditional gender roles during the COVID-19 pandemic (see Boring and Moroni, 2023; Huebener et al., 2024,

²¹For the stability of the other two statements, see Appendix Figures C2.

for evidence on France and Germany). Together, these findings suggest that the attitudes we elicit are highly persistent over time.

We observe similar stability in the perceptions of gender norms: Prior to the treatment, all mothers were again asked how many out of 100 mothers with children aged 2–3 years in their city would agree with the statement: "*Mothers with children under 3 years should not work*." Perceptions of this statement are highly persistent across surveys: 82% of mothers who overestimated the conservativeness of their environment in the first survey continue to do so in the second. Likewise, for perceptions, average values remain very stable across surveys (40% in the first survey vs 41% in the second), underscoring the relatively slow evolution of (perceptions of) gender norms.

5.2. Treatment

Our information treatment was implemented in the second survey. Immediately after being asked about their perception of other mothers in their city, mothers in the treatment group were informed about the actual gender norm in their city held by other mothers with children aged 2–3 years (see Appendix Figure A2 for details). This information was presented both in written form and graphically, emphasizing that the data originated from the first survey conducted with participating mothers. Additionally, the mother's initial belief was displayed at the bottom of the information slides (see, e.g., Haaland et al., 2023). Mothers in the control group received no further information and moved directly from the belief elicitation to the outcome questions.

Following prior research (e.g., Bursztyn et al., 2020), we define prevailing norms as the average attitudes of participating mothers in the same city. A potential concern is that our sample may not be fully representative of the broader population of mothers, potentially affecting the validity of the norm information. To address this, we use administrative birth registry data for the full cohort— which include information on the child's and parents' age, the child's sex, migration background, citizenship, household structure, zip code, first-time parent status, and number of siblings—to predict city-level norms for the entire population. The predicted norms align with the observed ones in our sample: 24% of mothers in city A and 12% in city B, compared to 21% and 12% as observed in our sample (and shown in the treatment). A related concern could be that study participants may not constitute a relevant reference group for the mothers, which could reduce the effectiveness of the information. Reassuringly, we demonstrate below that the information treatment shifts mothers' perceptions of the norms prevailing within their actual reference network (i.e., friends and acquaintances), which are likely to influence behavior (Bicchieri and Dimant, 2022).

5.3. Outcomes

After the treatment, we measured three categories of outcomes: (i) mothers' perceptions of gender norms, (ii) their own gender attitudes, and (iii) their labor-market plans. First, we assessed

mothers' perceptions of gender norms held by their friends and acquaintances and by women in Germany. For friends and acquaintances, we asked mothers to estimate the share agreeing with the statement: *"Mothers with children under 3 years should not work."* This allowed us to examine spillover effects from the reference group in the information treatment (mothers in their city) to another important reference group (their friends and acquaintances). When assessing perceptions about women in Germany, we slightly changed the gender norm compared to the treated gender norm to reduce experimenter demand effects and to examine whether participants generalized the provided information to related contexts (Settele, 2022). Specifically, mothers estimated the share of women in Germany agreeing with the statement: *"When a mother is in paid work, her children suffer."* This question was incentivized: With a probability of 50%, mothers received an additional payment of 5 EUR if their perception was correct.²² For the analysis, we also created a dummy variable indicating whether the mother overestimated the share of women in Germany agreeing with the statement the share of women in Germany agreeing with the statement.

Second, we measured mothers' own attitude towards working. In line with the first survey, we asked whether they agreed with the statement: "*Mothers with children under 3 years should not work*." For the analysis, we use a dummy variable indicating whether the mother agreed with the statement.

Third, we elicited mothers' labor-market expectations for the following year.²³ Specifically, we asked whether mothers planned to work and how many hours they expected to work one year after the survey. Our primary outcome is a dummy variable indicating whether the mother planned to increase her working hours in one year. This includes both transitions from not working to employment (extensive margin) and increases in working hours for mothers already employed (intensive margin). Furthermore, we asked mothers whether they were interested in a job counseling meeting with the local employment office.

A potential concern in our setting is experimenter demand effects. To mitigate such effects, we avoided asking about mothers' perceptions directly after informing them about the true gender norm in their city (for the treatment group). Instead, we elicited outcomes in a different order than described above. Specifically, we first asked about labor-market plans, followed by attitudes, and finally perceptions. Moreover, we incentivized perceptions about the national norms for accuracy, providing an additional safeguard against experimenter demand. We also checked that there is no bunching for perceptions around the numbers used in the information treatment (12% and 21%).

²²The true value was derived from the World Value Survey (Haerpfer et al., 2020).

²³The time horizon for eliciting labor-market expectations in previous studies ranges from one year to about 40 years (Giustinelli, 2023). We selected a one-year horizon to balance the time required to realize changes in labor supply with the difficulties of forming accurate long-term expectations.

Taken together, these design choices and results suggest that experimenter demand effects are unlikely to drive our findings.

5.4. Randomization and Balancing

We assigned treatment status using stratified randomization (Athey and Imbens, 2017). Stratas are defined based on mothers' employment status (two categories), migration background (two categories), city of residence (two categories), and an indicator for whether the mother assessed her city as too conservative in the first survey (three categories: yes, no, missing). Within these strata, we randomized mothers into the treatment group with 50% probability. In our analytical sample (n = 451), 229 mothers (51%) are in the control group and 222 mothers (49%) are in the treatment group.

This stratified randomization ensured that observable characteristics were well balanced between treatment and control groups (see Column (4) of Table 1). The only variable showing a significant difference is the age of the child, which is slightly higher in the treatment group (significant at the 5%-level). To ensure that this difference does not affect our results, we include child age as a control variable in all regressions.

5.5. Empirical Strategy

We employ an ordinary least squares (OLS) regression model to assess the causal effect of our information treatment on maternal outcomes:

$$Y_i = \alpha + \beta_1 Treatment_i + \mathbf{X}'_i \delta + \varepsilon_i \tag{1}$$

 Y_i is the outcome variable of interest for mother *i*, namely her perceptions of gender norms, her own gender attitudes, and her labor-market expectations (see Section 5.3 for details). *Treatment*_i equals one if the mother is part of the treatment group and zero if she is part of the control group.

Furthermore, we include a vector of control variables, X_i , to improve the precision of our estimates. These controls encompass maternal pre-treatment perceptions and attitudes, working hours, college entrance degree, age, pregnancy status, household income, father's involvement in child care, and whether the mother is the main caregiver. Additional child-related controls include the child's age, whether the child has a younger sibling, and the younger sibling's age. We also include strata fixed effects and a dummy for participation in a prior intervention (Hermes et al., 2024). In the few cases where control variables have missing values, we impute missings using the sample mean and add imputation dummies. The error term is represented by ε_i .

The inference is based on robust standard errors. The results also hold when employing randomization inference or adjusting for multiple hypothesis testing (see Appendix Table D1).

	Per	rceptions about	
	Friends and Acquaintances agreeing to Mothers with children below the age of 3 should not work	Women in Germany agreeing to When a mother works, her children suffer	Women in Germany agreeing to When a mother works, her children suffer
	Perception (0–100)	Perception (0–100)	Dummy: Perception too conservative
	not incentivized (1)	incentivized (2)	incentivized (3)
Treatment	-7.767*** (2.070)	-8.540*** (2.003)	-0.190*** (0.046)
Pre-Treatment Outcome	Yes	Yes	Yes
Sociodemographic Controls	Yes	Yes	Yes
Control Mean	29.01	37.53	0.53
N	451	451	451

Table 3: Treatment Effects on Perceptions of Gender Norms

Notes: Table shows intention-to-treat effects on maternal perceptions of gender norms, all models are estimated by OLS. In Column (1), the outcome variable is mother's perception about the number of friends and acquaintances (0–100) agreeing with the statement: *Mothers with children under the age of 3 should not work.* In Column (2), the outcome variable is mother's perception about the number of women in Germany (0–100) agreeing to the statement: *When a mother engages in paid work, her children suffer.* In Column (3), the outcome variable is a dummy equal to one if mothers overestimate the share of women in Germany agreeing with the statement: *When a mother engages in paid work, her children suffer.* In Column (3), the outcome variable is a dummy equal to one if mothers overestimate the share of women in Germany agreeing with the statement: *When a mother engages in paid work, her children suffer.* Overestimation is defined as a perception exceeding the actual value by more than 0.25 standard deviations. All models include strata fixed effects and sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are also included. *Control mean* is the mean of the outcome in the control group. Robust standard errors in parentheses. * p < .10, ** p < .05, *** p < .01.

5.6. Results

Perceptions of Gender Norms. We start evaluating our information intervention by examining its effects on mothers' perceptions of gender norms. Treated mothers received information about the actual gender norm in their city, specifically the share of mothers with similarly aged children agreeing with the statement: "*Mothers with children under the age of 3 should not work.*" First, we assess whether this information affects mothers' perceptions of gender norms held by their friends and acquaintances. This question was not incentivized since the true answer is unknown. Second, we analyze whether the treatment influences mothers' incentivized perceptions of a related gender norm at the national level ("*When a mother engages in paid work, her children suffer*"). Investigating these spillover effects on a mother's close social network is crucial, as gender norms held by relevant reference networks are most likely to affect mothers' work-related decision (Bicchieri and Dimant, 2022).

Column (1) of Table 3 shows that our treatment strongly influences mothers' perceptions of their friends' and acquaintances' agreement with the statement that "Mothers with children under

the age of 3 should not work." Treated mothers, on average, believe that 7.8 (out of 100) fewer of their friends and acquaintances agree with the statement (p < .01), equivalent to a reduction by 27% relative to the control mean. Similarly, the treatment substantially affects mothers' (incentivized) perceptions of a related gender norm held by women in Germany. Specifically, treated mothers estimate that 8.5 (out of 100) fewer women in Germany believe that mothers engaging in paid work hurts their children (p < .01), which translates to 23% of the control mean.²⁴ Consistently, the treatment reduces the probability that mothers perceive women in Germany as too conservative by 19 pp (p < .01), or 36% relative to the control mean.²⁵

In summary, these findings reveal that providing information about a city-level gender norm has strong effects on mothers' perceptions of both their local reference groups and a related national norm. This complements evidence from Bursztyn et al. (2023), who show that information about a national-level gender norm causally impacts perceptions of norms at the state and workplace levels.

Own Attitudes. After demonstrating significant shifts in maternal perceptions of gender norms, we now turn to mother's own gender attitudes. Our information treatment about the actual gender norm has a strong impact on mothers' attitudes toward maternal labor supply (see Figure 4 and Appendix Table C3). Specifically, being informed about the actual gender norm reduces the probability that mothers agree with the statement "*Mothers with children under the age of 3 should not work.*" by 6.6 pp (p = .049), equivalent to 25% of the control mean (see Panel (A) of Figure 4). This result implies that perceptions of gender norms have a causal impact on mothers' own attitudes.

As with any information treatment (see Haaland et al., 2023), the effects of our intervention are likely to vary based on mothers' initial perceptions of their environment (and the direction and intensity of the information update), their confidence in these perceptions, and their pre-treatment gender attitudes. Our analysis shows that average treatment effects are primarily driven by mothers who initially perceived their environment as too conservative, as measured pre-treatment. For these mothers, the treatment reduces the probability of agreeing with the statement "*Mothers with children under the age of 3 should not work*." by 8.5 pp (p = .042, Panel (B) of Figure 4). This is consistent with the fact that these mothers were informed that their environment was more liberal than they had initially believed.²⁶ Furthermore, the treatment has stronger effects on mothers

²⁴These perception updates are stronger for mothers who initially overestimate the conservativeness in their environment (see Appendix Table C2).

²⁵Additional analysis shows that mothers in the treatment group only update perceptions directly related to the treated norm. There is no evidence of a generalized shift in their answering behavior, as we find no treatment effect on perceptions of a norm more distant from the treated one (i.e., "*It leads to problems if women earn more than their husbands*").

²⁶This analysis uses perceptions measured in the second survey, but the results are similar when using perceptions from the first survey.



Figure 4: Treatment Effect on Mothers' Own Attitudes Towards Labor Supply

Notes: Figure shows the intention-to-treat effects on mothers' agreement with the statement: *Mothers with children under the age of 3 should not work* for different subgroups, all models are estimated by OLS (see Appendix Table C3 for detailed results). While Panel (A) shows the average effect, the next three panels (B, C, and D) show heterogeneous treatment effects estimated by using models with interaction terms. Panel (B) reports heterogeneity based on whether the mother *overestimates* the conservativeness in her environment in the second survey (results are similar when using overestimators from the first survey). Panel (C) reports heterogeneity based on whether the mother has *little confidence* about her pre-treatment perception. Panel (D) reports heterogeneity=0 indicates liberal or conservative gender attitudes. In Panels (B)–(D), the left-hand bar represents the estimated treatment effect for the subgroup of mothers to whom the specific heterogeneity applies (e.g., mothers who overestimate the conservativeness around them in Panel (B)). The right-hand bar indicates the treatment effect for the remaining mothers (e.g., those who did not overestimate the conservativeness around them in Panel (B)). All models include strata fixed effects and sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are also included. * p < .05, *** p < .01.

who lack confidence in their pre-treatment perceptions. As shown in Panel (C) of Figure 4, these mothers are 12.1 pp less likely to agree with the statement following the treatment (p = .013). This aligns with the idea that mothers with less confidence in their beliefs are more responsive to information updates. The treatment also has particularly large effects on mothers with moderate pre-treatment gender attitudes, defined as the middle tercile of our gender attitude index from Figure 1 (with the lower tercile representing liberal and the upper tercile conservative attitudes). For mothers with moderate attitudes, the treatment reduces agreement with the statement by 12.7 pp (p = .052, Panel (D) of Figure 4).²⁷

²⁷We also examine treatment effects on other gender attitudes, such as agreement with statements that *a woman* should earn no more than her partner and that mothers and fathers should share child care responsibilities equally. We find no significant treatment effects for these more distant attitudes, suggesting that the treatment's influence is limited to attitudes closely related to the treated norm.



Figure 5: Predicted Agreement by Pre-Treatment Gender Attitudes

Notes: Figure shows intention-to-treat effects on mothers' agreement with the statement: *Mothers with children under the age of 3 should not work* for mothers with liberal, moderate, or conservative pre-treatment gender attitudes, estimated by OLS. Heterogeneous treatment effects are estimated by using models with interaction terms. Results show the predicted agreement to the statement for the control group (dashed line) and the treatment group (solid line). Pre-treatment gender attitudes of mothers are measured by mothers' agreement to the seven statements described in Section 4.1. We create an index by calculating mother's average agreement to the statements (recoding all statements in a way that agreement represents conservative attitudes). We then divide the distribution of the index into three terciles. The first tercile includes mothers with liberal gender attitudes, the second includes mothers with moderate gender attitudes, and the third includes mothers with conservative gender attitudes.

Further extending this analysis, we estimate marginal effects across the three subgroups (liberal, moderate, and conservative gender attitudes) by interacting the treatment indicator with an indicator for each group. As shown in Figure 5, only mothers with moderate gender attitudes respond significantly to the treatment. This likely occurs because a majority of liberal mothers already disagree with the statement at baseline, leaving little room for change, while conservative mothers tend to hold more entrenched traditional views, making their attitudes less malleable. This finding complements evidence from Miho et al. (2023), which suggests that groups culturally closer to new gender norms adapt more quickly. Similarly, our results show that mothers with attitudes closer to the new norm are more likely to adjust, likely because individuals tend to reject information that contradicts their pre-existing beliefs (Bicchieri and Mercier, 2014).

In addition, the information about actual gender norms could potentially influence how mothers perceive the returns to working or the barriers to finding a job. To assess this, we asked mothers hy-

pothetical questions about how full-time work might affect various aspects of their lives, including their career, personal well-being, child's well-being, relationship, and social acceptance. We also asked about general problems mothers may face when seeking suitable employment. However, we find no significant treatment effects on these outcomes (see Appendix E for details).

In summary, we have shown that our treatment has strong effects on mothers' perceptions of gender norms and their own attitudes. These own attitudes (or "personal norms") have been shown to directly influence behavior (Bašić and Verrina, 2024). As demonstrated in Section 4.1 and Figure 2, the attitude shifted by the treatment is a strong predictor of both current and future labor-market behaviors. Thus, it is plausible to expect that the treatment also affects mothers' plans for their own labor-market participation, which we analyze in the following section.

Labor-Market Expectations. The final set of results examines the effects of our treatment on mothers' plans for labor-market participation. Specifically, we investigate whether being informed about the actual (more liberal) gender norm leads to changes in expected labor supply. To assess this, we elicited mothers' labor-market expectations for one year after the experiment, asking whether and how many hours they planned to work. Based on this, we construct a dummy variable indicating whether mothers intend to increase their working hours. The variable equals one if the mother plans to start working within the next year or, if already employed at the time of the second survey, intends to work more hours. As shown in Column (1) of Table 4, treated mothers are 7.4 pp (or 18%) more likely to plan an increase in their current working hours (p = .095).²⁸ However, the treatment effect is no longer statistically significant at conventional levels after correcting for multiple hypothesis testing ($p \approx .150$, see Appendix Table D1). As discussed below, we find larger and more precisely estimated treatment effects for mothers with existing support to facilitate their labor-market participation.

To underscore the behavioral relevance of maternal labor-market expectations, we show that baseline labor-supply plans are highly predictive of actual employment 18 months later: Of all mothers who at baseline (child age: 0–1) expected to return to work within the next year, 72% were actually employed and 16% were on paid parental leave, which usually requires prior employment.

Our main outcome variable, "Increase in Working Hours," combines both the extensive margin (i.e., transitioning from non-employment to employment) and the intensive margin (i.e., increasing hours for already employed mothers) of maternal labor supply. To disentangle which margin responds more strongly to the treatment, we estimate heterogeneous effects based on employment

²⁸Instrumental variable (IV) estimation further supports that the treatment effect on labor-market expectations is indeed driven by shifts in mothers' perceptions (see Appendix Table C4). In the second stage, both elicited perceptions are negatively associated with the outcome, as expected, but fall just short of statistical significance (p = .128 and p = .105, respectively)—likely due to a relatively weak first stage, which reduces the precision of the second-stage estimates.

	Increase in Working Hours	Interest in Job Counseling
	(1)	(2)
Treatment	0.074*	-0.029
	(0.044)	(0.038)
Strata Controls	Yes	Yes
Sociodemographic Controls	Yes	Yes
Control Mean	0.402	0.205
N	450	451

Table 4: Treatment Effects on Labor-Market Participation

Notes: Table shows intention-to-treat effects on mothers' plans for labor-market participation, all models are estimated by OLS. In Column (1), the outcome is a dummy variable indicating whether the mother plans to increase her working hours in the following year; this includes both transitions from not working to employment (extensive margin) and increases in working hours for mothers already employed (intensive margin). In Column (2), the outcome is a dummy variable indicating whether the mother expresses interest in seeking job counseling from the local employment agency and provides her personal contact information (mail or phone number). All models include strata fixed effects and sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are also included. *Control Mean* is the mean of the outcome in the control group. Robust standard errors in parentheses. * p < .05, *** p < .01.

status at the time of the second survey. This analysis reveals that the treatment effect is primarily driven by the intensive margin, with treated mothers already employed in the second survey being 9.8 pp more likely to increase their working hours compared to employed mothers in the control group (p = .092). For mothers currently not employed, treatment effects are positive, but not statistically significant (see Column (2) of Appendix Table C5).²⁹

²⁹Although the information provided in the treatment explicitly referred to a norm about the extensive margin of employment, it plausibly also impacts the intensive margin. First, the treatment likely reduced the perceived social cost of working, which aligns with marginal increases in working hours. A reduction in perceived social cost would also predict that mothers lower their reservation wage. Estimating treatment effects on the reservation wage, we observe a 7.9 pp increase in the likelihood that mothers report a lower reservation wage (hourly wage) in the second survey compared to the first (p = .161). Albeit not statistically significant at conventional levels, this finding suggests that the treatment may have reduced the perceived social cost associated with maternal employment. Second, perceptions of gender norms related to employment are likely correlated, meaning that shifting perceptions of a norm about "working or not" may also influence norms about full-time work. In support of this argument, Figure 2 demonstrates that the treated norm is also predictive of whether mothers work full-time. Third, since the outcomes are measured within the same survey, it seems plausible that responses occur along the easier-to-shift intensive margin—e.g., increasing working hours in an existing job—rather than along the extensive margin, which requires more planning, such as finding and starting a new job.



Figure 6: Heterogeneous Treatment Effects on Increase in Working Hours

Notes: Figure shows heterogeneous treatment effects on mothers' plans for labor-market participation, all models are estimated by OLS (see Appendix Table C6 for detailed results). The outcome is a dummy variable indicating whether the mother plans to increase her working hours in the following year; this includes both transitions from not working to employment (extensive margin) and increases in working hours for mothers already employed (intensive margin). We do not have information on their current working hours for seven mothers; for six of these mothers, we use values from the first survey to impute the missing data (see Appendix Table B1). Panel (A) reports heterogeneity based on whether the mother overestimates the conservativeness in her environment in the second survey (results are similar when using overestimators from the first survey). Panel (B) reports heterogeneity based on whether the child spends at least one hour per week in child care. Information on whether the child is in child care is missing for one mother. Panel (C) reports heterogeneity based on whether the father provides at least one hour per week of care for the child alone. This information is missing for one mother. Panel (D) reports heterogeneity based on whether the mother's own mother worked full-time when the mother was 15 years old. In Panels (A)-(D), the left-hand bar represents the estimated treatment effect for the subgroup of mothers to whom the specific heterogeneity applies (e.g., mothers who overestimate the conservativeness around them in Panel (A)). The right-hand bar indicates the treatment effect for the remaining mothers (e.g., those who did not overestimate the conservativeness around them in Panel (A)). All models include strata fixed effects and sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are also included. * p < .10, ** p < .05, *** p < .01.

Consistent with this reasoning, we find no treatment effect on mothers' interest in seeking job counseling from the local employment agency (see Table 4, Column (2)).³⁰ While 19% of mothers in our sample express interest in such counseling and provide their personal contact information (mail or phone number), the treatment has no significant effect on this outcome (b = -.029; p = .438). This further supports the notion that the treatment primarily encourages mothers who are already employed to increase their working hours, rather than prompting non-employed mothers to enter employment—a process that is more likely to require or benefit more from employment agency support.

³⁰In Germany, the increase in working hours, for example from part-time to full-time, is regulated by the *Part-Time and Fixed-Term Employment Act*. According to §9 of this Act, part-time employees have a legal entitlement to an increase in working hours, which makes the need for job counseling unnecessary at the intensive margin.

To better understand which mothers responded more strongly to the information treatment, we investigate heterogeneous treatment effects focusing on mothers' initial perceptions of their environment and (exploratory) existing support for employment.³¹ Specifically, we analyzed four factors that might moderate the treatment effect: overestimating the conservativeness in their environment, access to child care, the partner's active involvement in child care, and the mother's cultural background. Following the literature, we regard a mother's cultural background as more liberal and gender-equal if her own mother was working full-time when the mother was 15 years old (see, e.g., Fernández et al., 2004; Fernández and Fogli, 2009; Schmitz and Spiess, 2021). Column (2) of Table C6 shows that while the effect becomes slightly larger for overestimators, it is no longer significant. Columns (3)–(5) of Table C6 show that the treatment effect was significantly stronger for mothers that already have support for employment available. Treated mothers with access to child care are 13.2 pp more likely to plan an increase in their working hours compared to the control group with child care access (p = .021). Likewise, treated mothers with a partner actively engaging in child care are 16.4 pp more likely to intend to increase their working hours (p = .014). Finally, treated mothers who grew up in a more gender-equal environment are 13.6 pp more likely to plan an increase in their current working hours (p = .063). Mothers lacking this type of support consistently show small and statistically insignificant treatment effects. These findings suggest that the information treatment is particularly effective for mothers with existing support for labor-market participation. Access to supportive conditions, such as child care availability or active partner involvement, and exposure to more gender-equal norms during childhood seem to amplify the treatment's impact on mothers' labor-market expectations.

Robustness Checks. We conduct two sets of robustness checks to ensure the validity of our results. First, recognizing that our study was conducted in two specific cities in West Germany, we leverage a comprehensive dataset representative of the German population (German Socioeconomic Panel, see Goebel et al., 2019; SOEP, 2021) to re-estimate our treatment effects using propensity score weights (for a similar approach, see Hermes et al., 2024). Results using SOEP population weights are very similar across all three groups of outcomes and, if anything, tend to become slightly larger (see Appendix Table D2). Second, we account for potential concerns regarding multiple hypothesis testing and calculate standard errors using randomization inference, which randomly reassigns treatment status within strata. All findings remain robust to these corrections (see Appendix Table D1).

³¹We pre-registered four additional subgroups to examine heterogeneous treatment effects: mothers' own attitudes, education, migration background, and labor-market history. With the exception of mothers' own attitudes, we find no significant differences in treatment effects across these groups (see Appendix Figure C3).

6. Conclusion

We provide causal evidence that informing mothers about the actual gender norm regarding maternal employment shapes their perceptions of gender norms, employment attitudes, and labor-market expectations. When mothers learn that prevailing norms in their city are typically more liberal than assumed, they adjust their perceptions about gender norms both in Germany overall and within their social networks. The information also shifts their own employment attitudes in a more liberal direction. Treated mothers are also more likely to plan an increase in working hours, especially those with support structures in place, such as access to child care or partners actively involved in caregiving.

An important question is whether the increased labor-market expectations observed among treated mothers translate into actual labor-market outcomes. In general, expectations of this kind have been shown to carry predictive power. For instance, Gong et al. (2022) finds that labor-supply expectations measured among college students in their third year strongly predict realized labor-market outcomes after graduation. Leveraging the panel structure of our survey, we can also show that mothers' employment plans align well with their actual employment outcomes 18 months later. Furthermore, we observe that mothers' employment attitudes are strong predictors for their future labor-market participation. Taken together, these findings suggest that both labor-market expectations and attitudes are informative of actual behavior. At the same time, we are cautious not to overstate the impact of our light-touch intervention—i.e., providing a single piece of information during a survey—on realized labor-market choices. Decisions about labor supply are shaped by a complex set of constraints and preferences beyond social norms. We therefore interpret our findings as proof of concept: perceptions of gender norms and related attitudes are malleable and may, under supportive conditions, influence labor-market trajectories.

Our findings carry two main policy implications. First, they demonstrate that gender norms often viewed as a fixed, non-institutional driver of the child penalty—are in fact malleable, even among the directly affected group: mothers. By shifting perceptions of prevailing norms, our information treatment induces meaningful changes in mothers' attitudes and labor-market expectations. This underscores the potential for addressing gender gaps in the labor market not only through institutional reforms (e.g., child care expansion) but also through interventions that target the social norms shaping maternal behavior. One practical avenue for policymakers is to scale low-cost, easily implementable information interventions like ours. More fundamentally, they could implement policies known to affect gender norms, such as family-oriented reforms (e.g., Farré et al., 2023). Future research should explore how norm-shaping interventions, such as information campaigns, can be embedded into broader policy strategies to reduce child penalties and promote gender equality in the labor market. Second, our findings resonate with broader theories of "bad equilibria" in social norms, as described by Bursztyn et al. (2023). In such equilibria, mothers may overestimate the conservativeness of their social environment and adapt their behavior accordingly—thereby reinforcing the very norms they misperceive. By correcting these misperceptions, our intervention enables mothers to align their behavior more closely with their actual preferences, contributing to a more gender-equal labor supply. This also has broader relevance in societies facing labor shortages due to an aging population, where mobilizing underutilized labor potential—especially among mothers—is becoming increasingly important.

References

- Alesina, A., P. Giuliano, and N. Nunn (2013). On the Origins of Gender Roles: Women and the Plough. *The Quarterly Journal of Economics* 128(2), 469–530.
- Andresen, M. and E. Nix (2022a). Can the Child Penalty be Reduced?. Evaluating Multiple Policy Interventions. Discussion Papers 983, Statistics Norway, Research Department.
- Andresen, M. and E. Nix (2022b). What Causes the Child Penalty? Evidence from Adopting and Same Sex Couples. *Journal of Labor Economics* 40(4), 971–1004.
- Angelov, N., P. Johansson, and E. Lindahl (2016). Parenthood and the Gender Gap in Pay. Journal of Labor Economics 34(3), 545–579.
- Athey, S. and G. W. Imbens (2017). The Econometrics of Randomized Experiments. In A. V. Banerjee and E. Duflo (Eds.), *Handbook of Economic Field Experiments*, Volume 1, pp. 73–140. North Holland, Amsterdam.
- Bašić, Z. and E. Verrina (2024). Personal norms and not only social norms shape economic behavior. *Journal of Public Economics 239*.
- Bertrand, M., C. Goldin, and L. F. Katz (2010). Dynamics of the Gender Gap for Young Professionals in the Financial and Corporate Sectors. *American Economic Journal: Applied Economics* 2(3), 228–55.
- Bertrand, M., E. Kamenica, and J. Pan (2015). Gender Identity and Relative Income within Households. *The Quarterly Journal of Economics 130*(2), 571–614.
- Bicchieri, C. (2006). The grammar of society: The nature and dynamics of social norms. Cambridge University Press.
- Bicchieri, C. and E. Dimant (2022). Nudging with care: the risks and benefits of social information. *Public Choice 191*, 443–464.
- Bicchieri, C. and H. Mercier (2014, 05). Norms and Beliefs: How Change Occurs, pp. 37-54. Cham: Springer.
- Blau, F. D. and L. M. Kahn (2017). The Gender Wage Gap: Extent, Trends, and Explanations. *Journal of Economic Literature* 55(3), 789–865.
- Bleemer, Z. and B. Zafar (2018). Intended college attendance: Evidence from an experiment on college returns and costs. *Journal of Public Economics* 157(C), 184–211.
- Boelmann, B., A. Raute, and U. Schönberg (2024). Wind of Change? Cultural Determinants of Maternal Labor Supply. *American Economic Journal: Applied Economics (Forthcoming)*.
- Boring, A. and G. Moroni (2023). Turning Back the Clock: Beliefs About Gender Roles During Lockdown. *Labour Economics* 84.
- BPB (2021). Erwerbstätigkeit von Eltern nach Alter des jüngsten Kindes. https://www.bpb.de/ nachschlagen/zahlen-und-fakten/soziale-situation-in-deutschland/61606/ erwerbstaetigkeit-nach-alter-des-juengsten-kindes, Bundeszentrale für politische Bildung.

- Brosch, H., E. Grewenig, P. Lergetporer, and K. Werner (2024). Navigating the Gender Norms Landscape: Regional Variations and Labor Market Implications. Technical report, Mimeo.
- Bursztyn, L., A. W. Cappelen, B. Tungodden, A. Voena, and D. H. Yanagizawa-Drott (2023). How are Gender Norms Perceived. NBER Working Paper 31049, NBER.
- Bursztyn, L., A. González, and D. H. Yanagizawa-Drott (2020). Misperceived Social Norms: Women Working Outside the Home in Saudi Arabia. *American Economic Review 110*(10), 2997–3029.
- Bursztyn, L. and D. Y. Yang (2022). Misperceptions About Others. Annual Review of Economics 14, 425-452.
- Cialdini, R. and N. Goldstein (2004, 02). Social Influence: Compliance and Conformity. *Annual review of psychology* 55, 591–621.
- Clarke, D., J. P. Romano, and M. Wolf (2020). The Romano-Wolf Multiple-Hypothesis Correction in Stata. *The Stata Journal* 20(4), 812–843.
- Cortés, P., G. Koşar, J. Pan, and B. Zafar (2024). Should Mothers Work? How Perceptions of the Social Norm Affect Individual Attitudes Toward Work in the US. *Review of Economics and Statistics (forthcoming)*.
- Destatis (2022). Personen in Elternzeit. https://www.destatis.de/de/themen/arbeit/ arbeitsmarkt/qualitaet-arbeit/dimension-3/elternzeit.html. German Federal Statistical Office, Wiesbaden.
- Destatis (2024). Attendance rates of children under 6 years in day care for children. https://www.destatis. de/en/themes/society-environment/social-statistics/day-care-children/tables/ attendance-rates-children-daycare-year.html. German Federal Statistical Office, Wiesbaden.
- EVS (2011). European Values Study 1981-2008, Longitudinal Data File. ZA4804 Data File Version 2.0.0. *GESIS Data Archive, Cologne*.
- Farré, L., C. Felfe, L. González, and P. Schneider (2023). Changing Gender Norms across Generations: Evidence from a Paternity Leave Reform. IZA Discussion Paper No. 16341, IZA, Bonn.
- Fernández, R. (2007). Women, Work, and Culture. Journal of the European Economic Association 5(2-3), 305–332.
- Fernández, R. and A. Fogli (2009). Culture: An Empirical Investigation of Beliefs, Work, and Fertility. American Economic Journal: Macroeconomics 1(1), 146–77.
- Fernández, R., A. Fogli, and C. Olivetti (2004). Mothers and Sons: Preference Formation and Female Labor Force Dynamics. *The Quarterly Journal of Economics 119*(4), 1249–1299.
- Fortin, N. (2005). Gender Role Attitudes and the Labour Market Outcomes of Women Across OECD Countries. Oxford Review of Economic Policy 21, 416–438.
- Fortin, N. M. (2015). Gender Role Attitudes and Women's Labor Market Participation: Opting-Out, AIDS, and the Persistent Appeal of Housewifery. *Annals of Economics and Statistics* (117/118), 379–401.

- Gambaro, L., C. K. Spiess, K. Wrohlich, and E. Ziege (2023). Should Mama or Papa Work? Variations in Attitudes towards Parental Employment by Country of Origin and Child Age. *Comparative Population Studies* 48, 339–368.
- Geis-Thöne, W. (2021). Mütter haben unterschiedliche Erwerbswünsche und erwerbsbezogene Normen. IW-Report 28/2021, IW, Köln.
- GGP (2021). Generations and Gender Programme (GGP): Generations and Gender Survey (Round II) data for Germany 2021, Values for statement *Child suffers if mother works*. https://ggp.colectica.org/item/int.example/3515fc78-fa2e-4353-8b65-62682856504b. Accessed via GGP data portal.
- Giavazzi, F., M. Serafinelli, and F. Schiantarelli (2013). Attitudes, Policies, and Work. *Journal of the European Economic Association 11*(6), 1256–1289.
- Giustinelli, P. (2023). Expectations in Education. In R. Bachmann, G. Topa, and W. van der Klaauw (Eds.), *Handbook of Economic Expectations*, pp. 193–224. Academic Press.
- Goebel, J., M. M. Grabka, S. Liebig, M. Kroh, D. Richter, C. Schroeder, and J. Schupp (2019). The German Socio-Economic Panel (SOEP). *Journal of Economics and Statistics* 239(2), 345–360.
- Gong, Y., R. Stinebrickner, and T. Stinebrickner (2022). Marriage, children, and labor supply: Beliefs and outcomes. *Journal of Econometrics* 231(1), 148–164.
- Grewenig, E., L. Lergetporer, and K. Werner (2020). Gender norms and labor-supply expectations: Experimental evidence from adolescents. CESifo Working paper Series 8611, CESifo.
- Haaland, I., C. Roth, and J. Wohlfart (2023). Designing Information Provision Experiments. *Journal of Economic Literature* 61(1), 3–40.
- Haerpfer, C., R. Inglehart, A. Moreno, C. Welzel, K. Kizilova, D.-M. J., M. Lagos, P. Norris, E. Ponarin, and B. e. a. Puranen (2020). World Values Survey: Round Seven - Country-Pooled Datafile. *Madrid, Spain and Vienna, Austria: JD Systems Institute and WVSA Secretariat*.
- Hermes, H., P. Lergetporer, F. Peter, and S. Wiederhold (2024). Application Barriers and the Socioeconomic Gap in Child Care Enrollment. *Journal of the European Economic Association* (forthcoming).
- Hess, S. (2017). Randomization Inference with Stata: A Guide and Software. Stata Journal 17(3), 630-651.
- Huebener, M., N. Danzer, A. Pape, P. Schober, C. K. Spiess, and G. G. Wagner (2024). Cracking Under Pressure? Gender Role Attitudes Toward Maternal Employment During COVID-19 in Germany. *Feminist Economics* 30(3), 217–254.
- Ilieva, B. and K. Wrohlich (2022). Gender Gaps in Employment, Working Hours and Wages in Germany: Trends and Developments Over the Last 35 Years. CESifo Forum 23(2), 17–19.
- ISSP (2016). International Social Survey Programme: Family and Changing Gender Roles IV ISSP 2012. *GESIS Data Archive, Cologne*.
- Kleven, H. (2024). The Geography of Child Penalties and Gender Norms: A Pseudo-Event Study Approach. Working Paper 30176, National Bureau of Economic Research.

- Kleven, H., C. Landais, and G. Leite-Mariante (2023). The Child Penalty Atlas. Working Paper 31649, National Bureau of Economic Research.
- Kleven, H., C. Landais, J. Posch, A. Steinhauer, and J. Zweimüller (2019). Child Penalties Across Countries: Evidence and Explanations. AEA Papers and Proceedings 109, 122–26.
- Kleven, H., C. Landais, and J. E. Søgaard (2019). Children and Gender Inequality: Evidence from Denmark. *American Economic Journal: Applied Economics 11*(4), 181–209.
- Kleven, H., C. Landais, and J. E. Søgaard (2021, June). Does Biology Drive Child Penalties? Evidence from Biological and Adoptive Families. *American Economic Review: Insights 3*(2), 183–98.
- Kling, J. R., J. B. Liebman, and L. F. Katz (2007). Experimental Analysis of Neighborhood Effects. *Econometrica* 75(1), 83–119.
- Kuziemko, I., J. Pan, J. Shen, and E. Washington (2018). The Mommy Effect: Do Women Anticipate the Employment Effects of Motherhood? NBER Working Paper 24740, National Bureau of Economic Research.
- Lim, N. and L.-M. Duletzki (2024). Can Early Public Childcare Reduce Child Penalties? Evidence From Germany. Working Paper, Boston University.
- List, J. A., A. M. Shaikh, and Y. Xu (2019). Multiple Hypothesis Testing in Experimental Economics. *Experimental Economics* 22(4), 773–793.
- Miho, A., A. Jarotschkin, and E. Zhuravskaya (2023). Diffusion of Gender Norms: Evidence from Stalin's Ethnic Deportations. *Journal of the European Economic Association forthcoming*.
- Mueller, K.-U., M. Neumann, and K. Wrohlich (2018). Labor Supply under Participation and Hours Constraints: An Extended Structural Model for Policy Evaluations. IZA Discussion Paper No. 12003, IZA, Bonn.
- Müller, K. and K. Wrohlich (2020). Does Subsidized Care for Toddlers Increase Maternal Labor Supply? Evidence from a Large-Scale Expansion of Early Childcare. *Labour Economics* 62.
- OECD (2017). Dare to Share: Germany's Experience Promoting Equal Partnership in Families. OECD, Paris.
- OECD (2020). OECD Family Database: Maternal Employment Rates. https://www.oecd.org/els/family/lmf1_2_maternal_employment.pdf, Paris.
- OECD (2023). Joining Forces for Gender Equality: What is Holding us Back? Paris: OECD, Paris.
- Olivetti, C., J. Pan, and B. Petrongolo (2024). The evolution of gender in the labor market. Working Paper 33153, National Bureau of Economic Research.
- Olivetti, C., E. Patacchini, and Y. Zenou (2020). Mothers, Peers, and Gender-Role Identity. *Journal of the European Economic Association 18*(1), 266–301.
- Panizza, F., E. Dimant, E. O. Kimbrough, and A. Vostroknutov (2024). Measuring Norm Pluralism and Perceived Polarization in us Politics. *PNAS Nexus* 3(10), pgae413.

- Romano, J. P. and M. Wolf (2005). Stepwise Multiple Testing as Formalized Data Snooping. *Econometrica* 73(4), 1237–1282.
- Romano, J. P. and M. Wolf (2016). Efficient Computation of Adjusted P-Values for Resampling-Based Stepdown Multiple Testing. *Statistics & Probability Letters 113*, 38–40.
- Schmitz, S. and C. K. Spiess (2021). The intergenerational transmission of gender norms—why and how adolescent males with working mothers matter for female labour market outcomes. *Socio-Economic Review* 20(1), 281–322.
- Settele, S. (2022). How do beliefs about the gender wage gap affect the demand for public policy? *American Economic Journal: Economic Policy* 14(2), 475–508.
- SOEP (2021). Socio-Economic Panel (SOEP) 2021, Years 1984-2019, Version 36. doi:10.5684/soep.v36, DIW Berlin, Berlin.
- Steinhauer, A. (2018). Working Moms, Childlessness, and Female Identity. LIEPP Working Paper 79, Sciences Po LIEPP.
- Westfall, P. H. and S. S. Young (1993). *Resampling-Based Multiple Testing: Examples and Methods for P-Value Adjustment*. Wiley Series in Probability and Mathematical Statistics. New York: Wiley.

Appendix A. Details on the Study



Figure A1: Timeline of Surveys

Notes: Figure gives an overview of all surveys and their timing.



Figure A2: Information Treatment

Notes: Figure shows how the information treatment was presented to participants. Note that the actual gender norm differs in the two cities, with 21% of mothers in one city agreeing to the statement compared to 12% in the other city.

Appendix B. Further Details on Variables

	Survey Wave (1)	Definition (2)	Values (3)	Missings (4)	N (5)
Outcome variables					
Perception about friends and ac- quaintances agreeing to <i>Mothers</i> with children below the age of 3 should not work	Survey IV	Answer to the following question: What is your estimate, out of 100 mothers with approximately 2-3 year old children from your circle of friends or acquaintances how many mothers agree with the following statement? <i>Mothers with children below the age of 3 should not work</i>	0-100	-	451
Perception about women in Ger- many agreeing to When a mother works, her children suffer	Survey IV	Answer to the following question: What is your estimate, out of 100 women in Germany how many women agree with the follow- ing statement? When a mother works, her children suffer	0-100	-	451
Dummy: Perception about women in Germany agreeing to When a mother works, her chil- dren suffer is too conservative	Survey IV	The answer to the following question is higher than the actual value (allowing for a 0.5 std puffer around the truth): What is your estimate, out of 100 women in Germany how many women agree with the following statement? When a mother works, her children suffer	0 or 1	-	451
Agreement to the statement: Mothers with children below the age of 3 should not work	Survey IV	The answer to the following question: Do you agree with the following statement? <i>Mothers with children below the age of 3 should not work</i>	0 or 1	-	451
Increase in working hours	Survey IV	A dummy equal to one if the planned working hours in a year from now exceed the current working hours reported in the sec- ond survey. For six observations, we lack information on the cur- rent working hours. In these instances, we use the working hours reported in the first survey.	0 or 1	Missing if we have no information on the working hours from neither the second nor the first survey $(n = 1)$.	450
Interest in job counseling	Survey IV	A dummy variable is set to one if the respondent answers posi- tively to the following question and provides their contact details (either an email address or phone number). In order to support you with your occupational progress in the best possible way, we realized the possibility to make use of a counseling with the of- ficer of equal opportunities at the employment agency in [city]. Such a counseling could provide you with individual support re- garding your occupational plans. Would you be interested in a counseling?	0 or 1	-	451
Perceived benefits of full-time work: Income	Survey IV	Answer to the following question: if you went from not working at all to working full time, would the your family income im- prove, stay the same or get worse?	1 (worsen), 2 (stay the same) or 3 (improve)	Missing if the mother did not answer this question $(n = 1)$.	450
Perceived benefits of full-time work: Career	Survey IV	Answer to the following question: if you went from not working at all to working full time, would the your career opportunities improve, stay the same or get worse?	1 (worsen), 2 (stay the same) or 3 (improve)	Missing if the mother did not answer this question $(n = 2)$.	449
Perceived benefits of full-time work: Child	Survey IV	Answer to the following question: if you went from not working at all to working full time, would the development of your child improve, stay the same or get worse?	1 (worsen), 2 (stay the same) or 3 (improve)	Missing if the mother did not answer this question $(n = 3)$.	448
Perceived benefits of full-time work: Partnership	Survey IV	Answer to the following question: if you went from not working at all to working full time, would the satisfaction with your part- nership improve, stay the same or get worse?	1 (worsen), 2 (stay the same) or 3 (improve)	Missing if the mother has no part- ner $(n = 30)$, or did not answer this question $(n = 3)$.	418
Perceived benefits of full-time work: Own Well-Being	Survey IV	Answer to the following question: if you went from not working at all to working full time, would your own well-being improve, stay the same or get worse?	1 (worsen), 2 (stay the same) or 3 (improve)	Missing if the mother did not answer this question $(n = 3)$.	448
Perceived benefits of full-time work: Social Prestige	Survey IV	Answer to the following question: if you went from not working at all to working full time, would your social prestige improve, stay the same or get worse?	1 (worsen), 2 (stay the same) or 3 (improve)	Missing if the mother did not answer this question $(n = 4)$.	447
Perceived barriers to employ- ment: Salary	Survey IV	Answer to the following question: what problems do you think mothers of young children encounter when looking for a job: salary is too low?	1 (fully applies) to 6 (does not apply at all)	Missing if the mother did not answer this question $(n = 1)$.	450
Perceived barriers to employ- ment: Unsuitable Working Hours	Survey IV	Answer to the following question: what problems do you think mothers of young children encounter when looking for a job: working hours are not suitable?	1 (fully applies) to 6 (does not apply at all)	Missing if the mother did not answer this question $(n = 2)$.	449

Table B1: Variable Definitions

(continued on next page)

Table B1: Continued

Perceived harries to employ ment Lang Communo Survey IV Answer to the following question: what problems do you think ment Manufacted Qualification I (10) a papies Ministry if the mather did not and a papie at all or (10) a papies Perceived harries to employ ment Manufacted Qualification Survey IV Answer to the following question: what problems do you think ment Manufacted Qualification I (10) a papies Ministry if the mather did not and a papie at all or (10) a papies Perceived harries to employ ment Lake Colla Cure Survey IV Answer to the following question: what problems do you think in motions of young childrare encounter when looking for a job. in or (11) and in the papee at all or (10) a papee at all or (10) a papee at all or enclassing papee at all or (10) a papee at all or enclassing papee at all or (10) a papee at all or enclassing papee at all or enclassing papee at all enclassing papee at all or enclassing papee at all papee at all papee at all or enclassing papee at all all or enclassing papee at all all papee at all all		Survey Wave	Definition (2)	Values (3)	Missings (4)	N (5)
Perceived barries to employ Survey IV Answer to the following question: what problems do you think 1 (fully apple) Mixing if the mother did not and apply at ally apply and apply at ally aply	Perceived barriers to employ- ment: Long Commutes	Survey IV	Answer to the following question: what problems do you think mothers of young children encounter when looking for a job: long	1 (fully applies) to 6 (does not	Missing if the mother did not answer this question $(n = 2)$.	449
Previous harries to employ. Survey IV Intensing quantuminant, questions what problems do you him, and the previous harries to employ. Survey IV Answer to the following question: what problems do you him, and the question (n = 1), and the question (n = 2), apply at all to the following question: what problems do you him, and the question (n = 2), apply at all to the following question: what problems do you him, and the question (n = 2), apply at all to the question (n = 2). Massing the nonber did not and the question (n = 2), apply at all to the question (n = 2). Control variables Preveption about nonbers in the guestion (n = 1), how many mothers agree with the following question:. To how many hours per with the following question:. To how many hours per with the following question. To how many hours per question (n = 1), how many mothers agree with the following question. To how many hours per question, and nor work. 0 er 1 Matter is the following question. To how many hours per question, and the question, and the mean (n = 7), question (n = 1), how many mothers agree with the following question. To how many hours per question, and the question, and the question, and the question, and the mean (n = 1), how many mothers agree with the mean (n = 1), and the mean (n = 1), how many mothers agree qualification of one the question of the mother of means (n = 1), how many mothers agree qualification of the mean (n = 1), how many mothers agree with the mean (n = 1), how the many question (n = 1), how the many question (n = 1), how the question (n = 1), how the many question (n = 1), how the mean (n = 1), how the many question (n = 1), how the mean (n = 1), how the many question (n = 1), how the mean (n = 1), how the mean (n = 1), how the many question (n = 1), how the mean	Perceived barriers to employ- ment: Mismatched Qualification	Survey IV	commutes? Answer to the following question: what problems do you think mothers of young children encounter when looking for a job:	apply at all) 1 (fully applies) to 6 (does not	Missing if the mother did not an- swer this question $(n = 2)$.	449
precise lawners to employ. Survey IV Answer to the following question: what problems to you that, mothers of young children nouncer when looking for a job. 1 (fully applies). wee this question (n = 2). Caural variable Preception about mothers in the mothers of young children nouncer when looking for a job. 0.00 - 4 Preception about mothers in the studiad out overk Survey IV Answer to the following question: Do you gave with the following statement? Mothers with children below the age of 3 should not work 0 = 1 Missing for 40 mothers, 43 did not participate in the first survey age of 3 should not work Mother's with children below the age of 2 should not work Survey IV The answer to the following question: To how many hours your working mothers are into following duestion. 0 = 1 Missing for 40 mothers, 43 did not participate in the first survey due of should not work Mother's working loous (01 fnot working) Survey IV Age of mother in years. 21 - 46 Values for missing mothers are in 10,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,	Perceived barriers to employ- ment: Lack of Child Care	Survey IV	Answer to the following question: what problems do you think mothers of young children encounter when looking for a job: lack of child care?	1 (fully applies) to 6 (does not apply at all)	Missing if the mother did not answer this question $(n = 1)$.	450
Control Perception about moders in the survey IV answer to the following question: What is your estimate, out of the survey is dual not work with children below the age of 3 should not work.	Perceived barriers to employ- ment: Insufficient Job Flexibil- ity	Survey IV	Answer to the following question: what problems do you think mothers of young children encounter when looking for a job: in- sufficient job flexibility?	1 (fully applies) to 6 (does not apply at all)	Missing if the mother did not answer this question $(n = 2)$.	449
Agreement to the statement: Survey IV The answer to the following question: Do you agree with the difference with children below the age of 3 should not work Mothers with children below the age of 3 should not work Missing for 46 mothers, 43 did 4 Mothers' working hours (0) f not working) Survey IV The answer to the following question: To how many hours per week amounts your working time as provided by your contract? 034 Walkes for missing mothers are 4 imputed with the median answer. Age of nother (in years) Survey IV Age of nother in years. 21 -46 Values for missing mothers are 4 imputed with the median (n = 7). Age of child (in month) Survey IV Age of child in months. 29 - 42 - 4 Household income Survey IV Age of child in months. 29 - 42 - 4 Mother has younger child (in Survey IV Age of thild in months. 0 or 1 - 4 Age of younger child (in Survey IV Mother is regnant at the im of the interview. 0 or 1 - - Mother is pregnant Survey IV Mother is the main cargiver. 0 or 1 - - Mother is pregnant Survey IV Mother is the main cargiver. 0 or 1 -	Control variables Perception about mothers in the own city agreeing to <i>Mothers</i> <i>with children below the age of 3</i> <i>should not work</i>	Survey IV	Answer to the following question: What is your estimate, out of 100 mothers with approximately 2-3 year old children in [city] how many mothers agree with the following statement? <i>Mothers with children below the age of 3 should not work</i>	0-100	-	451
Moders' working hours (0 if not working)Survey IV The answer to the following question: To how many hours per (0 if not working)0 - 84Values for missing mothers are imputed with the mean $(n = 7)$.Age of mother (in years)Survey IVAge of mother in years.21 - 46Values for missing mothers are 10,Age of child (in months)Survey IVAge of child in months.29 - 42Age of child (in months)Survey IVNet monthly household income.75 - 18.000Values for missing mothers are imputed with the mean $(n = 1)^{1/3}$.Household incomeSurvey IVNet monthly household income.75 - 18.000Values for missing mothers are imputed with the mean $(n = 1)^{1/3}$.Mother has younger child Age of younger child (in months)Survey IVMother has a younger child na months.0 or 1Mother is pregnant months'Survey IVMother is a group child (in months.0 or 14Age of this younger child in months.0 or 14Age of his younger child in months.0 or 14Age of his younger child in months.0 or 14Age of his younger child (in months' survey IVNother is pregnant at the time of the interview.0 or 1Mother is pregnant faither size worksSurvey IVPather is pregnant at the time of the interview.0 or 1Family participated in previous interventionSurvey IIIndicator of the the mother working. If this information is	Agreement to the statement: Mothers with children below the age of 3 should not work	Survey III	The answer to the following question: Do you agree with the following statement? Mothers with children below the age of 3 should not work	0 or 1	Missing for 46 mothers, 43 did not participate in the first survey and 3 did not answer the ques- tion. Missing mothers are im- puted with the median answer.	451
Age of mother (in years)Survey IVAge of mother in years.21 - 46Values for missing mothers are 4Age of child (in months)Survey IVAge of child in months. $29 - 42$ -4Mother has no college entranceSurvey IVAge of child in months. $29 - 42$ -4Age of child in comeSurvey IVNet monthy household income. $75 - 18.000$ Values for missing mothers are 4Mother has younger childSurvey IVMother has a younger child in months. $0 - 31$ -Mother has younger child (in Survey IVMother has a younger child in months. $0 - 32$ Values for missing mothers are 4Mother is maincarerSurvey IVMother is neganat at the time of the interview. 0 or 1 -4Mother is maincarerSurvey IVMother is the main caregiver. 0 or 1 -4Father is involved in child careSurvey IVMother is the main caregiver. 0 or 1 -4Father is involved in child careSurvey IVFandir participated in previous intervention related to the access. 0 or 1 -4Mother worksSurvey IIIndicator of the the mother working. If this information is miss. ing we use information bouch the pre-birth working status. 0 or 1 -4Mother worksSurvey IIIndicator of the the mother working. If this information is miss. ing we use information bouch they are shall and work in the first survey (in $= 43$) or did not answered the survey. So the information refers to him ingritoin background. 0 or 1 -<	Mothers' working hours (0 if not working)	Survey IV	The answer to the following question: To how many hours per week amounts your working time as provided by your contract? (0 if not working)	0 - 84	Values for missing mothers are imputed with the mean $(n = 7)$.	451
Age of child (in months) Survey IV Age of child in months. 29 - 42 - - 4 Mother has no college entrance degree Survey IV Net monthly household income. 0 or 1 - - 4 Household income Survey IV Net monthly household income. 75 - 18.000 Values for missing mothers are 4 imputed with the mean (n = 14). - - 4 Mother has younger child (in months) Survey IV Mother has a younger child han the three-year old. 0 or 1 - - 4 Age of younger child (in months) Survey IV Mother is pregnant at the time of the interview. 0 or 1 - - 4 Mother is maincarer Survey IV Mother is pregnant at least one hour per week care of the child (without the mother). 0 or 1 - - 4 Father is involved in child care Survey IV Mother is the main caregiver. 0 or 1 - - 4 Father is involved in child care Survey IV Mother is the main caregiver. 0 or 1 - - 4 Mother kir surverse Survey II Indicator of the mother working. If this information is miss. ing. we use information about the pre-birth working status.	Age of mother (in years)	Survey IV	Age of mother in years.	21 - 46	Values for missing mothers are imputed with the mean $(n = 15)$.	451
Moher has no college entrance degree Survey I Indicator of mothers having no college entrance qualification ("Abitur"). 0 or 1 - 4 Household income Survey IV Net monthly household income. 75 - 18.000 Values for missing mothers are imputed with the mean (n = 2). 4 Mother has younger child (in months) Survey IV Mother has a younger child in months. 0 -32 Values for missing mothers are imputed with the mean (n = 2). Mother is pregnant Survey IV Mother is mean caregiver. 0 or 1 - 4 Mother is insincarer Survey IV Mother is the main caregiver. 0 or 1 - 4 Father is involved in child care Survey IV Father takes at least one hour per week care of the child (without the mother). 0 or 1 - - 4 Mother works Survey II Father takes at least one hour per week care of the child (without the child care. 0 or 1 - - 4 Mother works Survey III Indicator of the the mother working. If this information is miss- ing, we use information about the pre-birth working status. 0 or 1 - - - 4 Migration background Survey II Indicator of the the mother not being born in Germany. In 14 </td <td>Age of child (in months)</td> <td>Survey IV</td> <td>Age of child in months.</td> <td>29 - 42</td> <td>-</td> <td>451</td>	Age of child (in months)	Survey IV	Age of child in months.	29 - 42	-	451
Household incomeSurvey IVNet monthly household income. $75 \cdot 18.000$ Values for missing mothers are 4 imputed with the mean $(n = 1)4$.Mother has younger childSurvey IVMother has a younger child than the three-year old.0 or 1-4Age of younger child (in months)Survey IVMother is pregnant at the time of the interview.0 or 1-4Mother is maincarerSurvey IVMother is the main caregiver.0 or 1-4Father is involved in child careSurvey IVFather takes at least one hour per week care of the child (without the mother).0 or 1-4Father is involved in child careSurvey IVFamily participated in previous intervention related to the access to to thild care.0 or 1-4Mother is the main caregiver.0 or 14Strata variablesIndicator of the the mother working. If this information is miss- ing, we use information about the pre-birth working status.0 or 1-4Migration backgroundSurvey IIIndicator of the the mother noteing born in Germany. In 14 to shis migration background background0 or 1-4OverestimatorSurvey IIIndicator of the the mother notes overestimates the share of value, resulting in eight more mothers overestimating the conser- value meet of 3 should not work in the first survey. ($n = 43$) or did not answer this quarticipate in the first survey ($n = 43$) or did not answer this quarticipate in the first survey ($n = 43$) or did not answer this quarticipate in the first survey ($n = 43$) or did not answer this quarticipate	Mother has no college entrance degree	Survey I	Indicator of mothers having no college entrance qualification ("Abitur").	0 or 1	-	451
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Age of younger child (in months)Survey IV (months)Age of this younger child in months. $0-32$ Values for missing mothers are 4 imputed with the mean $(n = 2)$.Mother is pregnant Mother is pregnantSurvey IV (mother is involved in child careMother is pregnant at the time of the interview. $0 \text{ or } 1$ $ 4$ Mother is pregnant Father takes at least one hour per week care of the child (without intervention $0 \text{ or } 1$ $ 4$ Father takes at least one hour per week care of the child (without intervention $0 \text{ or } 1$ $ 4$ Mother worksSurvey IIFamily participated in previous intervention related to the access to child care. $0 \text{ or } 1$ $ 4$ Migration backgroundSurvey IIIndicator of the the mother not being born in Germany. $1 \text{ In } 0 \text{ or } 1$ $ 4$ City A (B)Survey IIIndicator of the the mother vorkes in gravion background.Survey IIIndicator of the the mother fiving in city A (B) $0 \text{ or } 1$ $ 4$ OverestimatorSurvey IIIIndicator of the the mother overestimates the share of the age of 0.5 did around the true value, resulting in eight more mothers overestimating the conser- valuemess around them. $ 4$ Further variablesSurvey IIMother has no partner. Dummy equal to one if the mother on being born in Germany. $0 \text{ or } 1$ $ 4$ Missing if fact answer file ualve, resulting in eight more mothers overestimating the conser- valiveness around them. $ 4$ Further variablesSurvey I <td>Mother has younger child</td> <td>Survey IV</td> <td>Mother has a younger child than the three-year old.</td> <td>0 or 1</td> <td>-</td> <td>451</td>	Mother has younger child	Survey IV	Mother has a younger child than the three-year old.	0 or 1	-	451
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Mother is maincarerSurvey IMother is the main caregiver.0 or 1-4Father is involved in child careSurvey IVFather takes at least one hour per week care of the child (without the mother).0 or 1-4Family participated in previous interventionSurvey IIFamily participated in previous intervention related to the access to child care.0 or 1-4Strata variables4Migration backgroundSurvey IIIndicator of the the mother working. If this information is miss- ing, we use information about the pre-birth working status.0 or 14Migration backgroundSurvey IIIndicator of the the mother not being born in Germany. In 14 overestimator0 or 14OverestimatorSurvey IIIDummy equal to one if the mother overestimates the share of output one the mother in her city agreeing with the statement Mothers with chil- ing for a range of 0.5 st daround the true vativeness around them.0 or 14Further variables44Single (Figure 1)Survey IVMother has no partner. Indicator of full-time employment in the year before the child was born.0 or 14Age child > Mother full-time, pre- birth (Figure 1)Survey IVMother has no partner. Indicator of full-time employment in the year before the child was born.0 or 14Strate44-4Strate <td< td=""><td>Mother is pregnant</td><td>Survey IV</td><td>Mother is pregnant at the time of the interview.</td><td>0 or 1</td><td>-</td><td>451</td></td<>	Mother is pregnant	Survey IV	Mother is pregnant at the time of the interview.	0 or 1	-	451
Father is involved in child careSurvey IVFather takes at least one hour per week care of the child (without the mother).0 or 1-4Family participated in previous interventionSurvey IFamily participated in previous intervention related to the access to child care.0 or 1-4Strata variablesSurvey IIIndicator of the the mother working. If this information is miss- ing, we use information about the pre-birth working status.0 or 14Migration backgroundSurvey IIndicator of the the mother not being born in Germany. In 14 cases the father answered the survey, so the information refers to his migration background.0 or 14City A (B)Survey IIIndicator of the the mother rowerstimates the share of mothers in her city agarceing with the statement Mothers with chil- mothers with child care0 or 14OverestimatorSurvey IVIndicator of full-time mother overstimating the conser- vativeness around them.0 or 14Further variablesSurvey IVMother has no partner. to range of 0.5 std around the true value, resulting in eight more mothers overstimating the conser- vativeness around them.0 or 14Mother Worked full-time, pre- birth (Figure 1)Survey IVMother has no partner. Lid is older than the median age. born.0 or 14Mother Worked full-time, pre- birth (Figure 1)Survey IVIndicator of the the mother not being born in Germany. Dummy equal to one if the mother not being born in Germany. Du	Mother is maincarer	Survey I	Mother is the main caregiver.	0 or 1	-	451
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OverestimatorSurvey IIIDummy equal to one if the mother overestimates the share of mothers in her city agreeing with the statement Mothers with chil- dren below the age of 3 should not work in the first survey (allow- ing for a range of 0.5 std around the actual value). In our strat- ification we did not allow for a range of 0.5 std around the true value, resulting in eight more mothers overestimating the conser- vativeness around them.Missing if the mother did not participate in the first survey (n = 43) or did not answer this question (n = 2).Further variablesSurvey IVMother has no partner. Indicator of full-time employment in the year before the child was born.0 or 1-4Mother worked full-time, pre- birth (Figure 1)Survey IVIndicator of the the mother not being born in Germany. one hour per week.0 or 1-4Slot in child careSurvey IVDummy equal to one if the child visits a child care center at leas one hour per week.0 or 14Mother with a liberal back- Survey IIIDummy equal to one if the mother of the mo	City A (B)	Survey I	Indicator of the the mother living in city A (B)	0 or 1	-	451
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1) vey I (n = 14). Slot in child care Survey IV Dummy equal to one if the child visits a child care center at least 0 or 1 one hour per week. - 4 Mother with a liberal back- Survey III Dummy equal to one if the mother of the mother worked full-time 0 or 1 This information is missing for 4	birth (Figure 1) Migration background (Figure	Survey I	born. Indicator of the the mother not being born in Germany.	0 or 1	Missing if father answered sur-	437
One hour per week. Mother with a liberal back- Survey III Dummy equal to one if the mother of the mother worked full-time 0 or 1 This information is missing for 4	1) Slot in child care	Survey IV	Dummy equal to one if the child visits a child care center at least	0 or 1	vey I ($n = 14$).	451
ground when she was 15 years old. mothers who did not participate in the first survey $(n = 44)$ or who did not answer the question $(n = 5)$, we code these mothers	Mother with a liberal back- ground	Survey III	one hour per week. Dummy equal to one if the mother of the mother worked full-time when she was 15 years old.	0 or 1	This information is missing for mothers who did not participate in the first survey $(n = 44)$ or who did not answer the question (n = 5), we code these mothers	451

Appendix C. Further Results



Figure C1: Correlates of Gender Attitudes (First Survey) and Labor-Market Participation (Second Survey)

Notes: Figure shows correlations between mothers' own gender attitudes in the first survey and their realized labormarket outcomes in the second survey, conducted about nine months later. The left (right) part of the figure shows the correlations with working in general (working full-time, i.e., working hours ≥ 30). Note that agreement with statements 1, 3, and 6, and disagreement with statements 2, 4, 5, and 7 indicate conservative attitudes. The dark gray circles represent bivariate correlations between the gender attitude of interest and the realized labor-market outcome, while the light gray diamonds represent multivariate correlations that account for all other gender attitudes as controls. Horizontal lines indicate the 95% confidence interval.

	Share agreeing		greeing Perception of agree	
	Analytical sample (1)	First survey (2)	Analytical sample (3)	First survey (4)
1. Mothers with children below the age of 3 should not work (1: Conservative)	0.17	0.18	0.40	0.40
2. Mothers and fathers should divide the housework equally (0: Cons.)	0.86	0.86	0.69	0.69
3. A woman should earn at most as much as her partner (1: Cons.)	0.12	0.13	0.29	0.30
4. Mothers and fathers should equally share caring obligations for the child (0: Cons.)	0.79	0.79	0.69	0.70
5. Fathers with children below the age of 3 should work at most part-time (0: Cons.)	0.21	0.22	0.27	0.28
6. Mothers with children below the age of 3 should work at most part-time (1: Cons.)	0.63	0.65	0.59	0.59
7. Fathers with children below the age of 3 should not work (0: Cons.)	0.03	0.03	0.18	0.18

Table C1: Comparison of Analytical Sample and Full Sample From First Survey

Notes: Table shows mothers' own gender attitudes and perceptions of other mothers' attitudes towards seven statements regarding gender roles. Column (1) shows the share of mothers agreeing to the statements in our analytical sample (n = 404 to n = 407), Column (2) in the full sample from the first survey (n = 443 to n = 445). Column (3) shows mothers' perceptions about the share of other mothers agreeing with the statement in our analytical sample (n = 404 to n = 404 to n = 406), Column (4) in the full sample from the first survey (n = 441 to n = 444).



Figure C2: Stability in Attitudes Over Time (Statement 3 and 4)

Notes: Figure illustrates the stability of attitudes between the first and second survey regarding the statements: A woman should earn at most as much as her partner and Mothers and fathers should equally share caring obligations for the child. The front-right and back-left bars represent the percentage of mothers whose attitudes remained stable across the two surveys. The back-right bar shows mothers who shifted from a conservative attitude in the first survey to a liberal one in the second, while the front-left bar indicates those who moved from a liberal to a conservative attitude.

	Perceptions about				
	Friends an ag Mothers with age of 3 s	d Acquaintances reeing to children below the hould not work	Women in agree When a mo her child	Germany ing to ther works, ren suffer	
	(1)	(2)	(3)	(4)	
Treatment	-7.767***	-9.376***	-8.540***	-9.407***	
	(2.070)	(2.504)	(2.003)	(2.323)	
\times Perception Not Too Conservative		5.789		3.281	
		(4.092)		(4.692)	
Perception Not Too Conservative		1.156		-0.533	
-		(3.924)		(4.142)	
Pre-Treatment Outcome	Yes	Yes	Yes	Yes	
Strata Controls	Yes	Yes	Yes	Yes	
Sociodemographic Controls	Yes	Yes	Yes	Yes	
Treatment Effect For:					
Perception Not Too Conservative		-3.587		-6.127	
		(3.37)		(4.05)	
Control Means:					
Full Sample	29.013		37.533		
Perception Not Too Conservative		17.103		30.603	
Perception Too Conservative		33.053		39.883	
N	451	451	451	451	

Table C2: Treatment Effect on Mothers' Perceptions for Overestimators

Notes: Table shows intention-to-treat effects on maternal perceptions of gender norms, all models are estimated by OLS. While Columns (1) and (3) show the average effect on perceptions (as Columns (1) and (2) in Table 3), Columns (2) and (4) show treatment effects interacted with a dummy for overestimating the conservativeness in their environment in the second survey. All models include strata fixed effects and sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are also included. *Control Means* are the means of the outcome in the control group in the different sample specifications used. *Full sample* depicts the mean of the outcome in the control group. *Perception (Not) Too Conservative* is the mean of the outcome in the control group. *Note:* The conservative of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the mean of the outcome. *Perception (Not) Too Conservative* is the perception (Not) to the outcome in the control group is the perception (Not) to the outcome in the control group is the perception (Not) to the outcome in the perceptication (Not) to t

Average EffectEffect for: Perception Too ConservativeEffect for: Moderate Attitudes(1)(2)(3)(4)Treatment -0.066^{+*} -0.085^{+*} -0.121^{+*} -0.127^{+} (0.033)(0.042)(0.043)(0.042)(0.045)(0.065)× Perception Not Too Conservative 0.072 (0.048)(0.065)× Confident About Perception 0.100 (0.069)(0.080)× Liberal or Conservative 0.007 (0.060)(0.080)Perception Not Too Conservative 0.007 (0.067)(0.080)Confident About Perception -0.067 (0.061)(0.061)Pre-Treatment OutcomeYesYesYesYesSociodemographic ControlsYesYesYesYesTreatment Effect For: Perception Not Too Conservative -0.013 (0.047) -0.021 (0.048) -0.008 (0.044)Confident About Perception 0.27 -0.021 (0.048) -0.008 (0.044) -0.008 (0.044)Confident About Perception 0.27 -0.021 (0.048) -0.008 (0.044)Confident About Perception 0.27 -0.021 (0.048) -0.008 (0.044)Liberal or Conservative Attitudes 0.086 0.260 0.209 Perception Not Too Conservative/ L		Do you agree with the following statement: Mothers with children below the age of 3 should not work				
(1) (2) (3) (4) Treatment -0.066** -0.085** -0.121** -0.127* (0.033) (0.042) (0.048) (0.065) × Perception Not Too Conservative (0.063) (0.063) × Confident About Perception 0.072 (0.063) × Liberal or Conservative Attitudes 0.100 (0.069) Perception Not Too Conservative -0.007 (0.060) Confident About Perception -0.067 (0.050) Liberal or Conservative Attitudes -0.067 (0.061) Pre-treatment Outcome Yes Yes Yes Yes Yes Yes Yes Yes Treatment Effect For: Perception -0.021 (0.048) Liberal or Conservative Attitudes -0.013 (0.044) -0.008 Confident About Perception -0.021 (0.044) -0.008 Liberal or Conservative Attitudes 0.026 0.209 -0.021 Confident About Perception -0.021 (0.044) -0.008 Confident About		Average Effect	Effect for: Perception Too Conservative	Effect for: Little Confidence About Perception	Effect for: Mothers with Moderate Attitudes	
Treatment -0.066^{**} -0.085^{**} -0.121^{**} -0.127^{*} (0.033) (0.042) (0.048) (0.065) × Perception Not Too Conservative 0.072 (0.063) × Confident About Perception 0.100 (0.069) × Liberal or Conservative Attitudes 0.007 (0.080) Perception Not Too Conservative -0.007 (0.080) Perception Not Too Conservative -0.007 (0.080) Confident About Perception -0.067 (0.061) Pre-Treatment Outcome Yes Yes Yes Strata Controls Yes Yes Yes Yes Strata Controls Yes Yes Yes Yes Treatment Effect For: Perception Not Too Conservative -0.013 (0.047) Confident About Perception -0.021 (0.044) (0.044) Confident About Perception -0.021 (0.044) (0.044) Confident About Perception -0.021 (0.044) (0.044) Confident About Perception/ (0.047) -0.008 (0.044) (0.044) (0.044) (0.044)<		(1)	(2)	(3)	(4)	
$(0.033) (0.042) \qquad (0.048) \qquad (0.065)$ $\times Perception Not Too Conservative (0.063) \qquad (0.063)$ $\times Confident About Perception (0.069) \qquad (0.069)$ $\times Liberal or Conservative Attitudes (0.060) \qquad (0.080)$ Perception Not Too Conservative (0.060) (0.081) (0.081) (0.081) (0.081) (0.081) (0.081) (0.081) (0.081) (0.081) (0.081) (0.081) (0.081) (0.081) (0.081) (0.081) (0.047) (0.047) (0.047) (0.047) (0.047) (0.048) (0.047) (0.048) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.047) (0.048) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.047) (0.048) (0.044) (0.044) (0.047) (0.048) (0.044) (0.044) (0.047) (0.048) (0.044) (0.044) (0.048) (0.044	Treatment	-0.066**	-0.085**	-0.121**	-0.127*	
× Confident About Perception 0.100 (0.069) × Liberal or Conservative Attitudes 0.119 (0.080) Perception Not Too Conservative -0.007 (0.060) Confident About Perception -0.067 (0.050) Liberal or Conservative Attitudes -0.067 (0.050) Liberal or Conservative Attitudes -0.080 (0.061) Pre-Treatment Outcome Yes Yes Yes Strata Controls Yes Yes Yes Strata Controls Yes Yes Yes Treatment Effect For: -0.013 (0.047) -0.021 (0.048) -0.008 (0.044) Confident About Perception -0.021 (0.044) -0.008 (0.044) -0.008 (0.044) Control Means: -0.27 -0.021 (0.044) -0.008 (0.044) Full Sample 0.27 -0.201 -0.029 Perception Not Too Conservative/ -0.086 0.260 0.209 Perception Too Conservative/ 0.086 0.260 0.209 Perception Too Conservative/ -0.327 0.274 0.319 Noderate Attitudes 0.327 0.274 0.319	\times Perception Not Too Conservative	(0.033)	(0.042) 0.072 (0.063)	(0.048)	(0.065)	
$ \begin{tabular}{ c c c } $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$$	\times Confident About Perception		(0.000)	0.100 (0.069)		
Perception Not Too Conservative -0.007 (0.060) Confident About Perception -0.067 (0.050) Liberal or Conservative Attitudes -0.080 (0.061) Pre-Treatment Outcome Yes Yes Strata Controls Yes Yes Sociodemographic Controls Yes Yes Treatment Effect For: -0.013 (0.047) -0.021 (0.048) Confident About Perception -0.013 (0.044) -0.008 (0.044) Control Means: -0.27 -0.008 Full Sample 0.27 -0.086 Perception Not Too Conservative/ 0.086 0.260 Control Means: 0.086 0.260 0.209 Perception Too Conservative/ 0.086 0.260 0.209	\times Liberal or Conservative Attitudes				0.119 (0.080)	
Confident About Perception -0.067 (0.050) Liberal or Conservative Attitudes -0.080 (0.061) Pre-Treatment Outcome Yes Yes Yes Strata Controls Yes Yes Yes Yes Sociodemographic Controls Yes Yes Yes Yes <i>Treatment Effect For:</i> -0.013 (0.047) -0.021 (0.048) -0.021 Confident About Perception -0.021 (0.048) -0.008 (0.044) -0.008 (0.044) Control Means: -0.27 -0.086 0.260 0.209 Perception Not Too Conservative/ 0.086 0.260 0.209 Perception Not Too Conservative/ 0.327 0.274 0.319	Perception Not Too Conservative		-0.007 (0.060)			
Liberal or Conservative Attitudes -0.080 (0.061) Pre-Treatment Outcome Yes	Confident About Perception		()	-0.067 (0.050)		
Pre-Treatment Outcome Yes Yes Yes Yes Strata Controls Yes Yes Yes Yes Sociodemographic Controls Yes Yes Yes Yes Treatment Effect For: -0.013 -0.021 -0.021 Perception Not Too Conservative -0.047) -0.021 -0.008 Confident About Perception -0.013 -0.008 -0.008 Liberal or Conservative Attitudes -0.27 -0.021 -0.008 Control Means: 0.27 - - Full Sample 0.27 - - Perception Too Conservative/ 0.086 0.260 0.209 Perception Too Conservative/ - - - Confident About Perception/ - - - Liberal or Conservative/ 0.260 0.209 - Perception Not Too Conservative/ - - - Confident About Perception/ - - - Liberal or Conservative/ - - - Confident About Perception/ - - - Liberal or Conservative/ - - - Little Confidence About Perception/ - - -	Liberal or Conservative Attitudes				-0.080 (0.061)	
Strata Controls Yes Yes Yes Yes Yes Sociodemographic Controls Yes Yes Yes Yes Treatment Effect For: -0.013 -0.013 Perception Not Too Conservative -0.013 (0.047) Confident About Perception -0.021 (0.048) Liberal or Conservative Attitudes -0.008 (0.044) Control Means: -0.27 -0.026 Full Sample 0.27 -0.086 0.260 Perception Not Too Conservative/ 0.086 0.260 0.209 Perception Too Conservative/ 0.327 0.274 0.319	Pre-Treatment Outcome	Yes	Yes	Yes	Yes	
Sociodemographic Controls Yes Yes Yes Treatment Effect For: -0.013 Perception Not Too Conservative -0.013 (0.047) -0.021 Confident About Perception -0.021 (0.048) (0.048) Liberal or Conservative Attitudes -0.008 Control Means: -0.027 Full Sample 0.27 Perception Not Too Conservative/ 0.086 Confident About Perception/ 0.086 Liberal or Conservative/ 0.086 Confident About Perception/ 0.260 Liberal or Conservative/ 0.086 Confident About Perception/ 0.086 Liberal or Conservative/ 0.0327 Output 0.327 0.274	Strata Controls	Yes	Yes	Yes	Yes	
Treatment Effect For: -0.013 Perception Not Too Conservative -0.013 (0.047) -0.021 Confident About Perception -0.021 Liberal or Conservative Attitudes -0.008 Control Means: -0.027 Full Sample 0.27 Perception Not Too Conservative/ 0.086 Confident About Perception/ Liberal or Conservative/ Liberal or Conservative/ 0.086 Confident About Perception/ Liberal or Conservative/ Liberal or Conservative/ 0.086 Moderate Attitudes 0.327 Number Of Conservative/ 0.319	Sociodemographic Controls	Yes	Yes	Yes	Yes	
Perception Not Too Conservative -0.013 (0.047) Confident About Perception -0.021 (0.048) Liberal or Conservative Attitudes -0.008 (0.044) Control Means: -0.021 (0.044) Full Sample 0.27 Perception Not Too Conservative/ 0.260 Confident About Perception/ 0.086 Liberal or Conservative/ 0.086 Liberal or Conservative/ 0.209 Perception Too Conservative/ 0.327 Little Confidence About Perception/ 0.327 Moderate Attitudes 0.327 0.274 No 451 451 451	Treatment Effect For:					
Confident About Perception -0.021 (0.048) Liberal or Conservative Attitudes -0.008 (0.044) Control Means: -0.021 (0.044) Full Sample 0.27 Perception Not Too Conservative/ Confident About Perception/ Liberal or Conservative Attitudes 0.086 0.260 0.209 Perception Too Conservative/ Little Confidence About Perception/ Moderate Attitudes 0.327 0.274 0.319	Perception Not Too Conservative		-0.013 (0.047)			
Liberal or Conservative Attitudes -0.008 (0.044) Control Means: Full Sample 0.27 Perception Not Too Conservative/ Confident About Perception/ Liberal or Conservative Attitudes 0.086 0.260 0.209 Perception Too Conservative/ Little Confidence About Perception/ Moderate Attitudes 0.327 0.274 0.319	Confident About Perception			-0.021 (0.048)		
Control Means: Full Sample 0.27 Perception Not Too Conservative/ Confident About Perception/ Liberal or Conservative/ Little Confidence About Perception/ Moderate Attitudes 0.327 0.274 0.319	Liberal or Conservative Attitudes				-0.008 (0.044)	
Perception Not Too Conservative/ Confident About Perception/ Liberal or Conservative Attitudes 0.086 0.260 0.209 Perception Too Conservative/ Little Confidence About Perception/ Moderate Attitudes 0.327 0.274 0.319	Control Means: Full Sample	0.27				
Perception Too Conservative/ Little Confidence About Perception/ Moderate Attitudes 0.327 0.274 0.319	Perception Not Too Conservative/ Confident About Perception/ Liberal or Conservative Attitudes		0.086	0.260	0.209	
Information 0.527 0.274 0.519	Perception Too Conservative/ Little Confidence About Perception/ Moderate Attitudes		0 227	0.274	0.310	
	N	451	451	451	407	

Table C3: Treatment Effect on Mothers' Own Attitudes

Notes: Table shows the intention-to-treat effects on mothers' agreement to the statement: *Mothers with children under the age of 3 should not work*, all models are estimated by OLS. While the first Column (1) shows the average effect, the next three Columns (2, 3, and 4) show heterogeneous treatment effects for different subgroups estimated by using models with interaction terms. Column (2) reports heterogeneity based on whether the mother overestimates the conservativeness in her environment in the second survey (results are similar when using the overestimators from the first survey). Column (3) reports heterogeneity based on whether the mother has little confidence about her pre-treatment perception. Column (4) reports heterogeneity based on whether the mother has moderate pre-treatment attitudes. All models include strata fixed effects and sociodemographic controls (see Section 5.5 for details). Inputation dummies for missing values in control variables are also included. *Control Means* are the means of the outcome in the control group in the different sample specifications used. *Perception Not Too Conservative/ Confident About Perception/ Liberal or Conservative Attitudes* is the mean of the outcome in the control group for mothers who do not overestimate the conservative/ *Little Confidence About Perception/ Moderate Attitudes* is the mean of the outcome in the control group for mothers who do not ograph for mothers who overestimate the conservative/ *Little Confidence About Perception/ Moderate Attitudes* is the mean of the outcome in the control group for mothers who done the renerting of mothers who overestimate the conservative/ *Little Confidence About Perception/ Moderate Attitudes* is the mean of the outcome in the control group for mothers who overestimate the conservative/ *Little Confidence About Perceptio*

	Increase in V	Working Hours	
	Second Stage		
	(1)	(2)	
Perceptions of Friends and Acquaintances	-0.010		
	(0.007)		
Perceptions of Women in Germany		-0.009	
		(0.005)	
Strata Controls	Yes	Yes	
Sociodemographic Controls	Yes	Yes	
Instrument	Treatment	Treatment	
F-Value (First Stage)	12.89	17.47	
N	450	450	

Table C4: Instrumental Variable Regression: Labor-Market Expectations

Notes: This table reports estimates from an instrumental variable (IV) regression, where the treatment serves as an instrument for mothers' perceptions to assess their impact on labor-market expectations. In Column (1) perceptions of mothers' friends and acquaintances are instrumented, while in Column (2) perceptions of women in Germany are instrumented. All models include strata fixed effects and sociode-mographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are also included. *F-Value* shows the F-Value of the first stage of the instrument (treatment). Robust standard errors in parentheses. * p < .10, ** p < .05, *** p < .01.

	Increase in Working Hours			
	Overall Effect (1)	Employed (2)		
Treatment	0.074*	0.098*		
	(0.044)	(0.058)		
Treatment \times Not Employed		-0.055		
		(0.089)		
Not Employed		0.411***		
		(0.079)		
Pre-Treatment Outcome	Yes	Yes		
Strata Controls	Yes	Yes		
Sociodemographic Controls	Yes	Yes		
Treatment Effect for		0.043		
Not Employed		(0.065)		
Control Mean	0.402			
Control Mean Not Employed		0.625		
Control Mean Employed		0.216		
N	450	450		

Table C5: Treatment Effect on Labor-Market Expectations: Extensive and Intensive Margin

Notes: Table shows intention-to-treat effects on maternal labormarket expectations, all models are estimated by OLS. In Columns (1) and (2), the outcome variable is a dummy equal to one if the mother plans to increase her current working hours in the following year (either from zero to a positive value or by increasing to a higher value). While the first Column (1) shows the average effect, the second Column (2) shows heterogeneous treatment effects by the mother's employment status. All models include strata fixed effects and sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are also included. *Control Mean* is the mean of the outcome in the control group. *Control Mean (Not) Employed* is the mean of the outcome in the control group for (not) employed mothers. Robust standard errors in parentheses. * p < .10, ** p < .05, *** p < .01.

	Increase in Working Hours			
	Overestimators	Slot in Child Care	Father Involved in Child Care	Mother With Liberal Background
	(1)	(2)	(3)	(4)
Treatment	0.077	0.132**	0.164**	0.136*
	(0.052)	(0.057)	(0.067)	(0.073)
\times Perception Not Too Conservative	-0.008			
	(0.100)			
\times No Slot in Child Care		-0.147		
		(0.092)		
\times Father Not Involved in Child Care			-0.164*	
			(0.089)	
imes Mother With Conservative Background				-0.097
				(0.092)
Perception Not Too Conservative	-0.022			
	(0.088)			
No Slot in Child Care		0.012		
		(0.064)		
Father Not Involved in Child Care			0.153**	
			(0.065)	
Mother with Conservative Background				0.063
				(0.062)
Strata Controls	Yes	Yes	Yes	Yes
Sociodemographic Controls	Yes	Yes	Yes	Yes
Treatment Effect For:				
Perception Not Too Conservative	0.069			
	(0.086)			
No Slot in Child Care	(0.000)	-0.015		
		(0.071)		
Father Not Involved in Child Care		(01071)	0.000	
			(0.059)	
Mother With Conservative Background			(0.002))	0.039
Hould Will Colloc (un) Duckground				(0.056)
				(0.000)
Control Means:				
Perception Not Too Conservative/	0.270	0.510	0.500	0.400
No Child Care Slot/Father Not Involved in CC/Liberal B.	0.379	0.510	0.508	0.428
Perception Too Conservative/				
Child Care Slot/Father Involved in CC/Liberal B.	0.409	0.320	0.265	0.357
N	450	449	449	450

Table C6: Heterogeneous Treatment Effects on Labor-Market Expectations

Notes: Table shows heterogeneous treatment effects on mothers' plans for labor-market participation, all models are estimated by OLS. The outcome is a dummy variable indicating whether the mother plans to increase her working hours in the following year; this includes both transitions from not working to employment (extensive margin) and increases in working hours for mothers already employed (intensive margin). We do not have information on their current working hours for seven mothers; for six of these mothers, we use values from the first survey to impute the missing data (see Appendix Table B1). In Column (1), Overestimators equals one if the mother overestimates the conservativeness in her environment in the second survey (as in Panel (B) in Figure 4 when measuring heterogeneous effects on mothers' attitudes). In Column (2), Slot in Child Care equals one if the child spends at least one hour per week in child care. Information on whether the child is in child care is missing for one mother. In Column (3), *Father Involved in Child Care* equals one if the father provides at least one hour per week of care for the child alone. This information is missing for one mother. In Column (4), *Mother With Liberal Background* equals one if the mother's own mother worked full-time when the mother was 15 years old. Since information on a mother's liberal background was collected in the first survey, this variable is missing for mothers who did not participate in the first survey (see Appendix Table B1). To avoid losing these mothers from the analysis, we conservatively assign them a value of zero (results remain very similar when these mothers are excluded from the analysis). All models include strata fixed effects and sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are also included. Control Means are the means of the outcome in the control group in the different sample specifications used. Perception (Not) Too Conservative/(No) Child Care Slot/Father(Not) Involved In CC /Liberal Background is the mean of the outcome in the control group for mothers who do (not) overestimate the conservativeness in their environment and for mothers with(out) child care slot/ with(out) involvement of father in child care/a mother with liberal background. Robust standard errors in parentheses. * p<.10, ** p<.05, *** p<.01.



Figure C3: Treatment Effect on Labor-Market Expectations: Pre-Registered Heterogeneity Analyses

Notes: Figure shows intention-to-treat effects on mothers' plans for labor-market participation for pre-registered subgroups. All models are estimated by OLS. The outcome is a dummy variable indicating whether the mother plans to increase her working hours the following year; this includes transitions from not working to employment (extensive margin) and increases in working hours for mothers already employed (intensive margin). We do not have information on current working hours for seven mothers; for six of these mothers, we use values from the first survey to impute the missing data (see Appendix Table B1). In the first row, *Overestimators* equals one if the mother overestimates the conservativeness in her environment in the second survey (as in Panel (B) in Figure 4 when measuring heterogeneous effects on mothers' attitudes). In the second row, *No (Pre-Treatment) Agreement* to the statement *Mothers with children below the age of 3 should not work* equals one if the mother disagrees with this statement in the first survey. In the third pre-registered subgroup analysis, *University-Entrance Degree equals* one if the mother has a university entrance qualification (*Abitur*). In the fourth row, *No Migration Background* equals one if the mother is born in Germany. And the last row depicts the pre-registered analysis for employment status, *Mother Worked (Pre-Birth)* equals one if the mother worked full-time, part-time, or was self-employed before the birth of her child. All models include strata fixed effects and sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are also included. Robust standard errors in parentheses. * p < .10, ** p < .05, *** p < .01.

Appendix D. Robustness

	Coefficient (1)	Rand. Inference (2)	List-Shaikh-Xu (3)	Westfall-Young (4)	Romano-Wolf (5)					
Panel A: Treatment Effects on Perceptions of Gender Norms (Table 3)										
Perceptions about										
Friends and Acquaintances	-7.767***	0.000	0.001	0.000	0.001					
Women in Germany	-8.540***	0.001	0.001	0.000	0.001					
Women in Germany (Dummy)	-0.190^{***}	0.000	0.001	0.000	0.001					
Panel B: Heterogeneous Treatment Effects on Mothers' Own Gender Attitudes (Figure 4 and Appendix Table C3)										
Agreement to the Statement										
Mothers with children below the age of 3 should not work	-0.066^{**}	0.051								
Overestimators	-0.085^{**}	0.049	0.075	0.061						
Little Confidence	-0.121 **	0.014	0.040	0.027						
Moderate Attitudes	-0.127*	0.053	0.056	0.061						
Panel C: Treatment Effects on Labor-Market Expectation	ons and Interest	in Job Counseling	(Table 4)							
Increase in Working Hours	0.074*	0.079	0.160	0.151	0.140					
Interest in Job Counseling	-0.030	0.421	0.456	0.416	0.392					
Panel D: Heterogeneous Treatment Effects on Labor-Market Expectations (Table C6)										
Overestimators	0.077	0.152	0.153	0.129						
Slot in Child Care	0.132**	0.013	0.042	0.055						
Father Involved	0.164 **	0.035	0.038	0.044						
Liberal Background	0.136*	0.067	0.095	0.098						

Table D1: Randomization Inference and Corrections for Multiple Hypothesis Testing

Notes: Table presents p-values for our main results, calculated using randomization inference and adjusted for multiple hypothesis testing. P-values < 0.10 are highlighted in bold. For comparison, Column (1) reports coefficients along with significance stars based on robust standard errors (* p < 0.10, ** p < 0.05, *** p < 0.01), as displayed in the main tables. The p-values in Column (2) are derived using randomization inference (RI) based on 1,000 permutations, with treatment status assigned randomly within strata (using the Stata command 'ritest' provided by Hess, 2017). In Columns (3)–(5), we apply three distinct methods to correct for multiple hypothesis testing, focusing on controlling family-wise error rates, all of which utilize bootstrap resampling techniques. Column (3) follows the approach by List et al. (2019), Column (4) implements the stepdown-approach by Westfall and Young (1993), and Column (5) the procedure by Romano and Wolf (2005, 2016). The Westfall-Young approach (applied via the Stata command 'rwolf' by Ulaira Reif) and the Romano-Wolf approach (executed with the Stata command 'rwolf' by Clarke et al. (2020)) both account for stratified randomization by selecting bootstrap samples within each stratum. In Panel A, we account for the fact that we use three outcomes related to mothers' perceptions: perceptions about friends and acquaintances, perceptions about women in Germany (measured on a scale from 0 to 100), and a binary variable indicating whether women in Germany are perceived as too conservative. In Panel B, we adjust for the fact that the effects on labor-market expectations are measured across multiple subgroups. Notably, some corrected p-values are smaller than the original ones due to the application of bootstrap methods. All control variables from the corresponding baseline specifications are included in the analysis.

			Percepti	ons about			Att	itudes	Labor-Mark	et Expectations
	Friends and agre Mothers w below 3 shoul	Acquaintances being to with children the age of d not work	Women agre When a m her chil	in Germany ceing to <i>aother works</i> , dren suffer	Women agre When a m her chil	in Germany being to tother works, dren suffer	Agreement to the Statement Mothers with children below the age of 3 should not work		Increase in Working Hours	
	Perception (0-100)		Perception (0-100)		Dummy: Perception too conservative		Dummy		Dummy	
	Unweighted (1)	SOEP Weights (2)	Unweighted (3)	SOEP Weights (4)	Unweighted (5)	SOEP Weights (6)	Unweighted (7)	SOEP Weights (8)	Unweighted (9)	SOEP Weights (10)
Treatment	-7.403*** (2.108)	-7.494*** (2.248)	-8.838*** (2.014)	-9.712*** (2.216)	-0.196*** (0.046)	-0.207*** (0.049)	-0.061* (0.034)	-0.074* (0.038)	0.081* (0.045)	0.080* (0.047)
Pre-Treatment Outcome Strata	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls Sociodemographic	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control Mean	28.70	28.62	37.42	37.71	0.53	0.54	0.26	0.26	0.40	0.39
N	437	437	437	437	437	437	437	437	437	437

Table D2: Treatment Effects on Perceptions of Gender Norms, Attitudes and Labor-Market Expectations Using SOEP Population Weights

Notes: Table presents treatment effects calculated using propensity score weights based on data from the representative German Socio-Economic Panel Study (SOEP). In Columns (1) and (2), the outcome variable is the mother's perception about the number of friends and acquaintances (0-100) agreeing with the statement: *Mothers with children under the age of 3 should not work*. In Columns (3) and (4), the outcome variable is the mother's perception about the number of women in Germany (0-100) agreeing to the statement *When a mother engages in paid work, her children suffer*. In Columns (5) and (6), the dummy variable is equal to one if mothers overestimate the share of women in Germany, agreeing with the statement: *When a mother engages in paid work, her children suffer*. We allow for a range of 0.5 standard deviations around the actual value. In Columns (7) and (8), the outcome variable is a dummy equal to one if the mother games of *s should not work*. Finally, in Columns (9) and (10) the outcome variable is a dummy equal to one if mothers with *children under the age of 3 should not work*. Singly, in Columns (9) and (10) the outcome variable is a dummy equal to one if the mother pare to the statement: *Mothers with children under the age of 3 should not work*. Finally, in Columns (9) and (10) the outcome variable is a dummy equal to one if mother share of by working more hours. The regressions in the even Columns (2, 4, 6, 8, 10) are re-weighted to ensure that our sample is representative of mothers with young children in Germany. These weights are derived by estimating a probit model, with an outcome dummy that equals zero if the mother is part of the SOEP sample (specifically, mothers with 2–3-year-old children born in 2017, 2018, or 2019) and one if the mother game duit information on their household income, they are missing in these analyses. All models include strata fixed effects and sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are

Appendix E. Treatment Effects on Perceived Returns of Full-Time Employment and Perceived Barriers to Employment

Providing information about the actual gender norm may influence mothers' labor-market expectations for several reasons. First, it could affect these decisions because of perceived social pressure from peers. Specifically, mothers may refrain from working because they believe that people around them disapprove of them doing so. Our treatment effectively reduces the perception of conservatism not only of mothers in Germany in general but also within their immediate social circle, including friends and acquaintances. Therefore, the effect on labor-market expectations may stem from the perception of a more liberal environment.

Second, it might operate through the change of their own attitudes. Indeed, we observe that changes in the perception of gender norms have a causal effect on mothers' own attitudes towards work, which in turn may explain the effect on employment expectations.

However, the perception of gender norms could also influence maternal labor-market expectations for other reasons, such as serving as a guide for best practices. We investigate this aspect by examining the effects on mothers' perceived returns of working full-time across various life domains, including their family income, career prospects, personal well-being, child development, satisfaction with the partnership, and social prestige. We assess the perceived returns in these domains by asking a hypothetical question: "*If you went from not working at all to working full time, would these domains improve, stay the same or get worse*?" We find no treatment effects on five out of six domains, nor on a summary index that combines all these outcomes (Kling et al., 2007) (see Appendix Table E1). The only exception is satisfaction with the partnership, where treated mothers rate the impact of transitioning to full-time work 7% less favorably (p = .035).

	Perceived Benefits of Full-Time Work							
	Family Income (1)	Career Opportunities (2)	Child Development (3)	Satisfaction Partnership (4)	Own Well-Being (5)	Social Prestige (6)	(7)	
Treatment	0.007 (0.056)	-0.076 (0.056)	0.035 (0.062)	-0.147** (0.069)	-0.020 (0.079)	-0.004 (0.061)	-0.043 (0.093)	
Pre-Treatment Outcome	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Strata Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Sociodemographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Control Mean	2.781	2.661	1.819	2.141	2.198	2.500	0.038	
N	450	449	448	418	448	447	450	

Table E1: Treatment Effects on Perceived Returns of Full-Time Work

Notes: Table shows treatment effects on mothers' perceived returns to full-time work. We assess the perceived returns by asking a hypothetical question: *If you went from not working at all to working full time, would the following domains improve, stay the same, or get worse*? Outcome variables in Columns (1)–(6) range from 1 (worsen) to 3 (improve). Column (1) refers to the perceived returns to family income. Column (2) refers to the perceived returns in career opportunities. Column (3) refers to the perceived returns in child development. Column (4) refers to the perceived returns in satisfaction with the partnership. In Column (4), our sample is smaller as some mothers are single (n = 30). Column (5) refers to the perceived returns to mothers' personal well-being. Column (6) refers to the perceived returns to full-time work with a mean = 0 and a standard deviation = 1 (Kling et al., 2007). All models include the pre-treatment outcome, strata controls, and baseline sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are included. *Control Mean* is the mean of the outcome in the control group. Robust standard errors in parentheses. * p < .10, ** p < .05, *** p < .01.

Finally, information about the actual gender norm may influence how mothers perceive barriers to employment. In particular, learning about the more liberal attitudes of other mothers may signal that finding a suitable job is actually easier than they previously thought. We ask mothers what types of problems they believe mothers with young children face when searching for a job. Potential issues include low wages, unsuitable working hours, long commutes, mismatched qualifications, lack of child care, or insufficient job flexibility. We observe no treatment effects on four out of these six potential barriers. However, there is a marginally significant positive effect on the perception that wages are too low— treated mothers are 7% less likely to consider this a problem (p = .097). We also find a stronger effect concerning qualifications, with treated mothers being 9% less likely to regard inadequate qualifications as a barrier (p = .015). When combining these outcomes into an index, however, we do not find a significant treatment effect. Additionally, we asked mothers if, assuming they would be looking for a job now, it would be easy, difficult, or nearly impossible for them to find a suitable job. We find no treatment effect on this outcome either (not shown).

	Perceived Barriers to Employment							
	Salary Too Low (1)	Unsuitable Working Hours (2)	Long Commutes (3)	Mismatched Qualifications (4)	Lack of Child Care (5)	Insufficient Job Flexibility (6)	(7)	
Treatment	0.189* (0.114)	-0.103 (0.116)	-0.067 (0.119)	0.313** (0.128)	0.022 (0.121)	0.029 (0.118)	0.056 (0.096)	
Pre-Treatment Outcome	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Strata Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Sociodemographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Control Mean	2.825	2.053	2.850	3.335	2.211	2.123	-0.015	
N	450	449	449	449	450	449	451	

Table E2: Treatment Effects on Perceived Barriers to Employment

Notes: Table shows treatment effects on mothers' perceived barriers to finding a suitable job. We asked mothers what kind of problems they think mothers with young children face when looking for a job. Outcome variables in Columns (1)-(6) range from 1 (fully applies) to 6 (does not apply at all). Column (1) focuses on whether the wage is perceived to be too low. Column (2) focuses on whether working hours are perceived as unsuitable. Column (3) focuses on whether the commute to work is perceived as too long. Column (4) focuses on whether qualifications do not match. Column (5) focuses on whether child care is missing. Column (6) focuses on whether jobs are not flexible enough. Column (7) shows the analysis for an index that combines all six dimensions of perceived barriers to finding a suitable job with a mean = 0 and a standard deviation = 1 (Kling et al., 2007). All models include the pre-treatment outcome, strata controls, and baseline sociodemographic controls (see Section 5.5 for details). Imputation dummies for missing values in control variables are included. *Control Mean* is the mean of the outcome in the control group. Robust standard errors in parentheses. * p < .05, *** p < .01.



Halle Institute for Economic Research – Member of the Leibniz Association

Kleine Maerkerstrasse 8 D-06108 Halle (Saale), Germany

Postal Adress: P.O. Box 11 03 61 D-06017 Halle (Saale), Germany

Tel +49 345 7753 60 Fax +49 345 7753 820

www.iwh-halle.de

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