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## Do Family Values Shape the Pace to Return to Work after Childbirth?

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## Do Family Values Shape the Pace to Return to Work after Childbirth?

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# Do Family Values Shape the Pace to Return to Work after Childbirth?

## Abstract

This paper argues that the pace to return to work after childbirth is not independent of family values. I evaluate the effect of a parental leave policy reform in Germany in 2007-aimed at incentivizing an earlier return to work - on the return to work of mothers who hold different family values. Using a regression discontinuity design and an epidemiological approach to family values I find that although the policy has substantially increased the pace to return to work of mothers regardless of their family values, mothers upholding traditional family values keep returning to work at a slower pace than mothers with liberal family values.

JEL-Code: J130, J210, J220, Z100.

Keywords: parental leave, family values, female labour supply, epidemiological approach.

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## I. INTRODUCTION

Female labour force participation has been on the rise across Europe and other developed economies in the last decades. Several factors have contributed to such increase: the spread of household durable goods, medical advances in contraception, and increased availability in childcare among others. And yet, after accounting for these material and institutional changes, differences across societies are still salient. This has prompted a gradual turn to beliefs and values among economists to account for cross-country differences in labour market outcomes (see for example Alesina & Giuliano, 2010; Algan & Cahuc, 2007; Fernandez, 2007).

This paper investigates the effect of a parental leave policy reform on the preferences to return to work of mothers who hold different family values. I will show that although the policy substantially increases the pace to return to work for mothers regardless of their values, the pace to return to work of mothers upholding traditional family values is – both before and after the policy - lower than the pace to return to work of mothers with liberal family values. This finding is policy relevant insofar as it points at the limits of labour market interventions in increasingly multicultural societies and it speaks to the limitation of policy transfers. If, as I show, it is the case that the pace to return to work after childbirth is subject to individuals' family values, the policy may then increase the participation gap between different groups or, at the very least, perpetuate the differences in participation across groups. At the same time, the findings of this paper may be of interest for countries which, having a low female labour force participation, attempt to replicate successful care policies of countries whose population has, on average, different family values.

The identification of the causal effect of family values on female labour market participation is difficult because of omitted variable bias. In particular mothers may choose to stay at home because of lower career aspirations, or because they might be less successful, or more generally, for a reason that is difficult to identify and measure. I therefore use a natural experiment in Germany that aimed at increasing the pace to return to work of mothers after childbirth. The policy reform of 2007 incentivized an earlier return to work by reducing the paid parental leave subsidy from two to one year. Although it would encompass delivering childcare, the return was expected to generate an income effect in the second year. The choice of one country, as opposed to a comparative analysis between two or more countries also has an identification purpose. A comparative analysis between two countries with, on average, different family values and which implemented a similar parental leave policy has some caveats. Firstly, it is very difficult to find a parental leave policy which is similar across two countries. But even if it existed, the cross-country comparison would have made it very difficult to claim that it is family values, and not the institutional setting of each country, which accounts for the potential difference in the effectiveness of the policy. I address these two caveats by analysing instead the effect of a parental leave policy reform in one country – Germany – on the pace to return to work for different female migrants groups, comparing the outcome between these groups and between them and native individuals - East and West Germans. This identification strategy is known in the literature as the epidemiological approach (Fernandez, 2007) and it is especially useful in disentangling the institutional effects from the “cultural” ones. Migrant groups face the same institutional and economic environment of the native individuals in the country of residence but they are assumed to preserve, to a certain extent, family values of their country of ancestry. Thus, individual migrants are assigned the historic family values of their country of ancestry, to avoid reverse causality problems.

The analysis uses the cross-section form of the German Socio-Economic Panel data (GSOEP) for the years 2005 to 2009 – that is, before and after policy implementation- and it contains the stated and revealed preferences to return to work of mothers in the sample. The empirical strategy follows closely a regression discontinuity design to compare observations before and after the policy implementation cut-off point (January 2007). Given the assumption that the intervention is randomly assigned, observations before the implementation cut-off point can then be treated as a control group (Green, Leong, Kern, Gerber, & Larimer, 2009). At the same time, the difference-in-difference approach allows me to compare the outcome between different subgroups of individuals according to their family values.

The findings suggest that although the policy increased the pace to return to work for all mothers regardless of the family values, it maintained the difference in the pace to return to work between mothers with different family values. That is, I find that before the policy mothers associated with more liberal family values returned to work earlier than mothers coming from societies holding more

traditional family values, and that after the policy this difference persisted. The analysis yields similar results both when analysing the stated preferences of mothers and their actual behaviour. One exception would be when only mothers with very liberal and very traditional family values are compared. In this case the policy has a stronger effect on mothers with very liberal family values, although this difference in the effect disappears once we look at actual behaviour (revealed preferences). This suggests a conflict between values and economic incentives that is worth taking note on.

This paper contributes to the literature of social economics by looking at how family values affect the effectiveness of a policy reform and suggesting that the former are a factor that explains lack of convergence across societies. Institutional economist approaches have either pointed to the persistence of inefficient formal institutions to explain this limited convergence or to the existence of different types of institutional settings corresponding to equally efficient labour market performance (Amable, 2003; Freeman & Schettkat, 2001; Hall & Soskice, 2001; Scharpf & Schmidt, 2000). And yet, despite their great contribution to the understanding of a lack of convergence in economic outcomes, these approaches have arguably opened more questions. Firstly, empirical analyses suggest that the residual is still large after accounting for differences in institutions (Del Boca, Pissarides, Boeri, & Fondazione Rodolfo De Benedetti., 2005). Secondly, the persistence of inefficient or different institutional settings cannot be fully understood unless beliefs and values are taken on board. This is particularly the case with labour market institutions and policies that are tightly related to family life, such as childcare and parental leave policies. As some authors have already noted, there is a circularity between a lack of family policy measures and an absence of demand for such measures (Flaquer in Bahle, Pfenning, & Mannheim Centre for European Social Research., 2000), driven by the fact that in certain countries there exists the spread belief that ‘family services are superior in quality to those offered by the state’(p. 27). As a result, a growing body of research in the field of economics has turned to values, social norms and beliefs to explain differences in institutions and economic outcomes. In this field, recent analyses on the persistence of certain labour market institutions supports this view by showing that beliefs and values co-evolve with labour market regulations, reinforcing each other and creating multiple equilibria from which is difficult to depart (Aghion, Algan, & Cahuc, 2011; Aghion, Algan, Cahuc, & Shleifer, 2010). The acknowledgement of the existence of a two-way interaction between values and institutions broadly enhances our understanding of the persistence of such institutions. Yet, it does not tell us much about what would happen to female labour force participation if this co-evolution were to be broken and an institutional change in the opposite direction of the engrained values in society took place. And this is what this paper does. It analyses whether, when such an institutional change takes place via a policy reform, the power of engrained family values is as strong as to hamper the effects of the new institutional setting on female labour force participation.

The rest of the paper is organized as follows. Section 2 describes the policy reform and section 3 explains the empirical strategy. Section 4 gives an account of the data used. Section 5 presents the results and section 6 concludes.

## II. INSTITUTIONAL BACKGROUND

### *2.1. An overview of Germany’s parental leave reforms*

The numerous parental policy reforms that took place in Germany in the past three decades reflect a conflictive equilibrium between the traditional breadwinner model and the dual-earner-carer model, as can be seen in detail in *Table 1*. The introduction of maternity leave dates back to the 1920s and now women enjoy 14 weeks of leave with full wage replacement, with 6 weeks before the child is born and 8 weeks after childbirth. German mothers would have to wait until 1979 to have a parental leave period after the statutory maternal leave. The reform was meant to have promising effects in increasing employment rates among mothers (Leitner, 2010). The policy implemented a six months paid maternal leave period which enabled formerly employed mothers to receive a capped earnings-related benefit. This benefit did not account for partners’ earnings, and targeted formerly employed mothers. Part-time work was not included.

In 1986 came the second reform, which reverted back to the old breadwinner model (Leitner, 2010). Firstly, the pre-existing capped-earnings benefit was substituted by a flat-rate benefit available to both employed and non-employed mothers as well as fathers. The benefit, however, was so low that it did not attract fathers. Secondly, breadwinner’s earnings were taken into account and could reduce the

benefit (i.e. it was a means-tested benefit). Thirdly, the paid maternal leave period was increased firstly to ten months and later on, in 1993, to two years. Additionally, the overall leave period was extended to three years. Implicitly the model was therefore promoting a breadwinner model, the traditional family model (Leitner, 2010). Part-timing, however, was permitted up to 18-19 hours per week.

A third reform took place in 2000 which acknowledged the individual right to parental leave by allowing both parents to take the leave simultaneously, although the benefit remained a means-tested one (Fleckenstein, 2011). It also allowed part-time work up to 30 hours per week and it included the possibility of having a higher flat-rate benefit if the benefit span was reduced from two to one year. The impact of the reform, however, was weakened by the lack of institutional childcare facilities. In 2005 an attempt was made to tackle this issue by passing a law which committed to the expansion of childcare facilities for children less than 3 years old.

Finally, in 2007, a fourth reform– called *Elterngeld* - replaced the flat-rate benefit with a wage-replacement benefit up to 67% of earnings before maternity leave, funded by the federal government through public taxation (Blum, 2012). A cap of €1800 and a minimum of €300 was set and the non-employed were entitled to this minimum. Importantly, the reform also decreased the benefit span from two to one years and devoted resources to the expansion of childcare places.

## 2.2 *The expected benefits of the 2007 parental leave reform*

The design of the *Elterngeld* policy suggests that low-income mothers are the group which should experience a larger change in their work behaviour. Before the policy they were entitled to a maximum of €300, whereas after the policy they are entitled to 67% of their pre-maternal earnings with a minimum of €300, a substantial increase of the benefit. In the second year, however, by design, employed low-income mothers experience a total decrease of the benefit. High-income employed mothers, instead, do not see their incentives much changed by the policy, especially in the second year. Before the policy high-income mothers did not receive any benefit so the incentives to return to work after maternity leave were high. After the policy this situation changes and they receive 67% of their earnings during the first year (with a cap of €1800) and nothing in the second year.

The argument of the paper is that these expectations are likely to be influenced by family values in the case of a working mother. As Bork states in his paper (2011), attitudes towards working mothers in Germany have been rather negative over the years, especially in West Germany. A term has been coined - 'Rabenmütter' (raven mother) - to designate working mothers with young children. Fleckenstein (2011) makes a similar point in his paper when he argues that, despite a decline in traditional family values, 'West Germany remains relatively conservative by international standards' (p. 548).

**Table 1. Parental policy reforms in Germany since 1970s.**

Year reform	1979	1986	1993	2000	2007
<b>period of paid parental leave (in months)</b>	6 months	10 months	24 months	24 months	12-14 months
<b>period of non-paid parental leave (in months)</b>	-	-	12 months	12 months	22-24 months
<b>total period parental leave (in months)</b>	6 months	10 months	36 months	36 months	36 months
<b>benefits</b>	- capped-earning related - partner's earnings not accounted	- flat-rate benefits - partner's earnings accounted		- flat-rate - higher if benefit span reduced from 2 to 1 year	- wage-replacement up to 67% wage. - capped at €1,800 - minimum of € 300.
<b>target</b>	formerly employed mothers	employed and non-employed mothers		employed and non-employed mothers	- employed - the non-employed are entitled to the minimum benefit
<b>part-time work</b>	not allowed	allowed: up to 18-19 hours week		allowed: up to 30 hours week	allowed: up to 30 hours week
<b>parental leave for fathers</b>	not allowed	allowed		allowed, and simultaneously with the mother	allowed, and simultaneously with the mother

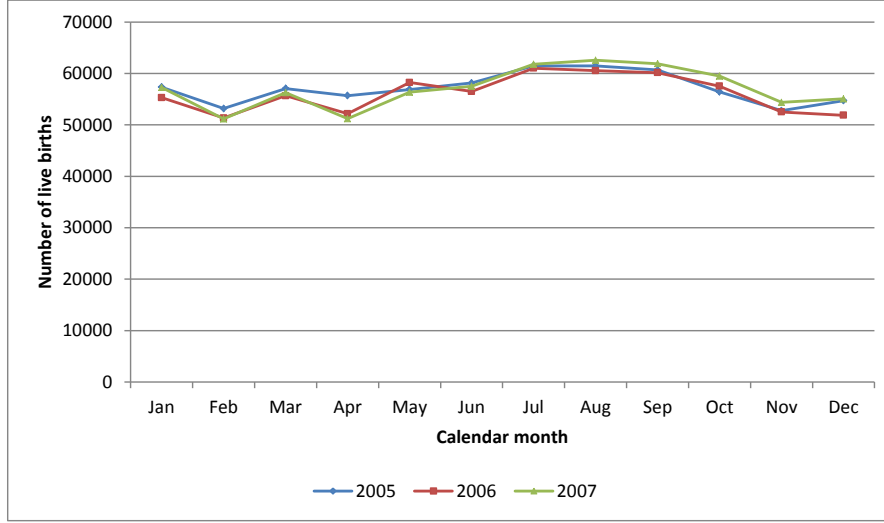
Source: own elaboration, based on Leitner (2010) and Ostner, Reif, Schmitt & Turba (2003).

Notes: This table shows how the different reforms affected the period of paid and non-paid parental leave, the calculation of the benefits, the potential beneficiaries and whether part-time work was allowed.

### III. EMPIRICAL STRATEGY

The paper examines the effects of the 2007 policy on the decision to return to work for mothers with different family values. Given the existence of a policy intervention in a large country such as Germany, I have been able to take advantage of a regression discontinuity design (RDD) with a difference-in-difference specification. As noted earlier, the RDD method is used to estimate causal effects of an intervention by examining comparable observations before and after the cut-off point. It relies on the assumption that the intervention is randomly assigned and therefore observations *around* the cut-off point are comparable. Observations before the cut-off point (the implementation of the policy) can then be treated as a control group (Green et al., 2009). I suggest that the policy intervention analysed in this paper suits a RDD method. Firstly, the intervention can be argued to be randomly assigned, given that the treatment would be available for all new-mothers from 1 January 2007. The cut-off point, therefore, did not depend on any individual characteristics of the mother, only on the birth date of the child. Although it can be argued that mothers could have attempted to change their behaviour and delay maternity, this argument is rather weak due to the speed of the legislation process. The main features of the reform were discussed in May 2006, drafted in June, the law was passed in September 2006 and it became effective on 1 January 2007 (Kluve, 2009). *Figure 1* supports this argument by showing that the monthly number of birth rates did not change significantly from 2005 to 2007.

**Figure 1. Birth rates across years**



Source: German Federal Statistical office

The choice of years before and after the cut-off point reflects a trade-off between the number of observations and the accuracy of the control and treatment group. With a RDD specification, the closer the observations are to the cut-off point, the lower the risk that the treatment effect suffers from omitted variable bias (Green et al., 2009). On the other hand, having a narrow timeframe leads to fewer number of observations, which increases the sampling variability. At the same time, a narrow timeframe cannot account for a potential delay in implementation. In this paper the timeframe has been two years before (2005-2006) and three years after the policy (2007-2009) in order to allow an acceptable number of observations and account for potential delays. This choice, however, is made at the expense of increasing the bias. Arguably, this drawback has a limited relevance, given that I am more interested in comparing the impact of the policy for mothers with different family values than the impact of the policy in itself. The difference in impact between the two groups is captured by the difference-in-difference coefficient in my regression. That is, I estimate the following difference-in-difference coefficient for the effect of the parental leave policy when the mother holds  $fv$  family values (for  $fv =$  liberal and traditional):

$$\beta_3 = (y_{l,t} - y_{l,c}) - (y_{t,t} - y_{t,c}) \quad (1)$$

where  $y_{fv,T}$  denotes the return to work of mothers with  $fv$  family values in year  $T$ . The difference-in-difference coefficient  $\beta_3$  measures the changes in the pace to return to work before and after the policy for mothers holding liberal family values compared with mothers holding traditional family values.

The paper therefore runs a series of probability-linear model specifications<sup>2</sup> of the following type:

$$P(y_{it}=1) = \alpha + \beta_1 T_{it} + \beta_2 fv_j + \beta_3 T_{it}fv_j + \beta_4 X_i + \varepsilon \quad (2)$$

where  $y_{it}$  is the mother  $i$ 's labour market outcome, that is, the probability of preferring a fast return to work after maternity.  $T_{it}$  stands for the timeframe, whether the observation takes place before or after the policy,  $fv_j$  is a proxy of the family values of each individual, who can hold traditional or liberal family values,  $T_{it}fv_j$  is the interaction between the time dummy and the family values and  $X_i$  includes a set of individual characteristics as controls.

<sup>2</sup> The choice of a Probability-linear model (LPM) is inspired on Angrist and Pischke's argument in his Mostly Harmless Econometrics blog (Angrist & Pischke, 2012), where they state that LPM does a pretty good job estimating the marginal effects when the dependent variable is a binary one. It goes on by emphasizing that although it will not give the "true" marginal effects from the right non-linear model, the 'wrong' non-linear model will not either, and we don't know whether probit or logit are the right ones.



## IV. DATA

I use the German Socio-economic panel data (GSOEP)<sup>3</sup>, a longitudinal dataset running yearly since 1984 until 2011 (the latest wave) which interviews all the members of the household, newcomers and follows the leavers in new households. The GSOEP has gradually increased its sample up to nine times, with some of these samples being focused on migrants (see *Appendix 1* for details on sample). In total – from 1984 to 2011 - it contains around 600.000 observations. For the present analysis I select women who work and have had a child in one of the years from 2005 to 2009 (see coding of childbirth in *Appendix 2.1*). After dropping missing observations and coding all the variables I need, I end up with a total of approximately 600 observations.

### 4.1 Dependent variable

I use two different dependent variables. The first one is the stated preferences, that is, the preference to return to work stated by the mother in the interview, and the second one is the actual return to work of mothers in the sample. Stated preferences are interesting because they measure the actual “willingness” to return to work of the individual, without it being much influenced by factors such as the hazards of finding a job or other personal factors that may make it impossible to return to work at the preferred pace. On the other hand, in order to evaluate the real impact of the policy, revealed preferences need to be taken into account. The comparison of both outcome variables is also interesting in itself, given that it is a source of information on how far away are the actual behaviour of people from the one they state in surveys and interviews.

Having this in mind, the stated preferences’ outcome is taken from the following GSOEP question: ‘*When approximately, would you like to start with paid employment?*’ The answers can be: ‘1) *As soon as possible*, 2) *Next year*, 3) *In the next two to five years*, 4) *In the distant future, in more than five years*’. I code them as fast return (dummy = 1) if the answer is ‘*as soon as possible*’ or ‘*next year*’ and slow return if otherwise (dummy = 0) (see *Appendix 2.2* for more detail on the codification). I therefore have a binary dependent variable which is the intention to return to work. The chosen categorization is in line with the policy reform rationale. This one reduced the subsidy from two to one year, so I want to analyse whether this gave an incentive to mothers to return to work within one year.

The revealed preferences are taken from the variable “*Maternity Benefit No. Months*”, which, as the name suggests, gives me the number of months in maternity or child rearing leave for each individual. I also dichotomize it, coding it as fast return (dummy = 1) if the mother returns to work within 14 months (the time covered by the subsidy in the new policy framework when fathers also take parental leave), and slow return (dummy = 0) if the mother returns to work after 14 months.

### 4.2 Independent variable

#### *Family values*

There are different ways of proxying family values within the epidemiological literature. Carroll, Rhee and Rhee (1994) use a dummy variable for the immigrant’s home country region. As Fernandez (2006) points out, this has the drawback that it is not entirely clear what is being measured, or why does it matter that someone is from a different country or region. Fernandez and Fogli (2009) use the female labour force participation rates of the country of ancestry as cultural proxies. These rates are likely to reflect individual factors as well as economic, institutional and cultural factors of the country. Then, as Fernandez (2007) points out, if they have explanatory power for why, in a certain country, “women from one ancestry work more than women from another ancestry after controlling for their individual economic attributes, only the cultural contribution to this variable can be responsible” (p. 312). Nevertheless, this choice also comes with some drawbacks. Especially, female labour force participation rates in one country with traditional family values may be, for example, very high because there are very high female wages. In this case, female labour force participation rates would not represent the existing family values very accurately (Fernandez & National Bureau of Economic Research., 2010). An alternative, also suggested and used by Fernandez in some of her papers (see for example Fernandez & National Bureau of Economic Research., 2007) is to proxy family values with attitudes towards women with children and work expressed by individuals in the migrant’s country of

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<sup>3</sup> The data used in this paper were extracted using the Add-On package PanelWhiz v4.0 (Oct 2012) for Stata. PanelWhiz was written by Dr. John P. Haisken-DeNew (john@panelwhiz.eu). The PanelWhiz generated DO file to retrieve the SOEP data used here and any Panelwhiz Plugins are available upon request. Any data or computational errors in this paper are my own. Haisken-DeNew and Hahn (2010) describe PanelWhiz in detail.

origin in previous years, in order to avoid reverse causality. This approach follows a similar logic than the one stated above. If attitudes towards women and work in the country of ancestry, which may reflect individual factors as well as economic and institutional, are useful to proxy women's attitudes from this country of origin in another country with different economic circumstances and institutional settings and in another timeframe, then it has to be the cultural contribution of this variable that is responsible.

The GSOEP dataset contains the country of origin of the individuals. This variable gives the information on whether the observation has no migration background, direct migration background (i.e. first generation migrant), and indirect migration background (i.e. second generation migrant). In the case of indirect migration background, the dataset allows me to track the migration background of both parents (see *Appendix 2.3* for details). At the same time, the dataset contains information to differentiate observations that come from East and West Germany. For this, I have used the information from the variable 'sample'. Sample C includes only observations from East Germany. Therefore, those observations with "no migration background" will be coded as natives from either East or West Germany.

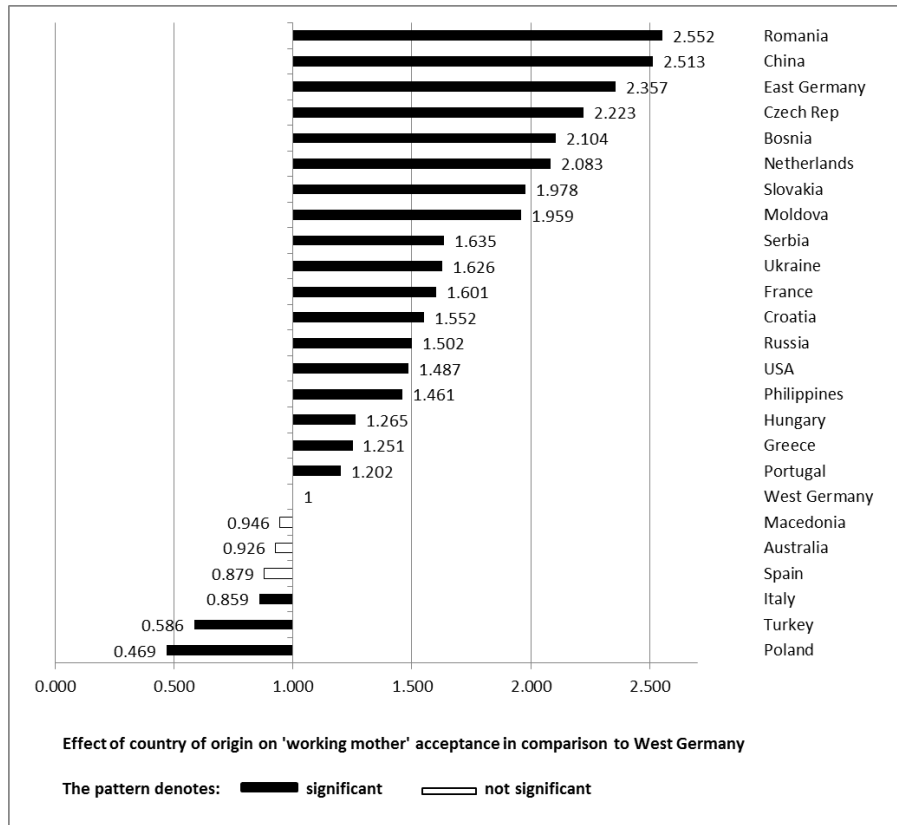
Knowing the migration background, I then use the 1990s waves<sup>4</sup> from the World Value Survey (WVS, 2006) and the European Value Survey (EVS) to construct a proxy for family values. The question I use as a proxy is the following: *'Do you agree with the following statement? A working mother can establish just as warm and secure a relationship with her children as a mother who does not work'*<sup>5</sup>. I then run an individual probit regression, with this question being the dependent variable and my main independent variable being country dummies. The base 'country' is 'West Germany'. These country dummy coefficients will be the proxy used for my independent variable. They are the likelihood that an individual from a certain country or region will agree with the previous statement compared to an individual from West Germany. I control for age, age squared, size of town, marital status, sex and education. All coefficients are statistically significant (most of them at 1% significance level) except for Macedonia, Australia and Spain. *Figure 2* depicts the results.

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<sup>4</sup> Mostly the wave 1995-1998.

<sup>5</sup> Data for this question is not available for the following countries of origin in my sample: Austria, Switzerland, Iran, Bolivia, Tunisia, Cuba, Brasil, Kazakhstan, Lebanon, Eritrea, Uzbekistan. This amounts to around 20 observations.

**Figure 2: effects of country of origin on ‘working mother’ acceptance**



Source: World Values Survey (wave 1995-1998) and European Values Survey (1999).

Note: the bars represent the effect of country/region dummies on the attitudinal question selected and relative to people with ancestors from West Germany, the excluded region. The dependent variable is as follows: ‘Do you agree with the following statement? A working mother can establish just as warm and secure a relationship with her children as a mother who does not work’. Therefore, a coefficient of, say, 1.202 (Portugal), suggests that an average individual from Portugal is 20% more likely to agree with the statement than an average individual from West Germany.

Before proceeding, and in order to test whether the country coefficients are a good proxy for family values of the individuals in my sample, I compare the current family values of first and second-generation migrants in Germany with these country coefficients. A high correlation would then suggest that my proxy – family values expressed by individuals in the migrant’s country of ancestry in the year 2000 – is a good one.

To get the current family values of first and second generation migrants in Germany I use the German sample of the European Social Survey (ESS) database (ESS, 2004, 2010) for the years 2004 and 2010, that is, before and after the policy. Ideally, I should find the same question from the WVS in the ESS database, run an individual-level probit regression with the question as a dependent variable and country dummies as my main independent variable and compare these coefficients with the country coefficients of my proxy. Unfortunately the ESS does not include a statement on working mothers as the one included in the WVS. Nevertheless, it includes one similar question, namely ‘Women should be prepared to cut down on paid work for sake of family’. Besides, the ESS also includes another question – ‘men should have more right to women to work when job scarce’ – which is also included in the WVS in several waves. Arguably, this question is closely related to the question used to proxy family values. Thus, if the correlation between the values of individuals in the country of ancestry in the WVS and the family values of first and second generation Germans from that ancestry in the ESS with regard to this question is high, we can expect similar questions to have a high correlation too. Given that the German ESS sample of first and second generation migrants is rather small, I only keep countries with more than twenty observations (the result is robust also if I keep only countries with more than fifty observations) to do the individual-level probit regression, which leaves me with nine countries for each

question<sup>6</sup>. From all the included countries only few country dummies (three for one question and four for the other) are statistically significant at 5% significance level<sup>7</sup>. The findings are as follows<sup>8</sup>: with regard to the question about job scarcity I find that taking all country dummies from the ESS (both the statistically significant and the non-statistically significant) the correlation is around 0.5, and it increases up to 0.80 if I take only the country dummies from ESS which are statistically significant. As for the question about women cutting down paid work, its correlation with the WVS question about the working-mum relationship with children is very low (-0.15), and again, it goes up to roughly 0.80 if I take only the country dummies that are.

These country coefficients are then assigned to the individuals in my sample who have migration background from the country in question, and these are their imputed family values. I use the mother's migrant origin and I carry out robustness checks with the father's migrant origin. I then dichotomise this variable between traditional or liberal family values according to whether the value is below or above the mean value. Following Fernandez (2007), I drop the observations with indirect migration background whose parents came from a country that became a centrally planned economy during World War II (11 observations). This is because there might be the possibility that their parents emigrated during or before this time and therefore it would not be accurate to attribute them the values of these countries in 1990. The following table, *Table 2*, shows the migration background and the number of observations (see *Appendix 3* for a more detailed breakup of the migrants' background).

**Table 2. Country of origin of observations**

Stated preferences					Revealed preferences				
No migration background		Direct migration background	Indirect migration background	TOTAL	No migration background		Direct migration background	Indirect migration background	TOTAL
East G.	West G.				East G.	West G.			
158	310	93	37	598	157	276	92	37	562

*Source: own elaboration based on GSOEP*

*Note: this table shows the migration background of the sample. The indirect migration background shows the mother's country of origin. The empirical analysis also includes robustness checks where the father's country of origin is taken, instead of the mothers. The drop in the number of observations when I use revealed preferences as the dependent variable is due to the lack of information on such preferences.*

#### *Time variable*

As noted earlier, the other independent variable of interest is the time variable, which is 0 before the policy (years 2005 and 2006) and 1 after the policy (years 2007 to 2009) – and the interaction between family values and time variable (the difference-in-difference estimator).

#### *4.3 Control variables*

Several controls are included in the regression. Individual controls include age and age squared, marital status (0 single, 1 non-single), net household income (0 if it is lower than the median income of 2500€ and 1 if it is higher), years of education, and a variable that accounts for the existence of children younger than 16 years old in the household (0 there are and 1 if there are not). Husband characteristics

<sup>6</sup> These countries are: Austria, Serbia, Czech Republic, Kazakhstan, Italy, Poland, Romania, Russia and Turkey, altogether adding up to roughly 500 observations aside from West and East Germany, with roughly 5,000 observations.

<sup>7</sup> These are Italy, Kazakhstan, Russia, Turkey and East Germany for the question related to scarcity of jobs and Austria, Russia, Turkey and East Germany for the question related to women cutting on paid job when having a family.

<sup>8</sup> The findings are robust to a binary dependent variable and a categorical one where the category 'neither' is added. With regard to the independent variable, second-generation migrants in the ESS database were assigned their mother's country of ancestry, but the findings were robust to using father's country of ancestry.

are also included, given that they are likely to influence the mother's decision to go back to work. These are husband's age, his years of education and a dummy of his net income (0 if it is below the mean and 1 otherwise). Finally, I have also included regional data on the percentage of zero to three year-old babies that attend childcare as a proxy for regional childcare availability or regional dummies. Table 3 presents some basic descriptive statistics of the data before and after the policy. The data reveals that while there are no statistically significant differences in the means of the stated preferences to return to work between the two periods, there are significant differences in the means of the revealed preferences, with mothers returning faster to work after the policy. With regard to the independent and control variables, there are no significant differences between the two periods (before and after the policy), except for the number of children younger than 16 at home. The data shows a bias towards observations with more traditional family values. The average maternal age is around 31 years old, and most of the observations in both periods are married. Average household income amounts to approximately €2.700 and the average years of education of the sample are 13 years, which is the A-levels threshold. There are a slightly higher number of observations in the sample with children below 16 years old in the sample. With regard to husband's characteristics, they tend to be slightly older than their spouses, with a similar average education and a mean net income of around 2000€ a month. Finally, around 15% of pre-school children attend childcare.

**Table 3: Descriptive statistics**

	<b>Before the policy reform 2005-2006</b>		<b>After the policy reform 2007-2009</b>	
<b>Number of children born</b>	<b>331</b>		<b>299</b>	
<b>Variables</b>	<b>mean</b>	<b>SD</b>	<b>mean</b>	<b>SD</b>
Stated Fast return (0/1)	0.50	0.50	0.57	0.50
Revealed Fast return (0/1)	0.44***	0.28	0.61***	0.30
Family values (0/1)	0.38	0.49	0.31	0.47
Age	31.07	5.99	31.48	5.34
Marital status (0/1)	0.66	0.48	0.68	0.47
Income	2781.31	1479.27	2755.56	1185.13
Income (0/1)	0.47	0.50	0.52	0.50
Education (years)	13.05	2.71	13.35	2.65
Children<16 at home (1/2)	1.40**	0.49	1.30**	0.46
Age husband	34.29	6.63	34.80	6.12
Education husband	13.02	3.01	13.03	2.80
Net income husband	2002.43	1130.21	1926.00	1013.49
Net income husband (0/1)	0.50	0.50	0.48	0.50
Regional childcare availab.	0.17	0.15	0.15	0.14

*Note: this table contains descriptive statistics from the main variables used in the regression analysis. t-tests indicate the statistically significant differences between subgroups at 1% and 5% levels.*

## V. EMPIRICAL ANALYSIS AND RESULTS

### 5.1. Stated preferences

Table 4 presents the main results for stated preferences to return to work. Model 1 includes the main independent variables without the difference-in-difference coefficient. As expected, the policy increases the probability of preferring a fast return to work by approximately 8%, whereas mothers holding liberal family values experience a 10% increase in their probability to return fast to work compared with mothers holding traditional family values. Model 2 shows that the difference-in-difference coefficient is insignificant, therefore suggesting that the effect of policy has been the same for mothers holding liberal and traditional family values. In the following models several controls are added to assess whether other covariates could actually be behind an increase in the pace to return to work. Model 3 adds individual controls, Model 4 adds individual and husband controls, Model 5 adds individual, husband controls and regional childcare availability and finally Model 6 replaces childcare

availability for regional dummies, in order to control for other regional differences such as tax rates or other institutional and economic factors.

Throughout the models the policy coefficient remains significant at 1% level (5% level when we add regional dummies), and its impact once all controls are added is around 5%, suggesting that the probability of fast return increases by 5% after the policy is implemented. Family values keep their statistical relevance as well. Mothers with liberal family values increase their preference to return fast to work before the policy by 10%. The difference-in-difference coefficient is insignificant. The consequences are relevant to note: whereas this suggests that the policy works for mothers regardless of their values, it also suggests that the policy has not brought convergence in the pace to return to work between mothers holding different family values. That is, mothers with traditional family values still return to work in a slower pace than mothers with liberal family values.

Control variables are interesting to analyse. Age and age squared are only significant in some specifications, so a careful analysis is needed. The effect of age is quadratic: the older the mother is, the slower it goes back to work but this pattern is reversed at some point, although the coefficient of the age squared is close to zero. Marital status only appears in Model 3 and it is insignificant. A stepwise addition of the several covariates (not shown in here) shows that marital status becomes insignificant once the number of children below 16 years old is added in the regression. According to descriptive statistics (not shown in here), 70% of married women have children below 16 at home. Moreover, once I add the husband covariates, marital status becomes insignificant, understandably so. Education has a positive effect on the pace to return to work. An increase of one year in education leads to an increase of approximately 3% in the probability of going back to work at a faster pace. Not having children below 16 years old at home also increases the probability of a fast return by approximately 7%. Having a net household income above the median increases the probability of a fast return to work, whereas having a husband with an income above median decreases the probability of a fast return by a similar rate of 18%. The age of the husband also matters and the probability of a fast return increases the older the husband is.

**Table 4. The effect of parental leave reform policy on the stated pace to return to work for mothers holding different family values.**

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
dummy time [base:before]	0.084*** (0.001)	0.103*** (0.000)	0.101*** (0.000)	0.070*** (0.004)	0.076*** (0.002)	0.052** (0.044)
family values: [base:traditional]	0.108** (0.014)	0.132*** (0.000)	0.132*** (0.000)	0.134*** (0.001)	0.092* (0.073)	0.099** (0.047)
time*family values		-0.055 (0.380)	-0.045 (0.456)	0.034 (0.699)	0.029 (0.747)	0.005 (0.961)
age			-0.009 (0.456)	-0.028* (0.080)	-0.028 (0.109)	-0.038*** (0.006)
age2			0.000** (0.048)	0.000* (0.074)	0.000* (0.094)	0.000** (0.012)
marital st [base:single]			-0.081 (0.176)			
dummy net hh income median			0.033 (0.331)	0.169*** (0.000)	0.167*** (0.000)	0.188*** (0.001)
yrs educ			0.028*** (0.006)	0.032*** (0.000)	0.031*** (0.000)	0.025*** (0.000)
childr<16 [base:yes]			0.120*** (0.000)	0.096*** (0.002)	0.109*** (0.002)	0.071* (0.055)
age husband				0.017*** (0.002)	0.017*** (0.001)	0.020*** (0.001)
yrs educ husband				-0.008 (0.461)	-0.008 (0.402)	-0.006 (0.567)
dummy net income median hubs				-0.227*** (0.000)	-0.215*** (0.000)	-0.189*** (0.002)
Regional dummies						0.159** (0.020)
Regional childcare availability					0.288 (0.112)	
Constant	0.466*** (0.000)	0.457*** (0.000)	-0.042 (0.770)	-0.057 (0.858)	-0.085 (0.793)	0.092 (0.763)
Observations	562	562	521	366	366	366
R-squared	0.016	0.017	0.080	0.120	0.125	0.177

Robust pval in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### 5.1.1. Robustness checks

Table 5 depicts some robustness checks to assess the impact of the policy in different scenarios. All robustness checks use the more complete model above, Model 6. Model 1 from table 5 is the same as Model 6 from table 4 (I have included it in table 5 for comparison). Model 2 uses the father's migrant origin for observations with indirect migrant background, to check whether the results are consistent. This is because, although, as stated earlier, there are reasons to use mother's migrant origin, the paternal figure might have a very strong influence on mother's and children's values, which then might affect results if the paternal family values differ from the maternal ones. Results are very similar, which is something I expected, as there is only sixteen observations with different parental country of origin. So it could be that the paternal figure is relevant, but the difference is not shown because of the structure of the data. Model 3 estimates are based on a logit model. The aim is to see whether the significance of the coefficient changes if we assume away the linearity of our PLM and introduce non-linearity. Although its coefficients are the odds ratios and that makes it difficult to compare with Model 1, the significance is very similar. In Model 4 the variable family values is dichotomized according to its median value, as opposed to its mean, and I get very similar results as well. Model 5 is a placebo test. The rationale for the placebo test is that it could be argued that an increase in the pace to return to work has not been the result of the policy but of the passing of time. I have therefore created a time variable that is zero when year is below 2006 and one when otherwise. Results show that there was no significant change in the pace to return to work in 2006. Finally, in Model 6 I have only included those migrant observations whose parents have the same country of origin. This is because it could be argued that it is not clear the family values that should be assigned to individuals where the mother has different family values than the father. The coefficients still remain very similar.

**Table 5. The effect of parental leave reform policy on the stated pace to return to work for mothers holding different family values- robustness checks.**

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	base	Father's values	Logit (odds ratios)	Fv: median dichotomi zat.	Placebo: dummy time 2006	Migrant parents same country of origin
dummy time [base:before]	0.052** (0.044)	0.045* (0.088)	0.246** (0.021)	0.069*** (0.008)	0.034 (0.526)	0.052** (0.033)
family values: [base:traditional]	0.099** (0.047)	0.109** (0.034)	0.477** (0.035)	0.125** (0.021)	0.088 (0.110)	0.111** (0.037)
time*dummy family values	0.005 (0.961)	0.013 (0.901)	0.018 (0.971)	-0.051 (0.677)	0.033 (0.781)	-0.001 (0.994)
age	-0.038*** (0.006)	-0.032*** (0.009)	-0.224*** (0.001)	-0.038*** (0.005)	-0.036*** (0.010)	-0.031** (0.015)
age sq	0.000** (0.012)	0.000** (0.018)	0.003** (0.021)	0.000** (0.010)	0.000** (0.015)	0.000** (0.047)
dummy net hh income median	0.188*** (0.001)	0.196*** (0.001)	0.935*** (0.000)	0.186*** (0.000)	0.193*** (0.000)	0.185*** (0.002)
yrs educ	0.025*** (0.000)	0.026*** (0.000)	0.119*** (0.000)	0.026*** (0.000)	0.025*** (0.000)	0.025*** (0.000)
childr<16 [base:yes]	0.071* (0.055)	0.070* (0.091)	0.364** (0.028)	0.070** (0.050)	0.065* (0.080)	0.059 (0.189)
age husband	0.020*** (0.001)	0.020*** (0.000)	0.098*** (0.000)	0.020*** (0.001)	0.020*** (0.001)	0.021*** (0.001)
yrs educ husband	-0.006 (0.567)	-0.007 (0.511)	-0.034 (0.490)	-0.006 (0.546)	-0.006 (0.565)	-0.006 (0.561)
dummy net income median hubs	-0.189*** (0.002)	-0.191*** (0.002)	-0.912*** (0.001)	-0.189*** (0.002)	-0.193*** (0.002)	-0.197*** (0.001)
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.092 (0.763)	0.001 (0.997)	-1.318 (0.441)	0.079 (0.792)	0.067 (0.832)	-0.028 (0.928)
Observations	366	365	360	366	366	361
R-squared	0.177	0.172	-	0.178	0.176	0.175

Robust pval in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### 5.1.2. Subsample analysis

Table 6 focuses on the effects of the policy for mothers who hold ‘extreme’ values; that is, mothers who have been associated with very traditional or very liberal family values<sup>9</sup>. The Models show a stepwise addition of covariates and Model 6 reflects the most complete model. The results show that firstly, the probability to return fast to work before the policy is higher for the mothers holding the most liberal family values than for the mothers holding the most traditional family values. A comparison of the policy coefficient with the one in the main specification shows that for this subsample the coefficient is only slightly higher. Secondly, even for the most traditional observations in the sample the policy has had an effect of a 6% magnitude, which is encouraging, given that it suggests that mothers with traditional family values react in a significant way to economic incentives. The model also shows that the difference-in-difference coefficient is significant, therefore suggesting that mothers with very liberal family values react more to the economic incentives of this policy than mothers with highly traditional family values. The coefficient’s significance drops from 1% level to 10% level when adding regional variables though, implying that other institutional and economic factors may have softened the difference in the impact of the policy between both groups. Given the drop in the significance level one has to be careful in drawing conclusions and arguing that preferences change differently according to the values held. The controls added do not differ much from the main specification in Table 4.

**Table 6. Subsample analysis - the effect of parental leave reform policy on the stated pace to return to work for mothers holding very traditional values and very liberal values.**

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model6
dummy time [base:before]	0.108*** (0.000)	0.113*** (0.000)	0.113*** (0.000)	0.083*** (0.004)	0.085*** (0.003)	0.066** (0.023)
Family values [base:traditional]	0.141*** (0.000)	0.149*** (0.000)	0.151*** (0.000)	0.162*** (0.000)	0.148*** (0.005)	0.136*** (0.004)
Time*family values		-0.018 (0.321)	-0.012 (0.530)	0.113*** (0.001)	0.113*** (0.001)	0.083* (0.073)
age			-0.018* (0.083)	-0.029* (0.054)	-0.028* (0.064)	-0.037*** (0.004)
age2			0.000*** (0.005)	0.000* (0.053)	0.000* (0.064)	0.000** (0.030)
dummy net hh income median			0.027 (0.393)	0.187*** (0.001)	0.186*** (0.001)	0.206*** (0.001)
yrs educ			0.026** (0.022)	0.029*** (0.001)	0.029*** (0.001)	0.026*** (0.001)
childr<16 [base:yes]			0.122*** (0.002)	0.077*** (0.002)	0.079*** (0.003)	0.050* (0.069)
age husband				0.018** (0.012)	0.018** (0.013)	0.019** (0.010)
yrs educ husband				-0.010 (0.317)	-0.010 (0.308)	-0.009 (0.363)
dummy net income median hubs				-0.221*** (0.001)	-0.218*** (0.001)	-0.193*** (0.010)
Regional dummies						0.164** (0.020)
regional childcare availability					0.065 (0.707)	
Constant	0.456*** (0.000)	0.454*** (0.000)	0.091 (0.391)	0.052 (0.874)	0.037 (0.916)	0.163 (0.629)
Observations	522	522	483	333	333	333
R-squared	0.026	0.027	0.075	0.134	0.134	0.177

Robust pval in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>9</sup> I have taken the percentile 25 and percentile 75.



So far the analysis has focused on the stated preferences. The next section will turn to revealed preferences. As noted earlier, the latter might show different results, either because of other external factors affecting the pace to return to work, or because there might be a gap between the preferences expressed in an interview and the actual behaviour.

## 5.2. Revealed preferences

Table 7 presents the main results for revealed preferences to return to work. The structure of the Table is similar to Table 4, where stated preferences are the dependent variable. The difference with Table 4 is that I have added a last column where the complete model for stated preferences (Model 6 from Table 4) is shown. This is for comparison purposes. Throughout the Models in Table 7 the policy coefficient remains significant at 1% level and its impact once all controls are added is around 22%, suggesting that the probability of fast return increases by 22% after the policy is implemented. This is a much higher increase than the one we had with stated preferences (Model 7), suggesting that the pace to return to work has increased more than what the mothers stated in the survey. Family values keep their statistical relevance as well, in a similar level than with stated preferences. Mothers with liberal family values increase their preference to return fast to work before the policy by 11%. The difference-in-difference is again insignificant.

Some control variables have also changed their significance compared to when stated preferences were analysed, although, as expected, the signs of the coefficients are the same.

**Table 7. The effect of parental leave reform policy on the revealed pace to return to work for mothers holding different family values.**

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model6	Model 7
dyear	0.178*** (0.000)	0.188*** (0.000)	0.213*** (0.000)	0.234*** (0.000)	0.234*** (0.000)	0.221*** (0.000)	0.052** (0.044)
Family values	0.047 (0.185)	0.059* (0.083)	0.038 (0.295)	0.120*** (0.001)	0.063 (0.196)	0.110** (0.046)	0.099** (0.047)
Time*family values		-0.028 (0.408)	-0.024 (0.551)	-0.069 (0.290)	-0.063 (0.352)	-0.086 (0.193)	0.005 (0.961)
age			-0.085*** (0.007)	-0.129*** (0.000)	-0.128*** (0.000)	-0.141*** (0.000)	-0.038*** (0.006)
age2			0.001** (0.007)	0.002*** (0.000)	0.002*** (0.000)	0.002*** (0.000)	0.000** (0.012)
marital st [base:single]			0.046* (0.073)	0.126*** (0.003)	0.148*** (0.001)	0.170*** (0.000)	
D. net hh income median			-0.054* (0.051)	0.088** (0.032)	0.086** (0.038)	0.080** (0.033)	0.188*** (0.001)
yrs educ			0.024** (0.033)	0.032** (0.034)	0.030** (0.033)	0.029** (0.030)	0.025*** (0.000)
childr<16 [base:yes]			0.045 (0.271)	0.027 (0.454)	0.044 (0.290)	0.047 (0.188)	0.071* (0.055)
age husband				0.009 (0.222)	0.009 (0.206)	0.009 (0.213)	0.020*** (0.001)
yrs educ husband				-0.005 (0.690)	-0.006 (0.642)	-0.003 (0.816)	-0.006 (0.567)
D net income median hubs				-0.205*** (0.000)	-0.193*** (0.000)	-0.187*** (0.000)	-0.189*** (0.002)
Regional dummies						-0.053 (0.426)	0.159** (0.020)
regional childcare availab.					0.352*** (0.000)		
Constant	0.421*** (0.000)	0.416*** (0.000)	1.484** (0.011)	1.975*** (0.000)	1.907*** (0.000)	2.001*** (0.000)	0.092 (0.763)
Observations	542	542	504	359	359	359	366
R-squared	0.032	0.032	0.073	0.137	0.144	0.197	0.177

Robust pval in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Robustness checks like the ones done with the stated preferences show no significant difference in the results (see results in *Appendix 4*).

### 5.2.1. Subsample analysis

A replication of the subsample analysis for ‘extreme’ values done with stated preferences is carried out (see results in *Appendix 5*). This time however, the difference-in-difference estimator is statistically insignificant. Therefore, this suggests that, when it comes to actual behaviour, the economic incentives of the policy have a positive and significant effect on the pace to return to work, reducing it significantly. And yet, the differences between the pace to return to work between mothers with liberal and traditional family values remain after the policy.

## VI. CONCLUSION

This paper has investigated the effect of a parental leave policy on the preferences to return to work for mothers holding different family values. To this purpose I have looked at both stated preferences about the pace to return to work as well as revealed preferences – that is, actual behaviour – of mothers living in Germany. For identification, I have used the 2007 parental leave policy reform which reduced the parental leave subsidy from two to one year. At the same time, and in order to disentangle any possible institutional effects from the “cultural” ones, I have compared the effect of the reform across mothers living in Germany with different migrant origin (native from East Germany, native from West Germany, and migrant origin from several different countries).

The results have shown that family values affect the pace to return to work after childbirth, thus suggesting that the former are a factor that contributes explaining the lack of convergence across societies. More specifically, the paper has shown that the policy has substantially increased the return to work of mothers, regardless of their family values. Nevertheless, the pace to return to work of mothers with traditional family values is – both before and after the policy – lower than the pace to return to work of mothers with liberal family values. At the same time, the examination of the policy effects on both stated and revealed preferences show that mothers have adjusted their actual behaviour to the policy more than what they claimed in the survey. This points at the relevance of looking at revealed preferences, as the stated ones may underestimate the effect of policy reforms. Moreover, it points at a potential conflict between the actual wants of mothers and their ultimate behaviour. This seems to be especially the case when the stated and revealed preferences of mothers with very liberal and very traditional family values are compared. The stated preferences reveal a difference in the policy effects for mothers holding very liberal family values compared to mothers holding very traditional family values. Nevertheless, this difference disappears once the revealed preferences are analysed.

In line with previous analysis of the same policy (see Bergemann & Riphahn, 2011; Kluge, 2009), this paper suggests that the policy has had an overall positive effect in increasing the pace to return to work for mothers in Germany. And yet, by analysing the differences in the effect of the policy for mothers holding different family values, the present paper provides a more nuanced picture, suggesting that family values may be indeed a source for the lack of convergence in female labour force participation in different societies. This result is important for countries with a heterogeneous population and implies that other family policies have to be in place if female labour force participation is to be increased across all population groups. At the same time, the results might also be of importance for countries which replicate family policies from other countries with an average population who have different family values. The policy replicated may still work, but the impact might be of a very different magnitude.

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## APPENDIX

### Appendix 1

Table A.1. GSOEP samples relation

Name/ Value	Label	Start Year	House- holds	Persons	Description
A/1	German West	1984	4,528	9,076	Head is either German or other nationality than those in Sample B
B/2	"Foreigner" West	1984	1,393	3,169	Head is either Turkish, Italian, Spanish, Greek or from the former Yugoslavia
C/3	Germans East	1990	2,179	4,453	Head was a citizen of the GDR (expansion of survey territory)
D/4	84-93 Immigrant (West)	1994/1995	522	1,078	At least one household member has moved to Germany after 1989 (expansion of survey population)
E/5	Refreshment 1998	1998	1,056	1,910	Random sample covering all existing subsamples (total population)
F/6	ISOEP 2000	2000	6,043	10,880	InnovationRandom sample covering all existing subsamples (total population)
G/7	High Income	2002	1,224	2,671	Monthly net household income is more than 4.500 Euro (7.500 DM)
H/8	Refreshment 2006	2006	1,506	2,616	Random sample covering all existing subsamples (total population)
I/9	"Incentive"	2009	1,531	2,509	Random sample covering all existing subsamples (total population); since 2011 part of SOEP Innovation Sample
J/10	Refreshment 2011	2011	3,136	5,161	Random sample covering all existing subsamples (total population)

Source: SOEP Samples Overview – 2011 / Wave 28

## Appendix 2 – Coding of variables

### 2.1 Coding of dummy variable childbirth

To know whether they had a child, there is a question which asks ‘*Has your family situation changed after December 31, 200X?*’ (200X belongs to  $n-2$ , i.e. if the questionnaire belongs to year 2008, the question will refer to December 31, 2006). One of the answers is ‘Yes, had a child’ and for each answer the respondent is asked whether this was in year  $n$  or  $n-1$  (i.e. in the questionnaire belonging to year 2008, the options are: 2007 and 2008). Given that the interviews happen in different months of the year for each respondent, it can be the case that they are asked this question before they have had a child (e.g. the respondent is interviewed in January 2007 and she has a child in December 2007). To avoid dropping women who have actually had a child, I rely on the answers from year  $n-1$ .

### 2.2 Dependent variable – stated preferences

Two problems arise in the coding of the stated preferences variable. Firstly, given that the interviews were done in different months of the years, there exists the possibility that the question is asked before the women has had a child, in which case the answer would be ‘*no apply*’. Given that I have information on whether they have had a child (see above), if this is the case I check at the answer of this question for the next year. Secondly, there might be a big gap between the birth date and the interview date, especially in the case where we get the answer to the dependent variable from the following year. This poses an inconvenient for the coding of the dependent variable if the answer is ‘*within a year*’. This is because if, say, the gap between the birth and interview date is of 10 months, an answer ‘*within a year*’ should be coded as slow return (as opposed to fast return), given that the total amount of time the respondent would have been on parental leave would be two years. To account for this, I take information about the difference between the birth and interview month, and for answers ‘*within a year*’ I look at the difference between birth and interview rate. If the difference is eleven or twelve months, I code the answer as slow return. If the difference amounts to one to six months, I code it as fast return. If the difference amounts to seven to ten months, it is quite ambiguous, so I drop the observation.

### 2.3 Coding of country of origin subject to migration background

For those observations which have ‘direct migration background’, I take the variable ‘country of origin’. For the observations with ‘indirect migration background’ the process to trace back the country of origin is more complex. Firstly, I look at the variable ‘mother and father country of origin’. If this one is existent, I attribute this information to the observation. If the mother or father country of origin is not available, I trace back the mother or father personal number and their ‘country of origin’.

### Appendix 3 – Detailed migrants’ background

Table A.2. depicts the detailed migrants’ background. Information on family values for the shaded countries is not available in the World Value Survey.

Table A.2. Detailed migrants’ background

	Stated preferences				Revealed preferences			
	no migration background	Direct migration background	Indirect migration background	total	no migration background	Direct migration background	Indirect migration background	total
East Germany	158	-	-	<b>158</b>	157	-	-	<b>157</b>
West Germany	310	-	-	<b>310</b>	276	-	-	<b>276</b>
Turkey	-	10	31	<b>41</b>	-	12	31	<b>43</b>
Ex-Yugoslavia	-	3	-	<b>3</b>	-	2	-	<b>2</b>
Greece	-	2	1	<b>3</b>	-	2	1	<b>3</b>
Italy	-	3	2	<b>5</b>	-	2	2	<b>4</b>
Austria	-	1	-	<b>1</b>	-	1	-	<b>1</b>
France	-	-	1	<b>1</b>	-	1	1	<b>2</b>
USA	-	4	-	<b>4</b>	-	3	-	<b>3</b>
Switzerland	-	1	-	<b>1</b>	-	-	-	<b>0</b>
Rumania	-	7	-	<b>7</b>	-	8	-	<b>8</b>
Poland	-	9	-	<b>9</b>	-	9	-	<b>9</b>
Iran	-	1	-	<b>1</b>	-	1	-	<b>1</b>
Hungary	-	1	-	<b>1</b>	-	1	-	<b>1</b>
Bolivia	-	1	-	<b>1</b>	-	1	-	<b>1</b>
Portugal	-	2	1	<b>3</b>	-	1	1	<b>2</b>
Czech Republic	-	1	-	<b>1</b>	-	1	-	<b>1</b>
Russia	-	9	-	<b>9</b>	-	10	-	<b>10</b>
Philippines	-	3	-	<b>3</b>	-	3	-	<b>3</b>
Australia	-	-	1	<b>1</b>	-	-	1	<b>1</b>
Tunisia	-	1	-	<b>1</b>	-	1	-	<b>1</b>
Cuba	-	1	-	<b>1</b>	-	1	-	<b>1</b>
Brasil	-	2	-	<b>2</b>	-	2	-	<b>2</b>
China	-	1	-	<b>1</b>	-	1	-	<b>1</b>
Moldova	-	1	-	<b>1</b>	-	1	-	<b>1</b>
Kazakhstan	-	10	-	<b>10</b>	-	9	-	<b>9</b>
Lebanon	-	2	-	<b>2</b>	-	2	-	<b>2</b>
Ukraine	-	3	-	<b>3</b>	-	3	-	<b>3</b>
Eritrea	-	1	-	<b>1</b>	-	1	-	<b>1</b>
Uzbekistan	-	1	-	<b>1</b>	-	1	-	<b>1</b>
The Netherlands	-	1	-	<b>1</b>	-	1	-	<b>1</b>
Croatia	-	3	-	<b>3</b>	-	3	-	<b>3</b>

Bosnia	-	1	-	1	-	1	-	1
Macedonia	-	3	-	3	-	3	-	3
Slovakia	-	1	-	1	-	1	-	1
Kosovo	-	2	-	2	-	2	-	2
Serbia	-	1	-	1	-	1	-	1
<b>TOTAL</b>	<b>468</b>	<b>93</b>	<b>37</b>	<b>598</b>	<b>433</b>	<b>92</b>	<b>37</b>	<b>562</b>
<b>TOTAL with information on family values available</b>	<b>468</b>	<b>72</b>	<b>37</b>	<b>577</b>	<b>433</b>	<b>73</b>	<b>37</b>	<b>543</b>



## Appendix 4

Table A.3 depicts some robustness checks to assess the impact of the policy in different scenarios. All robustness checks use the more complete model from Table 7, Model 6 (I have included it here for comparison). Model 2 uses the father's migrant origin for observations with indirect migrant background, and results are very similar. Model 3 estimates are based on a logit model. The aim is to see whether the significance of the coefficient changes if we assume away the linearity of our PLM and introduce non-linearity. Although its coefficients are the odds ratios and that makes it difficult to compare with Model 1, the significance is very similar. In Model 4 the variable family values is dichotomized according to its median value, as opposed to its mean, and I get very similar results as well. Model 5 is a placebo test where the time variable is zero when year is below 2006 and one when otherwise. Results show that there was no significant change in the pace to return to work in 2006. Finally, in Model 6 I have only included those migrant observations whose parents have the same country of origin and the coefficients still remain very similar.

Table A.3 – The effect of parental leave reform policy on the revealed pace to return to work for mothers holding different family values- robustness checks.

VARIABLES	Model 1 base	Model 2 Father's values	Model 3 Logit (odd ratios)	Model 4 Fv median	Model 5 placebo	Model 6 Mig: parents same origin
dyear	0.221*** (0.000)	0.217*** (0.000)	1.068*** (0.000)	0.224*** (0.000)	0.069 (0.520)	0.222*** (0.000)
Family values	0.110** (0.046)	0.126** (0.042)	0.545** (0.025)	0.136** (0.020)	0.029 (0.673)	0.129** (0.032)
Time*family values	-0.086 (0.193)	-0.091 (0.198)	-0.433 (0.159)	-0.094 (0.172)	0.103 (0.247)	-0.098 (0.163)
age	-0.141*** (0.000)	-0.141*** (0.000)	-0.864*** (0.000)	-0.140*** (0.000)	-0.129*** (0.000)	-0.135*** (0.000)
age2	0.002*** (0.000)	0.002*** (0.000)	0.012*** (0.000)	0.002*** (0.000)	0.002*** (0.000)	0.002*** (0.000)
marital st [base:single]	0.170*** (0.000)	0.168*** (0.000)	0.830*** (0.000)	0.166*** (0.000)	0.172*** (0.000)	0.165*** (0.000)
dummy net hh income median	0.080** (0.033)	0.083** (0.021)	0.415** (0.024)	0.083** (0.028)	0.098*** (0.005)	0.076** (0.048)
yrs educ	0.029** (0.030)	0.030** (0.025)	0.137** (0.035)	0.029** (0.028)	0.026* (0.088)	0.029** (0.033)
childr<16 [base:yes]	0.047 (0.188)	0.040 (0.313)	0.308** (0.020)	0.043 (0.198)	0.031 (0.474)	0.035 (0.345)
age husband	0.009 (0.213)	0.010 (0.185)	0.051 (0.149)	0.009 (0.205)	0.011 (0.156)	0.010 (0.183)
yrs educ husband	-0.003 (0.816)	-0.004 (0.760)	-0.017 (0.802)	-0.004 (0.786)	-0.003 (0.827)	-0.003 (0.783)
d. net income median hubs	-0.187*** (0.000)	-0.191*** (0.000)	-0.926*** (0.000)	-0.189*** (0.000)	-0.209*** (0.000)	-0.196*** (0.000)
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes
Constant	2.001*** (0.000)	2.001*** (0.000)	9.781*** (0.001)	1.989*** (0.000)	1.862*** (0.001)	1.899*** (0.000)
Observations	359	357	354	359	359	354
R-squared	0.197	0.200	-	0.199	0.170	0.198

Robust pval in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix 5

Table A.4 focuses on the effects of the policy on revealed preferences for the pace to return to work for mothers who hold 'extreme' values; that is, mothers who have been associated with very traditional or very liberal family values. The Models show a stepwise addition of covariates and Model 6 reflects the most complete model. The results show that, as opposed to the subsample analysis for stated preferences, the difference-in-difference coefficient is not significant.

Table A.4. Subsample analysis - the effect of parental leave reform policy on the revealed pace to return to work for mothers holding very traditional values and very liberal values.

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
dyear	0.187** *	0.191***	0.220***	0.239***	0.238***	0.226***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Family values	0.052 (0.145)	0.058* (0.084)	0.041 (0.275)	0.104*** (0.005)	0.013 (0.699)	0.058** (0.032)
Time*family values		-0.013 (0.395)	-0.006 (0.704)	-0.003 (0.906)	0.009 (0.679)	-0.029 (0.306)
age			-0.108*** (0.006)	-0.127*** (0.002)	-0.126*** (0.002)	-0.142*** (0.001)
age2			0.002*** (0.005)	0.002*** (0.004)	0.002*** (0.004)	0.002*** (0.002)
marital st [base:single]			0.036 (0.165)	0.105** (0.021)	0.124*** (0.010)	0.149*** (0.002)
dummy net hh income median			-0.048 (0.110)	0.113** (0.037)	0.110** (0.040)	0.096** (0.043)
yrs educ			0.027** (0.037)	0.034* (0.062)	0.033* (0.059)	0.033** (0.035)
childr<16 [base:yes]			0.037 (0.336)	0.020 (0.605)	0.038 (0.432)	0.036 (0.324)
age husband				0.007 (0.313)	0.008 (0.249)	0.009 (0.234)
yrs educ husband				-0.006 (0.702)	-0.007 (0.664)	-0.003 (0.856)
dummy net income median hubs				-0.201*** (0.000)	-0.185*** (0.000)	-0.182*** (0.000)
Regional dummies						Yes
regional childcare availability					0.402*** (0.000)	
Constant	0.414** *	0.411***	1.813**	1.990***	1.878***	1.927***
	(0.000)	(0.000)	(0.012)	(0.002)	(0.004)	(0.002)
Observations	502	502	466	325	325	325
R-squared	0.036	0.036	0.081	0.154	0.161	0.221

Robust pval in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1