ISSN: 2281-1346

Department of Economics and Management

DEM Working Paper Series

Natives and Migrants in Home Production: The Case of Germany

Emanuele Forlani
(Università di Pavia)

Elisabetta Lodigiani
(Università di Venezia – Ca' Foscari)

Concetta Mendolicchio
(Institute for Employment Research, IAB)

 # 125 (07-16)

Via San Felice, 5
I-27100 Pavia
http://epmq.unipv.eu/site/home.html

July 2016

Natives and Migrants in Home Production: The Case of Germany*

Emanuele Forlani[a,d], Elisabetta Lodigiani[b,d] , Concetta Mendolicchio[c]

[a]University of Pavia, Via San Felice, 5 - 27100 Pavia, Italy. emanuele.forlani@eco.unipv.it

[b]University of Venice - Ca' Foscari, Cannaregio 873, Fondamenta San Giobbe, 30121 Venezia, Italy.

elisabetta.lodigiani@unive.it

[c]Institute for Employment Research, Regensburger Strasse 104, D-90478 Nuremberg, Germany.

Concetta.Mendolicchio@iab.de

[d]Centro Studi Luca d'Agliano (LdA), University of Milan - Via Conservatorio 7, 20122 Milano, Italy.

July 2016

Abstract: In this paper, we assess the impact of international migration, and the induced home-care service labour supply shock, on fertility decisions and labour supply of native females in Germany. Specifically, we consider individual data of native women from the German Socio-Economic Panel and we merge them with the data on the share of female immigrants and other regional labour market characteristics. We find that an increase of the share of female immigrants at the local level induces women to work longer hours and positively affects the probability to have a child. This effect strengthens for (medium) skilled women and, among them, for women younger than 35 years of age. The negative change in household work attitude confirms the behavioural validity of our results.

JEL Classification: J13, J22, J61
Keywords: Female labour, time allocation, fertility, international migration.

*Concetta Mendolicchio acknowledges the financial support of the IAB. The responsibility for any mistakes is our own.

I Introduction

International migration may alter significantly the labour market conditions in the destination countries. As a first order effect, it may change the labour market supply in sectors where a large number of migrants looks for a job. In particular, migrants represent a significant fraction of employees in sectors providing services to households. Several recent studies (Barone and Mocetti, 2011; Cortes and Tessada, 2011; Farre et al., 2011) show that immigrants have contributed to a decrease in the prices of household services where they specialize, or in sectors with high concentration of low-wage workers (see Cortes, 2008, and Frattini, 2012, for the US and UK, respectively), such as housekeeping, childbearing, or caring for the elderly. Given that these services are, typically, a substitute for time consuming activities carried out, mostly by women, within the family, there may be a second order effect on the labour supply of native women (see Cortes and Tessada, 2011, for the US; Farre et al., 2011, for Spain; Barone and Mocetti, 2011, for Italy; Forlani et al., 2015, for a multi-country analysis). Moreover, immigration can induce women both to increase hours at work and have an additional child, thus affecting the traditional trade-off between fertility and work activities (see Furtado and Hock, 2010; Furtado, 2015; Furtado, 2016 for the US).

This paper aims to study the impact of female immigrants on fertility choices, and on the optimal allocation of time between home production (including childcare) and paid work of native women in Germany.

Our paper adds to previous results from several viewpoints. First, we focus on Germany and we perform a cross-regional analysis. This allows us to understand how migrants interact with the local labour market conditions. This is of particular importance as differences in participation, employment and unemployment rates across areas contribute to the significant variations in women's labour supply behaviour and migrants assimilation on the labour market. Second, the German education system is characterized by an early-track system, which could affect the performance on the labour market. For this reason, in the empirical analysis, we test whether the impact is stronger for (three) different skill levels. Finally, focusing on the behaviour of women, we think we could contribute to the discussion about fertility rate in Germany, which has become an important issue for policy makers. One of the key point for our research question is that the increase of female migrants in Germany has increased the availability of household services. This impact is confirmed in the empirical analysis that we will present in Section III. Given that household services bought on the market and own time are inputs in the home production, we expect that an increase in the labour supply of this kind of services decreases the time spent in household and childcare work and increases the time spent on the workplace.[1] Generally speaking, these effects (and the one on fertility) will depend on the childcare system and on the family policies implemented in the country. This may be of particular interest for a country like Germany, which traditionally had a relatively low degree of family policy support (Novy et al., 2009) and where the main features of family policies have been recently changed. [2]

The empirical analysis is based on two large datasets: the German Socio-Economic Panel (GSOEP) data combined with the Indikatoren und Karten zur Raumentwicklung (INKAR - Indicators and Maps on Spatial and Urban Development) data. In the next sections we will present the data and our empirical strategy. Here, it is sufficient to say that one of the main difficulties with

[1] For a theoretical discussion see Forlani et al. (2015).

[2] For a discussion on the recent reform on parental leave benefits see Raute (2015).

the empirical analysis of immigration is to address the potential endogeneity issues caused by the location choices of immigrants (since their distribution across areas is not random), and by measurement errors (due to undocumented migrants). To solve this problem, we exploit the tendency of migrants to locate in areas with a large share of migrants of the same country of origin and create a shift-share instrument redistributing current migrants according to their past distribution across areas (Card, 2001).

We present several sets of results. First, we estimate the impact of (female) immigration on the fertility decisions of native women aged 22-45, segmented by skill levels. We find that there is a positive and statistically significant effect on the average probability of having a child for the (medium) skilled native women. Second, we test the empirical relationship between the concentration of female immigrants and the probability of working longer hours. Similarly to previous studies, we observe that an increase in the share of female immigrants augments the probability of (medium) skilled women to work more hours. Third, we find a negative effect on the weekly hours native women devote to home production. All these findings are particularly strong for young women, aged 22-35. The results are robust to different sample compositions and identification tests.

The structure of the paper is the following. In Section II, we briefly discuss the data. Section III introduces the econometric specification and presents the main results. Some conclusions are reported in Section IV.

II Data Description

In this section, we introduce the details of the data on migration, labour supply and home production of native females. Our analysis is based on data taken from the GSOEP, which is a representative and longitudinal survey of private households living in Germany. Data are collected on a yearly basis by the German Institute of Economic Research (DIW Berlin) since 1984 (Wagner et al., 2012) and include individual characteristics for the entire population following participants over time. We focus on Germany for several reasons. First, Germany is a high immigration country. Second, the GSOEP has the advantage to allow for longitudinal analysis of the socio-economic behaviour of individuals. The data cover a wide range of topics, such as employment status, income, household type, educational attainment, birthplace, region of residence, etc. Third, the GSOEP has survey questions on the number of hours respondents spent on several activities on a normal weekday, a normal Saturday, and a normal Sunday. We use this information to construct a measure of home production which includes housework (washing, cooking, cleaning), and childcare. The GSOEP can be merged with the INKAR data, a dataset containing local labour market characteristics such as GDP per capita, unemployment rate, female participation rate, share of manufacturing employment, share of services employment, and so on for the 1995-2012 period. Germany is divided into 97 regional policy regions, Raumordnungsregionen (ROR). The RORs are official spatial units defined by the Federal Office for Building and Regional Planning (Bundesamt Bauwesen und Raumordnung, BBR2) to differentiate areas in Germany based on their economic interlinkages (for more details, see BBSR, 2015). Most important from our viewpoint, the INKAR data provide rich and reliable information on the proportion of immigrants by gender over the entire population at the ROR level. As Figure A.1 in Appendix A shows, the share of female immigrants over the total population by RORs level remains relatively constant over time, while

there are significant differences across regions. On average in a ROR, in the period 1999-2012, the proportion of female migrants accounts for the 3.41 percent of the total resident population, while total migrants (males and females) represent the 7.03 percent (see Table 2).

Using the geocode information available in the GSOEP data, we have merged GSOEP individual data with the INKAR data on migration, restricting our analysis to thirteen waves, from 1999 to 2012.[3] Nevertheless, compared to the previous studies in the literature, including our own contribution, this enables to conduct the analysis on the impact of immigrants also on fertility choices, which can be seen as a long term decision.

We restrict our sample to native women aged 22-45.[4] This allows us to focus on females in fertile age, with or without young children, for which the link between time spent in household production and labour market decision is stronger. We define as a *native* an individual, woman in this case, who self-declares to be national born.

Given the structure of the German education system, the so-called dual system, we consider three skill levels.[5] We define as *high skilled* an individual who has achieved a bachelor, or a higher degree. *Medium skilled* are the individuals who have obtained an upper-secondary education different from university degree (e.g., Specialized vocational school - Berufsfachschule). Finally, a *low skilled* is an individual with at most a high school diploma (see Table A.1). With the aim of focusing on, both the intensive margin of labour supply and home production, we include only employed native women. Table 1 displays some descriptive statistics of our estimation sample by skill level. Not surprisingly, the educational level affects the labour supply and fertility choices of German female population. On average, low skilled women work less hours per week and have more children, though the average number of children per woman is quite low for all the educational groups.

[3]This choice depends on our instrumental variable strategy, as we will discuss in Section III.

[4]We do not include women enrolled in school, or women in the army.

[5]German students are separated into different tracks at age 10, when they may choose between three levels of secondary education: Hauptschule, Realschule, and Gymnasium. The lowest level, Hauptschule, is designed for students who plan to begin apprenticeship programs starting at age 16. Similarly, the Realschule focuses attention on providing students with the skills necessary for an apprenticeship, though it provides slightly more advanced academic content than the Hauptschule. Students who plan to attend universities generally attend Gymnasium, the highest level of the secondary educational system. Upon graduating from Gymnasium, students receive a university entry certificate, known as the Abitur. There is a strong incentive for high school students to do well in competition for the best apprenticeships. This is why German students who do not continue into higher education, generally, gain more knowledge through high school classes compared with students from the United States, the United Kingdom or other countries, not planning to attend college. As a result of the country's apprenticeship training programs, where studies are combined with on-the-job training, it becomes important to account for the three levels of skill.

Table 1: Descriptive Statistics by skill level (averages)‡

	All Mean	Low Skill Mean	Medium Skill Mean	High Skill Mean
% Age 36-45	0.521	0.538	0.515	0.531
NewBorn	0.050	0.038	0.044	0.068
PW20	0.702	0.599	0.690	0.768
PW30	0.533	0.423	0.522	0.600
PW35	0.464	0.355	0.452	0.532
PW40	0.265	0.168	0.247	0.349
Age	35.177	35.282	34.927	35.798
Number Child. (0-18)	0.891	1.045	0.887	0.846
Marital Status	0.533	0.554	0.535	0.518
Old in HH	0.022	0.031	0.021	0.022
Observations	34530	3039	22814	8677

‡ Source: our calculation from GSOEP data. Averages for employed women aged 22-45 from 1999 to 2012. Skill level from Equivalent Data (see Table A.1). NewBorn takes value one if there is a child aged 0 to 1 in the household of the women, otherwise zero. PW20, PW30, PW35, and PW40: take value one if a woman works more than 20, 30, 35, and 40 hours per week, respectively. Number Child. (0-18) is the number of children aged 0-18 in the household of the woman. Marital Status: share of married or cohabiting women. Old in HH, number of people aged 65 or more in the household of the woman.

Table 2: Share of Migrants on the total resident population (averages by year)‡

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Share Total Migrants	7.23	7.14	7.19	7.22	7.22	7.17	7.16	7.13	7.13	7.07	7.03	7.12	6.19	6.49	7.03
Share Female Migrants	3.33	3.32	3.36	3.40	3.43	3.43	3.45	3.45	3.45	3.44	3.43	3.47	3.62	3.19	3.41

‡ Source: our calculation from Inkar Data. Each cell reports the average share across ROR regions.

III Empirical approach and main results

In this section, we describe the empirical approach that we have adopted to estimate the effects of migrants on native female labour supply. Among the possible channels of transmission, we are particularly interested in the one mediated by the effects of female migrants on the supply of household goods and services. This is because hired help is a natural substitute for own labour in the home production. Using INKAR aggregate data, Table 3 shows that there is a positive correlation between (the logarithm of) the share of female migrants over total population and (the logarithm of) the share of people employed in home care services and nursing homes (per 10,000 population). This suggests that female immigrants have increased the availability of workers in the personal care, and (by extension) in the household service, sector.[6] Consequentially, we expect that

[6]The impact is positive and statistically significant when we consider the share of female immigrants. When considering the share of total migrants the results do not hold, being in line with the fact that females are more likely

female immigrants increase the native women's labour supply at the intensive margin and decrease the intensive margin of the home production, i.e. the weekly hours a woman spends in household activities. At the same time, female migrants can positively affect the decision about having or not a child.

Table 3: Impact on household labour market supply - ROR data‡

	(1) Nurse Care (ln) OLS	(2) Home Care (ln) OLS	(3) (1)+(2) OLS	(4) Nurse Care (ln) 2SLS	(5) Home Care (ln) 2SLS	(6) (4)+(5) 2SLS
Share Female Migrants (ln)	0.408***	0.403***	0.468***	1.660***	1.774***	1.766***
	(0.068)	(0.128)	(0.060)	(0.463)	(0.525)	(0.456)
R^2	0.953	0.838	0.949	0.896	0.803	0.874
Obs	480	480	480	480	480	480
F-Test				8.41	8.41	8.41

‡ OLS and 2SLS estimations. Because of data availability, estimation sample includes year 2003, 2005, 2007, 2009, and 2011. Robust standard errors are clustered by ROR and reported in brackets. Each column represents a different estimation. Year and ROR fixed effects are included. F-Test is the Kleibergen-Paap rk statistic. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

In the following, after introducing our identification strategy, we first focus on the impact of immigration on fertility decisions, and then we present the results of the impact on the intensive margin of women's labour supply and home production. To deal with the endogeneity issues, we adopt a standard instrumental variable strategy that relies on the ROR past distribution of migrants by country of origin (Card, 2001).[7]

More specifically, we predict the share of female immigrants over total population in a given ROR r by redistributing total immigrants, at the national level, from different countries of origin across RORs as of 1996 (as the classification of RORs changed in 1996, this is the earliest year we can take as a year of reference).[8] This instrument captures the tendency of migrants to locate in areas with a large share of migrants of the same country of origin. This is because network effects influence migrants' location choices, reducing the costs faced by newcomers. As the past distribution of migrants could be not random, but driven by economic shocks that attracted specialized immigrants in the past and that are persistent over time, we construct our instrument considering total immigrants, instead of female immigrants.

More formally, the instrument is defined as:

$$\widehat{ShareFemaleMigrants}_{rt} = \frac{\sum_j \frac{Immigr_{jr1996}}{Immigr_{j1996}} TotMigrants_{jt}}{TotPop_{r1996}} \tag{1}$$

where $\sum_j \frac{Immigr_{jr1996}}{Immigr_{jc1996}}$ is the share of total immigrants from country of origin *j*, living in ROR *r*, in the year 1996. $TotMigrants_{jt}$ stands for the total number of migrants from country of

to work in the household service sector.

[7] A similar approach has been applied by Cortes and Tessada (2011), Farre et al. (2011), Barone and Mocetti (2011).

[8] Migration data by country of origin, at the national level, are taken from the data reported by the Federal Statistical Office (Statistische Bundesamt - DESTATIS). A similar approach has been used by Giuntella and Mazzonna (2015) that study the impact of immigration on natives' health in Germany.

origin *j* in year *t*. $TotPop_{r1996}$ is the ROR total population in 1996.[9] We then apply a logarithmic transformation.[10]

We evaluate the effects of the share of female immigrants over total population, $ShareFemMigr_{irt}$, on two types of decisions made by employed native women: fertility and labour supply (intensive margin).

First, we estimate the effect of migration on the fertility decision of native women, namely

$$Fert_{irt} = a_0 + a_1 ln(ShareFemMigr_{irt}) + \sum_j a_j X(j)_{irt} + \sum_m a_m R(m)_{rt} + Y_t + R_l + c_i + e_{irt}, \quad (2)$$

where $Fert_{irt}$ is a dummy variable that takes the value of 1 if a native woman i, located in ROR r, at time t, has a child aged 0-1 in the household, and 0 otherwise. $X(j)_{irt}$ is a vector of individual controls, and $R(m)_{rt}$ a vector of regional controls.[11] The estimated model includes year fixed effects (Y_t), and Länder fixed effects (R_l). Equation 2 is estimated considering individual fixed effects c_i. Standard errors are clustered at individual level to control for serial correlation within survey respondents.

Second, we estimate the effect of migration on the intensive margin of native women's labour supply, namely

$$Int.Marg_{irt} = a_0 + a_1 ln(ShareFemMigr_{irt}) + \sum_j a_j X(j)_{irt} + \sum_m a_m R(m)_{rt} + Y_t + R_l + c_i + e_{irt}, \quad (3)$$

where $Int.Marg$ is the labour supply, measured as the probability to work more than a given amount of hours per week.

Finally, for completeness, we estimate the effect of migration on the total amount of weekly hours spent by a native employed woman in housework and childcare activities: [12]

$$Ln(HouseWork)_{irt} = a_0 + a_1 ln(ShareFemMigr_{irt}) + \sum_j a_j X(j)_{irt} + \sum_m a_m R(m)_{rt} + Y_t + R_l + c_i + e_{irt}, \quad (4)$$

Table 4 presents the empirical results on the relationship between migrants and fertility decisions.[13] Panel A provides estimates from a simple fixed effect (FE) model and shows an overall positive correlation between the share of female immigrants and the probability to have a new born child in the household, though the positive correlation is statistically significant only for German

[9] We prefer to use the regional total population in 1996, because it is less likely to be correlated with contemporaneous labour market shocks.

[10] We follow Forlani et al. (2015).

[11] Individual controls include: age, age squared, skill level, marital status, number of children in the household, number of individuals older than 65 in the household. Regional controls include: ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000).

[12] We added the reported home production on Saturday and Sunday to the reported home production on a weekday multiplied by five. Note that data on hours spent on time-use categories are available every two years, from 1999 to 2011.

[13] We report only the estimated coefficient of the variable of interest. Estimated coefficients for control variables are provided in Table A.2 and A.3 of the Appendix A.

Table 4: Fertility (FE-2SLS)- Employed women 22-45[‡]

	(1) All	(2) Low SK	(3) Med Sk	(4) High Sk	(5) Med Sk 22-35	(6) Med Sk 36-45
Panel A			Dummy NewBorn (FE)			
Share Female Migrants (ln)	0.004	0.017	0.019	-0.025*	0.029*	0.022
	(0.009)	(0.038)	(0.013)	(0.015)	(0.016)	(0.016)
R^2	0.103	0.099	0.103	0.136	0.146	0.056
Obs.	34530	3039	22814	8677	11074	11740
Panel B			Dummy NewBorn (FE-2SLS)			
Share Female Migrants (ln)	-0.000	-0.167	0.038*	-0.041	0.057**	0.043**
	(0.017)	(0.195)	(0.023)	(0.025)	(0.029)	(0.020)
R^2	0.100	0.069	0.099	0.132	0.141	0.046
Obs.	33254	2689	21542	8382	10185	11051
F-Test	337.76	4.70	170.57	193.35	137.19	48.26
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes

[‡] Dependent variable: NewBorn takes value one if there is a child aged 0 to 1 in the household of the women, otherwise zero. F-Test is the Kleibergen-Paap rk statistic. Each column represents a different estimation sample. Robust standard errors are clustered by individuals and reported in brackets. Regional control variables are ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. All: sample of all native women. High Sk: sample of skilled native women. Medium Sk: medium skilled. Low Sk: sample of low skilled native women. Medium Sk 22-35 : medium skilled aged 22 to 35. Medium Sk 36-45 : medium skilled aged 36 to 45. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value. 0.01>p-value.

medium skilled women aged 22-35.[14] However, these results should be taken with caution because of endogeneity concerns. For instance, immigrants can locate in regions where the demand for childcare services is higher because of high birth-rates (this would cause an upward bias in the estimates). Conversely, immigrants could locate in areas with a sustained labour demand, where it is more likely that women are active on the labour market. If women with better labour market opportunities are less likely to have children, then estimates are likely to be biased downward. Panel B shows the 2SLS-FE results. The share of female immigrants has a positive and now statistically significant effect on the probability for a medium skilled woman to have a child, while it is not significant for the low skilled and high skilled native women. The results seem to be quite intuitive: the highly educated women tend to be less financial constrained and therefore less sensitive to changes in the availability (and prices) of childcare services, while the low skilled native women could be substitute to female immigrants working in the household service sector (and therefore the impact of immigration on these women could be different). The effect of migration is positive and statistically significant for the medium skilled women aged 22-35 and 36-45. But, again, the effect is stronger for the youngest ones. The estimate suggests that a 1 percent increase in the share of female migrants induces a 0.057 percentage point increase in the probability for a medium skilled native woman aged 22-35 to have a child younger than 1 in the household; while it induces a 0.043 percentage point increase for the one aged 36-45 (Panel B, Col.5 and 6). It should be noticed that the share of female immigrants is measured at time t as well as the presence of a child aged $0-1$

[14]The correlation is also weekly significant for the high skilled women, but with a negative coefficient.

in the household. Clearly, a woman decides to become pregnant at time $t-1$. For robustness, in unreported regressions, we regress the share of female migrants at time $t-1$ on the probability to have a child aged $0-1$ in the household at time t and we obtain very similar results (note that the uncoditional correlation between the share of female migrants at time t and the one at time $t-1$ is 0.99).

Female immigrants can induce native women not only to have more children, but also to work more hours and devote less time to home production activities. Table 5 shows that the share of female immigrants increases the probability for a native woman to work more than a certain amount of hours per week.[15] Consistently with the results that we have found on fertility decisions, when we divide the sample by skill level, we find a positive and statistically significant effect only for the medium skilled native women. For example, the estimate suggests that a 1 percent increase in the share of female migrants induces a 0.10 percentage point increase in the probability for a medium skilled native woman to work more than 40 hours per week (Panel A, Col.8). [16] Again, if we consider separately the effect for the medium skilled women aged 22-35 and 36-45, the results hold for both groups, with a stronger statistically effect for the first one. In particular, a 10 percent increase in the main explanatory variable raises by 1.29, 1.33, and 1.14 percentage points the probability a (medium skilled) woman aged 22-35 to work more than 30, 35, and 40 hours per week, respectively (Panel B, Col. 2, 3, and 4). The results seem to indicate that immigration helps medium skilled native women to better reconcile work and family responsibilities, especially in their early career stage.

These findings are further supported by the results reported in Table 6, which presents the estimates of the impact of the share of female immigrants on the number of weekly hours (logs) that native women devote to housework and childcare.[17] As in the previous cases, we split the estimation sample by three skill levels. We find that migration decreases the time that medium skilled native women allocate to housework and childcare. Considering the effect by age groups, it is clear that the results hold especially for the youngest ones: a 1 percent increase in the share of female migrants decreases by 0.4 percent the total amount of hours spent by medium skilled women aged 22-35 in both housework and childcare activities (Panel C, Col.5). Taken all together, our results suggest that medium skilled women, aged 22-35, are more likely to respond to changes in the availability of household services (in this case due to immigration) working more hours, having a child and devoting less hours to home production.

[15] We report only the estimated coefficient of the variable of interest. Estimated coefficients for control variables and FE/IV results are provided in Tables A.4 and A.5 of the Appendix A.

[16] In Table 5 we report the results only for medium skilled women. We get not statistically significant results for the low skilled and high skilled women. Results are available upon request.

[17] We report only the estimated coefficient of the variable of interest and IV results. Estimated coefficients for control variables are provided in Tables A.6 of the Appendix A.

Table 5: Intensive Margin (FE-2SLS) - Employed women 22-45‡

Panel A	All - Age 22-45				Medium Skilled - Age 22-45			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PW20	PW30	PW35	PW40	PW20	PW30	PW35	PW40
Share Female Migrants (ln)	0.047*	0.084**	0.080**	0.055*	0.030	0.104**	0.095**	0.102**
	(0.029)	(0.034)	(0.031)	(0.031)	(0.035)	(0.046)	(0.040)	(0.043)
R^2	0.069	0.084	0.083	0.035	0.048	0.065	0.066	0.021
Obs	33254	33254	33254	33254	21542	21542	21542	21542
F-Test	336.94	336.94	336.94	336.94	170.35	170.35	170.35	170.35
Panel B	Medium Skilled - Age 22-35				Medium Skilled - Age 36-45			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PW20	PW30	PW35	PW40	PW20	PW30	PW35	PW40
Share Female Migrants (ln)	0.075*	0.129***	0.133***	0.114***	-0.019	0.189*	0.182*	0.230**
	(0.039)	(0.043)	(0.038)	(0.040)	(0.064)	(0.109)	(0.109)	(0.104)
R^2	0.098	0.125	0.130	0.045	0.012	0.009	0.005	0.004
Obs	10185	10185	10185	10185	11051	11051	11051	11051
F-Test	137.02	137.02	137.02	137.02	48.304	48.30	48.30	48.30
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

‡ Dependent variables. PW20, PW30, PW35, and PW40: take value one if a woman works more than 20, 30, 35, and 40 hours per week, respectively. F-Test is the Kleibergen-Paap rk statistic. Each column represents a different estimation. Robust standard errors are clustered by individuals and reported in brackets. Reginal control variables are: ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

Table 6: Housework and Childcare (FE-2SLS) - Employed women 22-45‡

	(1) All	(2) Low Sk	(3) Med Sk	(4) High Sk	(5) Med Sk 22-35	(6) Med Sk 36-45
Panel A	Log hours housework (weeklong)					
Share Female Migrants (ln)	-0.073	-0.062	-0.178**	0.038	-0.233**	-0.144
	(0.052)	(1.187)	(0.078)	(0.074)	(0.096)	(0.149)
R^2	0.051	0.032	0.049	0.057	0.076	0.013
Obs	15281	1159	9687	3773	4232	4961
F-Test	213.32	1.50	101.51	116.17	83.34	14.61
Panel B	Log hours childcare (weeklong)					
Share Female Migrants (ln)	-0.161	-2.163	-0.212	-0.186	-0.453***	-0.450
	(0.100)	(4.777)	(0.139)	(0.157)	(0.157)	(0.302)
R^2	0.398	0.241	0.364	0.486	0.485	0.131
Obs	14651	1106	9294	3620	4048	4753
F-Test	189.56	1.58	88.35	107.49	72.31	13.73
Panel C	Log hours childcare and housework (weeklong)					
Share Female Migrants (ln)	-0.135*	-0.780	-0.214**	-0.048	-0.398***	-0.259
	(0.077)	(2.773)	(0.106)	(0.112)	(0.132)	(0.178)
R^2	0.294	0.150	0.268	0.363	0.340	0.084
Obs	14651	1106	9294	3620	4048	4753
F-Test	189.56	1.58	88.35	107.50	72.31	13.73
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes

‡ Each column represents a different estimation. Robust standard errors are clustered by individuals and reported in brackets. F-Test is the Kleibergen-Paap rk statistic. Regional control variables are ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. All: sample of all native women. High Sk: sample of skilled native women. Medium Sk: medium skilled. Low Sk: sample of low skilled native women. Medium Sk 22-35 : medium skilled aged 22 to 35. Medium Sk 36-45 : medium skilled aged 36 to 45. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

III.1 Robustness

In this sub-section, we present some robustness checks of our main findings. First, we consider an alternative classification of educational groups based on ISCED97 classification.

In order to distinguish native women by educational level, in the baseline we have considered the standard classification that the GSOEP provides in the cross-national equivalent file, where measures of many concepts (such as education) are made cross-nationally comparable. For the sake of robustness, we have constructed a further educational classification, defining education groups according to the ISCED97 classification reported in the GSOEP Generated Individual Data (PPGEN dataset).[18] Compared to the baseline classification, here some women with specialized vocational school, and previously classified as medium skilled, are moved to the high skilled category. Tables A.7, A.8, A.9 in Appendix A show the new estimation results of Eq. 2, 3, 4, respectively. Results are generally preserved.

[18] According to this classification, low skilled women belong to categories (1) inadequately and (2) general elementary of ISCED97. Medium skilled women belong to categories (3) middle vocational and (4) vocational plus abitur of ISCED97. High skilled women belong to categories (5) higher vocational and (6) higher education of ISCED97. See Table A.1.

Second, we test whether female migrants affect the labour market participation (and consequentially the participation to home production activities) of native men. Women are more likely to be affected by family responsibilities. Therefore, it is plausible to think that an increase in the supply of the household service sector due to female immigrants can change the work and fertility trade-off, and induce women to spend less time on childcare and household activities and to work more. Conversely, men are less likely to be involved in housework and childcare duties. Then, the presence of migrants should not affect male's labour supply and the time men spend on household activities. To test this hypothesis, we re-estimate Eq. 3 and Eq. 4 on a sample of native men aged 22-45. In line with our reasoning, Table A.10 in Appendix A shows that the share of female migrants does not affect the probability for a men to work more than a certain amount of hours per week. Similarly, Table A.11 shows that migration does not have any significant impact on the amount of weekly hours that a man spends on housework and childcare.

IV Conclusions

After discussing the empirical approach, we have estimated three reduced-form models. With the first, we have evaluated the effect of female migrants on the decision of having or not a child. With the second one, the impact on female probability of working longer hours and, with the third one, the impact on household and childcare working hours. We have restricted our analysis to native women aged 22-45, not enrolled in school.

Our results indicate that the presence of female migrants positively affects both the Germans' female labour market supply and fertility choices. This two results are coherent because of the adjustment in home production activities. For these activities, we have found that migration reduces the number of hours that native women devote to housework and childcare. All the results are particularly strong for women aged 22-35. The empirical evidence is consistent with our ideas that the channel of transmission from the share of female immigrants to the native female labour supply is through the availability of home service workers, which is increasing in this share. These results are of particular interest given the low German family policy support, the low childcare availability and the low fertility rate which have been one of the hottest topics in the German public debate, jointly with migration issues, during the last years.

References

[1] Barone, G. and Mocetti, S. (2011). With a little help from abroad: The effect of low-skilled immigration on the female labour supply. Labour Economics, Vol.18(5): 664-675.

[2] BBSR - Federal Institute for Research on Building Urban Affairs and Spatial Development (2015): INKAR: Indicators and Maps for Urban Affairs and Spatial Development, http://www.inkar.de/.

[3] Card, D. (2001). Immigrant in ows, native out ows, and the local labour market impacts of higher immigration. Journal of labour Economics, Vol.19(1): 22-64.

[4] Cortes, P. (2008). The effect of low-skilled immigration on us prices: Evidence from CPI data. Journal of Political Economy, Vol.116(3): 381-422.

[5] Cortes, P. and Tessada, S. (2011). Low-skilled immigration and the labour supply of highly skilled women. American Economic Journal: Applied Economics, Vol.3(3): 88-123.

[6] Farre, L., Gonzalez, L., and Ortega, F. (2011). Immigration, family responsibilities and the labour supply of skilled native women. The B.E. Journal of Economic Analysis & Policy, Vol.11(1): 1-48.

[7] Forlani, E., Lodigiani, E., and Mendolicchio, C. (2015). The Impact of Low-Skilled Immigration on Female Labour Supply. The Scandinavian Journal of Economics, Vol.117(2): 452-492.

[8] Frattini, T. (2012), Immigration and Prices in the UK, Policy Studies Institute, mimeo.

[9] Furtado, D. (2015), Can immigrants help women "have it all"? Immigrant labour and womens joint fertility and labour supply decisions, IZA Journal of Migration, Vol.4(19): 1-19.

[10] Furtado, D. (2016), Fertility Responses of High-Skilled Native Women to Immigrant Inflows, Demography, Vol. 53(1): 27-53.

[11] Furtado, D. and Hock, H. (2010), Low Skilled Immigration and Work-Fertility Trade-off among High Skilled US Natives, American Economic Review, Vol. 100 (2): 224-228.

[12] Giuntella, O. Mazzonna, F. (2015), Do immigrants improve the health of natives?, Journal of Health Economics, Vol.43: 140-153.

[13] Novy, L., Kuhn, A., and Schraad-Tischler, D. (2009). Sustainable Governance Indicators 2009 Policy Performance and Executive Capacity in the OECD. Bertelsmann Stiftung.

[14] Raute, A. (2015), Can financial incentives reduce the baby gap? Evidence from a reform in maternity leave benefits, mimeo.

[15] Wagner, G., Frick, J., and Schupp, J. (2012). The German Socio-Economic Panel Study (SOEP) Scope, Evolution and Enhancements. Journal of Applied Social Science Studies, Vol.127(1): 139-169.

A Additional Tables

Table A.1: Educational level: definitions [‡]

	Equivalent Data: Education with respect to High School	PPGEN Data: ISCED-97 classification of education	
Low Skilled	Intermediate secondary school (Realschule); Lower secondary school (Hauptschule); Other; None.	Inadequately or General Elementary	Other Degree; Dropout -No School Degree; No Degree (outside Germany); With Degree (outside Germany); Secondary School Degree (Hauptschulabschluss); Intermediate School Degree (Realschulabschluss).
Medium Skilled	Upper secondary school degree giving access to university studies (Abitur); Certificate of aptitude for specialized short-course higher education (Fachhochschulreife); Apprenticeship (Lehre); Specialized vocational school (Berufsfachschule).	Middle vocational; vocational + Abitur	Technical School Degree (Fachhochschulreife); Upper Secondary Degree (Abitur); Vocational Extension School (Outside Germany); Apprenticeship (Lehre); Vocational School (Berufsfachschule, Gesundheitswesen); Civil Service Training (Sonstiger Abschluss).
High Skilled	School of health care (Schule des Gesundheitswesens); Specialized college of higher education, post-secondary technical (Fachhochschule); College Technical university usually requiring practical training as part of the studies (Technische Universitt); Civil service training.	Higher vocational; higher education	Health Care School (Schule Gesundheitswesen (bis 99)); Technical School (Fachschule, Meister); Civil Service Training (Beamtenausbildung); University Degree.

[‡] Source: GSOEP data.

Table A.2: Fertility (FE) - Employed women 22-45[‡]

	(1) All	(2) Low Sk.	(3) Med.Sk	(4) High Sk.	(5) Med. Sk. 22-35	(6) Med. Sk.36-45
Share Female Migrants	-0.001	-0.167	0.037	-0.041	0.057*	0.042**
	(0.016)	(0.195)	(0.023)	(0.025)	(0.029)	(0.021)
Age	0.065***	0.042	0.047***	0.126***	-0.028	0.036**
	(0.008)	(0.031)	(0.009)	(0.018)	(0.018)	(0.016)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***	0.000	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Med.Sk	-0.004					
	(0.011)					
High.Sk	0.005					
	(0.014)					
Number Children (2-18)	-0.143***	-0.121***	-0.142***	-0.192***	-0.265***	-0.064***
	(0.005)	(0.019)	(0.006)	(0.010)	(0.013)	(0.007)
Marital Status	0.128***	0.067***	0.116***	0.156***	0.184***	0.014*
	(0.008)	(0.024)	(0.010)	(0.017)	(0.016)	(0.008)
Old in HH	-0.010	-0.030	0.004	-0.036*	-0.002	0.022
	(0.011)	(0.029)	(0.016)	(0.019)	(0.033)	(0.017)
R2	0.101	0.073	0.099	0.131	0.142	0.046
Obs.	33254	2689	21542	8382	10185	11051
F-Test	337.7586	4.700961	170.5664	193.3451	137.1913	48.25959
Regional Control	Yes	Yes	Yes	Yes	Yes	Yes
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes

[‡] Dependent variable: NewBorn takes value one if there is a child aged 0 to 1 in the household of the women, otherwise zero. Each column represents a different estimation sample. Robust standard errors are clustered by individuals and reported in brackets. Regional control variables are ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. All: sample of all native women. High Sk: sample of skilled native women. Medium Sk: medium skilled. Low Sk: sample of low skilled native women. Medium Sk 22-35 : medium skilled aged 22 to 35. Medium Sk 36-45 : medium skilled aged 36 to 45. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

Table A.3: Fertility (FE-2SLS) - Employed women 22-45‡

	(1) All	(2) Low Sk.	(3) Med.Sk	(4) High Sk.	(5) Med. Sk. 22-35	(6) Med. Sk.36-45
Share Female Migrants	0.004	0.017	0.019	-0.025*	0.029*	0.022
	(0.009)	(0.038)	(0.013)	(0.015)	(0.016)	(0.016)
Age	0.064***	0.028*	0.060***	0.112***	0.003	0.038***
	(0.004)	(0.016)	(0.005)	(0.010)	(0.013)	(0.015)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***	0.000	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Med.Sk.	-0.003					
	(0.011)					
High.Sk.	0.005					
	(0.014)					
Number Children (2-18)	-0.143***	-0.117***	-0.143***	-0.192***	-0.265***	-0.064***
	(0.005)	(0.019)	(0.006)	(0.010)	(0.013)	(0.007)
Marital Status	0.128***	0.068***	0.116***	0.156***	0.184***	0.015*
	(0.008)	(0.024)	(0.010)	(0.017)	(0.016)	(0.008)
Old in HH	-0.010	-0.034	0.004	-0.036*	-0.001	0.021
	(0.011)	(0.032)	(0.016)	(0.019)	(0.033)	(0.017)
R2	0.103	0.099	0.103	0.136	0.146	0.056
Regional Control	Yes	Yes	Yes	Yes	Yes	Yes
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes

‡ Dependent variable: NewBorn takes value one if there is a child aged 0 to 1 in the household of the women, otherwise zero. F-Test is the Kleibergen-Paap rk statistic. Each column represents a different estimation sample. Robust standard errors are clustered by individuals and reported in brackets. Regional control variables are ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. All: sample of all native women. High Sk: sample of skilled native women. Medium Sk: medium skilled. Low Sk: sample of low skilled native women. Medium Sk 22-35 : medium skilled aged 22 to 35. Medium Sk 36-45 : medium skilled aged 36 to 45. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value. 0.01>p-value.

Table A.4: Intensive Margin (FE)- Employed women 22-45‡

Panel A	All - Age 22-45				Medium Skilled - Age 22-45			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PW20	PW30	PW35	PW40	PW20	PW30	PW35	PW40
Share Female Migrants (ln.)	0.022	0.055***	0.050***	0.040**	0.016	0.065**	0.051*	0.064***
	(0.018)	(0.019)	(0.019)	(0.017)	(0.026)	(0.026)	(0.026)	(0.023)
Age	0.050***	0.066***	0.067***	0.063***	0.026***	0.040***	0.042***	0.033***
	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.009)	(0.009)	(0.010)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***	-0.000**	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Med.Skill	-0.058**	-0.052**	-0.057**	-0.018				
	(0.023)	(0.024)	(0.025)	(0.022)				
High Skill	0.248***	0.225***	0.199***	0.155***				
	(0.030)	(0.030)	(0.030)	(0.027)				
Number Children (0-18)	-0.161***	-0.200***	-0.202***	-0.130***	-0.144***	-0.180***	-0.183***	-0.107***
	(0.007)	(0.008)	(0.008)	(0.007)	(0.009)	(0.010)	(0.010)	(0.010)
Marital Status	-0.100***	-0.107***	-0.107***	-0.064***	-0.115***	-0.129***	-0.129***	-0.066***
	(0.011)	(0.012)	(0.012)	(0.011)	(0.014)	(0.015)	(0.015)	(0.014)
Old in HH	-0.009	0.013	-0.008	0.007	0.017	0.018	-0.000	-0.007
	(0.025)	(0.026)	(0.026)	(0.031)	(0.031)	(0.034)	(0.032)	(0.038)
R2	0.074	0.088	0.087	0.038	0.049	0.070	0.072	0.024
Obs	34530	34530	34530	34530	22814	22814	22814	22814
Panel B	Medium Skilled - Age 22-35				Medium Skilled - Age 36-45			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PW20	PW30	PW35	PW40	PW20	PW30	PW35	PW40
Share Female Migrants (ln.)	0.063**	0.084***	0.081***	0.060**	-0.069	0.081*	0.049	0.135**
	(0.029)	(0.030)	(0.030)	(0.027)	(0.049)	(0.049)	(0.058)	(0.056)
Age	-0.018	0.044**	0.074***	0.083***	0.058	0.069*	0.040	0.046
	(0.020)	(0.021)	(0.022)	(0.022)	(0.040)	(0.041)	(0.041)	(0.043)
Age^2	0.001	-0.001	-0.001***	-0.001***	-0.000	-0.001	-0.000	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Number Children (0-18)	-0.288***	-0.334***	-0.341***	-0.198***	-0.024**	-0.045***	-0.039***	-0.002
	(0.015)	(0.016)	(0.016)	(0.015)	(0.011)	(0.011)	(0.012)	(0.011)
Marital Status	-0.083***	-0.113***	-0.116***	-0.060***	-0.105***	-0.090***	-0.083***	-0.040*
	(0.018)	(0.019)	(0.020)	(0.020)	(0.025)	(0.024)	(0.024)	(0.022)
Old in HH	0.009	0.027	0.001	-0.038	-0.016	0.039	0.007	0.078
	(0.036)	(0.046)	(0.040)	(0.061)	(0.051)	(0.050)	(0.055)	(0.054)
R2	0.107	0.139	0.144	0.051	0.022	0.018	0.013	0.012
Obs	11074	11074	11074	11074	11740	11740	11740	11740
Regional Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

‡ Dependent variables. PW20, PW30, PW35, and PW40: take value one if a woman works more than 20, 30, 35, and 40 hours per week, respectively. Each column represents a different estimation. Robust standard errors are clustered by individuals and reported in brackets. Regional control variables are: ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

Table A.5: Intensive Margin (FE-2SLS) - Employed women 22-45‡

Panel A	All - Age 22-45				Medium Skilled - Age 22-45			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PW20	PW30	PW35	PW40	PW20	PW30	PW35	PW40
Share Female Migrants (ln.)	0.047	0.084**	0.079**	0.055*	0.029	0.104**	0.095**	0.102**
	(0.029)	(0.034)	(0.031)	(0.031)	(0.035)	(0.046)	(0.040)	(0.043)
Age	0.080***	0.085***	0.088***	0.071***	0.058***	0.058***	0.064***	0.052***
	(0.012)	(0.013)	(0.013)	(0.013)	(0.015)	(0.015)	(0.016)	(0.016)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***	-0.000**	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Med.Skill	-0.058**	-0.052**	-0.057**	-0.017				
	(0.023)	(0.024)	(0.025)	(0.022)				
High Skill	0.247***	0.224***	0.198***	0.155***				
	(0.030)	(0.030)	(0.030)	(0.027)				
Number Children (0-18)	-0.160***	-0.200***	-0.201***	-0.129***	-0.144***	-0.180***	-0.183***	-0.106***
	(0.007)	(0.008)	(0.008)	(0.007)	(0.009)	(0.010)	(0.010)	(0.010)
Marital Status	-0.100***	-0.107***	-0.107***	-0.064***	-0.115***	-0.129***	-0.129***	-0.066***
	(0.011)	(0.012)	(0.012)	(0.011)	(0.014)	(0.015)	(0.015)	(0.014)
Old in HH	-0.009	0.013	-0.008	0.007	0.017	0.019	-0.000	-0.007
	(0.025)	(0.026)	(0.026)	(0.031)	(0.031)	(0.034)	(0.032)	(0.038)
R2	0.069	0.084	0.083	0.035	0.048	0.065	0.066	0.021
Obs	33254	33254	33254	33254	21542	21542	21542	21542
F-Test	336.95	336.95	336.95	336.95	170.35	170.35	170.35	170.35
Panel B	Medium Skilled - Age 22-35				Medium Skilled - Age 36-45			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PW20	PW30	PW35	PW40	PW20	PW30	PW35	PW40
Share Female Migrants (ln.)	0.075*	0.128***	0.133***	0.114***	-0.019	0.189*	0.182*	0.230**
	(0.039)	(0.043)	(0.038)	(0.040)	(0.064)	(0.109)	(0.109)	(0.104)
Age	-0.001	0.058**	0.095***	0.110***	0.099**	0.074*	0.039	0.042
	(0.028)	(0.028)	(0.030)	(0.029)	(0.043)	(0.044)	(0.044)	(0.045)
Age^2	0.001	-0.001	-0.001***	-0.001***	-0.000	-0.001	-0.000	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Number Children (0-18)	-0.289***	-0.335***	-0.342***	-0.199***	-0.023**	-0.044***	-0.037***	-0.001
	(0.015)	(0.016)	(0.016)	(0.015)	(0.011)	(0.011)	(0.012)	(0.011)
Marital Status	-0.083***	-0.113***	-0.116***	-0.060***	-0.105***	-0.091***	-0.084***	-0.040*
	(0.018)	(0.019)	(0.020)	(0.020)	(0.025)	(0.024)	(0.024)	(0.022)
Old in HH	0.009	0.027	0.001	-0.038	-0.015	0.041	0.010	0.080
	(0.036)	(0.046)	(0.040)	(0.061)	(0.052)	(0.050)	(0.055)	(0.055)
R2	0.098	0.125	0.130	0.045	0.012	0.009	0.005	0.004
Obs	10185	10185	10185	10185	11051	11051	11051	11051
F-Test	137.02	137.02	137.02	137.02	48.30	48.30	48.30	48.30
Regional Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

‡ Dependent variables. PW20, PW30, PW35, and PW40: take value one if a woman works more than 20, 30, 35, and 40 hours per week, respectively. F-Test is the Kleibergen-Paap rk statistic. Each column represents a different estimation. Robust standard errors are clustered by individuals and reported in brackets. Regional control variables are: ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

Table A.6: Housework and Childcare (FE-2SLS) - Employed women 22-45‡

	(1) All	(2) Low Sk.	(3) Med. Sk.	(4) High Sk.	(5) Med. Sk. 22-35	(6) Med. Sk. 36-45
Panel A			Log hours housework (weeklong)			
Share of Female Migrants (ln.)	-0.073	-0.062	-0.177**	0.038	-0.233**	-0.142
	(0.052)	(1.189)	(0.078)	(0.074)	(0.096)	(0.149)
Age	0.056***	0.017	0.068***	0.031	0.197***	-0.115**
	(0.014)	(0.063)	(0.018)	(0.030)	(0.043)	(0.058)
Age^2	-0.001***	-0.000	-0.001***	-0.000	-0.003***	0.001
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
Med.Skill	0.018					
	(0.028)					
High Skill	0.053					
	(0.034)					
Number Children (0-18)	0.107***	0.104**	0.090***	0.149***	0.173***	0.047***
	(0.010)	(0.049)	(0.013)	(0.018)	(0.027)	(0.014)
Marital Status	0.146***	0.151**	0.132***	0.149***	0.192***	0.065**
	(0.016)	(0.066)	(0.022)	(0.030)	(0.033)	(0.032)
Old in HH	-0.123**	0.133	-0.199**	-0.100	-0.342***	0.011
	(0.056)	(0.135)	(0.085)	(0.083)	(0.125)	(0.110)
R2	0.051	0.032	0.049	0.058	0.076	0.014
Obs	15281	1159	9687	3773	4232	4961
F-Test	213.32	1.50	101.50	116.17	83.32	14.60
Panel B			Log hours childcare (weeklong)			
Share of Female Migrants (ln.)	-0.159	-2.158	-0.209	-0.186	-0.453***	-0.432
	(0.100)	(4.782)	(0.139)	(0.157)	(0.157)	(0.302)
Age	0.366***	0.409***	0.402***	0.317***	0.636***	0.149
	(0.031)	(0.143)	(0.042)	(0.061)	(0.087)	(0.170)
Age^2	-0.005***	-0.006***	-0.006***	-0.005***	-0.011***	-0.003
	(0.000)	(0.002)	(0.000)	(0.001)	(0.001)	(0.002)
Med.Skill	-0.027					
	(0.090)					
High Skill	-0.061					
	(0.100)					
Number Children (0-18)	1.296***	0.868***	1.207***	1.536***	1.850***	0.624***
	(0.035)	(0.142)	(0.046)	(0.068)	(0.077)	(0.058)
Marital Status	0.450***	0.387*	0.420***	0.448***	0.344***	0.012
	(0.049)	(0.204)	(0.063)	(0.089)	(0.081)	(0.103)
Old in HH	-0.206**	-0.569	-0.238**	-0.069	-0.473***	0.057
	(0.100)	(0.347)	(0.109)	(0.240)	(0.143)	(0.163)
R2	0.399	0.240	0.365	0.486	0.485	0.132
Obs	14651	1106	9294	3620	4048	4753
F-Test	189.56	1.58	88.34	107.41	72.3	13.72
Panel C			Log hours childcare and housework (weeklong)			
Share of Female Migrants (ln.)	-0.134*	-0.778	-0.213**	-0.048	-0.398***	-0.253
	(0.077)	(2.774)	(0.106)	(0.112)	(0.132)	(0.177)
Age	0.182***	0.158*	0.202***	0.162***	0.460***	-0.138*
	(0.020)	(0.091)	(0.026)	(0.039)	(0.058)	(0.082)
Age^2	-0.003***	-0.002*	-0.003***	-0.002***	-0.008***	0.001
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
Med.Skill	0.026					
	(0.047)					
High Skill	0.047					
	(0.055)					
Number Children (0-18)	0.568***	0.347***	0.506***	0.739***	0.890***	0.214***
	(0.019)	(0.078)	(0.024)	(0.037)	(0.047)	(0.026)
Marital Status	0.312***	0.294***	0.286***	0.310***	0.284***	0.050
	(0.028)	(0.112)	(0.036)	(0.054)	(0.051)	(0.050)
Old in HH	-0.214***	-0.003	-0.323***	-0.132	-0.560***	0.015
	(0.071)	(0.231)	(0.098)	(0.139)	(0.142)	(0.128)
R2	0.295	0.150	0.269	0.363	0.340	0.085
Obs	14651	1106	9294	3620	4048	4753
F-Test	189.55	1.59	88.34	107.49	72.30	13.72
Regional Control	Yes	Yes	Yes	Yes	Yes	Yes
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes

‡ Each column represents a different estimation. Robust standard errors are clustered by individuals and reported in brackets. F-Test is the Kleibergen-Paap rk statistic. Regional control variables are ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. All: sample of all native women. High Sk: sample of skilled native women. Medium Sk: medium skilled. Low Sk: sample of low skilled native women. Medium Sk 22-35 : medium skilled aged 22 to 35. Medium Sk 36-45 : medium skilled aged 36 to 45. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

Table A.7: Fertility (FE-2SLS) - Employed women 22-45 (alternative education group) ‡

	(1)	(2)	(3)	(4)	(5)	(6)
	All	Low Sk.	Med. Sk.	High Sk.	Med.Sk 22-35	Med.Sk. 36-45
Share of Female Migrants (ln.)	-0.001	0.014	0.039	-0.042*	0.058*	0.065**
	(0.016)	(0.038)	(0.026)	(0.022)	(0.031)	(0.027)
Age	0.065***	0.015	0.053***	0.116***	-0.018	0.044***
	(0.008)	(0.023)	(0.009)	(0.017)	(0.019)	(0.017)
Age^2	-0.001***	-0.000**	-0.001***	-0.001***	0.000	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Med.Skill	-0.006					
	(0.014)					
High Skill	0.006					
	(0.017)					
Number Children (0-18)	-0.143***	-0.127***	-0.143***	-0.174***	-0.264***	-0.064***
	(0.005)	(0.018)	(0.006)	(0.009)	(0.014)	(0.007)
Marital Status	0.128***	0.089***	0.118***	0.141***	0.186***	0.017**
	(0.008)	(0.027)	(0.010)	(0.015)	(0.016)	(0.008)
Old in HH	-0.010	-0.033	0.007	-0.036**	0.002	0.026**
	(0.011)	(0.031)	(0.016)	(0.018)	(0.033)	(0.013)
R2	0.101	0.097	0.099	0.119	0.142	0.044
Obs	33268	2700	19994	10083	9697	10027
F-Test	338.70	15.90	133.54	210.14	110.28	31.31
Regional Control	Yes	Yes	Yes	Yes	Yes	Yes
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes

‡ Dependent variable: NewBorn takes value one if there is a child aged 0 to 1 in the household of the women, otherwise zero. F-Test is the Kleibergen-Paap rk statistic. Each column represents a different estimation sample. Robust standard errors are clustered by individuals and reported in brackets. Regional control variables are ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. All: sample of all native women. High Sk: sample of skilled native women. Medium Sk: medium skilled. Low Sk: sample of low skilled native women. Medium Sk 22-35 : medium skilled aged 22 to 35. Medium Sk 36-45 : medium skilled aged 36 to 45. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

Table A.8: Intensive Margin (FE-2SLS) - Employed women 22-45 (alternative education group) ‡

Panel A	All - Age 22-45				Medium Skilled - Age 22-45			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PW20	PW30	PW35	PW40	PW20	PW30	PW35	PW40
Share of Female Migrants (ln.)	0.051*	0.088***	0.083***	0.057*	0.013	0.229*	0.155	0.230*
	(0.029)	(0.034)	(0.031)	(0.031)	(0.071)	(0.133)	(0.124)	(0.126)
Age	0.075***	0.082***	0.085***	0.068***	0.077*	0.029	0.011	0.030
	(0.012)	(0.013)	(0.013)	(0.013)	(0.046)	(0.045)	(0.046)	(0.046)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***	-0.000	-0.000	-0.000	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Med.Skill	-0.008	-0.016	-0.025	0.003				
	(0.026)	(0.028)	(0.027)	(0.025)				
High Skill	0.308***	0.246***	0.224***	0.173***				
	(0.034)	(0.035)	(0.034)	(0.031)				
Number Children (0-18)	-0.161***	-0.201***	-0.202***	-0.130***	-0.020*	-0.039***	-0.033***	-0.007
	(0.007)	(0.008)	(0.008)	(0.007)	(0.011)	(0.012)	(0.012)	(0.011)
Marital Status	-0.100***	-0.107***	-0.107***	-0.064***	-0.100***	-0.093***	-0.083***	-0.032
	(0.011)	(0.012)	(0.012)	(0.011)	(0.026)	(0.026)	(0.026)	(0.024)
Old in HH	-0.010	0.012	-0.009	0.006	-0.045	0.048	0.024	0.091
	(0.025)	(0.026)	(0.026)	(0.031)	(0.047)	(0.051)	(0.057)	(0.058)
R2	0.070	0.083	0.083	0.035	0.009	0.007	0.004	0.002
Obs	33268	33268	33268	33268	10027	10027	10027	10027
F-Test	337.84	337.84	337.84	337.84	31.33	31.33	31.33	31.33
Panel B	Medium Skilled - Age 22-35				Medium Skilled - Age 36-45			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PW20	PW30	PW35	PW40	PW20	PW30	PW35	PW40
Share of Female Migrants (ln.)	0.096**	0.142***	0.144***	0.107**	0.013	0.229*	0.155	0.230*
	(0.043)	(0.046)	(0.041)	(0.042)	(0.071)	(0.133)	(0.124)	(0.126)
Age	-0.001	0.057*	0.089***	0.103***	0.077*	0.029	0.011	0.030
	(0.029)	(0.029)	(0.031)	(0.030)	(0.046)	(0.045)	(0.046)	(0.046)
Age^2	0.001	-0.001	-0.001**	-0.001***	-0.000	-0.000	-0.000	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Number Children (0-18)	-0.295***	-0.336***	-0.340***	-0.193***	-0.020*	-0.039***	-0.033***	-0.007
	(0.015)	(0.017)	(0.017)	(0.015)	(0.011)	(0.012)	(0.012)	(0.011)
Marital Status	-0.079***	-0.108***	-0.113***	-0.057***	-0.100***	-0.093***	-0.083***	-0.032
	(0.019)	(0.019)	(0.021)	(0.020)	(0.026)	(0.026)	(0.026)	(0.024)
Old in HH	0.004	0.023	-0.004	-0.044	-0.045	0.048	0.024	0.091
	(0.036)	(0.046)	(0.041)	(0.062)	(0.047)	(0.051)	(0.057)	(0.058)
R2	0.101	0.126	0.130	0.043	0.009	0.007	0.004	0.002
Obs	9697	9697	9697	9697	10027	10027	10027	10027
F-Test	109.84	109.84	109.84	109.84	31.33	31.33	31.33	31.33
Regional Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

‡ Dependent variables. PW20, PW30, PW35, and PW40: take value one if a woman works more than 20, 30, 35, and 40 hours per week, respectively. F-Test is the Kleibergen-Paap rk statistic. Each column represents a different estimation. Robust standard errors are clustered by individuals and reported in brackets. Regional control variables are: ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

Table A.9: Housework and Childcare (FE-2SLS) - Employed women 22-45 (alternative education group) ‡

	(1) All	(2) Low Sk.	(3) Med. Sk.	(4) High Sk.	(5) Med. Sk. 22-35	(6) Med. Sk. 36-45
Panel A			Log hours housework (weeklong)			
Share of Female Migrants (ln.)	-0.073	-0.228	-0.191**	0.009	-0.285***	-0.020
	(0.052)	(0.721)	(0.081)	(0.076)	(0.097)	(0.148)
Age	0.052***	0.002	0.071***	0.033	0.193***	-0.102*
	(0.015)	(0.060)	(0.019)	(0.027)	(0.045)	(0.061)
Age^2	-0.001***	-0.000	-0.001***	-0.001*	-0.003***	0.001
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
Med.Skill	0.033					
	(0.033)					
High Skill	0.098**					
	(0.044)					
Number Children (0-18)	0.107***	0.123***	0.084***	0.132***	0.175***	0.035**
	(0.010)	(0.044)	(0.014)	(0.016)	(0.029)	(0.015)
Marital Status	0.145***	0.123**	0.137***	0.147***	0.196***	0.073**
	(0.016)	(0.062)	(0.023)	(0.028)	(0.034)	(0.032)
Old in HH	-0.123**	0.119	-0.182**	-0.135*	-0.350***	0.047
	(0.056)	(0.116)	(0.087)	(0.078)	(0.125)	(0.114)
R2	0.051	0.036	0.047	0.059	0.068	0.008
Obs	15289	1173	8972	4614	4011	4512
F-Test	214.73	4.01	88.50	112.27	74.00	14.04
Panel B			Log hours childcare (weeklong)			
Share of Female Migrants (ln.)	-0.161	-0.347	-0.189	-0.181	-0.474***	0.018
	(0.100)	(1.992)	(0.151)	(0.146)	(0.169)	(0.291)
Age	0.363***	0.208	0.404***	0.367***	0.701***	0.084
	(0.032)	(0.138)	(0.045)	(0.057)	(0.089)	(0.185)
Age^2	-0.005***	-0.004**	-0.006***	-0.005***	-0.012***	-0.002
	(0.000)	(0.002)	(0.000)	(0.001)	(0.001)	(0.002)
Med.Skill	-0.017					
	(0.106)					
High Skill	-0.001					
	(0.121)					
Number Children (0-18)	1.299***	1.134***	1.200***	1.437***	1.852***	0.613***
	(0.035)	(0.131)	(0.048)	(0.056)	(0.078)	(0.060)
Marital Status	0.450***	0.432**	0.441***	0.403***	0.372***	0.037
	(0.049)	(0.199)	(0.066)	(0.081)	(0.082)	(0.110)
Old in HH	-0.206**	-0.628**	-0.217*	-0.079	-0.461***	0.150
	(0.100)	(0.266)	(0.112)	(0.232)	(0.142)	(0.148)
R2	0.398	0.306	0.360	0.466	0.467	0.099
Obs	14661	1116	8604	4438	3838	4317
F-Test	190.21	4.25	77.16	112.55	65.18	13.51
Panel C			Log hours childcare and housework (weeklong)			
Share of Female Migrants (ln.)	-0.135*	-0.122	-0.217*	-0.069	-0.444***	-0.014
	(0.077)	(1.282)	(0.113)	(0.111)	(0.136)	(0.151)
Age	0.176***	0.056	0.200***	0.179***	0.480***	-0.166*
	(0.020)	(0.091)	(0.027)	(0.036)	(0.060)	(0.089)
Age^2	-0.003***	-0.001	-0.003***	-0.002***	-0.008***	0.001
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
Med.Skill	0.032					
	(0.057)					
High Skill	0.102					
	(0.071)					
Number Children (0-18)	0.570***	0.472***	0.500***	0.674***	0.894***	0.201***
	(0.019)	(0.070)	(0.025)	(0.031)	(0.048)	(0.027)
Marital Status	0.311***	0.307***	0.297***	0.291***	0.299***	0.057
	(0.028)	(0.108)	(0.038)	(0.049)	(0.052)	(0.053)
Old in HH	-0.215***	-0.054	-0.301***	-0.179	-0.562***	0.083
	(0.071)	(0.179)	(0.100)	(0.129)	(0.142)	(0.120)
R2	0.294	0.193	0.263	0.353	0.317	0.056
Obs	14661	1116	8604	4438	3838	4317
F-Test	190.21	4.25	77.16	112.56	65.18	13.57
Regional Control	Yes	Yes	Yes	Yes	Yes	Yes
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes

‡ Each column represents a different estimation. Robust standard errors are clustered by individuals and reported in brackets. F-Test is the Kleibergen-Paap rk statistic. Regional control variables are ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. All: sample of all native women. High Sk: sample of skilled native women. Medium Sk: medium skilled. Low Sk: sample of low skilled native women. Medium Sk 22-35 : medium skilled aged 22 to 35. Medium Sk 36-45 : medium skilled aged 36 to 45. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

Table A.10: Intensive Margin (FE-2SLS) - Employed Men 22-45‡

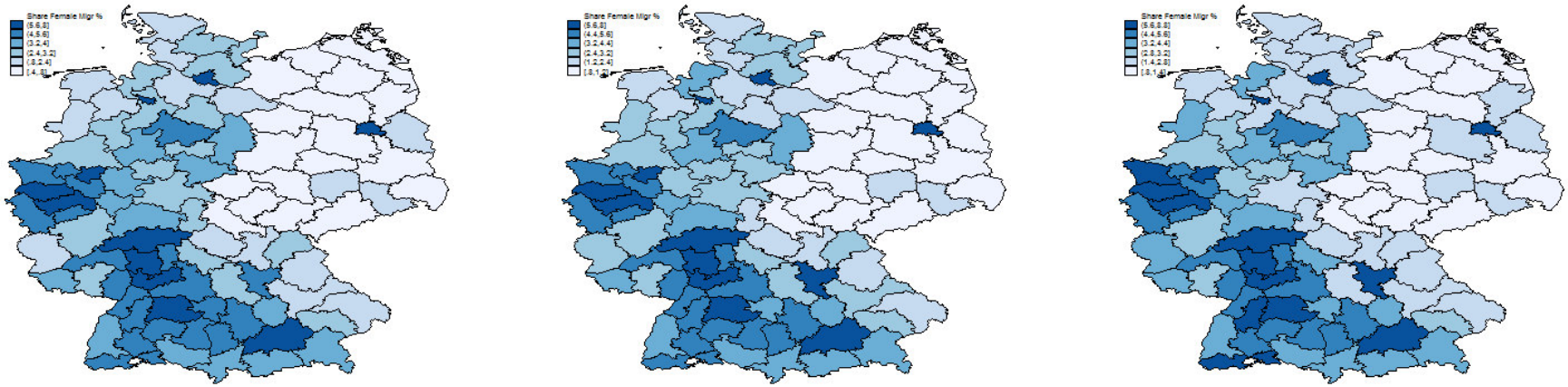
Panel A	All - Age 22-45				Medium Skilled - Age 22-45			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PW20	PW30	PW35	PW40	PW20	PW30	PW35	PW40
Share Female Migrants (ln.)	0.031	0.029	0.049	0.017	0.003	-0.025	0.035	-0.050
	(0.029)	(0.034)	(0.033)	(0.037)	(0.039)	(0.046)	(0.043)	(0.051)
Age	0.083***	0.128***	0.135***	0.087***	0.071***	0.119***	0.126***	0.083***
	(0.009)	(0.011)	(0.012)	(0.015)	(0.010)	(0.013)	(0.014)	(0.019)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Med.Skill	-0.007	-0.039**	-0.025	0.036				
	(0.016)	(0.019)	(0.021)	(0.027)				
High Skill	0.267***	0.221***	0.207***	0.206***				
	(0.027)	(0.029)	(0.030)	(0.036)				
Number Children (0-18)	-0.017***	-0.025***	-0.027***	-0.017**	-0.013***	-0.021***	-0.019***	-0.002
	(0.004)	(0.004)	(0.005)	(0.006)	(0.004)	(0.005)	(0.006)	(0.008)
Marital Status	0.025***	0.037***	0.040***	0.050***	0.017**	0.028***	0.028**	0.048***
	(0.007)	(0.008)	(0.010)	(0.013)	(0.008)	(0.010)	(0.012)	(0.016)
Old in HH	-0.022	-0.021	-0.014	0.012	-0.038**	-0.035*	-0.042*	-0.008
	(0.015)	(0.016)	(0.019)	(0.022)	(0.019)	(0.020)	(0.022)	(0.025)
R2	0.056	0.053	0.043	0.014	0.013	0.021	0.017	0.007
Obs	35217	35217	35217	35217	23432	23432	23432	23432
F-Test	193.58	193.58	193.58	193.58	89.77	89.77	89.77	89.77
Panel B	Medium Skilled - Age 22-35				Medium Skilled - Age 36-45			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PW20	PW30	PW35	PW40	PW20	PW30	PW35	PW40
Share Female Migrants (ln.)	-0.035	-0.058	0.017	0.014	0.082	0.011	0.037	-0.133*
	(0.045)	(0.059)	(0.049)	(0.067)	(0.059)	(0.051)	(0.057)	(0.076)
Age	0.193***	0.260***	0.269***	0.190***	0.017	0.060**	0.035	0.072
	(0.023)	(0.028)	(0.030)	(0.038)	(0.019)	(0.027)	(0.032)	(0.050)
Age^2	-0.003***	-0.003***	-0.003***	-0.002***	-0.000	-0.000	-0.000	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Number Children (0-18)	-0.009	-0.007	-0.014	-0.007	-0.004	-0.012*	-0.006	0.011
	(0.009)	(0.011)	(0.012)	(0.014)	(0.005)	(0.006)	(0.008)	(0.011)
Marital Status	0.007	0.017	0.018	0.047**	0.033***	0.039***	0.037**	0.077***
	(0.012)	(0.015)	(0.017)	(0.024)	(0.011)	(0.013)	(0.015)	(0.023)
Old in HH	-0.038	-0.033	-0.019	-0.007	-0.047*	-0.034	-0.060**	-0.013
	(0.032)	(0.034)	(0.038)	(0.037)	(0.026)	(0.023)	(0.027)	(0.036)
R2	0.026	0.035	0.031	0.011	0.002	0.004	0.003	0.004
Obs	10793	10793	10793	10793	12367	12367	12367	12367
F-Test	54.98	54.98	54.98	54.98	28.99	28.99	28.99	28.99
Regional Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

‡ Dependent variables. PW20, PW30, PW35, and PW40: take value one if a woman works more than 20, 30, 35, and 40 hours per week, respectively. F-Test is the Kleibergen-Paap rk statistic. Each column represents a different estimation. Robust standard errors are clustered by individuals and reported in brackets. Regional control variables are: ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.

Table A.11: Housework and Childcare (FE-2SLS) - Employed Men 22-45[‡]

	(1) All	(2) Low Sk.	(3) Med. Sk.	(4) High Sk.	(5) Med. Sk. 22-35	(6) Med. Sk. 36-45
Panel A			Log hours housework (weeklong)			
Share of Female Migrants (ln.)	0.000	0.298	0.112	0.075	0.007	0.145
	(0.075)	(0.249)	(0.118)	(0.089)	(0.129)	(0.246)
Age	0.058***	0.089	0.071**	-0.030	0.160**	-0.307**
	(0.023)	(0.088)	(0.030)	(0.047)	(0.065)	(0.121)
Age^2	-0.001***	-0.002*	-0.001***	0.000	-0.004***	0.004**
	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)
Med.Skill	-0.067					
	(0.064)					
High Skill	0.034					
	(0.078)					
Number Children (0-18)	-0.063***	-0.039	-0.056***	-0.033	-0.057	-0.037
	(0.015)	(0.072)	(0.020)	(0.027)	(0.035)	(0.031)
Marital Status	-0.181***	-0.123	-0.214***	-0.104**	-0.148**	-0.295***
	(0.030)	(0.119)	(0.040)	(0.050)	(0.061)	(0.061)
Old in HH	-0.076	-0.023	-0.056	-0.139	0.054	-0.004
	(0.056)	(0.145)	(0.069)	(0.138)	(0.108)	(0.115)
R2	0.011	0.020	0.011	0.006	0.017	0.012
Obs	15957	1123	10522	3767	4578	5455
F-Test	137.35	4.23	60.86	53.60	33.90	19.46
Panel B			Log hours childcare (weeklong)			
Share of Female Migrants (ln.)	-0.000	-0.522	-0.136	0.000	-0.452*	0.090
	(0.120)	(0.492)	(0.190)	(0.153)	(0.242)	(0.374)
Age	0.311***	0.095	0.337***	0.406***	0.285***	0.332**
	(0.027)	(0.107)	(0.034)	(0.066)	(0.067)	(0.151)
Age^2	-0.004***	-0.002*	-0.005***	-0.005***	-0.006***	-0.004**
	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)	(0.002)
Med.Skill	-0.123					
	(0.076)					
High Skill	-0.089					
	(0.091)					
Number Children (0-18)	0.842***	0.844***	0.775***	0.920***	0.998***	0.493***
	(0.028)	(0.093)	(0.035)	(0.058)	(0.062)	(0.050)
Marital Status	0.430***	0.281	0.419***	0.403***	0.491***	0.250***
	(0.046)	(0.210)	(0.057)	(0.094)	(0.073)	(0.097)
Old in HH	0.002	-0.072	0.039	-0.150	0.021	-0.008
	(0.042)	(0.125)	(0.051)	(0.103)	(0.077)	(0.110)
R2	0.299	0.255	0.269	0.356	0.348	0.090
Obs	15526	1088	10264	3652	4447	5326
F-Test	133.08	4.11	59.92	53.69	34.38	19.51
Panel C			Log hours childcare and housework (weeklong)			
Share of Female Migrants (ln.)	0.017	-0.382	0.072	0.031	-0.147	0.201
	(0.091)	(0.567)	(0.149)	(0.096)	(0.176)	(0.297)
Age	0.249***	0.111	0.273***	0.242***	0.296***	-0.004
	(0.025)	(0.104)	(0.032)	(0.053)	(0.071)	(0.129)
Age^2	-0.004***	-0.003**	-0.004***	-0.003***	-0.006***	0.000
	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)	(0.002)
Med.Skill	-0.133*					
	(0.070)					
High Skill	-0.029					
	(0.085)					
Number Children (0-18)	0.381***	0.460***	0.342***	0.447***	0.464***	0.206***
	(0.020)	(0.083)	(0.026)	(0.035)	(0.047)	(0.039)
Marital Status	0.103***	-0.011	0.090*	0.112*	0.162**	-0.058
	(0.036)	(0.159)	(0.046)	(0.063)	(0.066)	(0.074)
Old in HH	-0.050	-0.009	-0.014	-0.207	0.079	0.006
	(0.058)	(0.157)	(0.072)	(0.149)	(0.109)	(0.141)
R2	0.113	0.116	0.095	0.169	0.107	0.018
Obs	15526	1088	10264	3652	4447	5326
F-Test	133.08	4.11	59.92	53.69	34.38	19.51
Regional Control	Yes	Yes	Yes	Yes	Yes	Yes
Individual F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Länder & Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes

[‡] Each column represents a different estimation. Robust standard errors are clustered by individuals and reported in brackets. F-Test is the Kleibergen-Paap rk statistic. Regional control variables are ROR unemployment rate, ROR female participation rate, ROR share of manufacturing employment, ROR share of services employment, and ROR GDP per capita in Euro (PPP, 2000), year and Länder fixed effects. All: sample of all native women. High Sk: sample of skilled native women. Medium Sk: medium skilled. Low Sk: sample of low skilled native women. Medium Sk 22-35 : medium skilled aged 22 to 35. Medium Sk 36-45 : medium skilled aged 36 to 45. Significance level: *0.10>p-value ** 0.05>p-value*** 0.01>p-value.



(a) 2000: Mean Value 3.23 (b) 2007: Mean Value 3.45 (c) 2011: Mean Value 3.62

Figure A.1: Share Female Migrants (Mean=3.41, 1999 -2012)