The Intergenerational Transmission of Female Labour Force Participation by Gender among Native and Immigrant Europeans: A Focus on Religion

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Accepted: 2 August 2021 / Published online: 27 September 2021
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Abstract

The aim of this paper is to explore the intergenerational transmission of female labor force participation from mothers to children. Using data collected by the European Social Survey from 2002 to 2018 (N = 118,219), we analyse four different samples of native and immigrant women and men in order to assess the relationship between working mothers and their daughters and sons' wives participation to the labour market. For both native and immigrant women, having had their mothers employed when the respondents were 14 was associated with higher probability they were employed at the time of survey. Similarly, for both native and immigrant men, having had their mothers employed when the respondents were 14 was associated with higher probability their wives were employed at the time of the survey. We concentrate our attention on the role of religion. We find that religiosity is negatively related to the participation of women in the labour market, with differences between those who had a working mother and those who had not. Results of some augmented models indicate that the intergenerational transmission of female labor force participation varies according to religious affiliation.

Keywords Intergenerational transmission · Female labor force participation · Religion · Natives · Immigrants · Europe

JEL Classification Codes J10 demographic economics: general · J16 economics of gender · Z10 cultural economics

Introduction

Goldscheider et al. (2015) refer to the growing female contribution in supporting their families through work outside the home as the “first part of the gender revolution”.¹ The female labour force has actually increased over the last 50 years in almost all developed countries, but it is still low if compared with men and it is still strongly influenced by family and childbearing considerations.

Among the other factors that affect women's employment (human capital, social and economic conditions, institutions, and so on), many studies have pointed out the key role of culture, which is the set of preferences, values,

attitudes and beliefs transmitted across generations among ethnic, religious, and social groups (Guiso et al., 2006). In Particular, many papers have explored the relationship between the labour market behaviour of women across adjacent generations (Farrè & Vella, 2013; Fernández & Fogli, 2009; Fernández, 2007; Fogli & Veldkamp, 2007; Fernández et al., 2004).

In this paper we focus on intergenerational transmission of female work² from mothers to both daughters and sons, focusing—in the latter case—on their wives' labour force participation. This issue has been addressed by analysing whether the fact of having had a working mother in early life (at the age of 14) is related to the probability of being in the labour force for daughters and on the probability of having their wife in the labour force for men. The intergenerational transmission of beliefs, attitudes, and behaviours is an important issue

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¹ The second is men's increased involvement in the private sphere of home and family.

² We refer to paid work outside the home.

in the field of family interactions and functioning. A variety of studies have analyzed the transmission of different skills from parents to children (e.g., Campos-Vazquez, 2018, on cognitive and non-cognitive skills and socio-economic status), economic behaviours (e.g., Ferrando-Latorre, 2019, on entrepreneurial activities), or attitudes (e.g., Gauly, 2017, on time preferences and reciprocity).

Due to the differences in data sources, some papers concentrate only on the link between working mothers and daughters' labour force participation (Evans & Kelley, 2008; van Putten et al., 2008) and others only on sons' wives (Bütikofer, 2013; Kawaguchi & Miyazaki, 2009). Others analyse the effect on both genders (Campos-Vazquez & Velez-Grajales, 2014; Johnston et al., 2014; Sandler Morrill & Morrill, 2013). Moreover, all papers concentrate on one country and just a few focus on Europe (Bütikofer, 2013; van Putten et al., 2008). In this paper, we concentrate on both lines of transmission (daughters and daughters-in-law), relying on a large dataset covering many countries for a considerable period of time.

Beyond the gender comparison, a second contribution of this paper is the analysis of the intergenerational transmission of female labour force participation both for natives and for immigrants. The decision to conduct separate analysis is due to the well-known differences in the labour market participation of native and immigrant women in the receiving countries. For the latter, the decision to join the labour market may be influenced by many "cultural" factors absorbed in their country of origin. A number of studies (e.g., Scoppa & Stranges, 2019; Blau et al., 2013; Gevrek et al., 2013; Fernández & Fogli, 2009; Antecol, 2000) find that immigrant women's labour force participation in receiving/host countries is influenced by the female labor force participation and gender differences in their original countries. The idea that conducting separate analysis is desirable is also supported by findings on intergenerational transmission of skills (e.g., Luthra & Soehl, 2015), which have highlighted the existence of marked differences between natives and immigrants.

A third contribution of this paper is that we explore the role of religion in the intergenerational transmission process of female labour force participation. Religion³ is

part of the culture transmitted through generations (Guiso et al., 2006). Despite its importance, often because of lack of data, just a few studies on intergenerational transmission of female labour force participation have taken religion into account, mainly by adding it as a covariate (Farrè & Vella, 2013; Guiso et al., 2006), and sometimes using parents' religious affiliation (Evans & Kelly, 2008; Sandler Morrill & Morrill, 2013).

In the next section, we review the theoretical framework. Following that we shall discuss, in sequence: data, sample and methods, descriptive and empirical findings. We close with discussion of results and conclusions. Robustness checks are reported in the appendix.

Literature Review

The Intergenerational Transmission of Female Labour Force Participation

According to the mechanism of socialization, parents are the most important socializing agents and they influence their children by transmitting their own preferences (Bisin & Verdier, 2001; Bütikofer, 2013; Cunningham, 2001a, 2001b; Witt, 1997), especially during childhood, which is the formative period which mostly shapes behavioural preferences (van Putten et al., 2008). The stratification mechanism emphasizes the transmission of resources and skills from parents to children (Bielby, 1978; Menaghan & Parcel, 1991).

Within the framework of socialization and stratification, many contributions have focused, in particular, on the effect of parental gender-role attitudes in shaping gender-role attitudes and behaviours of their offspring (Cunningham, 2001a). Such attitudes are established early in life because in their childhood and adolescence children have their parents as role models (Bütikofer, 2013). Women who work have more egalitarian attitudes as regards gender roles than those who do not and are, therefore, likely to transmit these attitudes to their children (Boehnke, 2011; Fan & Mooney Marini, 2000; Farrè & Vella, 2013; Kawaguchi & Miyazaki, 2009).

In the socialization literature (specifically in the area of behavioural role modelling), different scholars have argued that mothers exert a stronger influence on daughters than sons (Casey & Dustmann, 2010; Dion & Dion, 2001). Many studies in this field have found that the mother's education and occupational trajectories affect a daughter's occupational status as well as her own educational achievement and personal skills (Aschaffenburg, 1995). By analysing trends in female labour force participation in Australia from 1984 to 2002, Evans and Kelley (2008) find that daughters of working mothers work about 5 h per week more than homemakers' daughters. However, several

³ The terms religion and religiosity are often use interchangeably (Popova, 2017) and it is difficult to clearly define the two concepts as they overlap. Iannaccone (1998) defines religion as "[...] any shared set of beliefs, activities, and institutions premised upon faith in supernatural forces" (p. 1466). Need and Evans (2001) define religiosity as a self-identification with a particular religious denomination, having religious beliefs, praying, and attending religious services. Following Campbell and Coles (1973), in our analysis we will use the term religiosity to indicate the self-declared level of involvement (as derived from the answer at the question "How religious are you?"), while religious affiliation will be use to refer to the self-declared religion or denomination the respondent belongs (is affiliated) at the present.

studies highlight the fact that a mother's behaviour may also affect her son's preferences and, among other aspects, may positively influence his inclination toward a working wife (Bütikofer, 2013; Campos-Vazquez & Velez-Grajales, 2014; Del Boca et al., 2000; Fernández et al., 2004; Johnston et al., 2014). Others (Gupta, 2006; Sandler Morril & Morril, 2013) suggest that in this relationship an underlying process of “assortative mating” is operating on the women's side: women form preferences and then choose a spouse, selecting from those who have more egalitarian gender-role attitudes and better household skills which, according to the socialization and stratification literature, should be men whose mothers worked.

Turning specifically to the intergenerational transmission of female labour force participation for immigrants, Fleischmann and Dronkers (2010), analysing the unemployment rates of immigrants in the ‘old’ European Union (EU15)⁴ countries in 2004, underline the importance of the socialization processes within immigrant families that somehow transmit the effects of origin countries' culture regarding gender roles to children born in host countries. This finding is supported by the growing strand of literature which uses the so called “epidemiological approach” (originally proposed by Fernández & Fogli, 2009) to explore how cultural values brought from the country of origin influence labour force participation and other economic outcomes in the destination countries (see, e.g., Scoppa & Stranges, 2019; Mendez & Zamarro, 2018; Frank & Hou, 2016; Blau et al., 2011, 2013).

Differences in Female Labour Force Participation between Immigrants and Natives

Immigrants and natives have different outcomes in the labour market. The disadvantage faced by immigrants has frequently been explained within the framework of the human capital theory (Reyneri & Fullin, 2011). Comparative studies about different European countries have shown that immigrants have relatively high employment rates but are mostly concentrated in unskilled and low paid jobs (Bernardi et al., 2011; Causa & Jean, 2007). Kogan (2011), for Germany, finds that the gaps in labour market outcomes between natives and immigrants become larger as the level of education increases. The author finds that, for both men and women, more educated immigrants (especially those coming from outside the EU) are more likely than comparable natives to be employed in unskilled sectors. Koopmans (2016) confirms that in all European countries, foreign-born immigrants and their second-generation descendants fare worse on the labour market than natives.

Important differences in the immigrants' labour market participation may be found by generation. First-generation immigrants, for whom work is the main reason for having migrated, are still predominant in Europe. They have been more exposed to the social, cultural and institutional environment of their origin country, while as second-generation immigrants, on the contrary, have been longer embedded in the receiving country, they are more likely to have adopted host country's attitudes. Moreover, mothers of second generation immigrants have probably worked in the host countries. Koopmans (2016) finds substantial generational differences in labour force participation only for immigrant women, and not for men. In particular, second generation women are more like to participate in the labour market.

Migrants' area (or country) of origin is also important, because it may determine varying job opportunities, social exclusion or discrimination (Stranges et al., 2021). Still Koopmans (2016) finds no significant ethnic differences for immigrant men, while he finds differences by nationality for immigrant women. The levels of immigrant labour market discrimination and segregation vary across groups from different origins, and this might be partly due to varying levels of ‘visibility’ and ‘acceptability’ of different immigrant groups in the destination countries (Fleischmann & Dronkers, 2010). While immigrants from Western countries do not face particular problems to integrate in the labour market, immigrants from other areas—especially Africa, Asia and Latin America (for Sweden, see Rydgren, 2004; le Grand & Szulkin, 2002) and predominantly Muslim countries (for France, see Silberman et al., 2007; Simon, 2003)—are more disadvantaged. These differences in job opportunities may also affect the decision to participate in the labour market, by causing discouragement and disillusion: individuals who face a higher risk of unemployment or repeated spells of unemployment (Ayllón, 2013; Blundell et al., 1998) or ethnic exclusion and religious discrimination (Khattaba et al., 2019) are more likely to become discouraged and to decide to leave the labour market.

Religion and Female Labour Force Participation

Religion may play a key role on women's decisions regarding work and participation in the labour market (Barro & McCleary, 2002; Guiso et al., 2003, 2006; Heineck, 2004; Iannaccone, 1998).⁵ According to Lehrer (2011), conservative religious norms may encourage early marriage and motherhood, low investment in

⁴ Minus Italy and Finland.

⁵ See Popova (2017) and Lehrer (2008) for a literature's review.

secular education, and low levels of female labour force participation.

When analysing the relationship between religion and economic outcomes, it must be recalled that religiosity and religious affiliation may have a different influence on female labour force participation. Religious affiliation is unlikely to change over the life course, while religiosity captures the actual level of religious involvement of the respondent. Some studies have found that religiosity affects the female labour force participation more than religious affiliation (e.g., Heineck, 2004), especially in more traditional societies such as Catholic and Southern European countries (Guetto et al., 2015).

Guetto et al. (2015) provide empirical evidence that corroborates a causal interpretation of the impact of religion on female labour force participation, while many other studies have found that religious women are less likely to join the labour market (Guiso et al., 2003; H'madoun, 2010; Heineck, 2004) and hold less egalitarian gender-role attitudes (Algan & Cahuc, 2006; Fan & Mooney Marini, 2000; Fortin, 2005; Seguino, 2011). Dildar (2015), concentrating on Turkey, find a negative relationship between women's religious practice (and patriarchal norms which may be related to religion) and labour force participation. Goldscheider et al. (2015) for Sweden find that religion remains a relevant feature of attitudes toward the balance of work and family of both men and women. Ammons and Edgell (2007), analysing the influence of religion on work–family trade-offs for men and women, find that religious involvement makes women more family oriented.

Nevertheless, different religious affiliations might strongly affect women's decisions regarding work, investing in human capital, having children and so on, because of the different attitudes towards gender role models and the appropriate role of women in society that each religion expresses (Scoppa & Stranges, 2019). Bayanpourtehrani and Sylwester (2013) find that female labour force participation varies depending upon the religion practised in these countries. In particular, the authors find that the female participation is lower in Muslim countries, but this association declines to a similar level as that found between Catholicism and female participation as other controls are included in the regression. Moreover, in line with Feldmann (2007)'s previous results, they find that female participation in the labour force is higher in countries where Protestantism is prevalent or no religion is practised.

Focusing on immigrants, some studies have found that religion is itself a crucial part of culture transmitted across generations, often brought from the home country, and that religion can influence the female labour force participation (Algan & Cahuc, 2006; Guiso et al., 2006; Scoppa & Stranges, 2019). Different outcomes in the labour market for immigrants coming from various parts of the world may be

partly explained by differences in religion and cultural values leading to different priorities (Fleischmann & Dronkers, 2010; Kao & Thompson, 2003).

Other Possible Mediators

There are many other factors which may play a role in mediating the intergenerational transmission of female work from mothers to daughters/daughters-in-law. Women's individual characteristics (age, health and education) are closely related to labour force participation. In particular, higher educational attainment is positively associated with female's employment (Evans & Kelly, 2008; Holland & de Valk, 2017; Rebhun, 2008; van Putten et al., 2008) and more egalitarian gender role attitudes (Boehnke, 2011; Cotter et al., 2011).

The family's cultural background may significantly affect women's likelihood to work (Bütikofer, 2013; Evans & Kelley, 2008). Individuals of both sexes with more educated parents have more egalitarian attitudes (Fan & Mooney Marini, 2000) and better educated mothers are more influential egalitarian role models for their daughters than mothers with less education (Idema & Phalet, 2007). For immigrants the effect of parents' education may be different from that for natives. Luthra and Soehl (2015) find that the educational transmission process between parents and children is much weaker in immigrant families than in native ones and, among immigrants, this differs significantly across national groups.

As a woman's decision to work can be the result of a couple's or family's strategy, it may be affected by her husband and extended family's characteristics. In particular, the presence of young children in the household can lower women's employment prospects because of the greater responsibilities in the home (Bütikofer, 2013; Holland & de Valk, 2017; Rebhun, 2008; van Putten et al., 2008).

For the immigrant subsamples, additional mediators are related to the migration history, namely the generation to which migrants belong and their area of origin, which may have an important role in their labour market's outcomes.

Main Hypotheses

The literature review discussed above leads us to undertake an empirical investigation into the link between the mother's working condition when the respondent was 14 and the actual labour participation of daughters and sons' wives, stratified by gender and immigrant status.

Daughters of working mothers may be more likely to participate in the labour market because they have been accustomed to more egalitarian gender roles, by directly observing their mother. Sons of working mothers may be more likely to have a working wife for the effect of socialization and stratification processes. Starting from this point, we propose

to test the following hypotheses for both immigrants and natives:

H1. Women who had a working mother are themselves more likely to participate in the labour market.

H2. Men who had a working mother are more likely to have a wife who participates in the labour market.

Religion and religiosity may reduce female participation in the labour market. Moreover, as some religions are more adherent to a more traditional role of women in the family and in society, intergenerational transmission may be different from one religious denomination to another. So, we want to test these two additional hypotheses for both immigrants and natives:

H3. Religiosity mediates the intergenerational transmission of female labour force participation.

H4. Intergenerational transmission of female labour force participation varies depending on religious affiliation.

Data and Methods

Data and Sample

For this analysis, we used the cumulative dataset of the nine rounds of the European Social Survey (2018), a two-year repeated cross section survey, started in 2002, which involved 33 countries.⁶ The validity in using the pooled dataset is well-assessed in the literature (e.g., Mc Daniel, 2013; Safi, 2010; Soons & Kalmijn, 2009).

As our outcome is female labour force participation, in the men's sample we restricted the analysis to married men only and—in order to balance—we restricted to married women in the female's samples too. We concentrated on women between 20 and 60 years (whose husband is at least 20) to consider those who may have a greater involvement in the labour market. For the same reasons, in all subsamples, we dropped women whose main activity was education, or who were permanently sick, disabled, or retired. After all these selections, the complete sample we obtained was composed of 118,219 individuals, divided into four subsamples as follows: 48,423 native women, 10,698 immigrant women, 48,668 native men, and 10,430 immigrant men.

Tables 1 and 2 show basic descriptive statistics for all the subsamples.⁷ Native women were on average 43.29 years old, 76.3% of them had children living in the household, 64% declared having good or very good health. Immigrant women were on average slightly younger (42.03 years old), 78.1% of them had children living in the household, and they had a better self-perceived health as 66.3% of them claimed to be in good or very good health. Native men's wives were on average 43.66 years old (41.52 for immigrant men), 71.5% had children living in the household (74.5 for immigrant men).

Method

To verify hypotheses H1 and H2 we estimated the following logit model,⁸ separately for immigrants and natives (for each gender):

$$\log\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 mother_work_i + \beta_2 X_i + \beta_3 Y_i + \beta_4 W_i + \beta_5 Z_i \quad (1)$$

The dependent variable is: (a) labour force participation (LFP_{iky}), a dummy taking the value 1 if the woman i is currently employed or actively searching for a job in country k in year y (and zero otherwise) in the estimation on women; (b) wife's labour force participation (WLP_{iky}), a dummy taking the value 1 if man i 's wife is in the labour force in country k in year y (and zero otherwise) in the estimations on men. The main explanatory variable is the mother's working condition when the respondent was 14 ($mother_work_i$), a dummy taking value 1 if she was working and 0 otherwise.⁹ This probability is affected also by a vector of variables about the respondent's religion (X_i): degree of religiosity (an eleven scale variable, which varies from "not religious at all" to "very religious"), and religious affiliation (Catholic, Protestant, Eastern Orthodox

⁷ The distribution of the dependent and main explanatory variables is discussed in section "Descriptive findings".

⁸ As McDaniel (2013) and Safi (2010), we decided not to use multi-level modelling because we do not include in the models any variable at country level (except for country dummies to allow for country heterogeneity). Furthermore, the inclusion of second or upper level variables in models may cause insignificant estimations in the immigrants' subsamples, because of the small sample size in each country and each year.

⁹ Reverse causality should not be a concern in our regressions since the current attitudes of a person toward work cannot affect their mother's working condition in the past. Nonetheless, unobserved factors might affect both the mother's and daughter's labor force participation. For this reason, we don't make causal claims in this paper, but rather individualize the existence of an association between mothers' work and daughters' and daughters-in-law's participation in the labor market.

⁶ Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, United Kingdom, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, Turkey.

Table 1 Descriptive statistics, women's samples

Variables	Native women (N = 48,423)	Immigrant women (N = 10,698)
Dependent variables		
Labour force participation	0.711	0.681
Work ^a	0.679	0.633
Main explanatory variables		
Mother worked when the respondent was 14	0.601	0.571
Mother worked as dependent when the respondent was 14 ^a	0.516	0.513
Respondent's religiosity		
Degree of religiosity	5.145 (2.779)	5.504 (2.986)
Catholic	0.367	0.241
Protestant	0.104	0.083
Islamic	0.039	0.123
Eastern orthodox Christian	0.136	0.149
Other religions	0.016	0.078
No religion	0.338	0.326
Respondent's family background		
Mother's years of education	8.893 (4.671)	9.356 (5.183)
Father's years of education	9.472 (4.994)	10.152 (5.503)
Father worked when the respondent was 14	0.907	0.889
Wife's characteristics		
Years of education	13.078 (3.854)	13.694 (3.984)
Age	43.290 (9.615)	42.027 (9.507)
Age ²	1966.472 (819.200)	1856.614 (802.310)
Husband's and household's characteristics		
Work	0.854	0.859
Years of education	12.728 (4.867)	13.309 (4.998)
Age	45.537 (10.173)	44.791 (10.122)
Age ²	2177.084 (931.885)	2108.696 (932.422)
Presence of children in the household	0.763	0.781
Other respondent covariates		
Health: very bad	0.005	0.004
Health: bad	0.043	0.047
Health: fair	0.312	0.286
Health: good	0.469	0.446
Health: very good	0.171	0.217
Year dummies		
Year 2018	0.065	0.094
Year 2016	0.116	0.124
Year 2014	0.075	0.109
Year 2012	0.132	0.130
Year 2010	0.130	0.138
Year 2008	0.120	0.110
Year 2006	0.137	0.131
Year 2004	0.122	0.088
Year 2002	0.103	0.077
Country dummies		
Austria	0.012	0.016
Belgium	0.017	0.026
Bulgaria	0.009	0.001
Cyprus	0.001	0.001
Croatia	0.002	0.003

Table 1 (continued)

Variables	Native women (N = 48,423)	Immigrant women (N = 10,698)
Czech Republic	0.021	0.010
Denmark	0.008	0.006
Estonia	0.001	0.004
Finland	0.007	0.003
France	0.074	0.130
Germany	0.145	0.209
Greece	0.011	0.011
Hungary	0.019	0.005
Iceland	0.0001	0.0001
Ireland	0.008	0.008
Israel	0.003	0.034
Italy	0.055	0.031
Lithuania	0.003	0.002
Luxemburg	0.0001	0.001
Netherlands	0.038	0.032
Norway	0.007	0.009
Poland	0.094	0.021
Portugal	0.022	0.009
Russia	0.160	0.102
Slovakia	0.008	0.003
Slovenia	0.004	0.004
Spain	0.089	0.058
Sweden	0.010	0.013
Switzerland	0.011	0.042
Turkey	0.025	0.004
Ukraine	0.059	0.076
United Kingdom	0.074	0.127
Specific covariates for migrants		
Second generation		0.403
Area of origin: Europe		0.495
Area of origin: North America		0.022
Area of origin: South and Centre America		0.109
Area of origin: Asia		0.190
Area of origin: Africa		0.167
Area of origin: Oceania		0.008

Mean/percentage, standard deviation in parentheses

Respondent's age: 20–60 years; husband's age ≥ 20

Weighted descriptive statistics

^aVariables used in the robustness checks

Table 2 Descriptive statistics. Men's samples

	Native men (N = 48,668)	Immigrant men (N = 10,430)
Dependent variables		
Wife's labour force participation	0.681	0.653
Wife works ^a	0.647	0.612
Main explanatory variables		
Mother worked when the respondent was 14	0.566	0.498
Mother worked as dependent when the respondent was 14 ^a	0.483	0.447
Respondent's religiosity		
Degree of religiosity	4.244 (2.865)	4.989 (3.101)
Catholic	0.340	0.214
Protestant	0.100	0.070
Islamic	0.036	0.158
Eastern orthodox Christian	0.098	0.118
Other religions	0.014	0.077
No religion	0.412	0.363
Respondent's family background		
Mother's years of education	8.768 (4.568)	8.852 (5.109)
Father's years of education	9.422 (4.936)	9.781 (5.529)
Father worked when the respondent was 14	0.919	0.899
Wife's characteristics		
Years of education	12.797 (4.881)	12.755 (5.106)
Age	43.655 (10.064)	41.524 (10.041)
Age ²	2,007.027 (861.879)	1,825.057 (836.733)
Husband's and household's characteristics		
Work	0.810	0.809
Years of education	13.177 (3.863)	13.482 (4.086)
Age	46.869 (10.645)	45.131 (10.537)
Age ²	2309.967 (996.782)	2,147.778 (968.953)
Presence of children in the household	0.715	0.745
Other individual covariates		
Health: very bad	0.007	0.009
Health: bad	0.049	0.050
Health: fair	0.293	0.265
Health: good	0.480	0.473
Health: very good	0.171	0.203
Year dummies		
Year 2018	0.072	0.091
Year 2016	0.121	0.125
Year 2014	0.080	0.106
Year 2012	0.132	0.131
Year 2010	0.132	0.134
Year 2008	0.121	0.120
Year 2006	0.133	0.137
Year 2004	0.113	0.078
Year 2002	0.097	0.079
Country dummies		
Austria	0.011	0.014
Belgium	0.018	0.030
Bulgaria	0.007	0.001
Cyprus	0.001	0.001
Croatia	0.002	0.003

Table 2 (continued)

	Native men (N = 48,668)	Immigrant men (N = 10,430)
Czech Republic	0.023	0.011
Denmark	0.010	0.005
Estonia	0.001	0.003
Finland	0.009	0.003
France	0.079	0.120
Germany	0.161	0.207
Greece	0.008	0.008
Hungary	0.018	0.006
Iceland	0.0002	0.0001
Ireland	0.006	0.007
Israel	0.003	0.029
Italy	0.052	0.031
Lithuania	0.002	0.001
Luxemburg	0.0001	0.001
Netherlands	0.035	0.028
Norway	0.010	0.008
Poland	0.099	0.027
Portugal	0.018	0.009
Russia	0.162	0.120
Slovakia	0.007	0.002
Slovenia	0.003	0.005
Spain	0.087	0.059
Sweden	0.011	0.015
Switzerland	0.012	0.043
Ukraine	0.046	0.072
United Kingdom	0.075	0.126
Turkey	0.021	0.003
Specific covariates for migrants		
Second generation		0.397
Area of origin: Europe		0.487
Area of origin: North America		0.062
Area of origin: South and Centre America		0.094
Area of origin: Asia		0.197
Area of origin: Africa		0.156
Area of origin: Oceania		0.004

Mean/percentage, standard deviation in parentheses

Respondent's age ≥ 20 ; wife's age: 20–60 years

Weighted descriptive statistics; standard errors in parentheses

^aVariables used in the robustness checks

Christian, Islamic, Other religions,¹⁰ “No religion”). Other controls include: a vector (Y_i) of woman’s characteristics (years of education, age, age squared¹¹); a vector (W_i) of husband’s and household’s characteristics (husband’s age¹² and age squared, husband’s years of education,¹³ husband’s working status,¹⁴ presence of children in the household); a vector of variables (Z_i) about the respondent’s family background (father’s working status, mother’s years of education, father’s years of education) and health status (5 self-assessed categories ranging from “very bad” to “very good”). All models control for the year of the survey and the country of residence. For immigrants, we include in (1) a set of additional variables that allow us to control some aspects of migration experience: second generation¹⁵ and area of origin¹⁶ (Europe, North America, Southern and Central America, Asia, Africa, Oceania).

¹⁰ We have built a dummy for the first four religious affiliation by numerosity. We grouped all the residual religions (Other Christian denominations, Jewish, Eastern religions, and Other non-Christian religion) in a dummy “Other religions”. This choice was mainly due to the fact that including covariates with a small number may lead to imprecise estimations. Since our main goal is to compare those who have a religious affiliation and those who have not, all these dummies are included in the models. The reference category is “No religion”, which includes all those individuals who declared they have no religious affiliation.

¹¹ To test for a possible not linear relationship.

¹² Calculated by crossing the variables about the relationship between the respondent and the other persons present in the household with those about year of birth of each person in the household.

¹³ In the ESS, respondent’s education is measured in years, while husband’s and parent’s education are measured as highest achieved level (ISCED). Moreover, the coding has changed over ESS rounds (five categories for rounds 1–2–3 and seven subsequently). So, to even up all the educational variables, we recoded them all into years of education, assigning to each ES-ISCED category the correspondent numbers of years necessary to achieve it: I=4 years; II=8; IIIb=10; IIIa=13; IV=15; V1=16; V2=21. The first category (no specific qualification), and the category “Other levels of education” (very few units) are imputed by assigning the average for each subsample. “Not applicable”, “refusal”, “don’t know” or “no answer” values are considered as missing. As a check, we estimated the models including the 8 dummies for mothers’ and fathers’ level of education, but the results are substantially unchanged.

¹⁴ A dummy taking value 1 if the husband is currently working.

¹⁵ We tried another specification, by including length of stay in the receiving country for first generation (included in the models as dummies, with second generation as reference) but results were less clear, with many not significant variables. Results available upon request.

¹⁶ As Brendtman and Otten (2013), we assign to first generation immigrants the actual country of birth. For second generation, for whom one or both parents were born abroad, we assign the mother’s country of birth as country of ancestry. Then we group countries in six geographical areas. The choice to use area of origin instead of country has two reasons: first, for some nationalities there are very few observations, secondly for mothers in round 1 only area of origin is available.

In order to verify hypothesis H3, starting from the main estimations, we computed the predicted probabilities of participation in the labour market by degree of religiosity separately for both mother’s working status when the respondent was 14, while in order to verify hypothesis H4 we ran a set of regressions augmented by interaction terms between the working condition of the mother when the respondent was 14 and each religious affiliation.

Because datasets were gathered from different countries and for different years, all the estimations (including descriptive findings) were properly weighted, by means of a combined weight resulting from the product of post-stratification weight (*pspwght*) and design weight (*dweight*) (see European Social Survey, 2014, for a clarification of the weighting system).

Descriptive Findings

Concentrating on the dependent variable, at the time of the interview, 71.1% of native women and 68.1% of immigrant women were in the labour force. For men, 68.1% of wives in the natives’ sample and 65.3% in the immigrants’ sample were in the labour force. About the main explanatory variable, the percentage of those whose mother worked when they were 14 was slightly lower for immigrants of both genders: 60.1% for native women, 57.1% for immigrant women, 56.6% for native men, and 49.8% for immigrant men.

Combining these two variables (Fig. 1) we found that female labour force participation varied according to the mother’s past working status in all subsamples. For native women, 60.8% of those whose mother did not work were actually in the labour force, while this percentage grew to 74.6% for those whose mother were working at the time. The same pattern was found for immigrant women, but with lower values (58.6 and 70.1%, respectively). Also in the men’s samples the percentage of wives in the labour force was higher in the group of men whose mother worked when they were 14, both for natives (73.9%) than for immigrants (70.2%).

The χ^2 value of association between the two variables—which was always higher than the 6.63 threshold (at 1 df) such that the H_0 hypothesis that results are due to the case can be rejected—confirmed that there is an association between the mothers working in the past and the labour force participation of daughters/daughters-in-law in the present.

For a closer look at religion, Table 3 shows percentages of working mothers and female labour force participation in the four sub-samples by religious affiliation. The labour force participation of mothers was lower than the labour force participation of daughters and daughters-in-law in all four subsamples and for all religious affiliations, except for Eastern Orthodox Christian. Female labour force participation was lower for Islamic respondents in all four subsamples

Fig. 1 Women's labour force participation by employment status of mothers in the four subsamples. *Note: Weighted descriptive statistics*

Table 3 Percentage of female labour force participation and working mothers in the sub-samples by religious affiliation

	Native women		Immigrant women		Native men		Immigrant men	
	LFP (%)	Working mothers (%)	LFP (%)	Working mothers (%)	Wife's LFP (%)	Working mothers (%)	Wife's LFP (%)	Working mothers (%)
Roman Catholic	68.30	49.52	72.15	53.30	65.46	46.81	71.10	49.33
Protestant	71.10	57.70	67.44	60.99	71.79	52.02	71.41	55.93
Eastern orthodox Christian	72.99	82.32	75.32	80.45	63.34	80.10	70.58	72.99
Islamic	29.18	26.68	43.36	25.57	25.51	27.52	39.71	15.73
Other religions	64.75	58.90	71.50	54.98	69.04	51.47	70.79	42.74
No religion	78.45	67.21	70.28	61.11	73.92	62.90	68.70	57.95

Weighted descriptive statistics

LFP labour force participation

(ranging from 25.51% in the native men's sample and 43.36% in the immigrant women's sample) and higher for Protestants, Eastern Orthodox Christians, and individuals who were not religious, with differences across the four sub-groups. As regards the mother's work, overall the lowest values were recorded for Islamic individuals (ranging from 15.73% in the immigrant men's sample and 27.52% in the native men's sample) and the highest among individuals who declared being Eastern Orthodox Christian (ranging from

72.99% in the immigrant men's sample and 82.32% in the native women's sample).

For both genders, the percentage of working mothers was quite similar for immigrants and natives for all religious affiliations, while the female labour force participation was higher for immigrants of both genders for all religious affiliations. This result may be due to the selection process of migrants throughout the globe (which cannot be controlled in European Social Survey), since they migrate mainly for economic reasons (United Nations, 2013).

Table 4 Intergenerational transmission of female labour force participation

	(1) Native women (LFP)	(2) Immigrant women (LFP)	(3) Native men (wife's LFP)	(4) Immigrant men (wife's LFP)
Mother worked when the respondent was 14	1.386*** (0.044)	1.492*** (0.106)	1.531*** (0.029)	1.341*** (0.086)
Respondent's religiosity				
Declared level of religiosity	0.958*** (0.011)	0.980+ (0.017)	0.976*** (0.005)	0.962+ (0.021)
Religious affiliation (ref. no religion)				
Catholic	0.860*** (0.033)	1.129 (0.086)	0.950 (0.038)	1.295** (0.129)
Protestant	0.827* (0.072)	0.844** (0.049)	0.924+ (0.042)	1.246+ (0.144)
Eastern orthodox Christian	0.938 (0.116)	1.798 (0.643)	0.835*** (0.016)	1.436** (0.166)
Islamic	0.520** (0.107)	0.494** (0.111)	0.553*** (0.076)	0.507* (0.134)
Other religions	0.772 (0.124)	0.980 (0.200)	0.886 (0.205)	1.313* (0.178)
Respondent family's background				
Father worked when the respondent was 14	1.154*** (0.044)	1.034 (0.112)	1.141** (0.050)	1.024 (0.195)
Mother's years of education	0.994 (0.009)	0.989 (0.008)	0.989 (0.009)	0.972* (0.014)
Father's years of education	0.995 (0.008)	0.993 (0.006)	0.998 (0.003)	1.007 (0.007)
Wife's characteristics				
Years of full-time education	1.126*** (0.015)	1.065*** (0.009)	1.104*** (0.016)	1.080*** (0.007)
Age	1.307*** (0.048)	1.220*** (0.047)	1.388*** (0.037)	1.431*** (0.054)
Age ²	0.997*** (0.0004)	0.998*** (0.0004)	0.996*** (0.0003)	0.996*** (0.0004)
Husband's characteristics and presence of children				
Working status	1.372*** (0.109)	1.431** (0.173)	1.710*** (0.208)	1.302** (0.119)
Years of education	0.993 (0.009)	0.989 (0.013)	1.005 (0.009)	0.997 (0.010)
Age	1.036* (0.016)	0.960 (0.041)	1.028 (0.018)	0.928* (0.028)
Age ²	1.000* (0.0002)	1.000 (0.0004)	1.000* (0.0002)	1.000 (0.0003)
Children living in the household	0.478*** (0.023)	0.399*** (0.080)	0.656*** (0.042)	0.610*** (0.083)
Respondent's migration history				
Second generation		1.204* (0.091)		1.178* (0.151)
Area of origin (ref. Europe)				
North America		0.903 (0.186)		0.935 (0.211)

Table 4 (continued)

	(1) Native women (LFP)	(2) Immigrant women (LFP)	(3) Native men (wife's LFP)	(4) Immigrant men (wife's LFP)
South-central America		1.323 (0.330)		1.624* (0.319)
Asia		1.165 (0.184)		0.670*** (0.045)
Africa		1.248 ⁺ (0.154)		1.165 (0.248)
Oceania		0.724 (0.320)		1.474 (0.681)
Country of residence dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Health status dummies	Yes	Yes	Yes	Yes
Observations	48,423	10,698	48,668	10,430
Pseudo R-squared	0.144	0.107	0.146	0.124

The table reports odds ratios of logit estimates based on European social survey data (2002–2018), separately for gender and immigrant status. Selected samples and dependent variables (in parentheses) are indicated at the top of each column. Robust standard errors (corrected for heteroskedasticity and clustered at a country level) are reported in parentheses (N. clusters = 33)

LFP labour force participation

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

Empirical Findings¹⁷

The Intergenerational Transmission of Female Labour Force Participation for Natives and for Immigrants

In Table 4, we present the results of logit models by gender and immigrant status. The Odds Ratio of mother work when the respondent was 14 was positive and highly statistically significant ($p < 0.001$) in all subgroups: after controlling for several covariates, a working mother was associated with an increase of 38.6% in the probability of the daughter being in the labour force for native women (column 1) and with an increase of 49.2% for immigrant women (column 2). Turning to men's samples, the increase in the likelihood of having a working wife if the men's mother was in work when they were 14 was 53.1% higher for natives (column 3) and of 34.1% for immigrants (column 4).

The level of religiosity was related to a diminishing probability of a woman's participation in the labour force, statistically significant in all subgroups. Results about religious affiliation were more mixed: Catholic, Protestant and Islamic native women

were less likely to be in the labour force than those who declared no religious affiliation (14%, 17.3%, and 48% less, respectively). For immigrant women, being Protestant or Islamic was negatively related to the labour force participation (15.6% and 50.6% less, respectively). In the native men's sample, wives were significantly less likely to be in the labour force if the husband was Protestant, Eastern Orthodox Christian, or Islamic (7.6%, 16.5%, and 44.7% less, respectively), compared with wives of men with no religious affiliation. For immigrant men, except for Islamic affiliation, having any other religious affiliation other than none was positively related to wives' labour force participation.¹⁸

Turning shortly to the other covariates included in the model,¹⁹ we found that father's working status was positive and statistically significant for native women and men, while mother's education was negative and significant only in the immigrant men's subsample. As expected, women's education was positively related to their labour force participation

¹⁷ We don't compare the magnitude of each variable across models. Anyway, the results of Wald chi-square tests on the main specifications show that for the main explanatory variables, religiosity, religious affiliation (and most of the others) the differences by gender and by ethnicity are statistically significant.

¹⁸ Despite the lack of significance of some of the religion variables, an F-test for the joint significance of the religious affiliation covariates for each subsample allows us to reject the null hypothesis that the five dummies are jointly equal to zero and confirm that religious affiliation is important in explaining women's decisions regarding work.

¹⁹ Results for health dummies (not shown) display a typical pattern: increasing perceived health conditions are positively related to the likelihood of being in the labor force for a woman. Results for the country dummies and the ESS round dummies (included in the models to adjust for country and time heterogeneity) are not shown.

in all subgroups. Age of women was significant in all models and showed a non-linear pattern, first increasing and then decreasing. The presence of children in the household was negatively related with participation of women in the labour market.

Regarding the covariates included in the immigrants' samples, for both genders, results showed that second generation immigrant women were more likely to work than first generation (reference). About area of origin, only Africa turned out to be significant and positively related to the female labour force participation in the women sample. In the men's samples, men from South-Central America and Asia were respectively more and less likely than European (reference) to have a working wife.²⁰

A Deeper Insight into the Role of Religion

In order to analyse how religiosity is related to the intergenerational transmission of female labour force participation, we computed the predicted probabilities of participation in the labour market by degree of religiosity separately for the two conditions of the mother when the respondent was 14 (worked or not worked) (Fig. 2).²¹

There is a clear pattern in all the four subgroups: as the degree of religiosity grows, the probability of being in the labour force strictly decreases,²² for both working conditions of the mother, with higher probabilities for those whose mother had been in work. For native women whose mothers did not work, the predicted probability of being in the labour force decreases from 69.66% for those who claim to be "not at all religious" to 59.82% for the "very religious". In the same subgroup, for those whose mother worked, the predicted probability of being in the labour force declines from 82.63% for not religious women to 75.52% for very religious ones. For immigrant women whose mothers did not work, the predicted probability of being in the labour force decreases from 66.18 to 61.42% as the degree of religiosity increases, while for those women whose mother worked when they were 14 it drops from 77.22% for not religious women to 73.38% for very religious ones.

For native men whose mothers did not work, the predicted probability of having a wife in the labour force decreases from 63.73% for those who claim to be "not at all religious" at 58.06% for very religious ones. In the same subgroup,

for those whose mother worked, the predicted probability of having a wife in the labour force diminishes from 78.42 to 74.11%. In the immigrant men's sample, for those whose mothers did not work, the predicted probability of having a wife in the labour force declines from 65.53% for those who declare to be "not at all religious" at 56.11% for very religious ones, while it goes from 76.73% for not at all religious men to 69.14% for very religious men for those whose mother worked when they were 14.

In order to study the influence of religious affiliation in the intergenerational transmission, we interact the working mother status with the set of categorical variables corresponding to each religious denomination, to let the association between mothers' working condition and the log of the odds of labour force participation to vary across affiliations. This set of augmented models (Table 5), allow the disentangling and interpretation of the different influence of each religion variable on the relationship under investigation.

For native women, having had a working mother is associated with an increase of the likelihood to be in the labour force for those who do not have any religious affiliation (reference, Odds Ratio 1.39, $p < 0.01$). For Muslim individuals, the increase in the likelihood of being in the labour force is more than three times higher for those who had a working mother (Odds Ratio $3.391 = 2.440 \times 1.390$, $p < 0.001$). For immigrant women, having had a working mother is associated with an increase of the likelihood of being in the labour force for those who do not have any religious affiliation (Odds Ratio 1.116, $p < 0.1$), and there is also a significant evidence of a more positive link between working mothers and daughters' labour force participation for Catholics (Odds Ratio $1.572 = 1.116 \times 1.409$, $p < 0.01$), Protestant (Odds Ratio $1.649 = 1.116 \times 1.478$, $p < 0.1$), Eastern Orthodox Christian (Odds Ratio $2.159 = 1.116 \times 1.935$, $p < 0.01$) and Other Religions (Odds Ratio $2.093 = 1.116 \times 1.875$, $p < 0.001$).

For native men, having had a working mother is associated with an increase of the likelihood that their wives are in the labour force for those who do not have any religious affiliation (OR 1.454, $p < 0.001$), while there is an higher positive link between working mothers and daughters' labour force participation for Muslims (Odds Ratio $3.740 = 1.454 \times 2.572$, $p < 0.001$). For immigrant men, having a working mother for those who declared no religious affiliation leads to an increase of 60.8% (Odds Ratio 1.608, $p < 0.001$) in the probability that their wives work. Results of the interaction terms are not in line with those achieved for women. For Catholics, the relation is still positive, but with much lower values (Odds Ratio $1.204 = 1.608 \times 0.749$, $p < 0.5$), while for Protestants the link between working mothers and the labour force participation of their son's

²⁰ Results of an F-test for the joint significance of the area of origin covariates for the two immigrant subsamples confirm that area of origin is also important in explaining women's working decisions.

²¹ For space constraints we do not report the complete results of estimations, which are available upon request to the authors.

²² All the predicted probabilities computed for the four subsamples are significant (p value < 0.001).

Fig. 2 Predicted probabilities (and 95% confidence intervals) from logistic regression of labour force participation at different level of religiosity by working mother status when the respondent was 14. All

models controlled for all the covariates included in main estimations (see Table 4). *Note:* All the estimated predicted probabilities were significant ($p < 0.001$)

wife is negative (Odds Ratio $0.881 = 1.608 \times 0.548$, $p < 0.01$).

Discussion and Concluding Remarks

Discussion

Consistent with previous findings (Campos-Vazquez & Velez-Grajales, 2014; Fernández et al., 2004; Johnston et al., 2014; Sandler Morrill & Morrill, 2013), our results confirm that the intergenerational transmission works more from mothers to daughters than from mothers to sons, both for natives and for immigrants.

We have concentrated, in particular, on the role of religion in mediating intergenerational transmission. The choice of married women to participate in the labour market is related to the gender balance within the couple, which is also driven by religion (Goldscheider et al., 2015). In the main models we find that religiosity is negatively related to the female labour force participation in all four subsamples, and

this is consistent with many findings in the literature (Guetto et al., 2015; Guiso et al., 2003, 2006; Heineck, 2004; Barro & McCleary, 2002; Lehrer, 2011; Iannaccone, 1998). The estimated predicted probabilities by level of religiosity and mother's employment when the respondent was 14 show that as the level of religiosity increases, the probability of daughters and son's wives being in the labour force decreases in all the four subsamples. This result may be explained with the fact that, as shown by Alesina and Giuliano (2010), religious beliefs influence the role of women in society and, hence, their labour force participation and other family outcomes. Religion shapes attitudes toward the balance of work and family of both men and women (Goldscheider et al., 2015) and, in particular, the religious involvement makes women more family oriented (Ammons & Edgell, 2007). Generally, we find that the distance between the predicted probabilities by the two mothers' working conditions is highest for native men (15.39 percentage points on average), and lowest for immigrant women (11.51 percentage points).

Besides the question of religiosity, we have also explored the role of religious affiliations. Results show the existence

Table 5 Intergenerational transmission of female labour force participation by religious affiliation

	(1) Native women (LFP)	(2) Immigrant women (LFP)	(3) Native men (wife's LFP)	(4) Immigrant men (wife's LFP)
Mother worked when the respondent was 14	1.390** (0.158)	1.116+ (0.125)	1.454*** (0.060)	1.608*** (0.167)
Religious affiliation (ref. no religion)				
Catholic	0.867* (0.057)	0.931 (0.107)	0.907* (0.041)	1.496** (0.213)
Protestant	0.837** (0.046)	0.672* (0.115)	0.925 (0.084)	1.727** (0.309)
Eastern Orthodox Christian	1.004 (0.139)	1.132 (0.370)	0.858*** (0.024)	2.022+ (0.790)
Islamic	0.318*** (0.063)	0.410*** (0.104)	0.311*** (0.053)	0.534* (0.167)
Other religions	0.873 (0.203)	0.710 (0.181)	0.923 (0.272)	1.463* (0.234)
Interactions				
Catholic#mother_work	0.979 (0.150)	1.409** (0.183)	1.107 (0.072)	0.749* (0.107)
Protestant#mother_work	0.973 (0.137)	1.478+ (0.325)	0.983 (0.121)	0.548** (0.128)
Eastern orthodox Christian #mother_work	0.922 (0.120)	1.935** (0.420)	0.976 (0.032)	0.611 (0.285)
Islamic#mother_work	2.440*** (0.411)	1.420 (0.353)	2.572*** (0.366)	1.045 (0.274)
Other religions#mother_work	0.778 (0.260)	1.875*** (0.344)	0.870 (0.350)	0.800 (0.244)
Full set of controls	Yes	Yes	Yes	Yes
Observations	48,423	10,698	48,668	10,430
Pseudo R-squared	0.144	0.109	0.147	0.125

The table reports odds ratios of logit estimates based on European social survey data (2002–2018), separately for gender and immigrant status. Selected samples and dependent variables (in parentheses) are indicated at the top of each column. All regressions are run with corresponding full set of controls (see Table 4), not reported. Robust standard errors (corrected for heteroskedasticity and clustered at a country level) are reported in parentheses (N. clusters = 33)

LFP labour force participation

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

of dissimilarities in the intergenerational transmission of labour participation across different religious groups. For native women and men, the link is stronger for Islamic respondents. This may be due to the fact that Muslims are less common in the native samples and especially given the fact that a working mother is not a normative situation for individuals of this specific religious affiliation. As shown in Table 3, Islamic working mothers within natives were less common, so the socialization effect of having had a working mother may be greater.

For immigrants the results are more mixed. In particular, immigrant women of any religious affiliation (except Islamic which is not significant) have a stronger intergenerational

transmission of female labour force participation. One possible explanation may be that, as shown in the literature (Algan & Cahuc, 2006; Fan & Mooney Marini, 2000; Fortin, 2005; Lehrer, 2011; Seguino, 2011), religious people hold less egalitarian gender roles, so the influence of a working mother may have been more influential for daughters and sons. For immigrant men, the link between a working mother and their wives' labour force participation is slightly positive for Catholic and negative for Protestant, compared with men with no religious affiliation.

For both genders, in the immigrant samples, the interaction for Islamic is not significant. This result could be considered quite unexpected, since findings in the

literature have shown that Muslims tend to believe in the more traditional role of women in society and also have lower female labour force participation (Alesina & Giuliano, 2010). One possible explanation may be found in the so-called “discouragement effect”: individuals from particular groups which typically face problems of integrating in the labour market, who face a higher risk of repeated spells of unemployment, are discouraged from participating and may decide to leave the labour market altogether (Ayllón, 2013; Blundell et al., 1998). Khattaba et al. (2019) refer to this “discouragement effect” as a possible explanation of the low participation rate of Muslim women in Canada. Migrants coming from predominantly Muslim countries suffer more discrimination and segregation in the labour market (Silberman et al., 2007; Simon, 2003) and this may push them to decide not to participate in (or leave) the labour market. So, if this “discouragement effect” takes place for Muslim immigrants, it might be irrelevant whether their mothers worked or not. It is plausible that native Muslims, being more socially and culturally integrated, do not face the same difficulties in entering the labour market, so this “discouragement effect” does not take place.

Overall, while the results for religious affiliation are more mixed and tricky to interpret, the results about religiosity are clearer, partially confirming that religiosity may affect the female labour force participation more than religious affiliation per se (e.g., Heineck, 2004).

Limitations

One drawback of the European Social Survey is that unfortunately it does not provide data about spouses' cultural and family background, so it is not possible to control for assortative mating concerning involvement in work and gender roles and to disentangle the effect on a woman's working decision of the mother's working status from the mother-in-law's working status. Hence, it is necessary to bear in mind that the link between mothers and daughters-in-law (via sons) may also reflect an indirect effect of a woman's mating decision (Sandler Morrill & Morrill, 2013), which is influenced by her attitudes regarding gender roles and, eventually, affects her decision to work (Brendtmann & Otten, 2013). On the same lines, Del Boca et al. (2000) find that a woman's labour force participation is correlated with both her mother and her mother-in-law's working experience. So, also the daughter's labour force participation on which we concentrate in female models may be influenced by their mother-in-law's employment history.

Additionally, we cannot control for religious assortative mating. When we analyse the role of religion in the men's sample, religious affiliation is referred to the male

respondent, while we do not have information about wife's religious affiliation. Similarly, in the women's sample, we don't have the religious affiliation of the husbands. This is a relevant issue. Lehrer (1995, 2004) reports that if the spouses have different religious affiliations, they may face a dual structure of perceived costs and benefits associated with female employment. For instance, for women with typical characteristics for all other variables, the probability of non-employment is 0.55 in the case of both spouses being of the same faith, compared to 0.35 if only the wife is a strict Protestant. So, husband and wife may have a different level of religiosity and a different religious affiliation and these assortative mating patterns (which cannot be properly accounted for in the European Social Survey) may combine in determining labour force participation.

In the migrants subsamples, results on the role of religion should be considered carefully as migrant status and religion may not be independent of the mother's work status. Unfortunately we cannot control for mother religiosity and religious affiliation, which could be related to her participation in the labour market. Finally, as shown in Table 3, the distribution of religious affiliation in each subsample differs.

Another relevant caveat is that the results on immigrants should be interpreted with caution because of possible problems of unobserved heterogeneity. Firstly, although the area of origin is considered, this may not be sufficient to account for ethnic differences in female labour force participation in these areas. Moreover, we do not control for any cohort effect (although this is, to some extent, corrected by adjusting for age, age squared, generation, and year of the survey). Additionally, data may be biased by selectivity. For example, in the European Social Survey only migrants who speak the receiving country's language are interviewed and these migrants are presumably more integrated (Chiswick & Miller, 2002; Strøm et al., 2018).

As a final point, previous findings have framed the intergenerational transmission of female labour force participation within socialization and stratification mechanisms, often suggesting that the effect of a working mother is causal. In this paper, we cannot make a causal connection of the relationship detected, due to the unobserved heterogeneity from different sources that might influence the relationship between working mothers and their daughters and daughters-in-law's participation in the labour force.

Conclusions and Implications

Studies on female labour force participation have strong policy implications as an important asset for economic growth and development (Verick, 2018). According to Pignatti (2016), increasing women's labour force participation

is an important prerequisite for sustainable economic development, in particular in economies with highly educated women and an aging population. This paper contributes to the existing literature on the subject by observing the pattern of intergenerational transmission by gender on a very large multi-country dataset both for natives and for immigrants. All our four hypotheses are confirmed. It is reasonable to assume that the outcome of greater female participation in the labour market will propagate through cohorts both along the daughters' and on the sons' channel, although a progressive reduction of the effect is expected as the presence of working mothers becomes increasingly the norm.

Results are robust (see Appendix) and consistent with previous findings, adding fresh evidence that the mechanism also works for immigrants both from mothers to daughters and from mothers to daughters-in-law (via sons). Generally, no striking differences appear between natives and immigrants with regard to the transmission of female work.

Religiosity has proved to be negatively related to female labour force participation, and there is a clear interconnection with the working mother condition when the respondent was 14. Results about religious affiliation are less clear cut. Some differences have emerged in the models with interactions, suggesting that for those religions where the incidence of working mothers is lower, the effect of having had a working mother may be more significant.

One research implication of this contribution is that the role of religion cannot be neglected in studies which aim to understand the intergenerational transmission of female labour force participation. The review of the literature has found that only a few studies on this topic have taken religion into account by adding it as a covariate, sometimes using parents' religious affiliation. More research is surely needed, in particular to scrutinize the transmission channels from religious denominations to labour market performance (Feldmann, 2007). Future efforts should be also directed at verifying how the assortative mating and, in particular, the religious assortative mating, may influence the decision of women to participate in the labour market. "Studies of familism, family values, and gender issues, therefore, need to consider the continuing power of religious affiliation and religiosity." (Goldscheider et al., 2014, p. 906).

Appendix

Robustness checks

In this section we test the robustness of our findings through sensitivity checks.²³ As a first check we change the

dependent variable. Often women wish to work but they do not so because of lack of employment opportunities, so in our main estimation we use labour force participation as dependent variable because it is more suitable to measure willingness to work. As a sensitivity test, we use the current employment condition of women, taking value 1 if the woman works and 0 otherwise.

There is a slight reduction of the Odds Ratio of "working mother" in all the four subgroups, although the signs and significance are unchanged (Table 6). The variables about religion are mostly unchanged: religiosity is still negatively related with the participation of women in the labour force, and the religious affiliations show the same signs as the main estimations, albeit with some small changes in magnitude and significance. Most importantly, we computed the predicted probabilities by using new dependent variables and the models with interactions and all the results confirm the previous findings.

As a second robustness check we change the main explanatory variable. According to Kawaguchi and Miyazaki (2009), self-employed women could more easily manage their time when their children were growing up and have spent more hours at home with them. So, we use a restricted measure of a mother's working status considering only those who have worked as employees. In all the four subgroups the intergenerational transmission of female work is substantially confirmed and highly significant statistically (Table 7). Also the variables concerning religion show no changes from the main estimations. Findings for predicted probabilities by religiosity and working mother status and models with interactions by religious affiliation are mostly unchanged in sign, magnitude and significance.

As a third robustness check, we apply a different sample selection. Following Fernández et al. (2004) and Sandler Morrill and Morrill (2013), we restrict the analysis only to women aged between 30 and 50, to consider those with the highest involvement in the labour market. For all the four subsamples, the Odds Ratio for the variable "mother work" is still positive and statistically significant with a notable rise in magnitude (Table 8). The predicted probabilities by religiosity and working status of the mother and the models with interaction terms between a working mother and each religious affiliation confirm results obtained in the main models.

Another important check is related to the decision in the main estimations to consider only married women. Although this strategy is widely adopted in literature, one may argue that this selection may bias the estimations, because marriage and labour force participation are likely to be joint decisions, particularly among cultural groups that allow

²³ For space constraints, we discuss only results for mother's working status and religion variables in the main models. Complete results of all the regressions, as well as those for predicted probabilities and augmented models, are available upon request.

Table 6 Robustness check #1: different definition of the dependent variable (woman's working status, assuming values 1 = currently working, 0 = not currently working)

	(1) Native women (work)	(2) Immigrant women (work)	(3) Native men (wife's work)	(4) Immigrant men (wife's work)
Mother worked when the respondent was 14	1.336*** (0.042)	1.357*** (0.064)	1.422*** (0.035)	1.267*** (0.085)
Respondent's religiosity				
Declared level of religiosity	0.964*** (0.011)	0.974+ (0.017)	0.979*** (0.006)	0.967+ (0.017)
Religious affiliation (ref. no religion)				
Catholic	0.904** (0.030)	1.255* (0.116)	0.991 (0.035)	1.339** (0.138)
Protestant	0.843* (0.071)	0.893+ (0.054)	0.942* (0.026)	1.327*** (0.093)
Eastern orthodox Christian	0.947 (0.076)	1.810 (0.699)	0.869*** (0.017)	1.435* (0.212)
Islamic	0.566*** (0.090)	0.512** (0.125)	0.577** (0.104)	0.490** (0.123)
Other religions	0.706+ (0.131)	1.051 (0.196)	0.944 (0.221)	1.268 (0.187)
Full set of controls	Yes	Yes	Yes	Yes
Observations	48,423	10,698	48,668	10,430
Pseudo R-squared	0.141	0.106	0.144	0.117

The table reports odds ratios of logit estimates based on European social survey data (2002–2018), separately for gender and immigrant status. Selected samples and dependent variables (in parentheses) are indicated at the top of each column. All regressions are run with corresponding full set of controls (see Table 4), not reported. Robust standard errors (corrected for heteroskedasticity and clustered at a country level) are reported in parentheses (N. clusters = 33)

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

Table 7 Robustness check #2: restricted definition of the main explanatory variable (mother worked as employee)

	(1) Native women (LFP)	(2) Immigrant women (LFP)	(3) Native men (wife's LFP)	(4) Immigrant men (wife's LFP)
Mother worked as employee when the respondent was 14	1.320*** (0.070)	1.364*** (0.112)	1.503*** (0.050)	1.363*** (0.079)
Respondent's religiosity				
Declared level of religiosity	0.958*** (0.010)	0.979+ (0.017)	0.978*** (0.005)	0.963+ (0.021)
Religious affiliation (ref. no religion)				
Catholic	0.858*** (0.033)	1.124 (0.087)	0.956 (0.038)	1.297* (0.135)
Protestant	0.826* (0.072)	0.847* (0.055)	0.929+ (0.040)	1.236+ (0.149)
Eastern orthodox Christian	0.934 (0.114)	1.785 (0.631)	0.834*** (0.018)	1.429** (0.170)
Islamic	0.518** (0.108)	0.482** (0.109)	0.551*** (0.077)	0.505** (0.131)
Other religions	0.771+ (0.122)	0.976 (0.196)	0.885 (0.202)	1.314* (0.174)
Full set of controls	Yes	Yes	Yes	Yes
Observations	48,423	10,698	48,668	10,430
Pseudo R-squared	0.143	0.105	0.145	0.125

The Table reports odds ratios of logit estimates based on European social survey data (2002–2018), separately for gender and immigrant status. Selected samples and dependent variables (in parentheses) are indicated at the top of each column. All regressions are run with corresponding full set of controls (see Table 4), not reported. Robust standard errors (corrected for heteroskedasticity and clustered at a country level) are reported in parentheses (N. clusters = 33)

LFP labour force participation

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

Table 8 Robustness check #3: restricted samples by age (woman's age 30–50 years; partner's age ≥ 30)

	(1) Native women (LFP)	(2) Immigrant women (LFP)	(3) Native men (wife's LFP)	(4) Immigrant men (wife's LFP)
Mother worked when the respondent was 14	1.412*** (0.063)	1.546*** (0.122)	1.764*** (0.073)	1.476*** (0.157)
Respondent's religiosity				
Declared level of religiosity	0.958** (0.013)	0.970* (0.014)	0.972*** (0.008)	0.957* (0.021)
Religious affiliation (ref. no religion)				
Catholic	0.893+ (0.055)	1.279*** (0.094)	0.999 (0.062)	1.402* (0.225)
Protestant	0.785** (0.059)	0.875 (0.112)	0.897+ (0.057)	1.352* (0.179)
Eastern Orthodox Christian	0.734*** (0.035)	1.623 (0.672)	1.044 (0.038)	1.333 (0.265)
Islamic	0.521*** (0.091)	0.508** (0.123)	0.427*** (0.0808)	0.473* (0.141)
Other religions	0.637** (0.0901)	0.999 (0.239)	0.922 (0.236)	1.202 (0.181)
Full set of controls	Yes	Yes	Yes	Yes
Observations	30,121	7040	28,787	6454
Pseudo R-squared	0.134	0.103	0.122	0.139

The table reports odds ratios of logit estimates based on European social survey data (2002–2018), separately for gender and immigrant status. Selected samples and dependent variables (in parentheses) are indicated at the top of each column. All regressions are run with corresponding full set of controls (see Table 4), not reported. Robust standard errors (corrected for heteroskedasticity and clustered at a country level) are reported in parentheses (N. clusters = 33)

LFP labour force participation

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

Table 9 Robustness check
#4: enlarged women' samples
(married and not married)

	(1) Native women (LFP)	(2) Immigrant women (LFP)
Mother worked when the respondent was 14	1.341*** (0.024)	1.387*** (0.051)
Marital status (ref. Single)		
Married	0.527*** (0.072)	0.516*** (0.026)
Divorced or separated	1.288* (0.154)	1.106 (0.107)
Widow	0.719** (0.080)	0.647* (0.127)
Respondent's religiosity		
Declared level of religiosity	0.968*** (0.009)	0.962*** (0.006)
Religious affiliation (ref. no religion)		
Catholic	0.957 (0.057)	1.313*** (0.109)
Protestant	0.912 (0.075)	0.987 (0.116)
Eastern Orthodox Christian	1.015 (0.105)	1.763* (0.428)
Islamic	0.460*** (0.061)	0.700* (0.111)
Other religions	0.771* (0.094)	1.078 (0.164)
Full set of controls	Yes	Yes
Observations	86,028	19,011
Pseudo R-squared	0.151	0.116

The table reports odds ratios of logit estimates based on European social survey data (2002–2018), separately for gender and immigrant status. Selected samples and dependent variables (in parentheses) are indicated at the top of each column. All regressions are run with corresponding full set of controls (see Table 4), not reported. Controls about husband's characteristics are excluded. Additional controls for marital status are included. Robust standard errors (corrected for heteroskedasticity and clustered at a country level) are reported in parentheses (N. clusters = 33)

LFP labour force participation

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

single women to work but do not view married women's employment favourably. So, in order to test this potential bias, we estimate models on the whole sample of women, including also unmarried ones and adding variables on marital status as controls. Results show that, albeit to a slightly lower magnitude, the link between working mothers and daughters' labour force participation is still positive and highly statistically significant (Table 9). For both groups the variables aiming to adjust for marital status have consistent signs: as expected, being married reduces the probability of work compared to being single or widowed (although to a lesser degree), while being divorced and separated is positively related to the labour force participation.²⁴

Also for this last sensitivity test, the predicted probabilities by religiosity and models with interaction terms with religious affiliation show similar results, except for the interaction between a working mother and Protestant, which is no longer significant.

Finally, we have run other robustness checks, combining some of the previous checks (results not reported to save space). For instance, we run the full models changing both the dependent and the main explanatory variables, estimating these last models both on 30–50 years reduced sample and on the extended one with both married and non-married women. The estimations prove to be robust to all these differing specifications, with the coefficient of working mother remaining always positive and highly statistically significant. Religiosity maintains its negative and statistically significant relationship with female labour force participation, while some minor but negligible changes occur in the models with interactions between working mother and religious affiliation.

Acknowledgements The author would like to thank Annalisa Busetta, Maria De Paola, Daria Mendola, Vincenzo Scoppa, François-Charles Wolff for useful comments and suggestions at different stages of this work. The author would also to thank the four reviewers and the Editor for their valuable comments which helped to strongly improve the paper. Usual disclaimers apply.

Funding Open access funding provided by Università della Calabria within the CRUI-CARE Agreement.

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²⁴ In this case, the decision to work may be a necessity rather than a choice.

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