

Marcén, Miriam; Morales, Marina

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Gender division of household labor: How does culture operate?

Miriam Marcén¹ and Marina Morales¹

¹Universidad de Zaragoza, Zaragoza, Spain

ABSTRACT

In this paper, we examine whether culture plays a role in the gender division of household labor. To explore this issue, we use data on early-arrival first and second generation immigrants living in the United States. Since all these individuals have grown up under the same laws, institutions, and economic conditions, then the differences between them in the gender division of housework may be due to cultural differences. We find that the higher the culture of gender equality in the country of ancestry, the greater the equality in the division of housework. This is maintained when we consider both housework and childcare as household labor. Our work is extended by examining how culture operates and is transmitted. We study whether culture may influence by and with whom housework activities are performed and the timing of the day when this happens, which can help us to understand how culture operates in the family life of couples. Results indicate that the more culture of gender equality is associated with greater probability that individuals report performing housework when they are with their partner in the evening, which may improve family life by making housework a non-individual task. The cultural impact is also observed in the case of working days, but it is not so clear during public holidays, which can be explained by the fact that those individuals originating from less egalitarian countries work longer work hours than those from egalitarian countries.

Keywords: Culture, immigrants, housework, childcare

JEL Codes: D13, J13, Z13

Corresponding Author: Miriam Marcén

Universidad de Zaragoza
Gran Vía 2
50005 Zaragoza (Spain)
mmarcen@unizar.es
Telephone: +34876554684

Marina Morales
Universidad de Zaragoza
Gran Vía 2
50005 Zaragoza (Spain)
mcmorales@unizar.es
Telephone: +34876554684

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1. INTRODUCTION

The dramatic increase in women's participation in the labor force has not appeared to be enough to achieve equality in the division of household labor (Dilli et al., 2019; Fuwa, 2004; Fuwa and Cohen, 2007; Knudsen and Wærness, 2007; McMunn et al., 2019). In the early twenty-first century, North American women reported performing nearly two thirds of the household labor (Greenstein, 2009). Specifically, women spent an average of 13.5 hours per week in unpaid work, compared to 6.5 hours per week for their spouses (Fuwa and Cohen, 2007; Greenstein, 2009; Knudsen and Wærness, 2007). Although there has recently been an increase in men's contribution to housework, it has only been moderate (Bianchi et al. 2008; Sayer et al. 2004). The persistence of the asymmetric gender division of housework in some societies is not a minor issue since it has been found to have consequences on demographic and socioeconomic variables such as women's career (Becker, 1985; Polachek, 2006; Waldfogel, 1998), women's life satisfaction (Foster and Stratton, 2019), partnership (Gimenez-Nadal et al., 2012), and fertility (Sevilla-Sanz, 2010), among others.

Traditionally, paid and unpaid work were divided according to gender, where men were breadwinners who worked for a salary and women were specialized in housework, placing women in a position of dependency on their husbands (Sayer et al., 2004). The economic theory of specialization has been used to explain this kind of household division of labor. As Becker (1991) postulates, the partner with the lowest opportunity cost of time, normally women, should focus completely on home-based production and the other partner should specialize in the labor market. Nevertheless, this is not the current framework, because women are massively incorporated into the labor market in developed countries, but, at the same time, many of them are still involved in many of the household tasks. Empirically, there are researchers who have tried to analyze the determinants of the division of household labor by studying individual's and couple's characteristics such as age, gender, race, educational level, employment status or the presence of children in the household (Bianchi et al., 2000), but also macro-level factors appear to be important in determining the division of household labor. Fuwa (2004) suggests that individual characteristics are not enough to achieve an equal division, pointing to the necessity of a reduction in the gender inequality at the country level, which, as McMunn et al. (2019) explain, can be interpreted as a change in the culture of a country. Fuwa (2004) explains that, in those countries where gender inequality is relatively severe, the time spent by women in paid work may not matter so much in

determining the division of household labor. In contrast, women may be able to bargain the division of household labor according to their individual characteristics in more gender equal countries. From these findings, it can be deduced that cultural issues are important in the household tasks. However, there is only one working paper exploring the possible effect of culture on housework and childcare focusing on a sample of US immigrants most of whom had been exposed to their country of origin characteristics for a large part of their life (Blau et al., 2018). Thus, their behavior could be influenced not only by culture, but also by other country level characteristics. In this setting, disentangling the possible effect of culture from that of other economic and institutional characteristics of their country of origin is tricky. To our knowledge, this is still an unexplored issue. Our paper contributes to this literature, not only in studying whether culture may explain, at least in part, the division of household labor in a sample of individuals who have grown up in the same country (under the same laws, institutions, and economic conditions), but also in examining how culture operates and is transmitted.

What is culture? The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2001) defines culture as *the set of distinctive spiritual, material, intellectual, and emotional features of society or a social group. Not only does this encompass art and literature, but it also includes lifestyles, ways of living together, value systems, traditions, and beliefs*. To isolate the impact of culture from the effect of institutions and economic conditions, we follow the epidemiological approach (Fernández, 2007) by exploring the behavior of early-arrival first and second generation immigrants whose ethnicity or country of origin is known.¹ All those individuals have grown up in the same country, but they differ in their cultural background, so dissimilarities in the gender division of household labor of those immigrants (first and second generation) by country of origin can be interpreted as the existence of cultural effect.

Our work contributes to the growing research on the effect of culture on socioeconomic and demographic outcomes (Fernández, 2011; Giuliano, 2016). Related to our research are those recent studies that show how gender norms in the country of ancestry may impact intimate partner violence (González and Rodríguez-Planas, 2018)

¹ Second generation immigrants are those who were born in the host country to where their parents migrated. Early-arrival-first generation immigrants are those who migrated at or before the age of 5. As Furtado et al. (2013) explain, both can be considered quite similar since they have spent almost their entire life living in the same country. Both are incorporated to the analysis to have enough observations, see below.

and teenagers' smoking behavior (Rodríguez-Planas and Sanz-de-Galdeano, 2018). González and Rodríguez-Planas (2018) find that greater the gender equality in the country of ancestry is associated with less intimate partner violence in the host country. They also show that the higher the gender-equality attitudes in the country of origin, the higher the likelihood that females smoke relative to males. In addition, using methodologies quite analogous to ours, there are several papers showing a role of culture in living arrangements (Giuliano, 2007), women's labor-force participation and fertility (Bellido et al., 2016; Contreras and Plaza, 2010; Fernández, 2007; Fernández and Fogli, 2006, 2009; Marcén et al., 2018), self-employment (Marcén, 2014), the search for a job (Eugster et al., 2017), the living-together decision (Marcén and Morales, 2018), divorce (Furtado et al., 2013), homeownership (Huber and Schmidt, 2018; Marcén and Morales, 2019), and even on the math, reading, and science gender gap (Nollenberger et al., 2016; Rodríguez-Planas and Nollenberger, 2018).

In our empirical analysis, we use data from the Integrated Public Use Microdata Series Time Use (IPUMS Time Use) for the period 2006-2016 (Hofferth et al., 2018). Following Blau et al. (2018), González and Rodríguez-Planas (2018) and Nollenberger et al. (2016), culture is measured by using information on the 2009 World Economic Forum's Gender Gap Index (GGI), which represents the gap between men and women in economic and political opportunities, education, and wellbeing in each country. It should be noted that, since the behavior of early-arrival first and second generation immigrants is unlikely to influence the gender-equality index of the country of ancestry, reverse causality is not a problem here (Nollenberger et al., 2016). Our main analysis focuses on housework as household labor. Results point to culture in the country of ancestry as an important factor in the division of housework. We find that the gender gap in the household division of housework decreases for those individuals originating from countries having a culture of gender-equal norms. The more gender-equal norms in the country of origin are associated with a higher relative housework time of men over women. This is maintained after adding controls for observable and unobservable characteristics (including country of ancestry fixed effects), regardless of the definition of the cultural proxy, using different subsamples, and carrying out several robustness checks. Our findings are maintained when we consider childcare, in addition to housework, as household labor.

In addition, we present evidence suggesting that gender norms culture in the country of ancestry can be transmitted. Following Furtado et al. (2013) and Nollenberger et al.

(2016), the horizontal transmission of culture is studied by exploring whether the individuals' sensitivities to their country of ancestry culture differs depending on whether they live in predominantly same-ethnicity communities. The stronger relationship between the cultural proxy and the males' housework time relative to that of females in predominantly same-ethnic communities may be interpreted as empirical evidence that culture is horizontally transmitted. Our estimations appear to confirm the existence of a horizontal transmission of culture.

Since we find empirical evidence of the importance of culture on gender division of housework, we extend our work to the analysis of how culture operates. There is no prior literature studying this for the division of household labor. First, we explore the probability of performing housework with the married or unmarried partner present in the household and the timing of the day when couples are more likely to be together while the respondent does the housework tasks. The dataset used in this work only provides information on the time use of the respondent, but it is possible to know whether other individuals are with him/her while performing the household tasks. Our estimations suggest that greater gender equality in the country of ancestry is related to a higher probability that individuals decide to do the housework with their partner present. Additionally, we find that individuals originating from more gender-equal countries are more likely to perform household tasks with the presence of their partners in the evening. The cultural effect is clearly observed during working days, but there is no empirical evidence on that during holidays and Sundays. All these findings may suggest that individuals from more egalitarian countries perform housework activities after work, which may indicate that culture on gender equality is operating through their own work/life balance and that of their partners, since they are more likely to be present while the housework is performed.

Because there are 1440 minutes per day, it is possible to hypothesize that the higher involvement in housework of early-arrival first and second generation immigrant men relative to women of more gender-equal countries of ancestry has to be compensated with the time spent on other activities. Presser (1994) views employment schedules as an important factor of the time available for household labor. Then, we wonder whether culture also operates through a variation of employment schedules or leisure time. Results point to a negative association between the more gender-equal culture and the time spent in paid labor. No effect is observed in the case of leisure. It can be suggested, then, that culture operates through a balance between work and domestic work, but does not affect

the leisure time differently, at least during working days. These findings reinforce the idea that culture is important in the gender division of household labor.

The remainder of the paper is organized as follows. Section 2 describes the data, Section 3 presents the empirical strategy, our results are discussed in Section 4, and Section 5 concludes.

2. DATA

Our main data source is the Integrated Public Use Microdata Series Time Use (IPUMS Time Use) for the period 2006-2016 (Hofferth et al., 2018), also known as the American Time Use Survey. Our sample selection consists of early-arrival first and second generation immigrants living in the US, coming from 36 different countries of ancestry. We restrict our sample to those individuals who report information about their housework activities and who have a married or unmarried partner present in the household. Our sample contains 2,387 observations of respondents aged 26 to 80 years old.² The dataset on time use incorporates an extensive number of variables, but the number of first and second generation immigrants is scarce since this survey obtained information from a randomly selected subset of households from the Current Population Survey (CPS). This problem is reflected in the literature, for instance, Giuliano (2007) and Muchomba et al. (2019) had to include many waves of the CPS in order to have enough observations for their analyses on first and second generation immigrants. Then, if, even using the CPS, it is necessary to use several waves of the CPS, in our case, we have also to include several waves of the Time Use Survey, see Giuliano (2007) and Blau et al. (2018). We should note that we have imposed no restrictions on the age of individuals in order to have enough observations for several of the robustness checks. In any case, the main results are maintained using a sample of individuals aged 26 to 65 to include only those who are likely to have completed schooling and are below the retirement age, (Furtado et al., 2013).

As before, following González and Rodríguez-Planas (2018), both early-arrival first and second generation immigrants have been considered in order to amplify the size of our sample.³ For the first generation, we select those immigrants living in the US who

² We have eliminated those countries of origin with fewer than 10 observations per country, as in prior studies (Furtado et al., 2013). Note that the sample is limited to those living in an identifiable US state.

³ The sample of second-generation immigrants represents 73% of our sample (1,737 individuals), we have repeated the analysis with only those second-generation immigrants and we find evidence of the effect of culture, see below.

arrived in that country when they were aged 5 or younger, and who report their country of origin. In the case of the second generation, we select native individuals whose mothers' ancestry is reported, and we assign the mother's country of origin since the mother's culture has been found to be more important in the intergenerational transmission of gender roles (Blau et al., 2013).⁴ As mentioned above, both generations can be considered quite similar. Early-arrival immigrants, like second generation immigrants, have been exposed to US economic conditions and institutions almost their entire lives and are not likely to have language barriers (Furtado et al., 2013).

With respect to the cultural proxy, we use data on The Gender Gap Index (GGI) from the 2009 World Economic Forum, which is a national-level index available since 2006 designed to measure gender-based gaps.⁵ The GGI is formed by four different sub-indexes ranging from 0 to 1: Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment. Following the epidemiological approach, the culture of the respondents is represented by the GGI of their country of ancestry. Additionally, we have repeated the analysis using each of those sub-indexes separately. We revisit this issue below. Table A1 in the Appendix presents a detailed description of all measures on gender gap used in the analysis, as well as their data sources.

Table 1 reports summary statistics for the main variables by country of ancestry, ordered from lowest to highest gender gaps in housework time (column 1). The first column shows the average gap in housework time for early-arrival first and second generation immigrant males relative to females, calculated as the average male's housework minus that of females by country of ancestry (in minutes per day). Hence, a negative gap means that females over perform males in time while a positive gap means that males over perform females. Large variations in the gender gap in housework time across countries of ancestry are observed. For the entire sample, the difference in housework time between males and females is -45.82 minutes on average, which means that, on average, females in our sample spend more time than males on housework. This

⁴ We have rerun our analysis without those with an American father in the robustness check and our results do not change.

⁵ The Time Use Survey contains information since 2003, but, because the cultural proxy has only been available since 2006, we have restricted our sample to the years in which the cultural proxy is available. This is based on the idea that both generations of immigrants behave in the same way as their counterparts in their country of ancestry, which is a common strategy in the epidemiological approach, see Furtado et al. (2013). Note that there are also other gender equality indexes such as the Historical Gender Equality Index described in Dilli et al. (2019), but this is only available for the period 1950-2003.

dissimilarity varies from around 14.04 minutes in France to -104.17 minutes in Nicaragua. Column 2 reports differences in the proportion of immigrants sharing housework with the married or unmarried partner present in the household across countries of ancestry. As can be seen, 57% of individuals report doing housework with the presence of their married or unmarried partners. The rest of the columns show the cultural proxies by country of ancestry. The higher values indicate a greater gender equality in that society. Our main variable, the GGI, averages 0.71 varying from 0.63 in India to 0.83 in Norway. It is worth noting that, for some of the sub-indexes that comprise the GGI, there are no important differences across countries of ancestry (see the case of the GGI in education). Thus, the empirical analysis should not reflect any statistically significant coefficient for this motive, as we show below. In the general GGI index, there are enough variations across countries in order to run the analysis proposed here, see also a similar analysis in Nollenberger et al. (2016).

Figure 1 presents the relationship between the gender gap in housework time in the US and the GGI by country of ancestry. At least with the raw data, that figure and the information provided in Table 1 do not appear to reveal the presence of a positive relationship between the greater culture of gender equality in the country of ancestry and the decrease in the gender gap in housework for both generations of immigrants. However, this is not a conclusive analysis and we need to study this issue more deeply in the next sections.

3. EMPIRICAL STRATEGY

Following the epidemiological approach, our empirical strategy is based on the fact that both early-arrival first and second generation immigrants have all lived under the same US markets and institutions. Thus, if only institutions and markets are important in gender division of housework of both generation of immigrants, we would expect no effect of the home-country cultural proxy. On the other hand, if individuals form their identities based on culture of gender norms, (Akerlof and Kranton, 2000), and this is transmitted vertically (across generations) or horizontally (within communities) by providing acceptable role models or punishing behavior different from the norm (Fernández and Fogli, 2009), we would expect to observe that the GGI, the home-country cultural proxy, does have an effect on the gender division of housework of early-arrival first and second

generation immigrants in the host country, in our case, the US. To explore this issue, we propose the same methodology as in Nollenberger et al. (2016). Formally:

$$Y_{ijkt} = \beta_0 + \beta_1 Male_i + \beta_2 (Male_i * GGI_{jt}) + X'_{ijkt} \beta_3 + (X'_{ijkt} * Male_i) \beta_4 + \delta_k + \eta_j + \mu(\delta_k * Male_i) + \theta_t + \varepsilon_{ijkt} \quad (1)$$

with Y_{ijkt} being the housework time (measured in minutes per day) reported by individual i of cultural origin j living in state k in year t .⁶ The variable $Male_i$ is a dummy variable that takes value of one if the individual is a male and zero otherwise. The cultural proxy, GGI_{jt} , is a measure of culture in the country of ancestry j in year t .⁷ A higher value of this index represents a more gender-equal culture. β_2 is the coefficient of the interaction between the GGI_{jt} and the male indicator, which is our coefficient of interest. This picks up the role of culture in explaining the gender differences in housework time of early-arrival first and second generation immigrant males and females. A positive and statistically significant β_2 would suggest that higher gender-equal attitudes in the immigrant's country of ancestry are associated with a higher relative housework time of early-arrival first and second generation immigrant males over females. Thus, this would imply a smaller gender gap in housework time. The vector X_{ijkt} incorporates a set of individual characteristics of the respondent i and his/her partner. We include controls for age, educational level (more college or not), employment status (employed or not), race, immigrant status (second generation or not) and the presence of children in the households, which is found to be related to time spent in household labor, in addition to child care time (Bianchi et al., 2000; Fuwa, 2004).⁸ These individual characteristics are also interacted with the male indicator. Controls for unobserved characteristics of the areas where our early-arrival first and second generation immigrants live are added by using state fixed effects, denoted by δ_k . To capture the country of ancestry unobserved characteristics, we introduce country of ancestry fixed effects, η_j , and, to pick up the time-variant unobserved characteristics, we add year fixed effects, θ_t . State fixed effects (δ_k) are interacted with $Male_i$ to account for variation in the state's housework gender

⁶ Housework includes interior cleaning, laundry, sewing, repairing and maintaining textiles, storing interior household items including food, and food and drink preparation, presentation, and clean-up.

⁷ It should be noted that, for the cultural proxy, we use a contemporaneous measure, which is common in the literature (see for example, Giuliano, 2007; Fernández and Fogli, 2009; Furtado et al., 2013; Marcén et al., 2018; Marcén and Morales, 2018, 2019; Nollenberger et al., 2016).

⁸ Results are maintained without those controls, see below.

gaps that may arise from differentials across states in cultural or institutional channels. Standard errors are clustered at the country of ancestry level, in order to account for any within-ethnicity correlation in the error terms.⁹

With this empirical strategy, we examine the impact of culture on the housework time of males over females. This is a different proposal to analyze the impact of culture on gender division of housework to that presented in Blau et al. (2018). They focus on the association between the GGI and the housework time, dividing the sample between males and females.¹⁰ In addition, as mentioned above, we do not limit our work to the examination of whether culture is a factor in the gender division of housework, since we also explore how culture operates and can be transmitted. This is explained in detail in the subsequent section.

4. RESULTS

a. Does culture matter?

Table 2 reports the estimates of equation (1). Column 1, which includes controls for the male indicator and the year, country of ancestry, and state fixed effects, reveals that males underperform females in housework time by, on average, around 50 minutes. If we translate this to hours per week, it approximately corresponds with six hours of difference between females and males. This is close to what is observed in the literature where the gender gap is around seven hours per week between women and their partners in the US (Fuwa and Cohen, 2007; Greenstein, 2009; Knudsen and Wærness, 2007). In the rest of columns, we introduce the interaction between the male dummy and the home-country cultural proxy, which informs us about the effect of culture on the gender gap in housework. As can be seen in column 2, the estimated coefficient on the term of interaction is positive and statistically significant, suggesting that the gender gap in housework time decreases among those originating from countries of ancestry with more egalitarian attitudes. We find that a one standard deviation increase in the GGI is

⁹ All estimates have been repeated with/without weights and clusters. Results do not vary.

¹⁰ Another important difference between our analysis and that of Blau et al. (2018) is the sample selection. Our sample of individuals is less likely to be influenced by the economic and institutional conditions of the country of ancestry since they have lived almost their entire life in the US. However, in the case of Blau et al. (2018), their sample of first generation immigrants are more likely to have spent several years living in their country of origin and, so, they are more likely to be affected by other characteristics of the country of origin in addition to the culture of that place. This has been explained previously, but we want to remind of this here in order to clarify that both analyses are different although both have the objective to study the possible effect of culture on gender division of housework.

associated with an increase of 7.61 minutes in the housework time per day of males relative to females, which represents 40 percent of the standard deviation in the housework gender gap across countries of ancestry. Under the epidemiological approach, this empirical evidence can be interpreted as a cultural effect. Comparing countries of ancestry, the housework time of males relative to females from the country with the highest GGI, Norway (0.83), is about 38 minutes per day higher than that of individuals from India, the country of ancestry with the lowest GGI (0.63). In column 3, we add controls for the characteristics of the respondent and his/her partner. We include controls for the age, the level of education, the race, the employment status of each individual, whether the respondent was born in the host country or not, and whether there are any children under 18 years old living in the household. Our results do not change.

We explore whether our findings are maintained when utilizing different subsamples, and incorporating observable characteristics at the country of ancestry level. Results are reported in Table 2. In column 4, we repeat the analysis without the two countries with the highest and the lowest country of ancestry GGI (Norway and India) to check whether this is driving our estimates. Our findings do not vary. Furthermore, in column 5, we have eliminated those early-arrival first generation immigrants from Mexico, Germany, and Canada and those second generation immigrants whose parents were Mexicans, Germans or Canadians, which are the countries of ancestry with the largest number of observations, and we do not observe changes in our findings.¹¹ Our results are also maintained when we restrict our sample by including those individuals aged 26 to 65 in column 6. We can conclude the same when we add GDP per capita (in constant 2010 US \$) as a control for the countries of ancestry characteristics in column 7.¹² Our estimations do not vary substantially. Then, it can be argued that we are capturing the effect of culture rather than other country of ancestry differences. It should be noted that the inclusion of some of the controls can generate concerns since they can be potentially affected by culture, such as the employment status or the fertility decision, among others. For this reason, we prefer not to include them in the rest of the main analysis. In any case, it is reassuring that our results do not change in all the robustness presented here.

¹¹ This is a common strategy in the literature to check the consistency of the effect of culture, see Furtado et al. (2013), Marcén et al. (2018), Marcén and Morales (2018, 2019).

¹² We also interact the GDP per capita with the male indicator and nothing changes.

Although we show evidence that culture appears to be important in the housework division, it can be suggested that culture may play a major role in some subgroups of individuals (heterogeneity analysis). For example, low educated individuals can be more affected by the social pressure of maintaining gender roles, whereas high educated individuals can be less ostracized if they do not follow the pattern of behavior in their country of ancestry (González and Rodríguez-Planas, 2018; Rodríguez-Planas, 2018). To check this, we repeat the analysis separating the sample between low and high educated individuals.¹³ Columns 1 and 2 of Table 3 present the estimations. Estimated points appear to indicate that culture persists among low educated individuals, but not in the case of high educated individuals. In any case, this result may also indicate that we are not well-measuring the culture in the country of ancestry when separating the sample by level of education, since we are not considering heterogeneity within countries of ancestry (Marcén et al., 2018, Marcén and Morales 2018, 2019). Unfortunately, since we cannot redefine the cultural proxy considering whether culture varies by level of education in the country of ancestry (Marcén et al., 2018; Marcén and Morales 2018, 2019), these results on the heterogeneity analysis should be taken with caution. In the same line, it is possible to hypothesize that those couples with children are more likely to follow the culture on gender norms. To test this, we consider a sample of individuals with children in column 3. The results are maintained. As we have explained above, this should be taken with caution since the home-country culture can also be affected by the decision of having children and because we are not considering the heterogeneity within countries of origin in the definition of the cultural proxy. In addition, it can be supposed that our findings are driven by the behavior of the first or the second generation immigrants. Columns 4 and 5 present estimates for early-arrival first and second generation immigrants, separately. We find that the effect of culture is detected for both subgroups although only at the 10% level for the early-arrival first generation immigrants. This can be due to the small number of observations of early-arrival first generation immigrants, which may generate imprecisely estimations. The magnitude of the coefficients is similar, which may indicate that both groups (early-arrival first and second generation immigrants) are quite similar.

b. How can culture be transmitted?

With respect to the transmission of culture, two kinds of transmissions have been described in the literature: vertical (across generations) and horizontal (within

¹³ We define high educated individuals as those individuals having completed at least a Bachelor's degree.

communities). As suggested in Furtado et al. (2013), parents surely instill in their children beliefs and preferences representing their home-country culture. In our framework, since we identify culture of the second generation immigrants with that of their mother's home country, the vertical transmission of culture would be necessary to find a cultural effect. This is also suggested in prior literature (Antecol, 2000; Fernández and Fogli, 2006; Giuliano, 2007; Marcén, 2014; Nollenberger et al, 2016; Rodríguez-Planas, 2018). Thus, at least in part, our previous findings on the effect of culture on the gender division of housework may be the result of that vertical transmission from parents to their children.

The existence of horizontal transmission is based on the idea that ethnic communities may provide acceptable role models or punish behavior different from the norm (Fernández and Fogli, 2009). To explore this transmission of culture, we examine whether individuals' sensitivities to their country of ancestry GGI differs depending on whether they live in predominantly same-ethnic communities. As Furtado et al. (2013) suggest, the stronger relationship between the cultural proxy and the males' housework time relative to that of females in predominantly same-ethnic communities may be interpreted as empirical evidence that culture is horizontally transmitted. We follow Rodríguez-Planas and Nollenberger (2018) by calculating the proportion of individuals from the same country of ancestry in each state. Then, we rerun our main analysis by separating the sample between those who are above and below the mean of concentration of same-ethnic individuals, as in Rodríguez-Planas and Nollenberger (2018). Columns 6 and 7 of Table 3 report our regression estimates. Results show that the effect of culture on the males' housework time relative to that of females is larger for early-arrival first and second generation immigrants living in states with a high concentration of individuals from the same ethnicity (above the mean) than for those who live in low concentrate states (below the mean), which can be interpreted as the existence of horizontal transmission of culture. In short, all the empirical evidence described in this section suggests that culture affects the gender division of housework and can be transmitted vertically and horizontally.

c. Alternative measures of culture

Up to now, we have used the GGI in the country of ancestry as our measure of culture. In this subsection, we explore which of the aspects of the country of ancestry can be responsible of the culture that appear to affect the gender division of housework in the host country. This analysis permits us to check whether our findings are robust to the use

of alternative proxies of culture. We utilize separately each of the four sub-indexes that defined the GGI: Gender Gap Educational Attainment Sub-index, Gender Gap Economic Participation and Opportunity Sub-index, Global Gender Gap Health and Survival Sub-index, and Gender Gap Political Empowerment Sub-index.

Table 4 shows the estimated coefficients. Among the gender gap sub-indexes, only two are statistically significant. The gap on educational attainment and that on economic participation appear not to be important, which is not really surprising due to the few differences across countries of ancestry, as we have explained above. The dissimilarities in political empowerment and health between women and men do have an effect. As can be seen, the coefficients on the interaction between the male dummy and those sub-indexes are positive and statistically significant, albeit the second one only at the 10% level. Our results are consistent with those obtained by Rodríguez-Planas and Nollenberger (2018), suggesting that political empowerment plays an important role in shaping the culture.

d. The effect of culture on housework and childcare

In the previous analysis, we have only considered housework in our cultural analysis. However, some researchers define household labor including childcare activities (Badr and Acitelli, 2008; Hook, 2006). As in the case of housework, the increase in female labor force participation has not resulted in more equitable gender distribution of childcare time (Bianchi, 2000; Bianchi and Milkie, 2010; Sayer and Gornick, 2011).¹⁴ Thus, it can be argued that culture is affecting both the allocation of childcare time and the housework tasks.

To check this issue, we consider both housework and childcare as household labor in this subsection. We restrict our sample to those individuals spending time in childcare with children under 18 years old in the household. Our dependent variable is redefined as the time (in minutes per day) that each individual spends in both housework and childcare.¹⁵ Column 5 of Table 4 displays the results. The coefficient on the interaction

¹⁴ Being responsible for childcare may negatively impact on mothers' job experience, employment, productivity at work, and, even if productivity does not fall, women may be discriminated through employers' perceptions that they might be less productive (Baum, 2002; Budig and England, 2001; Gangl and Ziefle, 2009).

¹⁵ Caring for children includes physical care for household children, reading to/with household children, playing with household children, arts and crafts with household children, playing sports with household children, talking with/listening to household children, helping or teaching household children, organization and planning for household children, looking after household children (as a primary activity), attending

between the male dummy and the cultural proxy is still positive and statistically significant after the introduction of the childcare time. Estimations reveal that, when the cultural proxy (GGI) increases by one standard deviation, there is an increase of around 9.8 minutes per day in the household labor time of males relative to females, which is in line with the importance of culture suggested above. Because of the cultural effect, housework and childcare time of males relative to females from the country with the highest GGI, Norway (0.83), is about 50 minutes higher than that of immigrants from India, the country of ancestry with the lowest GGI (0.63).¹⁶ Once again, because fertility culture may also influence the decision of having children or not, we prefer to focus the rest of the analysis on the housework time rather than considering both housework and childcare together. It should also be noted that the number of observations considerably decreases when childcare time is considered.

e. How can culture operate?

1. Housework a non-individual task: Performing housework with the presence of the married/unmarried partner

We have shown empirical evidence suggesting that culture may explain, at least in part, the gender division of household labor. Here, we provide further evidence of how culture operates. Unfortunately, we cannot study whether culture on gender equality implies that both members of the couple share housework tasks since the time use survey only provides information on the allocation of time of respondents. However, we know whether individuals perform housework with their partners present. This may be interesting to examine whether culture operates by affecting how housework is performed and when this takes place, which may be useful to understand the work/life balance of couples as a result of cultural differences. We first focus on analyzing whether culture is related to the probability of performing housework with the married/unmarried partner present. Formally, we estimate the following equation:¹⁷

$$Y_{ijkt} = \beta_0 + \beta_1 GGI_{jt} + \mathbf{X}'_{ijkt} \beta_2 + \delta_k + \eta_j + \theta_t + \varepsilon_{ijkt} \quad (2)$$

household children's events, waiting for/with household children, picking up/dropping off household children, caring for and helping household children, activities related to household children's education, and activities related to household children's health.

¹⁶ The same is observed when we add the controls included in Table 2.

¹⁷ As in Marcén and Morales (2018), we use a linear probability model for simplicity.

with Y_{ijkt} being a dummy variable that takes value of one when individual i of cultural origin j living in state k in year t reports performing, at least, one housework activity with his/her married/ unmarried partner present, and zero otherwise. The vector X_{ijkt} includes a set of individual and partner characteristics. The rest of the variables have been defined before. In this case, our coefficient of interest is β_1 . If culture on gender equality norms operates by making housework a non-individual task, β_1 should be positive, since we would expect that our sample of early-arrival first and second generation immigrants do the housework tasks with their partners present.

Table 5 reports the estimates of equation 2. Column 1, which only controls for year, country of ancestry and state fixed effects, reveals that the more gender equality in a respondent's country of ancestry is related to an increase in the probability that that respondent reports performing, at least, one household activity with the married or unmarried partner present in the household. We find that, when the cultural proxy (GGI) increases by 0.01 (GGI ranged from 0 to 1), there is an increase of around 2.80 percentage points in the probability that an individual reports performing housework in a non-individual way. Therefore, individuals from the country of ancestry with the highest GGI (the country with the most equalitarian gender norms), Norway (0.83), are 56 percentage points more likely to do the housework tasks with their partner present than individuals from India (0.63) the country of ancestry with the lowest GGI (the country with the least equalitarian gender norms). In column 2, we add individual and partner controls. As in our previous analysis, since some of these controls can be potentially affected by gender norms themselves, this estimation should be taken with caution, although it is reassuring that results do not vary. Thus, our findings indicate that culture on gender equality operates by encouraging individuals to perform housework activities with the presence of their married/unmarried partners, that is, in a non-individual way, which, as suggested in the literature, may improve family life and satisfaction (Greenstein, 2009).

2. When is housework performed?: Timing of the day and differences between working and non-working days

As we have shown above, greater gender equality attitudes in the country of ancestry are associated with higher domestic tasks that become non-individual tasks (with the presence of both members of the couple). As suggested above, culture appears to operate by making housework non-individual. To make this possible, partners have to be at home at the same time, which may imply that culture also operates in changing the timing of

housework activities. To check this, we analyze the timing of the day when couples are more likely to be together while the respondent reports performing the housework tasks.

Table 6 shows the estimations. The dependent variable takes value one when individual i of cultural origin j living in state k in year t reports performing, at least, one housework activity with his/her married/ unmarried partner present in the morning (column 1), afternoon (column 2), evening (column 3), and at night (column 4). As can be seen, the only estimated coefficient which is statistically significant at the 5% level is that obtained in column 3. Our results indicate that the greater the egalitarian gender norms in the country of ancestry, the higher the probability of doing housework tasks in the evening with the presence of the married/unmarried partner. This analysis is important, since it can contribute to the literature focused on the conflict between work schedule and family life. The seminal work of Presser (2000, 2003) and Kelly et al. (2011) suggest that working nonstandard hours (i.e., outside 9 a.m. to 5 p.m.) can be detrimental to family life. Then, our findings on the timing of the day in which housework is performed with the married/unmarried partner present, match with working in standard hours for those individuals originating from a more egalitarian culture. We revisit how culture operates for paid labor work in the next subsection.

Since the time use survey provides information on the day in which activities are developed, we can examine whether there are differences in the division of housework between working and non-working days as consequence of cultural differences. This analysis can provide additional evidence on how that culture is operating by way of the work/family balance of individuals. We estimate equation 1 separately depending on the day of the week in which housework is done. We first consider those who respond from Monday to Saturday, but excluding public holidays. Results are reported in column 1 of Table 7. Our findings are maintained, but this is not what we find when analyzing the behavior of those individuals responding during Sundays and public holidays in column 2. The coefficient of interest is positive, albeit non-statistically significant. Similarly, we have rerun the analysis excluding Saturdays in column 3 to be included jointly with Sundays and public holidays in column 4. What is detected is that culture matters in the gender division of housework during working days, but this is not clear in the case of non-working days. Again, our findings point to the importance of culture in the gender division of housework but, as shown here, it appears that culture only operates during working days.

3. Which activities are negatively affected because of culture? Work or Leisure

Every day in the life of a person has 1,440 minutes. In this setting, we have observed that the higher the gender equal culture of a country, the higher is the involvement in housework of early-arrival first and second generation immigrant men relative to women. Then, the longer the time spent on housework, the less is the time available for other activities during the day. If culture matters, as we have explained here, we should observe that culture is operating by decreasing the time spent in other activities, such as paid labor and/or leisure.¹⁸ We focus on the male behavior, choosing a sample of men who are employed.¹⁹

Our estimates can be observed in Table 8. Columns 1 and 4 incorporate all our individuals, whereas columns 2 and 5 (3 and 6) only include those responding from Monday to Saturday without public holidays. If we do not separate the sample, what we find is that the greater the cultural proxy, the lower the time spent in paid labor for those employed men; however, for leisure time, culture appears not to be statistically significant. Then, culture appears to operate by varying the time spent in paid labor. Again, this points to the importance of working schedules in order to improve family life (Kelly et al. 2011; Presser 2000, 2003). When separating the sample by working and non-working days, our findings are maintained during working days, but, in holidays, it is found that the more gender equal norms are associated with less time spent in leisure, but not in paid labor. Then, culture on gender equality is operating in detriment of paid labor during working days and leisure time in holidays. This provides additional evidence to reinforce our findings on the effect of culture on the gender division of household labor.

5. CONCLUSIONS

During the last decades, women have made important advances in many areas where they once were marginalized, entering the public spheres of education, employment and politics. However, they continue to confront discriminatory attitudes and practices (Dilli et al., 2019). One of the areas in which women have not completely broken through the

¹⁸ Paid labor includes work and work-related activities (such as socializing, eating, practice exercise or security procedures as part of a job), other income-generating activities, job search, and interviewing. Leisure includes socializing and communicating, attending or hosting social events, relaxing and leisure, arts, and entertainment activities.

¹⁹ In this case, we select individuals aged 26 to 65 in order to mitigate the problem that the inclusion of those individuals in retirement age can generate in this analysis.

glass ceiling is in the sphere of the household, where it requires the amplification of the responsibility for the care of home and children equally to both partners (McMunn et al., 2019). Some researchers have pointed to cultural issues related to gender norms as being determinant to achieve equality in the performance of housework (Fuwa, 2004; McMunn et al., 2019). In our paper, we aim at studying whether culture has an effect on the gender division of household labor.

Merging data from the IPUMS American Time Use and the GGI (cultural proxy) in the country of ancestry, this paper shows that housework time of early-arrival first and second generation immigrant males (relative to females) who are descended from more gender-equal countries is greater than that of those descending from less gender-equal countries. Our results are maintained after running several robustness checks and do not change when we consider both housework and childcare as household labor. The analysis of alternative components of the GGI appears to reveal that the differences across countries on women's political empowerment and health are driving these results. We also explore the transmission of culture showing empirical evidence of horizontal transmission of culture through neighbors or ethnic communities, as well as of vertical transmission from parents to children. These findings reinforce our results on the possible importance of culture in the division of household labor.

Not only do we examine whether culture on gender roles plays a role on housework, we also extend our work to the study of how culture operates focusing on the combination of mechanisms that can affect family life. Estimations suggest that the more the equalitarian gender norms in the country of ancestry, the more likely are early-arrival first and second generation immigrants to perform housework with their married/unmarried partner present. Thus, one channel through which culture on gender-equality is operating in family life is making housework a non-individual activity. This can be only possible if schedules allow couples to do that (Presser, 2000, 2003), thus, another channel in which culture is operating is on the timing of the day in which housework is performed. Our results indicate that the more gender equality is associated with a higher probability of doing housework activities in the evening under the presence of partners. As the literature suggests, this may indicate that culture is operating through working schedules, with standard schedules improving family life (Presser, 2000, 2003). The work/life balance in which culture appears to be operating is also observed in the exploration of the differences in the behavior of our individuals during working and non-working days. The cultural effect is observed in working days, but the impact is not significant in non-working days.

One explanation for this result can be that those men originating from less egalitarian countries work longer hours than those from egalitarian countries. Something that we have also tested, but only detected during working days. Leisure time appears not to differ between those originating from more or less egalitarian countries in working days. These findings suggest that the cultural impact on the gender division of housework is operating through the work/life balance.

Recognizing women's difficulties in combining family and work, a wide range of family policies has emerged. For example, the provision of childcare and the development of more flexible working patterns on the job are considered necessities to account for the gender inequality in the division of household labor underlying work/family balance. Nevertheless, our results suggest that policies aiming at transforming gender norms should be an important step in attaining gender equality in household labor. More egalitarian social norms may lower the penalty faced by men for engaging in traditionally female domestic activities, resulting in higher household labor by men.

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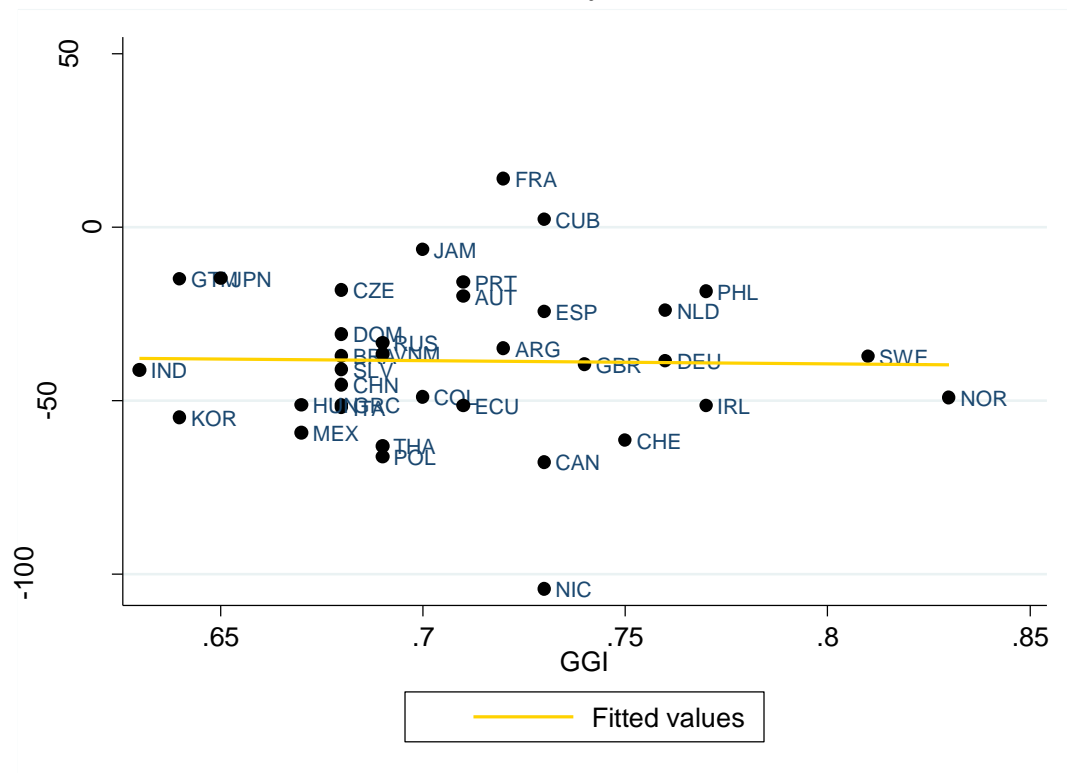
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Figure 1: Housework gender gap and the Gender Gap Index (GGI) by country of ancestry



Notes: This figure displays the correlation between the average gender gap in housework time among first and second generation immigrants and our measure of culture in the country of ancestry. The housework gender gap has been calculated as the average male's minus the average female's housework time (in minutes per day).

Table 1: Summary statistics by country of ancestry

Country of ancestry	Housework gender gap	Proportion of individuals performing housework with their partner present	GGI	GGI educ.	GGI Ec. Opp.	GGI health	GGI pol.	Obs
France	14.04	0.58	0.72	1.00	0.67	0.98	0.23	33
Cuba	2.17	0.53	0.73	1.00	0.63	0.97	0.33	62
Jamaica	-6.42	0.36	0.70	0.99	0.74	0.98	0.11	14
Japan	-14.80	0.67	0.65	0.99	0.57	0.98	0.07	72
Guatemala	-14.91	0.75	0.64	0.94	0.54	0.98	0.08	16
Portugal	-15.89	0.67	0.71	0.99	0.68	0.97	0.19	24
Czech Republic	-18.10	0.45	0.68	1.00	0.63	0.98	0.11	11
Philippines	-18.51	0.57	0.77	1.00	0.77	0.98	0.34	81
Austria	-19.96	0.59	0.71	0.99	0.61	0.98	0.27	32
Netherlands	-23.87	0.59	0.76	1.00	0.71	0.97	0.34	34
Spain	-24.41	0.65	0.73	1.00	0.62	0.97	0.34	26
Dominican Republic	-30.87	0.71	0.68	0.99	0.63	0.97	0.11	21
Russia	-33.42	0.48	0.69	1.00	0.73	0.98	0.06	21
Argentina	-34.89	0.47	0.72	1.00	0.60	0.98	0.29	15
Vietnam	-36.54	0.50	0.69	0.93	0.73	0.96	0.13	18
Brazil	-37.14	0.69	0.68	0.99	0.64	0.98	0.09	13
Sweden	-37.18	0.33	0.81	1.00	0.79	0.97	0.50	18
Germany	-38.51	0.52	0.76	0.99	0.71	0.98	0.35	252
United Kingdom	-39.47	0.55	0.74	1.00	0.71	0.97	0.29	152
El Salvador	-40.91	0.46	0.68	0.99	0.57	0.98	0.18	26
India	-41.09	0.61	0.63	0.85	0.40	0.94	0.32	41
China	-45.35	0.58	0.68	0.98	0.67	0.93	0.15	90
Colombia	-48.86	0.54	0.70	1.00	0.69	0.98	0.15	26
Norway	-49.00	0.56	0.83	1.00	0.80	0.97	0.54	16
Greece	-51.19	0.61	0.68	0.99	0.63	0.98	0.10	36
Hungary	-51.19	0.71	0.67	0.99	0.66	0.98	0.06	17
Ecuador	-51.38	0.50	0.71	0.99	0.62	0.98	0.26	16
Ireland	-51.51	0.58	0.77	1.00	0.72	0.97	0.40	57
Italy	-51.96	0.60	0.68	0.99	0.58	0.97	0.17	166
South Korea	-54.73	0.56	0.64	0.95	0.52	0.97	0.10	41
Mexico	-59.28	0.57	0.67	0.99	0.52	0.98	0.19	606
Switzerland	-61.44	0.42	0.75	0.98	0.73	0.98	0.31	12
Thailand	-63.05	0.71	0.69	0.99	0.74	0.98	0.07	21
Poland	-66.17	0.59	0.69	1.00	0.64	0.98	0.16	49
Canada	-67.68	0.54	0.73	1.00	0.76	0.98	0.18	238
Nicaragua	-104.17	0.57	0.73	1.00	0.56	0.98	0.37	14
Average	-45.82	0.57	0.71	0.99	0.63	0.97	0.22	
Std. Dev.	18.95	0.50	0.04	0.02	0.10	0.01	0.11	

Notes: Data comes from the Integrated Public Use Microdata Series Time Use (IPUMS Time Use) for the period 2006-2016. The sample contains 2,387 observations of early-arrival first and second generation immigrants, aged 26 to 80, originating from 36 different countries.

Table 2: The effect of culture on gender division of housework

Dependent variable: Housework time	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Male	-49.701*** (4.968)	-157.594*** (55.016)	-182.207*** (53.135)	-191.410*** (60.742)	-452.580*** (64.390)	-160.810*** (55.221)	-169.862** (74.879)
GGI x Male		190.320** (71.854)	223.695*** (81.907)	226.197*** (64.966)	230.894** (89.091)	170.577** (75.108)	198.791** (85.648)
Age			-0.026 (0.415)	-0.066 (0.397)	0.783 (0.513)	-0.157 (0.447)	-0.038 (0.423)
Age x Male			-0.620 (0.406)	-0.507 (0.395)	-1.428*** (0.469)	-0.659 (0.448)	-0.543 (0.444)
Employed			-40.147*** (5.849)	-39.349*** (6.113)	-24.811*** (8.816)	-44.919*** (6.721)	-39.046*** (6.031)
Employed x Male			25.258* (12.905)	26.296** (12.283)	-0.382 (16.795)	31.037*** (11.100)	25.498** (12.471)
More college			-0.290 (4.778)	-9.604 (7.202)	-8.694 (8.156)	-9.905 (9.428)	-9.773 (7.095)
More college x Male			-5.509 (4.865)	2.908 (7.024)	-0.836 (11.739)	-1.280 (9.427)	3.644 (6.804)
White			13.926 (13.921)	14.072 (13.916)	4.768 (21.117)	18.885 (11.219)	13.814 (13.446)
White x Male			-6.149 (8.115)	-5.356 (9.415)	6.282 (10.785)	-9.966 (10.889)	-5.652 (9.273)
Children			-9.635 (6.430)	-8.778 (6.318)	-11.393 (7.404)	-8.967 (6.910)	-8.390 (6.318)
Second-generation i mmigrants			-7.340 (4.458)	-6.068 (4.347)	-5.320 (8.997)	-2.992 (3.397)	-6.011 (4.352)
Partner' age			0.421 (0.429)	0.443 (0.434)	-0.081 (0.400)	0.879* (0.442)	0.442 (0.434)
Partner' more college			-8.037* (4.748)	-4.567 (5.717)	-8.315 (5.186)	-3.598 (5.516)	-5.274 (5.525)
Partner' white			-18.750** (7.698)	-18.369** (7.000)	-14.745 (9.832)	-13.835** (6.487)	-18.236** (6.970)
GDPpc							-0.002** (0.001)
GDPpc x Male							0.0001 (0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country of ancestry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects x Male	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,387	2,387	2,387	2,363	1,291	2,067	2,374
R ²	0.144	0.169	0.193	0.216	0.261	0.228	0.216

Notes: Data comes from the Integrated Public Use Microdata Series Time Use (IPUMS Time Use) for the period 2006-2016. The sample contains 2,387 observations of individuals aged 26 to 80, originating from 36 different countries. We have excluded those first and second generation immigrants from India and Norway in column 4, and those from Mexico, Germany or Canada in column 5. Column 6 only includes individuals aged 26 to 65 years old. Estimates are weighted. Robust standard errors, clustered by country of origin, are in parentheses. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Table 3: Heterogeneity analysis and Transmission of Culture

Dependent variable: Housework time	Low educated	High educated	Children	1st generation immigrants	2nd generation immigrants	Housework time (Above)	Housework time (Below)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Male	-210.485*** (67.378)	-168.984** (82.188)	-230.588*** (52.236)	-168.138* (85.331)	-170.043** (64.186)	-282.425* (149.591)	-235.761** (87.084)
GGI x Male	302.550*** (92.414)	91.106 (120.789)	274.904*** (76.711)	212.793* (105.974)	188.931** (79.605)	388.372** (169.650)	220.071* (111.637)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country of ancestry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects x Male	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,303	1,084	1,528	650	1,737	957	1,250
R ²	0.230	0.218	0.148	0.260	0.219	0.248	0.151

Notes: We separate the sample between low and high educated individuals in columns 1 and 2. Individuals with children have been considered in column 3. Early-arrival first and second generation immigrant have been separated in columns 4 and 5, respectively. Columns 6 and 7 include immigrants living in states where the concentration of individuals of their same country of ancestry is above and below the mean of the proportion of individuals of the same ethnicity, respectively. Estimates are weighted. Robust standard errors, clustered by country of origin, are in parentheses. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Table 4: Alternative measures of culture and redefinition of the household labor (including Housework and Childcare)

Dependent variable:	Housework time (1)	Housework time (2)	Housework time (3)	Housework time (4)	Housework and childcare time (5)
Male	-104.386 (104.181)	-54.218 (34.149)	-262.975* (132.382)	-41.163* (20.854)	-228.493*** (73.102)
GGI x Male					245.503** (99.384)
Gender Gap Educational Attainment x Male	83.639 (104.203)				
Gender Gap Economic Participation and Opportunity x Male		51.308 (52.346)			
Global Gender Gap Health and Survival Subindex x Male			246.527* (132.963)		
Gender Gap Political Empowerment Subindex x Male				74.766** (34.131)	
Year FE	Yes	Yes	Yes	Yes	Yes
Country of ancestry FE	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes
State fixed effects x Male	Yes	Yes	Yes	Yes	Yes
Observations	2,387	2,387	2,387	2,387	1,619
R ²	0.167	0.168	0.167	0.169	0.151

Notes: Estimates are weighted. Robust standard errors, clustered by country of origin, are in parentheses. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Table 5: How does culture operate? Housework a non-individual task. With whom present the housework is done

Dependent variable: (Performing housework with the married/unmarried partner present=1, 0 otherwise)		
	(1)	(2)
GGI	2.799*** (0.753)	2.670*** (0.818)
Age		-0.012 (0.010)
Age ² /100		0.009 (0.009)
Employed		-0.011 (0.036)
More college		-0.019 (0.031)
White		0.038 (0.065)
Children		-0.023 (0.033)
Second-generation immigrants		-0.050** (0.020)
Partner' age		-0.002 (0.007)
Partner' age ² /100		0.006 (0.007)
Partner' more college		0.081** (0.037)
Partner' white		-0.005 (0.049)
Year FE	Yes	Yes
Country of ancestry FE	Yes	Yes
State fixed effects	Yes	Yes
Observations	2,387	2,387
R ²	0.055	0.068

Notes: Column 2 includes controls. Estimates are weighted. Robust standard errors, clustered by country of origin, are in parentheses. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Table 6: How does culture operate? The timing of the day when housework is performed with the married/unmarried partner present

Dependent variable:	Performing household activities in the morning (1)	Performing household activities in the afternoon (2)	Performing household activities in the evening (3)	Performing household activities at night (4)
Gender Gap Index	1.122 (0.722)	1.303 (0.999)	1.808** (0.802)	0.931 (0.885)
State fixed effects	Yes	Yes	Yes	Yes
Country of ancestry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	2,387	2,387	2,387	2,387
R ²	0.067	0.065	0.070	0.054

Notes: Estimates are weighted. Robust standard errors, clustered by country of origin, are in parentheses. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Table 7: How does culture operate? Housework during working/non-working days

Dependent variable:	Housework time	Housework time	Housework time	Housework time
	(1)	(2)	(3)	(4)
Male	-201.372*** (55.829)	-18.339 (103.403)	-280.631*** (70.560)	-72.719 (100.123)
GGI x Male	234.349** (89.862)	112.238 (127.824)	334.505*** (101.442)	96.413 (134.158)
Year FE	Yes	Yes	Yes	Yes
Country of ancestry FE	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
State fixed effects x Male	Yes	Yes	Yes	Yes
Observations	1,700	687	1,130	1,257
R ²	0.190	0.291	0.229	0.239

Notes: Column 1 only includes those individuals who respond the survey from Monday to Saturday excluding public holidays. Individuals responding the sample in Sunday and non-working days (public holidays) have been included in column 2. Column 3 only includes those individuals who respond the survey from Monday to Friday excluding public holidays. Individuals responding the sample in Saturday, Sunday, and public holidays have been included in column 4. Estimates are weighted. Robust standard errors, clustered by country of origin, are in parentheses. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Table 8: How does culture operate? Paid labor or Leisure

Dependent variable:	Paid labor time (in hours) (1)	Paid labor time (in hours) (2)	Paid labor time (in hours) (3)	Leisure time (in hours) (4)	Leisure time (in hours) (5)	Leisure time (in hours) (6)
GGI	-73.600** (26.799)	-80.809*** (25.790)	1.984 (91.211)	-10.073 (6.015)	-10.221 (8.746)	-31.729** (15.286)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country of ancestry FE	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	584	497	87	1,024	733	291
R ²	0.212	0.235	0.641	0.059	0.097	0.299

Notes: A sample of employed men aged 26-65 has been included in all columns. Columns 2 and 5 include those individuals who respond the survey from Monday to Saturday excluding public holidays. Individuals responding the sample in Sunday and public holidays have been included in columns 3 and 6. Estimates are weighted. Robust standard errors, clustered by country of origin, are in parentheses. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Appendix A1: Gender Equality Measures

Name	Definition	Source
Gender Gap Index (GGI)	Measures the gap between men and women in four fundamental categories: economic opportunities, economic participation, educational attainment, political achievements, health and survival. The highest possible score is 1 (equality) and the lowest possible score is 0 (inequality).	World Economic Forum, 2009 Report
Economic Participation and Opportunity Subindex	Index based upon gender differences in the participation in labor markets, wage equality and the gap between the advancement of women and men captured through the ratio of women to men among legislators, senior officials and managers, and the ratio of women to men among technical and professional workers. The highest possible score is 1 (equality) and the lowest possible score is 0 (inequality). This index is also elaborated for the World Economic Forum as part of the Gender Gap Index.	World Economic Forum, 2009 Report
Educational Attainment Subindex	Index based upon the gap between women's and men's current access to education through ratios of women to men in primary, secondary and tertiary level of education. The highest possible score is 1 (equality) and the lowest possible score is 0 (inequality). This index is also elaborated for the World Economic Forum as part of the Gender Gap Index.	World Economic Forum, 2009 Report
Health and Survival Subindex	Index based upon the differences between women's and men's health through the use of the sex ratio at birth and the gap between women's and men's healthy life expectancy. The highest possible score is 1 (equality) and the lowest possible score is 0 (inequality). This index is also elaborated for the World Economic Forum as part of the Gender Gap Index.	World Economic Forum, 2009 Report
Political Empowerment Subindex	Index based upon the gap between men and women at the highest level of political decision-making by using the ratio of women to men in positions of minister and the ratio of women to men in parliamentary positions. The highest possible score is 1 (equality) and the lowest possible score is 0 (inequality). This index is also elaborated for the World Economic Forum as part of the Gender Gap Index.	World Economic Forum, 2009 Report