Does the woman's educational advantage mean a more egalitarian distribution of gender roles? Evidence from the distribution of time in Spanish couples dual-earner couples.

Abstract

In most Western countries, there is clear evidence of a reduction and even a reversal of the gender gap in education. However, there are doubts about the effect of this reversal on family life and about its impact on the distribution of gender roles within couples.

Using data from the Spanish time use survey of 2009-10, this paper explores whether the improved education of women is translating to better occupations and higher incomes and whether it is related to a more egalitarian distribution of gender roles.

The higher human capital that women are developing as a result of their improved education is being wasted because it is not reflected in better positions in terms of occupational class and income. The barriers of "doing gender" also prevent a fully egalitarian division of roles, and only the most advantaged women compared to their partners have a relatively egalitarian division of time.

Keywords: women's education, gender roles, time use

Introduction

In almost all developed countries, women achieve higher levels of education than men do, and contrary to expectations, this educational superiority affects partnership formation. Several studies addressing the end of hypergamy show that the reversal of the gender gap in education (henceforth RGE) has translated into a higher prevalence of hypogamy than hypergamy (Esteve et al, 2012; Esteve et al 2016; Van Bavel, 2012). In other words, for the first time in history, there are more couples in which women have a higher level of education than their male partner (hypogamy) than vice versa (hypergamy). As a result, an increasing number of women take up the role of primary breadwinner (Vitali & Mendola, 2014; Vitali & Arpino, 2016; Klesment & Van Bavel, 2017).

Compared to the traditional arrangement where a woman would partner with a man whose education surpassed hers, this new couple arrangement represents a dramatic change in the status of both members. In the past, the higher status of the man justified the division of roles in the household. The maximum expression of that model is the male breadwinner model, where the man takes the main responsibility for the productive tasks of the household and the woman takes the main responsibility for unpaid duties. In recent decades, women's progress in areas such as labor market participation, income, and education has reduced specialization and generalized the dual-earner couple model. As a consequence, the time uses of men and women have converged, and the gender gap, especially in housework, has decreased in recent decades. However, a nonegalitarian division of roles between men and women persists, particularly in the domestic sphere and even in countries that champion the gender revolution (Sullivan et al., 2018). Universally, women continue to devote more time to domestic chores than their male partners, especially once children arrive. Women's increasing labor force participation has not been enough to eradicate these differences because, among other reasons, men have maintained their economic advantage in the household. RGE might be a new factor that accelerates the reduction in inequalities.

The aim of this paper is to study whether the RGE has changed the division of roles in couples. Specifically, in couples where the woman has a higher level of education, we investigate whether the allocation of time is more symmetrical than in other types of couples. The paper analyzes whether the RGE has actually translated into a better social position for women within couples and whether this has affected other areas, such as time spent in the labor market, occupational prestige, or income. The second part will analyze the allocation of time within couples as a measure of the division of roles taking into account relative education, occupational prestige and earnings of both members of the couples. First, we will explore each characteristic independently, and second, we will analyze all at the same time.

The study is limited to Spain, which is a relevant case study. As some studies have shown, despite its important progress in recent decades towards becoming a more egalitarian country, Spain still has more traditional gender roles than other countries, and the role of mothers as the main caregivers and as responsible for unpaid work is still strong (Esping Andersen 2009; Sevilla-Sanz, 2010, García Román and Cortina, 2016). Moreover, educational expansion started later in Spain, although it very quickly achieved the level of the most advanced countries in terms of years of schooling (Ortiz y Rodríguez, 2016). The population with tertiary education has also increased dramatically and constantly. For example, according to the Spanish population censuses in 1981, only 5.7% of men aged 30-39 had completed university studies. This percentage tripled by the last census in 2011, reaching 16.8%. Following the worldwide pattern observed in most countries, the increase has been much more dramatic among the women's population, where the percentage changed from 2.4% of the population in 1981 to 22.6% in 2011.

Implications of the reversal of the gender gap in education

Women's increased level of education has undoubtedly been one of the factors that has contributed most to the social, economic and familial transformations in developed societies in recent decades. Since the mid-20th century, education has expanded across the globe. Illiteracy rates have been reduced to nearly zero in the richest countries, and the population with a university-level education is growing steadily. Although women started from a position of educational disadvantage relative to men, in recent years, this disadvantage has been reduced and even reversed. In most developed countries, and even in many developing nations, young women educationally outperform men of the same age. This difference is especially noticeable in higher education (Esteve et al., 2016; Esteve et al., 2012; Klesment & Van Bavel, 2017).

Among other things, the RGE is changing the traditional pattern of union formation wherein a man with a higher level of education than his partner was more common than the reverse. Recent studies based on the analysis of more than 90 countries unequivocally show that patterns of assortative mating (who partners with whom) have adapted to the changing structural conditions of the marriage market, with hypogamous couples (where the woman has a higher level of education than her partner) being, for the first time in history, more common than hypergamous couples (Esteve et al., 2012; Van Bavel 2012). Beyond the impact on who partners with whom, the RGE has implications for other aspects of family life, such as couple formation (as well as stability and dissolution), fertility, and the economic position of women in the household. Women with higher education also show more egalitarian values that might affect the couples' distribution of roles (Shalev, 2008)

However, there is no evidence that the RGE in and of itself has led to an increase in singlehood or has changed union timing in richer countries. What has been observed is that, contrary to what occurred in

the past, women with a higher level of education are now more likely to enter a partnership than their less educated counterparts (Van Bavel et al., 2018; Goldstein & Kenney, 2001, Fry, 2010; Bertrand et al., 2016). Regarding union stability, research addressing the United States and Belgium has also shown that new hypogamous relationships are more stable and lasting than hypogamous partnerships formed three decades ago (Grow et al., 2017, Schwartz & Han 2014). This finding suggests that the diffusion of hypogamy has normalized this situation.

Another area of academic interest when analyzing the consequences of the RGE on couples is whether this has translated into a better economic position for women within the household. A higher proportion of women in hypogamic couples are their household's main economic provider than in either homo or hypergamic couples, yet even among hypogamic couples, men are still more likely to be the primary breadwinner. Accordingly, some authors have referred to the motherhood penalty that restricts mothers' earnings (Klesment & Van Bavel, 2017). It is also important to remember that a higher level of education does not always translate directly into an occupation that yields higher earnings. Many occupations continue to be segregated by gender, which is partly a result of the type of studies pursued by women and men (Van Bavel, 2012). Thus, there are still largely female-dominated occupations, while others are more male-dominated. The expansion of women's education has largely occurred across more traditionally 'feminine' fields of study and work (e.g., education, nursing, and other caring professions), which are associated with lower potential incomes (Van Bavel, 2012; Blau et al., 2013, Mandel & Semynov, 2014). Even so, the potential earning power of more educated women would also enable them to attract more educated male partners (Grow and Van Bavel, 2015). Another point to take into account is that not all women have the same preferences regarding work and family, and many of them might choose to prevail family aspects rather than work (Shalev, 2008).

The allocation of time as a measure of gender equity

The distribution of time devoted to household chores is an established and widely used indicator for analyzing gender systems and inequalities (Coltrane, 2000; Bianchi et al., 2000; Sayer, 2005). Universally, women devote more hours to domestic chores than men (England, 2010; Sayer 2016). Therefore, the analysis of domestic tasks and their distribution between men and women can reveal the power balance within the couple (Davis & Greenstein, 2013). Several theories, with their corresponding hypotheses, have sought to explain the division of domestic labor within. Here, I briefly sketch the three most important approaches.

- **Relative resources.** According to this perspective, the member of the couple with greater power (relative resources) will have an advantage when negotiating the sharing of tasks, since the greatest benefit to the family unit is sought. In a similar vein, bargaining models suggest

that individuals use their income and social status to negotiate (Blood & Wolfe, 1960; Lundberg & Pollak, 1996). In the traditional (male breadwinner) model, where the man is the main provider, this would justify the female partner being responsible for domestic work. According to this perspective, the increase in women's level of education should grant them greater bargaining power and a more symmetrical division of household labor (Raley et al., 2006; Esteve et al., 2012; Van Bavel, 2012; Klesment & Van Bavel, 2017).

- **Time availability**. This theory complements the previous perspective in the sense that the member of the couple who has more time is responsible for domestic work. In the traditional model, men devote a greater part of their time to paid work, leaving domestic work for their partner, who spends less time in the labor market (South & Spitze, 1994). The widespread incorporation of women, especially mothers, into the labor market would, according to this theory, mean that women spend less time doing domestic work.

- **Doing gender**. This perspective is the counterpoint to the previous two. It theorizes why, despite the substantial social progress made by women, they continue to be primarily responsible for domestic work. The suggested explanation is that societies maintain gender norms according to established masculine and feminine patterns of behavior (West & Zimmermann, 1987). These patterns hinder the transition towards a more equal distribution of the time spent by women and men on unpaid work, as barriers to change persist at both the institutional and interpersonal levels (Kan, 2011; Deutsch 2007). In the same vein, there is some literature suggesting that when the male breadwinner model is challenged, a gender deviance neutralization effect is produced, and men with fewer resources and more dependence reinforce their masculine role by avoiding domestic work (Brines, 1994; Bittman et al., 2003; Sullivan & Gershuny, 2016).

With these theoretical perspectives in mind, the central focus of this paper is to explore how the reversal of the gender gap in education in heterosexual couples and the slow but sustained increase in the number of women with an economic advantage in the household affect the allocation of time between men and women, particularly regarding domestic work. From the 'Relative Resources' and 'Time Availability' perspectives, we should expect, in effect, a reduction of the gender gap in reproductive labor and, over the long term, the erosion of traditional gender norms that assign differential tasks and respect to household members based on sex. In fact, recent data for several countries show a certain degree of convergence in men's and women's time use, especially in relation to paid and unpaid work (Kan et al., 2011; Sayer 2016).

However, convergence is mainly occurring because women have reduced the amount of time they dedicate to domestic tasks and men have slightly increased the amount of time spent on them, though not enough to compensate for the decreasing time spent by women on these chores. The goal of fully

closing this gender gap remains elusive, and there is recent evidence that the process of convergence has slowed down (Sullivan et al., 2018; Kan, 2011), with men adapting more slowly than women to time use changes (Gershuny et al., 2005). This paper focuses on the Spanish context, which has seen important progress towards a more egalitarian distribution of time in recent decades (Ajenjo and García Román, 2015; Domínguez Folgueras, 2015). An important characteristic of the Spanish case is the traditionalization of couples' behaviors after parenthood (Abril et al, 2015; Domínguez, Jurado and Botía, 2018). Values change after the arrival of a child, and although couples' ideals are egalitarian, the realization is not. More egalitarian beliefs and a more symmetrical division of tasks before childbirth have been pointed out as factors that resist rationalization (Domínguez, Jurado and Botía, 2018)

Other studies have also noted that the relationship between resources and housework is not the same as that between resources and childcare. In the case of Spain, the "doing gender" hypothesis seems to prevail in the division of housework when the man has fewer resources, but this is not the case for childcare activities (Sevilla-Sanz et al 2010). When the woman earns more than her partner, a violation of gender norms occurs, and the couple moves to a more traditional allocation of roles. The same does not happen for childcare, where the woman is mainly responsible for caring activities regardless of the couple's bargaining power or resources. Although men have been more involved in childcare in recent times, it is not related to an improved gender-equal distribution of time (Borras et al., 2018). Spending time with children, especially the most interactive activities, is more enjoyable than spending time doing domestic tasks, and fathers and mothers are looking for time for that (Bianchi et al 2000).

Fathers' occupation is another element associated with differences in the time of parenting. Shows and Gerstel (2009) found differences in parenting practices between physicians and working class men, which suggests that the former, which can be associated with a more prestigious occupation, are less involved in the daily care of their children. These differing behaviors are related to the employment conditions of both groups but also the gender order of their families. The authors suggest that these working-class fathers are "undoing gender", while professional fathers reproduce the conventional gender order.

Although the division of domestic labor is the primary indicator used to measure gender equity in time use surveys, there are other areas in which gender relations are expressed, and I will also explore them in this project. For instance, the activities that fill men's and women's leisure time, historically, have also been related to the household division of labor and to wellbeing. Research shows that the main gender differences in leisure time are in its quality rather than quantity. Woman's leisure time usually overlaps with other activities and is more prone to interruptions (Mattingly & Bianchi, 2003; Sayer 2005), making it less relaxing and more stressful (Sayer, 2016; Craig & Mullan, 2013, Mattingly & Sayer, 2006).

Data and Methodology

The data used in this study come from the Spanish Time Use Survey conducted by the National Statistical Institute during 2009 and 2010. Time use surveys were characterized by collecting information through a diary in which the interviewees reported all their activities for 24 hours. In addition to the information collected in the diary, surveys also collect sociodemographic information from the different members of the household. The original sample of the survey contains 19,295 diaries of activities from 9,541 households. One of the advantages of the Spanish survey is that contrary to what is done in other countries, all members of the household aged 10 and over completed a diary. Thus, information is available on both members of the couple, and I can calculate the differences in the time spent by men and women on each activity and use the couple as a unit of analysis. From the original sample, heterosexual couples whose members are between the ages of 15-64 and who did not declare themselves retired were selected. To analyze couples where both members are in the same labor market conditions, the study is also restricted to dual-earner couples. The final sample is composed of 1,948 couples.

Measures

The dependent variables used in this study are the differences in time devoted by men and women to paid work, domestic work, leisure and childcare. Men and women have been shown to spend different amounts of time on these activities, and collectively, these activities also account for a large amount of the total time in each day (Sayer, 2016).

The main explanatory variables are three variables that compare the educational attainment, occupational prestige, and income of each member of the couple. Thus, for each of these characteristics, I recoded the original variables in 4 categories as follows:

- Educational attainment. I recodify the original categories as follows:
    o Secondary or less
    o High school or basic vocational qualification
    o Superior vocational qualification or 1r grade college
    o College, master and PhD
- Occupational prestige. From the original occupational and professional status, I compute a new variable according to the European Socio-Economic-ESEG (ESSnet, 2014). Then, I summarize these 4 categories:
    o Lower-status employees (categories 7)
    o Clerks and skilled services employees, skilled industrial employees (categories 5-6)
    o Technicians and associated professional employees and small entrepreneurs (categories 3-4)

- o   Managers and professionals (categories 1-2)
- Earnings. I recodify the original 7 categories of monthly income as these 4[1]:
    - o   600€ or less
    - o   601€-1200€
    - o   1201€-2000€
    - o   2001€ or more

Once I have the above categories for the man and the woman of each couple, I classify couples into the following categories in each characteristic:

Categories		Education	Occupation	Earnings
Homogamy: same status	Low	Secondary or less (1)	Not employed, lower status (1)	Not employed 1200€ or less (1-2)
	High	HS, Superior vocational or tertiary (2-4)	Categories 2-4	1201 or more (3-4)
Hypergamy		Man better status		
Hypogamy		Woman better status		

In the analyses, I include some control variables about those characteristics that, according to the previous literature, are relevant to understanding the gender differences in the distribution of time (Ajenjo and García-Román, 2014; Davis & Greenstein, 2004; Fuwa, 2004; Domínguez, 2012; González & Jurado, 2009; Sevilla et al 2010). The distribution of these variables in the sample is shown in Table 1:

Table 1 about here

Analytical strategy

First, the characteristics of the couples are analyzed in terms of the variables of interest to explore whether RGE is translated into a better status for women in terms of occupation and income.

Second, the gender gap is analyzed in the four dependent variables according to the three explanatory classifications (education, occupation and income).

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[1] 17,3% of men and 15,9% of women have missing earnings. We have done an imputation using age, work schedule, professional status and part time/full time work status.

Finally, general linear models for the gender gap in each type of activity are calculated, taking the educational status of the couples as the main explanatory variable. The main objective of this section is to assess whether the inclusion of occupation and income variables mitigates the effect of the woman's educational advantage on the allocation of time. From the general linear models, I will compute predicted means for each activity and each group of persons according to their categories by education, occupation and earnings. These predicted means will allow us to evaluate the situation for more advantaged women in the three independent variables.

Descriptive results: Couples' characteristics

A total of 28,9% of couples declare themselves as hypogamic according to the educational levels of their members, which means that women have a higher educational level than men. This percentage is reduced to 23.5% if we consider occupational prestige and to 12.9% if we consider the level of income. Conversely, the percentage of couples in which the man has a higher educational level is slightly lower (22,5%), but it increases 13 points if we consider occupational prestige and almost doubles (43,5%) if they are classified according to income level.

Table 2 about here

Tables 3a and 3b show the correspondence between the classification of couples according to their level of education and according to their occupation and income, respectively. The estimates show that a better position of the woman in terms of education is not always reflected in a more prestigious occupation or a higher income.

Table 3a about here

Table 3b about here

In only 42% of the couples in which women have a higher educational level do those women also have a better occupation. Conversely, 54,7% of couples where the man has a better education maintain the same hierarchy in occupation. In the case of hypogamous couples by education, even in one-fourth of the couples, there is reversal in the classification by occupation, and the man has a more prestigious job. It is not common for a woman in a couple who is hypergamous by education or in a homogamous couple with a low level of education to have a better occupation than her partner. Only 11,6% and

14,1% of women in these situations achieve a better occupational position than their partners, respectively.

The estimates are even more evident if we look at the level of income, as very few women can maintain their better position in terms of education as a better position in terms of income. It seems that the gender gap in salary is still high in Spain even for men and women with the same position. In 2017, the mean gross salary for women represented 78,1% of the most frequent salary for men (INE, 2018). In our sample, only one-sixth of hypogamic couples by educational level are in the same category in terms of income level. We can also observe that in 36,6% of couples in which women have a higher educational level, the income of their partners is higher. On the other hand, in less than 10% of hypergamous couples from the educational point of view, does women have a higher status in occupation or income. In both cases, we observed that more than half of the couples in which the man has a higher educational level also have a more prestigious occupation and higher income. Of the couples in which both members have a low level of education, in half of them, the men have a higher level of income, so women in this type of couple are much more disadvantaged in the labor market.

Couples' distributions of time

Figure 1 shows the gender gap in four selected activities by educational status of the couples. Positive gender gaps mean that the man spends more time on the activity, while negative gaps mean that the woman spends more time on the activity. The estimates for childcare have been computed only for couples with children. Stars show the significance of the differences with the hypogamic couples

Figure 1 about here

The most significant differences are observed in the time devoted to routine domestic work. For all types of couples, the gender gap is significantly different from zero. The estimates show that even when the woman has a higher education than her partner, she still spends more than one hour and 20 minutes more than the man on domestic routine tasks. The gender gap is significantly greater in couples where both members have a low educational level. The gap grows by 47 minutes between hypogamous and low-level homogamic couples. On the other hand, in couples where women have more education and those in which both partners have a high level of education, there are no significant differences. Differences between hypergamic and hypogamous couples were not significant.

The differences in paid work, leisure and childcare are not significant in the four categories of education, as shown by the relatively flat lines, except the differences between hypergamous and hypogamous couples. The gender gaps in paid work and leisure are both positive, so men spend more time on those

activities, while childcare is negative. In the case of hypogamic couples, men spend approximately one hour and 20 minutes more than women on domestic routine work, and the estimates are approximately one hour and 45 minutes on paid work, 25 minutes more in leisure, and 45 minutes less on childcare.

Figure 2 about here

Figure 2 depicts the gender gap according to the occupational prestige of both members of the couple. In this case, trends for housework are very similar to those observed when analyzing education, although differences in the categories are not significant. Again, all estimates are significant and higher than one hour and 20 minutes. Even the most advantaged women in terms of occupation spend more than one hour and thirty minutes more than their partners on domestic housework.

In relation to paid work, the gap is between one hour and 22 minutes (homogamy low) and one hour and 42 minutes (homogamy high), and there are no significant differences compared to hypogamous couples.

The gender gap in leisure activities shows that homogamous couples with low education are the most egalitarian (25 minutes more for men), while hypergamous couples are the least egalitarian (40 minutes more for men).

Regarding childcare, we observe significant differences between hypergamous and hypogamous couples. The highest gap is for hypergamous couples, where women spend an average of 48 minutes more than men. On the other hand, the most egalitarian couples are hypogamous couples and homogamy low couples, where women spend only 24 minutes more on childcare.

Figure 3 about here

In Figure 3, couples are classified by earnings. In this case, the gender gap in routine domestic housework for hypogamous and homogamous high couples is significantly smaller than that of the other two groups, but women still spend approximately one hour and 10 minutes more on that type of activity. Gender gaps are almost 2 hours in couples where the woman earns less than her partner and one hour and 40 minutes more when both members have low incomes. The relative resources theory regarding the allocation of time seems to prevail more clearly in this dimension, and the higher earnings of the women are reflected in a more egalitarian distribution of routine tasks in the household. Nevertheless, gender gap is far to close.

As in the 2 previous figures, differences in paid work are not significant compared to hypogamic couples, and men spend more time on paid work in the 4 types of couples. Differences go from slightly less than one hour in low-income homogamous couples to two hours in hypergamic couples.

Regarding leisure time, we can observe two groups: one for homogamous couples and another heterogamous couple. In the first gender gap is higher and approximately 45 minutes, while in the latter, it is approximately 20 minutes less.

In relation to childcare, the main results go in the same direction as those in Figure 1. The least egalitarian are the couples where the woman earns less (gender gap of 45 minutes), and the couples where both members have low income are the most egalitarian (gender gap of 26 minutes) it is very close to the gap observe dint he other two groups.

Multivariate models

The descriptive results provide some evidence that the better position of women with regard to education is translated into a better position in occupational prestige and earnings. The results regarding the distribution of time also suggest that there are similar patterns in the activity gender gaps for the three factors of classification. The aim of the multivariate models is to evaluate the effect of education when we control for the other two factors. Figure 4 presents the coefficients estimated for the education variables for 4 selected activities[2]. For each activity, I have computed three models. The first model (coefficients plotted in blue) basically corresponds to the gender differences among the groups observed in Figure 1 because the only variable included in the model is the classification of the couple according to the educational status of both members and the day of the week. In the second model (in red), the sociodemographic characteristics of the couples and their members are introduced. In the third model (green), the occupation prestige and earnings variables are added.

Figure 4 about here

The coefficients from the regressions show that the difference in the gender gap is lower when all controls are introduced in the model. In the case of domestic routine work, the differences decrease, but they are still significant in couples where both members have low education (coefficient -0.6, $p<0.001$). There were no significant differences between hypogamous couples and couples where both members had the same level of education or between couples where she had a lower level of education. We also

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[2] All coefficients of the models are displayed in Annex 1.

see significant coefficients for hypergamous couples in leisure and childcare activity (both cases coefficient 0.4, p<0.05).

Using the models with all the variables, predicted gender gaps were computed for each activity and combination of couples by education, occupational prestige and level of income. Thus, for each activity, sixty-four combinations are computed. The predicted gender gaps are displayed in Figure 5. Predicted gender gaps that are not significant (different than 0) at level 0.05 are also in gray.

Figure 5 about here

Predicted gender gaps are positive (men spend more time than women) for paid work and leisure and negative for domestic routine tasks and childcare, although in the last case, a few combinations are reversed. In the column for routine domestic work, we can see that all predicted gender gaps are significant, which means that even in the couples where she has a better position, she still spends more time. With some exceptions, the least egalitarian are couples where the man has a higher level of income and his occupational prestige is also higher. They are represented in the lower row on the left of each educational category. It is also relevant that the least egalitarian couples combining the three dimensions are couples where both have low education, she has a more prestigious job, but he earns a higher salary (156 minutes). On the other hand, the most egalitarian are those where the woman has more income and both partners have a high level of education and high occupational prestige (45 minutes).

Regarding paid work, there are a few combinations that are not significant. In that case, the highest gender gaps are observed when the man has a higher income (lower row for each square). There is not a clear combination in which the gender gap is reduced. The lowest estimated gender gap is predicted for couples that are homogamous with high levels for the three variables. In that case, the predicted gender gap is 43 minutes.

For leisure, the highest gender gaps are observed for the hypergamous couples by education (lower row). When the woman has a higher education and when both have a high level of education, the gender gaps are slightly lower. We can observe that for hypogamous and homogomously low couples in terms of education, the gender gap is not significant in a few of the combinations. Leisure time is key for individuals' well-being, and it seems that a better position of women allows a more egalitarian distribution of this type of activity.

Regarding childcare, we observed less significant differences when he had a better education, which was not expected. Moreover, more significant gender gaps are observed when she has a better education. These results highlight the different nature of childcare activities and the fact that parents want to spend time with their children. The highest gender gaps are also observed in the categories where the father

has a better occupation and a higher salary, which probably means that he has to spend more time on paid work.

Discussion

In this paper, I evaluate how the reversal of the gender gap in education is related to the allocation of roles in the couple, which I measure based on the gaps in time spent on paid work, routine housework, childcare and leisure by both members of the couple. In the first term, the study confirms that the progress of women in terms of education does not always translate into a better position in terms of occupational prestige and earnings. In that sense, the advantage in the negotiation of roles is much lower when other factors with stronger repercussions are considered. Higher education means higher human capital, but women's presence in more prestigious occupations is still far below the level enjoyed by men. This limited access to more prestigious occupations also means lower income. Moreover, the gender gap in salaries is still relevant. All these factors suppose that only 12.9% of women have higher earnings than their partner, although 28.9% have a higher level of education.

This study shows that women's improvement in education has a positive association with a more egalitarian allocation of time, and it supposes a significant reduction of the gender gap in routine housework when she has more education than her partner or when both have at least a high school education. There are less significant differences in other activities, but the one we observe is mainly in leisure activity where couples with more advantage women in terms of education the gender gap is lower. As predicted by the relative resources theories, women with higher education seem to have more power in the negotiation of gender roles, but this does not mean there is a total elimination of the gender gap in routine housework. Highly educated women are in a better position than women with a lower level of education, but this is mainly because of the large gender gaps observed in the latter case. In that sense, when occupation and earnings are taken into account, the differences attributed to education are lower.

Differences do not disappear even in couples where the woman has a better position in the three factors. Actually, even for couples where the woman has a much better position (better education, occupation and income), the gender gap in routine housework does not reverse in any combination. Doing gender mechanisms are still working and domestic routine tasks are the field where they manifest much stronger. In general, the other three types of activities follow the same pattern as the overall population; men spend more time on paid work and leisure, and women spend more time on childcare. In the case of childcare, the norms of intensive parenting are also reflected in our study, as reflected in the fact that couples in which women have educational advantages spend more time with their partner. Preferences in terms of balance between family and work also play a role in this, which is also supported by the higher differences observed in paid work. Regarding leisure, a type of activity basic for individuals'

well-being, the highest differences are observed in hypergamous couples, in which type differences in paid work and childcare time are lower. It suggests that preferences for these couples are more constrained, especially in their time on paid work and childcare, and as a result, it affects their women's leisure time.

We have to see this study in a context where women's educational gains are growing fast and couples where women have a higher level of education are expected to increase in the future. However, Spanish society must address restrictions that limit women's human capital. On the one hand, women's presence in some fields is still limited, and it is still the case that more lucrative jobs are mainly restricted to men. On the other hand, women are still primarily responsible for the reproductive tasks of the household, which is a great barrier to their professional careers. Gender differences in time use exist even when men and women do not live together, but they are much smaller (Ajenjo and García Román, 2019). Entry in union supposes an increase in the differences, but it is the arrival of children that has the greatest impact on couples' allocations of time. Although the gender ideals of younger couples are more egalitarian, the arrival of a child entails a return to more traditional behavior (Abril et al., 2015, Ajenjo and García Roman, 2011). Women reduce their participation in the labor market and increase their time spent on housework while also taking the lead in caring for the newborn. All of these factors slow women's careers and prevent them from developing their human capital.

Avoiding gender specialization and preventing the expansion of gender stereotypes will improve women's access to fields of knowledge where their presence is still scarce; such changes should also help women shift their primary responsibilities away from caregiving and domestic tasks. However, it is also necessary to give men greater responsibilities in the domestic sphere and to construct a new masculine identity that will rethink priorities. In that sense, recent trends show that men have more interest in childcare activities, especially activities that are more interactive. Men's roles in the domestic sphere should also include less-attractive activities as well as housework to facilitate the development of their partner's career. However, in some couples, these changes are not solely the responsibility of men. Women must convince themselves to give up their role as the main care provider and facilitate a more equal distribution of tasks or even give the main domestic responsibilities to the man when she has more resources. Nevertheless, it is not easy in a country such as Spain, where masculinity and femininity norms are much more entrenched than others (Sevilla-Sanz, 2010).

Overall, more weight should be given to the relative resources of both members of the couple in the division of tasks in the household. Not wasting women's human capital is essential if we are to move to a more egalitarian society, and it will also incentivize new generations to invest in their own human capital development to access better occupations and earnings and prioritize their professional development instead of remaining responsible for unpaid work.

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Table 1. Characteristics of the sample

Variables	Categories	N	%
Age male	30 or less	65	3.3
	30-49	1321	67.8
	50-64	562	28.9
	Mean	*44.1*	
Age female	30 or less	110	5.6
	30-49	1445	74.2
	50-64	393	20.2
	Mean	*42.0*	
Type of union	Cohabitting	224	11.5
	Married	1724	88.5
Number of children	Childless	723	37.1
	1	620	31.8
	2	522	26.8
	3 or more	83	4.3
Age of youngest child	3 or less	397	32.4
	4-9	411	33.6
	10-17	417	34.0
Day of the week	Workday	1239	63.6
	Weekend	709	36.4
Couples's eduction	Homogamy low	425	21.8
	Homogamy high	522	26.8
	Hipergamy	439	22.5
	Hipogamy	562	28.9
Couples' occupation	Homogamy low	179	9.2
	Homogamy high	613	31.5
	Hipergamy	699	35.9
	Hipogamy	457	23.5
Couples' earnings	Homogamy low	328	16.8
	Homogamy high	529	27.2
	Hipergamy	840	43.1
	Hipogamy	251	12.9
N			1948

Table 2. Distribution of couples by educational attainment, occupational prestige and earnings of both members

	Education	Occupation	Earnings
Homogamy low	21.8	9.2	16.8
Homogamy high	26.8	31.5	27.2
Hipergamy	22.5	35.9	43.1
Hipogamy	28.9	23.5	12.9

Source: Own calculations from Spanish Time Use Survey 2009-10, INE.

Table 3a. Distribution of couples by occupational prestige by educational attainment

|	Education				
Occupation	Homogamy low	Homogamy high	Hypergamy	Hypogamy	All couples
Homogamy low	21.4	6.3	6.1	5.0	9.2
Homogamy high	24.0	43.7	27.6	28.8	31.5
Hypergamy	40.5	28.9	54.7	24.2	35.9
Hypogamy	14.1	21.1	11.6	42.0	23.5

Source: Own calculations from Spanish Time Use Survey 2009-10, INE.

Table 3b. Distribution of couples by level of earnings by educational attainment

|	Education				
Earnings	Homogamy low	Homogamy high	Hypergamy	Hypogamy	All couples
Homogamy low	28	10.5	14.1	16.4	16.8
Homogamy high	8.7	41.8	22.6	31.1	27.2
Hypergamy	49.9	35.8	54.9	36.6	43.1
Hypogamy	13.4	11.9	8.4	16.9	12.9

Source: Own calculations from Spanish Time Use Survey 2009-10, INE.

Figure 1. Gender gap in selected activities by educational attainment of both members of the couple. Hours per day
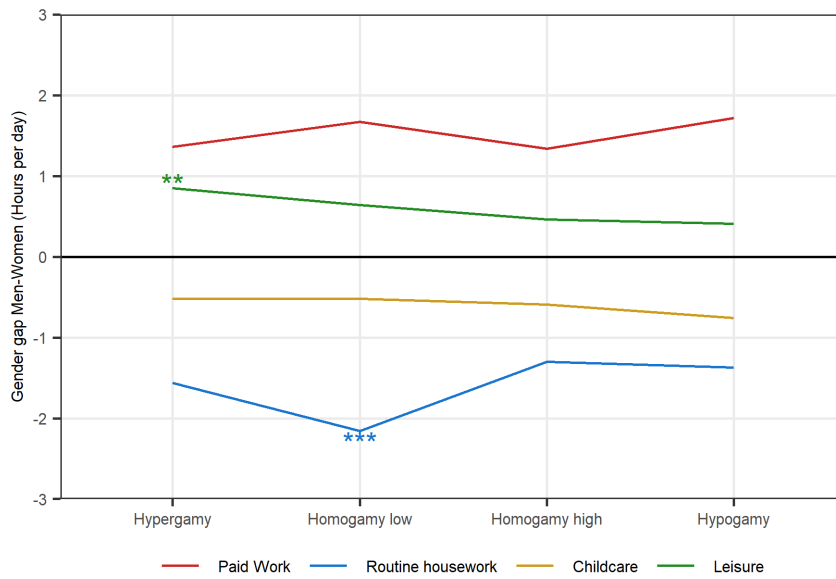
Source: Own calculations from Spanish Time Use Survey 2009-10, INE.
Differences compared to hypogamy *** p<0.001, ** p<0.01, * p<0.05

Figure 2. Gender gap in selected activities by occupational prestige of both members of the couple. Hours per day
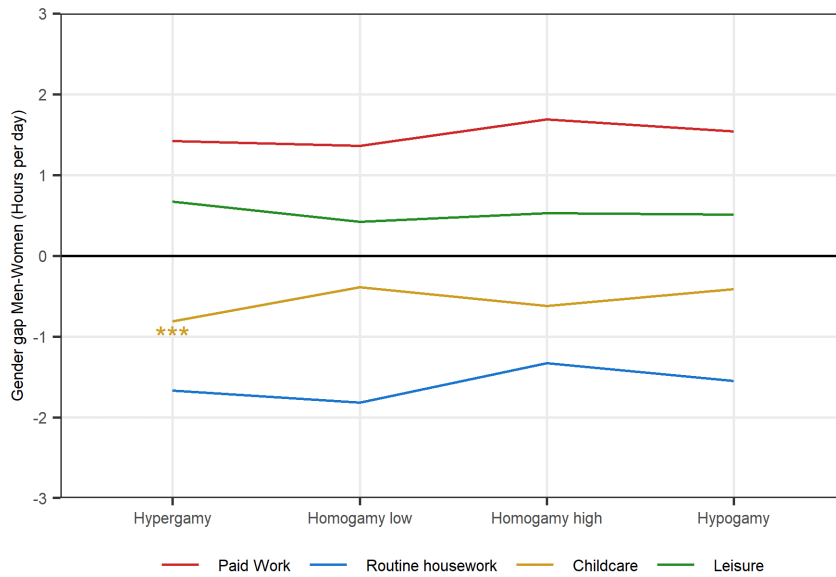
Source: Own calculations from Spanish Time Use Survey 2009-10, INE.
Differences compared to hypogamy *** p<0.001, ** p<0.01, * p<0.05

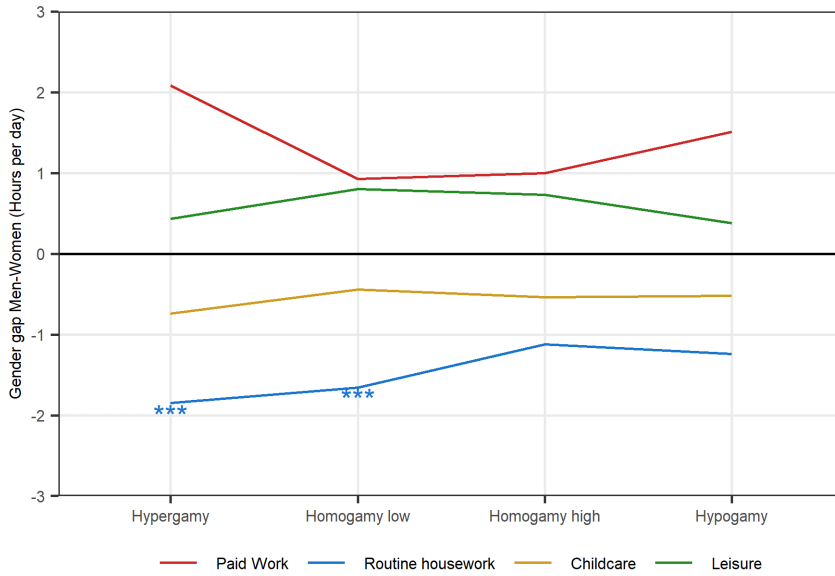Figure 3. Gender gap in selected activities by earnings of both members of the couple. Hours per day
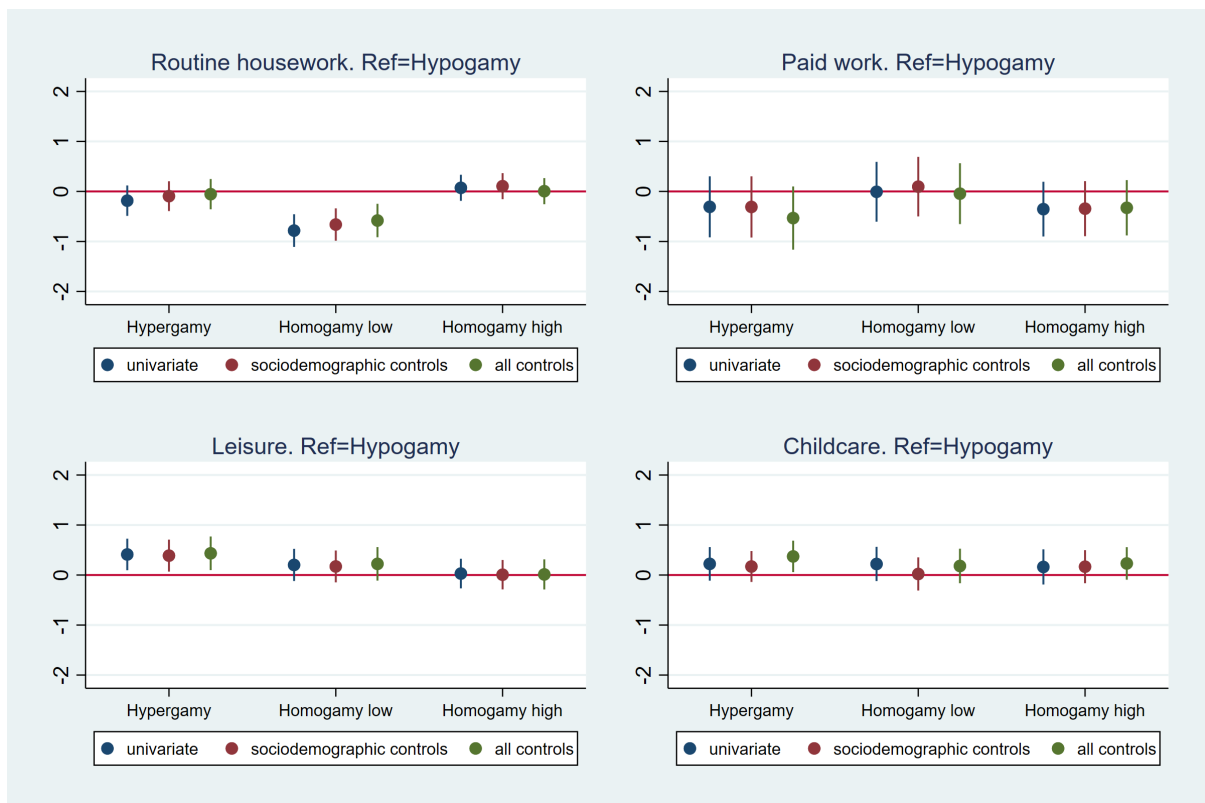

Source: Own calculations from Spanish Time Use Survey 2009-10, INE.
Differences compared to hypogamy *** p<0.001, ** p<0.01, * p<0.05

Figure 4. General linear models for the gender gap in selected activities. Coefficients for the variables: couples by educational attainment of both members.

Source: Own calculations from Spanish Time Use Survey 2009-10, INE.

Figure 5. Predicted gender gap in selected activities for combinations of couples by educational attainment, occupational prestige and earnings.
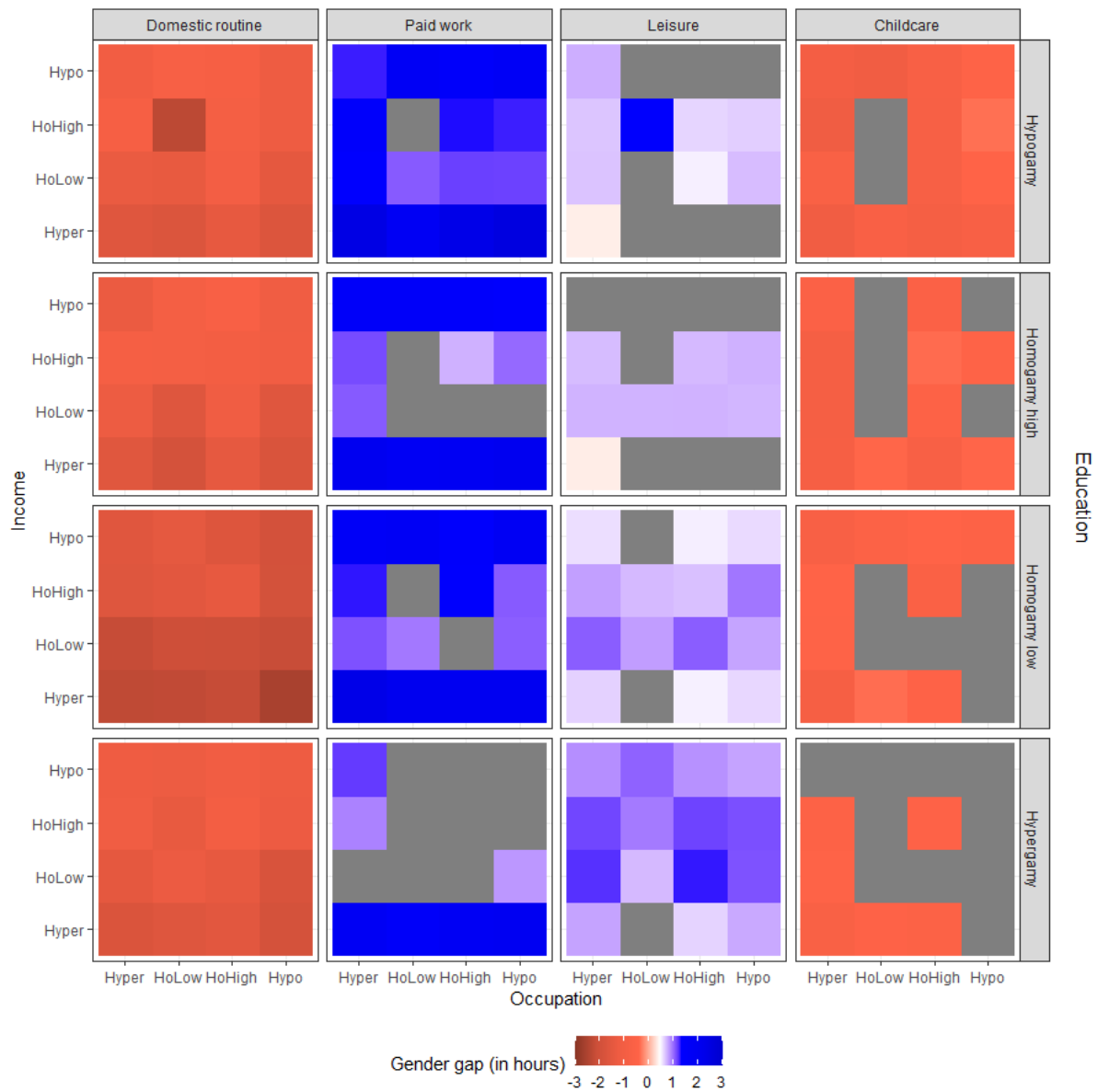
Annex 1. Multivariate models for the gender gap in selected activities

		Domestic routine	Domestic routine	Domestic routine	Paid work	Paid work	Paid work	Leisure	Leisure	Leisure	Childcare	Childcare	Childcare
COUPLE'S EDUCATION ref=Hypogamy	Hypergamy	-0.2	-0.1	-0.1	-0.3	-0.3	-0.5+	0.4*	0.4*	0.4*	0.2	0.2	0.4*
		(0.155)	(0.152)	(0.154)	(0.311)	(0.312)	(0.322)	(0.161)	(0.163)	(0.171)	(0.171)	(0.158)	(0.160)
	Homogamy low	-0.8***	-0.7***	-0.6***	-0.0	0.1	-0.0	0.2	0.2	0.2	0.2	0.0	0.2
		(0.166)	(0.165)	(0.170)	(0.305)	(0.304)	(0.310)	(0.164)	(0.162)	(0.171)	(0.174)	(0.169)	(0.176)
	Homogamy high	0.1	0.1	0.0	-0.4	-0.3	-0.3	0.0	0.0	0.0	0.2	0.2	0.2
		(0.133)	(0.133)	(0.133)	(0.279)	(0.280)	(0.282)	(0.151)	(0.150)	(0.153)	(0.179)	(0.169)	(0.166)
COUPLE'S OCCUPATION ref=Hypogamy	Homogamy low			0.1			0.1			0.1			0.0
				(0.195)			(0.403)			(0.252)			(0.175)
	Homogamy high			0.0			0.2			0.2			-0.3
				(0.191)			(0.395)			(0.243)			(0.174)
	Hypergamy			-0.2			0.1			0.2			0.3
				(0.209)			(0.419)			(0.261)			(0.203)
COUPLE'S EARNINGS ref=Hypogamy	Homogamy low			0.5**			0.0			-0.1			-0.1
				(0.176)			(0.332)			(0.183)			(0.210)
	Homogamy high			-0.2			1.1***			-0.5**			-0.2
				(0.152)			(0.294)			(0.166)			(0.190)
	Hypergamy			0.4*			0.6			-0.4+			-0.1
				(0.192)			(0.410)			(0.229)			(0.237)
FEMALE'S AGE ref=30 or less	30-49		-0.3	-0.4		0.1	0.2		0.2	0.1		-0.6	-0.7+
			(0.250)	(0.249)		(0.514)	(0.511)		(0.245)	(0.238)		(0.426)	(0.425)
	50-64		-1.0***	-1.1***		0.4	0.4		0.6*	0.6*		-0.4	-0.4
			(0.280)	(0.279)		(0.552)	(0.558)		(0.255)	(0.250)		(0.434)	(0.434)
TYPE OF UNION ref=coh	Married		0.0	0.0		-0.5	-0.6+		-0.0	0.0		-0.0	-0.0
			(0.156)	(0.153)		(0.357)	(0.350)		(0.200)	(0.196)		(0.224)	(0.222)
NUMBER OF CHILDREN ref=childless	1		-0.8***	-0.8***		0.2	0.1		0.3	0.3			
			(0.159)	(0.154)		(0.312)	(0.304)		(0.187)	(0.186)			
	2		-0.5**	-0.5**		0.3	0.3		0.2	0.2		-0.1	-0.1
			(0.185)	(0.185)		(0.350)	(0.344)		(0.212)	(0.210)		(0.132)	(0.129)
	3 or more		-0.5+	-0.5		-0.6	-0.7		0.6+	0.7*		0.2	0.3
			(0.323)	(0.321)		(0.603)	(0.596)		(0.333)	(0.332)		(0.291)	(0.296)
AGE OF YOUNGEST CHILD ref=10-17	3 or less		0.6***	0.6***		0.6*	0.6+		0.0	0.0		-1.1***	-1.1***
			(0.165)	(0.163)		(0.327)	(0.325)		(0.174)	(0.171)		(0.165)	(0.163)
	4-9		0.2	0.2		0.6+	0.6+		0.0	0.0		-0.3*	-0.3**
			(0.172)	(0.170)		(0.334)	(0.326)		(0.174)	(0.171)		(0.111)	(0.110)
DAY OF THE WEEK ref= Workday	Weekend	0.2+	0.2+	0.2+	1.2***	1.2***	1.2***	-0.6***	-0.6***	-0.6***	-0.3*	-0.3*	-0.3*
		(0.115)	(0.113)	(0.111)	(0.218)	(0.216)	(0.215)	(0.134)	(0.131)	(0.130)	(0.128)	(0.125)	(0.123)
CONSTANT		-1.5***	-0.9***	-1.0**	0.8***	0.7	0.1	0.9***	0.5+	0.6+	-0.5***	0.6	0.8
		(0.128)	(0.255)	(0.316)	(0.236)	(0.602)	(0.664)	(0.144)	(0.266)	(0.345)	(0.147)	(0.495)	(0.524)
Observations		1,948	1,948	1,948	1,948	1,948	1,948	1,948	1,948	1,948	1,225	1,225	1,225
R-squared		0.030	0.065	0.087	0.021	0.032	0.051	0.022	0.030	0.039	0.008	0.079	0.096

Standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05