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PREMIUMS AND PENALTIES AMONG PHYSICIANS IN ITALY: HOW GENDER AFFECTS THE COMBINED IMPACT OF MARITAL AND PARENTAL STATUS ON PAY

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This paper focuses on the penalties and premiums associated with marriage and parenthood among physicians. The research is based on a dataset of more than one thousand doctors working in five hospitals in the Lombardy region of northern Italy. The results show that, all else being equal, married fathers report a 15% premium compared to childless single men while married mothers report a 15% penalty compared to single childless women. Marriage and parenthood significantly affect wages only when they are combined together. Moreover, both males' premiums and women' s penalties grow as the number of children increases, but if married fathers' premium occurs from the first child, married mothers' penalty appears only from the second child on.

Keywords: Medical Careers; Gender Pay Gap; Motherhood Penalty; Fatherhood Premium; Italy.

1. *Introduction*

Women have made a significant progress in research and science. As shown by Eurostat data (*Human Resources in Science and Technology*), today they account for 41% of total employed scientists and engineers in Europe, with a growth rate of 71% since 2010, much higher than men's increase over the same period (+20%). Yet, many studies have shed light on gender inequalities in scientific occupations with respect to recruitment (Reskin and Ross 1990), promotion (Evetts 1996), leadership (Etzkowitz *et al.* 2008), pay (Falcinelli 2009; Kelly and Grant 2012) and access to research funds (Glover 2005). Moreover, the rate of feminization strongly varies across scientific fields. Women and men representation remains particularly uneven in the physical sciences,

mathematics and engineering, while important strides towards gender balance have been reached in life and medical sciences. According to the last *She Figures* report (European Commission 2015), women PhD graduates have outnumbered men in the health and welfare sector, where they account for 59% of total graduates, as well as in agriculture and veterinary (56%), while they are still strongly under-represented in

the field of engineering, manufacturing and construction (28%). The progress towards gender equality in the medical sciences is apparent also with respect to the gender composition of its work force according to OECD data (*Health Care Resources: Physicians by Age and Gender*, 2015). Nevertheless, like many other recently feminized professions, gender inequalities among physicians persist. It is widely acknowledged that female doctors earn less than men (Hoff 2004; Jagsi *et al.* 2012; Magnusson *et al.* 2015; Sasser 2005; Weeks *et al.* 2009), especially once they become mothers (Sasser 2005), they are clustered in less remunerative specialties (Boulis and Jacobs 2010; Crompton and Lyonette 2011; Hinze 2000; Sasser 2005) and they progress more slowly through ranks (Boulis and Jacobs 2010; Carnes *et al.* 2008; Spina and Vicarelli 2015).

In this paper I will focus on gender inequalities in pay among physicians and more specifically on gender inequalities in pay associated to marriage and parenthood. Analyzing the effect of family responsibilities on earnings within one single profession makes it possible to reduce unobserved heterogeneity, provided that the population under analysis is composed of individuals very similar in terms of human capital investments and work characteristics. The research is based on a dataset of more than one thousand doctors working in five hospitals in the Lombardy region of northern Italy. Data were collected from June 2014 to July 2015 by means of an online survey. Overall, 2,205 physicians received the questionnaire and 1,074 answered, with a response rate of 48.7%[1].

2. *Penalties and Premiums in the Literature*

Marriage and parenthood have opposite effects on pay according to whether they concern men or women. Typically, men experience a

[1] This paper is part of a broader study on gender inequalities in medical careers that has received support from the European project STAGES (*Structural Transformation to Achieve Gender Equality in Science*) at the University of Milan. The STAGES project (GA n. 289051) is financed by the DG Research and Innovation of the European Commission within the Seventh Framework Research Programme, and it is co-funded by the Italian General Inspectorate for Relations with the European Union of the Ministry of Economy and Finance (IGRUE). It involves five research institutes in Europe, among them the University of Milan, where it is coordinated by the GENDERS (Gender & Equality in Research and Science) research center.

marital wage premium and/or a fatherhood bonus in earnings (Glauber 2008; Hersch and Stratton 2000; Hodges and Budig 2010; Kelly and Grant 2012; Korenman and Neumark 1991; Loh 1995), while women are more likely to experience the opposite mechanism, that is, a marital wage and/or a motherhood penalty on pay (Buding and England 2001; Hodges and Budig 2010; Lundberg and Rose 2000; Waldfogel 1997).

Premiums and penalties may vary also across classes and family arrangements. Studies on high-skill workers show that female professionals experience a stronger work-life conflict than working class women (Crompton 2006; Gerson 2010; Hochschild 2001; Roth 2006). As a consequence, either they delay or avoid maternity or they outsource care-work (Roth 2006; Wajcman 1998). This may be particularly true in the case of Italy, which is a country traditionally characterized by long hours of work, with inadequate (or too expensive) care services (especially for early childhood) and persisting traditional gender roles within the household (Saraceno and Naldini 2011). Other studies have shed light on the variation of the marital wage premium for men according to their breadwinner status, highlighting that men married with a non-working spouse report greater career advantages with respect to their colleagues in dual-career couples (Lundberg and Rose 2002; Roth 2006; Wajcman 1998).

Explanations for the different effects of gender on the marital and parental impacts on pay are usually divided between supply-side and demand-side approaches. Supply-side approaches emphasize differences in workers' choices or characteristics; demand-side approaches emphasize employers' discrimination and/or organizational obstacles. The former tend to justify pay inequalities (by claiming differences in men's and women's attributes); the latter do not because they focus on structural constraints. Supply-side theories stress that women and men's differences in engaging the labour market determine (marital and parental) premiums and penalties. On this view, pay differentials are due to the fact that mothers and/or married women tend to report lower levels of human capital with respect to childless or single women because, for example, they reduce their work experience to take parental leaves or reduce their work hours to take care of the children (Becker 1985; 1991). On the other hand, fathers and/or married men may increase their work commitment once they get married and/or have children because of their greater financial responsibilities. As a consequence, their higher earnings may be due to an increase in work hours and/or productivity (Becker 1991; Korenman and Neumark 1991).

On the contrary, demand-side approaches stress the role of gender discrimination in determining inequalities. Gender discrimination may be direct or indirect (Olsen and Walby 2004). Direct discrimination is due to employers' discrimination and it takes place when men and women (mothers and non-mothers, fathers and non-fathers, etc.) are differently paid despite equal characteristics. Direct discrimination is due to gender bias in employers' evaluations (Valian 1999) as well as to the persistence of a hegemonic masculine culture in organizations (Acker 1990; Britton 2000). For example, in workplaces characterized by a long-hours culture, employers may think that mothers are less committed and productive regardless of equal work outcomes. On the other hand, they may believe that fathers are more serious about work or at least more deserving, especially if they have economically dependent wives (Hodges and Budig 2010). If direct discrimination is what occurs notwithstanding equal (supply-side) characteristics, indirect discrimination is what contributes to creating differences in those same characteristics by affecting individuals' motivations and preferences. For example, if women rarely receive promotions, they may decide to invest less in their human capital because they see it as futile (Kelly and Grant 2012). In other words, indirect discrimination is the mechanism whereby demand-side obstacles affect supply-side characteristics. All in all, supply-side approaches tend to interpret differences in characteristics in terms of preferences (Hakim 2000) or rational choices (Becker 1985). On the contrary, demand-side approaches emphasize not only employers' (direct) discrimination but also the role of structural constraints in shaping men's and women's choices in terms of human capital maintenance and/or occupational segregation, thus producing (indirect) discrimination (Crompton, Brockmann and Lyonette 2005; England 1982; England 1992; Jacobs 1995; Reskin and Ross 1990).

Within the more general debate on the gender pay gap, numerous studies have shed light on pay inequalities in some specific occupations, including that of physicians. Within the literature on gender inequalities in medical careers, most scholars find that pay differentials among physicians persist notwithstanding equal characteristics (Hinze 2000; Hoff 2004; Jagsi *et al.* 2012; Magnusson 2015; Sasser 2005; Weeks *et al.* 2009). By contrast, Baker (1996) reports no earning difference after controlling for experience, specialty, practice setting, family status and other attributes. As regards the effect of the marital and parental status, Sasser (2005) finds that mothers earn significantly less than childless women after controlling for all characteristics, with the penalty grow-

ing as the number of children increases, while fathers with two children earn significantly more than childless men. By contrast, Magnusson (2015) finds a positive effect of parenthood on income for both men and women. Overall, results on parental and marital premiums and pen- alties among physicians are not consistent, and further investigation is required.

3. *Focus of the Research*

This paper explores the combined effect of gender, marital status and parental status on physicians' pay. I will therefore address the following question: do parenthood and marriage have an impact on income and is this impact different for men and women? I consider six mechanisms by which parenthood and marriage may differently impact on women and men's pay. First, because of greater family responsibilities, mothers and married women may report lower levels of human capital either because they choose to invest less in paid work to take care of children or, alternatively, because employers provide them with less training. Accordingly, their lower pay is attributable to lower levels of human capital (Becker 1981). Even if the human capital hypothesis appears difficult to apply to such a homogeneous population, there may be differences among individuals that explain the penalty-premium mechanism.

Second, men may work longer hours and do more hours of private practice once they get married and have children, while women, when the same event occurs, may reduce those hours. This gap in working hours may contribute to explaining the mechanism of penalties and premiums. That is, husbands' and fathers' longer hours may increase their earnings while mothers' and wives' shorter schedules may reduce them. Differences in work hours may be due to the sexual division of work, which assigns heavier care commitments to women. Otherwise, with respect to the gap in the hours of private practice, it may be due to different commitments to the organization.

Third, penalties and premiums may vary across specialties. That is, they may be wider in surgical specialties than in medical ones. This may make medical specialties more appealing to those women who want to balance work and family. Typically, medical specialties provide more predictable schedules and shorter working hours than surgical specialties. In the latter case, there is a higher probability of working

extra hours and/or facing emergencies. As a consequence, the uneven concentration of female and male physicians across specialties (horizontal segregation) – and more specifically women's concentration in the medical area – may reduce their wage penalty.

Fourth, penalties and premiums may vary across sectors. That is, they may be wider in private hospitals than in public ones, where salaries are strictly regulated by the national contract and bonuses are team-based rather than individual-based. By contrast, in private hospitals salaries are regulated by a company agreement and individual rewards may vary significantly. This may negatively affect mothers and wives' pay.

Fifth, different family arrangements may change the effect of gender, parental status and marital status on salary. Because of the persistence of the sexual division of labor in the household, the amount of hours spent on domestic and care activities, as well as the amount of hours of domestic and care activities outsourced (to child-minders or maids) contribute to explaining the marital and child penalty for women. More specifically, the increased time devoted by married women and mothers to unpaid activities may increase their penalty, while the amount of outsourced domestic work may reduce it.

Sixth, women may experience a penalty once they get married or have children because they are (negatively) discriminated by their employers or because of the effect of unobservable characteristics, such as productivity and skills. On the other hand, men may report a premium either because they are (positively) discriminated or because of unobservable characteristics.

4. *The Data*

Data were collected through an online questionnaire sent to the physicians working in five hospitals in the Lombardy region of Italy: the Policlinico Hospital in Milan, the Civil Hospital in Legnano, the Sant'Anna Hospital in Como, the San Donato Hospital in San Donato and a fifth hospital in Milan which has asked to be anonymous. The data collection lasted about three months for each hospital and it took one year in total, starting in June 2014 and ending in July 2015. Out of 2,205 physicians that received the questionnaire, 1,074 answered, with a response rate of 48.7%. The five hospitals were chosen to be as representative as possible of the health-care system in the Lombardy

region as they vary in sector (three are public, two are private), vocation (three out of five are university hospitals), geography (two hospitals are located in Milan, two in the province of Milan, and one in the province of Como), and size (as they range from about 300 physicians to about 900).

Before analysing the dataset, differences in attributes – between respondents and non-respondents – were analysed by running t-tests. Once the representativity of the dataset had been tested, descriptive statistics were run in order to analyse whether men and women differed in characteristics and to what extent such characteristics varied across different combinations of marital and parental status. Descriptive statistics are set out in tables 1, 2 and 3. Table 1 reports men and women's frequencies by marital and parental status. Table 2 reports mean characteristics by gender and tests for significant differences using two-sample t-tests. Table 3 reports the mean characteristics distinguish- ing among four different combinations of marital and parental status for men and women. In the analysis, parental status is a dummy variable for having (1) or not having (0) children, while the marital status is a dummy variable assigning value 1 for physicians with a co-habiting partner and 0 for physicians without a co-habiting partner. Respondents with a co-habiting partner include those who are married and those who live with their partner[2], while respondents without a co-habiting partner include those who have a partner not living together with and those who are single. The result is a four-fold category for each sex: single with no children, spouse/cohabiting partner with no children, single with children, spouse/cohabiting partner with children.

Out of 1,074 physicians, 553 are males (51.5%) and 521 are females (48.5%). Table 2 shows that women, on average, are younger than their male colleagues (48 vs. 51 years old) and, as a consequence, they report, on average, fewer years of work experience (17 vs. 21.6). Overall, men report a yearly mean income of 87,973 euros while women earn 62,747 euros, for an earnings differential of 23,226 euros (number of observations: 1,004). Respondents were asked to state their income, and not their salary, in order to account for earnings made in private prac-

[2] Because of contemporary changes in family arrangements and in light of the decline in marriages, accounting for both married physicians and physicians with a co-habiting partner appeared more reasonable than accounting only for married couples. For the sake of simplicity, in the text I still use the words married and marriage, which must be understood in a broader sense including both married couples and co-habiting couples.

Tab. 1. *Men and women by marital and parental status*

	Men	*Women*	*Total*
Single with no children	48	97	145
Married or living together with no children	84	106	190
Single with children	27	40	67
Married or living together with children	394	278	672
Total	553	521	1074

tice and all other consultancy activities, if any. Moreover, because these earnings from extra work are taxed once a year through the income tax declaration, respondents were asked to report the gross value, which is easier to remember than the net one. The distribution of income, for both men and women, is rather skewed, with men reporting more outliers than women. Adopting the OECD definition of the gender pay gap[3], men earn 26.6% more than women. Table 3 shows that single parents, both men and women, are the highest earners although one must bear in mind that the number of physicians in this category is low (67). Without controlling for other characteristics, among men, married fathers earn more than childless single men and childless husbands, while, among women, married mothers earn more than childless single women and childless wives.

With respect to educational credentials, women graduate from medical schools with slightly better grades than men (108 vs. 107). Considering best-in-class graduates who have obtained the maximum degree (110/110), women tend to receive special honours slightly more often than men (51% versus 45%). No significant differences in grade are apparent across different marital and parental status within each sex (table 3). On the other hand, men tend to report more postgraduate training as they spend slightly more than five months abroad for study or work, while women slightly less than three months. Differences in postgraduate international training also occur across different marital and parental status (table 3). The descriptive statistics convey a mixed picture, with women investing more in their educational credentials while they are at medical school and being less likely to report postgraduate training. As a consequence, the traditional human capital hypothesis – spouses and mothers report lower levels of human capital

[3] As unadjusted and defined as the difference between median earnings of men (75,000 in the dataset) and women (55,000 in the dataset) relative to median earnings of men. Data refer to full-time employees.

Tab. 2. *Mean characteristics by gender*

	Men	*Women*	*t-test*
Annual income (€)	85973.0	62747.4	0.000
Age	52.2	47.8	0.000
Grade	107.1	108.0	0.000
Honours (%)	45.1	51.4	0.046
Work experience (years)	21.6	17.0	0.000
Months of training abroad	5.2	2.8	0.000
Total weekly work hours	47.7	44.9	0.000
Private practice (weekly hours)	3.7	2.0	0.000
Public hospital (%)	81.5	84.0	0.275
Specialties (%):			
Medicine	39.7	56.0	0.000
Surgery	35.0	15.9	0.000
Diagnostic	21.1	23.8	0.275
Public health	3.0	2.5	0.576
All others	0.7	0.9	0.664
Rank (%):			
1st level	50.6	70.2	0.000
Vice	28.5	18.6	0.000
Head	18.8	6.1	0.000
All others	1.9	4.9	0.007
Cohabiting partner (%)	15.9	15.7	0.937
Spouse (%)	70.5	57.9	0.000
Number of children	1.5	1.0	0.000
Number of children living at home	1.1	0.9	0.018
No children (%)	23.8	38.9	0.000
Nonpaid work (weekly hours)	15.5	25.4	0.000
Outsourced nonpaid work (weekly hours)	5.7	6.9	0.000

which explain pay inequalities – has been tested with respect to post-graduate international training while the grade has been added as a control variable.

As regards the hours of work, men tend to work slightly more than women: almost forty-eight hours against forty-five a week on average. Nevertheless, this difference decreases to one hour and twenty minutes if the time spent on private practice is not taken into account. Hence, men tend to do more private practice, which is more lucrative, than women. Part-time work is residual among physicians, with no marked difference between men and women. Only thirteen physicians – six

men and seven women – work less than twenty hours a week. This is not surprising because in Italy part-time work is not as widespread as it is, according to Eurostat data (*Persons Employed Part-Time*) in many North European countries. This is particularly true for high-qualified professions, where long hours of work are required. Considering different marital and parental status, single and childless men are those who work the most, followed by childless husbands, while single fathers are those who work the least. On the other hand, marriage by itself does not seem to reduce the amount of hours worked by women, while children do, especially in combination with marriage, as married mothers are the ones who work the least amount of hours. Moreover, there is a slight tendency for women to cluster in public institutions – which offer better schedules and fewer hours of work than private ones (46 *vs.* 49) – even if the difference is not significant.

Gender segregation is most evident in the gender composition of each specialty. Specialties were clustered into four areas according to the MIUR (Italian Ministry of Education, Universities and Research) classification. More than half of the female respondents (56%) work in the medical area against 40% of males, while only 16% of women is a surgeon, against 35% of men. The diagnostic area appears to be the most gender-balanced one, with 24% of female physicians working in it, against 21% of men. The public health area comprises only thirty respondents (seventeen men and thirteen women), which makes it difficult to draw conclusions. The medical area includes twenty-three specialties. Some specialties are more feminized than others: in neonatology and rheumatology 80% of the physicians are females. High female rates can also be found in paediatrics (67.5%), radiotherapy (66.7%), child neuropsychiatry (60%), while psychiatry exhibits a lower proportion of women (56.2%). While women are clustered in the medical area, men are more concentrated in the surgical one, where, out of ten physicians, seven are males and three are females. The highest level of segregation occurs in oral and maxilla-facial surgery (91% of men vs. 9% of women), orthopaedics (88% vs. 12%), urology (87.5% vs. 12.5%), heart surgery (83% vs. 17%), general surgery (77% vs. 23%), vascular surgery and otorhinolaryngology (both at 75% vs. 25%). The traditionally male-dominated branch – at least in Italy – of gynaecology has experienced strong feminization in recent years: in the dataset, 49% physicians in this specialty are women. Only two out of thirteen surgical specialties appear to be perfectly gender-balanced: paediatric surgery and neurosurgery. Together, the medical and surgical areas

comprise 74% of the physicians. Considering also the diagnostic area, which is the third most populated area, the three areas represent up to 96% of physicians[4].

Together with the persistence of horizontal segregation, data confirm the existence of a mechanism of vertical segregation. The different steps of the career ladder were harmonized by considering the differences between public and private hospitals and between the two private institutions. The result was a career ladder consisting of three steps: first level, vice, and head. The «all others» step comprises thirty-seven cases clustering three different professional figures difficult to code in an ordinal scale, that are collaborators, grant holders and freelancers working in public hospitals, as well as pure academic researchers. The descriptive statistics show that women are more likely to concentrate in the lower steps of the ladder, as seven out of ten female physicians are clustered in the first level. On the other hand, men are more likely to be promoted, because 50% of them are either vices or heads.

Men and women exhibit significant differences also with respect to family characteristics. Men are more likely to be married than women (70.5% of male physicians are married against 58% of female physicians), while no significant difference is apparent in the likelihood of having a non-married cohabiting partner. Moreover, the percentage of women who are mothers is lower than the percentage of men who are fathers: 61% against 76%. On the other hand, 39% of the women have no children, against 24% of men. Among parents, there is a significant gender difference in the number of children: 1.5 children for the men on average against 1 for the women. Being married and having children have different impacts on women and men's use of time devoted to unpaid work, defined as domestic and care work. Respondents could report their time devoted to unpaid work by distinguishing among five items: care for children; care for the elderly, traditional female domestic activity (cleaning, laundry, etc.), traditional male domestic activity (repairing, gardening, etc.), coordination of the maid or child-minder. Overall, men and women spend, respectively, an average of fifteen and a half hours and twenty-five and a half hours per week on unpaid activities. This translates into about one and a half hours per day of gender gap in time devoted to unpaid work, which is half of the gap in the

[4] Descriptive statistics on single specialties are not reported in the tables but are available upon request. This additional material has not been subjected to formal or substantive review, either by the editorial board or by the external reviewers.

Tab. 3. *Mean characteristics by gender, marital and parental status*

Men	*Single, no kids*	*Spouse/ cohabiting, no kids*	*Single, with kids*	*Spouse/ cohabiting, with kids*
Annual income	63666.6	71708.8	99711.5	90779.1
Age	45.2	47.1	57.9	53.8
Grade	107.7	106.7	107.5	107.1
Honours (%)	55.8	38.9	56.0	44.3
Work experience (years)	14.7	15.5	28.2	23.3
Months of training abroad	11.4	4.9	7.5	4.3
Total weekly work hours	51.3	48.1	45.9	47.4
Private practice (hours/week)	2.1	3.2	5.3	3.9
Public hospital (%)	83.3	76.1	62.9	83.7
Specialty (%):				
Medicine	39.5	39.2	34.6	40.3
Surgery	33.3	34.5	53.8	34.2
Diagnostic	25.0	23.8	11.5	20.8
Public health	0.0	1.1	0.0	4.0
All others	2.0	1.1	0.0	0.5
Rank (%):				
1st level	75.0	67.8	25.9	45.6
Vice	14.5	19.0	22.2	32.7
Head	4.1	10.7	48.1	20.3
All others	6.2	2.3	3.7	1.2
Nonpaid work (hours/week)	10.1	11.0	24.4	16.5
Outsourced nonpaid work (h/w)	3.1	2.7	9.1	6.4

Women	*Single, no kids*	*Spouse/ cohabiting, no kids*	*Single, with kids*	*Spouse/ cohabiting, with kids*
Annual income	61111.1	58789.4	68461.5	63898.4
Age	46.2	44.4	52.4	49.1
Grade	107.8	108.2	107.7	108.0
Honors (%)	47.8	54.7	37.5	53.2
Work experience (years)	15.0	13.5	21.5	18.3
Months of training abroad	5.3	2.5	2.8	2.0
Total weekly work hours	46.5	47.6	45.6	43.3
Private practice (hours/week)	1.4	2.8	4.7	1.5
Public hospital (%)	82.4	77.3	77.5	88.1
Specialty (%):				
Medicine	58.9	57.5	50.0	56.1
Surgery	15.7	20.7	17.5	14.1

(follows)

Tab. 3. *(follows)*

Women	*Single, no kids*	*Spouse/ cohabiting, no kids*	*Single, with kids*	*Spouse/ cohabiting, with kids*
Diagnostic	22.1	20.7	25.0	25.7
Public health	2.1	0.0	5.0	3.2
All others	1.0	0.9	2.5	0.7
Rank (%):				
1st level	70.1	78.3	67.5	67.6
Vice	16.4	13.2	22.5	20.8
Head	3.0	4.7	5.0	7.9
All others	10.3	3.7	5.0	3.6
Nonpaid work (hours/week)	15.8	12.1	26.8	33.7
Outsourced nonpaid work (h/w)	2.8	3.0	8.7	9.6

general population, according to ISTAT, the Italian national institute of statistics (Gaiaschi 2014). That is, the medical population is less gender-unequal with respect to the division of unpaid activities than the general population. This discrepancy may be due to the different methods of data collection (ISTAT uses diaries, while this study is based on respondents' estimates) but also to the different targeted population, because general data account for women working part-time or residually, while this study is based on a selected population composed of high-skilled female professionals who tend either to reduce the number of children or to outsource care and domestic work in order to balance work and family.

Time devoted to unpaid work varies according to the parental and the marital status. Single childless men devote around ten hours a week to unpaid activities. Once they get married, the workload increases to eleven hours. When they have children, it increases to seventeen hours a week if they are married and to twenty-four hours if they are not. This means that while marriage impacts only residually on their household responsibilities, children do it in a greater extent. As for women, wives without children dedicate twelve hours a week to nonpaid activities, almost four hours less than the single childless women. Contrary to expectations, being married doesn't increase women's household responsibilities. On the other hand, once they have children, and especially when motherhood is combined with marriage, they experience a sharp increase in nonpaid work: twenty-seven hours for single mothers and thirty-four hours for married mothers, twice than their husbands.

Moreover, data on outsourcing show that women report seven hours a week of outsourced care and domestic work, against five and a half hours declared by men. Single childless women have outsourced domestic and care work for less than three hours a week, while married mothers for less than ten hours (table 3). Hence, mothers tend to reduce their time devoted to unpaid work by outsourcing domestic and care work.

5. *Models*

In order to test the six above-mentioned hypotheses, multivariate regressions models were run based on the linear function of logged income. I estimated the following equation using OLS:

$$Y_i = b_0 + \sum b_i X_i + e_i$$

Where Y is the dependent variable, b denotes a vector of regression coefficients for the independent variables X's, b_0 is the intercept, *i* indexes individuals and e is the error term. The results are shown in five different tables (tables 4-8). Table 4 and table 5 examine the combined effects of marital, parental status and gender on logged income. Table 4 analyzes the general effect of parenthood without distinguishing the number of children, while table 5 focuses on the effects of having one, two, or more than two children. In both tables, the first model reports basic controls for educational credentials, work experience and institutional work characteristics. The second model adds post-graduate international training; the third model adds work hours; the fourth model controls for the specialty. The fifth and final model includes measures of household arrangements, that is the time (weekly hours) devoted to unpaid activities and the hours of domestic and care work outsourced. The final model provides also information on the net effect of the combination of gender, marital and parental status on pay, all else being equal. The final model was re-run on specific sub-populations. Table 6 reports separate regressions for each specialty, table 7 reports separate regressions for the sector (public vs. private). Lastly, table 8 focuses on household arrangements by adding the hours of unpaid work and the hours of care and domestic work outsourced separately in order to assess their specific impact on women's penalties and men's premiums.

6. *Measures*

The natural logarithm of the gross annual income is the dependent variable. In order to analyze the gender effects of parenthood and marriage, the marital status and the parental status have been combined in one categorical variable which was interacted with the variable gender (1: female; 0: male). The parental status is always categorized as a dummy (1: having children; 0: not having children), except in table 5, where it is a four-fold categorical variable (0: no children, 1: one child, 2: two children, 3: more than two children).

Therefore, in all the tables except for table 5, the combined gender effects of parenthood and marriage are captured by eight different dummies, four for each sex: single women with no children, married women with no children, single women with children and married women with children; and so on for the men. Single childless physicians are the reference category for both sexes. In table 5, the combined gender effects of parenthood and marriage are captured by twelve different dummies, six for each gender: single women with no children, married women with no children, single women with (total number of) children, married women with one child, married women with two children, married women with more than two children, and likewise for the men. For singles, the number of children has not been taken into account because of the low number of observations for this category. Single childless physicians are the reference categories for both men and women.

The combined marital and parental status categorical variable was then interacted with the gender of the respondent. Most of the studies on marital and parental penalties and premiums include either the interaction terms (Buding and England 2001; Sasser 2005) or the combined variables in the model (Kelly and Grant 2012). Combined variables make it possible to assess the combined effects of marital and parental status for men and women but only in comparison to one single reference category, for example, as in the case of Kelly and Grant (2012), to married fathers. On the contrary, interaction terms make it possible to compare parental and marital penalties and premiums within each sex, thus comparing, for example, mothers with childless women and fathers with childless men. However, if interactions are run separately (genderXmarriage and genderXchildren), the combined effects of marital and parental status are not provided. The combination is provided only in the case of a three-way interaction (genderXmarriageXchildren) which is nonetheless quite difficult to interpret, while carrying on a

problem of multicollinearity. Using a two-way interaction with a combined variable is comparable to running a three-way-interaction, thus making possible to account for the combined effects of marital and parental status for both sexes and within each sex. On the other hand, it is easier to interpret while reducing the problem of multicollinearity[5]. In this paper, the combined effect of having children and having a husband or a co-habiting partner for men is measured with respect to single and childless men (reference category), while the combined effect of having children and being married or cohabiting with the partner for women is measured with respect to single and childless women (reference category). Moreover, the effect of being a single childless woman must also be interpreted with respect to childless single men (for details on the interpretation of interactions, see Grotenhuis and Thijs 2015).

Penalties and premiums are measured by controlling for differences in characteristics. In table 4, the first model accounts for basic controls: educational credentials are operationalized through a dummy variable assigning 1 to physicians who have graduated with a mark of 105 or more (out of 110) and 0 to graduates who have graduated with a mark up to 104. Institutional work characteristics include the hospital, which is a categorical variable made of five items accounting for the five health organizations (Policlinico is the reference category). The rank is a dummy variable assigning 1 for physicians in the vice or head position and 0 for all others (first level and all others, see descriptive statistics). Finally, work experience is an interval variable accounting for the number of years since entry into the labor market. The following stepwise models add specific characteristics in order to test the different hypotheses. Postgraduate training is an interval variable accounting for the number of months spent abroad (M2). Work hours and the hours of private practice account, respectively, for the number of hours worked in a week – net of the private practice – and for the number of hours a week devoted to private practice (M3). The specialty is a categorical variable made of four items: medicine (reference category), surgery, diagnostics, and all others (including public health, physicians without a specialty and specialties that could not be categorized) (M4). Family arrangements include two interval variables accounting for the weekly

[5] The regressions included in this paper were run using both the two-way interaction (with a combined variable) and the three-way interaction. The results of the multicollinearity tests suggested to opt for the use of the two-way interaction.

hours spent on unpaid work and the hours of care and domestic activities outsourced (M5).

7. *Results*

The results of the regression analysis are reported in five different tables (tables 4-8). Table 4 reports the coefficients of the combined effect of gender, marital and parental status without distinguishing the number of the children. The first model reports the gross effects accounting for basic controls (M1). The results show a significant positive effect for married fathers and a significant negative effect for single childless women on pay: the former reports a 16% premium (p: 0.006) and the latter reports a 13% penalty (p: 0.043) with respect to single childless men. Contrary to expectations, in the first model women don't experience any marital and/or parental penalty on pay, while they do experience a pure gender penalty – that is a penalty which doesn't concern them as mother or wives but as women – with respect to their (single and childless) male colleagues. On the other hand, men do experience a wage premium associated to marriage and fatherhood but only if marriage and fatherhood are combined together. By taking the number of children into consideration, the first model in table 5 confirms the combined marital and parental premium for men with one child (but at 90% level), two and more than two children. On the other hand, the coefficient for married mothers with more than two children turns significant at 90% level, while reporting a wage penalty of 17%.

The following step-wise models in tables 4 and 5 incrementally add the independent variables to the initial regression. In order to test the above-mentioned hypotheses, I have analyzed whether and how the coefficients of the interaction terms change when the varia- bles are added while considering mean differences in characteristics among the four combinations of marital and parental status for each sex. The first hypothesis states that differences in market human capital, and more specifically in the time spent abroad for international train- ing, explain differences in pay. The second column of table 4 shows that international training doesn't have a significant impact on income (M2). Nevertheless, once the variable is added, men's bonus slightly increases while women's penalty decreases. Single childless women's penalty decreases from 13% to 12% thus suggesting that their reduced training experience (with respect to single childless men) does contrib-

Tab. 4. *OLS on logged annual income with total number of children*

	M1	*M2*	*M3*	*M4*	*M5*
M: single no children	0	0	0	0	0
M: married no children	0.049	0.057	0.073	0.058	0.063
	(0.066)	(0.066)	(0.065)	(0.063)	(0.063)
M: single parent	0.017	0.020	0.024	0.024	0.016
	(0.088)	(0.088)	(0.087)	(0.085)	(0.085)
M: married parent	0.156***	0.164***	0.171***	0.159***	0.150***
	(0.057)	(0.057)	(0.056)	(0.055)	(0.055)
F: single no children	-0.130**	-0.119*	-0.086	-0.056	-0.052
	(0.064)	(0.064)	(0.063)	(0.062)	(0.061)
F: married no children	-0.015	-0.023	-0.048	-0.066	-0.078
	(0.083)	(0.083)	(0.082)	(0.080)	(0.079)
F: single parent	0.061	0.062	0.041	-0.011	-0.018
	(0.113)	(0.113)	(0.110)	(0.107)	(0.106)
F: married parent	-0.110	-0.115	-0.104	-0.126*	-0.147**
	(0.070)	(0.070)	(0.069)	(0.067)	(0.067)
Months abroad		0.027	0.020	0.011	0.001
		(0.017)	(0.016)	(0.016)	(0.016)
Weekly work hours			0.006***	0.006***	0.006***
			(0.001)	(0.001)	(0.001)
Private practice (hours/week)			0.013***	0.013***	0.013***
			(0.002)	(0.002)	(0.002)
Specialty: Medicine				0	0
Specialty: Surgery				0.075***	0.074***
				(0.027)	(0.027)
Specialty: Diagnostic				0.146***	0.148***
				(0.027)	(0.027)
Specialty: All others				0.184***	0.178***
				(0.060)	(0.059)
Outsourcing					0.005***
					(0.001)
Unpaid work hours					-0.000
					(0.000)

(follows)

Tab. 4. *(follows)*

	M1	*M2*	*M3*	*M4*	*M5*
Constant	10.78***	10.75***	10.43***	10.35***	10.36***
	(0.066)	(0.069)	(0.092)	(0.092)	(0.091)
R-square	0.425	0.426	0.451	0.474	0.484
N	914	914	914	908	908

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Controls include: hospital, grade, work experience and rank. As regards interpretation of the interaction terms, «M: single parent», «M: married no children» and «M: married parent» refer to males' combined variables and must be interpreted with respect to «M: single no children» (reference category). «F: single parent», «F: married no children», «F: married parent» refer to females' combined variables and must be interpreted with respect to «F: single no children» (reference category). «F single no children» must be interpreted with respect to «M: single no children». For interpretation of the interactions see: Grotenhuis and Thijs 2015.

ute to producing their wage penalty. Also in the second model, female coefficients associated with parenthood and marriage are not significant, except when controlling for the number of children (table 5). In this case, the penalty for married mothers with more than two children slightly increases (from 17.2% to 17.8%) when international training is added. The change is minor but it nonetheless suggests that married mothers' (with more than two kids) reduced training experience (with respect to single childless women) does not contribute to producing their child penalty. Contrary to expectations, the fact that they report lower levels of international training doesn't explain their penalty. With respect to men, coefficients in table 4 show that married fathers' reduced training experience (with respect to single childless men) contribute to diminish their bonus, because once the variable is added, the coefficient increases. This is confirmed by the coefficients in table 5. It is interesting to stress the fact that married fathers report fewer months of international training with respect to childless single men (table 3). This is not consistent with the human capital approach, which argues that fathers tend to enhance their market human capital investments once they have children because of higher financial responsibilities (Becker 1991; Korenman and Neumark 1991). All in all, by looking at the interaction terms' coefficients in the second model of table 4 and table 5, the hypothesis that mothers' losses and fathers' gains in human capital can explain the pay gap has to be rejected.

	M1	*M2*	*M3*	*M4*	*M5*
M: single no children	0	0	0	0	0
M: single parent	0.017	0.019	0.024	0.024	0.014
	(0.089)	(0.089)	(0.087)	(0.085)	(0.085)
M: married no children	0.049	0.057	0.073	0.058	0.063
	(0.066)	(0.066)	(0.065)	(0.063)	(0.063)
M: married with 1 child	0.123*	0.131**	0.146**	0.131**	0.127**
	(0.063)	(0.064)	(0.063)	(0.061)	(0.061)
M: married with 2 children	0.164***	0.172***	0.182***	0.170***	0.155***
	(0.060)	(0.060)	(0.059)	(0.057)	(0.057)
M: married with > 2 children	0.184***	0.191***	0.176***	0.169**	0.166**
	(0.068)	(0.068)	(0.067)	(0.066)	(0.065)
F: single no children	-0.131**	-0.119*	-0.086	-0.057	-0.053
	(0.064)	(0.064)	(0.063)	(0.062)	(0.061)
F: single parent	0.062	0.063	0.042	-0.011	-0.018
	(0.113)	(0.113)	(0.110)	(0.107)	(0.107)
F: married no children	-0.015	-0.022	-0.047	-0.065	-0.077
	(0.084)	(0.084)	(0.082)	(0.080)	(0.079)
F: married with 1 child	-0.061	-0.065	-0.065	-0.086	-0.098
	(0.080)	(0.080)	(0.079)	(0.077)	(0.076)
F: married with 2 children	-0.119	-0.124	-0.118	-0.141*	-0.166**
	(0.077)	(0.077)	(0.075)	(0.073)	(0.073)
F: married with > 2 children	-0.172*	-0.178*	-0.138	-0.158*	-0.199**
	(0.094)	(0.094)	(0.092)	(0.090)	(0.090)
Months abroad		0.027	0.020	0.011	0.0024
		(0.017)	(0.016)	(0.016)	(0.016)
Weekly work hours			0.005***	0.006***	0.006***
			(0.001)	(0.001)	(0.001)
Private practice (hours/week)			0.013***	0.013***	0.012***
			(0.002)	(0.002)	(0.002)
Specialty: Medicine				0	0
Specialty: Surgery				0.074***	0.073***
				(0.027)	(0.027)
Specialty: Diagnostic				0.146***	0.149***
				(0.027)	(0.027)
Specialty: All others				0.186***	0.180***
				(0.060)	(0.059)

(follows)

	M1	*M2*	*M3*	*M4*	*M5*
Outsourcing					0.005***
					(0.001)
Unpaid work hours					-0.000
					(0.000)
Constant	10.78***	10.75***	10.43***	10.35***	10.36***
	(0.067)	(0.069)	(0.092)	(0.092)	(0.092)
R-square	0.426	0.428	0.452	0.474	0.485
N	914	914	914	908	908

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. All the regressions include control variables. Controls include: hospital, grade, work experience and rank.

The second hypothesis states that differences in work hours explain differences in pay. Adding the hours of work (net of private practice) and the hours of private practice in the third model (M3), the penalty for single and childless women (table 4) and the penalty for married mothers with more than two children (table 5) disappear. This suggests that the reduced work hours of single childless women (with respect to single childless men) as well as the reduced work hours of married mothers (with respect to single childless women) explain part of penalty. As for men, once work hours are added into the model, married fathers' premium increases (from 16.4% to 17.1%, see table 4). That is, work hours do not explain married fathers' premiums. This is not surprising because, contrary to expectations, married fathers work less than single childless men. Therefore, their reduced work hours translate into a reduction of the bonus. The second hypothesis – married fathers may work more, thus increasing their premium, while married mothers may work less, thus increasing the penalty – must be accepted with respect to women and it must be rejected with respect to men.

The third hypothesis states that penalties and premiums may vary across specialties. More specifically, they may be stronger in surgery and weaker in the medical area. The fourth model controls for the specialty (M4). Table 4 shows that surgeons earn 7.5% more than physicians working in the medical area (reference category). Moreover, adding the specialty into the regression decreases married fathers' premiums while, for the first time, married mothers' premium becomes significant. Results suggest that while men's concentration in the surgical specialties (which imply higher premiums) contributes to increas-

Tab. 6. *OLS on logged annual income by specialty (full model)*

	Medicine	*Surgery*	*Diagnostic*
M: single no children	0	0	0
M: married with no kids	0.117	0.119	-0.155
	(0.096)	(0.123)	(0.115)
M: single parent	-0.050	0.0320	0.066
	(0.140)	(0.145)	(0.222)
M: married parent	0.181**	0.222**	-0.002
	(0.085)	(0.105)	(0.103)
F: single no children	-0.025	-0.033	-0.113
	(0.090)	(0.142)	(0.114)
F: married with no kids	-0.121	-0.055	0.030
	(0.116)	(0.184)	(0.144)
F: single parent	0.212	-0.383*	-0.229
	(0.168)	(0.231)	(0.251)
F: married parent	-0.156	-0.175	-0.107
	(0.097)	(0.167)	(0.123)
Constant	10.16***	10.40***	10.90***
	(0.142)	(0.175)	(0.174)
R-square	0.490	0.505	0.513
N	435	232	210

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. All the regressions include control variables. Controls include: hospital, grade, work experience, rank, weekly hours of work, weekly hours of private practice, unpaid work hours, outsourced unpaid work hours.

ing their premiums, women's concentration in the medical specialties (which imply lower penalties) contributes to easing their penalty. Table 6, where the full model is run within each specialty, confirms this. The marital and parental premiums for men are much stronger in the surgical specialties. The surgical area appears penalizing for single mothers, but not for married mothers, while no penalty for women is reported in the medical area. This suggests that the surgical area is more gen- der-unequal in terms of premiums and penalties, while the medical area guarantees more equal treatment.

The fourth hypothesis states that premiums and penalties may vary across sectors. This hypothesis was tested by running two separate full models, one for the population working in private hospitals and one for the population working in public ones (see table 7). The results show that (married mothers) penalties and (married fathers) premiums in

Tab. 7. *OLS on logged annual income by sector (full model)*

	Public	*Private*
M: single no children	0	0
M: married no children	0.077	-0.101
	(0.066)	(0.184)
M: single parent	-0.007	-0.082
	(0.097)	(0.217)
M: married parent	0.166***	-0.005
	(0.057)	(0.178)
F: single no children	-0.033	-0.102
	(0.063)	(0.195)
F: married no children	-0.079	-0.058
	(0.084)	(0.230)
F: single parent	0.070	-0.378
	(0.118)	(0.298)
F: married parent	-0.171**	-0.028
	(0.069)	(0.212)
Constant	10.37***	10.45***
	(0.091)	(0.269)
R-square	0.457	0.575
N	760	148

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. All the regressions include control variables. Controls include: hospital, grade, work experience, rank, weekly hours of work, weekly hours of private practice, unpaid work hours, outsourced unpaid work hours.

public hospitals are significant while in private ones they are not. The results are surprising as they are not consistent with institutional data (e.g. Eurostat data *Gender Pay Gap in Unadjusted Form by Type of Ownership of the Economic Activity*) showing that public organizations guarantee higher gender equality in pay and must be interpreted with caution, by bearing in mind the difference in the number of observations in the two models (only 148 for private hospitals). These results require further investigation.

The fifth hypothesis states that family arrangements, and more specifically the division of unpaid work within the household, have effects on penalties and premiums. More specifically, the increased time devoted by married women and mothers to unpaid activities may increase their penalty, while the amount of outsourced domestic work may reduce it. The final model (M5) shows that outsourcing unpaid activities

Tab. 8. *OLS on logged annual income controlling for unpaid work and outsourced care/domestic work separately*

	M1	*M2*	*M3*	*M4*
M: single no children	0	0	0	0
M: married no children	0.058	0.059	0.062	0.063
	(0.063)	(0.063)	(0.063)	(0.063)
M: single parent	0.024	0.032	0.006	0.016
	(0.085)	(0.086)	(0.084)	(0.085)
M: married parent	0.159***	0.163***	0.145***	0.150***
	(0.055)	(0.055)	(0.054)	(0.055)
F: single no children	-0.056	-0.055	-0.054	-0.052
	(0.062)	(0.062)	(0.061)	(0.061)
F: married no children	-0.066	-0.067	-0.076	-0.078
	(0.080)	(0.080)	(0.079)	(0.079)
F: single parent	-0.011	-0.013	-0.016	-0.018
	(0.107)	(0.107)	(0.106)	(0.106)
F: married parent	-0.126*	-0.122*	-0.151**	-0.147**
	(0.067)	(0.067)	(0.067)	(0.067)
Months abroad	0.011	0.011	0.002	0.001
	(0.016)	(0.016)	(0.016)	(0.016)
Weekly work hours	0.006***	0.006***	0.006***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)
Private practice (hours/week)	0.013***	0.013***	0.013***	0.013***
	(0.002)	(0.002)	(0.002)	(0.002)
Specialty: Medicine	0	0	0	0
Specialty: Surgery	0.075***	0.075***	0.074***	0.074***
	(0.027)	(0.027)	(0.027)	(0.027)
Specialty: Diagnostic	0.146***	0.149***	0.145***	0.148***
	(0.027)	(0.027)	(0.026)	(0.027)
Specialty: All others	0.184***	0.184***	0.178***	0.178***
	(0.060)	(0.060)	(0.059)	(0.059)
Unpaid work hours		-0.000		-0.000
		(0.000)		(0.000)
Outsourcing			0.005***	0.005***
			(0.001)	(0.001)
Constant	10.35***	10.35***	10.35***	10.36***
	(0.092)	(0.092)	(0.091)	(0.091)
R-square	0.474	0.474	0.483	0.484
N	908	908	908	908

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. All the regressions include control variables Controls include: hospital, grade, work experience and rank.

increases pay while the amount of hours spent on unpaid activities is not significant. Moreover, once controls on family arrangements are added, married fathers' premium decreases while married mothers' penalty increases. However, by considering the two variables – unpaid work hours and hours of domestic and care work outsourced – sepa- rately, the analysis of their coefficients shows that changes in penalties and premiums are mostly caused by the latter. Table 8 shows that after adding unpaid work hours only into the model, women and men's coefficients respectively decrease and increase of 0.4 percentage points. Results suggest that the higher amount of time spent in unpaid activities by married mothers (with respect to single childless women) as well as by married fathers (with respect to single childless men) contribute to producing women's penalty and to reducing men's premium[6]. On the other hand, the impact of outsourcing appears much stronger both for men and women: adding the variable in the model reduces males' bonuses and it enhances females' penalties. The results suggest that outsourcing care and domestic activities helps wives and married mothers to ease their work-life balance conflict.

The sixth hypothesis states that, all else being equal, penalties and premiums persist, thus suggesting the existence of discrimination. The final model in table 4 confirms this hypothesis. Married fathers report a pay premium of 15% at 99% level (p: 0.007). On the other hand, married mothers report a 15% penalty with respect to single childless women at 95% level (p: 0.030). Overall, the final model shows that differences in characteristics explain around 85% of the pay gap for married parents (both women and men), while the rest is due either to unobserved characteristics or to employer's discrimination. Moreover, the final model doesn't report any premium or penalty for marriage and parenthood when they are separately considered: only the combination of the two produces a significant effect. Considering the number of children, the final model in table 5 reports significant premiums for married fathers with one, two, or more than two children. As regards (married) women, the penalty occurs only from the second child on. Moreover, the premiums and penalties grow as the number of children increases.

[6] A further step-wise model has been run by considering the effects of the different components of unpaid work separately. The results of the analysis show that the change in married mothers' penalty is mostly due to the time dedicated to (traditionally female) domestic activities rather than to care work. No substantial change occurs neither by controlling for (traditionally male) domestic activities nor for the time spent on coordinating maids and nannies (table not shown, available upon request).

All in all, controlling for all characteristics, penalties and premiums for men and women respectively persist. However, the combined effect of marital and parental status on pay reports a higher level of significance for men than for women.

8. *Conclusions*

Controlling for all characteristics, the women and men surveyed experience a net effect associated with parenthood and marriage. The results show that, all else being equal, married fathers report a 15% pay premium with respect to single childless men while married mothers report a 15% penalty with respect to single childless women. Considering the number of children, males' premiums occur from the first child while women's penalties appears with the second child. Moreover, the premiums and penalties grow as the number of children increases. It is worth to mention that neither marriage nor parenthood by themselves affect pay, this occurs only when they are combined. All in all, fatherhood premiums show higher levels of statistical significance than motherhood penalties. The 85% of unexplained combined marital and parental premiums and penalties (table 4) may be due either to employers' discrimination or to unobservable characteristics such as productivity. Nevertheless, because of the restricted population analyzed – consisting of high-skilled professionals who had invested strongly in their human capital and therefore had similar characteristics – the unobservable characteristics-possibility is less likely to occur.

Discrimination and eventual unobserved characteristics are not the only explanation for pay inequalities. Differences in structural characteristics (i.e. the rank, the specialty) as well as in individual attributes (i.e. educational credentials, work experience, work hours, outsourced unpaid activities) play a role in creating the gap. The results of the stepwise regression analysis suggest that men's concentration in the surgical specialties explains the combined marital and parental bonus, while the reduction in work hours and, especially, in training experience, contribute to lowering their premium as – contrary to human capital arguments – married fathers are not more committed to work than their single childless colleagues. On the other hand, despite the reduction in working hours, female physicians experience modest levels of combined motherhood and marriage penalty provided that they choose less-penalizing family-friendly specialties and outsource care

work. That is, they adopt specific work-life balance strategies in order to ease the penalty. This finding should be interpreted in the light of the persistence of the sexual division of unpaid work, showing that married mothers' time devoted to unpaid work is twice as much as that of married fathers. In other words, women physicians succeed to reduce their (combined) marital and parental penalty not because they share nonpaid activities with their partners, but because – notwithstanding the persistence of traditional gender roles – they adopt specific work-life balance strategies.

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