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**Wage premiums and penalties associated to marriage and parenthood.
Evidence from the medical profession.**

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Professioni e Professionalismo: nuove sfide per la sociologia economica
(Stefano Neri, Elena Spina, Giovanna Vicarelli).

Gender affects the impact of marriage and parenthood on pay. Typically, getting married and having children has a positive effect on men's earnings while it has a negative or a null effect on women's pay. In this paper I will focus on the penalties and premiums associated with marriage and parenthood in regard to a particular profession – that of physicians. 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.

Many studies have shown that men are likely to experience a marital wage premium and a fatherhood bonus in earnings (Glauber 2008, Hodges and Budig 2010, Kelly and Grant 2012), while the opposite mechanism occurs to women (Budig and England 2001, Hodges and Budig 2010, Lundberg and Rose 2000). 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 that differences in attributes between mothers and fathers (wives and husbands, mothers and single childless women, etc.) produce differences in pay. The latter don't, as they claim that differences in pay persist notwithstanding equal characteristics, thus shedding light on the role of structural constraints in producing inequalities.

Within the more general debate on the gender pay gap, numerous important studies have shed light on pay inequalities in some specific occupations, including that of physicians. 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. Sasser (2005) finds that mothers earn significantly less than childless women after controlling for all characteristics, with the penalty growing 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 penalties among physicians are not consistent, and further investigation is required.

Most of the studies using quantitative data sources to analyze gender inequalities in medical careers have been carried out in the United States. To my knowledge, only a few studies have been conducted in Europe (Crompton and Lyonette 2010, Magnusson 2015, Pas et al. 2011, Spina and Vicarelli 2015). The aim of this paper is to shed light on pay inequalities associated with marital and parental status among physicians in Italy. 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 by means of an online survey from June 2014 to July 2015. Physicians were asked to provide information on their human capital, work and family characteristics. Overall, 2205 physicians received the questionnaire and 1074 answered, with a response rate of 48.7%.

Data have been analysed through a step-wise multivariate regression model based on the linear function of logged income. In order to capture the combined effect of gender, marital and parental status, interaction terms – between gender and the different combinations of marital and parental status – were added into the model. Supply and demand-side explanations for premiums and penalties have been tested by incrementally adding different independent variables into the initial regression and by analyzing their effect on the interaction terms. Results show that women and men physicians report a net effect associated with parenthood and marriage, controlling for all characteristics. More specifically, both married fathers and married men without children report a pay premium respectively of 17% ($p=0.001$) and 12% ($p=0.024$). On the other hand, married mothers report a 17% penalty with respect to single childless women ($p=0.007$). Differences in characteristics explain 83% of the pay gap for married parents (both women and male) and 88% of the gap for married men without children; the rest is due either to unobserved characteristics or to employer's discrimination.

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. Neither marriage nor parenthood by themselves significantly affect wages but 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. Moreover, by analyzing the effect of individual characteristics on the interaction terms, the step-wise model shows that – notwithstanding a reduction in work hours – married mothers ease their penalty by “choosing” family-friendly specialties and by outsourcing care and domestic work. That is, women physicians adopt specific work-life balance strategies in order to maintain their level of income. This finding should be

interpreted in the light of the persistence of the sexual division of unpaid work within physicians' households. Indeed, married mothers' time devoted to unpaid work is more than twice as much as that of childless single women and almost twice as much as that of married fathers. This means that 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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