

## Money, money, money... On PhDs, wages and gender.

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### INTRODUCTION

Many studies have shown significant differences in the wages of male and female employees. In order to tackle gender inequality, the EU's Strategy of Equality between Women and Men 2010-2015 has set "equal pay for equal work" and "work of equal value" as one of its main priorities. In Belgium, the gender wage gap has surely narrowed over the past decades, but it is still characterizing the labour market (OECD, 2013).

Some studies suggest that the gender gap increases when moving up the income ladder. A "glass ceiling", the invisible barriers created by behavioral and organizational prejudices keeps women from moving up the career ladder. In addition to the "glass ceiling", "sticky floors" are self-inflicted forms of blocked upwards mobility because of attitudes and behaviors of women themselves.

An overall expansion of higher education in Belgium has led to a rising share of female staff in the academic professions. Although women are no longer underrepresented among higher education students (Eurostat, 2013), they remain underrepresented among higher education professionals. While the number of male and female students starting a PhD has almost reached an equilibrium in Flanders with 50.7% men and 49.3% women in the academic year 2010-2011 (ECOOM, 2013), the proportion of women still decreases rapidly as we move up the academic ladder. In this respect, Belgium is one of the OECD's worst pupils: in 2010-2011 men accounted for 60.9% of the post-doc positions (in FTE) and 77.7% of the appointed faculty positions (in FTE) (VLIR, 2012). Concerning the latter: the higher the rank, the fewer female professors. Consequently, gender inequality is not

only characterizing the business world, but also the Belgian academic scene.

In recent years, due to societal changes and less attractive academic career opportunities, an increasing number of doctorate holders seek careers outside academia. To date, however, it is unclear whether the disadvantage of women relative to men in the academic world continues to exist when doctorate holders seek employment outside the academic world.

In our study, we focus on one specific domain of potential disadvantage, namely on wages. We look at the wages of doctorate holders in both the academic and non-academic labour market in Belgium. Three questions are addressed: 1) *What are the monetary returns of a PhD?*, 2) *Are these monetary returns equal for men and women?* and 3) *To what extent can differences in wages be accounted for by the employee's employment conditions?* Employment conditions are the mutual agreements between employee and employer about the organisation of employment in terms of contract, rewards, working hours, etc. For some employees, high wages are just one aspect of their beneficial employment conditions. Others, however, receive high wages as a compensation for unbeneficial employment conditions. Do men receive higher salaries because these compensate for less favorable employment conditions compared to those of female employees?

### DATA

Our analyses are based on the data of the Belgian Labour Force Survey (LFS) of 2009 and 2010. The LFS is a large socio-economic household survey providing quarterly results on labour participation of people aged 15 and over, covering all industries and occupations.

Our group of interest is composed of master graduates (N= 8403, 52.9% male) and doctorate holders (N= 521; 65.8% male) with a maximum age of 65, working in paid employment. Individuals holding more than one job were not considered in our study (5.7%).

In our analyses we take into account the respondents age, field of study, occupation, years of experience within the company, supervisory responsibilities, sector of employment, company size, and region. In addition we consider working hours, nonstandard hours (i.e. not the standard nine-to-five working time), unpaid overtime, permanent contract or not, and the availability of learning opportunities.

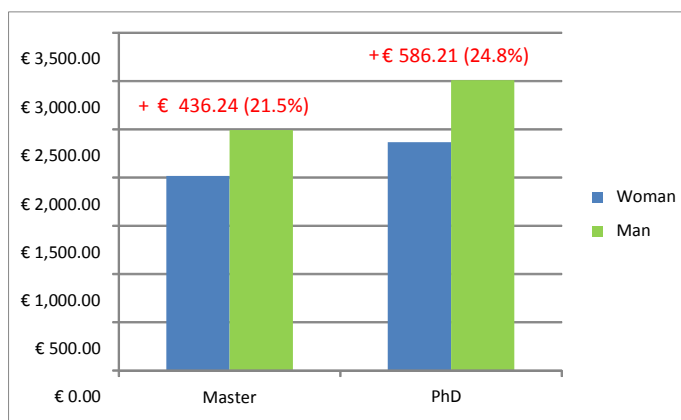
## FINDINGS

Our data show that doctorate holders in Belgium earn significantly more than master graduates. The mean difference is € 490/month.

The LFS also shows that mean difference between men and women's wages in the total population of masters and doctors is € 457/month. The wage difference between men and women with a master's degree is € 436/month, for PhD holders we note a wage difference of € 586/month.

Taking into account the wage differences between masters and PhDs, we see in Figure 1 that the gender wage gap is 3.3 percentage points larger for PhD holders than for masters.

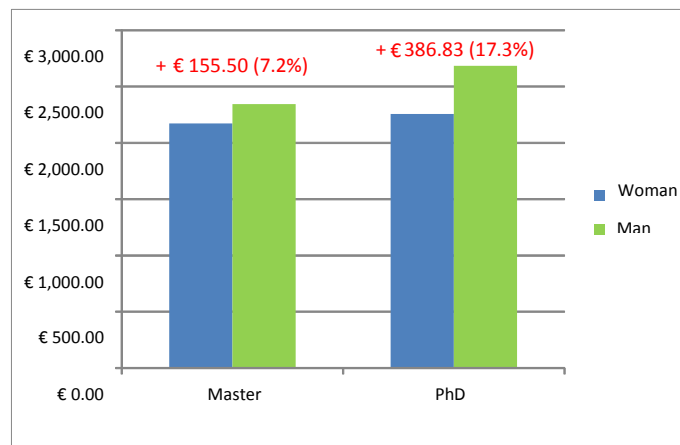
**Figure 1: Mean net monthly income for masters and doctors in the Belgian labour market: differentiation by gender and highest academic degree**



Can different employment conditions for men and women explain why female employees earn less than men in comparable jobs? Figure 2 shows the estimated adjusted mean net monthly income by gender and degree. When calculating the adjusted means for these groups, we took into account the values for the variables measuring the employment conditions. The result here show that the

gender gap is reduced substantially when differences in employment conditions between men and women are taken into account. However, the gender wage gap remains significant. Men with a master degree on average still earn € 156/month (or 7.2%) more than women in comparable positions. Among PhDs this difference is significantly larger, namely € 387/month (or 17.3%).

**Figure 2: Adjusted<sup>1</sup> mean net monthly income for masters and doctors in the Belgian labour market: differentiation by gender and highest academic degree**



<sup>1</sup> Adjusted for age, experience in the organisation, field of study, sector, occupation, supervisory responsibilities, company size, region, working hours, nonstandard hours, unpaid overtime, permanent contract, learning opportunities

## CONCLUSION

Until today, knowledge about gender differences in wages of doctorate holders in the Belgian labour market was lacking. The same holds for comparisons between employees holding a master's degree and those with a PhD title. Our analyses show that, the wages of doctorate holders are, on average and per month, € 490 higher than that of masters. We also find that, on average, female PhDs earn € 387/month less than male PhDs, *even when adjusting for differing employment conditions*.

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