# Are women and men equally happy at work? Evidence from PhD holders working at the university. The case of Uruguay 

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# Are women and men equally happy at work? Evidence from PhD holders at a public university in Uruguay 

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#### Abstract

The present study focuses on gender differences in job satisfaction as reported by highly educated professors who hold a doctorate at the public university in Uruguay. The data allows us to distinguish between fourteen areas of job satisfaction: wage, benefits, security, location, labor conditions, autonomy, promotion opportunities, intellectual challenge, responsibility, management and administrative support tasks, working environment, contribution to society, social status, infrastructure, as well as overall job satisfaction.

After controlling for selection by sector of activity, an issue not commonly addressed in previous studies, our findings stress that female PhD holders report a lower satisfaction with some aspects of their job. For five of the ten areas in which gender disparities were observed, dissatisfaction can be explained by differences in observable characteristics: wages, intellectual challenge, labor conditions, infrastructure, and responsibility, as well as overall job satisfaction. For five other satisfaction domains, i.e. autonomy, promotion opportunities, administrative tasks, security, and contribution to society, we are unable to explain the lower satisfaction levels among women, although plausible explanations point to unobservable characteristics. This is surprising given the nature of the sample, i.e. doctorate holders working at the public university.


Keywords: Gender gaps, Job satisfaction, Skilled workers, Uruguay
JEL classification: J16, J20, J28

[^0]
## Resumen

El presente estudio analiza las diferencias de género con la satisfacción del empleo de docentes con formación de doctorado en la Universidad de la República, Uruguay. Los datos utilizados nos permiten distinguir satisfacción con el empleo en catorce dimensiones: salario, beneficios, seguridad, ubicación, condiciones laborales, autonomía, oportunidades de ascenso, desafío intelectual, responsabilidad, gestión y soporte a tareas administrativas, ambiente laboral, contribución a la sociedad, estatus social, infraestructura, así como satisfacción global con el empleo.

Una vez controlado por el sesgo de selección derivado de la elección del sector de actividad, un tema que no se aborda comúnmente en estudios anteriores, nuestros hallazgos enfatizan que las mujeres con doctorado reportan una menor satisfacción con algunos aspectos de su trabajo. Para cinco de las diez áreas en las que se observaron disparidades de género, la insatisfacción puede explicarse por diferencias en las características observables: salarios, desafío intelectual, condiciones laborales, infraestructura, y responsabilidad, así como la satisfacción laboral general. Para otros cinco dominios de satisfacción, es decir, autonomía, oportunidades de promoción, tareas administrativas, seguridad y contribución a la sociedad, no podemos explicar los niveles más bajos de satisfacción entre las mujeres, aunque posibles explicaciones apuntan a características no observables.

Palabras clave: Brechas de género, satisfacción con el empleo, trabajadores altamente calificados, Uruguay

Clasificación JEL: J16, J20, J28

## 1. Introduction

Women face worse objective labor conditions than men, earn lower wages, have greater difficulties in finding a job, experience lower political representation (Altonji and Blank, 1999; Blau and Kahn, 2003), are underrepresented in higher-paying jobs and top positions (De Paola et al., 2017). However, women report higher job satisfaction than men at work (Clark, 1997; Sanz de Galdeano, 2002; Sousa-Poza and Sousa-Poza 2003, 2007). The factors influencing this paradox are still undefined and a subject of ongoing inquiry in the literature.

Studies engaging these questions often point to differences in job characteristics (women in lower positions or earning less than men), personal characteristics (i.e. women attaining lower education than men), shared unobserved job and personal characteristics (Mora and Ferrer-i-Carbonell, 2009; Bertrand, 2011), or selectivity bias in employment (Clark, 1997).

According to Clark (1997) and Sanz de Galdeano (2002) there is no evidence to suggest that women's self-selection in employment can explain job satisfaction disparities. In this sense, Clark (1997) points out that since satisfaction is partly determined by the discrepancy between what one wants and what one gets, the gender gap in favor of women could be attributed to women having lower expectations than men. Therefore, Clark (1997) concludes, if one focuses on homogeneous population groups, i.e. young and highly educated workers with similar expectations, the observed gender gap should disappear. In this line, subsequent studies have centered on analysis of specific segments of the labor force, i.e. highly-educated, those in professional occupations, and in male-dominated workplaces (see Mora and Ferrer-i-Carbonell, 2009; Memon and Jena, 2017).

Although there is compelling evidence showing that doctorate-holders contribute to development in their countries, serving as key actors for innovation and technological advancement (Kifle and Hailemarian, 2012; Bender and Heywood, 2006), and facilitating new knowledge flows into the productive system (Stephan et al. 2005 and Auriol, 2010; quoted in Di Paolo, 2016), few studies have focused on their reported job satisfaction. The studies that have been conducted focus on developed countries and offer mixed results. While some studies find no association between gender and reported overall job satisfaction (Escardibul and Afcha, 2016), gender disparities favoring males arise for different cohort ages (Sloane and Ward, 2001), areas of knowledge (Sabharwal and Corley, 2009), and certain job domains (Ward and Sloane, 2000); some show a positive correlation between being a women and high satisfaction with one's job (Oshgabemi, 2003; Bender and Heywood, 2006).

Building on this evidence, we examine whether gender disparities exist among PhD holders working at Uruguay's public university. We exploit a unique survey of doctorate holders in Uruguay in which individuals reported on their satisfaction in different job domains. We use instrumental variable analysis and conditional mixed process to account for individuals' self-selection into different sectors due to unobservable variables: i.e., risk aversion, job expectations, impatience, the degree of 'taste for
science,' 'taste for teaching,' or valuing pecuniary and non-pecuniary benefits differently.

The contributions of this study are threefold. First, we provide empirical evidence for a developing country, a context relatively less-studied in the literature. We specifically focus on PhD holders working at a public university, Universidad de la República (UdelaR) ${ }^{3-}$ the largest employer of academics in Uruguay. We contend that examining a case like Uruguay's, in which the number of PhD females are close to that of males, 4 can contribute to the literature on gender gaps among highly educated workers. Second, we overcome challenges faces in other similar studies by addressing endogeneity that could arise given individuals' selectivity. As a result, we account for causality. Finally, by distinguishing between 14 different job satisfaction aspects, we are able to present a rather broad picture of the sources of the job satisfaction gender gap among PhD holders working at the university.

Our findings confirm previous research and suggest that despite the objective labor conditions considered, gender gaps favoring males prevail regarding satisfaction with the job's autonomy, promotion opportunities, and administrative tasks (at $95 \%$ of significance), security and contribution to society, at $90 \%$ of confidence. Also, regardless of the age cohort considered, women are less satisfied than men concerning opportunities to ascend and autonomy. Finally, we find that women and men value different aspects of their jobs: women place greater value on labor conditions, while men value salary when contemplating overall job satisfaction.

Our results should be of interest to policymakers who value individuals' job satisfaction, who are concerned with improving equity in labor market conditions and participation, and who see human capital accumulation as a key factor for social and economic development.

The paper is organized as follows: the next section reviews the related literature; Section 3 describes the institutional background of the public university in Uruguay; Section 4 presents the data used in this analysis; Section 5 describes the methodological framework; our main findings are reported in Section 6. The last section concludes.

## 2. Related literature

This study is broadly related to the literature on subjective well-being (SWB), in which an individual's utility can be associated with her satisfaction with life, and different dimensions of well-being (i.e. health, job, leisure time, education, etc.) (Layard, 2005). Specifically, this literature highlights the importance of factors beyond objective qualities, in which personal perceptions mediate objective circumstances, affecting people's reported well-being (Dolan et al., 2008). Overall, reported satisfaction is the result of people's aspirations and outcomes (Clark and Oswald, 1996) and these depend on perceptions of opportunities, sense of fairness, comparison income relative to a

[^1]reference group, among others (Alessina et al., 2004; Dolan et al. 2008, Bjørnskov et al. 2010).

Raab (2019) defines individuals' reported job satisfaction as the outcome of efforts and rewards of the job. Work efforts refer to physical and mental burden and time pressure, education, working time, job intensity; while rewards include income, esteem of a job, career and opportunity of promotion, job security, a job being interesting, the opportunity to help others and being useful to the society, and the relationship with colleagues and management. Therefore, besides the monetary compensation of the job, psychological factors influence the balance of efforts and rewards; income is mediated by overall job satisfaction. In this framework, there is supporting evidence (though it is not conclusive) that individuals' reported job satisfaction -the result of aspirations and outcomes- can be predictive of behavior in the labor market, i.e. productivity, quits, staff turnover, quality of work and working status (Clark et al., 1998; Clark, 2001).

The few studies that exist on the job satisfaction gender gap for doctorate holders working at universities shows mixed results. For instance, Bender and Heywood (2006) find a gender gap on reported job satisfaction favoring males in academia for the United States, which is reversed once disparities in valuing earning and academic tenure among genders are taken into account. The authors explain this gap by stressing that because women are more likely to drop out of the labor market, to give up a career, or to accept lower level positions than men due to family demands or because of dual earner decision making, tenure as a job guarantee and tenure as an important determinant of earnings are valued less by women.

Sabharwal and Corley (2009) report gender disparities within disciplines in the United States, showing that women are more satisfied than men in science and health fields while no gender gaps arise in social sciences and engineering. In their study, job satisfaction is a multi-item variable combining various aspects of the job, such as opportunity for advancement, benefits, intellectual challenge, degree of independence, location, level of responsibility, salary, job security, and contribution to society. The authors suggest that women place a greater emphasis on intrinsic values such as feelings of accomplishment, recognition and autonomy, and males value more extrinsic factors such as salary and job security.

By contrast, Weber and Roggers (2018) do not find gender differences across disciplines for academics in the U.S., and provide multiple explanations for their result, such as women's low representation in STEM disciplines, women valuing relatively more intrinsic aspects of the job while men value extrinsic ones, or women having found success and location of good fit.

In turn, Escardibul and Afcha (2016) report no significant gender differences regarding job satisfaction for PhD academics in Spain, arguing that the absence of significant differences in the Spanish labor market explains their results. Oshagbemi (2003) reports a gender gap favoring women university professors in higher positions in the United Kingdom. As in Sabharwal and Corley (2009), overall job satisfaction is a multiitem variable, averaging satisfaction with job pay, promotion, head of unit's behavior and co-workers' behavior; which is regressed against age, rank, gender, length of
service in higher education and in the current university, and an interaction term between gender and rank. Oshagbemi (2003) stresses that the higher-reported satisfaction for women in comparison to men is due to their relatively lower representation in higher academic positions; this low representation, they suggest may mean they "see themselves as exceptionally gifted and hardworking in their disciplines." (p.1225).

Two complementary studies analyzing gender gaps among academics in Scottish universities are found in Ward and Sloane (2000) and Sloane and Ward (2001). The former considers overall job satisfaction in specific areas, such as promotion prospects, salary, relations with their head of department, relationship with their colleagues, job security, opportunity to use their own initiative, the ability and efficiency of their head of department, the actual work undertaken and the hours of work. Once controls are established for individuals' characteristics, comparison or absolute salary, attitudes or job characteristics, gender disparities for overall job satisfaction, salary and job security observed in the descriptive analysis disappear but the gender gap for opportunity prospects remains. Thus, differential promotion opportunities by men and women is tentatively suggested as an explanation for this gender gap.

When addressing the factors affecting women and men's reported job satisfaction separately, their findings suggest problems for women in male dominated areas, i.e. women in social science and arts report higher satisfaction of job security than women in engineering. They highlight that the relationship between satisfaction with salary and promotion is re-emphasized by the significantly negative influence of acknowledging promotion disadvantages of academic employment.

Their second study focuses on gender disparities for two age cohorts. They find that women under 36 years old report lower satisfaction than their male peers, while the reverse is observed for the older cohort. According to the authors, these results reflect different requirements of the job in time, i.e. less formal qualification for older cohorts while younger females work to the same standards as their male peers; although female academics are younger and exhibit different characteristics than their average male peers.

Overall, mixed findings in the literature might be observed due to different measures of job satisfaction -single and multi-item measures- as well as alternative dimensions of the job and control variables considered in the analysis. In turn, common explanations point to women and men valuing different aspects of the job, to the lower representation of women in higher rank positions and in certain disciplines, and to differential promotion opportunities for men and women.

## 3. Institutional background of the Uruguayan public university

Several characteristics of the Uruguayan public university (UdelaR) make it a notable subject of study. Innovation, research and development activities in Uruguay are mainly fostered by the public sector; within it, the public university sustains the bulk of teaching and research activities nationwide. 5 In recent years, UdelaR has also implemented important policies reinforcing its key role in the Uruguayan scientific system, leading the process of creation and dissemination of new knowledge, innovation and technology. First, since the early 2000s, it began to offer postgraduate degrees in various fields. Prior to this expansion, individuals aiming to attain postgraduate education had to migrate abroad. ${ }^{6}$ The reforms also initiated an expansive system of scholarships for advanced degrees in Uruguay and abroad, as well as policies for attracting Uruguayan academics living abroad; these changes reinforced human capital accumulation. 7 After 2007, UdelaR began a territorial decentralization by progressively locating new research and teaching centers in different regions of the country, breaking the historical concentration of university education supply in Montevideo. ${ }^{8}$

Within the UdelaR, professors are ranked as: Profesor Adjunto (grado 3), Profesor Agregado (grado 4), and Profesor Titular (grado 5), which roughly correspond to the ranks Assistant, Associate, and Full Professor. The categories Ayudante (Grado 1) and Asistente (Grado 2) are two levels of assistantships. Wage is determined for each rank, worked hours, and years in the institution. Higher ranks imply greater wage, autonomy, tasks and responsibilities of the job; including management and administrative tasks.

Professors with 30 or more worked hours, ranked 2 to 5, can access the Full Dedication Regime System (RDT: Régimen de Dedicación Total) implying a wage compensation of $60 \%$ of the base salary. ${ }^{9}$ A committee of academics in each field evaluates candidates' CVs in a non-competitive process; when funds are available at the UdelaR and the candidate is positively evaluated, then she integrates into the RDT.

Academics also receive additional salary upon joining the National System of Researchers (SNI: Sistema Nacional de Investigadores), a national research incentive program. A committee of experts categorizes researchers based on academic experience and scientific performance on four levels, the higher level attained, the greater payment, prestige and recognition. ${ }^{10}$ Any researcher who passes a certain threshold for a certain SNI level is admitted. Notably, Buckstein and Gandelman (2019) provide consistent evidence for a glass ceiling in SNI access, in which large gender gaps are observed at higher levels. According to the authors, discriminatory treatment of women

[^2]in certain fields (i.e. health-related sciences, natural sciences and humanities) explains the observed glass ceiling.

Each faculty, department or institute, autonomously defines its promotion and hiring practices. In general, a committee of academics evaluates candidates on the basis of their CV and on one or several oral presentations (teaching lecture, seminar presentation of their own research). This process involves direct interactions between committees' members and candidates; therefore, the unobserved abilities in teaching and in presenting research is likely to affect the final decision of the committee, with certain margin for discretion.

Finally, it is worth noting that female professors at the UdelaR are overrepresented in the lowest positions of the hierarchy and males are overrepresented in the highest ones. ${ }^{11}$ Similar patterns of gender distribution are observed for female professors in the RDT and the SNI. ${ }^{12}$ Within fields, women are highly represented in health sciences and humanities; while men dominate engineering and technological sciences. ${ }^{13}$

## 4. Data and descriptive statistics

We draw on a unique dataset obtained from the First Census of Doctorate-holders in Uruguay and Uruguayans living abroad (PCDUY: Primer Censo de Personas con título de Doctorado en Uruguay) carried out by the Migration Studies Group of the UdelaR during 2017. ${ }^{14}$ The PCDUY followed the 'Career of Doctorate Holders' (CHD) project, developed by the OECD and adapted to the Uruguayan reality; and it is the first attempt to quantify doctorate holders living in Uruguay and Uruguayans residing abroad.

An online survey was sent to all individuals captured through different sources: (i) the National Agency of Research and Innovation (ANII: Agencia Nacional de Investigación e Innovación) provided contacts of all individuals with a doctorate degree and with a public CV, ${ }^{15}$ (ii) the professor's census carried on 2015 by the UdelaR and provided by the University Planning Department (Dirección de Planeamiento Universitario), ${ }^{16}$ and (iii) through a snow ball methodology that asked respondents to supply contacts that could be considered as part of the PhD holders' universe. ${ }^{17}$ Overall, 2,415 individuals were invited to participate with a response rate of $86 \%$, a number larger than previous studies using online surveys. ${ }^{18}$ We restricted the sample to individuals who live in

[^3]Uruguay, completed the online survey, and were employed at the time of the survey; obtaining 1,346 observations.

Table 1 presents descriptive statistics regarding doctorate holders employed in Uruguay. Almost half of the sample are women, on average they are 50 years old, and they are mainly in natural and exact sciences (37.9\%). The major employer is the public university ( $70.5 \%$ ), with a low number in the private sector ( $3.1 \%$ ). We observe significant differences by gender regarding whether they obtained their PhD in Uruguay ( $40 \%$ of women versus $29 \%$ men), income (women earn $75 \%$ of males' wages) and multi- employment ( $25 \%$ for males and $22 \%$ for women).

We next distinguished between doctorate holders working at the public university and those employed in non-public university sectors: those at non-teaching research centers, private universities, in the private and public sector, and international organizations. Table 2 shows that doctorate holders vary in their observable characteristics across sectors (columns 1 and 2). For instance, workers at the UdelaR are older than those in the non-public university sector ( 50.3 versus 49.4 years old) and have on average less children ( 1.5 versus 1.7). Also, $38 \%$ of workers at the public university obtained their PhD in Uruguay, started their PhD sooner, and completed their PhD at younger ages. In addition, among workers at the UdelaR, relatively more work in natural and exact sciences ( $43 \%$ versus $28 \%$ in non-public university) and relatively fewer work in social sciences ( $17.9 \%$ versus $25.1 \%$ in non-public university) and agricultural sciences ( 8.9 versus $13.3 \%$ ). On average, PhDs at the UdelaR earn less, work more hours, and have more previous experience in research activities, than those employed at the non-public university.

Gender differences arise among UdelaR workers (columns 4 and 5). Women are more likely to have obtained their PhD in Uruguay while men were more likely to have studied in a foreign country. Women are underrepresented in engineering and technology, and men are overrepresented in medical and health sciences. Women earn $83 \%$ of men's hourly wage, work on average less hours, attain lower positions, and are underrepresented at the RDT and the SNI.

Finally, Table 3 reports overall job satisfaction and 14 domains for professors at the UdelaR. Individuals rate satisfaction with their job from 1 to 4 , in which 1 is very dissatisfied and 4 very satisfied. Women report lower satisfaction than men in overall job satisfaction and for 10 out of 14 dimensions: promotion opportunities, autonomy, responsibility, salary, security, labor conditions, contribution to society, administrative tasks, intellectual challenge, and infrastructure. Conversely, non-statistical and significant gender gaps are found for a job's perceived benefits, work environment, social status and location.

## 5. Empirical strategy

We study whether gender disparities on reported job satisfaction arise for doctorate holders employed at the public university in Uruguay, by exploring gender gaps on reported overall job satisfaction and for 14 dimensions.

Doctorate holders can self-select across sectors due to unobservables. Therefore, not accounting for selection could induce biased estimations. Reinforcing self-selection, Table 2 showed that individuals in public and non-public university sectors differ in observable characteristics.

In order to deal with endogeneity issues, we use instrumental variable analysis and a conditional mixed process (cmp) in which a system of seemingly unrelated equations is estimated. ${ }^{19}$ This strategy requires use of instrumental variables (IV), a variable or set of variables, directly influencing individuals' sector choice, but not directly affecting their reported job satisfaction.

Then, we estimate a probit model in equation (1) in which the individual ( $i$ ) decides whether to work at the UdelaR or not ( $p_{i}$ ); and conditional on this choice, equation (2) estimates the probability of individuals' reporting high job satisfaction as an ordered probit. Specifically, we jointly estimate the following equations:
$\left\{\begin{array}{l}p_{i}=X_{d}{ }^{\prime} \beta_{1}+E C_{i}^{\prime} \beta_{2}+P R_{i}{ }^{\prime} \beta_{3}+\text { Past }^{\prime} \beta_{4}+I V^{\prime} \beta_{5} \varepsilon_{1} \\ J S_{i}=X_{d}{ }^{\prime} \beta_{1}+E C_{i}^{\prime} \beta_{2}+J C_{i}^{\prime} \beta_{3}+\text { Past }^{\prime} \beta_{4} \varepsilon_{2}\end{array}\right.$
$J S_{i}$ is an ordered categorical variable with possible values of 1 to 4,1 denotes "very dissatisfied" and 4 "very satisfied".
$J S_{i}\left\{\begin{array}{rr}1 & \text { if } J S_{i} \leq J S_{1} \\ 2 & \text { if } J S_{i} \leq J S_{1} \leq J S_{2} \\ 3 & \text { if } J S_{2}<J S_{i} \leq J S_{3} \\ 4 & \text { if } J S_{4} \leq J S_{i}\end{array}\right.$
where $\boldsymbol{\varepsilon}=\left(\varepsilon_{1}, \varepsilon_{2}\right)^{\prime} \sim N(0, \Sigma)$
and $\Sigma=\left[\begin{array}{ll}1 & \rho \\ \rho & 1\end{array}\right]$
A $\rho>0$ implies that unobserved factors that make individuals more likely to choose the public university also increase individuals' reported job satisfaction. Conversely, $\rho<0$ signals that unobserved factors that make individuals more likely to be employed at the public university also make them less likely to report higher job satisfaction.

Common variables to both equations are: socio-demographic variables ( $X_{d}$ ), a set of educational choices variables (EC), and a set of past employment variables (Past) Additionally, equation (2) includes job characteristic variables that could affect the reported job satisfaction. Sub-section 5.1 describes in detail the variables used in the

[^4]analysis. Finally, equation (1) includes a set of instrumental variables (IV) in order to correctly identify the equation system, discussed in depth in sub-section 5.2.

### 5.1. Explanatory variables

We first consider a set of individuals' socio-demographic variables, including: gender, age cohort, marital status and number of children. Cohorts are: younger than 40 years old, between 40 to 49 , between 50 to 59 , and 60 and above. In turn, the set of educational variables include: field of study, i.e. agricultural sciences, medical and health sciences, natural sciences, social sciences, humanities, and engineering and technology; the starting period of the doctorate degree; and whether the individual obtained her PhD in Uruguay or in a foreign country. Specifically, studying abroad and returning to the country after PhD completion can influence job satisfaction in different ways; for instance, by affecting the opportunities of entry and promotion in the local labor market, or perceptions of the labor conditions in Uruguay as compared to a foreign country.

Current job characteristics included are weekly hours worked, the logarithm of the hourly wage, rank, length of time in the institution and in her current position, related tasks of the job, and if after completing the PhD the individual returned to her previous job before starting the PhD (in a higher position, in the same as before, not, or never worked before). Wage was imputed according to the respondents' reported rank, hours, years in the institution, and if the individual is part of the RDT or not. ${ }^{20}$ Also, related tasks are considered: mentoring, advising theses; the relationship between the PhD studies and current research; and the time devoted to research relative to the total tasks of the job -teaching, management and administrative tasks-, i.e. less than $25 \%, 25$ to $49 \%, 50$ to $75 \%, 75 \%$ and more. In turn, two dummy variables indicate whether individuals are part of the RDT or not, and if they are recipients of the SNI. Recall that being part of the RDT and/or the SNI, besides the monetary compensation, can also signal prestige or status.

We also consider whether the individual often collaborates with colleagues abroad or not. ${ }^{21}$ A priori, the effect of these collaborations on job satisfaction is unknown; it could increase an individual's satisfaction if these activities are valued and if they derive a utility of cooperation, but could also decrease satisfaction if, for example, she compares her labor conditions with those abroad.

Finally, we control for past employment conditions by considering whether an individual previously worked on research before starting her doctorate, and if she worked in research activities immediately after PhD completion.

[^5]
### 5.2. Exclusion restrictions

In order to correctly identify the model, we use a set of instrumental variables that includes sources for PhD funding, parental educational background, and the length of time between the completion of the undergraduate degree and PhD enrollment. These variables are intended to affect the sector choice but not directly influence reported satisfaction with the actual job.

We could argue that the alternative sources for PhD funding, i.e. a granting public program, private funding, own or family savings, can condition the sector chosen after PhD completion. For instance, some scholarships establish job reincorporation after PhD completion, others support research and/or teaching activities during the PhD , exposing individuals to certain activities and plausibly influencing future choices. In turn, those who financed their PhD with their own savings may be inclined to quickly find a job after graduating, thus exposing them to the market's labor demands. Those who worked during the PhD may acquire experience in certain sectors of activity that affect their future choices.

Parental educational background, may in turn, affect individuals' sector choice by influencing their preferences (Bender and Heywood, 2006). Last, like Di Paolo (2016), we consider the elapsed time between the completion of the undergraduate degree and PhD enrollment, arguing that each additional year between undergraduate graduation and PhD enrollment represents more exposure to the labor market, increasing the chances of finding a job outside academia (during and) after the doctorate program, and is exogenous to the individual at the time of the survey.

## 6. Results

We first present the main results of this study regarding gender gaps among overall job satisfaction as well as the 14 dimensions for which we have information. Second, we address whether gender disparities vary among cohort ages. Last, we explore the value placed on different areas of work by gender; and whether different factors influence reported job satisfaction.

### 6.1. Gender and job satisfaction

Before presenting our results, note that our instrumental variables proved to be statistically significant in explaining individuals' sector choice (Table A. 1 in the Appendix). Also, cross-correlation coefficients of the estimated system of seemingly unrelated equations with instrumental variables are statistically significant in 3 out of 14 dimensions of job satisfaction, showing that unobservables that increase individuals' chances of being employed at the public university also favor their likelihood of reporting high satisfaction with promotion opportunities, intellectual challenge and status. Therefore, not accounting for the potential endogeneity resulting from unobserved heterogeneity would lead to biased results.

Recall that the descriptive analysis showed gender gaps in overall job satisfaction and in 10 out of 14 dimensions favoring males; satisfaction with job's salary, security, labor conditions, autonomy, promotion opportunities, intellectual challenge, responsibility, infrastructure, administrative tasks, and contribution to society.

Table 4 (Column 1) presents average marginal effects (AME) for reported overall job satisfaction and its alternative domains for doctorate holders working at the UdelaR after controlling for sample selection. We observe a closure in the gap for overall job satisfaction, salary, intellectual challenge, labor conditions, infrastructure, and responsibility. However, the gender gap remains in five domains. Men are 11.7 percentage points ( pp ) more likely to be very satisfied with the autonomy of the job, 5.5pp more prone to be very satisfied with promotion opportunities, and 2.9pp more likely to report high satisfaction with administrative tasks. At $90 \%$ of significance, men are 5.7 pp and 5 pp more likely to being very satisfied with security and contribution to society, respectively, as compared to women.

Our results so far show that while some gender gaps in reported job satisfaction disappear once objective labor conditions are accounted for, as stressed by Souza- Poza and Sousa-Poza (2000) ${ }^{22}$ others remain; these findings are consistent with Ward and Sloane (2000). Two questions thus emerge. First, why do some gender gaps persist?; and second, what factors explain the closing gender gaps observed here?

The literature provides some plausible answers to the first question and points to unobservables as affecting women and men's aspirations and outcomes differently, i.e. personality traits such as optimism and capacity to deal with adversities, perceptions of opportunities, sense of fairness, risk aversion, taste for competition, overconfidence, role models, peers' comparisons, past and current circumstances (Bertrand, 2011; Bjørnskov et al., 2010; Dolan et al., 2008). The literature also suggests that these results can be explained by women and men facing different opportunities for promotion (Ward and Sloane, 2000; Sabharwal and Corley, 2009).

We next explore those observed characteristics favoring the gender gap closure in different domains once sample selection is controlled for. Findings in Table 5 show that the overall job satisfaction gender gap is reduced for younger cohorts and married individuals. In addition, individuals who report research activities prior to PhD enrollment, those who attain higher positions, and who are better represented in social sciences and in engineering and technology, are more prone to be very satisfied with their jobs. In turn, rank, wage and being at the RDT reduce the satisfaction with salary gap.

In addition, mentoring activities and higher attained ranks contribute to closing the gender gap for satisfaction with the job's intellectual challenge and responsibility. Having completed the PhD in Uruguay also increases satisfaction with intellectual challenge and being part of the SNI reduces the gender gap for responsibility. Those in social sciences and engineering report greater satisfaction with labor conditions. Significant at $95 \%$, those who never worked before obtaining their current job are more

[^6]likely to report higher satisfaction as compared to those who remained at the same position as before their PhD completion; individuals holding a job that is partially related to their doctorate thesis are less likely to be very satisfied. Last, satisfaction with infrastructure increases for workers in natural sciences and engineering, for those working in higher ranks, and for those who reported engaging in research activities prior to PhD enrollment. At $90 \%$ of confidence, academics who were members of the SNI as well as those who reported cooperating with colleagues abroad are less likely to report satisfaction with infrastructure.

Summing up, observable labor conditions such as attained rank, mentoring activities (advising theses, training young researchers), and increasing women's presence in areas with historically greater concentration of men, help to close certain gender gaps. Yet, these changes are not enough to close all the observed gender gaps.

### 6.2. Gender and cohort analysis

Following Ward and Sloane (2000), we could argue that different cohorts of doctorate holders are exposed to different labor conditions over time. Therefore, if professors are exposed to different formal requirements, tasks, labor conditions and institutional frameworks, they could differ in their expectations and perceptions of the job and its different domains.

We ran our estimations separately for academics younger than 50 years old and those who were 50 and older. Note first that, irrespective of the cohort analyzed, women report being less satisfied than men in opportunity to ascend and autonomy (Table 4, column 2). Second, gender disparities in other domains of job satisfaction varied among cohorts. Specifically, when controlling for observables for the youngest cohort, the observed gender gaps in Table A.2. in the Appendix disappear for satisfaction with salary and contribution to society but remained for security (Table 4, column 2). For the oldest cohort, gap closures are observed for satisfaction with the job's intellectual challenge, responsibility, and infrastructure; but the gap remains for salary, labor conditions, and management and administrative tasks (Table 4, column 3).

### 6.3. What makes women and men feel more satisfied with their jobs?

In line with previous studies (Bender and Heywood, 2006; Sabharwal and Corley, 2009), we find that women and men place different values on dimensions of their jobs; women place more value on the labor conditions of the job while men place more value on their wages. Common significant domains for both genders are wage, responsibilities, infrastructure, and benefits of the job. Women also value status, environment, and promotion opportunities at $99 \%$ of significance; for men autonomy is also significant.

Table 7 presents separate estimations by gender for job domains commonly valued by women and men, and for the overall job. Table 8 shows AME for those domains by gender. Below we summarize the main findings.

First, socio-demographic variables play different roles across genders. For both genders, the younger cohorts report higher overall job satisfaction. Younger males are more satisfied with salary, responsibility, benefits and autonomy; while younger women report higher satisfaction regarding promotion opportunities, responsibility and environment. Married women are more satisfied with their job, as well as with their salary, responsibility, and environment. Also, the number of children a woman has, reduces her likelihood of reporting being very satisfied with promotion opportunities.

When focusing on educational choices, we observe that the PhD enrollment period affects women's but not men's reported satisfaction. Specifically, women who began the PhD before 1989 are more satisfied with their overall job, promotion opportunities, and the environment. Having completed their PhD in Uruguay favors women's satisfaction with their salary. In turn, the field of knowledge affects each gender's satisfaction differently. Women in the natural sciences are more satisfied with their responsibility; those in engineering and technology report higher satisfaction with labor conditions, responsibility and environment. Men in humanities are more satisfied with salary. Women and men in social sciences and engineering and technology report higher satisfaction in infrastructure.

Note that women report greater satisfaction with benefits and salary, labor conditions and social status, when their working hours were greater. Conversely, males working more hours report lower overall job satisfaction, and lower satisfaction with infrastructure and benefits. For both genders, the higher the individual's attained position, the greater their satisfaction with responsibilities, salary, and their job overall. Also for women, working in a higher position favors their satisfaction with promotion opportunities and infrastructure.

Mentoring activities prove to be important for women but not for men. Specifically, engaging mentoring activities increases women's overall satisfaction and responsibility but reduces their satisfaction with benefits, promotion opportunities and infrastructure.

Years in their current position increases men's satisfaction with salary and infrastructure but reduces women's satisfaction with promotion opportunities. Also, years in the same institution reduces men's satisfaction with salary and benefits. In turn, women with a higher position in their current job relative to the position they held prior to holding a PhD, or those that never worked before their current position, are more satisfied with promotion opportunities.

Holding a job that is highly related to their doctoral thesis is positively associated with males' satisfaction with their salary and for women implies more satisfaction with social status. Wage, in turn, increases satisfaction with salary for men and benefits for women.

Having engaged in research activities immediately following PhD completion favors women's satisfaction with overall job, infrastructure and salary; being at the RDT increases women's satisfaction with salary. In addition, being at the SNI fosters satisfaction with responsibilities for both genders, but it is more significant for males than for females. Finally, women who collaborated with a network of colleagues abroad report being less satisfied regarding the job's environment.

## 7. Discussion and conclusions

This study explored whether gender disparities regarding job satisfaction and its different domains exist for doctorate-holders working at the public university in Uruguay. To undertake this study, we used conditional mixed process methods and instrumental variables in which endogeneity due to unobservables were taken into account.

Our findings show that when women increase their participation in fields dominated by men, i.e. social sciences, natural sciences and engineering and technology, attain higher ranks, engage in mentoring activities, are part of the SNI and the RDT, no gender gaps are observed regarding overall job satisfaction, salary, intellectual challenge, labor conditions, infrastructure, and responsibility of the job. However, gender gaps favoring men persist for autonomy, promotion opportunities, administrative tasks, security, and contribution to society.

Although personality traits cannot be discarded as a plausible explanation for our findings, we observe other common factors. Specifically, not climbing the occupational ladder, not being part of the SNI, and having children, reduce women's satisfaction with autonomy, perceptions of opportunities to ascend, management and administrative tasks of the job, contribution to society, and job security.

Overall, our findings are in line with previous studies that suggest that women could be facing different promotion opportunities than men (Ward and Sloane, 2000; Sloane and Ward, 2001; Sabharwal and Corley, 2009), and gender discrimination as noticed in Buckstein and Gandelman (2019). Although more research is needed regarding this issue, promotion or hiring at the UdelaR implies direct interactions between committees' members and candidates in which a certain margin for discretion exists when evaluating unobserved abilities in teaching and in presenting research.

As access to higher positions is associated with more research autonomy, women attaining higher ranks could also increase their sense of contribution to society, as well as better balance job efforts and rewards related with more management and administrative tasks. Given this, policy makers who aim to reduce gender gaps among university professors and along different domains of job satisfaction may find that reducing subtle impediments to career advancement for female professors will allow them to better balance family decisions and their research career; these findings are particularly relevant for fields where women are underrepresented.

## 8. References

Altonji, J., \& Blank, R. (1999). Race and gender in the labor market, in O. Ashenfelter and D. Card (eds) Handbook of Labor Economics, North-Holland, Amsterdam.

ANII (2017). Indicadores de Ciencia, Tecnología e Innovación en Uruguay. Montevideo: Agencia Nacional de Investigación e Innovación

Bender, K.A., \& Heywood, J.S. (2006). JOB SATISFACTION OF THE HIGHLY EDUCATED: THE ROLE OF GENDER, ACADEMIC TENURE, AND EARNINGS, Scottish Journal of Political Economy, 53: 253-279. doi:10.1111/j.1467-9485.2006.00379.x

Bertrand, M. (2011). New Perspectives on Gender, Handbook of Labor Economics, Vol. 4b, Elsevier, B.V.

Bjørnskov, C., Dreher, A., Fischer, J. \& Schnellenbach, J. (2010). On the Relation Between Income Inequality and Happiness: Do Fairness Perceptions Matter?, University of Heidelberg, DP No. 495.

Blau, F., \& Kahn, M. (2003). Understanding international differences in the gender pay gap, Journal of Labor Economics, 21: 106-44.

Bukstein, D., \& Gandelman, N. (2019). Glass ceilings in research: Evidence from a national program in Uruguay, Research Policy, 48: 1550-1563.

Clark, A. E. (1997). Job satisfaction and gender: why are women so happy at work? Labour Economics, 4: 341-72.

Clark, A.E. (2001). What Really Matters in a Job? Hedonic measurement using quit data, Labour Economics, 8: 223-242.

Clark, A. \& Oswald, A. (1998). Comparison-concave utility and following behaviour in social and economic settings, Journal of Public Economics, 70(1):133-155.

Clark, A.E., Georgellis, Y., \& Sanfey, P. (1998). Job satisfaction, wage changes and quits: evidence from Germany. Research in Labor Economics, 17: 95-121.

De Paola, M., Ponzo, M., \& Scoppa, V. (2017). Gender differences in the propensity to apply for promotion: evidence from the Italian Scientific Qualification", Oxford Economic Papers, 1-24.

DICYT - MEC (2012). Informe a la Sociedad. Ciencia, Tecnología e Innovación en Uruguay en los últimos años.

Di Paolo, A. (2016). (Endogenous) occupational choices and job satisfaction among recent Spanish PhD recipients, International Journal of Manpower, 37(3):
511- 535.
Dolan, P., Peasgood, T. \& White, M. (2008). "Do We Really Know What Makes Us Happy? A Review of the Economic Literature on the Factors Associated with Subjective Well-being", Journal of Economic Psychology, 29:94-122.

Escardibul, J., \& Afcha, S. (2016). Determinants of the job satisfaction of PhD holders: an analysis by gender, employment sector, and type of satisfaction in Spain, High Educ. doi: 10.1007/s10734-016-0081-1

Kifle, T., \& Hailemarian, I. (2012). Gender differences in Domains of Job Satisfaction: Evidence from Doctoral Graduates from Australian Universities, Economic Analysis and Policy, 42(3): 319-338.

Layard, R. (2005). Happiness: Lessons from a new science. New York: Penguin.
Méndez, L. (2020). University supply expansion and inequality of opportunity of access: the case of Uruguay, Education Economics, 28(2): 115-135.

Méndez, L., Pellegrino, A., Robaina, \& Vigorito, A. (2019). Primer censo de personas uruguayas e inmigrantes con título de doctorado. Informe de resultados, Serie Documentos de Trabajo, IECON DT 16/19.

Memon, N., \& Jena, L. (2017). Gender Inequality, Job Satisfaction and Job Motivation: Evidence from Indian Female Employees, Management and Labour Studies, 42(3): 253-274.

Mora, T., \& Ferrer-i-Carbonell, A. (2009). The job satisfaction gender gap among young recent university graduates: Evidence from Catalonia, The Journal of Socio- Economics, 38 (4).

Oshagbemi, T. (2003). Personal correlates of job satisfaction: empirical evidence from UK universities, International Journal of Social Economics, 30(12): 1210-1232.

Raab, R. (2019). Workplace Perception and Job Satisfaction of Older Workers, Journal of Happiness Studies. doi:10.1007/s10902-019-00109-7.

Roodman, D. (2010). Estimating fully observed recursive mixed-process models with CMP, Stata Journal, 11(2): 159-206.

Sabharwal, M., \& Corley, E. A. (2009). Faculty job satisfaction across gender and discipline, The Social Science Journal, 46: 539-556.
Sanz de Galdeano, A. (2002). Gender differences in job satisfaction and labour market participation: UK evidence from propensity score estimates. Mimeo: European University Institute, Florence.

Sloane, P. J., \& Ward, M. E. (2001). Cohort effects and job satisfaction of academics. Applied Economics Letters, 8: 787-91.

Sousa-Poza, A., \& Sousa-Poza, A. (2003). Gender differences in job satisfaction in Great Britain, 1991-2000: permanent or transitory? Applied Economics Letters, $\quad 10$ (11): 691-694.

Sousa-Poza, A., \& Sousa-Poza, A. (2007). The effect of job satisfaction on labor turnover by gender: An analysis for Switzerland. The Journal of SocioEconomics, 36: 895-913.

Ward, M.E., \& Sloane, P.J. (2000). Non-pecuniary advantages vs Pecuniary disadvantages; Job Satisfaction Among Male and Female Academics in Scottish Universities, Scottish Journal of Political Economy, 47(3): 273-303.

Webber, K., \& Rogers, S. (2018). Gender Differences in Faculty Member Job Satisfaction: Equity Forestalled?, Research in Higher Education. doi: 10.1007/s11162-018-9494-2

TABLES

Table 1. Descriptive statistics, by gender

|  | Total | Women | Men |
| :--- | :--- | :--- | :--- |
| Total | 100.0 | 49.9 | 50.1 |
| Age | 50.0 | 49.5 | 50.6 |
| PhD in Uruguay | 35.1 | 40.5 | 29.4 |
| PhD start | 34.0 | 34.2 | 33.9 |
| PhD end | 38.9 | 39.0 | 38.8 |
| Wage per hour | 2035.2 | 1741.1 | 2338.1 |
| Multi-employment | 22.6 | 18.9 | 25.8 |
| Field |  |  |  |
| Agricultural science | 10.4 | 9.3 | 11.5 |
| Medical \& health | 12.5 | 16.0 | 9.0 |
| Natural sciences | 37.9 | 39.5 | 36.2 |
| Social sciences | 20.2 | 18.2 | 22.2 |
| Humanities | 8.4 | 8.9 | 8.0 |
| Engineering | 10.6 | 8.1 | 13.0 |
| Sector |  |  |  |
| Public university | 70.5 | 71.1 | 69.7 |
| Private universities | 6.1 | 5.1 | 7.3 |
| Research center | 11.1 | 12.8 | 9.6 |
| Other research center | 1.2 | 1.3 | 1.2 |
| Commerce \& industry | 3.1 | 2.2 | 4.0 |
| Government | 5.8 | 6.2 | 5.4 |
| International org. | 2.0 | 1.4 | 2.6 |
| Obs. | 1,346 | 667 | 671 |

Table 2. Descriptive statistics

| Panel A. All sample | Total sample |  |  | UdelaR |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | UdelaR | NonUdelaR | T- test UdelaR vs No UdelaR | Women | Men | T- test Women vs men |
| Demographic Variables | (1) | (2) | (3) | (4) | (5) | (6) |
| Age | 50.3 | 49.4 | 0.089 | 50.1 | 50.7 | 0.313 |
| Gender | 50.4 | 48.7 | 0.572 | - | - |  |
| Married | 81.1 | 84.7 | 0.128 | 72.9 | 89.6 | 0.000 |
| Children | 1.5 | 1.7 | 0.004 | 1.3 | 1.6 |  |
| Educational Choices |  |  |  |  |  |  |
| PhD in Uruguay | 37.9 | 29.1 | 0.002 | 42.0 | 33.4 | 0.008 |
| PhD start age | 33.8 | 34.5 | 0.129 | 34.1 | 33.6 | 0.397 |
| PhD end age | 38.6 | 39.5 | 0.050 | 38.9 | 38.3 | 0.258 |
| Yrs grade- PhD | 6.8 | 8.0 | 0.003 | 7.0 | 6.7 | 0.427 |
| Public funds for PhD | 33.1 | 33.5 | 0.891 | 34.6 | 31.4 | 0.306 |
| Private found for PhD | 52.2 | 54.6 | 0.409 | 49.2 | 54.9 | 0.091 |
| Field |  |  |  |  |  |  |
| Agricultural science | 8.9 | 13.3 | 0.013 | 8.4 | 9.4 | 0.570 |
| Medical \& health | 11.9 | 13.3 | 0.435 | 14.0 | 9.9 | 0.062 |
| Natural sciences | 42.8 | 28.1 | 0.000 | 44.2 | 41.2 | 0.370 |
| Social sciences | 17.9 | 25.1 | 0.002 | 17.4 | 18.7 | 0.622 |
| Humanities | 7.7 | 10.1 | 0.142 | 7.7 | 7.6 | 0.968 |
| Engineering | 10.8 | 10.1 | 0.725 | 8.4 | 13.1 | 0.022 |
| Job Characteristics |  |  |  |  |  |  |
| Research previous to PhD | 92.6 | 85.0 | 0.000 | 92.4 | 92.7 | 0.865 |
| Wage per hour | 1897.9 | 2404.1 | 0.035 | 1730.9 | 2074.9 | 0.040 |
| Worked hours | 39.9 | 36.9 | 0.000 | 39.3 | 40.7 | 0.021 |
| RDT |  |  |  | 0.76 | 0.76 | 0.966 |
| SNI |  |  |  | 0.53 | 0.64 | 0.001 |
| Rank 1 |  |  |  | 0.13 | 0.06 | 0.002 |
| Rank 2 |  |  |  | 0.03 | 0.01 | 0.080 |
| Rank 3 |  |  |  | 0.47 | 0.35 | 0.001 |
| Rank 4 |  |  |  | 0.21 | 0.29 | 0.007 |
| Rank 5 |  |  |  | 0.16 | 0.28 | 0.000 |
| Obs | 906 | 436 |  | 453 | 446 |  |

Table 3. Reported job satisfaction

| Satisfied with... | Total | Women | Men | t- Test |
| :--- | :---: | :---: | :---: | :---: |
| Overall job | 2.99 | 2.95 | 3.03 | 0.041 |
| Salary | 2.77 | 2.70 | 2.84 | 0.005 |
| Benefits | 2.93 | 2.91 | 2.94 | 0.468 |
| Security | 3.16 | 3.10 | 3.23 | 0.008 |
| Location | 3.20 | 3.19 | 3.21 | 0.626 |
| Labor conditions | 2.79 | 2.73 | 2.85 | 0.026 |
| Autonomy | 3.32 | 3.20 | 3.44 | 0.000 |
| Promotion | 2.41 | 2.22 | 2.61 | 0.000 |
| opportunities | 3.39 | 3.35 | 3.44 | 0.065 |
| Intellectual challenge | 3.22 | 3.15 | 3.29 | 0.002 |
| Responsibility | 2.43 | 2.38 | 2.49 | 0.051 |
| Administrative tasks | 3.01 | 2.99 | 3.03 | 0.387 |
| Working environment | 3.17 | 3.13 | 3.22 | 0.043 |
| Contribution to society | 3.02 | 3.00 | 3.02 | 0.661 |
| Social status | 2.40 | 2.35 | 2.44 | 0.095 |
| Infrastructure | 906 | 453 | 446 | - |
| Obs. |  |  |  |  |

Table 4. AME. Men coefficient

| Satisfaction with... | All sample <br> $(1)$ |  | Cohort <br> $(2)$ |  | Cohort <br> $(3)$ |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall JS | 0.014 | $(0.022)$ | -0.008 | $(0.028)$ | 0.031 | $(0.034)$ |
| Wage | 0.017 | $(0.016)$ | -0.000 | $(0.022)$ | $0.050^{* *}$ | $(0.024)$ |
| Benefits | -0.009 | $(0.022)$ | -0.016 | $(0.034)$ | 0.001 | $(0.029)$ |
| Security | $0.057^{*}$ | $(0.032)$ | $0.082^{*}$ | $(0.043)$ | 0.046 | $(0.049)$ |
| Location | -0.017 | $(0.033)$ | 0.001 | $(0.045)$ | -0.034 | $(0.048)$ |
| Labor conditions | 0.036 | $(0.022)$ | -0.008 | $(0.030)$ | $0.075^{* *}$ | $(0.034)$ |
| Autonomy | $0.17^{* * *}$ | $(0.033)$ | $0.101^{* *}$ | $(0.045)$ | $0.116^{* *}$ | $(0.048)$ |
| Promotion opport. | $0.00^{* * *}$ | $(0.014)$ | $0.038^{* *}$ | $(0.019)$ | $0.073^{* * *}$ | $(0.023)$ |
| Intellectual challenge | 0.009 | $(0.035)$ | -0.035 | $(0.045)$ | 0.060 | $(0.052)$ |
| Responsibility | 0.038 | $(0.029)$ | 0.003 | $(0.040)$ | 0.067 | $(0.043)$ |
| Administrative tasks | $0.029^{* *}$ | $(0.014)$ | 0.011 | $(0.016)$ | $0.053^{* *}$ | $(0.025)$ |
| Environment | 0.020 | $(0.027)$ | -0.037 | $(0.037)$ | 0.055 | $(0.040)$ |
| Contribution to society | $0.050^{*}$ | $(0.030)$ | 0.045 | $(0.039)$ | 0.035 | $(0.047)$ |
| Social status | -0.010 | $(0.027)$ | -0.056 | $(0.034)$ | 0.038 | $(0.043)$ |
| Infrastructure | 0.013 | $(0.013)$ | -0.001 | $(0.018)$ | 0.032 | $(0.021)$ |
| Obs. | 683 |  | 363 |  | 320 |  |

Robust standard errors in parenthesis
${ }^{*} p<0.1,{ }^{* *} p<0.05,{ }^{* * *} p<0.001$
Note: all controls are included.

Table 5. AME Gender gap closure

|  | Wage |  | Labor conditions |  | Intell. challenge |  | Responsibility |  | Infrastructure |  | Overall JS |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gender (men) | 0.017 | (0.016) | 0.036 | (0.022) | 0.009 | (0.035) | 0.038 | (0.029) | 0.013 | (0.013) | 0.014 | (0.022) |
| Age ( < 40 yrs.) |  |  |  |  |  |  |  |  |  |  |  |  |
| 40-49 | -0.056** | (0.024) | -0.005 | (0.035) | 0.022 | (0.055) | -0.092** | (0.044) | -0.029 | (0.021) | -0.064** | (0.031) |
| 50-59 | -0.059* | (0.031) | -0.041 | (0.045) | -0.041 | (0.068) | $-0.177^{* * *}$ | (0.056) | -0.027 | (0.027) | $-0.140^{* * *}$ | (0.043) |
| 60 and more | -0.038 | (0.039) | 0.051 | (0.056) | 0.003 | (0.087) | -0.074 | (0.071) | -0.012 | (0.033) | -0.110** | (0.054) |
| No. of children | -0.011 | (0.008) | 0.012 | (0.010) | 0.025 | (0.016) | -0.008 | (0.014) | 0.000 | (0.006) | -0.000 | (0.010) |
| Married | 0.052** | (0.024) | 0.028 | (0.031) | 0.052 | (0.045) | $0.079^{* *}$ | (0.038) | 0.017 | (0.017) | 0.061** | (0.030) |
| PhD in Uruguay | 0.015 | (0.020) | 0.032 | (0.026) | 0.101** | (0.040) | 0.015 | (0.035) | -0.000 | (0.016) | -0.004 | (0.026) |
| PhD enrollment (until 1989) |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990-2000 | 0.047 | (0.033) | -0.015 | (0.048) | -0.003 | (0.073) | -0.006 | (0.066) | 0.030 | (0.026) | -0.038 | (0.045) |
| 2001-2010 | 0.066* | (0.039) | -0.012 | (0.056) | 0.016 | (0.082) | -0.014 | (0.073) | 0.042 | (0.031) | -0.032 | (0.051) |
| 2011-2017 | 0.070 | (0.052) | -0.004 | (0.071) | 0.029 | (0.099) | -0.027 | (0.086) | 0.039 | (0.037) | 0.010 | (0.063) |
| Field (Agricultural science) |  |  |  |  |  |  |  |  |  |  |  |  |
| Medical \& Health | -0.048 | (0.035) | 0.011 | (0.049) | -0.040 | (0.078) | 0.075 | (0.060) | -0.019 | (0.029) | -0.009 | (0.044) |
| Natural sciences | -0.007 | (0.032) | 0.038 | (0.043) | 0.001 | (0.065) | 0.073 | (0.052) | 0.024 | (0.025) | 0.021 | (0.035) |
| Social sciences | 0.023 | (0.033) | $0.146^{* * *}$ | (0.045) | -0.019 | (0.069) | 0.031 | (0.056) | $0.089^{* * *}$ | (0.027) | 0.074** | (0.037) |
| Humanities | 0.031 | (0.040) | 0.079 | (0.059) | -0.066 | (0.085) | -0.026 | (0.066) | 0.020 | (0.033) | 0.058 | (0.049) |
| Engineering | -0.022 | (0.037) | 0.128*** | (0.048) | 0.069 | (0.076) | 0.070 | (0.064) | 0.069** | (0.028) | 0.080* | (0.044) |
| Weekly hours (20 or less) |  |  |  |  |  |  |  |  |  |  |  |  |
| 21-30 | 0.040 | (0.063) | 0.080 | (0.098) | -0.033 | (0.141) | 0.036 | (0.119) | -0.021 | (0.050) | -0.114 | (0.105) |
| 31-39 | 0.073 | (0.073) | 0.019 | (0.113) | -0.070 | (0.159) | -0.086 | (0.128) | -0.050 | (0.056) | -0.128 | (0.118) |
| 40+ | 0.067 | (0.060) | 0.104 | (0.094) | -0.014 | (0.134) | 0.043 | (0.113) | -0.035 | (0.047) | -0.050 | (0.100) |

Table 5 (cont.)

|  | Wage |  | Labor conditions |  | Intell. challenge |  | Responsibility | Infrastructure |  | Overall JS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Job research related (Less 25\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| 25-49\% | -0.001 | (0.034) | 0.008 | (0.056) | 0.034 | (0.073) | -0.007 | (0.069) | 0.008 | (0.032) | 0.051 | (0.048) |
| 50-74\% | -0.019 | (0.034) | 0.009 | (0.055) | 0.025 | (0.072) | -0.018 | (0.067) | -0.005 | (0.031) | 0.029 | (0.047) |
| 75-100\% | -0.035 | (0.036) | 0.026 | (0.058) | 0.119 | (0.079) | 0.032 | (0.071) | 0.011 | (0.032) | 0.053 | (0.050) |
| Training activities | 0.008 | (0.038) | 0.009 | (0.054) | 0.246*** | (0.067) | 0.186*** | (0.063) | -0.002 | (0.034) | 0.070 | (0.050) |
| Advise Thesis | -0.002 | (0.026) | -0.009 | (0.041) | 0.056 | (0.054) | -0.024 | (0.053) | 0.021 | (0.024) | 0.056 | (0.035) |
| Trains assistants | 0.034 | (0.029) | 0.026 | (0.039) | 0.038 | (0.059) | 0.005 | (0.048) | -0.026 | (0.024) | 0.006 | (0.039) |
| Job thesis relationship |  |  |  |  |  |  |  |  |  |  |  |  |
| High | 0.071 | (0.056) | -0.143 | (0.098) | 0.217* | (0.130) | -0.010 | (0.106) | -0.022 | (0.038) | 0.011 | (0.070) |
| Partial | 0.041 | (0.058) | -0.199** | (0.101) | 0.156 | (0.134) | -0.136 | (o.111) | -0.035 | (0.040) | -0.032 | (0.073) |
| Wage hour (log). | 0.095** | (0.042) | -0.026 | (0.063) | 0.027 | (0.094) | 0.003 | (0.081) | -0.054 | (0.037) | 0.027 | (0.055) |
| Reinstatement (Same position) |  |  |  |  |  |  |  |  |  |  |  |  |
| Higher position | -0.004 | (0.020) | 0.025 | (0.027) | 0.025 | (0.043) | 0.059 | (0.036) | -0.002 | (0.016) | 0.031 | (0.027) |
| No | 0.024 | (0.024) | 0.038 | (0.033) | -0.007 | (0.053) | -0.029 | (0.045) | 0.006 | (0.020) | . 001 | (0.032) |
| Never worked | 0.132 | (0.093) | 0.297** | (0.135) | -0.143 | (0.185) | -0.011 | (0.192) | 0.096 | (0.111) | 0.121 | (0.123) |
| Yrs position | 0.003* | (0.002) | -0.002 | (0.002) | -0.001 | (0.003) | -0.000 | (0.003) | 0.001 | (0.001) | -0.003 | (0.002) |
| Yrs institution | -0.002** | (0.001) | -0.001 | (0.002) | -0.003 | (0.003) | 0.001 | (0.002) | -0.000 | (0.001) | 0.002 | (0.002) |
| Rank (5 Professor) |  |  |  |  |  |  |  |  |  |  |  |  |
| Rank 4 | -0.040* | (0.024) | -0.027 | (0.034) | -0.121** | (0.054) | -0.148*** | (0.045) | -0.048** | (0.020) | -0.077** | (0.033) |
| Rank 3 | -0.085*** | (0.030) | -0.045 | (0.042) | -0.177*** | (0.065) | $-0.236^{* * *}$ | (0.057) | -0.056** | (0.025) | -0.093** | (0.041) |
| Rank 2 | -0.145** | (0.056) | -0.061 | (0.082) | -0.121 | (0.140) | $-0.475^{* * *}$ | (0.125) | -0.031 | (0.055) | -0.117 | (0.080) |
| Rank 1 | -0.133*** | (0.047) | 0.000 | (0.069) | -0.155 | (0.107) | $-0.383^{* * *}$ | (0.088) | -0.083** | (0.042) | -0.078 | (0.064) |
| RDT | 0.132*** | (0.036) | -0.011 | (0.056) | -0.018 | (0.075) | -0.052 | (0.066) | 0.025 | (0.031) | -0.001 | (0.047) |
| SNI | 0.004 | (0.017) | 0.004 | (0.023) | -0.007 | (0.035) | $0.063 * *$ | (0.029) | -0.026* | (0.014) | 0.005 | (0.021) |

Table 5 (cont.)

|  | Wage |  | Labor conditions |  | Intell. challenge |  | Responsibility |  | Infrastructure | Overall JS |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cooperation | -0.023 | $(0.025)$ | -0.020 | $(0.030)$ | -0.036 | $(0.045)$ | -0.053 | $(0.037)$ | $-0.028^{*}$ | $(0.017)$ | -0.019 |
| Research previous | -0.014 | $(0.028)$ | -0.022 | $(0.038)$ | -0.005 | $(0.060)$ | 0.023 | $(0.050)$ | -0.000 | $(0.023)$ | 0.012 |
| Research post | $0.106^{*}$ | $(0.056)$ | $0.125^{* *}$ | $(0.062)$ | 0.001 | $(0.114)$ | 0.004 | $(0.095)$ | $0.140^{* * *}$ | $(0.051)$ | $0.162^{* * *}$ |
| (0.062) |  |  |  |  |  |  |  |  |  |  |  |
| Obs. | 683 |  | 683 |  | 683 |  | 683 |  | 682 |  | 683 |
| Robust standard errors in parenthesis |  |  |  |  |  |  |  |  |  |  |  |

Robust standard errors in parenthesis

* $p<0.1,{ }^{* *} p<0.05,{ }^{* * *} p<0.001$

Table 6. AME Reported job satisfaction, by gender

|  | Total |  | Females |  | Males |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Wage | $0.056^{* * *}$ | $(0.010)$ | $0.046^{* * *}$ | $(0.010)$ | $0.067^{* * *}$ | $(0.017)$ |
| Benefits | $0.047^{* * *}$ | $(0.011)$ | $0.045^{* * *}$ | $(0.012)$ | $0.041^{* *}$ | $(0.018)$ |
| Security | 0.009 | $(0.010)$ | $0.020^{*}$ | $(0.011)$ | -0.006 | $(0.017)$ |
| Location | $0.017^{*}$ | $(0.010)$ | 0.006 | $(0.011)$ | 0.023 | $(0.015)$ |
| Labor conditions | $0.051^{* * *}$ | $(0.011)$ | $0.061^{* * *}$ | $(0.011)$ | $0.034^{* *}$ | $(0.017)$ |
| Autonomy | $0.024^{* *}$ | $(0.010)$ | 0.009 | $(0.013)$ | $0.051^{* * *}$ | $(0.017)$ |
| Promotion opportunities | $0.019^{* *}$ | $(0.007)$ | $0.021^{* * *}$ | $(0.008)$ | 0.016 | $(0.012)$ |
| Intellectual challenges | 0.019 | $(0.013)$ | 0.008 | $(0.015)$ | 0.032 | $(0.021)$ |
| Responsibility | $0.054^{* * *}$ | $(0.014)$ | $0.056^{* * *}$ | $(0.017)$ | $0.049^{* *}$ | $(0.021)$ |
| Administrative tasks | 0.009 | $(0.008)$ | -0.004 | $(0.009)$ | $0.030^{* *}$ | $(0.013)$ |
| Environment | $0.031^{* * *}$ | $(0.010)$ | $0.032^{* * *}$ | $(0.010)$ | 0.028 | $(0.017)$ |
| Contribution | 0.020 | $(0.013)$ | 0.019 | $(0.013)$ | 0.033 | $(0.024)$ |
| Status | $0.042^{* * *}$ | $(0.012)$ | $0.044^{* * *}$ | $(0.013)$ | $0.034^{*}$ | $(0.020)$ |
| Infrastructure | $0.038^{* * *}$ | $(0.009)$ | $0.029^{* * *}$ | $(0.011)$ | $0.047^{* * *}$ | $(0.015)$ |
| Obs. | 722 |  | 368 |  | 352 |  |

Robust standard errors in parenthesis
${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.001$

Table 7. AME Common dimensions valued by gender

|  | Overall JS |  | Salary |  | Responsibility |  | Benefits |  | Infrastructure |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Women | Men | Women | Men | Women | Men | Women | Men | Women | Men |
| Age (<40 yrs) |  |  |  |  |  |  |  |  |  |  |
| 40-49 | -0.017 | -0.110** | -0.034 | -0.074** | -0.019 | $-0.163^{* *}$ | -0.042 | -0.093** | -0.012 | -0.050 |
| 50-59 | $-0.141^{* * *}$ | -0.120* | -0.066 | -0.037 | -0.181** | -0.143* | -0.105 | -0.110* | -0.032 | -0.015 |
| 60 and above | -0.090 | -0.118 | -0.045 | -0.029 | -0.037 | -0.066 | -0.082 | -0.095 | -0.018 | -0.002 |
| No. of children | 0.001 | 0.001 | -0.006 | -0.015 | -0.010 | -0.001 | -0.004 | 0.004 | -0.006 | 0.012 |
| Married | 0.052* | 0.050 | 0.050* | 0.030 | 0.052 | 0.125* | 0.043 | 0.009 | 0.012 | 0.019 |
| PhD in Uruguay | -0.034 | 0.036 | -0.015 | 0.054* | -0.028 | 0.073 | -0.028 | 0.023 | -0.000 | 0.013 |
| PhD enrollment (until 1989) |  |  |  |  |  |  |  |  |  |  |
| 1990-2000 | $-0.125^{* *}$ | 0.056 | 0.014 | 0.053 | -0.109 | 0.071 | -0.030 | 0.082 | 0.047 | 0.027 |
| 2001-2010 | -0.106 | 0.070 | 0.032 | 0.071 | -0.094 | 0.043 | 0.059 | 0.021 | 0.062 | 0.050 |
| 2011-2017 | -0.074 | 0.136 | 0.045 | 0.085 | -0.091 | 0.045 | 0.069 | 0.019 | 0.053 | 0.062 |
| Field (Agricultural science) |  |  |  |  |  |  |  |  |  |  |
| Medical \& Health | -0.022 | 0.034 | -0.026 | -0.069 | 0.094 | 0.042 | -0.054 | -0.091 | -0.004 | -0.025 |
| Natural sciences | 0.013 | 0.071 | 0.020 | -0.021 | 0.122* | 0.014 | 0.041 | -0.073 | 0.036 | 0.026 |
| Social sciences | 0.007 | $0.178^{* * *}$ | 0.016 | 0.036 | -0.014 | 0.074 | -0.016 | -0.040 | $0.063 * *$ | $0.124^{* *}$ |
| Humanities | -0.043 | 0.192*** | -0.039 | $0.127^{* *}$ | -0.037 | -0.076 | -0.015 | 0.061 | -0.002 | 0.082 |
| Engineering | 0.074 | 0.121** | -0.014 | -0.015 | 0.158** | 0.029 | 0.021 | -0.058 | 0.054* | 0.084* |
| Weekly hours (20 or less) |  |  |  |  |  |  |  |  |  |  |
| 21-30 | 0.112 | -0.264** | $0.162^{* *}$ | -0.056 | 0.061 | 0.092 | 0.421*** | -0.087 | 0.073 | -0.090 |
| 31-39 | 0.115 | -0.355** | $0.184^{* *}$ | -0.011 | 0.077 | -0.239 | $0.445^{* * *}$ | -0.068 | 0.045 | -0.149* |
| 40 and above | 0.173 | -0.246** | 0.137* | 0.004 | 0.096 | 0.053 | 0.470*** | -0.102* | 0.058 | -0.125** |

Table 7 (cont.)

|  | Overall JS |  | Salary |  | Responsibility |  | Benefits |  | Infrastructure |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Women | Men | Women | Men | Women | Men | Women | Men | Women | Men |
| Job research related (<25\%) |  |  |  |  |  |  |  |  |  |  |
| 25-49\% | 0.023 | 0.109 | -0.008 | 0.054 | -0.066 | -0.034 | -0.098 | 0.012 | -0.072* | 0.098** |
| 50-74\% | 0.027 | 0.041 | -0.028 | 0.026 | -0.090 | -0.025 | -0.056 | -0.019 | -0.061 | 0.054 |
| 75-100\% | 0.046 | 0.069 | -0.044 | 0.011 | -0.079 | 0.078 | -0.124 | -0.044 | -0.032 | 0.053 |
| Training activities | 0.128* | -0.058 | 0.065 | -0.055 | 0.218*** | 0.083 | 0.071 | 0.045 | 0.052 | -0.074 |
| Advise Thesis | -0.016 | 0.137** | -0.061* | 0.032 | -0.111* | 0.067 | -0.109** | -0.008 | -0.011 | 0.036 |
| Trains assistants | -0.015 | 0.032 | 0.017 | 0.031 | -0.013 | 0.033 | 0.064 | 0.015 | -0.070*** | 0.025 |
| Job thesis relationship (none) |  |  |  |  |  |  |  |  |  |  |
| High | 0.034 | -0.010 | 0.033 | 0.155** | 0.053 | 0.007 | 0.024 | 0.034 | 0.002 | -0.066 |
| Partial | -0.063 | 0.039 | -0.045 | 0.178** | -0.120 | -0.077 | -0.051 | 0.074 | -0.008 | -0.077 |
| Wage hour (log). | 0.039 | 0.037 | 0.064 | 0.137** | 0.010 | 0.007 | 0.299*** | 0.060 | -0.050 | -0.034 |
| Reinstatement (Same position) |  |  |  |  |  |  |  |  |  |  |
| Higher position | 0.046 | 0.007 | -0.008 | -0.003 | 0.069 | 0.044 | 0.044 | -0.026 | 0.009 | -0.015 |
| No | -0.034 | 0.012 | -0.022 | 0.061* | -0.011 | -0.030 | -0.004 | -0.062 | 0.006 | 0.004 |
| Never worked | 0.056 | . | 0.082 |  | -0.002 |  | 0.428** | . | 0.079 |  |
| Yrs position | -0.003 | -0.000 | 0.004** | 0.002 | 0.003 | -0.002 | 0.000 | 0.003 | 0.001 | $\underset{*}{0.004^{*}}$ |
| Yrs institution | -0.000 | 0.002 | -0.003* | -0.002 | 0.002 | -0.001 | -0.002 | -0.005** | 0.000 | -0.001 |
| Rank (5 Professor) |  |  |  |  |  |  |  |  |  |  |
| Rank 4 | -0.059 | -0.108*** | -0.019 | -0.062* | -0.109* | -0.207*** | 0.013 | -0.057 | -0.056** | -0.030 |
| Rank 3 | -0.119* | -0.079 | -0.082** | -0.075* | -0.209** | -0.282*** | -0.049 | -0.088* | -0.064** | -0.042 |
| Rank 2 | -0.170* | 0.045 | -0.163** | -0.115 | -0.439*** | -0.538** | 0.100 | -0.135 | -0.122** | 0.212** |
| Rank 1 | -0.134 | -0.001 | -0.147** | -0.129* | -0.352*** | -0.364*** | 0.070 | -0.107 | -0.124** | -0.014 |

Table 7 (cont.)

|  | Overall JS |  | Salary |  | Responsibility |  | Benefits |  | Infrastructure |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Women | Men | Women | Men | Women | Men | Women | Men | Women | Men |
| RDT | 0.016 | -0.008 | $0.169^{* * *}$ | 0.084 | -0.050 | -0.059 | -0.060 | 0.035 | 0.038 | 0.007 |
| SNI | 0.031 | -0.009 | 0.020 | -0.019 | $0.062^{*}$ | $0.097^{* *}$ | -0.001 | 0.023 | -0.026 | -0.015 |
| Cooperation | 0.003 | -0.012 | -0.025 | -0.008 | -0.059 | -0.061 | -0.040 | -0.008 | -0.026 | -0.015 |
| Research previous | -0.056 | $0.145^{* *}$ | 0.015 | -0.045 | 0.044 | 0.081 | 0.032 | -0.018 | 0.008 | -0.002 |
| Research post | $0.135^{* *}$ | 0.120 | $0.093^{*}$ | 0.127 | -0.094 | 0.103 | 0.085 | 0.005 | $0.141^{* *}$ | 0.038 |
| Obs. | 335 | 348 | 335 | 348 | 335 | 348 | 335 | 348 | 335 | 347 |

Robust standard errors in parenthesis
${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.001$

Table 8. AME Different domains valued by gender

|  | Women |  |  |  |  |  |  |  | Men |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Labor conds |  | Prom. opportunities |  | Environment |  | Social status |  | Autonomy |  |
| Age (<40 yrs) |  |  |  |  |  |  |  |  |  |  |
| 40-49 | 0.017 | (0.047) | -0.025 | (0.025) | -0.105 | (0.067) | 0.047 | (0.059) | $-0.168^{* *}$ | (0.071) |
| 50-59 | -0.052 | (0.057) | $-0.086^{* * *}$ | (0.032) | -0.176** | (0.078) | -0.090 | (0.074) | -0.219** | (0.092) |
| 60 and above | 0.038 | (0.071) | -0.066* | (0.038) | -0.058 | (0.096) | 0.044 | (0.090) | -0.032 | (0.129) |
| No. of children | 0.006 | (0.013) | -0.017** | (0.007) | -0.010 | (0.017) | 0.020 | (0.017) | 0.002 | (0.023) |
| Married | 0.021 | (0.034) | -0.001 | (0.016) | 0.097** | (0.041) | -0.001 | (0.039) | 0.032 | (0.077) |
| PhD in Uruguay | 0.037 | (0.033) | 0.007 | (0.016) | 0.048 | (0.043) | -0.041 | (0.044) | -0.049 | (0.059) |
| PhD enrollment (until 1989) |  |  |  |  |  |  |  |  |  |  |
| 1990-2000 | -0.064 | (0.058) | $-0.096^{* * *}$ | (0.035) | -0.066 | (0.084) | 0.021 | (0.084) | 0.039 | (0.113) |
| 2001-2010 | -0.042 | (0.071) | -0.051 | (0.038) | -0.153* | (0.093) | 0.018 | (0.096) | -0.076 | (0.122) |
| 2011-2017 | -0.051 | (0.088) | -0.023 | (0.043) | -0.113 | (0.108) | 0.091 | (0.120) | -0.133 | (0.146) |
| Field (Agricultural sciences) |  |  |  |  |  |  |  |  |  |  |
| Medical \& Health | 0.034 | (0.053) | 0.004 | (0.030) | 0.022 | (0.070) | 0.009 | (0.075) | -0.023 | (0.111) |
| Natural sciences | 0.064 | (0.051) | -0.006 | (0.026) | 0.076 | (0.063) | 0.041 | (0.068) | 0.033 | (0.091) |
| Social sciences | 0.112** | (0.052) | 0.006 | (0.028) | -0.009 | (0.068) | -0.004 | (0.073) | 0.111 | (0.099) |
| Humanities | 0.044 | (0.072) | -0.032 | (0.034) | 0.044 | (0.081) | -0.089 | (0.087) | 0.026 | (0.126) |
| Engineering | 0.135** | (0.054) | 0.010 | (0.031) | 0.196*** | (0.075) | 0.092 | (0.091) | 0.069 | (0.105) |
| Weekly hours (20 or less) |  |  |  |  |  |  |  |  |  |  |
| 21-30 | 0.382** | (0.173) | 0.071 | (0.094) | -0.097 | (0.115) | 0. $444{ }^{* *}$ | (0.195) | 0.026 | (0.172) |
| 31-39 | 0.306* | (0.183) | 0.072 | (0.093) | -0.074 | (0.140) | $0.419^{* *}$ | (0.197) | 0.107 | (0.217) |
| 40 and above | 0.350** | (0.173) | 0.077 | (0.092) | -0.058 | (0.109) | 0.446** | (0.192) | 0.051 | (0.165) |

Table 8 (cont.)

|  | Women |  |  |  |  |  |  |  | Men |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Labor conds |  | Prom. Opportunities |  | Environment |  | Social status |  | Autonomy |  |
| Job research related (<25\%) |  |  |  |  |  |  |  |  |  |  |
| 25-49\% | -0.019 | (0.075) | 0.078* | (0.043) | -0.035 | (0.081) | 0.093 | (0.096) | 0.043 | (0.121) |
| 50-74\% | 0.017 | (0.073) | 0.061 | (0.042) | -0.028 | (0.080) | 0.068 | (0.094) | -0.022 | (0.121) |
| 75-100\% | 0.025 | (0.080) | 0.037 | (0.042) | 0.029 | (0.092) | 0.077 | (0.101) | 0.135 | (0.137) |
| Training activities | 0.111 | (0.068) | 0.048 | (0.037) | 0.100 | (0.083) | 0.010 | (0.092) | 0.006 | (0.121) |
| Advising thesis | -0.081 | (0.055) | -0.040* | (0.024) | -0.046 | (0.059) | -0.018 | (0.063) | 0.121 | (0.098) |
| Trains assistants | -0.025 | (0.049) | 0.003 | (0.026) | 0.068 | (0.059) | 0.068 | (0.062) | -0.057 | (0.111) |
| Job thesis relationship |  |  |  |  |  |  |  |  |  |  |
| High | -0.108 | (0.100) | -0.036 | (0.046) | 0.069 | (0.099) | $0.232^{* *}$ | (0.111) | -0.139 | (0.188) |
| Partial | -0.175* | (0.103) | -0.051 | (0.049) | -0.080 | (0.105) | 0.147 | (0.121) | -0.141 | (0.197) |
| Wage/hs (logs) | 0.005 | (0.085) | -0.024 | (0.040) | -0.131 | (0.108) | 0.032 | (0.096) | 0.037 | (0.126) |
| Reinstatement (same position) |  |  |  |  |  |  |  |  |  |  |
| Higher position | 0.032 | (0.035) | $0.052^{* * *}$ | (0.019) | 0.041 | (0.044) | 0.050 | (0.043) | 0.088 | (0.060) |
| No | 0.019 | (0.045) | 0.003 | (0.023) | -0.012 | (0.060) | -0.003 | (0.058) | -0.090 | (0.077) |
| Never worked before | 0.231 | (0.142) | 0.106** | (0.049) | 0.022 | (0.233) | 0.210 | (0.172) |  |  |
| Yrs position | -0.000 | (0.003) | -0.003* | (0.002) | -0.002 | (0.004) | 0.001 | (0.003) | -0.003 | (0.005) |
| Yrs institution | -0.003 | (0.003) | 0.000 | (0.001) | -0.001 | (0.003) | -0.002 | (0.003) | -0.003 | (0.004) |

Table 8 (cont.)

|  | Women |  |  |  |  |  |  | Men |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Labor conds | Prom. opportunities |  | Environment |  | Social status |  | Autonomy |  |
| Rank (5 Professor) |  |  |  |  |  |  |  |  |  |
| Rank 4 | -0.061 (0.047) | $-0.106^{* * *}$ | (0.028) | -0.041 | (0.060) | -0.060 | (0.060) | -0.108 | (0.070) |
| Rank 3 | -0.077 (0.057) | $-0.213^{* * *}$ | (0.040) | -0.065 | (0.072) | -0.134* | (0.069) | -0.110 | (0.088) |
| Rank 2 | -0.138 (0.102) | $-0.330^{* * *}$ | (0.072) | -0.204 | (0.137) | -0.192 | (0.143) | -0.202 | (0.212) |
| Rank 1 | $0.083 \quad(0.090)$ | $-0.340^{* * *}$ | (0.069) | -0.033 | (0.118) | -0.131 | (0.104) | -0.047 | (0.167) |
| RDT | 0.007 (0.076) | 0.019 | (0.031) | 0.106 | (0.085) | 0.020 | (0.078) | -0.094 | (0.106) |
| SIN | $0.013 \quad(0.029)$ | 0.007 | (0.014) | 0.012 | (0.036) | 0.031 | (0.036) | -0.010 | (0.053) |
| Cooperation | $0.009 \quad(0.042)$ | -0.015 | (0.018) | -0.093* | (0.048) | 0.028 | (0.057) | 0.022 | (0.069) |
| Research previous | 0.009 (0.049) | 0.009 | (0.023) | -0.115 | (0.073) | -0.057 | (0.062) | 0.007 | (0.097) |
| Research post | 0.064 (0.083) | 0.045 | (0.038) | 0.012 | (0.096) | -0.103 | (0.119) | 0.113 | (0.178) |
| Obs. | 335 | 335 |  | 335 |  | 335 |  | 348 |  |

Robust standard errors in parenthesis
${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.001$

## Appendix

Table A.1. AME Sector choice

|  | Salary |  | Benefits |  | Security |  | Location |  | Labor conditions |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Parental education (Incomplete secondary) |  |  |  |  |  |  |  |  |  |  |
| Complete secondary/ incomplete tertiary | -0.056 | (0.038) | -0.054 | (0.038) | -0.054 | (0.040) | -0.054 | (0.038) | -0.049 | (0.038) |
| Incomplete university | -0.023 | (0.040) | -0.024 | (0.039) | -0.023 | (0.042) | -0.024 | (0.040) | -0.023 | (0.040) |
| University or more | -0.092** | (0.041) | -0.092** | (0.041) | -0.092** | (0.042) | -0.092** | (0.042) | -0.086** | (0.042) |
| Time elapsed degree-PhD | -0.004 | (0.003) | -0.004 | (0.003) | -0.004 | (0.003) | -0.004 | (0.003) | -0.004 | (0.003) |
| Public funding (yes) | -0.023 | (0.034) | -0.024 | (0.034) | -0.024 | (0.034) | -0.024 | (0.034) | -0.026 | (0.035) |
| Private funding (yes) | -0.000 | (0.034) | -0.004 | (0.033) | -0.004 | (0.033) | -0.004 | (0.033) | 0.001 | (0.033) |
| Other source (yes) | 0.068* | (0.041) | 0.069* | (0.041) | 0.069* | (0.041) | 0.069* | (0.041) | 0.065 | (0.041) |
| atanhrho_12 | -0.105 | (0.118) | -0.012 | (0.119) | -0.003 | (0.137) | -0.005 | (0.119) | -0.177 | (0.117) |
| Obs. | 1163 |  | 1156 |  | 1161 |  | 1163 |  | 1162 |  |
| Robust standard errors in parenthesis * p<0.1, ** $p<0.05,{ }^{* * *}$ p<0.001 |  |  |  |  |  |  |  |  |  |  |

Table A.1. (cont.)

|  | Autonomy |  | Promotion opportunities |  | Intellectual challenge |  | Responsibility |  | Administrative tasks |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Parental education (Incomplete secondary) |  |  |  |  |  |  |  |  |  |  |
| Complete secondary/incomplete tertiary | -0.049 | (0.039) | -0.056 | (0.037) | -0.058 | (0.039) | -0.061 | (0.038) | -0.053 | (0.038) |
| Incomplete university | -0.019 | (0.041) | -0.029 | (0.039) | -0.025 | (0.040) | -0.030 | (0.039) | -0.029 | (0.040) |
| University or more | -0.088** | (0.042) | $-0.095^{* *}$ | (0.041) | -0.093** | (0.041) | -0.095** | (0.041) | -0.090** | (0.041) |
| Time elapsed degree-PhD | -0.004 | (0.003) | -0.004 | (0.003) | -0.004 | (0.003) | -0.004 | (0.003) | -0.004 | (0.003) |
| Public funding (yes) | -0.021 | (0.034) | -0.026 | (0.034) | -0.026 | (0.035) | -0.025 | (0.034) | -0.021 | (0.035) |
| Private funding (yes) | -0.004 | (0.033) | -0.010 | (0.033) | -0.003 | (0.033) | -0.003 | (0.033) | -0.007 | (0.033) |
| Other source (yes) | 0.072* | (0.041) | 0.071* | (0.041) | 0.068* | (0.041) | 0.073* | (0.041) | 0.067 | (0.041) |
| atanhrho_12 | -0.127 | (0.143) | $0.2369^{* *}$ | (0.126) | 0.205** | (0.121) | 0.203 | (0.115) | -0.030 | (0.116) |
| Observations | 1163 |  | 1159 |  | 1162 |  | 1161 |  | 1159 |  |

Table A.1. (cont.)

|  | Environment |  | Contribution to society |  | Social status |  | Infrastructure |  | Overall JS |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Parental education (Incomplete secondar |  |  |  |  |  |  |  |  |  |  |
| Complete secondary/incomplete tertiary | -0.054 | (0.038) | -0.055 | (0.038) | -0.050 | (0.038) | -0.050 | (0.038) | -0.053 | (0.038) |
| Incomplete university | -0.023 | (0.040) | -0.023 | (0.040) | -0.019 | (0.040) | -0.025 | (0.039) | -0.024 | (0.040) |
| University or more | -0.092** | (0.041) | $-0.093 * *$ | (0.041) | $-0.086 * *$ | (0.041) | -0.090** | (0.041) | -0.090** | (0.042) |
| Time elapsed degree-PhD | -0.004 | (0.003) | -0.004 | (0.003) | -0.004 | (0.003) | -0.004 | (0.003) | -0.004 | (0.003) |
| Public funding (yes) | -0.023 | (0.034) | -0.024 | (0.034) | -0.021 | (0.034) | -0.025 | (0.034) | -0.024 | (0.034) |
| Private funding (yes) | -0.003 | (0.033) | -0.004 | (0.033) | -0.002 | (0.033) | -0.003 | (0.033) | -0.004 | (0.033) |
| Other source (yes) | 0.068 | (0.041) | 0.071* | (0.041) | 0.071* | (0.041) | 0.068* | (0.041) | 0.067 | (0.041) |
| atanhrho_12 | -0.034 | (0.132) | -0.066 | (0.114) | -0.261* | (0.129) | -0.141 | (0.101) | -0.089 | (0.148) |
| Observations | 1162 |  | 1161 |  | 1157 |  | 1160 |  | 1161 |  |

Robust standard errors in parenthesis
${ }^{*} \mathrm{p}<0.1,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.001$

Table A.2. AME Reported job satisfaction, by gender and cohort

| Satisfied with... | Cohort $<50$ |  |  |  |  |  | Cohort 50+ |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Women | Men | Test | Total | Women | Men | Test |  |  |
| Overall JS | 3.01 | 2.97 | 3.06 | 0.116 | 2.97 | 2.93 | 3.01 | 0.147 |  |  |
| Salary | 2.75 | 2.69 | 2.83 | 0.039 | 2.78 | 2.71 | 2.84 | 0.060 |  |  |
| Benefits | 2.97 | 2.97 | 2.98 | 0.879 | 2.88 | 2.85 | 2.91 | 0.287 |  |  |
| Security | 3.17 | 3.09 | 3.28 | 0.009 | 3.15 | 3.12 | 3.19 | 0.260 |  |  |
| Location | 3.24 | 3.22 | 3.26 | 0.576 | 3.17 | 3.16 | 3.18 | 0.798 |  |  |
| Labor conditions | 2.82 | 2.80 | 2.84 | 0.641 | 2.76 | 2.65 | 2.86 | 0.006 |  |  |
| Autonomy | 3.29 | 3.16 | 3.43 | 0.000 | 3.35 | 3.24 | 3.44 | 0.001 |  |  |
| Promotion opports. | 2.39 | 2.22 | 2.60 | 0.000 | 2.43 | 2.23 | 2.63 | 0.000 |  |  |
| Intellectual challenge | 3.39 | 3.37 | 3.42 | 0.453 | 3.40 | 3.34 | 3.45 | 0.063 |  |  |
| Responsibility | 3.18 | 3.12 | 3.26 | 0.030 | 3.26 | 3.19 | 3.32 | 0.040 |  |  |
| Administrative tasks | 2.34 | 2.31 | 2.37 | 0.449 | 2.53 | 2.46 | 2.59 | 0.103 |  |  |
| Working environment | 3.03 | 3.03 | 3.03 | 0.995 | 2.98 | 2.93 | 3.03 | 0.213 |  |  |
| Contribution to society | 3.14 | 3.09 | 3.20 | 0.083 | 3.21 | 3.18 | 3.24 | 0.333 |  |  |
| Social status | 2.99 | 3.00 | 2.97 | 0.579 | 3.04 | 3.01 | 3.07 | 0.277 |  |  |
| Infrastructure | 2.40 | 2.39 | 2.42 | 0.701 | 2.39 | 2.31 | 2.46 | 0.047 |  |  |
| Obs. | 448 | 238 | 204 |  | 458 | 215 | 242 |  |  |  |


[^0]:    ${ }^{1}$ Instituto de Economía, Facultad de Ciencias Económicas y de Administración, Universidad de la República
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[^1]:    ${ }^{3}$ The UdelaR was founded in 1849 , and comprises more than $80 \%$ of university students.
    ${ }^{4}$ See Méndez et al. (2019).

[^2]:    ${ }^{5}$ See ANII (2017) and DICyT - MEC (2012).
    ${ }^{6}$ The exception are postgraduate programs in health and natural sciences provided by PEDECIBA since 1986 (Méndez et al., 2019).
    ${ }^{7}$ Méndez et al. (2019) briefly describe the implemented policies in Uruguay.
    ${ }^{8}$ Méndez (2020) describes the territorial decentralization process of the UdelaR and its implications in equality of opportunity of access.
    ${ }^{9}$ Once individuals enter in the system, their continuity is subject to periodic evaluations.
    ${ }^{10}$ The SNI ranks researchers from a lowest level (entry level) to the highest level (Level III; in the middle are levels I and II). Buckstein and Gandelman (2019) comprehensively describe the system.

[^3]:    ${ }^{11}$ Censo docente 2015, DGPlan (UdelaR)
    ${ }^{12}$ See: https://www.dedicaciontotal.udelar.edu.uy/estadisticas/datos-generales/, and Buckstein and Gandelman (2019).
    ${ }^{13}$ https://www.anii.org.uy/upcms/files/listado-documentos/documentos/doc-stem-1-.pdf
    ${ }^{14}$ Programa de Población, FCSS - UdelaR.
    15 The ANII financially supports research projects, postgraduate scholarships and incentive programs for innovative culture and entrepreneurship, both in the private and public sectors. Researchers aiming to these funds should complete an online CV.
    ${ }^{16}$ This census is mandatory for students, professors and non-professor workers at the UdelaR.
    ${ }^{17}$ See Méndez et al. (2019) for a comprehensive analysis of the PCDUY.
    ${ }^{18}$ For instance, in Di Paolo (2016) are $58 \%$ and $67 \%$ for 2008 and 2011, respectively; and $30 \%$ in Sloane and Ward (2001).

[^4]:    ${ }^{19}$ See Roodman (2010).

[^5]:    ${ }^{20}$ The extra payment derived for the SNI is not imputed. However, results do not change if this extra-payment is considered.
    ${ }^{21}$ Collaboration includes at least one of the following cooperation: official and/or informal networks, research centers, professional associations, journals or scientific publications, and teaching and human capital formation.

[^6]:    ${ }^{22}$ In Mora and Ferrer-i-Carbonell (2009).

