

## The Status of Women in Economics in Spain<sup>1</sup>

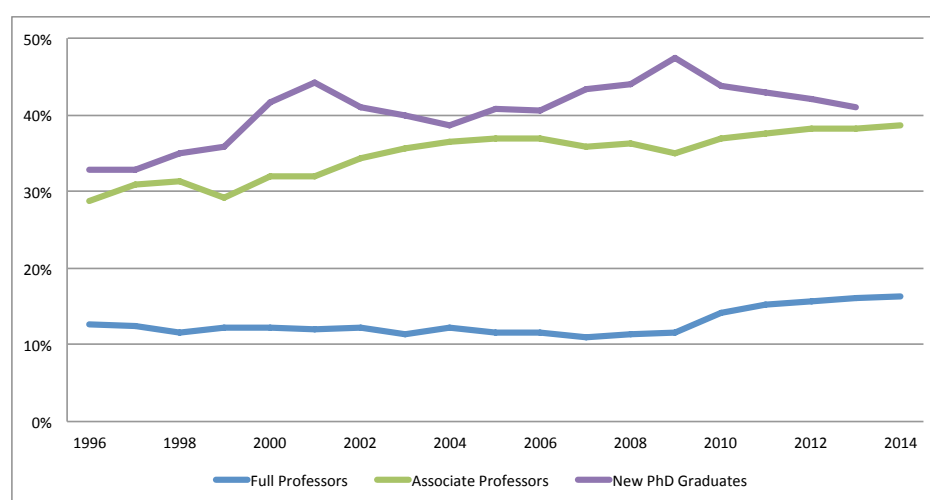
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*The Committee on the Status of Women in Economics in Spain (COSME) monitors the status of women in the profession on behalf of the Spanish Economic Association. In this article we describe how the representation of women in Economics in Spain has evolved during the last twenty years. We examine the presence of women at several academic rungs: among (i) new Ph.D. graduates, (ii) Associate Professors, and (iii) Full Professors. We also provide information about the presence of women in scientific committees.*

### 1. New Ph.D. graduates, Associate Professors and Full Professors

Since the publication of the previous report on the Status of Women in Economics in Spain in 2013, the situation of women has barely changed, mainly due to the freeze in hiring and promotions in the public sector.<sup>2</sup>

Figure 1 – Share of women among new Ph.D. graduates, Associate Professors and Full Professors in Economics, years 1996-2014.



Note: The figure provides information about the share of women among Associate Professors and Full Professors in the areas of Economics and Applied Economics. (Source: “Higher Education Statistics in Spain”, *National Statistical Institute*, 1996-2011; and *Estadística de Personal de las Universidades*, Ministerio de Educación, Cultura y Deporte, 2012-2014). We consider dissertations that have been classified within the chapter *Economics*, code 53 of the Unesco classification, as provided by the TESEO database of Ph.D. dissertations, Ministry of Education, Culture and Sports.

The percentage of women among new Ph.D. graduates in Economics increased significantly during the 90s reaching the 40% in year 2000 (Figure 1).<sup>3</sup> Since

<sup>1</sup> This article is an updated version of the report on “The Status of Women in Economics in Spain” published in the 1<sup>st</sup> COSME Newsletter in 2013.

<sup>2</sup> Between 2013 and 2015 the State Bulletin reports only six new openings in Spain at the level of Associate or Full Professor in Economics, compared to approximately 75 openings in the previous three years.

then the incidence of women has been relatively stable and, in 2013, women accounted for 41% of new Ph.D. graduates.

The pattern is very similar among Associate Professors.<sup>4</sup> Between 1996 and 2005 the incidence of women among Associate Professors increased from 29% to 37%, but during the last decade there have not been major changes. In 2014 the share of women among Associate Professors was only slightly higher, around 39%.

The degree of feminization of the upper echelon of the academic career, Full Professorship, is significantly lower. While approximately half of new Ph.D. graduates and one third of Associate professors are women, women account only for one out of every six Full Professors. Moreover this figure has remained stagnant during the last twenty years. In 1996 only 13% of Full Professors were women. In 2014 the figure was practically the same: 16%.

## 2. How “leaky” is the pipeline?

The low incidence of women on the upper echelons of the academic career may partly reflect the late transitioning of women into academia. In order to understand how “leaky” the pipeline is, we track the progress of academic cohorts over time using two approaches. First, we use a bare-bones model of lock-step progression through the ranks.<sup>5</sup> Second, we analyze the information provided by the Survey on Human Resources in Science and Technology. This survey provides information about the labor market outcomes of a representative sample of Ph.D. graduates who graduated between 1990 and 2006 (Spanish Statistical Bureau).

The model of lock-step progression assumes that movements through the ranks occurred as follows. Ph.D. graduates may become Assistant Professors and remain in that category for seven years. After this period, they might be promoted to the level of Associate Professor. In another seven years, Associate Professors might, in turn, be promoted to the level of Full Professor.<sup>6</sup> Under these assumptions we can track the representation of women in a cohort that obtained a Ph.D. in year  $t$  by looking at Assistant Professors in  $t+7$  and Associate Professors in  $t+14$ . Figure 2 presents information of such model.

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<sup>3</sup> Source: Database on Ph.D. dissertations “TESEO”, Ministry of Education, Culture and Sport. We consider dissertations that have been classified within the chapter *Economics*, code 53 of the Unesco classification.

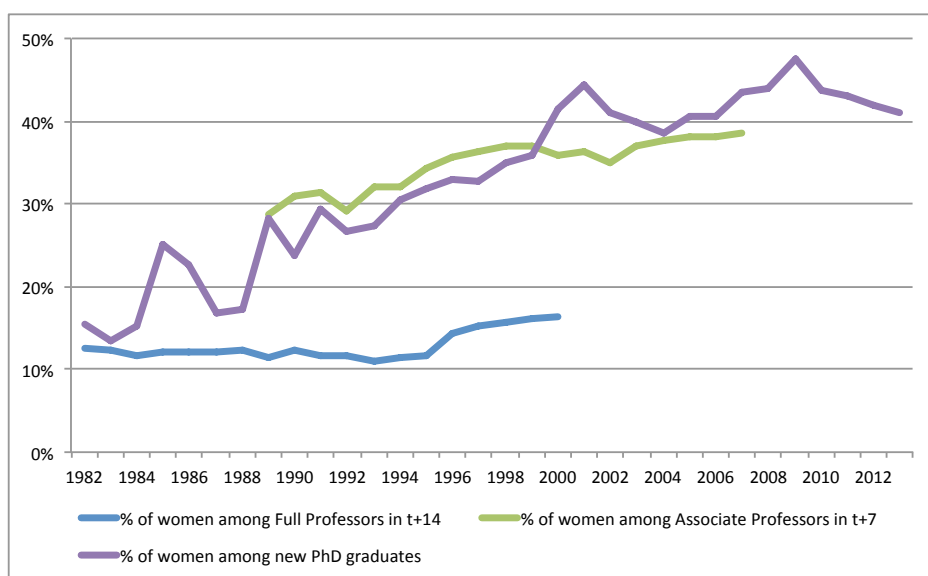
<sup>4</sup> In Spain there are nearly two hundred legally defined academic disciplines. Here we consider professors in *Economics (Fundamentos del Análisis Económico)* and in *Applied Economics (Economía Aplicada)*.

<sup>5</sup> This model is qualitatively similar to the model proposed by the Committee on the Status of Women in the Economics Profession of the American Economic Association (Newsletter Winter 2013). Ideally, we would want to observe disaggregated information by rank and by age. Unfortunately, in the absence of this information the model only provides an approximation, and its interpretation depends on the assumptions about how the age profile of men and women within each rank has evolved over time.

<sup>6</sup> This timing is consistent with the available information about the age at Ph.D. graduation, tenure and access to Full Professorship in the context of Spain.

The proportion of women among Associate Professors is very similar to the proportion of women among new Ph.D. graduates seven years earlier. For instance, in 2007, 39% of new Ph.D. graduates in Economics were women. Seven years later the share of women among Associate Professors was almost identical, about 38%. The situation is very different when we examine the transition to Full Professorship. The share of women among Full Professors is systematically lower than the share of women among Associate Professors seven years earlier (or among new Ph.D. graduates fourteen years earlier). Moreover, this gender gap, almost inexistent in the early 1980s, has dramatically increased over time. The degree of feminization of the higher echelon of the academic career has not experienced practically any progress in the last fifteen years, despite continuous growth in the number of women joining academia over the last thirty years. For instance, in 1982 the share of women among new Ph.D. graduates was equal to 15%. Fourteen years later, the proportion of women among Full Professors in Economics was very similar, around 13%. However, while the cohort of new Ph.D. graduates in 2000 included 42% of women, fourteen years later the share of women among Full Professors was only 16%.

Figure 2 – Tracing Women from the  $t^{\text{th}}$  Cohort of New Ph.D. graduates



Note: The figure provides information about the share of women among Associate Professors and Full Professors in the areas of Economics and Applied Economics. We consider dissertations that have been classified within the chapter *Economics*, code 53 of the Unesco classification, as provided by the database on PhD dissertations TESEO (Ministry of Education, Culture and Sports).

Additionally, we also analyze the information provided by the Survey on Human Resources in Science and Technology, which was conducted in years 2006 and 2009.<sup>7</sup> This survey provides information on 23,000 graduates who obtained their Ph.D. degrees during the period 1990-2006, including 946 graduates in Economics or Business. First, we analyze their career choices. Female graduates in Economics are more likely to follow an academic career than men: 83% vs. 70%, respectively. Conditional on this initial choice, we do not observe any significant gender differences in the early stages of the academic career.

<sup>7</sup> Unfortunately this survey was discontinued in 2009.

Approximately 62% of male Ph.D. graduates had been granted tenure at the time of the survey. The figure for female Ph.D. graduates is practically identical, 63%. This evidence is consistent with the above model of lock-step progression. It would also be interesting to analyze promotion to Full Professor but, unfortunately, at the time of the survey most graduates were still at an early stage of their career and only in very few cases can we observe transitions to Full Professorship.<sup>8</sup>

### 3. The Situation of Women in other Fields and Countries

Columns 1 and 2 of Table 1 provide information on the situation of women in the Economics profession and the situation of women in other academic fields in Spain. Economics is relatively less feminized. In the overall Spanish system of higher education, approximately half of new Ph.D. graduates, 40% of Associate Professors, and 21% of Full Professors are women, compared to 41%, 38% and 16% of women, respectively, in Economics.<sup>9</sup> On the other hand, the share of female economists in Spain is relatively larger than in the U.S.. In the latter, only 33% of new Ph.D. graduates, 24% of Associate Professors, and 12% of Full Professors are women.

Tabla 1: Percentage of women in academia, 2013/2014.

	All disciplines	Economics, Spain	Economics, U.S.
New PhD Graduates	49%	41%	33%
Associate Professor	40%	38%	24%
Full Professor	21%	16%	12%

Source: University Education Statistics and TESEO database on PhD dissertations, Ministry of Education, Culture and Sport; Committee on the Status of Women in the Economics Profession, Newsletter 2015, Issue I.

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<sup>8</sup> The average respondent graduated seven years earlier. The sample includes only four male and one female Full Professors.

<sup>9</sup> The “White paper on the Status of Women in Science in Spain” (2011), edited by Inés Sánchez de Madariaga, Sara de la Rica and Juan José Dolado, provides a very complete description of the situation of women in Spanish academia.

#### 4. The Presence of Women in Scientific Committees

An extensive literature has analyzed why women do not reach the upper rungs of the academic career. The literature has identified several factors at play, including the existence of gender roles at the household level and the lack of appropriate research networks and role models (Ceci, Ginther, Kahn, y Williams 2014). Some authors have also documented the existence of gender discrimination, although this is still a controversial issue.<sup>10</sup>

Discrimination may be potentially linked to the lack of women in the evaluation committees that decide on hiring and promotions. Although the available empirical evidence seems to reject this hypothesis, several countries, including Spain, have introduced gender quotas in scientific committees. Since 2007 the Equality Act requires the presence in the committee of at least 40% of members of each gender, although the law allows this threshold to be relaxed whenever there are “well grounded and objective reasons, appropriately justified”.<sup>11</sup> Next we provide descriptive information on the implementation of the Equality Law in the field of Economics.

As shown in Figure 3, in exams for the position of Full Professor, the gender quota is satisfied by two-thirds of committees. Most of these committees include three men and two women.<sup>12</sup> In the remaining committees, the share of women is below 40%. The implementation of the law has been stronger in committees that evaluate applications for the position of Associate Professor: the law is satisfied by 77% of committees. In a couple of committees the law is not satisfied due to an excess of female evaluators.

But even if gender quotas have not been implemented in a systematic way, the presence of women in committees is far larger than their representation in the academic ranks. During the period of our analysis, 31% of full professors sitting in committees are women, compared to only 15% in the overall population of full professors. Among associate professors, women account for 53% of evaluators, compared to 37% in the overall population. As a result, female full professors participate in almost three times more committees than male full professors and female associate professors participate in twice as many committees as male associate professors.

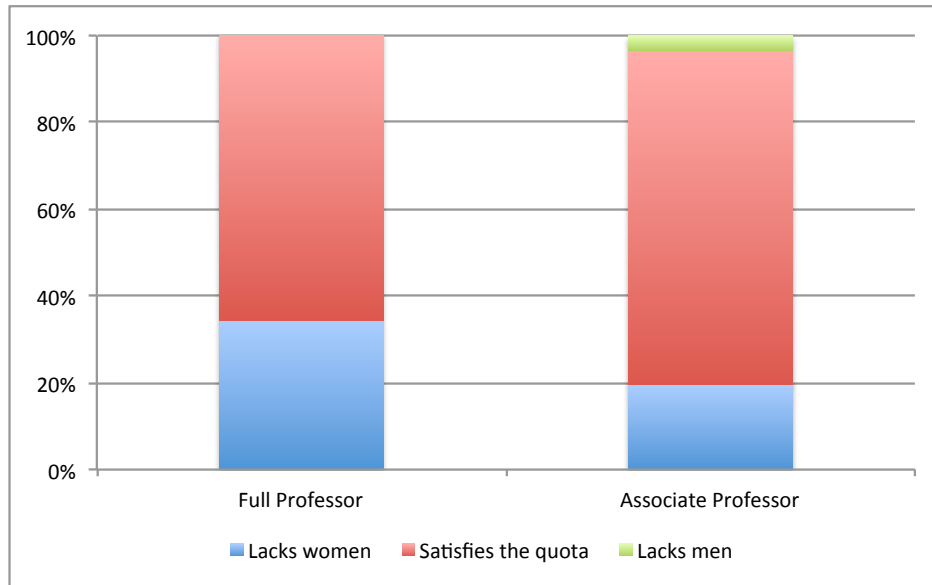
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<sup>10</sup> According to the meta-analysis conducted by Ceci and Williams (2011) and Ceci, Ginther, Kahn, and Williams (2014), the most recent evidence is not consistent with the existence of gender discrimination in scientific evaluations. At the same time, some studies have documented that sometimes women receive lower evaluations than equally qualified men (Steinpreis, Anders and Ritzke 1999, Moss-Racusin, Dovidio, Brescoll, Graham and Handelsman 2012).

<sup>11</sup> Chapter 53 of the Equality Act, published in the State Bulletin number 71, on 23/03/2007.

<sup>12</sup> Most committees include five members (83%), but a few committees include four members (2%) or three members (15%). In exams for the position of Full Professor all committee members must have the rank of Full Professor. In exams to Associate Professor the committee might include both full and associate professors.

Figure 3 – Implementation of gender quotas in scientific committees



Note: The graph includes information on the gender composition of committees in 104 exams for Full Professor or Associate Professor positions held between 2009 and 2015. The quota requires a minimum of 40% of committee members of each gender. Source: State Bulletin.

Gender quotas imply that senior female researchers have to spend relatively more time sitting on scientific committees. Paradoxically, in a context where researchers are usually not compensated for their participation in committees, there is the risk that forcing senior women to serve in a disproportionate number of committees reduces the time that they can devote to research, eventually harming their careers.<sup>13</sup>

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<sup>13</sup> This risk has been already pointed out by Daniel Hamermesh, who in an article addressed to young female economists argues that “(u)niversity administrators love committees that are balanced by gender; but the relative supply of women, especially from economics departments, is small. Even as a junior professor you may be asked to serve on university- or college-wide committees, a request that is flattering. Do not be flattered- avoid these like the plague unless the exposure/effort ratio is huge. The time spent on them eats up research time and usually generates minimal credit in your tenure decision. Requests like this are another form of sexual exploitation.” (Hamermesh 2005).

References:

Bagues, Manuel (2013), "Informe sobre la Situación de la Mujer en Economía," in "1st COSME Newsletter", Libertad González (Ed.).

Bagues, Manuel, Mauro Sylos-Labini and Natalia Zinovyeva (2015), "Does the Gender Composition of Scientific Committees Matter?" IZA Discussion Paper No. 9199.

Ceci, Stephen J., Donna K. Ginther, Shulamit Kahn, and Wendy M. Williams (2014), "Women in Academic Science: A Changing Landscape," *Psychological Science in the Public Interest*, Vol. 15(3), pp. 75-141.

Ceci, Stephen J. and Wendy M. Williams (2011), "Understanding Current Causes Of Women's Underrepresentation In Science," *Proceedings of the National Academy of Sciences*, Vol. 108(8), pp. 3157-3162.

Hamermesh, Daniel S. (2005) "An Old Male Economist's Advice to Young Female Economists", *CSWEP Newsletter*, Winter.

Moss-Racusin, Corinne A., John F. Dovidio, Victoria L. Brescoll, Mark J. Graham and Jo Handelsman (2012), "Science faculty's subtle gender biases favor male students," *Proceedings of the National Academy of Sciences*, Vol. 109(41), pp. 6474-6479.

Sánchez de Madariaga, Inés, Sara de la Rica and Juan José Dolado (2011), "Libro Blanco sobre la situación de las Mujeres en la Ciencia Española", Madrid: Ministerio de Ciencia e Innovación.

Steinpreis, Rhea E., Katie A . Anders, and Dawn Ritzke (1999), "The Impact of Gender on the Review of the Curricula Vitae of Job Applicants and Tenure Candidates: A National Empirical Study," *Sex Roles*, Vol. 41(7/8), pp. 509- 528.