

# DOCTORAL THESIS

**Women, accounting, academia and business: History  
and current affairs of the female struggle in a  
patriarchal context**

**Maria Victoria Uribe Bohorquez**



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**Women, accounting, academia and business: History  
and current affairs of the female struggle in a  
patriarchal context**

**Programa de doctorado en Economía de la Empresa**

**Facultad de Economía y Empresa**

**Maria Victoria Uribe Bohorquez  
Doctoranda**

**Isabel María García Sánchez  
Directora**

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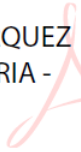
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URIBE BOHORQUEZ  
MARIA VICTORIA -  
Y4271046Y



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URIBE BOHORQUEZ MARIA  
VICTORIA - Y4271046Y  
Fecha: 2021.09.22 15:20:39  
+02'00'

*Fdo: María Victoria Uribe Bohorquez*

GARCIA SANCHEZ  
ISABEL MARIA -  
07961018M



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GARCIA SANCHEZ ISABEL  
MARIA - 07961018M  
Fecha: 2021.09.16 20:25:29  
+02'00'

*Fdo: Isabel María García Sánchez*

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# **ABSTRACT**

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Although the progress that the accounting profession has made in terms of the inclusion of women over time is undeniable, even in the twenty first century, women experience gender asymmetries in terms of their employment status, remuneration, prestige and promotion, especially if they are married with children, they face a glass ceiling that causes them to be underrepresented in high-level positions, they are excluded from critical operational knowledge, private information as well as important and confidential decision-making, and to achieve success, advancement, permanence and professional and job satisfaction have had to accept and behave according to the stereotypically masculine “rules of the game” (Adapa, Rindfleish, & Sheridan, 2016; Brennan & Nolan, 1998; Broadbent, 2016; Crowley, 2016; Czarniawska, 2008; Dambrin & Lambert, 2008; Hantrais, 1995; Haynes, 2017; Maupin & Lehman, 1994; Pillsbury, Capozzoli, & Ciampa, 1989; Whiting & Wright, 2001; Windsor & Auyeung, 2006; Wootton & Kemmerer, 2000).

The above is not an isolated event but a dynamic construction, socially, historically, legally, politically, geographically and culturally modeled, which has been reproduced and institutionalized at a professional and organizational level (Barker & Monks, 1998; Carrera, Gutiérrez, & Carmona, 2001; Escobar Andrae, 2017; Evans & Rumens, 2020; Gamber, 1998; Hantrais, 1995; Hareven, 1991; Haynes, 2017; Kerber, 1988; Lee Cooke & Xiao, 2014; Lehman, 1992; Scranton, 1998; Thane, 1992; Walker, 1998; 2003b; Walker & Llewellyn, 2000; Zucca Micheletto, 2013).

In this sense, the present work seeks, on the one hand, to show the gender disparities that have occurred in the exercise of accounting work at an academic and professional level and, on the other, to relate, from a qualitative and quantitative approach, the considerations of gender with historical, social and cultural factors that could influence them.

In compliance with this purpose, the present work is structured in four main sections, the first of which summarizes the history of women in accounting between the eighteenth to twentieth centuries<sup>1</sup>, pointing out how the social context, characterized by principles and values patriarchal, represented an obstacle in their incursion and advancement, but at the same time how the participation of women in accounting tasks empowered them and served as a bridge for their inclusion in society, the labor and professional market; in the second section, the participation of women as authors in the accounting journals top tier in the twenty first century is analyzed, specifically between 1960 and 2019, as a possible source of the existing gender gaps in the accounting academia and finally in the third and fourth sections, moving to the business context and professional practice, on the one hand, I analyze how cultural factors can pose a barrier to achieving greater gender diversity in the boards of directors and, on the other, the impact that presence of female directors have on business performance and the moderation exerted by cultural factor in this relationship, for which a sample of companies between 2006 and 2015 is used. In this way, it is expected to cover a wide temporal range and different paths of the exercise of women in the accounting profession.

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<sup>1</sup> Period of the patriarchal apogee and the greatest advance of women on the road to accounting parity (Allen, 2014; Anderson, 2020; Capelo Bernal, Araújo Pinzón, & Funnell, 2018; Cooper, 2010; Emery, Hooks, & Stewart, 2002; Licini, 2011; Gordon, 2004; Honeyman, 2007; Smith Rosenberg, 1972; Tasca, 2004; Thane, 1992; Vickery, 1993; Virtanen, 2009; Walker & Llewellyn, 2000).

# RESUMEN

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Aunque es innegable el progreso que ha tenido la profesión contable en cuanto a la inclusión de la mujer a lo largo del tiempo, aún en el siglo XXI las mujeres experimentan asimetrías de género en cuanto a su estatus laboral, remuneración, prestigio y promoción, especialmente si son casadas y con hijos, enfrentan un techo de cristal que hace que estén sub-representadas en cargos de alto nivel, son excluidas del conocimiento operativo crítico, de información privada así como de la toma de decisiones importantes y confidenciales, y para lograr el éxito, avance, permanencia y satisfacción profesional y laboral han tenido que aceptar y comportarse de acuerdo a las “reglas del juego” estereotípicamente masculinas (Adapa, Rindfleish, & Sheridan, 2016; Brennan & Nolan, 1998; Broadbent, 2016; Crowley, 2016; Czarniawska, 2008; Dambrin & Lambert, 2008; Hantrais, 1995; Haynes, 2017; Maupin & Lehman, 1994; Pillsbury, Capozzoli, & Ciampa, 1989; Whiting & Wright, 2001; Windsor & Auyeung, 2006; Wootton & Kemmerer, 2000).

Lo anterior no es un evento aislado sino una construcción dinámica, modelada social, histórica, legal, política, geográfica y culturalmente, que se ha reproducido e institucionalizado a nivel profesional y organizacional (Barker & Monks, 1998; Carrera, Gutiérrez, & Carmona, 2001; Escobar Andrae, 2017; Evans & Rumens, 2020; Gamber, 1998; Hantrais, 1995; Hareven, 1991; Haynes, 2017; Kerber, 1988; Lee Cooke & Xiao, 2014; Lehman, 1992; Scranton, 1998; Thane, 1992; Walker, 1998; 2003b; Walker & Llewellyn, 2000; Zucca Micheletto, 2013).

En ese sentido, el presente trabajo busca, por una parte, evidenciar las disparidades de género que se han dado en el ejercicio del quehacer contable a nivel académico y profesional y, por otra, relacionar, desde un enfoque cualitativo y cuantitativo, las consideraciones de género con factores históricos, sociales y culturales que pudieran influir en las mismas.

En cumplimiento de dicho propósito el presente trabajo está estructurado en cuatro grandes apartados, el primero de ellos hace una síntesis de la historia de la mujer en la contabilidad entre los siglos XVIII y XX<sup>2</sup>, señalando cómo el contexto social, caracterizado por los principios y valores patriarcales, representó un obstáculo en su incursión y avance, pero a su vez cómo la participación de la mujer en las tareas contables las empoderó y les sirvió de puente para su inclusión en la sociedad, el mercado laboral y profesional; posteriormente en el segundo apartado, se analiza la participación de las mujeres como autoras en las revistas de investigación top de contabilidad en el siglo XXI, específicamente entre 1960 y 2019, como posible fuente de las brechas de género existentes en la academia contable, en el tercer y cuarto apartado, pasando al contexto empresarial y al ejercicio profesional, por una parte, se analiza cómo los factores culturales pueden suponer una barrera para lograr una mayor diversidad de género en los consejos de administración y, por otra, se analiza el impacto que tienen las consejeras de administración en el desempeño empresarial y la moderación que ejercen los factores culturales en esta relación, para lo cual se utiliza una muestra de empresas entre 2006 y 2015. De esta manera, se espera cubrir un amplio rango temporal y diferentes vías del ejercicio de la mujer en la profesión contable.

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<sup>2</sup> Periodo del apogeo patriarcal y del mayor avance de las mujeres en el camino hacia la paridad en la contabilidad (Allen, 2014; Anderson, 2020; Capelo Bernal, Araújo Pinzón, & Funnell, 2018; Cooper, 2010; Emery, Hooks, & Stewart, 2002; Licini, 2011; Gordon, 2004; Honeyman, 2007; Smith Rosenberg, 1972; Tasca, 2004; Thane, 1992; Vickery, 1993; Virtanen, 2009; Walker & Llewellyn, 2000).

# INTRODUCTION

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The objective of this work is to show the existing gender disparity in accounting, at an academic and professional level, and to observe its relationship with historical, social and cultural factors that could have originated or influenced it.

In development of this objective, four studies were carried out with alternative and complementary approaches, both qualitative and quantitative, addressing a time horizon between the eighteenth and twenty first centuries, both in academic, professional and business context.

In the first one, a systematic review of the literature of papers related to the history of women's access to bookkeeping and accounting work between the eighteenth and twentieth centuries was carried out, mainly from academic journals linked to the Web of Science (WOS) database.

Based on the above, we synthetically identify, on the one hand, the process that women had to undergo to exercise accounting in the public sphere (outside the home) and, on the other, how the social context represented both an obstacle and a driver for their access to the labor and professional field.

This is due to the fact that society between the eighteenth and twentieth centuries was characterized by patriarchal values and principles that defined women as weak, incapable and subordinate, restricted to marriage, motherhood and housework, without legal, financial, labor or occupational identity, rights or capacity. Consequently, a large number of professions were classified as male, including accounting which, obeying phallus-centric, macho and misogynistic approaches and prejudices, considered the inclusion of women absurd and laughable, hindered their access to professional bodies and the development of bookkeeping and accounting tasks, subsequently those who were able to enter, suffered discredit, discrimination and exclusion. Although these conditions and limitations generated frustration and discomfort in women, in turn motivated them to group together, fight for equal rights and found in bookkeeping and accounting work, a way to overcome traditional stereotypes and roles of gender, achieved legal improvements, access to education, paid employment and personal improvement.

This tradition has been institutionalized in gendering and gendered practices in organizations and in professional practice that are still in force today. Previous research has shown that just being a woman hurts someone's status, pay, prestige, and promotion.

In this sense, the following studies dealt with the current situation of women and the gender gaps they face in two different contexts, academic and business.

The academic environment, as a heritage of the patriarchy that has historically characterized the profession, even in the twenty first century is characterized by being mainly masculine and relegating women in terms of achieving promotions, top positions, tenure, participation in research and salary improvements. On the other hand, given the centrality that has been given to papers in journals top tier for the granting of merits and benefits, the participation of women as authors in this type of research outputs was analyzed.

For which we use a sample of 1798 management and cost accounting papers and 1916 authors for the period between 1960 and 2019.

The results showed that the presence of women as authors, although it has improved over time, is still far from parity and that, within the sample of authors in general and within the most productive authors, their presence is a minority. In parallel, analyzing their participation as sole authors and strategic positions in the list of authors (first and last author), although it is on the rise, it is still very

low. Similarly, when observing the levels of citations by author, women's works have a lower level of impact and reference.

Although theoretically this type of results can be attributed either to organizationally legitimized discrimination schemes or to deficiencies in the human capital of women, regardless of the origin, the marked gender disparity that defines the accounting academy relegates women to being defined as a minority, with an almost invisible participation that makes teaching, research and accounting thinking homogeneous, uniform, endogamous and localized.

Passing the business scenario, in parallel, previous studies have found that, although there is progress in the participation of women in large corporations, they are still underrepresented in the high organizational ranks and suffer from a salary gap that hurts them. Likewise, it has been found that such gender gap may have its origin in the cultural characteristics of the setting.

To do this, based on Hofstede's cultural dimensions, this relationship was studied in a sample of 2185 companies between 2006 and 2015.

We find that the cultural characteristics of the context have an influence on the gender gap, but with a different effect. Thus, environments with a higher masculinity value promote a greater presence of women on boards of directors, while the long-term dimension represents a barrier for women on them.

On the other hand, globalization, the growing competitiveness of businesses and the lower rate of business survival have made an essential aspect for companies and for the boards of directors to be the improvement in business performance.

Therefore, the fourth study raises two main objectives, the first is to examine the impact of board diversity in terms of gender on firm performance measured by technical efficiency, and the second is to examine the moderating role of institutional context on this relationship according to the cultural dimensions of the country of origin.

In fulfillment of these purposes, several truncated regression models for panel data were used and data envelopment analysis was employed to examine efficiency as a performance measure.

We validate that the female directors decrease the firm's technical efficiency; however, cultural values as an institutional factor exert a moderating effect on the previous relationship. We confirm that the prevalence of a culture characterized by economically oriented values determines that female directors adopt male stereotypes; in other words, female directors of companies located in countries with higher economically orientated values adopt male stereotypes and have a significant and positive interest in improving efficiency.

In sum, the previous results indicate that, although the presence and position of women has improved over time, they have experienced a gender gap that has affected their progress, participation in high positions, their ability to promote and their remuneration, both in past centuries as in recent years, as well as in different accounting professional practice environments. Additionally, it can be seen that historical, social and cultural factors have had a clear influence on the access, progress and permanence of women professionally.

In addition to these results, from a practical point of view, this work (i) contributes to academic research and literature by presenting accounting as a phenomenon that reflects, responds to and perpetuates social and cultural patterns that obey patriarchal, macho, phallogocentric and misogynistic ingrained over time; (ii) by analyzing the composition and situation of the research and professional



community, it allows to raise awareness and understand the nature, scope and real and potential consequences of gender asymmetries with a view to finding new ways of addressing it to achieve concrete changes that allow achieve inclusion, diversity, equity, justice and pluralism; (iii) contributes to the business, educational, political and legal system since it can serve as input for the development of policies that promote and/or reinforce gender diversity and equality at the organizational, social and cultural level.

# INTRODUCCIÓN

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El objetivo del presente trabajo es evidenciar la disparidad de género existente en el quehacer contable, a nivel académico y profesional, y observar su relación con factores históricos, sociales y culturales que pudieran haber originado o influido en la misma.

En desarrollo de dicho objetivo se llevaron a cabo cuatro estudios con enfoques alternativos y complementarios, tanto de corte cualitativo como cuantitativo, que abordan un horizonte temporal entre los siglos XVIII y XXI, tanto en el contexto académico, profesional y empresarial.

En el primero de ellos se realizó una revisión sistemática de literatura de artículos relacionados con la historia del acceso de la mujer a las labores de teneduría de libros y contabilidad entre los siglos XVIII y XX, provenientes principalmente de revistas académicas vinculadas a la base de datos Web of Science (WOS).

A partir de lo anterior, identificamos de manera sintética por una parte el proceso que debió surtir la mujer para ejercer la contabilidad en la esfera pública (fuera del hogar) y por otra cómo el contexto social representó tanto un obstáculo como un impulsor para su acceso al campo laboral y profesional.

Lo anterior debido a que la sociedad entre los siglos XVIII y XX estaba caracterizada por valores y principios patriarcales que definían a la mujer como débil, incapaz y subordinada, restringida al matrimonio, la maternidad y las labores domésticas, sin identidad, derechos o capacidad legal, financiera, laboral u ocupacional. En consecuencia, un gran número de profesiones se catalogaron como masculinas, entre estas la contabilidad que, obedeciendo a enfoques y prejuicios falocéntricos, machistas y misóginos, consideró absurdo e irrisorio la inclusión de las mujeres, obstaculizó su acceso a los organismos profesionales y al desarrollo de labores de teneduría de libros y contabilidad, posteriormente aquellas que pudieron ingresar, sufrieron desprestigio, discriminación y exclusión. Si bien, estas condiciones y limitaciones generaron frustración y malestar en las mujeres, a su vez las motivó a agruparse, luchar por la igualdad de derechos y encontraron en la teneduría de libros y las labores contables, una forma de superar los estereotipos y roles tradicionales de género, lograron mejoras legales, acceso a la educación, empleo remunerado y la superación personal.

Esta tradición se ha institucionalizado en prácticas sexualizantes y sexualizadas en las organizaciones y en el ejercicio profesional que siguen vigentes en la actualidad. Investigaciones previas han puesto de manifiesto que el solo hecho de ser mujer perjudica el estatus, remuneración, prestigio y promoción de alguien.

En ese sentido los siguientes trabajos abordaron la situación actual de las mujeres y las brechas de género que enfrentan en dos contextos diferentes, el académico y el empresarial.

El entorno académico, como herencia del patriarcado que históricamente ha caracterizado la profesión, aún en el siglo XXI se caracteriza por ser principalmente masculino y relegar a las mujeres en cuanto al logro de promociones, altos cargos, antigüedad, participación en investigación y mejoras salariales. De otro lado, dada la centralidad que se le ha otorgado a las publicaciones en revistas top para el otorgamiento de méritos y beneficios, se analizó la participación de las mujeres como autoras en dicho tipo de productos de investigación.

Para lo cual utilizamos una muestra de 1798 artículos de contabilidad de costos y gestión y 1916 autores para el periodo comprendido entre 1960 y 2019.

Los resultados arrojaron que la presencia de las mujeres como autoras, aunque ha mejorado en el tiempo, aún dista mucho de la paridad y es que, dentro de la muestra de autores en general y dentro de los autores más productivos, su presencia es minoritaria. Paralelamente analizando su participación como autoras únicas y posiciones estratégicas en el listado de autores (primer y último autor) aunque va en ascenso aún es muy baja. De igual forma, al observar los niveles de citas por autor, los trabajos de las mujeres tienen un menor nivel de impacto y referencia.

Aunque teóricamente este tipo de resultados se pueden atribuir ya sea a esquemas de discriminación legitimados organizacionalmente o a deficiencias en el capital humano de las mujeres, sin importar el origen la marcada disparidad de género que define la academia contable relega a las mujeres a ser definidas como una minoría, con una participación casi invisible que hace que la enseñanza, la investigación y el pensamiento contable sea homogéneo, uniforme, endogámico y localizado.

Pasando el escenario empresarial, de manera paralela, estudios previos han encontrado que, aunque hay progreso en la participación de las mujeres en las grandes corporaciones, aún se encuentran infrarrepresentadas en los altos escalafones organizacionales y sufren de una brecha salarial que las perjudica. Así mismo se ha encontrado que tal brecha de género puede tener origen en las características culturales del entorno.

Para ello, partiendo de las dimensiones culturales de Hofstede, se estudió dicha relación en una muestra de 2185 empresas entre 2006 y 2015.

Encontramos que las características culturales del contexto tienen una influencia en la brecha de género, pero con un efecto diferente. Así, los entornos con mayor valor de masculinidad promueven una mayor presencia de mujeres en los consejos de administración, mientras que la dimensión de largo plazo representa una barrera para las mujeres en los mismos.

De otro lado, la globalización, la creciente competitividad de los negocios y la menor tasa de supervivencia empresarial han hecho que un aspecto neurálgico para las empresas y para los consejos de administración sea la mejora en el rendimiento empresarial.

Por tanto, el cuarto estudio plantea dos objetivos principales, el primero es examinar el impacto de la diversidad del consejo de administración en términos de género y el desempeño corporativo, medido por la eficiencia técnica, y el segundo es examinar el rol moderador que ejercen el contexto institucional sobre esta relación de acuerdo a las dimensiones culturales del país de origen.

Para ello, se utilizaron varios modelos de regresión truncada para datos de panel y se empleó el análisis envolvente de datos para examinar la eficiencia como una medida de desempeño.

Validamos que las consejeras disminuyen la eficiencia técnica de la empresa; sin embargo, los valores culturales como un factor institucional ejercen un efecto moderador sobre la relación anterior. Confirmamos que el predominio de una cultura caracterizada por valores de orientación económica determina que las consejeras adopten estereotipos masculinos; es decir, las consejeras de empresas ubicadas en países con mayores valores de orientación económica adoptan estereotipos masculinos y tienen un interés significativo y positivo en mejorar la eficiencia.

En suma, los anteriores resultados indican que, aunque la presencia y posición de las mujeres ha mejorado en el tiempo, ellas han experimentado una brecha de género que ha perjudicado su progreso, participación en altos cargos, su capacidad de promoción y su remuneración, tanto en siglos pasados como en años recientes, así como en diferentes entornos del ejercicio profesional contable. Adicionalmente, se puede ver que factores históricos, sociales y culturales han ejercido una clara influencia en el acceso, progreso y permanencia de las mujeres profesionalmente.

Adicional a estos resultados, desde un punto de vista práctico, el presente trabajo (i) aporta a la investigación y a la literatura académica al presentar la contabilidad como un fenómeno que refleja, responde y perpetúa patrones sociales y culturales que obedecen a enfoques patriarcales, machistas, falo céntricos y misóginos arraigados a lo largo del tiempo; (ii) al analizar la composición y situación de la comunidad de investigación y profesional contable, permite concienciar y comprender la naturaleza, alcance y consecuencias reales y potenciales de las asimetrías de género con miras a encontrar nuevas formas de abordarla para lograr cambios concretos que permitan alcanzar la inclusión, diversidad, equidad, justicia y pluralismo; (iii) aporta al sistema empresarial, educativo,

político y legal ya que puede servir de insumo para el desarrollo de políticas que promuevan y/o refuercen la diversidad e igualdad de género a nivel organizacional, social y cultural.

# CHAPTER ONE

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## 1. Women in accounting: A historical review of obstacles and drivers on a patriarchal and classist path

### Summary

This document, through a systematic review of academic papers, presents a comprehensive and synthetic proposal that compiles, on the one hand, the prevailing macho, misogynistic and phallogocentric obstacles and stereotypes at the family, social and work level between the eighteenth and twentieth centuries and that had an impact on the accounting profession, hindering the access and evolution of women in it. In contrast, a series of factors are presented that drove the training and entry of women to bookkeeping and accounting tasks, which, in turn, served as a way to break stereotypes and traditional gender roles, achieve legislative improvements and the incursion of women into the paid labor market. Besides the above-mentioned elements, it is important to take into account the class perspectives that, under promises of well-being and economic status, idealized a model of a woman whose realization was exclusively at the domestic and family level.

**Keywords:** woman, class, domesticity, accounting, history, patriarchy

**JEL:** B54; J16; M41; N01

**Paper status:** Accepted in Spanish Accounting Review, journal indexed in Journal Citation Reports with 2.324 Journal impact factor and ranked in the “Business, Finance” category, position 58 out of 108, quartile 3 in 2020.

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## Mujeres en la contabilidad: Una revisión histórica de obstáculos e impulsores en un camino patriarcal y clasista

### Resumen

Este documento, a través de una revisión sistemática de artículos académicos, presenta una propuesta íntegra y sintética que recopila, por una parte, los obstáculos y estereotipos machistas, misóginos y falocéntricos imperantes a nivel familiar, social y laboral entre los siglos XVIII y XX que repercutieron en la profesión contable, obstaculizando el acceso y evolución de las mujeres en la misma. En contraposición, se presentan una serie de factores que impulsaron la formación e ingreso de las mujeres a las labores de teneduría de libros y contabilidad, que, a su vez, sirvieron como una vía para romper los estereotipos y roles tradicionales de género, lograr mejoras legislativas y la incursión de las mujeres en el mercado laboral remunerado. Además de los elementos ya mencionados, es importante tener en cuenta las perspectivas de clase que, bajo promesas de bienestar y estatus económico, idealizaron un modelo de mujer cuya realización era exclusivamente a nivel doméstico y familiar.

**Palabras clave:** Mujer, clase, domesticidad, contabilidad, historia, patriarcado

**JEL:** B54; J16; M41; N01

**Estado del artículo:** Aceptado en la Revista de Contabilidad, revista indexada en Journal Citation Reports con un factor de impacto de 2.324 y clasificada en la categoría “Business, Finance” en la posición 58 de 108, cuartil 3 en 2020.

**Previsualización:** Uribe Bohorquez, Maria Victoria and García-Sánchez, Isabel-María, Women in accounting: A historical review of obstacles and drivers on a patriarchal and classist path (Forthcoming). Spanish Accounting Review, Available at SSRN: <https://ssrn.com/abstract=3918879>

## Introduction

The literature seems conclusive in that the history of business and accounting has been told in an incomplete and gendered way due to different factors, including the language used and the omission and undervaluing of the role of women in this field. Thus, it is possible to observe the use of a language that, on the one hand, assumes a masculine orientation as neutral, for example when referring to businesspeople as “businessmen” or “tradesmen”, and where, on the other, consequently, hierarchically according to sex, for example, the meaning of these words in the case of men is literal, but to women, the term “businesswomen” refers to secretaries, stenographers and file clerks (Gamber, 1998). Even the titles of the texts of accounting and business emphasize this male orientation, examples being those cited by Edwards (2011), *The Newest Young Man's Companion* (Wise, 1754) and *The Man of Business* (Perry, 1774), or in *The Merchants Mirrour* (Dafforne, 1635), which includes the title *Directions for the Perfect Ordering and Keeping of his Accounts*, underlining “he” or “his” as the nature of the accounting profession.

Similarly, the texts omit the participation of women in accounting history, do not faithfully represent their contribution to disciplinary work or have modified figures to minimizing their intervention (Roberts, 2013; Walker, 2008).

Nevertheless, there are texts that show that since before Christ or in Ancient Greece, women kept records, budgeted and generally played key roles in household finances, family businesses or in scenarios that did not imply a specific recognition (Kirkham & Loft, 2001; Pomeroy, 1994 cited in Walker & Llewellyn, 2000). In this sense, the academic literature identifies several successful women between the nineteenth and twentieth centuries that being pioneers in the progress of professionalization, they are considered key to opening it (Broadbent & Kirkham, 2008; Cooper, 2001; 2008; Gamber, 1998; Haynes, 2017; Jeacle, 2011; Kirkham & Loft, 1993; Lehman, 1992; Loft, 1992; Ried, Acken, & Jancura, 1987; Roberts, 2013; Shackleton, 1999; Silverstone & Williams, 1979; Spruill & Wootton, 1995; Walker, 2011)

Over time, these women and other anonymous women have had to face stereotypical characterizations about their intrinsic nature that defined them as weak, dependent and emotional since their virtue was determined by submission, sacrifice, dependence, obedience and service to the whims and desires of men and to the domestic model, which focuses on family needs, as the sole purpose of female life. As a result, they have faced a model of separate spheres, where they should be confined to the home (as a private sphere) and men were the ones who went out to work in the market (public sphere) and were the breadwinners (Carrasco & Rodríguez, 2000; Cooper, 2010; Escobar-Andrae, 2017; Gamber, 1998; Hopwood, 1987; Loft, 1992; Minoglou, 2007; Schmidt & Van Nederveen Meerkerk, 2012; Smith-Rosenberg, 1972; Vickery, 1993; Virtanen, 2009; Walker, 1998).

Specifically when trying to enter accounting, as a male discipline and profession, women have encountered, on the one hand, the macho beliefs and paradigms of society, which demonized their feminine nature, sought to return them home, or that they worked either in professions well seen by the patriarchy (being an extension of household chores, such as cleaning, laundry, teaching, secretarial or nursing work), or in activities that represented a lower rank, hierarchy, rigor, salary, decision-making capacity or contribution within the same discipline (administrative work vs. bookkeeping vs. accounting); on the other hand, they have encountered different closure regimes, and legalistic, credentialist or separatist strategies that have sought to exclude them from the profession (Broadbent & Kirkham, 2008; Edwards & Walker, 2007; Haynes, 2017; Kirkham & Loft, 1993; Kwolek-Folland, 2007; Minoglou, 2007; Roberts & Coutts, 1992; Silverstone & Williams, 1979; Thane, 1992; Walker, 2003a; Wootton & Kemmerer, 1996, 2000).

This situation worsens when social classes come into play, since this patriarchal model promised, to the upper and middle class, potential economic, social and hierarchical benefits (Allen, 2014; Kerber, 1988; Kirkham & Loft, 1993; Licini, 2011; Peiss, 1998; Roberts, 2013; Schmidt & Van Nederveen Meerkerk, 2012; Smith-Rosenberg, 1972; Vickery, 1993; Zucca-Micheletto, 2013).



Despite the aforementioned scenario, which leaves consequences to this day at a social level and specifically in the accounting profession, gender issues have received little attention in research and the research carried out takes place in narrow spatial and temporal frameworks, which, although they constitute valuable and detailed contributions, prevent having a comprehensive overview of women in the discipline and their professionalization over time (Anderson, 2020; Carrera, Gutiérrez, & Carmona, 2001; Haynes, 2017; Kirkham & Loft, 2001; Komori, 2007; Licini, 2011; Roberts, 2013; Walker, 2008).

Therefore, the purpose of this work is to synthesize the history of women in accounting during the eighteenth and twentieth centuries, pointing out how the patriarchal context of the moment represented an obstacle to their advancement and, in turn, how the incursion of women into accounting tasks empowered and served as a bridge for their inclusion in the labor and professional market. The above with the purpose, on the one hand, of contributing to the accounting field in two senses, the first with a view to improving scientific objectivity, from an alternative perspective to the traditional history told from the male lens that is the predominant one and of greater dissemination, and the second with a view to giving a general and holistic vision of the struggle that women followed in the profession, summarizing information sources that study specific contexts and time frames; and on the other hand, contribute to gender studies, highlighting accounting as a source of social transformation and as a key instance for both the oppression and liberation of women.

In compliance with the foregoing, a review of academic papers will be carried out ranging from the eighteenth to the twentieth century, a period of time in which the patriarchal apogee is located, there is the greatest evolution of the accounting and in turn the greatest advance of women on the way to parity (Allen, 2014; Anderson, 2020; Capelo-Bernal, Araújo-Pinzón, & Funnell, 2018; Cooper, 2010; Emery, Hooks, & Stewart, 2002; Gordon, 2004; Honeyman, 2007; Licini, 2011; Smith-Rosenberg, 1972; Tasca, 2004; Thane, 1992; Vickery, 1993; Virtanen, 2009; Walker & Llewellyn, 2000).

To this end, this document is structured as follows. In the first section will present the methodology and procedure followed for the search and selection of documents. Subsequently, the process that women had to undergo to enter and stay in the accounting in the public sphere will be addressed. Based on the above, the third and fourth sections, respectively, will make explicit the obstacles that women have historically faced both privately (within the home) and publicly (outside the home) to their access to the labour market and to accounting activities, as well as the factors that have triggered a greater involvement of women in bookkeeping and accounting at professional level. Finally, the work will close with some conclusions.

## **1.1. Methodology**

The search for was carried out in journals linked to the Web of Science (WOS) database, following two stages: at first, general search words were used and the selected papers, in a second stage, were filtered with words specific to the subject matter of this work.

<b>Journal subject</b>	<b>Keywords</b>
Accounting	Search words: woman, women, feminism, gender, women's history Filter criteria: History Discarded papers: History prior to the 19th century Papers found: 49
Business History	Search words: Accounting, Accountant, woman, women, feminism, gender Filter criteria: Female accountant Discarded papers: History prior to the 19th century, History of the evolution of accounting Papers found: 17
Gender studies	Search words: Accounting, Accountant, Business, Finance Filter criteria: History Discarded papers: History prior to the 19th century, History of women in other disciplines Papers found: 26

Subsequently, from the selected papers, through citations and/or references, we identify another number of papers that are aligned with the purpose of this work and that obey the following criteria:

<b>In WOS</b>	<b>From another databases</b>
Journal areas: Organizations, human resources, sociology, history (general) Papers found: 6	<ul style="list-style-type: none"> <li>• Journal area: Accounting Papers found: 14</li> <li>• Journal areas: Human resources, history and accounting education Papers found: 4</li> </ul>

Thematically, in general terms, we can group the consulted papers as follows:

Century	Thematic		
	Patriarchal principles	Access to education, business, occupations and the professions	Access to the accounting profession
XVIII	Kerber, 1988; Maynes & Waltner, 2001; Schmidt & van Nederveen Meerkerk, 2012; Vickery, 1993	Bodkin, 1999; Carlos, Maguire, & Neal, 2006; Freeman, Pearson, & Taylor, 2006; Hernández, 2013; Honeyman, 2007; Laurence, 2006; Minoglou, 2007; Perriton, 2017; Wiskin, 2006; Zucca Micheletto, 2013	Burrell, 1987; Capelo-Bernal, Pinzón-Arújo, & Funnell, 2018; Edwards, 2011; Gallhofer, 1998; Hartigan-O'Connor, 2005; Kirkham & Loft, 2001; Rico-Bonilla, 2020; Ried, Acken, & Jancura, 1987; Walker, 2008; Walker & Llewellyn, 2000
XIX	Augustine-Adams, 2002; Boris, 2004; Gordon, 2004; Kerber, 1988; Lerner, 1975; Maynes & Waltner, 2001; Mead, 2000; Norton, 1994; Schmidt & van Nederveen Meerkerk, 2012; Smith-Rosenberg, 1972; Vickery, 1993; Welter, 1966	Anderson, 2020; Bodkin, 1999; Evans & Rumens, 2020; Escobar Andrae, 2017; Folbre, 1991; Gamber, 1998; Gálvez Muñoz & Fernández, 2007; Honeyman, 2007; Freeman, Pearson, & Taylor, 2006; Grantham, 2012; Kwolek-Folland, 2007; Maltby & Rutterford, 2006; Minoglou, 2007; Muñoz Abeledo, 2012; Perriton, 2017; Wren, 1983; Zelizer, 1989	Carnegie & Walker, 2007a; 2007b; Czarniawska; 2008; Cooper, 2010; Cooper & Taylor, 2000; Dambrin, & Lambert, 2008; Edwards & Walker, 2007; Gallhofer, 1998; Kirkham & Loft, 1993; Komori, 2007; Licini, 2011; Hartigan-O'Connor, 2005; Rico-Bonilla, 2020; Roberts, 2013; Thane, 1992; Virtanen, 2009; Walker, 1998; 2003a; 2006; 2008; 2011; Walker & Carnegie, 2007; Walker & Llewellyn, 2000; Wootton & Kemmerer, 1996
XX	Allen, 2014; Augustine-Adams, 2002; Boris, 2004; Gordon, 2004; Hareven, 1991; Mead, 2000; Norton, 1994; Tasca & Hilwig, 2004	Anderson, 2020; Carrasco, & Rodríguez, 2000; Croucher & Økland, 2019; Crowley, 2016; Evans & Rumens, 2020; Gálvez Muñoz & Fernández Pérez, 2007; Heineman, 2000; Honeyman, 2007; Hudson-Richards, 2015; Jackson, 2000; Lee Cooke & Xiao, 2014; Maltby & Rutterford, 2006; Minoglou, 2007; Nordlund Edvinsson, 2016; Peiss, 1998; Phillips & Taylor, 1980; Scranton, 1998; Sohn, 2015; Summerfield, 1993; Wilson, 1999; Witz, 1990; Zelizer, 1989	Adams, & Harte, 1998; Barker, & Monks, 1998; Black, 2006; Broadbent, & Kirkham, 2008; Carnegie & Walker, 2007a; 2007b; Carrera, Gutiérrez, & Carmona, 2001; Ciancanelli, Gallhofer, Humphrey, & Kirkham, 1990; Dambrin & Lambert, 2008; Gallhofer, 1998; Cooper, 2001; 2010; Emery, Hooks & Stewart, 2002; Hantrais, 1995; Haynes, 2017; Hermanson & Ransopher, 1985; Hopwood, 1987; Ikin, Johns, & Hayes, 2012; Jeacle 2011; Kirkham, 1992; Kirkham, & Loft, 1993; Komori, 2007; 2012; Komori & Humphrey, 2000; Llewellyn & Walker, 2000; Loft, 1992; McKeen & Richardson, 1998; Mutchler, Turner, & Williams, 1986; Paisey & Paisey, 1995; Pillsbury, Capozzoli, & Ciampa, 1989; Richardson, 1923; Rico-Bonilla, 2020; Roberts, & Coutts, 1992; Shackleton, 1999; Silverstone &

			Williams, 1979; Slocum & Vangermeersch, 1996; Spruill & Wootton, 1995; Thane, 1992; Walker, 2003b; 2006; 2008; 2011; 2015; Walker, & Carnegie, 2007; Walker, & Llewellyn, 2000; Wootton, & Kemmerer, 1996; 2000; Wootton, & Spruill, 1994
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From the aforementioned sources of information, particularities of contexts or specific moments were not taken into account and those that had a parallel historical thread and that allowed us to fulfill the purpose of this document were synthesized. The following sections will address the process that women took to enter the accounting profession, as well as the obstacles and drivers they faced in this patriarchal and classist path.

## 1.2. Women’s access to the accounting profession

During the patriarchal era, women were given a single goal in life, namely to catch a man and hold him for life, which was achieved through motherhood, spirituality and purity, caring, love, sweetness and joy displayed in the home and housework (Vickery, 1993; Walker, 1998; Welter, 1966). Therefore, women who studied, emancipated themselves, sought to achieve political rights and independence, who performed professionally or sought to do so, were classified as strange, neurotic, unhappy, unnatural, “non-sexual”, “unladylike” and “unwanted” (Friedan, 1963 cited in Cooper, 2001; Murray, 1913 cited in Kirkham & Loft, 1993).

This occupationally and professionally translated into women facing legal, union, socio-economic, constitutional, cultural and professional prejudices, opposition, restrictions and exclusions. Misogyny and phallocentrism at social, financial and labour level were reinforced by class paradigms, resulted in the practically exclusive dominance of men in occupations. Thus, the job opportunities available to women were few and far between and were mainly achieved by middle-class women (Cooper, 2001; Hantrais, 1995; Kirkham & Loft, 1993; Lehman, 1992; Thane, 1992; Walker, 2003b; Wootton & Kemmerer, 1996).

Accounting was not a field alien to this panorama, since patriarchal principles and beliefs at the social level materialized in obstacles and restrictions imposed on women to carry out tasks of this nature and to obtain a place in the profession, which was took place through the development of different stages that are described below.

### 1.2.1. Clerical work

In the first instance, women passed from the domestic and patriarchal yoke to secretarial and clerical tasks. There is evidence from single-entry records showing that from the early eighteenth century some women used accounting as a tool for merchants. It is also known that in Greece during the nineteenth century some women participated as unofficial bookkeepers. However, accounting job opportunities for “spinster” women (a small number were married) were restricted to the upper class and those who mainly worked in family businesses. In most cases, women were still limited to a clerical or bookkeeping role, with menial, mechanical and low-paid functions (in many cases it was only bed and food); their place was the back room or hidden and they represented 1% of employees (Haynes, 2017; Kirkham & Loft, 1993; 2001; Lehman, 1992; Minoglou, 2007; Walker, 2003a).

### 1.2.2. From clerical work to bookkeeping

During the First World War, women left behind housework and began to replace men who had temporarily left the workforce while facing battle. There was a shortage of personnel to carry out clerical and typing functions, so the women replaced their husbands so that when they returned there would be no resistance. To do this, the women received training dealing with simple interest, cost of

goods, trade discounts, invoicing, and principles of double-entry bookkeeping (Cooper, 2010; Evans & Rumens, 2020; Kirkham & Loft, 1993).

The accounting firms began to depend on the clerical work of women and this motivated to enroll them in accounting functions (temporarily), albeit limited and with low status to differentiate them from the ideal male professional accountant (Evans & Rumens, 2020). Their hierarchy, for example, was evident in the names of the positions (Walker, 2008), which included first the gender and then the occupation: “*women working in accountants’ offices*”, “*women clerks*”, “*lady assistants*” and “*lady audit clerks*” (Kirkham & Loft, 1993).

However, at the end of the war, discriminatory practices were re-established: ex-military personnel, having returned as heroes, were helped with the payment (or exempting) of exam courses and favourable conditions to facilitate their return to work. In addition, they forced women to return to the home and to traditional occupations; or in the best of cases they made them downgrade and return to typing or clerical tasks (Cooper, 2010; Evans & Rumens, 2020; Kirkham & Loft, 1993; Walker, 2008). The solution that the government gave to these destitute women was the creation of courses in household management (Walker, 2003b). They went from being “our girls” who helped win the war to being unfeminine, unpatriotic, selfish and evil for leaving the warriors and breadwinners without work (Lehman, 1992; Zimmeck, 1984).

In the interwar years there was a patriarchal counterattack, a resurgence of domestic ideology, and the concept of a marriage bar<sup>3</sup> appeared, but at the same time feminist movements remained and demanded their entry into professions. There was a very small increase in the number of women who worked for accounting firms and who were linked to professional organizations, came from the elite and had professional connections with high positions. By hiring women, these organizations could show themselves strategically as inclusive (tokenism), but in practice they were still male entities (Evans & Rumens, 2020; Shackleton, 1999; Thane, 1992; Walker, 2003a; 2003b; Zimmer, 1988).

Although before the beginning of the nineteenth century, bookkeeping and accounting were not clearly segregated, at the end of this period, once clerical work and bookkeeping began to feminize, they were established as different occupations. The accountant was considered a gentleman, professional, guardian and/or supervisor of records and financial statements, creator of accounts, provider of a wider range of information (costs, capital, operating ratios, budgets, forecasts, performance measures), auditor, expert in analysing business and information and preparing statements for management, representative of shareholders’ interests and supervisor of bookkeepers. Numerically they had less presence and they had defining themselves as an exclusive and elite occupation, and therefore male. It had nothing to do with the aspirations, skills, social status, rewards, influence, importance and power of bookkeeping, which was a simple occupation, clerical, administrative, white collar (non-professional), servile, routine and mechanical; it only registered financial information, for which only patience, care and repetitive skills were required, but little analytical capacity, thus it did not represent great value and therefore could be assigned to women. When the participation of women increased, most did so as bookkeepers or, in the best of cases, in staff positions, not as professional public accountants (Edwards & Walker, 2007; Kirkham & Loft, 1993; Lehman, 1992; Walker, 2003a; Wootton & Kemmerer, 1996, 2000).

### **1.2.3. Bookkeeping and new accounting responsibilities**

During the Second World War, due to the fact that many young men went directly from high school to the armed forces (without training), and in other cases they left their jobs to go into combat, there was a drop in the accounting workforce (Wootton & Kemmerer, 2000). This translated into an increase in the paid labour participation of women; however, they did it as substitute labour and under subordinate structures (Crompton & Sanderson, 1986; Loft, 1992; Thane, 1992; Walker, 2003b, 2008; Silverstone & Williams, 1979). By performing statistical analyses, office management and accounting work, they challenged the belief that they were not suitable for these tasks (Haynes, 2017).

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<sup>3</sup> It refers to the feasibility that women had to work, but only until marriage, given that afterwards it was illegal to do so (Barker & Monks, 1998; Thane, 1992; Whiting & Wright, 2001).

From this moment on, the period of labour bonding extended from the stage prior to marriage to the stage prior to motherhood (Thane, 1992; Whiting & Wright, 2001).

Once the war had ended, men who returned and this resulted in a later glut of accountants and companies that chose to dispense with women, forcing them to renounce their achievements and prominence in accounting to return home (Walker, 2003b; Whiting & Wright, 2001; Wootton & Kemmerer, 2000). In the case of not doing so completely, they were reduced to a part-time shift, they were demoted to other types of lower-level tasks, and those who resisted were considered selfish, unfeminine and unpatriotic (Jeacle, 2011; Lehman, 1992).

The differences with men were extreme in terms of their proportion, salary, access to high-level positions and entry into the most prestigious and best-paid sectors. Employers argued that women and men would be paid the same if they did the exact same thing, but that would rarely happen as men were more efficient, flexible, ambitious, strong, took less time off and were less tolerant of monotonous work; they had greater commitment over time and therefore it was worth training them (Thane, 1992). Despite the fact that many firms considered that “*the feminine virtues of patience, perseverance, attention to detail and accuracy, on top of sound training in accountancy, would fit them admirably for such career*” (Journal of Accountancy, 1942 cited in Lehman, 1992), their work was extremely well, fulfilled their working hours, they had been accepted by clients, tested inventories and travelled without problems (Ried, Acken, and Jancura, 1987), the arguments, already mentioned, were reiterated against them: that is to say, the resistance of the clients, their impediment to share jobs with men and, worse still, to direct them, their inability to travel, their naivety, the waste of time and money that represented training them because it took too long or they would go home early, as well as restrictions on the type and amount of work they could do (Gildea, 1952 cited in Lehman, 1992; Quire, 1947).

In the mid- twentieth century, due to mechanization and computerization, bookkeeping became dehumanized and began to be integrated as women’s work (Cooper & Taylor, 2000); however, the professional levels of accounting remained a reserve of men (Haynes, 2017; Roberts & Coutts, 1992). After this, the decrease in family size, improvement in education, economic needs, changes in social attitudes, the introduction of legislation against discrimination, the increased demand for goods and services, the shortage of qualified personnel contributed to a change in the treatment of women and an increase in their labour participation (Peiss, 1998; Ried, Acken, & Jancura, 1987; Whiting & Wright, 2001; Wootton & Kemmerer, 2000). However, the few women accountants were considered strange by both men and women (Loft, 1992). In 1965, Arthur Anderson & Co. hired its first women staff accountant (Wootton & Spruill, 1994).

In the 70s and 80s, the number of women who obtained accounting degrees and who were hired by accounting firms increased, reaching 50% of the accounting workforce in the United States and obtained more than 53% of the titles in this field in 90s. But despite the numerical increase, there were disproportionate differences in recruitment, promotion, training, hierarchy, responsibilities, influence and salaries in relation to men (Adams & Harte, 1998; Haynes, 2017; Ciancanelli, Gallhofer, Humphrey, & Kirkham, 1990; Cooper & Taylor, 2000; Silverstone & Williams, 1979; Wilson, 1999; Wootton & Kemmerer, 2000).

### **1.3. Obstacles on the path to the accounting profession**

The access of women to the accounting profession is conditioned by a set of private and public obstacles that they have had to face: conditioning factors linked to stereotypes, prejudices and legal and financial limitations.

#### **1.3.1. Private obstacles**

##### **1.3.1.1. Stereotypes, roles and conceptions of patriarchal societies**

The patriarchal system is defined by male primacy. Men are considered worthy, strong, ambitious, powerful and suitable for competition, for hard work, and thus their natural sphere is the public one

(outside the home). Their mind was powerful and active, ready to learn. Being endowed with reason and a talent for writing they were worthy of a vocation in civil society, law, politics, scholarship, philosophy, science or in war. Although they were considered the owners of the home, they were only responsible for the moral health and education of their wife and children and exercised a figure of control, protection and authority (Capelo-Bernal, Araújo-Pinzón, & Funnell, 2018; Cooper, 2010; Thane, 1992; Virtanen, 2009; Walker, 1998).

Women were defined as: affectionate, weak, shy, passive, doubtful, fragile, vulnerable, trusting, emotional, impulsive, sensitive, pure, delicate, sentimental, hasty, subordinate, obedient, selfless, pious, self-sacrificing, in need of a protector, physically, intellectually and morally inferior; their power, wealth and being was love, they were fit only for light work, eternal children, almost invalid (Capelo-Bernal, Araújo-Pinzón, & Funnell, 2018; Cooper, 2010; Smith-Rosenberg, 1972; Vickery, 1993; Walker, 1998; Welter, 1966). They were encouraged to restrict their ego, to have a low self-evaluation, and to wish not for their success but for that of men (Smith-Rosenberg, 1972). In general, society (including feminists) declared that the nature of women made them want to become mothers, and to suggest otherwise was monstrous (Welter, 1966).

The epicentre of the domestic ideal was the home as a private sphere, the destiny and reserve of women, where they could display patience, mercy and sweetness, they felt useful, accomplished and influential and where they repaid male administration and protection with deference, cleanliness, care, comfort and joy, as a way to retain them so that they were not forced to seek happiness elsewhere (Capelo-Bernal, Araújo-Pinzón, & Funnell, 2018; Honeyman, 2007; Tasca & Hilwig, 2004; Vickery, 1993; Walker, 1998; Walker & Llewellyn, 2000; Welter, 1966).

#### **1.3.1.2. Legal and financial disability**

At legal level, once women married, they passed from the subordination of their father (who decided whom his daughter married, according to social status) to the subordination of their husband (Virtanen, 2009), and lost their existence and individual and independent legal identity, which was transferred to men, who became their legal authority (Walker, 1998).

These patriarchal postulates resulted in the hierarchization of the sexes and the paradigm of separate spheres that associated, on the one hand, the public, paid work outside the home, the economy, the market and man defined as *dynamic, focused on their own economic interests and competition* (Folbre, 1991), and on the other, the private, home, the moral, domestic, maternal, feminine and unpaid work (Escobar-Andrae, 2017; Gamber, 1998; Minoglou, 2007; Schmidt & Van Nederveen Meerkerk, 2012; Vickery, 1993), that is, the market as the antithesis of women (Capelo-Bernal, Araújo-Pinzón, & Funnell, 2018; Gamber, 1998).

Industrialization and capitalism radicalized the division between the public and private spheres and instituted the model of man as breadwinner, worker, producer, supporter, boss and protector of the family. Thus, men were positioned as rector of the rules of the game at an emotional and financial level in his family. Men had power, among other aspects, to evaluate a possible allowance or income subsidy for their wives (Carrasco & Rodríguez, 2000; Folbre, 1991; Kerber, 1988; Kirkham & Loft, 1993; Llewellyn & Walker, 2000; Schmidt & Van Nederveen Meerkerk, 2012; Thane, 1992; Vickery, 1993; Zelizer, 1989).

Since it was assumed that women, being less ambitious, rational, valuable and confined to domestic life (Walker, 1998, 2003b), were not only considered unsuitable for financial and business affairs (Honeyman, 2007; Gamber, 1998), but also economically dependent and incompetent (Licini, 2011). Likewise, although with different scopes depending on social class<sup>4</sup>, they could only be beneficiaries

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<sup>4</sup> In the working class, since the amount of money basically represented household maintenance expenses, women were able to manage and control the money, as well as determine the financial policies of the family. Some men even gave their wages to their wives or at least the amount they considered necessary for household spending, while in the middle and upper classes, serious money was considered a matter of control, ownership, dominance, discretion of use and male ownership (Zelizer, 1989)

of their husbands; they were restricted to having money, in many cases insufficient, for the maintenance of the home and family, but no access to a personal fund (Zelizer, 1989).

On the other hand, it was spread and it was assumed that their nature made them financially weak, emotional, frivolous, selfishly wasteful, irresponsibly extravagant, vain, staunch consumers; their role and happiness was to spend; they were unable to live within the allowance, to save, and even less to generate income; their inexperience and financial ignorance did not allow them to have a concept of the value of money (Carnegie & Walker, 2007b; Walker, 1998, 2003b; Walker & Carnegie, 2007). In contrast to these social demands, the patriarchy defined the ideal woman as prudent and solvent (Carnegie & Walker, 2007b), who spent the least (Capelo-Bernal, Araújo-Pinzón, & Funnell, 2018) and sacrificed her wishes (Walker, 1998).

The patriarchal system, the definitions of masculinity and femininity, the ideology of domesticity and the separate spheres were bourgeois ideas and carried class implicit considerations, therefore their apogee was in the middle classes; however, it constituted an ideal for the lower classes, workers and slaves that they believed that it would ensure their passage into the middle class (Allen, 2014; Kerber, 1988; Licini, 2011; Peiss, 1998; Schmidt & Van Nederveen Meerkerk, 2012; Smith-Rosenberg, 1972; Vickery, 1993).

### **1.3.2. General public obstacles**

Likewise, women faced preconceptions about their behaviour outside the home that, ultimately, limited and discredited their connection to the labour market.

#### **1.3.2.1. Preconceptions about women in the public sphere**

Since they were seen as elegant ornaments, physically, intellectually and emotionally incapable, and their mind was considered passive and subjective, which assigned them tasks that were not based on knowledge, that is, the family and the home, and excluded them from public responsibilities, work, access to science, philosophy or state affairs. It was assumed that professional life would distance them from feminine virtue (Cooper, 2010; Hegel, 1965 cited in Virtanen, 2009; Hegel, 1952 cited in Cooper, 2010; Kirkham & Loft, 1993; Lehman, 1992; Walker, 2003b).

This model of domesticity and the stereotype of a “lady” (not the simple housewife) became the ideal of aristocratic society and Victorian culture, finding its apogee in the middle and upper classes who defended traditional values and motivated the female sex to abandon the jobs they previously performed; meanwhile simple “women” who were poor or working class were considered physiologically damaged, and given that they could not access that lifestyle, and despite legal, union, political and business restrictions, in addition to housework, it was desirable for them to work, but in jobs in lower occupational categories, with little qualification, outside of official labour agreements, with low wages, and they were not even considered real workers (Carrasco & Rodríguez, 2000; Folbre, 1991; Honeyman, 2007; Kerber, 1988; Kirkham & Loft, 1993; Thane, 1992; Zucca-Micheletto, 2013).

Later, when the labour market opened up, women were forced to join professions that were traditionally classified as female, for example cleaning, laundry, teaching, secretarial work or nursing (Kirkham & Loft, 1993; Silverstone & Williams, 1979; Wootton & Kemmerer, 2000). While occupations such as law, medicine, business and accounting, among others, kept women on the sidelines and defined themselves as male terrain (Cooper, 2010; Escobar-Andrae, 2017; Gálvez-Muñoz & Fernández-Pérez, 2007; Hermanson & Ransopher, 1985; Hudson-Richards, 2015; Lehman, 1992; Norton, 1994; Roberts & Couts, 1992; Sohn, 2015; Thane, 1992; Walker, 2011).

#### **1.3.2.2. Discrediting female work**

In some professions women have been limited to the basic, manual and routine “dirty work”, bringing their subordinate condition to the workplace. Thus, occupations and positions in organizations have been segregated and hierarchical according to gender (Acker, 1990; Phillips & Taylor, 1980; Roberts & Couts, 1992).



Likewise, when occupations become more qualified and require longer periods of training, they have tended to become masculinized, and conversely as professions become feminine (the presence of women increases or begins to achieve ownership and/or leadership roles), tasks are simplified, mechanized and deskilled, they become subordinate, lose status, remuneration and autonomy (Czarniawska, 2008; Kirkham & Loft, 1993; Kwolek-Folland, 2007; Roberts & Coutts, 1992; Thane, 1992).

### **1.3.3. Public obstacles in the accounting profession**

When women tried to enter the profession, they encountered barriers related to prejudices from male accountants and professional organizations.

#### **1.3.3.1. Access to education**

One of the main barriers that prevented the entry of women into clerical, commercial, bookkeeping and accounting work was their training. There was great resistance to women's access to higher education. The first advance in the matter occurred with laws that allowed universities to grant degrees to women, but did not oblige them to do so (Kirkham & Loft, 1993).

However, to be linked to accounting firms a university degree was required, but it was the same educational institutions that sought to dissuade them in this regard, preventing them from taking courses or forcing them to do so at night (Wootton & Kemmerer, 2000) because they knew the difficulties that they would face later in the labour market (Ried, Acken, & Jancura, 1987).

Even in the 1960s there were prejudices against women in the university environment (Thane, 1992), so it is not surprising that in the United States the percentage of accounting students and graduates was around 4% of the population. This was also explained by the few incentives they had: only 0.94% of job offers accepted women, 3% of CPAs were women and there were firms that had never hired a woman for their staff (Wootton & Kemmerer, 2000).

#### **1.3.3.2. Male prejudices about the incompatibility of women and the accounting world**

Although women were considered fit for domestic accounting and engineering and with skills in handling and managing cash, but only in the domestic sphere since their delicacy, fragility and incapacity made them unsuitable for them in the public sphere (Kirkham & Loft, 1993; Llewellyn & Walker, 2000; Walker, 1998).

Thus, the main problem that women had to face to gain acceptance in the accounting profession was male prejudices, such as: (i) the difference between the "governed writing" typical of adherence to the rules and cognitive balance of men and the irregular and unleashed "rebellious writing" of women in the numerical representations of the economy and accounting; (ii) female incompatibility with, and inexperience (even dislike) of, the public world, affairs and responsibilities; (iii) the *remote and unpleasant* presence as well as vulnerability and incompatibility of women (even more so when they were mothers) in a world that, being public and serious, was masculine; (iv) physical, physiological, mental, intellectual, educational, rational, analytical and skill incapacity of women, as well as by their lack of assertiveness, self-confidence, resistance, efficiency, aggressiveness, competitiveness, long-term commitment and interest in occupations such as accounting<sup>5</sup>; (v) their impulsive, naive, emotional, sentimental and hasty essence that hampered them from exercising severe and inflexible justice or a fair judgment; (vi) the incompatibility between the natural education that they must receive in housework and their social life on the one hand, and being in an office on the other; (vii) their incursion would generate a socio-economic displacement in the fact that men had to perform domestic duties for which they were not suitable; (viii) their participation would lead to overcrowding, greater competition and, therefore, to a reduction of opportunities, status, rights and remuneration of man accountants and this would affect the ability to support the household financially (Cooper, 2010; Dambrin & Lambert, 2008; Emery, Hooks, & Stewart, 2002; Evans & Rumens, 2020; Haynes,

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<sup>5</sup> It was even stated that "[t]he profession of accountant, or even mere bookkeeper, is one for which, perhaps, ten in a thousand girls are mentally qualified to think themselves suited" (The Accountant, 1900 cited in Kirkham & Loft, 1993).

2017; Kirkham & Loft, 1993; Lehman, 1992; Poovey, 1996; Shackleton, 1999; Walker, 1998; 2011; Wootton & Kemmerer, 2000).

Later, and until the end of the twentieth century, women's presence in accounting firms was described as "commercial suicide" and their professional practice was limited for the following reasons: (i) their lack of creative capacity to speak openly and energetically and undergo high pressure; (ii) clients objected, despised and considered the presence of women unacceptable; (iii) men would not accept the supervision or direction of a woman and they would be ashamed to work with people of the other sex; (iv) women could not work at any time and place that was required, for example not at night or in places of difficulty, and it would be problematic for them to travel and/or stay alone (or with a male CPA) in hotels; (v) it was not worth training them due to their short stay in the labour market and their prioritization of family over work. Therefore, firms continued to prefer hiring men over women with excellent qualifications (even stipulated in job calls) (Lehman, 1992; Quire, 1947; Ried, Acken, & Jancura, 1987; Wootton & Kemmerer, 1996; 2000).

The class perspective also meant an additional closure since upper- and middle-class women were the only ones who had educational access to accounting knowledge, but it was they who mainly embraced the domesticity model; thus, only lower-class women (not ladies), whose experience had been forged in family retail businesses and artisans, would be the ones who entered the profession. In this case the refusal was due to lower status and remuneration as well as to the loss of chivalric respectability that this would represent in it (Lehman, 1992; Walker, 2003a).

### **1.3.3.3. Professionalizing bodies**

So, accounting emerged as a male practice that resorted to exclusionary practices and closure regimes, not only through social and cultural barriers, but also through credential and separatist tactics, deprivation of access to the knowledge and skills required to perform in the accounting field, which were exercised by educational institutions, professional organizations and work environments with the purpose of making women ineligible, guaranteeing and improving privileges in the access, rewards and opportunities for men as a dominant community and to maintain the status of the profession, even their statutes and rules were drafted in masculine terms (Cooper, 2010; Haynes, 2017; Kirkham, 1992; Kirkham & Loft, 1993; Loft, 1992; Roberts, 2013; Roberts & Coutts, 1992; Walker, 2011; Witz, 1990).

Accordingly, several bills were presented seeking the admission of women to public accounting, but these were mocked<sup>6</sup>, blocked, rejected or shelved due to opposition from male accountants. Later, after the enactment of the Sex Disqualification (Removal) Act in 1929, although women took the exam to become certified accountants and their pass rate was similar to that of men's, a minority applied for membership since the fees were very high, and given that they could only enjoy their professional life until marriage (Kirkham & Loft, 1993; Shackleton, 1999).

## **1.4. Drivers of the labour and professional activity of women**

While these obstacles were imposed by the patriarchy to restrain women, there were also a number of factors that drove women's participation in accounting, which in turn became a key factor in empowering women, emancipate themselves and improve the level of inclusion in education, work and society.

### **1.4.1. Suffragettes and feminist movements**

There are records that show that since eighteenth century women began their active struggle for equality in family, state and society in terms of education, politics, marriage and divorce, vote, property and children (Gallhofer, 1998; Thane, 1992). This was intensified during nineteenth and twentieth centuries because a large number of educated women, with access to readings on feminist

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<sup>6</sup> About the admission of women to the ICAEW, its president welcomed them with laughter and stated that it would be shameful to manage a staff made up of women who would prefer to retire from the profession (Howitt, 1966 cited in Kirkham & Loft, 1993).

thought (Komori, 2007) and active in terms of work (mainly belonging to the middle class), felt that they were being taken advantage of through their labour. Thus, they were granted “women’s jobs”, with lower salaries (Crompton & Sanderson, 1986) and with labour, legal and financial limitations, also restricted by having to abandon their careers to be a housewife when they became pregnant. This generated frustration, disgust and anxiety (Cooper, 2001) as well as resistance to adopting the role of the ideal middle-class, dependent, protected and home-loving woman, accordingly, started to organize and create women’s movements demanding equal rights (Crowley, 2016; Kirkham & Loft, 1993; Lehman, 1992; Thane, 1992; Vickery, 1993; Walker, 2003b).

The suffrage fight was based on the postulate that the vote would lead to a change in the legislation to achieve sexual inclusion and the elimination of obstacles in professions, in which the accounting struggle was part of a broad feminist agenda (Walker, 2011).

In addition, feminist movements promoted bookkeeping as an occupation for middle-class women (especially the petty bourgeoisie), and as a pathway to gainful employment and self-improvement (Reitano, 1984; Walker, 2003a, 2008) as well as created societies of women accountants that became chapters offering technical education and vocational orientation, requirements to obtain experience (Lehman, 1992).

Thanks to feminist movements of the 60s and 70s were achieved: equal pay and anti-discrimination laws, improvements in the equalization of employment opportunities, the integration of women into the capitalist system, the establishment of women’s study courses, access to university studies and an accelerated growth of female students of accounting, which resulted in a rapid increase in professional qualifications, as well as the recruitment of hundreds of women in bookkeeping and accounting jobs (Cooper, 2001; Crompton & Sanderson, 1986; Hantrais, 1995; Jackson, 2000; Kirkham & Loft, 1993; Lehman, 1992; Pillsbury, Capozzoli, & Ciampa, 1989; Thane, 1992; Walker, 2003a; Wootton & Spruill, 1994).

#### **1.4.2. Economic interest of the business sector**

A source of failure for this exclusion effort was the business sector that benefited from women’s vulnerability in the labour market and took advantage of them to use and exploit them and pay them lower wages. Thus, although the companies constituted a capitalist scenario of closure and rejection for women and their progress, it was the same companies that fostered a scenario that kept them linked to work, performing clerical, bookkeeping and accounting work, as a second class (or reserve) workforce, unqualified and cheap that at any time could be returned to their natural space, their home, but ultimately they preferred to keep them to continue taking advantage (Komori, 2007; Phillips & Taylor, 1980; Roberts & Coutts, 1992; Walker, 2003a).

#### **1.4.3. Wars and other personal needs**

There was an increase in the need and desire of women to support themselves and their families as several of them were divorced or widowed and those who had a professional career married later and they had fewer or no children (Ried, Acken, & Jancura, 1987).

Furthermore, there is a consensus in the literature on wars as a stepping stone for women to access male jobs that otherwise they would not have been able to get (Ikin, Johns, & Hayes, 2012).

Because men, during periods of war, were not trained or left their jobs to join the armed forces, their functions and positions were vacant. This was when women, left the housework to temporarily replace their husbands in the tasks they were in charge. For this they received training in accounting that until that time had been claimed to be exclusively male and they were hired as substitutes and subordinate labour. This generated an increase in the offers to, and labour participation of, women (mainly middle-class women to give a refined status to the work) in clerical, bookkeeping and accounting tasks (Cooper, 2010; Crompton & Sanderson, 1986; Crowley, 2016; Evans & Rumens, 2020; Ikin, Johns, & Hayes, 2012; Kirkham & Loft, 1993; Lehman, 1992; Loft, 1992; Silverstone & Williams, 1979; Thane, 1992; Walker, 2003b, 2008; Wootton & Kemmerer, 2000).

Thanks to this, they were able to demonstrate that as students the average woman surpassed the average man in accounting application and ability, and also that in the exercise of their functions they were as good, efficient and skilled as men, and that the feminine virtues made them ideal for the detail and precision that were needed in accounting work (Kirkham & Loft, 1993; Lehman, 1992; Richardson, 1923).

The wars, then, constitute one of the main factors that motivated a legal opening to the employment of women (Thane, 1992; Whiting & Wright, 2001), allowed their admission to accounting practice and challenged the power and control of the professional organizations (Ikin, Johns, & Hayes, 2012; Shackleton, 1999).

#### **1.4.4. First accounting responsibilities of women**

During the eighteenth and nineteenth centuries, the patriarchal postulates limited female work to their housework. Thus, their initial contact with accounting took place timidly in settings that, due to their proximity to the private sphere (the home and traditionally female roles), were accepted and well regarded by men. Therefore, although these first approaches took place under macho and patriarchal restrictions, they served as an impetus for women to fight for their rights (at a social and familiar level) and seek a place in the profession.

##### **1.4.4.1. Philanthropy**

Some of the accesses to the public sphere allowed to women comprised charitable, social-service or philanthropic activities, without being paid. In addition, they were a way of making the social and financial status of families visible, increasing their socio-economic power and improving the image of their family businesses (Lerner, 1975; Minoglou, 2007; Nordlun-Edvinsson, 2016; Walker, 2006, 2011).

Where women performed secretarial, financial management, treasury, bookkeeping and accounting tasks when obtaining, collecting and recording donations, keeping records of daily visits to potential funders, managing properties, recording beneficiaries as well as expenses (for food, medicines, salaries, funerals and religious celebrations), taxes, insurance and salaries and keeping workers' time sheets (Edwards & Walker, 2007; Lerner, 1975; Mead, 2000; Rico-Bonilla, 2020; Walker, 2006, 2011).

On a personal level, it represented for women the only scenario that allowed them to have mobility and social contact, a means of escape from the boredom of home (Mead, 2000; Rico-Bonilla, 2020) and represented a departure from the traditional domestic and housewife pattern to which they had had to submit (Walker, 2006).

At a professional level, it was a key option to receive education, strengthen their intellectual capacity and adroitness, expand their professional horizons and gain experience, as well as to acquire and demonstrate managerial and organizational skills in the public sphere (Barker & Monks, 1998; Escobar-Andrae, 2017; Honeyman, 2007; Rico-Bonilla, 2020; Walker, 2006).

##### **1.4.4.2. Domestic accounting and Domestic engineering**

Another of the patriarchal presumptions was the classification of women as staunch consumers and financially irresponsible. Thus, domestic, internal or private domain accounting arose during the eighteenth and nineteenth centuries, as a frequent, rigorous and detailed system for registering and reporting accounts maintained by women with the purpose of being accountable to their husbands, who acted as a control figure against the irrepressible female spending (Carnegie & Walker, 2007a, 2007b; Dambrin & Lambert, 2008; Komori, 2007; Llewellyn & Walker, 2000; Tasca & Hilwig, 2004; Walker, 1998, 2008).

This assignment was considered feminine in nature since their virtues made them patient and even motivated by the monotonous and meticulous recording of domestic transactions. Thus, women could conform to the model of the ideal woman who, acting as a guardian, wise and carefully tracking, caring for, preserving and managing her husband's wealth and possessions and household finances,

keeping records of domestic stores and budgeting for consumption. Skills and knowledge in domestic accounting constituted a way of being eligible and prepared for marriage and, later, the basis for gaining the liking, affection, esteem and trust of her husband, a form of taking care of him and having a greater influence on him, guaranteeing his happiness and that of the marriage, as well as family harmony and well-being (Carnegie & Walker, 2007a; 2007b; Hareven, 1991; Llewellyn & Walker, 2000; Tasca & Hilwig, 2004; Walker, 1998; Walker & Llewellyn, 2000).

Later, in the early twentieth century, domestic engineering tended to save and prevent waste and the frantic search for efficiency through a meticulous, scientific home management, based on the application of laws, investigation, experimentation and detailed measurement, as well as on the integration of diverse sciences, arts and applied knowledge. Likewise, it provided households with a systematic commercial and managerial approach, such as the one used at the business level (assuming the same complexity), which implied documenting in writing, using management techniques, time and movement studies, programming and schedules, planning schedules, standing work orders, instruction sheets for particular tasks and daily plans, material routing diagrams, process charts, motion cycle charts, household interdependence and operations planning, identification, measurement, analysis and elimination of waste, scrap or leakage, standardized instruction cards, actual and standard costing, financial management, budgeting, bookkeeping, accounting and business methods, price analysis, control management, dashboards, charts, industrial standardization practices and determination of consumption patterns (Walker, 2003b).

It was the middle class, the landowners and the educated, who mainly became involved in domestic accounting and engineering, made evident their commitment to saving and prudence as a foundation for financial management, accumulating wealth and cultivating bourgeois values, and thus preserving the social status of the family. Specifically, the middle class, having latent aspirations to advance socially, prioritized social appearance, had sufficient resources to afford domestic equipment and the possibility of planning consumption, and likewise in the future they could pay servants; however, they still had too limited resources (unlike the upper class) to allow themselves to waste without measure. In the working class the application of the domestic accounting was limited because, on the one hand, it was not possible to have a regular or large income to plan them and, on the other, women had restricted resources to buy newspapers, magazines and thus be enlightened about bookkeeping and budgeting (Carnegie & Walker 2007a; 2007b; Komori, 2007; Walker, 1998; 2003b).

Nevertheless, the literature agrees in recognizing that domestic accounting did not only contribute to the domination of women, but rather was a means to empower them by making them stewards of resources and responsible for the economic well-being of the family, which ultimately translated into economic power and the performance of roles that had been denied them (Capelo-Bernal, Araújo-Pinzón, & Funnell, 2018; Carnegie & Walker, 2007a, 2007b; Kirkham & Loft, 2001; Komori, 2007, 2012, Komori & Humphrey, 2000; Walker, 2008).

#### **1.4.4.3. Other accounting practices**

Given the restrictions that women experienced in the public sphere, other occupational practice scenarios with greater proximity to the traditional roles or parallel to the feminist struggle became common (Walker, 2011).

Taking into account the fact that a large part of the economy was mobilized by family businesses, women had clerical, management and bookkeeping functions, for which they recorded in books all monetary transactions over time (income, sale of family products, personal or servant expenses, purchase of goods and supplies, payment to employees, doctors, clothing, food, death expenses, investments, education). Although without contracts, salaries or public recognition (Edwards & Walker, 2007; Gálvez-Muñoz & Fernández-Pérez, 2007; Hartigan-O'Connor, 2005; Quire, 1947; Roberts, 2013; Walker, 2003a; 2006; 2011; 2015).

Another setting had to do with the fact that husband, parents or children who came from well-educated families and who performed this activity professionally and who motivated women to

formally begin their professional careers (Edwards & Walker, 2007; Emery, Hooks, & Stewart, 2002; Maltby & Rutterford, 2006; Ried, Acken, & Jancura, 1987; Roberts, 2013).

In the other hand, given the rejection of the labour market (mainly for married women), some resorted to establishing their own firms (Ried, Acken, & Jancura, 1987) or to work in suffragette and/or feminist organizations, where they served as treasurers or auditors (Walker, 2008; 2011).

## **1.5. Conclusions**

Although in the twenty-first century there is a greater presence of women in the accounting profession and they face fewer barrier than before, they are still being ignored and minimized and face limitations and prejudices, which ultimately translates into discrimination in employment opportunities, promotion processes and remuneration.

The present review finds that it is not an isolated event but rather the product of a social context historically dominated by men who, under patriarchal prejudices, despised, discredited, relegated, excluded and marginalized women and of a professional context that hindered the access of women to education, professional organizations and the labor market. However, these macho conceptions and restrictions imposed on women at the social level, although generated them frustration and discomfort, in turn motivated them to group together and fight for equal rights.

In this way, although bookkeeping and accounting (at the private and public level) perpetuated patriarchal postulates and were an instrument of repression and marginalization of women, they were also configured as a way for women to overcome gender stereotypes and traditional roles, achieve legislative improvements and paid employment.

In this sense, this document takes a two-way step forward, on the one hand, in presenting a holistic proposal of the history of women in accounting during the eighteenth to twentieth centuries, through the integration, concretization and analysis of academic sources who have studied contexts and time periods that, because they are so specific, prevent having a general image of the struggle that women have had in the accounting profession over time, and on the other hand, in the understanding of accounting as a phenomenon that reflects, responds, and perpetuates cultural and social patterns of the setting over time.

The foregoing with the purpose of (i) strengthening a complementary perspective that, on the one hand, improves scientific objectivity by transcending knowledge and conventional, dominant and “masculine” positions of reality, counteracting, instead of ignoring, exclusion; (ii) challenge power relations, dominant patriarchal structures, androcentrism, classism and scientific and professional machismo in the accounting field and (iii) prevent the perpetuation of gendered and gendering relationships in accounting, motivating advancement, transformation, diversity, and social and disciplinary justice.

However, the present work is limited by several aspects. The first is related to the divergent criteria of some authors who indicate different dates for the same events or simply present contradictory points of view that, although enriching the literature, may limit the purpose of presenting a general and synthetic image of history. The second is the type of sources used, as they are focused on academic papers from indexed journals and do not take into account books, primary sources of information or any other type that could be valuable. The third, such resources are mainly literature in English that do not cover a range of diverse and multicultural contexts that would enrich the study with new perspectives and research findings and lead to a greater knowledge and understanding. Finally, along the same lines as the previous point, given that the purpose of this work is to synthesize and unify sources of information that cover different places and periods of time, the particularities of the contexts and the influence of political, cultural, legal and other factors that could enrich the analysis of the history of women are omitted.

These limitations could be addressed in future research either by analyzing how cultural dimensions and/or legal systems in various countries have shaped gender perspectives and women's foray into accounting or by studying unconventional contexts, observing gender (its definition, ideals, rights, obligations, models, roles, power relations, division of labor, hierarchy, spheres and in general everything that can encompass this concept) as a dynamic construction, showing how social forces, political, geographical, cultural, institutional, legal and labor have shaped over time the status of women both in general and in the accounting profession (Anderson, 2020; Barker & Monks, 1998; Carrera, Gutiérrez, & Carmona, 2001; Escobar Andrae, 2017; Evans & Rumens, 2020; Gamber, 1998; Hantrais, 1995; Hareven, 1991; Haynes, 2017; Kerber, 1988; Lee-Cooke & Xiao, 2014; Lehman, 1992; Scranton, 1998; Walker 1998; 2003b; Walker & Llewellyn, 2000; Zucca-Micheletto, 2013).

## CHAPTER TWO

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## 2. Gender disparities in accounting academia: Analysis from the lens of publications

### Summary

There is a marked gender gap in accounting academia that places women at a disadvantage in terms of recruitment, hiring, promotion, tenure, status, high-level areas or positions (both research and administrative), burden distribution of work, and remuneration. Women are disproportionately represented in part-time or non-tenure tracks, such as lecturers, instructors and assistant professors. They experience a slower rate of advancement and have lower pay and prestige. Given that various authors attribute this situation to the level of research and production of papers in top tier scientific journals, the objective of this work is to analyse the participation of women as authors in the area of cost and management accounting, with a view to contributing to clarify possible causes of gender disparity in the accounting case.

**Keywords:** gender, women, top tier journals, inclusion, accounting academia, cost and management accounting

**Paper status:** In review

### Disparidades de género en la academia contable: Un análisis desde el lente de las publicaciones

### Resumen

Existe una marcada brecha de género en la academia contable que ubica a las mujeres en desventaja en términos de reclutamiento, contratación, promoción, permanencia, estatus, áreas o cargos de alto nivel (tanto de investigación como administrativos), distribución de la carga de trabajo y remuneración. Las mujeres están desproporcionada representadas en cargos a tiempo parcial o sin vías de ascenso, como profesores numerarios, instructores y asistentes. Experimentan una tasa de ascenso más lenta y tienen un salario y un prestigio más bajos. Dado que diversos autores atribuyen esta situación al nivel de investigación y producción de artículos en revistas científicas de primer nivel, el objetivo de este trabajo es analizar la participación de las mujeres como autoras en el área de contabilidad de costos y gestión, con el fin de contribuir aclarar las posibles causas de la disparidad de género en el caso contable.

**Palabras clave:** género, mujeres, revistas de primer nivel, inclusión, academia contable, contabilidad de costos y gestión

**Estado del artículo:** En revisión

## 2.1. Introduction

Historically, women have been immersed in a patriarchal system whose ideology is based on the supremacy and authority of men, who were granted the leading role and exclusivity in science, law, politics, paid work and the professions, while the nature of women, defined as weak, fragile, emotional, dependent and subordinate, gave them domestic and maternal roles and restricted them at a legal, financial, labour, educational, occupational and professional level (Capelo-Bernal et al., 2018; Escobar-Andrae, 2017; Gamber, 1998; Honeyman, 2007; Licini, 2011; Minoglou, 2007; Thane, 1992; Vickery, 1993; Walker, 1998, 2003b; Welter, 1966).

In particular, the accounting profession, based on beliefs and prejudices about the intellectual and physical incapacity of women, proclaimed itself male and, with a view to maintaining this condition, historically used exclusionary practices such as deprivation of access to knowledge and the development of skills, as well as closure regimes that included credential and separatist tactics, making women ineligible and thus guaranteeing and improving access privileges, rewards and opportunities for men as the dominant community (Cooper, 2010; Haynes, 2017; Kirkham, 1992; Lehman, 1992; Roberts, 2013; Roberts & Coutts, 1992; Thane, 1992; Walker, 2011; Wootton & Kemmerer, 1996).

Throughout the twentieth century, technology, improvement in education and legislation, and social and economic changes generated an increase in the labour participation of women, and the accounting field was no exception. However, the incursion of women generally took place in activities that men did not want or could not carry out, either because of their participation in world wars or because they considered the activities mechanical, servile, operational. or not very challenging and with worse compensation and status (Ciancanelli et al., 1990; Cooper, 2001, 2010; Edwards & Walker, 2007; Evans & Rumens, 2020; Haynes, 2017; Kirkham & Loft, 1993; 2001; Lehman, 1992; Loft, 1992; Thane, 1992; Walker, 2003a, 2008; Wootton & Kemmerer, 1996).

Given that for many years teaching and the first approaches to accounting research were linked to professional practice, the academic field replicated the dominant androcentric view, where misogyny is constant and the feminine is viewed pejoratively (Dillard & Reynolds, 2008; Fogarty & Zimmerman, 2019).

Thus, accounting academia has been characterized as a field dominated by men, with low female representation, where women have reduced opportunities to reach high administrative positions or professorial ranks, a slower rate of promotion, and lower remuneration and prestige, which may be due to the fact that they are assigned mainly teaching tasks or student accompaniment and less time and participation in research activities, ultimately meaning less visibility and productivity in high-impact publications (Davies & Thomas, 2002; Norgaard, 1989; Oakes & Hammond, 1995; Sonnert & Holton, 1996; Tessens et al., 2011; Toutkoushian, 1999; Turner Lomperis, 1990; Winchester et al., 2006).

A first step to identify the origin of gender disparities in accounting academia is to analyse the participation of women in top tier journals, since authorship of this type of research outcome is prioritized and highly valued by the academic community for the granting of merits and benefits to researchers. Given that it is suggested that gender discrimination studies be conducted in relatively small homogeneous subgroups (Ruane & Dobson, 1990), we will focus specifically on the area of cost and management accounting. In developing the aforementioned objective, this document is structured as follows. In the first section, a theoretical framework is presented that serves as a foundation for the development of the hypotheses. The next section describes the data source, sample and the measurement of variables. The third and fourth sections, respectively, present the results and a discussion on them, as well as the conclusions.

## 2.2. Situation of women in academia: Hypotheses development

### 2.2.1. Women in accounting academia

Parallel to the male dominance in the occupational and professional field, science has been classified as male. Great philosophers such as Plato, Aristotle, Aquinas, Locke and Bacon have left a macho legacy, considering women incapable of participating in science due to their emotional, personal and subjective character and their lack of ‘rational’ thought. Consequently, not only has the presence of women in academia been scarce historically, but themes, research subjects, experimentation, theorization, practices and applications have been carried out by and for men (Oakes & Hammond, 1995; Rosser, 1989).

Likewise, universities can be very hostile places for women, since they are hierarchically gendered and patriarchal relationships seem resistant to change (Cooper, 2001; Smart, 1991; Tessens et al., 2011). This is even more the case in knowledge related to business, which has even been thought of as a “*school of manhood*” (Gamber, 1998 p. 19).

At the accounting level, during the nineteenth century and until the middle of the twentieth century, higher education, as a reflection of the professional field, was dominated by men. There was little or no female presence, whose link was limited to first accounting courses and non-professional institutions (Gago & Macías, 2014; Norgaard, 1989; Turner Lomperis, 1990).

Although the presence and the status of women has improved over time, accounting academia is far from achieving parity of composition. Research results have revealed that women are still considered a minority; their participation tends to be relegated to institutions that emphasize teaching and/or service activities and student accompaniment, tasks from which men are freed to have more time to pursue their academic interests (and, consequently, achieve more and better benefits). Access to research grants, participation in high level activities, areas or positions (both research and administrative), prestige, status, ranks and compensation continue to be restricted to a very low proportion of women, while there is a disproportionate female concentration in part-time or non-tenure positions such as lecturers, instructors and assistants professors (Bellás, 1994; Bellás & Toutkoushian, 1999; Broadbent, 2016; Davies & Thomas, 2002; Gago & Macías, 2014; Hantrais, 1995; Johnson & Stafford, 1974; Link et al., 2008; Loeb & Ferber, 1971; Norgaard, 1989; Oakes & Hammond, 1995; Pyke, 2013; Ruane & Dobson, 1990; Smart, 1991; Tessens et al., 2011; Toutkoushian, 1999; Turner Lomperis, 1990; Winchester et al., 2006).

### 2.2.2. Theoretical framework about gender differences

The main factors mentioned in the literature to explain gender differences in accounting academia can be grouped into those related to human capital and the attributes of women and those related to institutionalized discrimination patterns and schemes, or a combination of both (Gago & Macías, 2014; Johnson & Stafford, 1974).

Factors related to the conditions and human capital of women are mainly explained as follows.

- *Women’s personal and work-life attributes.* Women’s personal and work-life attributes are blamed, although it has been found that female accountants are intelligent, firm, assertive, competitive, achievement-oriented, with a sense of urgency. On the other hand, in the development of research, they are perfectionists, meticulous, cautious and seek to cover a topic comprehensively without their level of productivity being affected (Davidson & Dalby, 1993; Mynati et al., 1997; Sonnert & Holton, 1996). Some studies indicate that women are considered weak, indecisive, uncompetitive, with a low level of self-confidence and with little capacity to handle pressure (Barker & Monks, 1998; Ferber, 1984; Lee Cooke & Xiao, 2014; Tessens et al., 2011).
- *Theory of human capital.* According to the theory of human capital developed by labour economists, the type and amount of investment made by women in said capital translates into reduced skills, wages and productivity, less or slower professional advancement, and an unbalanced distribution of working time between teaching and research (Bellás, 1994; Hirsch & Leppel, 1982; Hoffman, 1976; Johnson & Stafford, 1974; Loeb & Ferber, 1971; Maranto & Streuly, 1994; Norgaard, 1989;

Ruane & Dobson, 1990; Schaefer & Zimmer, 1995; Smart, 1991). When talking about human capital, reference is made to aspects such as:

- Education: At doctoral level, there has been a difference in the qualifications achieved by men and women. More than proportional growth of new highly qualified female doctoral students from status universities with a focus on research is needed to achieve parity in academia (Bellas, 1994; Ferber et al., 1978; Heath & Tuckman, 1989; Norgaard, 1989; Toutkoushian, 1999).
- Work experience: Although Ferber et al. (1978) revealed that 84.3 per cent of women had worked full time and without maternity leave, it is considered that they have less work experience due to discontinuous career patterns caused by breaks, leave and part-time agreements to fulfil maternity and parenting responsibilities, in addition to being high-cost workers due to their higher levels of absenteeism and turnover (Bellas, 1994; Gago & Macías, 2014; Hoffman, 1976; Johnson & Stafford, 1974; Norgaard, 1989; Ruane & Dobson, 1990; Smart, 1991; Whiting & Wright, 2001).
- Work commitment: It has been found that professional aspirations are similar between men and women (Barker & Monks, 1998; Collins, 1993). However, it is considered that women make less work effort and, anticipating their possible job leave to dedicate themselves to motherhood, nurturing, and care and education of children and the family, do not make as much effort as men in terms of their professional progress (Ferber et al., 1978; Tessens et al., 2011; Whiting & Wright, 2001).
- *Time lag*. The hypothesis of the pipeline phenomenon postulates that, since efforts to reduce discrimination began to bear fruit in the 1970s, women had a late entry into the academic accounting profession. They therefore have a younger career age or less professional maturity and have not yet had time to reach the top (Norgaard, 1989; Oakes & Hammond, 1995; Raymond et al., 1988; Smart, 1991; Tessens et al., 2011; Toutkoushian, 1999). At the same time, the 'leaky pipeline' hypothesis refers to the fact that the desertion rates of women in academic positions are higher than those of men, and this occurs just at the moment when they have the qualifications and experience to access higher levels of academia (Edwards et al., 2018; Pyke, 2013).

Regarding discrimination and associated phenomena, authors such as Ferber (1978) p. 386 affirm that "women are treated unequally because they are unequal [...] not by discrimination", and Raymond et al. (1988) suggest that there is no discrimination against women. Various studies have identified that the differential between men and women with the same qualifications in terms of recruitment, hiring, promotion, tenure, status, teaching load and remuneration, which in a generalized way hurts women in academia, is mainly attributed to the structural and systemic gender discrimination that exists in organizations (Ciancanelli et al., 1990; Ferber, 1974; Gago & Macías, 2014; Gordon et al., 1974; Hirsch & Leppel, 1982; Hoffman, 1976; Hull & Umansky, 1997; Johnson & Stafford, 1974; Koch & Chizmar, 1976; Lee Cooke & Xiao, 2014; Loeb & Ferber, 1971; Megdal & Ransom, 1985; Norgaard, 1989; Ruane & Dobson, 1990; Smart, 1991; Sonnert & Holton, 1996; Tessens et al., 2011; Ward, 2001; Whiting & Wright, 2001; Winchester et al., 2006).

Although it has been found that there is no relationship between academic rank, productivity and the marital and parental status of academics (Sonnert & Holton, 1996), being a woman, being married and having children makes a woman at work seen less committed; it is a source of discrimination, hinders her academic career, hinders promotion, and constitutes the foundation of the glass ceiling (Broadbent, 2016; Cooper, 2001; Hooks, 1992; Hull & Umansky, 1997; Norgaard, 1989; Whiting & Wright, 2001).

The first serious experience of discrimination faced by women occurs with pregnancy, from which moment they begin to receive derogatory comments, their benefits are cut off (Haynes, 2008), and they face obstacles that are difficult to overcome or are even fired, based on the belief that children and their care are a women's problem: they are forced to give up their careers, reduce their professional aspirations, submit to greater pressure to reconcile family and professional responsibilities, or sacrifice their marital and family life to advance professionally, to break the glass ceiling and be successful (Ciancanelli et al., 1990; Cooper, 2001; Ferber et al., 1978; Haynes, 2008;

Hooks, 1998; Khalifa, 2013; Lee Cooke & Xiao, 2014; Tessens et al., 2011; Turner Lomperis, 1990; Whiting & Wright, 2001).

### **2.2.3. Women and publications as a priority in the current academic system**

Ultimately, the different theoretical references reaffirm the idea that the labour market considers the ideal employee as someone totally focused on work and earning a living, without any marital, family or domestic responsibilities (Acker, 2006; Norton, 1994).

On the other hand, for around three decades, a business, managerial, competitive and marketing orientation focused on achievement and results has been adopted in universities. Where, the papers published in top tier journals are the main criteria used by stakeholders, businessmen, media, research evaluation agencies, government, business agencies, accreditation agencies and the community in general for the achievement of financing and investment international accreditations, growth, recognition, image, brand, institutional status, recruitment and retention of students (Beattie & Goodacre, 2012; Brinn et al., 1998; Chan et al., 2006; Edwards et al., 2013; Fogarty & Liao, 2009; Hopwood, 2007; 2008; Parker et al., 1998; Willmott, 1995).

This has led universities to prioritize research and publications in top-level peer-reviewed journals over teaching, administration or service. The authorship of papers in top-level journals has become the criterion for the granting of scholarships and project grants, achieve the hiring, promotion, tenure, awards, economic incentives and salary increase and, likewise, it is an indicator of reputational and cultural capital, research quality, professional recognition, success, experience, productivity, standing, and professional advancement of college and university professors (Beattie & Goodacre, 2004, 2012; Bonner et al., 2006; Bourdieu, 1988; Brand et al., 2015; Brinn et al., 1998; Corrêa et al., 2017; Edwards et al., 2013; Efthyvoulou, 2008; Einav & Yariv, 2006; Hasselback & Reinstein, 1995; Helgesson & Eriksson, 2019; Hull & Wright, 1990; Jones & Roberts, 2005; Lee, 1995, 1997; Moizer, 2009; Parker et al., 1998; Rodgers & Williams, 1996; Swanson et al., 2007; Whitley, 1984).

Therefore, given that the conditions and progress of women in academia are contingent on research and publication activities, it is crucial to understand the participation of women as authors of papers in top tier journals to assess the conditions of gender in accounting academia over time (Williams et al., 2015). Thus, it is worth validating the following hypothesis:

*Hypothesis 1a: Women are still considered a minority due to their low representation as authors of scientific papers in top tier journals.*

Given that research results, especially the volume of published papers, is considered a critical component of the status, advancement and remuneration of academics and has been used in countless studies as the main measure of authors' productivity and performance (Beattie & Goodacre, 2012; Brown et al., 2007; Carmona et al., 1999; Chan et al., 2007; Englebrecht et al., 1994; Gaunt, 2014; Lee & Williams, 1999; Richardson & Williams, 1990; Rodgers & Williams, 1996; Stephens et al., 2011), it is key to observe at the group of most prolific authors and determine their composition by gender.

*Hypothesis 1b: Among the most productive authors in cost and management accounting there is a higher proportion of men.*

Returning to the presence of women as authors in papers of top tier journals, when evaluating papers written by a sole author, there is no doubt about the origin, responsibility and accreditation of contributions (Peidu, 2019). Therefore, in some cases, these types of paper imply greater prestige and importance for professional progression (Williams et al., 2015). Taking into account the situation of women in academia over time, we are interested in validating the following hypothesis:

*Hypothesis 2a: There is a lower presence of women as sole authors.*

However, in recent decades there has been a positive trend towards larger teams of authors in published papers (Efthyvoulou, 2008; Engers et al., 1999; Frandsen & Nicolaisen, 2010; Gaunt, 2014; Hart, 2000; Kumar & Ratnavelu, 2016; Lukka & Kasanen, 1996; Peidu, 2019; Waltman, 2012; Wuchty et al., 2007).

Thus, in the aforementioned competitive environment, and given the focus of the academic world on papers, studies indicate that it is not only considered important to be an author but that it is strategic to achieve a dominant position in the list of authors that accredits the responsibility and relative contribution that each one has made, since this plays an important role as a basis for scientific merit and performance, allowing the identification of outstanding researchers, and has important academic, social and financial implications. However, there is no consensus or clarity on the form and meaning of how authors are presented in scientific publications: this varies between (and within) countries, disciplines, groups of researchers and institutional settings, and even among informal rules (Brand et al., 2015; Corrêa et al., 2017; Costas & Bordons, 2011; Frandsen & Nicolaisen, 2010; Haeussler & Sauer mann, 2013; Helgesson, 2020; Helgesson & Eriksson, 2019; Laband & Tollison, 2006; Peidu, 2019; Van Praag & Van Praag, 2008; West et al., 2013; Zuckerman, 1968).

Various strategies are followed. According to the literature, the most representative are (i) alphabetical order (using as a criterion the initial of the authors' surname: under this approach, all authors have made the same contribution to the study); (ii) in order of contribution (where the first author makes the most significant contribution); and (iii) by seniority (where the first author is normally starting his academic career, is a junior or doctoral student, while the last authors are supervisors, veteran leaders or senior staff, who drive the research both intellectually and financially) (Costas & Bordons, 2011; Frandsen & Nicolaisen, 2010; Jian & Xiaoli, 2013; Peidu, 2019; Van Praag & Van Praag, 2008; Waltman, 2012; Zuckerman, 1968).

It is shown in various studies that in economics and related subjects (business, finance, economic history) the authors are mainly listed alphabetically (Efthyvoulou, 2008; Einav & Yariv, 2006; Engers et al., 1999; Helgesson & Eriksson, 2019; Joseph et al., 2005; Kumar & Ratnavelu, 2016; Laband & Tollison, 2006; Van Praag & Van Praag, 2008; Waltman, 2012). However, order of contribution is the formal policy suggested by APA standards: it is the general guideline in most disciplines and the convention used by professional bodies, editors of scientific journals, and a large number of academics, who interpret first place as a greater scientific contribution and therefore academic merit (Engers et al., 1999; Frandsen & Nicolaisen, 2010; Hart, 2000; Peidu, 2019; Van Praag & Van Praag, 2008; West et al., 2013).

Additionally, the position of first author is important because some search engines give them exclusive visibility; there is a tendency to associate emblematic works with the name of the first author; and they are more remembered due to the alphabetical presentation of the references and the fact that often only the first author is mentioned and the rest are abbreviated as 'and co', 'and others' or 'et al.'. Thus, authors that are listed in first place (either due to their higher level of contribution or because their last name begins with a letter before in the alphabet) enjoy advantages and benefits such as increased probability of having papers with greater downloads, readings and citations, receiving tenure, obtaining scholarships and prestigious awards, achieving greater visibility and prestige, achieving professional recognition and having a significant increase in salary (Brand et al., 2015; Efthyvoulou, 2008; Einav & Yariv, 2006; Engers et al., 1999; Haeussler & Sauer mann, 2013; Kumar & Ratnavelu, 2016; Peidu, 2019; Toutkoushian, 1994; Van Praag & Van Praag, 2008; Waltman, 2012; Zuckerman, 1968).

For its part, the criterion of seniority has also been used traditionally. It is based on the professional rank and age of the authors as determinant of their function and, therefore, of the position in which they are listed. In this sense, the last position is assigned to the role of the supervisor who represents experience, seniority, leadership and success (Costas & Bordons, 2011; Engers et al., 1999; Gingras et al., 2008).

In conclusion, it is considered that those who appear as the first and last authors of a scientific paper are those who make the greatest contribution to it. Studies indicate that a certain number of first or

last positions as an author in peer reviewed papers is required to qualify for certain positions, promotion or achieving tenure (Helgesson, 2020; West et al., 2013).

Given the disadvantageous situation of women in accounting academia and the relationship with publications and the order of authorship, in line with studies such as those by Metz and Harzing (2009) and West et al. (2013) that analyse the position, recognition and advancement of women in different fields of academia, taking into account first and last place in the list of authors, we formulate the following hypotheses:

*Hypothesis 2b: There is a lower presence of women as first authors.*

*Hypothesis 2c: There is a lower presence of women as last authors.*

On the other hand, a variable that has been found to be positively related to the presence of women as authors of papers in top tier journals is the proportion of women on the editorial board (Metz & Harzing, 2009), not because of acceptance biased simply by gender, but because of an openness to other interests and research perspectives that are mainly addressed by women (Addis & Villa, 2003). Seen in another way, women authors of papers in top-level journals are the ones who can potentially form part of the editorial boards of such journals and, consequently, achieve benefits such as to establish, consolidate and reformulate dominant, legitimate and accepted research perspectives; access to greater resources for research (time, data, human talent); be part of renowned academic networks; and achieve greater reputation, prestige, influence, power and better economic conditions (Bourdieu, 1988; Edwards et al., 2013; Fogarty & Zimmerman, 2019; Lee, 1995, 1997, 1999; Rodgers & Williams, 1996).

Therefore, the relationship between the proportion of women on the editorial board and as authors is representative to understand the current state of women in the accounting community and potentially on future editorial boards. It is therefore worth validating the following hypothesis:

*Hypothesis 3: There is a greater presence of female authors in journals whose editorial board has a greater female presence.*

According to the neoclassical view of salary differences, gaps in terms of remuneration and in the general status of women in relation to men are attributed to lower productivity (Bellas, 1994; Ferber et al., 1978; Johnson & Stafford, 1974; Katz, 1973; Loeb & Ferber, 1971). However, most studies have focused on the count of papers, which has been subject to criticism as a research measure, mainly for focusing on the numbers without taking into account the quality and impact that these research outputs generate (Toutkoushian, 1994, 1999).

Although there is no unanimity on whether the number of citations measures the quantity, the quality, the impact of the papers, the reputation of the authors or a combination of above (Beattie & Ryan, 1989; Brown, 1996; Brown & Gardner, 1985a, 1985b; Moed et al., 1985; Toutkoushian, 1994), several studies have used citations as a measure of quality and even productivity (Davis & Astin, 1987; Ferber & Green, 1982; Hasselback & Reinstein, 1995; Lindsey, 1989).

Recognizing that the number of citations of authors has been shown to impact academics' public relations, recognition, reputation, appointments, promotions and tenures, salaries, and the achievement of awards (Beattie & Goodacre, 2012; Beattie & Ryan, 1989; Brown & Gardner, 1985a, 1985b; Toutkoushian, 1994), it is necessary to take this into account to analyse another possible factor in the origin of gender disparities in accounting academia. Therefore, we will validate the following hypothesis:

*Hypothesis 4: Women have lower numbers of citations.*

## 2.3. Methodology

### 2.3.1. Data and sample for analysis

Given the heterogeneity of the labour market, authors such as Ruane and Dobson (1990) suggest that empirical analyses in relation to gender discrimination and its implications should focus on relatively small homogeneous subgroups. On the other hand, according to Englebrecht et al. (1994), the degree of difficulty and the potential to publish is not the same for all areas in the academic field. Therefore, the field of analysis of this work is limited to of cost and management accounting.

As a source of information to carry out the analysis, all papers published during the period 1960–2019 from the following journals were manually compiled: *Journal of Accounting Research*; *Accounting Review*; *Management Accounting Research*; *Journal of Accounting & Economics*; *Accounting, Organizations and Society*; *British Accounting Review*; *Accounting, Auditing & Accountability*; *Critical Perspectives on Accounting*; *European Accounting Review*; *Journal of Accounting and Public Policy*; *Contemporary Accounting Research*; and *Review of Accounting Studies*.

These journals were selected following several criteria. (i) They have an unambiguous focus on accounting and publish papers related to cost and management accounting (Carmona et al., 1999). (ii) Studies such as that by Chan et al. (2006) that analyse research productivity consider a 12-year period to be adequate. In our case, the most recent journal has been published for 23 years. (iii) According to the perception of academics in the field, these journals are classified as having a higher level of quality and could therefore affect the status and benefits of academics (Beattie, 2005; Beattie & Goodacre, 2004; Brinn et al., 1996; Brown & Huefner, 1994; Chung et al., 1992; Howard & Nikolai, 1983). (iv) These journals correspond to the highest quality refereed publications according to the impact factor in the ISI journal citation report, based on the average number of citations, compiled by the Social Sciences Citation Index (SSCI) of the Web of Science (WOS), and have remained in the top quality categories (Q1 or Q2) for five continuous years. Journals from this category were chosen as they imply a similar level of demand and therefore there is no bias between quality and quantity (Toutkoushian, 1994).

From these journals we obtained all documents that were classified as research papers, for which we collected the year, volume, number, title, names of authors, pages, keywords and abstract. We exclude introductions, forewords, editorials, book reviews, notes, reports, conference reports, tributes, obituaries (and documents in memoriam), hall of fame, reflections or points of view, since they usually do not offer the same processes of review or do not require the same scientific criteria (Carnegie et al., 2003; Chan et al., 2006; Swanson et al., 2007).

Based on the available information, each of the authors classified the papers as belonging to the area of cost and management accounting or not. In case of divergence, the specific content of the paper was reviewed until a consensus among the authors was reached, a procedure that has been used in previous works (Chan et al., 2006). In this way, we obtained a total of 1,798 cost and management accounting papers.

Thus, we obtained a base of authors whose names we reviewed in detail to unify them, since many of them are listed differently in each paper—for example, Smith Robert M., Smith RM, Smith R. M. or Smith Bob; we used institutional affiliation over time as criterion. Thus, we obtained a total of 1,916 authors, for whom we determined their gender. In the first instance, we reviewed the biographies (and photos) that appear on the web pages of the universities where the authors are currently linked, detailing if they were referred to as "he" or "she". We then reviewed the bibliographies in the papers or in other academic pages in which the authors were mentioned, detailing in the same way if they were referred to by "he" or "she". We also determined gender by searching for the name on internet pages, following studies such as those by Dhanani and Jones (2017) and Ferber (1988). If there was still no clarity or no information was available, we coded the gender of these authors as "missing".



Taking into account the proposed analyses, in those cases in which the gender of the author was missing data, we had to eliminate the publications from the initial database (this way, some co-authors also left the database). In summary, we eliminated 2.80 per cent of papers and 6 per cent of authors (2.24 per cent unspecified gender, 0.57 per cent women and 3.18 per cent men). This is a small proportion of the data that is unlikely to distort the results presented here.

At the same time, we followed a similar process for the editorial boards. We manually compiled for each year, volume and issue the editorial composition; where they were not virtually available, we accessed the hard copies. Once we had the list of members, we unified their names and manually determined their gender (following the same path as for the authors). We excluded the *Review of Accounting Studies* from this analysis as it did not have the information available in any of the years. For the other journals, we did not find information on the editorial board in 2.6 per cent of cases and we could not determine the gender for 0.24 per cent of members.

Likewise, for each paper we consulted the citations it had received in Google Scholar and Web of Science, and the citations accumulated by each of the authors on our database.

### **2.3.2. Variable measurement**

### 2.3.3.

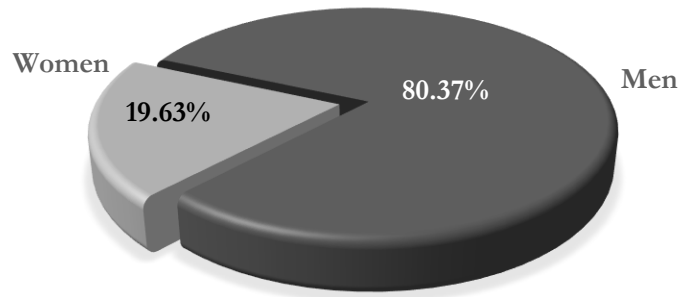
Variable	Description
gender	Categorical variable. Gender of author
cites_google~er float	Number of citations that Google Scholar has accumulated for each paper
cites_wos_paper float	Number of citations that Web of Science has accumulated for each paper
cites_google~or float	Number of citations that Google Scholar has accumulated for each author
position	Position of the author among the co-authors
authors	Number of authors of the paper
soleauthor	Dummy variable: 0 if there is more than one author; 1 if there is only one author
alphan	Dummy variable: 0 if the order in which the authors are listed is not alphabetical; 1 if the order in which the authors are listed is alphabetical
woman	Dummy variable: 0 if the author is male; 1 if the author is female
women	Number of female authors per paper
partwauthors	Percentage of female authors per paper
Pagauthor	Number of pages of paper divided by number of authors
Papers	Number of papers per author
Interval	Average years between the publication of one paper and the next paper
firstaut	Dummy variable: 0 if the first author of the paper is a man; 1 if the first author of the paper is a woman
lastaut	Dummy variable: 0 if the last author of the paper is a man; 1 if the last author of the paper is a woman
onlywomen	Dummy variable: 0 if the co-authors are of different gender; 1 if all the authors are women
onlywoman	Dummy variable: 0 if the sole author is a man; 1 if the sole author is a woman
onlymen	Dummy variable: 0 if the co-authors are of different gender; 1 if all the authors are men
partfem	Percentage of female editors on the editorial board
contrib	Sum of the proportional contributions (the authorship of a paper divided by the number of authors) made by each author
d80	Dummy variable: 0 before 1980; 1 after 1980
d90	Dummy variable: 0 before 1990; 1 after 1990
d00	Dummy variable: 0 before 2000; 1 after 2000
d10	Dummy variable: 0 before 2010; 1 after 2010
wauthorsis	Percentage of female authors per issue
cites_gabs	Number of citations that Google Scholar has accumulated for each paper absolutely assigned to each of its authors
cites_wabs	Number of citations that Web of Science has accumulated for each paper assigned absolutely to each of its authors
cites_grel	Number of citations that Google Scholar has accumulated for each paper divided by the number of authors and assigned proportionally to each of them
cites_wrel	Number of citations that Web of Science has accumulated for each paper divided by the number of authors and assigned proportionally to each of them
Arewomen	Dummy variable: 0 if all the authors are men; 1 if one or more authors are women
dcontr75	Dummy variable: according to the relative contribution (a paper divided by the number of authors), 0 if the author is not in the first quartile of highest productivity; 1 if the author is in the first quartile of highest productivity
dpagautor75	Dummy variable: according to the pages assigned relative to each author (the total of the pages of a paper divided by the number of authors), 0 if the

author is not in the first quartile with the highest productivity; 1 if the author is in the first quartile of highest productivity

womenperjour~a Number of female authors per journal divided by total authors per journal  
float

#### 2.4. Results and discussion

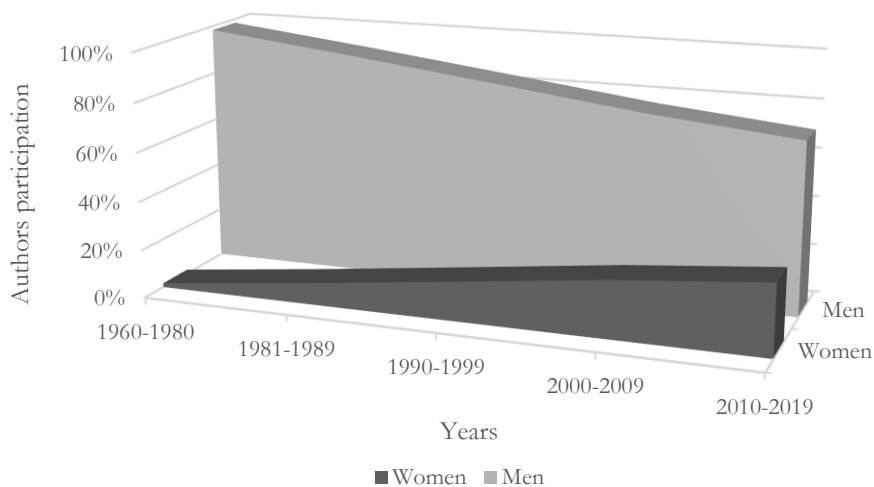
With a view to testing the first hypothesis, to measure the presence of female authors from 1960 to 2019, we observed the female and male presence in authorship (regardless of whether an author has written several papers) at a general level and by journal.



**Figure 1.** Composition of authors by gender

Taking into account that the progress of women in the profession has been dynamic and progressive, it is key to see their evolution over time. For this, a referential moment is the end of the seventies and the beginning of the eighties, when there was a greater representation of women in the profession as university graduates, CPAs and/or PhDs, as well as increased recruitment, participation in the workforce and career progression, and an improvement in salary. At the same time, in the 1980s, the incorporation of women into academia began to be significant and the gender gap decreased (Gago & Macías, 2014; Hantrais, 1995; Lehman, 1992; Loft, 1992; McKeen & Richardson, 1998; Ried et al., 1987; Walker, 2008; West et al., 2013).

Consequently, we observed the presence of women in the authorship of papers (without taking into consideration whether an author had written more than one paper) for different periods and we find the following results:



**Figure 2.** Composition of author observations by gender over time

**Table 1.** Composition of author observations by gender over time

	1960–1980	1981–1989	1990–1999	2000–2009	2010–2019	Total
Women	367	290	585	748	655	2,645
Men	6	27	111	230	272	646
	373	317	696	978	927	3,291

Taking as a reference the relative participation of the authors, the frequencies of participation of women as authors over time present the following distribution.

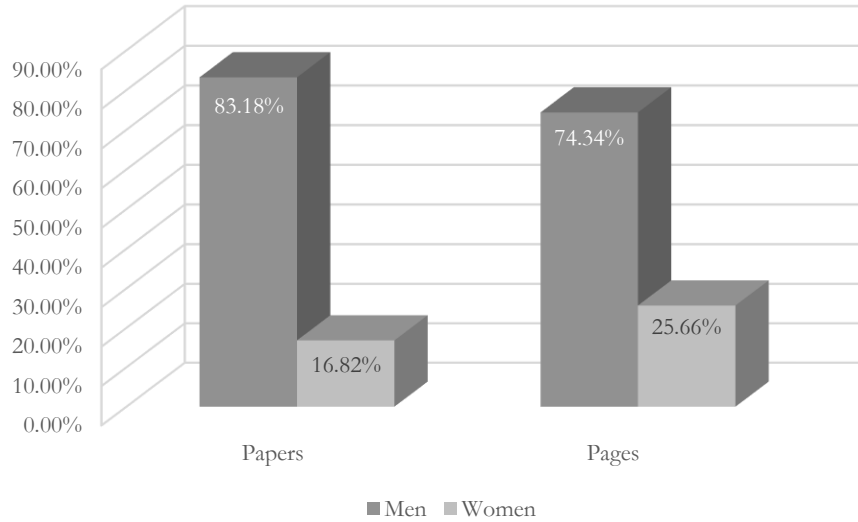
**Table 2.** Frequency of female authors' participation per paper over time

% of women per paper	1960–1980		1981–1990		1991–2000		2001–2010		2011–2019		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
0	273	97.50	952	64.81	783	61.56	507	56.40	193	48.01	1,225	70.04
16.67	0	0.00	1	0.07	1	0.08	0	0.00	0	0.00	1	0.06
20.00	0	0.00	5	0.34	5	0.39	5	0.56	2	0.50	5	0.29
25.00	0	0.00	10	0.68	10	0.79	9	1.00	7	1.74	10	0.57
33.33	4	1.43	121	8.24	114	8.96	93	10.34	59	14.68	125	7.15
40.00	0	0.00	2	0.14	2	0.16	2	0.22	1	0.25	2	0.11
50.00	2	0.71	194	13.21	182	14.31	138	15.35	73	18.16	196	11.21
60.00	0	0.00	1	0.07	1	0.08	1	0.11	0	0.00	1	0.06
66.67	0	0.00	39	2.65	39	3.07	36	4.00	18	4.48	39	2.23
75.00	0	0.00	2	0.14	2	0.16	2	0.22	1	0.25	2	0.11
100.00	1	0.36	142	9.67	133	10.46	106	11.79	48	11.94	143	8.18
	280	100.0	1,469	100.0	1,272	100.0	899	100.0	402	100.0	1,749	100.0

**Figure 3.** Average female author participation per journal

Consistent with parallel studies, taking as a reference both the list of authors and the relative participation of women in the writing of papers, there is a clear difference between authorship by men and women (West et al., 2013; Williams et al., 2015). Over time in the accounting academic community, women are considered a minority, validating hypothesis 1a.

With a view to observing productivity by gender, in a first analysis, following the works of Brown (1996), Chan et al. (2006) and Lee and Williams (1999), we determined the first quartile of the most productive authors, made up as follows.



**Figure 4.** First quartile of the most productive authors measured by relative contribution (per papers and per pages)

Following Brinn and Jones (2008), Lukka and Kasanen (1996), and Rodgers and Williams (1996), an alternative to analyse the concentration in productivity is to observe the presence of authors in several journals. The results obtained (Table 3) reveal that in general the participation of authors in more than one journal (concentration) is low, and only 5 per cent of the women achieve it. The maximum number of journals in which three women have participated is five out of a sample of 12.

**Table 3.** Distribution by gender of authors who have published in various journals

No. of journals in which an author has published	No. of authors			% of authors		
	Female	Male	Total	Female	Male	Total
1	323	1,051	1,374	17.93	58.36	76.29
2	63	210	273	3.50	11.66	15.16
3	17	77	94	0.94	4.28	5.22
4	7	28	35	0.39	1.55	1.94
5	3	16	19	0.17	0.89	1.05
6	0	6	6	0.00	0.33	0.33
Total	413	1,388	1,801	22.93	77.07	100.0

On the other hand, we observe the mean difference of the participation of the authors measured by the pages written by an author and by the relative contribution made by an author, taking into account papers in which there are no female contributors and in which there are one or more women in total, and for different periods of time.

**Table 4.** Mean difference between papers in which there are no women contributors and in which there are one or more women measured by pages by author. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively

	<b>Total</b>	<b>Men</b>	<b>Women</b>	<b>t-statistic</b>
No. obs. (Total)	1,749	1,225	524	
Mean	11.46	11.81	10.64	3.07***
No. obs. (1960–1980)	280	273	7	
Mean	7.98	8.06	4.76	1.57
No. obs. (1981–2019)	1,469	952	517	
Mean	12.12	12.88	10.72	5.38***
No. obs. (1991–2019)	1,272	783	489	
Mean	12.31	13.29	10.75	5.90***
No. obs. (2001–2019)	899	507	392	
Mean	12.11	13.37	10.50	5.76***
No. obs. (2011–2019)	402	193	209	
Mean	9.90	11.09	8.79	3.91***

**Table 5.** Mean difference between papers in which there are no women contributors and in which there are one or more women measured by the relative contribution by author. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively

	<b>Total</b>	<b>Men</b>	<b>Women</b>	<b>t-statistic</b>
No. obs. (Total)	1,801	1,388	413	
Mean	0.97	1.03	0.76	4.04***
No. obs. (1960–1980)	240	235	5	
Mean	1.23	1.24	0.87	0.74
No. obs. (1981–2019)	1,561	1,153	408	
Mean	0.93	0.99	0.76	3.32***
No. obs. (1991–2019)	1,375	986	389	
Mean	0.90	0.96	0.74	3.14***
No. obs. (2001–2019)	1,017	693	324	
Mean	0.84	0.90	0.72	2.45**
No. obs. (2011–2019)	537	347	190	
Mean	0.65	0.69	0.59	1.52

Based on the above, and in line with previous studies such as those by Oakes and Hammond (1995) and Toutkoushian (1999), we observe that although there is a gradual increase in the participation of women as authors over time, women constantly have fewer papers and fewer written pages, thus validating hypotheses 1b.

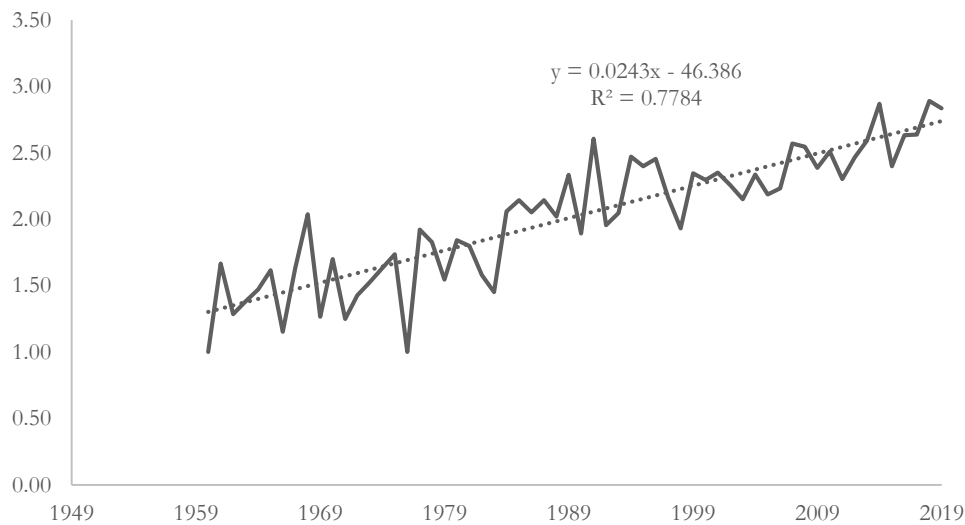
Finally, we measure the difference in the average time an author takes to write their next paper (among those authors who had more than one paper).

**Table 6.** Mean difference between the average time it takes an author to write their next paper. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively

	<b>Total</b>	<b>Men</b>	<b>Women</b>	<b>t-statistic</b>
No. obs. (Total)	557	446	111	
Mean	4.72	4.68	4.87	-0.42
No. obs. (1960–1980)	71	68	3	
Mean	5.12	5.06	6.50	-0.37
No. obs. (1981–2019)	486	378	108	
Mean	4.66	4.61	4.83	-0.51
No. obs. (1991–2019)	430	329	101	
Mean	4.62	4.57	4.81	-0.55
No. obs. (2001–2019)	306	226	80	
Mean	4.33	4.22	4.63	-0.86
No. obs. (2011–2019)	129	95	34	
Mean	4.14	3.85	4.93	-1.54

There are no significant differences between the rate of publication of men and women. The presence and productivity gaps are thus not due to a lower research and publication capacity of women, disproving the arguments that suggest lower productivity of women due to their parallel responsibilities in marriage, pregnancy, motherhood and the home.

Moving on to the second group of hypotheses, in accordance with previous studies, there is an increasing trend in the average number of authors over the years (Figure 5) (Efthyvoulou, 2008; Engers et al., 1999; Frandsen & Nicolaisen, 2010; Haeussler & Sauer mann, 2013; Jian & Xiaoli, 2013; Kumar & Ratnavelu, 2016; Waltman, 2012; Wuchty et al., 2007).

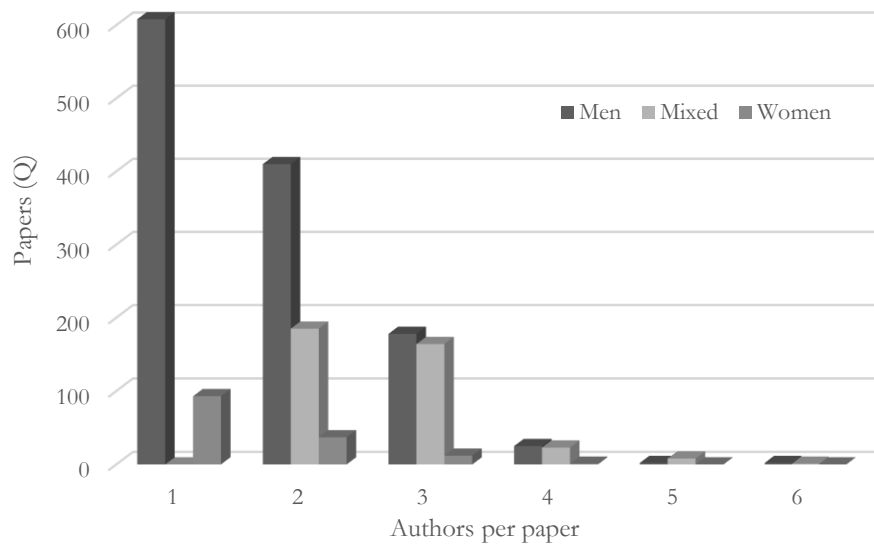


**Figure 5.** Average number of authors per paper over the years

Previous research attributes this increase in co-authorship to benefits such as the intellectual fusion that allows the integration of various fields of expertise of the authors, the synergy that allows the result to be greater than the sum of its parts, an efficient division of work, higher quality, higher probability of being published, higher levels of citation, better redistribution of the risk of failure in the editorial process, higher pay taking into account the opportunity cost of academics' time, and even higher productivity (Ductor, 2015; Kumar & Ratnavelu, 2016; Laband & Tollison, 2000).

Regarding the composition of the teams, on the one hand, the highest proportion of papers is by one or two authors. Although studies such as those by Edwards et al. (2018) and McDowell et al. (2006) find that it is more likely for both men and women to collaborate with researchers of the same gender,

in our work, as in previous studies of other disciplines (Williams et al., 2015; Young, 1995), this is valid only for men, who represent the majority of the co-author teams, while authorship exclusively by women is the minority.

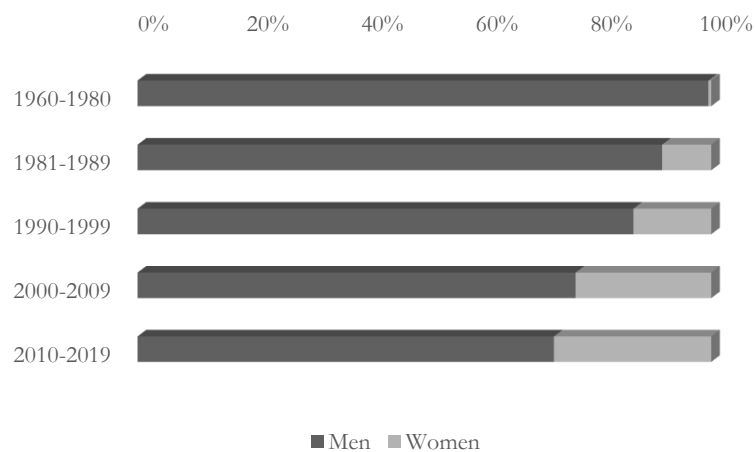


**Figure 6.** Composition of the author teams

**Table 7.** Composition of the author teams

Quantity of authors	Men	Mixed	Women	Total
1	608	0	93	701
2	410	185	37	632
3	178	164	12	354
4	25	23	1	49
5	2	8	0	10
6	2	1	0	3
	1,225	381	143	1,749
	70.04%	21.78%	8.18%	

Specifying the evolution of women as sole, first and last authors over time, we find the following data.

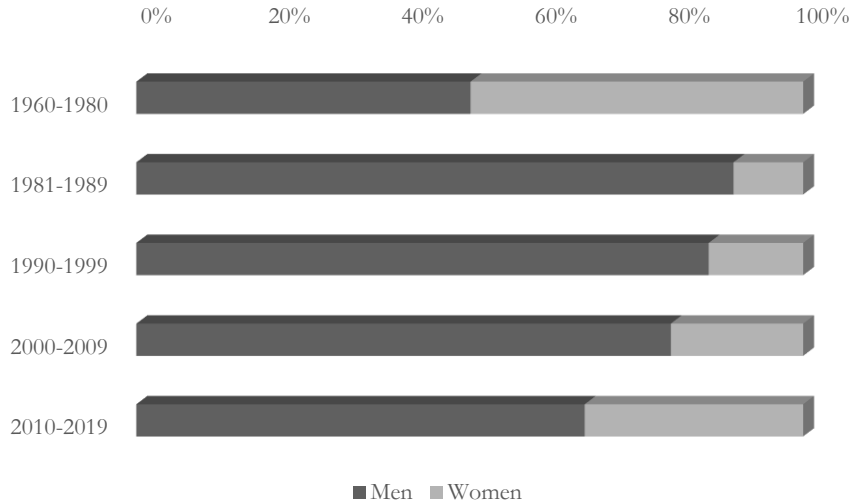


**Figure 7.** Percentage composition of unique authors by gender in total and over time



**Table 8.** Percentage composition of unique authors by gender in total and over time

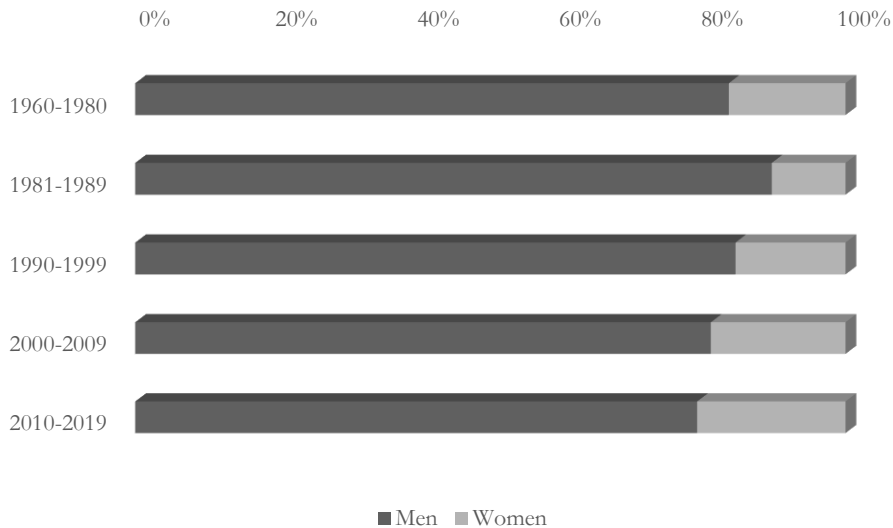
	1960–1980	1981–1989	1990–1999	2000–2009	2010–2019	Total
Men	99.50%	91.35%	86.30%	76.14%	72.37%	86.73%
Women	0.50%	8.65%	13.70%	23.86%	27.63%	13.27%



**Figure 8.** Percentage composition of first authors by gender in total and over time

**Table 9.** Percentage composition of first authors by gender in total and over time

	1960–1980	1981–1989	1990–1999	2000–2009	2010–2019	Total
Men	50.00%	89.47%	85.71%	80.00%	67.08%	75.59%
Women	50.00%	10.53%	14.29%	20.00%	32.92%	24.41%



**Figure 9.** Percentage composition of last authors by gender in total and over time

**Table 10.** Percentage composition of last authors by gender in total and over time

	1960–1980	1981–1989	1990–1999	2000–2009	2010–2019	Total
Men	83.33%	89.47%	84.29%	80.80%	78.88%	81.10%
Women	16.67%	10.53%	15.71%	19.20%	21.12%	18.90%

In accordance with previous studies (Oakes & Hammond, 1995; West et al., 2013), the participation of women as sole, first and last authors is a minority both in total as well as over time, thereby validating hypotheses 2a, 2b and 2c for the accounting area.

Although the focus of the present work is to observe the participation of women as authors in top tier journals, the data do not allow us to find and/or explain the exact causes which generate such gender disparities. However, previous studies attribute the low productivity, visibility and presence of women as authors in general, and specifically as sole, first and last authors, to one or more of the following aspects.

- *Work-life balance.* There is a clear difference between men and women's academic career patterns according to their personal and family situation. Marriage has been found to have a positive effect on men's careers, resulting in a higher publishing rate, rank, professional title (PhD) and salary. In contrast, the pattern of professional motivation for women is L-shaped, high at the beginning of their career but falling upon entering marriage. Regarding pregnancy, women are under pressure to align three clocks—the biological, the professional (stage of tenure) and the spouse's professional. The time when academic women can begin to be hired, once they have finished their PhD and have some post-doctoral experience, is the same time that couples are thinking about having a family, and the woman assumes the negative professional consequences while prioritizing the career of the man. In caring for the home, the marriage and the family, whether by force or by choice, women spend a disproportionately greater amount of time dedicated to such tasks, while men usually free themselves from these activities and dedicate their time to achieving salary raises and career advancement. Thus, it is women who are forced to survive or choose between two conflicting roles: on the one hand, being wives, mothers and housewives; and on the other, their academic progress. They face greater time and energy restrictions, and experience greater stress levels when trying to apply for leadership positions or focus on research. This can be translated into different rates of time, dedication and productivity in research and consequently lower participation and visibility of women as authors (Bellas, 1992; Broadbent, 2016; Cooper, 2001; Lee Cooke & Xiao, 2014; Norgaard, 1989; Sonnert & Holton, 1996; Tessens et al., 2011).
- *Non-mainstream research areas, methodologies and perspectives.* There is a dominant empirical, positivist, quantitative and statistical research school that studies mainly Anglo-Saxon contexts and whose approach is consistent with that of top tier journals. Given that men have a greater inclination towards these topics and methodologies, they achieve a greater number of publications, acceptance, prestige, status and reputation, which in turn allows them to have a greater number of colleagues willing to be their co-authors, resulting again in more publications. However, women tend to investigate issues of history, gender, diversity, behavioural accounting and social accounting, from different critical, ontological and epistemological perspectives, non-positivist and in non-traditional contexts that for the mainstream academia are considered suspicious, subjective or low level, and therefore end up being marginalized and silenced. Thus women have a greater probability of failure in the publication process in top tier journals (Addis & Villa, 2003; Brinn & Jones, 2008; Carnegie et al., 2003; Dhanani & Jones, 2017; Gago & Macías, 2014; Hopwood, 2008; Jones & Roberts, 2005; Khalifa & Quattrone, 2008; Komori, 2015; Lee, 1995, 1999; Lee & Williams, 1999; Locke & Lowe, 2008; Oakes & Hammond, 1995; Panozzo, 1997; Sonnert & Holton, 1996; Swanson et al., 2007; Tinker & Fearfull, 2007).
- *Old boy network or organizational homosociality.* As at the business level, in academia there is an institutionalized male social network (old boy network) that is select, elitist and exclusive to successful, high status and reputable men with similar university origins, training, hobbies and lifestyle. They participate in informal social gatherings, outside office hours, where they share their affinities in terms of stereotypically masculine sports and leisure activities (for example, Gaelic games, rugby, soccer, golf). This makes them intertwine their professional and personal lives and, thanks to this, they accumulate social capital, exchange information, achieve informality in their relationships, form alliances, and benefit in the work and academic sphere, increasing their productivity. Women, not having the same tastes and affiliations, are excluded from achieving high-level academic and professional relationships, integration and success. At the authorship level specifically, they have less chance of achieving intellectual collaboration and synergies for co-authorship, less access to high-level academics (with higher productivity), and limited options to collect and disseminate research results, exchange manuscripts, become familiar with the

research topics and perspectives from the mainstream academic community, get feedback and disseminate their research interests, projects and academic achievements, and, ultimately, achieve parity in publication in top tier journals (Addis & Villa, 2003; Bellas, 1992; Ferber, 1988; Khalifa, 2013; Norgaard, 1989; Roberts & Coutts, 1992; Shearer & Arrington, 1993; Tessens et al., 2011).

- *Assortative matching hypothesis.* Previous studies have shown that the formation of work teams is not done at random but in favour of the productivity (both in quality and quantity) and reputation of academics. It has also been determined that gender is a variable that affects the selection of co-authors. In keeping with the old boy network postulate, collaborations are probably between male authors with similar skills and productivity, and graduates of schools of the same rank. Consequently, women are usually paired with co-authors of relatively lower quality; they are less likely to associate with higher-level authors, affecting their productivity (measured in quantity and quality), their position as first or last author, and the consequences that this implies for their academic career (Boschini & Sjögren, 2007; Ductor, 2015; Ivanova-Stenzel & Kübler, 2011; Laband & Tollison, 2000). This is reflected in the case of cost and management accounting, observing the top 25 per cent most productive authors (measured by relative contribution and relative pages). The vast majority have male co-authors (Table 11), reflecting the limitation that women have to access academics with higher status and productivity.

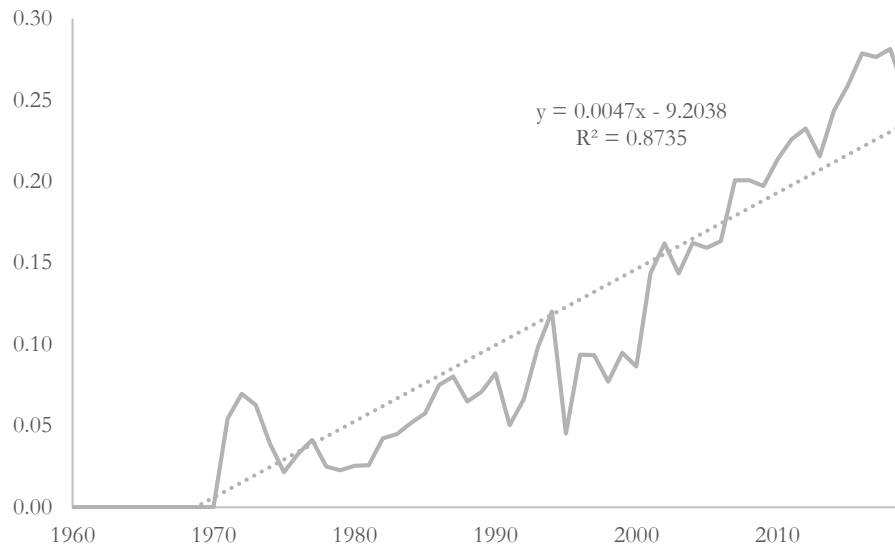
**Table 11.** Composition by gender of the co-authors of the most productive authors

	Relative contribution		Relative pages	
	Freq.	Percent	Freq.	Percent
Men	487	88.71	306	90.27
Women	62	11.29	33	9.73
	549	100.0	339	100.0

- *Matthew effect.* Based on the above, there is a tendency for productive, eminent, visible and more reputable authors (according to our figures, they are men) to associate with others of the same level and category, thereby consolidating and even enhancing their results and status. Those who considered less productive (women) are less likely to improve their level, following what is stated by the Gospel according to Saint Matthew “For whosoever hath, to him shall be given, and he shall have more abundance; but whosoever hath not, from him shall be taken away even that he hath” (Ductor, 2015; Merton, 1968; Perc, 2014; Rossiter, 1993).
- *Queen bee syndrome.* One way that women protect their achievements and positions in sexist and discriminatory environments, such as accounting, is by adhering to the male social identity of the context (which even leads them to define themselves in masculine terms), fostering gender stereotypes, distancing themselves from other women, and opposing attempts to promote female subordinates, arguing less commitment, assertiveness, skills and professional qualification. This may affect the intention of high-level women to co-author with other applicants, as well as indicating a lower propensity to act as role models or mentors for other women (Derks et al., 2011; Faniko et al., 2021; Schein, 1975; Staines et al., 1974).
- *Mentoring.* It has been found that mentoring relationships and role modelling between people of the same gender generate greater comfort, closeness, interdependence, psychosocial support, wealth and are considered important in professional development and advancement as well as for success, especially in the case of women. Due either to queen bee syndrome or to the cumulative effect of the shortage of women and women's networks in accounting, there is a lack of role models and mentors for new women academics, which affects their productive capacity as well as the associations that occur between women: exclusively female co-author teams represent only 8.18 per cent (Table 7) (Blake-Beard et al., 2011; Cullen & Luna, 1993; Edwards et al., 2018; Ensher & Murphy, 1997; Lockwood, 2006).
- *Self-promotion and female modesty.* One aspect that socially identifies women as more ‘feminine’ is modesty in their achievements and a natural concern for and commitment to the harmony and wellbeing of others and of groups, while men culturally and traditionally have been focused on individuality, leadership, hierarchy, achievement and self-promotion. In this scenario, women may be limited when it comes to presenting their abilities, achievements, status and attractiveness, and

be at a disadvantage when it comes to negotiating the order of authors' positions (Daubman et al., 1992; Daubman & Sigall, 1997; Rudman, 1998; West et al., 2013).

Turning to the third hypothesis, by observing the composition by gender of editorial boards (Figures 10 and 11, Table 12), we find that, although there is growing female participation, there is far from parity.



**Figure 10.** Average participation of women on editorial boards over time



**Figure 11.** Average participation of women on editorial boards per journal

**Table 12.** Maximum, minimum and average percentage participation of women on editorial boards per journal

	Mean	Std. Dev.	Min	Max
Accounting Review	0.14	0.13	0.00	0.36
Accounting, Auditing & Accountability Journal	0.24	0.03	0.20	0.31
Accounting Organizations and Society	0.12	0.08	0.00	0.28
British Accounting Review	0.14	0.02	0.07	0.16
Contemporary Accounting Research	0.19	0.08	0.00	0.32
Critical Perspectives on Accounting	0.25	0.07	0.14	0.40
European Accounting Review	0.17	0.04	0.10	0.24
Journal of Accounting Research	0.05	0.06	0.00	0.17
Journal of Accounting and Economics	0.13	0.07	0.06	0.25
Journal of Accounting and Public Policy	0.10	0.02	0.06	0.14
Management Accounting Research	0.13	0.10	0.00	0.27

Regarding the correlation between the proportion of female authors and women on the editorial board for each issue of different journals over time (Table 13), it can be seen that between 1960 and 2000 the correlation was slight although positive and significant; however, later, as there is a greater number of women (editors and authors), this relationship becomes diluted and the number of papers written by women are explained by other factors that are not related to the presence of women on the editorial board.

**Table 13.** Correlation between the proportion of female authors and the proportion of women on the editorial board. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively

	Total	1960–1980	1980–2019	1990–2019	2000–2019	2010–2019
Correlation coeff.	0.26***	0.16*	0.17***	0.14***	0.04	-0.08

Editorial boards are a select group of individuals who have graduated from high-status schools, with power, success, recognition, reputation, status and position as research experts in a particular discipline. According to the theory of homosociality, groups seek, enjoy and prefer the company of people with similar backgrounds, inclinations, values and characteristics. Since the composition of the editorial board has historically been homophilic and isomorphic, the access and participation of women in these groups is limited (Beattie & Ryan, 1989; Brinn & Jones, 2007; Fogarty & Zimmerman, 2019; Lipman-Blumen, 1976; Swanson et al., 2007; Williams & Rodgers, 1995).

Likewise, the interest of women to entrench in their position means that, as described by queen bee syndrome, they seek to behave according to the masculine social norms stipulated by the network of editors (Derks et al., 2011; Faniko et al., 2021; Schein, 1975; Staines et al., 1974).

Thus, although it is expected that the presence of women on the editorial board favours the acceptance of alternative research perspectives that men do not traditionally address (Addis & Villa, 2003), the fact that women do not reach a critical mass (Figures 10 and 11, Table 12) on editorial boards and that those who do act according to stereotypical male behaviours limits the women's ability to mobilize the focus of the journals to these new perspectives. Therefore, there is no greater participation of women as authors, and the low correlation can be explained.

In order to validate the fourth hypothesis, related to possible gender gaps in citation patterns, we calculate a mean differences of the citations that the papers have received, taking as a reference Google Scholar and Web of Science, assigned in an absolute and weighted way to the authors according to their gender. We also calculate a mean difference of the citations in the authors' profiles (from Google Scholar).

**Table 14.** Differences in means of citations for papers by Google Scholar and Web of Science (assigned in an absolute and relative way) and for authors by Google Scholar

	<b>Total</b>	<b>Men</b>	<b>Women</b>	<b>t-statistic</b>
No. obs.	1,801	1,388	413	
Paper Google citation absolute	293.97	309.28	242.50	1.55
Paper Google citation relative	159.72	170.52	123.44	1.63
No. obs.	1,224	921	303	
Paper WOS citation absolute	74.94	77.20	68.08	0.82
Paper WOS citation relative	38.27	39.69	33.95	0.85
No. obs.	695	511	184	
Author Google citation	6,266.35	7,578.52	2,622.26	3.30***

The results show that, from the point of view of citations of papers (assigned to their authors in absolute and relative terms), there is no significant difference by gender. However, analysing the Google Scholar profiles of the authors, we found a significant difference in the number of citations accumulated by men and women.

Previous literature does not show a consensus regarding citation patterns related to gender. Some studies indicate that women are cited more than men (Long, 1992; Sonnert & Holton, 1996; Toutkoushian, 1999); others find that there is no difference in the number of citations between men and women with the same qualifications (Davis & Astin, 1987; Ferber et al., 1978); and other studies affirm that men are cited more (Addis & Villa, 2003; Ferber, 1986, 1988; Toutkoushian, 1994).

Although the causes for these differences are not clarified with precision, some studies state various aspects that may influence this relationship at a general level and that may be linked to the present results.

- Since there is a positive correlation between the level of productivity and citations of authors (Tables 15a and 15b), as there is a lower presence of women as authors of papers in top tier journals, there is also a lower level of citations for them (from the point of view of authors).

**Table 15.** Correlation between author productivity (measured by relative contribution) and number of citations

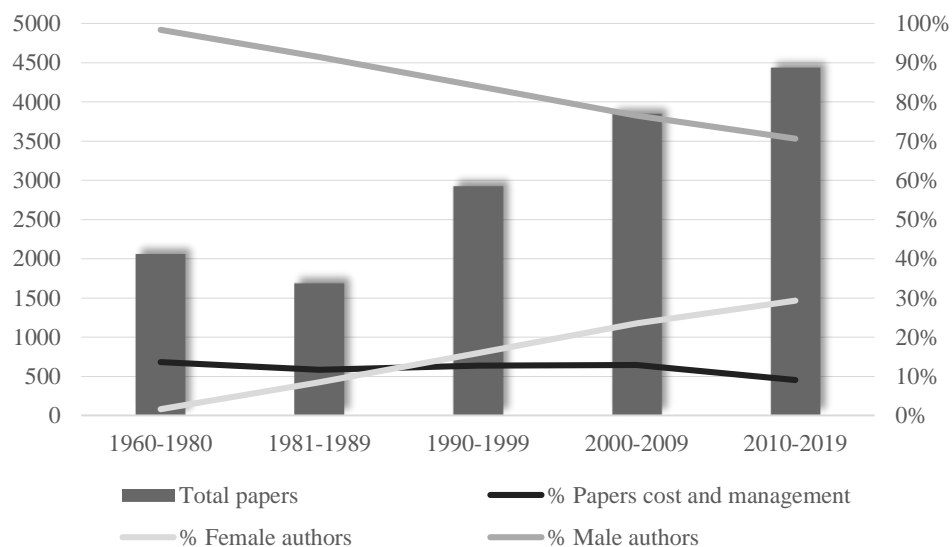
	contrib	cites_gabs	cites_wabs	cites_grel	cites_wrel
Contrib	1.00				
cites_gabs	0.73***	1.00			
cites_wabs	0.57***	0.88***	1.00		
cites_grel	0.72***	0.97***	0.81***	1.00	
cites_wrel	0.58***	0.85***	0.96***	0.85***	1.00

**Table 16.** Correlation between author productivity (measured by relative pages) and number of citations

	pagauthor	cites_gabs	cites_wabs	cites_grel	cites_wrel
Pagauthor	1.00				
cites_gabs	0.12***	1.00			
cites_wabs	0.15**	0.85***	1.00		
cites_grel	0.17***	0.98***	0.82***	1.00	
cites_wrel	0.21***	0.82***	0.96***	0.85***	1.00

- Taking into account that there are significant differences between the number of publications and the number of citations depending on the area of knowledge, and that the size of the community of authors is also a determining factor for the accumulation of citations (Dion et al., 2018), it is important to locate cost and management accounting—an area that corresponds only to 11.71 per cent of published papers in accounting (Figure 12). On the one hand, these results may

indicate that we are taking a subsample (of both papers and authors) that does not reflect the general stage of accounting, and that men may be achieving a greater impact, measured by citations, on topics that, according to the mainstream approach, generate greater visibility, presence, status and impact (Gago & Macías, 2014; Gonzalez-Brambila & Veloso, 2007). On the other hand, the results suggest that a strategy typical of the academic elites (in accounting, a male elite) may be being followed that seeks to position a small group of authors who keep research focused on what they have self-proclaimed as most promising areas or ideal methodological ideals (Lukka & Kasanen, 1996). However, once it is seen that the non-elite (in this case, women) can reach this terrain, it is declared obsolete and uninteresting and new subjects are proclaimed in which the elite can continue to lead (Fogarty & Zimmerman, 2019). As reflected in Figure 12, when participation in cost and management accounting papers decreases, this is when the proportion of men as authors decreases and that of women increases.



**Figure 12.** Proportion of cost accounting and management papers over time. Evolution of the percentage of women and men as authors

- Because authors tend to cite people of the same gender, especially if they are part of their closest social and informal network (old boy network), and women have not yet achieved a critical mass, the gender gap in the number of citations of authors has not been eliminated (Ferber, 1988; Ferber & Brün, 2011; McDowell et al., 2006). The Matthew effect refers to a phenomenon in which eminent and already famous authors and editors receive credit, citations, status and influence, and generate disproportionate recognition for their contributions, strengthening and enhancing their reputation more and more over time. In contrast, there is a Matilda effect, where women's research may be less cited and recognized academically, especially when they do not form the central core of knowledge in the academic field (cost accounting and management vs. accounting in general), and/or when they have not achieved a critical mass that allows levelling the citation patterns (Clark & Corcoran, 1986; Merton, 1968; Perc, 2014; Rossiter, 1993).
- Taking into account the inclination that men have for self-promotion, they are more inclined to create and update their profile for the dissemination of academic achievements, such as Google Scholar. Therefore, they have greater visibility, dissemination and presence. On the other hand, men have a greater inclination for self-citation, and therefore, having more publications, they in turn achieve increasing numbers of citations (Rudman, 1998). In contrast, women, according to queen bee syndrome, can avoid citing authors of the same gender in order to protect their position and status (Derks et al., 2011; Faniko et al., 2021; Schein, 1975; Staines et al., 1974).

## 2.5. Conclusions

Despite the importance and recent interest in diversity, the accounting academic community is a reflection of misogynistic and patriarchal structures at the professional level, where dominance and leadership continue to be centred on male academics who have a conventional, one-dimensional and dominant view of the reality, science and the profession. This places women in a disadvantageous position with respect to recruitment, hiring, promotion, tenure, status, distribution of workload and remuneration. Some authors have attributed this difference to the lower productivity of women in research outputs, caused on the one hand by lower investment in human capital, and on the other hand by the structural and systemic gender discrimination that exists in organizations, or a combination of both.

This study analyses the participation of women as authors in the area of cost and management accounting, in order to clarify whether authorship of papers in journals top tier is a possible cause of gender disparity in the accounting case. The results confirm that female authors are a minority group; they have a lower productivity and presence as sole, first and last authors. Two important parallel findings in this regard concern, on the one hand, the fact that there is not a significant difference by gender in the publication time between one paper and another, therefore the lower rate of authorship is not related to a lower publication capacity of women. On the other hand, we find a lower chance for women to have the most productive academics as co-authors, which slows down their ability to generate a greater number of papers. We also find that the proportion of women on editorial boards is a minority, and that the correlation of this with the proportion of women as authors, although positive and significant, is low. Finally, we find that the citations of the cost and management accounting papers are not influenced by the gender of the authors; however, there is a difference in the number of citations that the male and female authors in our sample receive.

This type of work, analysing the social composition of the accounting research community, allows us to understand the nature, scope, and real and potential consequences of gender asymmetries and to make visible the low representation of women in key areas of the academic world (such as top tier journals). This ultimately limits the possibility of having alternative research perspectives that lead to scientific and intellectual progress, dynamism and integrity as a result of inclusive, diverse, equitable and pluralistic academic teams.

We find some limitations of this study. It refers to the productivity measured by papers in a specific group of journals, leaving aside other research results in other journals or in other languages that can also be valuable and representative of the advancement of women in academia. We also recognize that this base includes professors from other disciplines such as sociology, mathematics, statistics, etc., who collaborate with cost and management accounting professors, which can partially influence the present results and analysis.

Finally, aspects that we underline as being important for continuing research in this field concern broadening the spectrum of study to the accounting area as a whole, and inquiring into or validating the reasons that we theoretically pose here and how they can affect the productivity of men and women in practice.



## **CHAPTER THREE**

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### 3. Cultural dimensions and board of director's diversity

#### Summary

This study proposes a research approach to examine the diversity of boards of directors and the business-oriented culture that characterizes a society, considering the role that institutional factors play in this relationship through the cultural dimensions of the country of origin. The research questions are examined using an international sample of 2185 listed companies between 2006 and 2015, applying various linear regression models for panel data. This work shows that institutional contexts with a culture more oriented to economic value exert a relevant effect on the gender gap, but with different types of effects. While contexts with a greater male orientation drive a higher proportion of women on boards of directors, contexts with a greater long-term orientation pose a barrier for women.

**Key words:** board diversity, female directors, efficiency, DEA, culture

**Paper status:** In review

#### Dimensiones culturales y diversidad en el consejo de administración

#### Resumen

Este estudio propone un enfoque de investigación para examinar la diversidad de los consejos de administración y la cultura orientada a los negocios que caracterizan a una sociedad, considerando el rol que los factores institucionales ejercen en esta relación a través de las dimensiones culturales del país de origen. Las preguntas de investigación se examinan utilizando una muestra internacional de 2185 empresas cotizadas entre 2006 y 2015, aplicando varios modelos de regresión lineal para datos de panel. Este trabajo evidencia que los contextos institucionales con una cultura con mayor orientación al valor económico ejercen un efecto relevante en la brecha de género, pero con diferentes tipos de efectos. Mientras que los contextos con mayor orientación masculina impulsan una mayor proporción de mujeres en los consejos de administración, los contextos con una mayor orientación al largo plazo suponen una barrera para las mujeres.

**Palabras clave:** Diversidad del consejo de administración, consejeras, eficiencia, DEA, cultura

**Estado del artículo:** En revisión

### 3.1. Introduction

Since 1978, the society has been aware of the existence of a glass ceiling, a term that describes the existence of an invisible barrier that hinders women to access power positions, despite having the same or greater qualifications, capabilities and merits than their peers of the opposite sex. Currently, although there are signs of slow progress, women remain underrepresented in the upper echelons of large corporations (Gupta, Mortal, Silveri, Sun, & Turban, 2020). In this respect, only 22.5% of the seats on the boards of directors of Fortune 500 companies are held by women (Catalyst, 2020b) due to the existence of intergroup biases in selection processes, derived from the majority presence of men in this organ (McDonald & Westphal, 2013; Westphal & Stern, 2006; 2007; Zhu, Shen, & Hillman, 2014)

Therefore, it seems that the salary gap and the glass ceiling may be based on a culture that obstructs female aspirations and does not promote equal opportunities, becoming a strong impediment to the access and promotion of women within the corporate hierarchies. To which must be added the masculine spirit that still characterizes the culture and business environments, in which prejudices, derived self-limitations and promotion policies hinder female leadership and gender equality (Perrault, 2015).

On the other hand, the appearance of public initiatives aimed at promoting gender equality, especially through the establishment of gender quotas in the boards of directors, has provided prima facie evidence that the main restriction on female leadership is not the lack of interest to occupy these positions (Pande and Ford, 2011), something that had already been shown in the results derived from the different Catalyst surveys show that women want to be leaders, without observing differences based on whether they are mothers or not.

In this sense, this paper attempts to contribute to this field of research with a macro approach, analyzing how the culture can pose a social barrier to achieving greater gender diversity in the board. To do this, we establish a theoretical framework based on institutional theory, adapting the arguments to the different characteristics of Hofstede culture dimensions.

The results obtained for a sample of 2,185 listed companies between 2006 and 2015 show that the institutional context with a greater culture of economic value has a relevant effect on the gender gap but with a different effect. In this sense, while environments with a higher masculinity value promote a greater presence of women on boards, the long-term dimension represents a barrier. This evidence improves the knowledge about the drivers and barriers to the presence of women on the board of directors because we observe relevant differences with those obtained in previous studies, suggesting that the effect of the macro context on company decisions presents evolutionary patterns.

### 3.2. Theoretical framework: Research hypothesis

The limited presence of female leaders began to fight through their inclusion on the agenda of numerous public debates and lobbying movements for the appointment of more women to the top of organizations (Knippen, Shen, & Zhu, 2019). This suggests that public intervention through the stipulation of legal obligations regarding gender quotas and, to a lesser extent, recommendations, is the driving force for change. All this, despite the evidence suggesting that the presence of women favors better organizational performance, especially in settings dominated by the male gender (Cumming & Leung, 2021). An effect that derives from the enrichment that their presence supposes for the functioning and decision-making processes with new social norms and approaches, as well as greater independence and more ethical values (Kirsch, 2018).

Although the evidence suggests that the presence of women favors organizational performance, especially in scenarios dominated by the male gender (Cumming & Leung, 2021), thanks to the greater independence and ethical values that women have, as well as the enrichment which supposes its contribution to organizational processes and decision-making regarding new norms and social approaches (Kirsch, 2018), it has been necessary for a small group of women leaders to start a struggle to achieve the inclusion of the female agenda in numerous public debates and lobbying movements with the aim of reaching a greater number of women at the top of organizations (Knippen, Shen, &

Zhu, 2019). This suggests that public intervention through the stipulation of legal obligations regarding gender quotas and, to a lesser extent, recommendations, is the engine of change.

Academics have promoted a line of research aimed at knowing the barriers that make it difficult for women to occupy different positions of responsibility in the boards of directors (Kogut, Colomer, & Belinky, 2014; Terjesen, Sealy, & Singh, 2009), contrasting the existence of an unconscious intergroup bias (McDonald & Westphal, 2013; Zhu, Shen, & Hillman, 2014) that favors directors continuing to select candidates belonging to the same group based on gender (Bodenhausen, Kang, & Peery, 2012). However, there may be a recategorization due to external pressures for those women with demographic attributes similar to those of active men, mainly those referring to ethnicity, age, education and experience (Zhu, Shen, & Hillman, 2014). Inclusion that alleviates tensions through an expansion of the number of seats on the board of directors, women not being considered as candidates to form part of specialized committees (McDonald & Westphal, 2013), decisions that allow intergroup bias to remain latent (Knippen, Shen, & Zhu, 2019) and the boards of directors in the hands of the traditional elite (Allemand, Bédard, Brullebaut, & Deschênes, 2021; Gregorič, Oxelheim, Randøy, & Thomsen, 2017).

The research current focused on the study of transnational differences at the macro level in the gender diversity of the boards of directors uses institutional arguments to explain that the underrepresentation of women is not due only to organizational reasons, but also to broader institutional structures and complex (Aguilera & Jackson, 2003). These studies show that women's access to boards is not simply an aggregate of individual actions, but is influenced by higher-order institutional factors (Allemand, Bédard, Brullebaut, & Deschênes, 2021).

In this regard, regulatory, normative and cultural-cognitive elements (Scott, 1995) combine to form a national context more or less conducive to the appointment of women, and key actors work to shape this context according to their interests. Thus, institutions determine the “rules of the game” (North, 1992), determining both the way in which business is carried out (Cantwell et al., 2010), and the structure they adopt to legitimize themselves (DiMaggio & Powell, 1983).

In this sense, although researchers have shown great interest in the impact of formal institutions on gender diversity, the impact of national culture is less studied, with the exception of the work of Cabeza, Del Brio, & Rueda (2020); Grosvold & Brammer (2011; 2016) and Gupta, Hanges, & Dorfman (2002). Culture must be understood as the values, beliefs and interpretations that result from common experiences and that the members of these groups transmit from generation to generation (House et al., 2004).

In this regard, those societies with a cultural system more oriented to the business world - male, individualistic, with greater recognition of distance from power, greater tolerance to uncertainty and long-term orientation, will have a lower responsibility and interest for social welfare, being able to affect the inclusion of women in management positions because they are expected to be less predisposed to renounce their own needs for the benefit of other groups. In addition, in these institutional settings, these societies value individual autonomy, the economic and political empowerment of people (Brieger, Francoeur, Welzel, & Ben-Amar, 2019), show a greater interest in achieving these objectives and compete with others if necessary, and may affect the gender gap since they have less concern for people and relationships. In this sense, we propose the following working hypothesis:

*H1: Gender diversity on the board of directors will be less in companies located in business-oriented environments.*

### **3.3. Empirical research: data, variables, and econometric models**

#### **3.3.1. Sample for the Analysis**

The data for this study are the result of information availability in the Thomson One Analytic database for the period of analysis from 2006 to 2015 (García Sánchez & Martínez Ferrero, 2018).

Firstly, archival data were collected from Thomson Reuters Eikon, which includes the above-mentioned database. In this study, we took into consideration information on all the firms from the global benchmark stock indices from America, Europe, the Middle East, Africa (EMEA) and Asia, comprising 3,594 companies from 31 stock indices. After excluding duplicated companies and observations with missing financial or economic information, a final sample of 10,279 firm-year observations (2,185 firms) spanning ten years (2006–2015) was available to test the hypotheses. The firms were engaged in activities in different sectors and were from 24 different countries. The sample was unbalanced because not all companies were represented in all periods. Companies that had filed for bankruptcy and merged should be deleted to avoid changes in values and strategies. Because other firms could be delisted or created during the period of analysis, the sample for analysis is an unbalanced panel, and consequently no information is available for the period.

Table 17 shows the sample distribution by country, year and industry. As we can see, the highest percentages are for the years 2010–2015 (more than 69% of the observations). In relation to geographic diversity, 35.41% of the companies are from the USA. With regard to industry, the sectors with a higher presence are materials and capital goods.

<b>Panel A. Sample by country</b>			
Country	Frequency	Percentage	
Australia	985	9.58%	
Belgium	10	0.10%	
Canada	1.281	12.46%	
China	354	3.44%	
Denmark	10	0.10%	
Finland	30	0.29%	
France	323	3.14%	
Germany	256	2.49%	
Hong Kong	227	2.21%	
Ireland	128	1.25%	
Italy	20	0.19%	
Japan	857	8.34%	
Luxembourg	20	0.19%	
Netherlands	186	1.81%	
New Zealand	53	0.52%	
Norway	20	0.19%	
Russia	144	1.40%	
Singapore	195	1.90%	
South	120	1.17%	
Spain	170	1.65%	
Sweden	218	2.12%	
Switzerland	220	2.14%	
United Kingdom	812	7.90%	
United States	3.640	35.41%	
<b>Total</b>	<b>10.279</b>	<b>100.00%</b>	

<b>Panel B. Sample by year</b>			
Year	Frequency	Percentage	
2006	608	5.91%	
2007	728	7.08%	
2008	849	8.26%	
2009	982	9.55%	
2010	1.070	10.41%	
2011	1.121	10.91%	
2012	1.120	10.90%	
2013	1.211	11.78%	
2014	1.260	12.26%	
2015	1.330	12.94%	
<b>Total</b>	<b>10.279</b>	<b>100.00%</b>	

<b>Panel C. Sample by industry</b>			
Industry	Frequency	Percentage	
Automobiles & Components	235	2.29%	
Capital Goods	1046	10.18%	
Commercial & Professional Services	282	2.74%	
Consumer Durables & Apparel	379	3.69%	

Consumer Services	322	3.13%
Diversified	259	2.52%
Energy	997	9.70%
Food & Staples Retailing	236	2.30%
Food, Beverage & Tobacco	466	4.53%
Health Care Equipment & Services	446	4.34%
Household & Personal Products	157	1.53%
Materials	1344	13.08%
Media	383	3.73%
Pharmac., Biotechnology & Life	402	3.91%
Real Estate	490	4.77%
Retailing	477	4.64%
Semiconductors & Semic. Equipment	185	1.80%
Software & Services	474	4.61%
Technology Hardware & Equipment	315	3.06%
Telecommunication Services	346	3.37%
Transportation	384	3.74%
Utilities	654	6.36%
<b>Total</b>	<b>10.279</b>	<b>100.00%</b>

**Table 17. Sample distribution:** Distribution by country, year and industry

### 3.3.2. Variable Measurement

#### *Dependent Variable: Board diversity*

To measure the female board presence (“*Wom*”), the Blau index (Blau, 1977) is used. This index has been especially used to measure the diversity of the board (whether of race, ethnicity, gender, or experience) but can be extended to other characteristics because it is based on the qualitative differences of members belonging to a particular group (Harrison & Klein, 2007). Methodologically, it meets the necessary criteria to be considered a good measure of relative female diversity so that it is not a negative and unlimited index (Miller & Triana, 2009).

The formula for calculation is  $1 - \sum p_k^2$ , where  $p$  is the proportion of members of a category  $k - th$ . This can take values from 0 to  $(k - 1)/k$ . Taking into account that female diversity takes two values (women vs. men),  $k = 2$ . Thus, its maximum value will be 0.50, which indicates that the distribution of the members is equal between the categories.

#### *Independent variables: Hofstede cultural dimensions*

We base our measure on the cultural dimensions proposed by (Hofstede, 2011), who developed them to explain the general similarities and dissimilarities in cultures around the world. In accordance with our aim, the use of Hofstede’s cultural dimensions allows us to develop an international comparison of sustainable patterns of behavior and identify which differences among them can be attributed to culture and which differences can be attributed to other institutional causes (Baskerville, 2003).

At this stage, following the dimensions proposed by (Hofstede, 2011), the cultural indices adopted refer to power distance, individualism, masculinity, uncertainty avoidance and long-term orientation. Power distance expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. Individualism expresses the preference for a loosely knit social framework in which individuals are expected to take care only of themselves and their immediate families. Meanwhile, masculinity expresses a preference in society for achievement, heroism, assertiveness and material rewards for success. Uncertainty avoidance expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. Finally, long-

term orientation describes the link of every society with its own past while dealing with the challenges of the present and future.

In line with the above, the cultural dimension variables are the following (the data are available on the Geert Hofstede™ Cultural Dimensions website): (i) “*Powdist*”, which is a numerical variable that represents the level of hierarchy within a society; a higher value represents a higher distance to power; (ii) “*Indiv*”, which is a numerical variable that reflects the prevalence of individual values compared with group values; a higher value represents a more individualist country while a lower value a more collectivist country; (iii) “*Masc*”, which is a numerical variable that represents the level of male orientation; a higher value represents countries with male focus and orientation and a lower value countries with female focus and orientation; (iv) “*Uncertavoid*”, which is a numerical variable that identifies the level of uncertainty avoidance; a higher value represents a greater aversion; and (v) “*LongTerm*”, which is a numerical variable that represents the orientation of a society towards the future.

These variables have been grouped by a factorial analysis and results are shown in Table 18. The Kaiser-Meyer-Olkin (KMO) measure of sample suitability is 0.736, higher than 0.5, the minimum variable of suitability, and the Bartlett test of sphericity is significant at a 99% confidence level. Results show one factor, “*Culture*”, represent the cultural values in a country. All of the variables have a positive charge on each factor with the exception of “*LongTerm*”.

	<b>Culture</b>	<b>Mean</b>	<b>Std. Dev.</b>
Individualism	0.9247	75.731	21.268
Power Distance	0.8361	44.206	13.252
Uncertain Avoidance	0.4907	51.273	18.502
Masculinity	0.5243	60.185	16.073
Long Term	-0.9467	60.718	14.783
Variance accounted for = 88.04%			
Kaiser-Meyer-Olkin (KMO) measure of simple suitability			0.74
Bartlett test of sphericity (Chi-square)			47890.03
p-value			0.00

**Table 18. Factorial Analysis:** Factorial analysis for cultural values

#### *Control Variables*

Previous studies analyzing the role of board diversity in terms of female directors in business efficiency have shown the influence of a set of factors that are here adopted as control variables, thus avoiding biased results (Chiu & Sharfman, 2011; Zhang et al., 2020). In this sense, the size represented by the logarithm of total assets (“*Size*”) is controlled; the level of indebtedness relativized by total assets (“*Leverage*”); and economic profitability (“*ROA*”). Additionally, certain characteristics of the board of directors are controlled, following Adams & Ferreira (2009) and Terjesen, Sealy & Singh (2009), relative to its size (“*BoardSize*”), activity (“*BoardMeet*”), and level of independence, identified by the percentage of independent directors (“*% IndepD*”).

Finally, we also control for industry, year and country using dummy variables: for “*Industry<sub>j</sub>*”, *j* represents the different sectors of activity in which the companies in the sample operate; for “*Country<sub>k</sub>*”, *k* represents the different countries in the sample; for “*Year<sub>n</sub>*”, *n* represents the years of the sample; “*Crisis*” represents the period of financial crisis (2007–2009); “*Crisis*” represents the period of financial crisis (2007–2009).

### **3.3.3. Models of Analysis**

This research aims to examine the impact of cultural dimensions on board diversity in terms of gender. To test our research hypothesis, the following model of analysis is proposed. In this model,



the board diversity is regressed on cultural dimensions and control variables (lagged one period to avoid the endogeneity problem).

$$\begin{aligned}
 Wom_{it} = & \beta_0 + \beta_1 Culture_{i,t} + \beta_2 Size_{it-1} + \beta_3 ROA_{it-1} + \beta_4 Leverage_{it-1} + \beta_5 Bospace_{it-1} \\
 & + \beta_6 Boactivity_{it-1} + \beta_7 Boinddep_{it-1} \\
 & + \sum_{j=8}^{29} \beta_j Industry_i + \sum_{k=30}^{51} \beta_k Country_i + \sum_{n=52}^{60} \beta_n Year_t + \beta_{61} Crisis_t + n_i \\
 & + \mu_{it}
 \end{aligned}$$

### 3.4. Results

#### 3.4.1. Descriptive Results

Table 19 displays the descriptive statistics and the correlations between variables used in this study. The measure of female directors using (Blau, 1977) index indicates that 20.5% of the board members are women. With respect to the control variables, on average, the boards sampled comprise 11 directors, around 30% of whom are independent, and have 8 meetings per year. Firm size has a mean value of around 5.2 (expressed in millions of euros), while 57% of companies are leveraged.

Table 19 presents the correlations among the selected variables. The correlation matrix shows low or moderate correlation among variables; in no case are high values obtained for the coefficients between the dependent and independent variables or between the independent variables. Thus, multicollinearity among these variables is not a severe problem.

<b>Panel A. Descriptive statistics</b>				
	<b>Mean</b>	<b>Std.dv.</b>		
Wom	0.205	0.149		
Size	5.277	1.649		
Leverage	0.569	0.201		
Bospace	10.711	3.246		
Boactivity	8.200	4.660		

<b>Panel B. Bivariate Correlation matrix</b>									
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
1	Efficiency	1							
2	Wom	0.044	1						
3	Culture	0.053	-0.360	1					
4	Size	-0.007	0.051	0.186	1				
5	Leverage	-0.005	0.131	0.001	0.136	1			
6	Bospace	0.042	0.131	0.232	0.376	0.198	1		
7	Boactivity	-0.017	-0.039	-0.052	-0.093	-0.135	-0.230	1	
8	Boinddep	0.001	0.033	0.000	-0.095	-0.056	-0.089	0.251	

**Table 19. Variable description:** Descriptive statistics and correlation matrix

#### 3.4.2. Multivariate Results: The Effect of Cultural Context on the Board Diversity

Table 20 shows the results obtained for the model proposed to test hypothesis H1. In this regard, it can be observed that the variable “Culture” has a negative but not significant effect on the diversity of the board of directors (coef. = -0.831; p-value > 0.10). Result that enhances the interest in knowing if the different dimensions of the cultural system affect the presence of women in this business body. The non-significant negative effect of the variable “Culture” is also observed for the representative variables of distance to power (“PowDist”: coef. = -0.00554; p-value > 0.10) and masculinity (“Masc”: coef. = -0.0425; p-value > 0.10) of the institutional environment; identifying a positive but not

significant effect for the variable of aversion to uncertainty (“*Uncertavoid*”: coef. = -0.0285; p-value > 0.10).

On the contrary, it is observed that the variable “*Indiv*”, representative of the level of individualism of the society in which the company is immersed, positively affects, for a confidence level of 95%, on gender diversity (coef. = 0.0875; p-value < 0.05). While the variable “*LongTerm*”, for the same level of confidence, negatively affects the presence of female directors (coef. = -0.0790; p-value < 0.05).

These results will be different from those obtained by Cabeza, Del Brio, & Rueda (2020) and Grosvold & Brammer (2011), who showed that male societies favor the presence of women on the board of directors, while the distance to power reduces it. More specifically, we observe that these environments do not affect gender diversity, being the cultural dimensions relative to individualism and the long-term vision, which act as drivers and barriers, respectively, to achieve gender equality. Differences that could be due to the period of analysis and the institutional diversity that differentiates our work from previous studies. Effects that could be due to the fact that various studies have shown that the benefits associated with diversity take place in more masculinized environments (Uribe Bohorquez, Martínez Ferrero, & García Sánchez, 2019).

	<b>Coef.</b> <b>(std.err)</b>	<b>z</b> <b>(p-value)</b>	<b>Coef.</b> <b>(std.err)</b>	<b>z</b> <b>(p-value)</b>	<b>Coef.</b> <b>(std.err)</b>	<b>z</b> <b>(p-value)</b>
Culture	-0.831 (0.715)					
Indiv		0.0875** (0.0404)				
PowDist			-0.00554 (0.0638)			
Uncertavoid				0.0285 (0.0684)		
Masc					-0.0425 (0.0559)	
LongTerm						-0.0790** (0.0366)
Size	3.061*** (0.179)	3.043*** (0.179)	3.054*** (0.179)	3.054*** (0.179)	3.053*** (0.179)	3.054*** (0.179)
ROA	-0.00150 (0.00482)	-0.00149 (0.00483)	-0.00159 (0.00483)	-0.00160 (0.00483)	-0.00156 (0.00483)	-0.00144 (0.00482)
Leverage	0.00155** (0.0007)	0.00154** (0.0007)	0.00154** (0.0007)	0.00154** (0.0007)	0.00154** (0.0007)	0.00154** (0.0007)
Bosize	-0.00711 (0.0336)	-0.00692 (0.0336)	-0.00671 (0.0336)	-0.00674 (0.0336)	-0.00734 (0.0336)	-0.00737 (0.0336)
Boactivity	0.0268*** (0.0102)	0.0270*** (0.0101)	0.0272*** (0.0101)	0.0272*** (0.0101)	0.0271*** (0.0101)	0.0268*** (0.0101)
Boindep	0.0114*** (0.00424)	0.0105** (0.00424)	0.0106** (0.00424)	0.0106** (0.00424)	0.0105** (0.00424)	0.0111*** (0.00424)
_cons	-37.69*** (3.288)	-43.14*** (4.117)	-37.47*** (4.583)	-39.24*** (4.865)	-35.25*** (4.636)	-34.13*** (3.740)
Industry	controlled					
Country	controlled					
Year	controlled					
Crisis	controlled					
R-square	0.023	0.023	0.023	0.023	0.023	0.023
F	2.70***	2.96***	2.72***	2.76***	2.74***	2.74***

N= 10,279 firm-year observations.

Estimated coefficients and associated standard errors (in parentheses) are reported.

**Table 20. Results: Diversity and institutional environments**

In relation to the control variables, we observe that the larger companies, whose boards are more independent and active, encourage the incorporation of female directors in this body. This effect is also attributable to the pressure exerted by financial institutions for the most indebted companies.

### **3.5. Conclusions**

The objective of this work is to analyze the impact that institutions have on business organizational structures, focusing on gender diversity in the board of directors. A subject of great interest from a theoretical and practical point of view, given the gender gap that continues to characterize the business world.

Starting from the institutional framework, focusing on the cultural dimensions that can determine a business-oriented environment, we evidence for an international sample of 2,185 listed firms from 2006 to 2015, that more economic-value cultures institutional context exerts a relevant effect on the gender gap but with different effect. In this sense, while masculine environments drive a higher proportion of women on boards, the long-term dimensions represent a barrier.

Results that suggest that the presence of women on the board of directors is associated with environments with a prevalence of masculinity, which favors obtaining advantages associated with diversity in decision-making. Additionally, the divergence with previous studies shows that the results obtained in this work may be associated with an evolution of society, causing a change in the institutional factors that drive or not the disappearance of the glass ceiling.

Which would mean that our evidence comprises important theoretical and practical contributions. Thus, with respect to institutional theory, we contrast that the effect that institutional pressures have on business decisions are not constant over time. From a practical point of view, our results are relevant for the business and political systems, being necessary the development of policies that promote gender diversity, which must be adapted to the cultural values of each society.

The results obtained are subject to limitations related to the geographic bias that characterizes our data, being necessary to deepen the macro-context analysis with paired samples, as well as analysis based on cases and interviews, approaches that would favor the acquisition of a greater knowledge about the effect that cultural dimensions play at the country level.

## **CHAPTER FOUR**

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#### 4. Women on boards and efficiency in a business-orientated environment

##### **Abstract**

This study proposes a new research approach to examining the relationship between board diversity in terms of gender differences and corporate performance, measured by technical efficiency. Moreover, this paper also examines the moderating role that institutional factors exert on this relationship through the cultural dimensions of the country of origin. The research questions are examined using an international sample of 2185 listed firms from 2006 to 2015, applying several truncated regression models for panel data and employing data envelopment analysis to examine efficiency as a measure of performance. This paper provides support for the assertion that female directors decrease the firm's technical efficiency; however, under more economic-value cultures institutional context exerts a moderating effect on the latter. The female directors of companies located in countries with higher economic-orientated values adopt male stereotypes and have a significant and positive interest in improving efficiency.

**Key words:** board diversity, culture, DEA, efficiency, female, directors

**Paper status:** Published in Corporate Social Responsibility and Environmental Management, journal indexed in Journal Citation Reports with 4.542 Journal impact factor and ranked in the "Business" category, position 37 out of 152, quartile 1 in 2019.

**Citations:** Google Scholar: 24, Web of Science: 14

#### **Mujeres en los consejos de administración y eficiencia en un entorno orientado a los negocios**

##### **Resumen**

Este estudio propone un nuevo enfoque de investigación para examinar la relación entre la diversidad del consejo de administración en términos de diferencias de género y el desempeño corporativo, medido por la eficiencia técnica. Además, este trabajo también examina el rol moderador que ejercen los factores institucionales sobre esta relación a través de las dimensiones culturales del país de origen. Las preguntas de investigación se examinan utilizando una muestra internacional de 2185 empresas cotizadas de 2006 a 2015, aplicando varios modelos de regresión truncada para datos de panel y empleando el análisis envolvente de datos para examinar la eficiencia como una medida de desempeño. Este documento respalda la afirmación de que las consejeras disminuyen la eficiencia técnica de la empresa; sin embargo, en culturas de mayor valor económico, el contexto institucional ejerce un efecto moderador sobre estas últimas. Las consejeras de empresas ubicadas en países con valores económicos más elevados adoptan estereotipos masculinos y tienen un interés significativo y positivo en mejorar la eficiencia.

**Palabras clave:** diversidad del consejo, cultura, DEA, eficiencia, mujer, consejeras

**Estado del artículo:** Publicado en Corporate Social Responsibility and Environmental Management, revista indexada en Journal Citation Reports con un factor de impacto de revista de 4.542 y clasificada en la categoría "Business" en la posición 37 de 152, cuartil 1 en 2019.

**Citas:** Google Scholar: 24, Web of Science: 14

#### 4.1. Introduction

In recent years, the globalization of markets and increasing business competitiveness has generated an uncertain economic environment, characterized by lower business survival. In this context, the analysis of business performance is of great interest because it allows identification of negative patterns of behaviour in order to correct them. Business profitability measured by accounting ratios or market variables, such as Tobin's Q and technical efficiency, are the parameters most often used to evaluate the performance of a company (Bhagat & Black, 2002; Campbell & Mínguez-Vera, 2008; Hermalin & Weisbach, 1991, Pletzer, Nikolova, Kedzior, & Voelpel, 2015; Rose, 2007). However, technical efficiency can be considered a better estimator of business performance because the central axis of a company is its productive process; moreover, technical efficiency reveals the information needed to know how things are being done (Sheu & Yang, 2005), while becoming determinants of business profitability, the market value of companies, and so on (Destefanis & Sena, 2007; Lehmann, Warning, & Weigand, 2004).

Although the role of the management team is key in achieving higher levels of technical efficiency, the board of directors provides the structure through which the company's objectives are set and the means to achieve those objectives and monitor performance, promoting the efficient use of resources and, equally, demanding accountability for the management of those resources (Organization for Economic Co-operation and Development, 2004). In this sense, it is extremely important to analyse the role of the diversity of this body in business efficiency, which is the main aim of this study. Among the possible board aspects, gender diversity is the dimension that has been the most researched because it has had the most practical impact; furthermore, women have gained greater representativeness on the boards of directors (Walt & Ingley, 2003). In this regard, board diversity in terms of gender differences is the dimension that will be examined in this paper.

In this respect, several papers have previously examined the impact of female directors on firm performance and efficiency. For example, Erhardt, Werbel, and Shrader (2003), Farrell and Hersch (2005), Campbell and Mínguez-Vera (2008) and García-Sánchez (2010). Mahadeo, Soobaroyen, and Hanuman (2012) and Post and Byron (2015), argue and defend a positive relationship, while Shrader, Blackburn, and Iles (1997) and Pathan and Faff (2013), support the decrease in firm performance under the presence of female directors. Given this lack of consensus, it could be expected that this relationship can be affected by additional factors, among which we can highlight the cultural dimensions of a society.

In this regard, there are important incentives for female directors to adopt a role stereotype, for example, the monetary aspects. For many years, there has been an obvious difference in monetary compensation between men and women (England, 2010). However, transcultural differences exert a powerful influence on female directors' behaviour. In general, and as Ibrahim and Angelidis (1995) argue, female directors tend to have fewer economic incentives and egoism than male directors, leading to an increase in the time needed in making decisions.

Nonetheless, in facing a cultural context oriented to economy, female directors should adopt male behaviours, such as a more selfish and individualistic role that ensures the success of the company (Davey, 2008). Thus, male stereotypes – such as individualism, masculinity, uncertainty avoidance, power distance and short-term orientation – are more aligned with cultural values than those of female stereotypes. Thus, the prevalence of a culture characterized by values oriented to the economy determine that the stereotypically male traits are adopted by women. In other words, more economic-incentive cultures adopt a male pattern of behaviour that leads to women adopting male stereotypes. It also implies that women show a high predisposition towards leadership in ways that emphasize competition, hierarchy, analytical problem-solving, high control, low emotionality and a marked bias towards analysis, leading to a prevalence of company performance compared to other dimensions of a less economic nature.

Therefore, based on the above, this paper will examine the impact of board diversity in terms of gender on firm performance measured by technical efficiency. Moreover, it will also examine the moderating role of institutional context according to the cultural dimensions proposed by Hofstede

(2011). By identifying an environment characterized by the prevalence of self-oriented values – one associated with individualism, masculinity, power distance, aversion to uncertainty, and short-term orientation – the objective is to defend the assumption that women will assume a style of male leadership, showing a greater concern for this business dimension than in other male-orientated environments.

From the above and using an international sample of 2185 international companies with data for the period 2006–2015, this paper will provide some relevant findings by regressing several truncated models of analysis. To examine the study objectives, technical efficiency is proposed as a performance measure determined using data envelopment analysis (DEA) and applying resampling methods and bootstrapping techniques in line with Simar and Wilson (1998). Board independence is represented by Blau's (1977) index. Truncated regressions, according to the algorithm (1) proposed by Simar and Wilson (2007), are used to determine the relationship between female directors and efficiency and the moderating effect of the cultural context.

The main findings of this paper provide support for the assertion that female directors decrease the firm's technical efficiency; however, under more economically orientated cultures, institutional context exerts a moderating effect on the latter. The female directors of companies located in countries with higher economically orientated values adopt male stereotypes and have a significant and positive interest in improving efficiency.

This paper contributes to the previous literature in several ways. The results of previous research on the relationship between board composition, in terms of gender, and business performance, have been mixed; some of them report a positive relationship, while others report a negative, or even a non-existent, association. These investigations have usually been carried out in specific contexts with particular legal and cultural characteristics, which are not necessarily generalizable in all countries. Thus, research that transcends such contexts and explores new contexts is justified as it can reveal the reasons why there are contradictory results. This paper constitutes a novel proposal in that it not only contemplates the cultural context in which the aforementioned relationship is developed, but also assumes it as a moderating variable of the relationship. Methodologically, in contrast to previous studies that represent board gender diversity through the percentage of female directors over the total number of directors (Rodríguez-Ariza, Cuadrado-Ballesteros, Martínez-Ferrero, & García-Sánchez, 2017), this paper adopts the Blau index (1977) as a means of representation. Moreover, to obtain the measure of efficiency as a means of assessing corporate performance, the DEA method is proposed, applying the resampling and bootstrapping techniques as in Simar and Wilson (1998).

Finally, this study adds exploratory evidence by using a panel dataset (24 countries from 2006 to 2015), in contrast to previous studies that have adopted a cross-sectional analysis. Our approach allows comparison between countries and years. Thus, we contribute to the literature by adopting an international approach encompassing 24 countries rather than a single-country or a two-region approach. Also, examining the period 2006-2015 rather than a single year has allowed us to update the time period analysed. What is more, our empirical evidence draws on a sample of 22 activity sectors. Methodologically, we employ econometric models based on dependency techniques for the panel data, unlike previous studies that have adopted configurational models or descriptive analysis (for example, survey instruments). The use of algorithm 1, proposed by Simar and Wilson (2007), is suggested for truncated regression with a view to determining the relationship between board characteristics and efficiency.

The remainder of the paper is structured as follows. The following section summarizes the theoretical framework related to the use of the efficiency concept as a measure of firm performance, the board of directors as an internal control mechanism – focusing on board diversity – and finally, the cultural context, underpinning the proposed hypothesis. The subsequent section describes the research model, data and sample. The penultimate section presents the empirical results and a discussion of the findings, and the main conclusions are addressed in the final section.

#### **4.2. The role of female directors in an economically orientated environment: Research hypothesis**

In an agency scenario, corporate governance ensures the strategic orientation of the company, effective monitoring, accountability, investor confidence building, better access to external capital, the reduction of agency costs and, ultimately, improves organizational efficiency (John & Senbet, 1998, Organization for Economic Co-operation and Development, 2015; Williamson, 1983). In this respect and empirically, there are several studies that demonstrate the positive relationship between the quality or effectiveness of corporate governance and corporate performance (Destefanis & Sena, 2007; Klapper & Love, 2004; Sheu & Yang, 2005; Zelenyuk & Zheka, 2006). Among the mechanisms of government, the level of diversity of this body guarantees the success of its operation.

Although the concept of diversity in boards covers different criteria such as age, gender, ethnicity, religion, electoral representation, professional background, technical and psychological skills, sexual orientation, attitudes, perspectives, experience and values (Milliken & Martins, 1996; Robinson & Dechant, 1997; Walt & Ingley, 2003), gender diversity is the dimension that has been the most researched because it has had the most practical impact; moreover, women have gained greater representativeness on boards of directors (Landry, Bernardi, & Bosco, 2016; Walt & Ingley, 2003).

In this respect, there are ethical and financial reasons for hiring women. The former are related to the belief that it is wrong for women to be excluded from the boards of directors. That is, to have greater involvement of women on the board meets the demand for equality in business and society. With this view, having women on the board is considered a positive outcome in itself (Brammer, Millington, & Pavelin, 2007; Campbell & Mínguez-Vera, 2008; Pletzer et al., 2015). There are also numerous financial reasons why gender diversity improves business performance. In this respect, it is important to highlight the better performance of the work of the board thanks to its cognitive framework; women enforce ethical standards more strictly, assume their responsibility more strongly and are better prepared for board meetings (Campbell & Mínguez-Vera, 2008; Erhardt et al., 2003; Post & Byron, 2015; Terjesen, Sealy, & Singh, 2009). Women have a style that emphasizes harmony which allows them to inspire confidence and thus, to encourage the sharing of information and power, lightens the board environment, unites people and responds to challenges. They also display more civilized behaviour and are more sensitive to other perspectives, generate relationships with a view to overcoming gender obstacles, and learn from the experiences of others. Additionally, the roles they have in their personal lives allow them to sharpen their interpersonal, multitasking and leadership skills (Rose, 2007; Terjesen et al, 2009). Moreover, social role theory argues that women possess characteristics related to a greater empathy with and concern for others (Eagly & Johannesen-Schmidt, 2001); moreover, they are more communicative, democratic, participatory and cooperative (Eagly, Johannesen-Schmidt, & van Engen, 2003), and they take greater account of the needs of stakeholders than their male counterparts do (Bear, Rhaman, & Post, 2010). Accordingly, it is assumed that female directors are more likely to encourage the company to adopt a more socially responsible approach. In this regard, several research studies show a positive relationship between board gender diversity and firm performance (Campbell & Mínguez-Vera, 2008; Erhardt et al., 2003; Farrell & Hersch, 2005; García-Sánchez, 2010; Mahadeo et al., 2012; Post & Byron, 2015).

However, balanced boards have still not been achieved, and women are still considered a minority group. The detractors of gender diversity argue that heterogeneous groups are less efficient in deliberating and making decisions (Walt & Ingley, 2003), have lower levels of social integration generating greater dissatisfaction and turnover (O'Reilly III, Caldwell, & Barnett, 1989), and also have lower levels of linkage with the group that generates absenteeism and the intention to abandon the group (Tsui & O'Reilly, 1989). In this line, authors such as Shrader et al. (1997) and Pathan and Faff (2013) argue that there is a negative relationship between the number of women on the board and business performance. Others state that there is no relationship between these variables (Du Rietz & Henrekson, 2000; Pletzer et al., 2015; Rose, 2007; Webber & Donahue, 2001).

Nonetheless, based on social psychology, we consider that these effects may be a consequence of the differences between the characteristics and the priority interest of each sex. Thus, while men may be predisposed to leadership in ways that emphasize competence, hierarchy, analytical problem resolution, high control, low emotionality, and a marked bias toward analysis, women are more prone



to intuitive resolution of problems, with lower levels of control and higher levels of emotionality (Litz & Folker, 2002); women show a greater interest in subjects that are less economically and self-interest-orientated than those of males (Ibrahim & Angelidis, 1991). Their presence positively contributes to the enhancement of firms' reputations and market value but they do not provoke higher performance such as productivity or efficiency (Bernardi, Bosco, & Vassill, 2006).

It is worth highlighting the need to conceptualize this impact in terms of the cultural values that prevail in a society, values that can moderate the female stereotype in business as by Ridgeway (2001) and Ridgeway, Boyle, Kuipers, and Robinson (1998). In this respect, the aforementioned authors consider that women can be defined as people with other-oriented, altruistic in collectivistic, feminist, tolerance, long term and less power distance cultures and self-oriented in individualistic, masculine, uncertain tolerance, short term and power distance societies. That is, female directors are influenced by the cultural values of the society where they take decisions.

The idea that resides in these studies is the one that leads us to raise the moderating effect of culture in the relationship between female directors and firm performance. Several theories allow us to justify this hypothesis: expectation states theory, social dominance theory and system justification theory; or even more so, social identity theory. From these theories, it is expected that female directors adapt their behaviour towards male stereotypes. The idea underlying these theories is that women will tend to adapt their role to behaviour conforming with male stereotypes as long as: (i) cultural values are associated with higher status groups that increase the value of their traits (expectation states theory; Ridgeway, 2001; Ridgeway et al., 1998); (ii) the legitimacy of their stereotypes are allowed (Pratto, Sidanius, Stallworth, & Malle, 1994; social dominance and system justification theories); and (iii) it enables the achievement of greater social influence and being valued as a high-ranking group. In other words, in countries with greater competitiveness and ambition, that is, traits associated with men, female directors can adopt these roles as a sign of adaptation to the culture, which will focus their efforts towards the maximization of the benefit.

Thus, the context given by its history, politics, traditions, values, beliefs, education, dynamism and turbulence, as well as the institutions, will determine the pattern of behaviour of each society or country. All these contextual factors will affect the conceptions of what is considered adequate, the way of interpreting the experiences, the responsibilities of the individuals, the interests and actions of the stakeholders, the decision-making, the organizational structures and activities, the effectiveness of the board, and the degree to which it influences business performance (Aguilera & Jackson, 2003; García-Sánchez, Cuadrado-Ballesteros, & Frias-Aceituno, 2016; Hofstede, 1983; Johnson, Schnatterly, & Hill, 2012; Post & Byron, 2015).

As García-Sánchez et al. (2016) point out, there are different models for understanding cultural differences; however, the one proposed by Hofstede (1983) is the broadest, raising dimensions that include those collected in other proposals, which is why it is selected in this study. In accordance with our aim, the use of Hofstede's cultural dimensions allows us to develop an international comparison of sustainable patterns of behaviour, and identify which differences among them can be attributed to culture, and which differences can be attributed to other institutional causes (Baskerville, 2003). The dimensions of this cultural model are explained below, and will act as determinants of the impact of women on performance:

- Individualism versus collectivism: these dimensions are part from two extremes. First, individualism, in which the bonds between people are very loose and individuals tend towards self-interest and caring for immediate family. Second, at the opposite extreme, is collectivism, in which the bonds between individuals are very strong, and there is mutual care of the whole family (i.e. grandparents, uncles, cousins, etc.), tribe, and other people. Evidence indicates that rich countries are more individualistic while poor countries are more collectivist. Consequently, one might expect that individualistic societies that are more focused on their own well-being and in showing that their work is well done, will favour the attainment of efficiency, and therefore will approve all those initiatives that allow them to achieve it.
- Masculinity versus femininity: In some societies there is a greater or lesser degree of division in the roles in which gender intervenes. In masculine societies the values that are prized are the

importance of showing, of carrying out, of achieving something visible, of making money, of the great is beautiful; while in feminine societies, the dominant values are not to show, but to put relationships with others before money, to consider the quality of life and the preservation of the environment, to help others, particularly those who are weaker people, focusing on the small being beautiful. Thus, from this, it could be understood that male societies are more business-oriented than feminine societies.

- Distance from power: the acceptance and importance given to physical and intellectual differences that can transcend inequalities of power and wealth. In this way there are people who are more likely to accept, to a greater or lesser extent, the centralization of authority and autocratic leadership. A higher power distance is most evident in societies in which power is unevenly distributed. It could be assumed that in countries where there is a greater power distance, independent directors and women will be respected more as superior role models that allow the achievement of organizational efficiency.
- Uncertainty avoidance: it identifies the level of acceptance of uncertainty by individuals. Those who have a low degree of aversion are satisfied with day to day life as it happens, they will take readily take risks because they are relatively tolerant of different behaviours and opinions. On the contrary, societies with an aversion to uncertainty need rules that regulate daily life. In this sense, countries with greater aversion to uncertainty demand a management board formed by women who control the directive actions in order to improve the organizational performance and the risks that the managers can assume.
- Long-term orientation or Confucian dynamism: At one end are people with a short-term orientation who show a significant concern about their status regardless of cost, who respond to social pressure for expensive objects, are concerned about appearance and expect fast results. But in the long-term orientation people adapt their traditions to modern contexts, respect social obligations and status (within limits), they are meagre in the use of resources; there is a willingness to subordinate oneself for a purpose, people have significant savings and therefore have the funds available for investment and show perseverance towards slow, long-term results (Hofstede, et al., 1991). Given that short-term orientation seeks quick results, it could be expected that the achievement of better results for companies is an intention that must be achieved quickly and therefore will promote the means that are necessary to accomplish this (as in this case with gender diversity).

From the above characteristics of these dimensions, more economically orientated societies are those with greater values of individualism, masculinity, uncertainty avoidance and power distance, while having a long-term orientation. Considering these cultural dimensions, overall we expect that the negative impact of female directors on performance could be moderated by the cultural values of a society as follows:

*H1: There is a negative relationship between board diversity and firm efficiency as a result of the differently orientated leadership of female directors, and the prevalence of less economical interest associated with female stereotypes.*

*H2: In an institutional context with an economic orientation valuing more individualism, masculinity, power distance, uncertainty avoidance levels and a short-term orientation cultural system, a positive relationship between board diversity and firm efficiency is expected as a result of the self-oriented leadership of female directors that moderates female stereotypes and leads to female directors adopting male stereotypes.*

### **4.3. Empirical research: data, variables, and econometric models**

#### **4.3.1. Sample for the Analysis**

The data for this study are the result of information availability in the Thomson One Analytic database for the period 2006–2015 (García-Sánchez & Martínez-Ferrero, 2018). Firstly, archival data were collected from Thomson Reuters Eikon, which includes the aforementioned database. In this study, we took into consideration information on all the firms from the global benchmark stock indices from America, Europe, the Middle East, Africa (EMEA) and Asia, comprising 3594 companies from 31 stock indices. After excluding duplicated companies and observations with

missing financial or economic information, a final sample of 10279 firm-year observations (2185 firms) spanning 10 years (2006-2015) was available to test the hypothesis. The firms were engaged in activities in different sectors and were from 24 different countries. The sample was unbalanced because not all companies were represented in all of the periods. Companies that had filed for bankruptcy and merged were deleted to avoid changes in values and strategies. Because other firms could be delisted or created during the period of analysis is an unbalanced panel, and consequently no information is available for the period.

Table 21 shows the sample distribution by country, year and industry. As can be seen, the highest percentages are for the years 2010–2015 (< 69% of the observations). In regard to geographic diversity, 35.41% of the companies are from the USA. With regard to industry, the sectors with the highest presence are materials and capital goods.

**Table 21.** Sample distribution by country, year and industry

<i>Panel A. Sample by country</i>		
Country	Frequency	Percentage
Australia	985	9.58%
Belgium	10	0.10%
Canada	1.281	12.46%
China	354	3.44%
Denmark	10	0.10%
Finland	30	0.29%
France	323	3.14%
Germany	256	2.49%
Hong Kong	227	2.21%
Ireland	128	1.25%
Italy	20	0.19%
Japan	857	8.34%
Luxembourg	20	0.19%
Netherlands	186	1.81%
New Zealand	53	0.52%
Norway	20	0.19%
Russia	144	1.40%
Singapore	195	1.90%
South	120	1.17%
Spain	170	1.65%
Sweden	218	2.12%
Switzerland	220	2.14%
United Kingdom	812	7.90%
United States	3.640	35.41%
<b>Total</b>	<b>10.279</b>	<b>100.00%</b>
<i>Panel B. Sample by year</i>		
Year	Frequency	Percentage
2006	608	5.91%
2007	728	7.08%
2008	849	8.26%
2009	982	9.55%
2010	1.070	10.41%
2011	1.121	10.91%
2012	1.120	10.90%
2013	1.211	11.78%
2014	1.260	12.26%
2015	1.330	12.94%
<b>Total</b>	<b>10.279</b>	<b>100.00%</b>
<i>Panel C. Sample by industry</i>		
Industry	Frequency	Percentage
Automobiles & Components	235	2.29%
Capital Goods	1046	10.18%
Commercial & Professional Services	282	2.74%

Consumer Durables & Apparel	379	3.69%
Consumer Services	322	3.13%
Diversified	259	2.52%
Energy	997	9.70%
Food & Staples Retailing	236	2.30%
Food, Beverage & Tobacco	466	4.53%
Health Care Equipment & Services	446	4.34%
Household & Personal Products	157	1.53%
Materials	1344	13.08%
Media	383	3.73%
Pharmac., Biotechnology & Life	402	3.91%
Real Estate	490	4.77%
Retailing	477	4.64%
Semiconductors & Semic. Equipment	185	1.80%
Software & Services	474	4.61%
Technology Hardware & Equipment	315	3.06%
Telecommunication Services	346	3.37%
Transportation	384	3.74%
Utilities	654	6.36%
<b>Total</b>	<b>10.279</b>	<b>100.00%</b>

#### 4.3.2. Variable measurement

##### 4.3.2.1. Dependent variable: technical efficiency

The impact that the presence of women has on a greater commitment to sustainability and corporate reputation can lead to greater market values, introducing a bias in the analysis of the role played by the diversity of boards within companies. In this sense, to determine the direct impact that the female directors have on business performance, it is necessary to resort to internal indicators of the company's behavior, traditionally associated with the productivity or efficiency of the business activity (García-Sánchez, 2010).

In order to define the concept of efficiency, it is necessary to use the relation between inputs and outputs, understood as the factors of production used in a transformation process and the goods and/or services that are obtained as a result of it. Thus, efficiency (or technical efficiency) can be understood as (i) the possibility of obtaining the maximum quantity of outputs with the same level of inputs, or (ii) maintaining a given level of outputs while minimizing the quantity of inputs. Although production theory (Cobb & Douglas, 1928; Dillard, 1980) is based on the production function, it is understood as the mathematical representation that shows the largest quantity of outputs a company can produce from the quantity of inputs which can be used (Seiford & Thrall, 1990).

As previously mentioned, technical or technological efficiency is part of the logic of inputs and outputs: in order to be efficient, the quantity of outputs produced must be maximized or the quantity of inputs minimized (Banker, Charnes, & Cooper, 1984; Bauer, Berger, Ferrier & Humphrey, 1998). To measure efficiency over time, multiple methods have been developed, focusing on financial ratios, statistical regressions, parametric (or econometric) or non-parametric models and simulation models. Although each of these approaches has its advantages and disadvantages, this paper focuses on DEA.

Taking into account the theoretical and applied importance of efficiency measurement, as well as the limitations of single input methods in evaluating output generation, Farrell (1957) proposed a radial measure that considers the different inputs and outputs involved in the transformation process, laying the basis for the development of DEA models (Charnes, Cooper, & Rhodes, 1978). These mathematical models for measuring efficiency have the following advantages over other approaches:

- Financial ratios, although easy to calculate and commonly used, are only adequate in cases where there is only one input and one output. A disadvantage of this is that depending which input is used as the efficiency criterion, different results can be obtained. To have a measure of general efficiency for a company, more than one ratio should be considered (Thanassoulis, Boussofiane, & Dyson, 1996), or arbitrary assumptions need to be made about the weighting of inputs and outputs (Baik, Chae, Choi, & Farber, 2013; Charnes, Clark, Cooper, & Golany, 1984).
- Regressions and statistical methods have also been used in the evaluation of efficiency. However, these imply imposing a production function on the relationship between inputs and outputs, whereas DEA, being a non-parametric method, does not assume any particular form. Parametric models involve establishing a functional form between inputs and outputs, as well as the distribution of error, which can be chosen erroneously. These types of methods divide all the boundary outputs of a decision-making unit (DMU) between actual inefficiency and random noise (Cullinane, Wang, Song, & Ji, 2006; Cummins, Tennyson, & Weiss, 1999). In addition, the DEA technique seeks to optimize each of the observations, while in regressions this is done at the general level (Charnes et al., 1985; Cooper & Tone, 1997; Seiford & Thrall, 1990).

DEA is a mathematical program based on linear programming, which is non-statistical and non-parametric in nature; that is, it does not make assumptions about the distribution of inefficiencies or the form of the production function to estimate the maximum output levels given the levels of inputs, or the minimum levels of inputs for output levels given by a DMU. This is done by delineating an efficient, deterministic, non-parametric production function, calculated in lengths and interpreted as the best practice of the company. This border is calculated from the input and output data of the individual organizations that make up the DMU, considering the extreme results (Cooper & Tone, 1997).

To develop its activity, a firm, following Simar and Wilson (1998), uses  $p$  inputs ( $x \in \mathbb{R}_+^p$ ) to produce  $q$  outputs ( $y \in \mathbb{R}_+^q$ ) by means of a set of means of production  $\psi$  of physically achievable points  $(x, y)$ :  $\psi = \{(x, y) \in \mathbb{R}_+^{p+q} \mid x \text{ can produce } y\}$ . The efficiency measures for inputs and outputs respectively for a given point  $(x_k, y_k)$  are:  $\theta_k = \min \{\theta \mid \theta x_k \in X(y_k)\}$ ,  $\beta_k = \max \{\beta \mid \beta y_k \in Y(x_k)\}$ .

If  $\theta_k = 1$  ( $\beta_k = 1$ ),  $(x_k, y_k)$ , the firm is considered efficient. Otherwise, if  $\theta_k \leq 1$ , the DMU is inefficient and a difference of 1 would indicate the proportional reduction of input that could be achieved if  $y_k$  were produced efficiently (Baik et al., 2013; Cubbin & Tzanidakis, 1998; Dopuch, Gupta, Simunic, & Stein, 2003; Seiford and Thrall, 1990).

Because the DEA estimators obtained are of finite samples, the efficiency measure is sensitive to variations in the sample configuration. Bootstrapping is used as a tool that takes into account such sensitivity and is developed through repeated simulation of data generation processing (DGP) using resampling. From this, the original estimator is applied to each simulated sample. Thus, this paper includes the application of the resampling method and bootstrapping techniques (Garcia-Sánchez, 2010; Simar & Wilson, 2000). The complete bootstrapping algorithm is summarized in the following steps:

1. For each  $(x_k, y_k)$   $k = 1, \dots, n$ , compute  $\widehat{\theta}_k$  by solving the following linear programming formula:

$$\widehat{\theta}_k = \min \left\{ \theta \mid y_k \leq \sum_{i=1}^n \gamma_i y_i; \theta x_k \geq \sum_{i=1}^n \gamma_i x_i; \theta > 0; \sum_{i=1}^n \gamma_i = 1; \gamma_i \geq 0, i = 1, \dots, n \right\}$$

2. Using smoothing bootstrapping, a random sample of size  $n$  originates from  $\widehat{\theta}_i$   $i = 1, \dots, n$ , where  $\theta_{1b}^*, \dots, \theta_{nb}^*$

Employing the random generator:

$$\tilde{\theta}_i^* = \begin{cases} \beta_i^* + h\epsilon_i^* & \text{si } \beta_i^* + h\epsilon_i^* \leq 1, \\ 2 - \beta_i^* - h\epsilon_i^* & \text{otherwise} \end{cases}$$

Smoothed pseudo-efficiencies are generated:

$$\theta_i^* = \bar{\beta}^* + \frac{1}{\sqrt{1 + \frac{h^2}{\sigma_\theta^2}}} (\tilde{\theta}_i^* - \bar{\beta}^*, \text{ where } \bar{\beta}^* = \left(\frac{1}{n}\right) \sum_{i=1}^n \beta_i^*$$

3. Compute  $X_b^* = \{(x_{ib}^*, y_i) | i = 1, \dots, n\}$ , where  $x_{ib}^* = \left(\frac{\hat{\theta}_i}{\theta_{ib}^*}\right) x_i, i = 1, \dots, n$ .
4. Estimate the bootstrap  $\hat{\theta}_{k,b}^*$  of  $\hat{\theta}_k$  for  $k = 1, \dots, n$ , resolving the theorem of linear programming from point 1.
5. Repeat steps 2 and 4  $B$  times to provide a  $k = 1, \dots, n$  set of estimates  $\{\hat{\theta}_{k,b}^*, b = 1, \dots, B\}$ .

For this paper – and in line with Simar and Wilson (1999) and García-Sánchez (2010) – the technical efficiency indices are calculated from the estimator of returns to scale, output orientation and the bootstrapping procedure.

Although in previous studies a great variety of inputs and outputs have been used to calculate the technical efficiency index “*Eff*”, in this paper, following García-Sánchez, (2010), for the inputs we have the number of employees (Burhop & Lübers, 2009), procurement costs and the amortization or depreciation of tangible and intangible assets, representing the annual use of fixed assets. As the output, the net business volume is used, which includes the sales or income generated by the main activity of the companies.

#### 4.3.2.2. Independent variables

To measure the female board presence, the Blau index (1977) is used. This index has been especially used to measure the diversity of the board (whether of race, ethnicity, gender, or experience) but can be extended to other characteristics because it is based on the qualitative differences of members belonging to a particular group (Harrison & Klein, 2007). Methodologically, it meets the necessary criteria to be considered a good measure of relative female diversity so that it is not a negative and unlimited index (Miller & del Carmen Triana, 2009).

The formula for calculation is  $1 - \sum p_k^2$ , where  $p$  is the proportion of members of a category  $k - th$ . This can take values from 0 to  $(k - 1)/k$ . Taking into account that female diversity takes two values (women vs. men),  $k = 2$ . Thus, its maximum value will be 0.50, which indicates that the distribution of the members is equal between the categories. To avoid problems of endogeneity, this variable “*Wom*” is lagged for a period.

#### 4.3.2.3. Moderating variables

We base our measure on the cultural dimensions proposed by Hofstede (2011), who developed them to explain the general similarities and dissimilarities in cultures around the world. In accordance with our aim, the use of Hofstede’s cultural dimensions allows us to develop an international comparison of sustainable patterns of behaviour and identify which differences among them can be attributed to culture and which differences can be attributed to other institutional causes (Baskerville, 2003).

At this stage, following the dimensions proposed by Hofstede (2011), the cultural indices adopted refer to power distance, individualism, masculinity, uncertainty avoidance and long-term orientation. Power distance expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. Individualism expresses the preference for a loosely knit social framework in which individuals are expected to take care only of themselves and their immediate families. Meanwhile, masculinity expresses a preference in society for achievement, heroism, assertiveness and material rewards for success. Uncertainty avoidance expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. Finally, long-term orientation describes the link of every society with its own past while dealing with the challenges of the present and future.

In line with the above, the cultural dimension variables are the following (the data are available on the Geert Hofstede™ Cultural Dimensions website): (i) “*Powdist*”, which is a numerical variable that represents the level of hierarchy within a society; a higher value represents a higher distance to power; (ii) “*Indiv*”, which is a numerical variable that reflects the prevalence of individual values compared

with group values; a higher value represents a more individualist country while a lower value a more collectivist country; (iii) “*Masc*”, which is a numerical variable that represents the level of male orientation; a higher value represents countries with male focus and orientation and a lower value countries with female focus and orientation; (iv) “*Uncertavoid*”, which is a numerical variable that identifies the level of uncertainty avoidance; a higher value represents a greater aversion; and (v) “*LongTerm*”, which is a numerical variable that represents the orientation of a society towards the future.

These variables have been grouped by a factorial analysis and results are shown in Table 22. The Kaiser-Meyer-Olkin (KMO) measure of sample suitability is 0.736, higher than 0.5, the minimum variable of suitability, and the Bartlett test of sphericity is significant at a 99% confidence level. Results show one factor, “*Culture*”, represent the cultural values in a country. All of the variables have a positive charge on each factor with the exception of “*LongTerm*”.

Additionally, in order to test the role of female and independent directors in each institutional environment, we interacted the Blau Index for women with the *Culture* component. The interacted variable is labelled *Wom\*Culture* and, as with the female directors variable, a time lag is applied to the variable in order to avoid problems of endogeneity.

**Table 22.** Factorial Analysis for Cultural Values

	<b>Culture</b>	<b>Mean</b>	<b>Std. Dev.</b>
Individualism	0.9247	75.731	21.268
Power Distance	0.8361	44.206	13.252
Uncertain Avoidance	0.4907	51.273	18.502
Masculinity	0.5243	60.185	16.073
Long Term	-0.9467	60.718	14.783
Variance accounted for = 88.04%			
Kaiser-Meyer-Olkin (KMO) measure of simple suitability		0.736	
Bartlett test of sphericity (Chi-square)		47890.032	
p-value		0.000	

#### 4.3.2.4. Control variables

Previous studies analysing the role of board diversity in terms of female directors in business efficiency and performance have shown the influence of a set of factors that are here adopted as control variables, thus avoiding biased results (Cuadrado-Ballesteros, Martínez-Ferrero, & García-Sánchez, 2017; Martínez-Ferrero, Ruiz-Cano, & García-Sánchez, 2016). The factors included in our models are as follows. First, we consider the size of the company (“*Size*”), calculated as the logarithm of total assets; larger firms in general may face higher agency costs (Rose, 2007). The level of leverage (“*Leverage*”), calculated as the ratio between debt and equity, is another mechanism of corporate governance which can affect the results of boards of directors. We also consider board size, measured by the number of directors (“*BoSize*”), as large boards of directors generally have more serious agency problems (García-Sánchez & Martínez-Ferrero, 2017). Next, we take into account board activity (“*Boactivity*”), calculated as the number of annual meetings; although the results are inconclusive, some studies have shown that a greater number of meetings – the dynamism of boards – yields more effective results, while other studies have shown that too many meetings reflects inoperative and wasted time (García-Sánchez & Martínez-Ferrero, 2017). Finally, board independence (“*Indep*”), calculated as the percentage of non-executive board members. Board independence is viewed as a strong mechanism to monitor the performance of managers and to prevent opportunistic actions, as a result of the greater motivation of such directors and their interest in supervising managerial actions and thus upholding the company’s reputation (Fama & Jensen, 1983). Even more, because of their status and image, their reputation depend on the quality of their work, being specifically focused on good monitoring of the management (Fama, 1980; Fama & Jensen 1983).



Finally, we also control for industry, year and country using dummy variables: for “*Industry<sub>j</sub>*”,  $j$  represents the different sectors of activity in which the companies in the sample operate; for “*Country<sub>k</sub>*”,  $k$  represents the different countries in the sample; for “*Year<sub>n</sub>*”,  $n$  represents the years of the sample; “*Crisis*” represents the period of financial crisis (2007–2009).

#### 4.3.3. Models of analysis

This study aims to examine the impact of board diversity in terms of gender on firm performance and the moderating effect of the cultural context on this relationship. To test our research hypothesis, considering the interaction between female directors and cultural factors, the following model of analysis is proposed. In this model, the technical efficiency indicator is regressed on female directors (lagged one period to avoid the endogeneity problem), the indicator associated with the cultural context and control variables. Moreover, we include the interaction between board diversity and cultural values.

$$\begin{aligned}
Eff_{it} = & \beta_0 + \beta_1 Wom_{it-1} + \beta_2 Culture + \beta_3 Wom_{it-1} * Culture_{it} + \beta_4 Size_{it} \\
& + \beta_5 Leverage_{it} + \beta_6 Bsize_{it} + \beta_7 Boactivity_{it} + \beta_8 Boinddep_{it-1} \\
& + \sum_{j=9}^{30} \beta_j Industry_i + \sum_{k=33}^{54} \beta_k Country_i + \sum_{n=55}^{64} \beta_n Year_t + \beta_{65} Crisis_t + n_i \\
& + \mu_{it}
\end{aligned}$$

Aiming at exploring each cultural dimensions individually, we performed five additional analysis where efficiency is regressed on “*Wom*” indicator, each cultural dimension (“*Powdisl*”, “*Indiv*”, “*Masc*”, “*Uncertavoid*”, and “*LongTerm*”), and the interaction between both for examining the moderating impact of cultural dimensions on the relation between board diversity and performance. Thus, each additional model includes a cultural dimensions (for instance “*Masc*”) and its interaction with female directors (for instance, “*Wom\*Masc*”).

As we intend to observe the impact of the board’s characteristics on efficiency, we take as our reference the work of Simar and Wilson (2007). They argue that, given the distribution of the DEA estimator, it is necessary to estimate a dependency model through a truncated regression for panel data, thus providing a better statistical inference (García-Sánchez, 2010). We use algorithm 1, which consists of the following steps:

1. Using the original data, compute  $\widehat{\delta}_i = \widehat{\delta}(x_i, y_i | \widehat{\Psi}) \forall i = 1, \dots, n$  using  $\widehat{\delta}_0 = \max \{ \theta > 0 | \theta y_0 \leq Y_q, x_0 \geq X_q, i'q = 1, q \in \mathbb{R}_+^n \}$ .
2. Using the maximum likelihood method, obtain an estimate  $\widehat{\beta}$  of  $\beta$  and of  $\widehat{\sigma}_\varepsilon$  of  $\sigma_\varepsilon$ , in the truncated regression of  $\widehat{\delta}_i$  on  $z_i$  in  $\widehat{\delta}_i = z_i \beta + \xi_i \geq 1$  using observations  $m < n$  where  $\widehat{\delta}_i > 1$ .
3. Repeat the following steps  $L$  times to obtain a set of bootstrap estimates  $\mathcal{A} = \{ (\widehat{\beta}^*, \widehat{\sigma}_\varepsilon^*)_b \}_{b=1}^L$ :
  - 3.1. For each  $i = 1, \dots, m$ ,  $\varepsilon_i$  is determined from the truncated distribution  $N(0, \widehat{\sigma}_\varepsilon^2)$  to the left at  $(1 - z_i \widehat{\beta})$ .
  - 3.2. For each  $i = 1, \dots, m$ , compute  $\delta_i^* = z_i \widehat{\beta} + \varepsilon_i$ .
  - 3.3. Using the maximum likelihood method, estimate the truncated regression of  $\delta_i^*$  in  $z_i$ , resulting in estimations  $(\widehat{\beta}^*, \widehat{\sigma}_\varepsilon^*)$ .
4. Using the bootstrap values in  $\mathcal{A}$  and the original estimations  $\widehat{\beta}^*, \widehat{\sigma}_\varepsilon^*$  construe confidence intervals for each element of  $\beta$  and for  $\sigma_\varepsilon$ .

#### 4.4. Results

##### 4.4.1. Descriptive Results

Table 23 displays the descriptive statistics and the correlations between variables used in this study. The efficiency score has a mean (standard deviation) of 0.782 ( $\pm 0.010$ ). The measure of female directors using Blau’s (1977) index indicates that 20.5% of the board members are women. With respect to the control variables, on average, the boards sampled comprise 11 directors, around 30% of whom are independent, and have eight meetings per year. Firm size has a mean value of around 5.2 (expressed in millions of euros), while 57% of companies are leveraged.

Table 23 presents the correlations among the selected variables. The dependent variable used to represent efficiency is shown to be positively correlated with female directors. The correlation matrix shows low or moderate correlation among variables; in no case are high values obtained for the coefficients between the dependent and independent variables or between the independent variables. Thus, multicollinearity among these variables is not a severe problem.

**Table 23.** Variable description

Panel A. Descriptive statistics							
	Mean	Std.dv.					
Efficiency	0.782	0.010					
Wom	0.205	0.149					
Size	5.277	1.649					
Leverage	0.569	0.201					
Bosize	10.711	3.246					
Boactivity	8.200	4.660					
Boindep	0.308	0.155					
Panel B. Bivariate Correlation matrix							
	1	2	3	4	5	6	7
1 Efficiency	1						
2 Wom	0.044	1					
3 Culture	0.053	-0.360	1				
4 Size	-0.007	0.051	0.186	1			
5 Leverage	-0.005	0.131	0.001	0.136	1		
6 Bosize	0.042	0.131	0.232	0.376	0.198	1	
7 Boactivity	-0.017	-0.039	-0.052	-0.093	-0.135	-0.230	1
8 Boindep	0.001	0.033	0.000	-0.095	-0.056	-0.089	0.251

#### 4.4.2. Multivariate results: the moderating effect of cultural context on the relationship between board diversity and technical efficiency

Table 24 summarizes the results obtained from the analytic models proposed: model 1 includes the indicator variables of board diversity, the cultural value, as well as the interaction between diversity and this institutional context. In the following five models, each individual dimension proposed by Hofstede (2011) is examined together with the interaction with female directors. The fit information for the estimated models is determined by the log likelihood function, which controls the representativeness of each equation. Specifically, to establish the likelihood, a  $\chi^2$  test is conducted, determining the significance of the difference between the value of the log likelihood function of the model and only the constant and that of the full model. The null hypothesis is that the coefficients of all the variables included in the final model except the constant are equal to 0; the alternative hypothesis is that the coefficients are significantly different from 0. If the  $\chi^2$  probability associated with the test value is  $<0.05$ , the null hypothesis should be rejected, accepting that the final ordinal model is significant from the econometric point of view (Hair et al., 1998). The level of representativeness is determined using the Wald test, which, according to the levels of significance obtained, leads to acceptance or rejection of the model in question. The p-values for all the models are statistically significant for a confidence level of 99%, which means that the equations adequately explain the level of application of the ethical codes examined.

For each explanatory variable, we report the estimated coefficient, the standard error, the Z-score and p-value associated with each coefficient. In addition, for each regression model we also include the additional standard deviation component included in the output of each model (labelled *sigma*). Regarding the effect of the explanatory variables, the Z-score determines whether the coefficient of each of the independent and control variables considered independently has a value that is

significantly different from 0, i.e. whether it has a real effect on the introduction and level of application of the codes of ethics. Here, the probability of occurrence should be  $<0.05$ , the p-value.

In model 1, the global model, the results show that board diversity is negatively, or even non-existent, and significantly related to technical efficiency at the 95% confidence level (coef. = 0.002, p-value  $<0.05$ ), supporting the assumption that female directors decrease corporate performance; they minimize firm performance. According to our hypothesis 1, female directors decrease firm performance, being less economically according to female stereotypes. Although the variable indicator “*Culture*” shows a not significant impact on efficiency, the interaction effect between female directors and the cultural values associated with an economic orientation is relevant; this indicator shows a positive and significant effect on efficiency at 99% (coef. = 0.002; p-value  $<0.01$ ). Operating with coefficients, these results show that female directors of companies located in countries with a high economic orientation in their cultural values have a stronger significant and positive effect on efficiency (coef. =  $-0.0001 + 0.002 = 0.0019$ ) than those in companies located in non-economic-value oriented environments (coef. =  $-0.0001$ ). From the above, our results confirm the proposition contained in hypothesis 2; that is, female directors of companies located in countries with higher economically orientated values adopt male stereotypes and have a significant and positive interest in improving efficiency.

In the following models, we again explore the effect of female directors on efficiency and the negative and significant effect of this indicator on performance remains (coef. =  $-0.0001$ , p-value  $<0.01$ ). In these models, we also explore the moderating effect of cultural dimensions but each one independently. In this respect, we analyse the individually moderated effect of each cultural dimension in female directors’ leadership styles. Regarding the variables representing environments characterized by high cultural economically oriented values (individualism, power distance, uncertainty avoidance and masculinity), the impact is positive but not statistically significant in all models. Similarly, for the variables representing environments characterized by low economically orientated values (long-term orientation), the impact is negative but again is not significant. Nonetheless, and similar to the previous global model, each cultural dimension proposed by Hofstede (2011) moderates the female-stereotype; this moderating effect is particularly evident in those societies with higher short-oriented vision, that is, those countries in which people have a higher concern about their status and respond to social pressures in order to have an apparent higher quality of life. For each model, then, the indicators are “*Wom\*Indiv*” (coef. = 0.002; p-value  $<0.01$ ), “*Wom\*PowDist*” (coef. = 0.002; p-value  $<0.01$ ), “*Wom\*Uncertavo*” (coef. = 0.002; p-value  $<0.01$ ), “*Wom\*Masi*” (coef. = 0.002; p-value  $<0.01$ ), and “*Wom\*LongTerm*” (coef. =  $-0.049$ ; p-value  $<0.01$ ). Operating with coefficients, these results show that the female directors of companies located in countries with a stronger individualism, uncertainty avoidance, power distance and masculinity levels have a stronger significant and positive effect on improving efficiency (for each model, coef. =  $-0.0001 + 0.002 = 0.0019$ ) than those in companies located in countries with a lower level of these dimensions (coef. =  $-0.0001$ ). Meanwhile, female directors of companies located in countries with a strong long-term orientation have a lower significant and negative effect on efficiency (coef. =  $-0.0001 - 0.049 = -0.0491$ ) than in countries with a lower long-term orientation. From the above, for each cultural dimension, our evidence supports the moderating effect of cultural values on the relation between board diversity and performance. More concretely, the female directors of companies located in countries with higher economically orientated values adopt male stereotypes and have a significant and positive interest in improving efficiency.

With respect to the control variables, all models in general offer evidence of the positive influence of firm size and board independence. However, board size and leverage have a significant negative effect from the econometric standpoint for the *Efficiency* score in all models, for an estimated confidence level of 99%. With respect to the remaining control variables, none of them are significant in all the models analysed.

**Table 24.** Efficiency, diversity and institutional environments

	Coef.	z	Coef.	z	Coef.	z	Coef.	z	Coef.	z	Coef.	z
	(std.err)	(p-value)	(std.err)	(p-value)	(std.err)	(p-value)	(std.err)	(p-value)	(std.err)	(p-value)	(std.err)	(p-value)
Wom	-0.0001	-2.280	-0.0001	-2.270	-0.0001	-2.270	-0.0001	-2.270	-0.0001	-2.260	-0.0001	-2.280
	(0.000)	(0.023)	(0.000)	(0.023)	(0.000)	(0.023)	(0.000)	(0.023)	(0.000)	(0.024)	(0.000)	(0.022)
Culture	0.001	0.280										
	(0.004)	(0.781)										
Indiv			0.003	1.080								
			(0.003)	(0.280)								
PowDist					0.003	1.010						
					(0.003)	(0.312)						
Uncertavoid							0.003	1.010				
							(0.003)	(0.312)				
Masc									0.003	1.010		
									(0.003)	(0.311)		
LongTerm											0.000	-0.020
											(0.007)	(0.984)
Wom*Culture	0.002	2.590										
	(0.001)	(0.010)										
Wom*Indiv			0.002	2.630								
			(0.001)	(0.009)								
Wom*PowDist					0.002	2.620						
					(0.001)	(0.009)						
Wom*Uncertavo							0.002	2.600				
							(0.001)	(0.009)				
Wom*Masc									0.002	2.610		
									(0.001)	(0.009)		

Wom*LongTerm											-0.049	-3.140
											(0.016)	(0.002)
Size	0.000	0.220	0.000	0.230	0.000	0.230	0.000	0.230	0.000	0.210	0.002	0.420
	(0.000)	(0.824)	(0.000)	(0.819)	(0.000)	(0.819)	(0.000)	(0.819)	(0.000)	(0.830)	(0.005)	(0.674)
Leverage	-0.019	-2.240	-0.019	-2.240	-0.019	-2.230	-0.019	-2.230	-0.019	-2.230	-0.003	-0.320
	(0.008)	(0.025)	(0.008)	(0.025)	(0.008)	(0.026)	(0.008)	(0.026)	(0.009)	(0.026)	(0.010)	(0.751)
Bosize	-0.047	-3.330	-0.047	-3.320	-0.048	-3.350	-0.048	-3.340	-0.048	-3.340	-0.011	-0.850
	(0.014)	(0.001)	(0.014)	(0.001)	(0.014)	(0.001)	(0.014)	(0.001)	(0.014)	(0.001)	(0.013)	(0.394)
Boactivity	-0.004	-0.840	-0.004	-0.840	-0.004	-0.850	-0.004	-0.850	-0.004	-0.830	-0.005	-1.040
	(0.005)	(0.403)	(0.005)	(0.399)	(0.005)	(0.394)	(0.005)	(0.395)	(0.005)	(0.406)	(0.005)	(0.296)
Boindep	0.003	4.150	0.003	4.160	0.003	4.130	0.003	4.130	0.003	4.130	0.002	2.630
	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.009)
cons	-0.588	-0.300	-0.592	-0.300	-0.613	-0.310	-0.613	-0.310	-0.606	-0.310	-0.772	-0.390
	(1.980)	(0.767)	(1.979)	(0.765)	(1.980)	(0.757)	(1.980)	(0.757)	(1.981)	(0.760)	(1.982)	(0.697)
Industry	controlled		controlled		controlled		controlled		controlled		controlled	
Country	controlled		controlled		controlled		controlled		controlled		controlled	
Year	controlled		controlled		controlled		controlled		controlled		controlled	
Crisis	controlled		controlled		controlled		controlled		controlled		controlled	
/sigma	0.172	133.410	0.172	133.410	0.172	133.410	0.172	133.410	0.172	133.410	0.172	133.410
	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)

N= 10,279 firm-year observations.

Estimated coefficients and associated standard errors (in parentheses) are reported.

#### 4.4.3. Discussion of results

Our main results confirm the negative impact or even non-existent impact of female directors on firm performance. Moreover, our main evidence is the moderating effect of the institutional factor in this relationship: that is, there is a greater and positive impact of board diversity on efficiency in a more economically orientated cultural context. Our corroboration of the proposed hypotheses shows that if these directors perform their duties in companies located in contexts with cultural dimensions orientated to economic aspects, they may have greater incentives to adopt male stereotypes, improving decision-making and focusing on maximization performance.

First, despite previous studies that defend a positive influence of female directors on performance and efficiency (Campbell & Mínguez-Vera, 2008; Erhardt et al., 2003; Farrell & Hersch, 2005; García-Sánchez, 2010; Mahadeo et al., 2012; Post & Byron, 2015), our evidence supports the lower technical efficiency of women on boards. In this respect, the results of this research confirms previous evidence provided by Shrader et al. (1997) and Pathan and Faff (2013). As in these studies, our findings are in line with those showing less efficiency in deliberating and making decisions (Walt & Ingley, 2003). Moreover, as we expected, female directors show less interest in subjects related to economic and self-interest orientation (Ibrahim & Angelidis, 1991).

Second, we support the moderating effect of cultural dimensions on the impact of women on boards on firm performance. In this regard, our evidence supports the initial assumption proposed by Ridgeway (2001) and Ridgeway et al. (1998), from which female directors are influenced by the cultural values of the society where they take decisions. Concretely, our evidence show that female directors adopt male stereotypes in a cultural context characterized by patterns of individualism, masculinity, uncertainty avoidance, power distance and short-term orientation – thus different to female behaviours. Adopting male stereotypes leads female directors to increase their economic incentives orientation, thus increasing the maximization of performance as business objective. Thus, according to previous studies (Aguilera & Jackson, 2003; García-Sánchez et al., 2016; Hofstede, 1983; Johnson et al., 2012; Post & Byron, 2015), the effectiveness of the board on performance is influenced by the institutional context in general, and particularly by cultural dimensions of a society.

Theoretically, we support arguments defended by expectation states theory, social dominance theory and system justification theory and especially by social identity theory. In this respect, our evidence shows that female directors adapt their behaviour towards male stereotypes in order to increase the value of their status group, the legitimacy of their stereotypes and achieve a greater social influence on society (Pratto et al., 1994; Ridgeway, 2001; Ridgeway et al., 1998).

Finally, we also provide support for previous studies that defend the use of technical efficiency as a measure of corporate performance (García-Sánchez, 2010; Hill & Snell, 1989). As these authors suggest, technical efficiency, measured using DEA, resampling procedures and bootstrapping techniques, is less ambiguous than other performance measures. Similar to Lehmann et al. (2004), we conclude that efficiency contributes to explaining helps to explain differences in the performance of firms.

#### 4.5. Conclusions

This study aimed to examine the impact of female directors, denoting the strength of the board, on technical efficiency as a measure of firm performance. In addition, given the international sample, the study also examined this relationship moderated by institutional factors, concretely, by cultural values by examining dimensions proposed by Hofstede (2011).

Employing an international sample for the period 2006–2015, this paper provides evidence of the negative or even non-existent effect of board diversity in terms of gender on efficiency as a measure of corporate performance. Nonetheless, cultural values as an institutional factor exert a moderating effect on the previous relationship. From our results, we confirm that the prevalence of a culture characterized by economically orientated values determines that female directors will adopt masculine stereotypes; that is, the female directors of companies located in countries with higher economically

orientated values adopt male stereotypes and have a significant and positive interest in improving efficiency.

Thereon, this study presents a more precise process for gaining an understanding of the relationship between board diversity, firm performance and the institutional context than that afforded by other methods. Understanding how female directors affect technical efficiency in contexts with economically orientated cultures has particular implications for companies, managers, shareholders and stakeholders, as well as for policymakers and regulatory bodies, among others. In this regard, and as a practical implication, it must be highlighted that boards balance the number of male and female directors with the aim of increasing their technical efficiency and thus enhancing their performance. The existence of female directors introduces a more intuitive resolution of problems, with lower control levels and higher emotionality, being less economically and self-interest oriented than males. There are implications for board directors in general and for women directors in particular, who must be more concerned about the importance of the control and monitoring function of the board in reducing agency costs, beyond creating stakeholder value and increasing firm performance. Our evidence argues that there should be greater awareness of boards' diversity in regard to increasing shareholders' wealth. For investors, our evidence can provide a tool for assessing the behaviour of their representatives on the board in terms of responsibility, as well as that of other female members. Our results can also help managers to understand how the institutional context in which a firm operates influences performance. Moreover, for companies, it is fundamental to know how different board compositions influence firm performance. Finally, our findings will be of interest to investors and public authorities seeking to assess the positive effects of board diversity on performance, as well as to policymakers and regulators, who could make use of them to improve market transparency by introducing new requirements for increasing the presence of female directors on boards, especially in contexts with more economic-value orientated cultures. In 2012, the OECD proposed gender targets to increase the number of female directors. Although some countries have implemented measures to promote female representation (e.g. Norway, Spain, Italy, France and Sweden), women are still underrepresented on company boards.

Overall, this type of study is justified by the contributions it makes to different areas, namely: (i) business, as the results obtained here can serve as a basis for rationalizing the composition of boards of directors that the companies determine, all supported with concrete data on the impact on organizational performance; (ii) political and legal scenarios, as it allows us to highlight whether the recommendations, policies or laws generated effectively fulfil their purpose and enhance business results; and (iii) social, since although the board composition will favour the transparency of business, it will also consider the participation of social groups that can be considered minorities but which nevertheless constitute a large proportion of the population.

Finally, we present some limitations of this study which also open up new areas for future research. The first limitation is that the empirical evidence is conditioned on the availability of information for a specific set of countries and years; our sample is restricted to 24 countries – with a notably bias towards the USA - and the last year used for the analysis was 2015. This limitation needs to be addressed in future research, increasing the number of countries and considering more recent years as that data become available. In addition, our research does not take into account other possible variables that may affect the relationship between board diversity and firm performance, such as the role of ownership concentration, the legal system of the country of origin and so on. These variables can act as a control mechanism in this relationship. It could be interesting to include some of these variables in the future as they may affect the relationship between female directors and technical efficiency. In addition, further studies are needed to determine the relationships analysed in this paper, controlling for different corporate governance systems, legal systems and other institutional contexts.

## **GENERAL CONCLUSIONS**

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The objective of this doctoral thesis is to show the existing gender disparity in accounting work, at an academic and professional level, and to observe its relationship with historical, social and cultural factors that could have originated or influenced it.

In development of this objective, four studies were carried out with alternative and complementary approaches, both qualitative and quantitative, addressing a time horizon between the eighteenth and twenty first centuries, both in the academic, professional and business context.

In the first of them we synthetically identify, on the one hand, the process that women had to undergo to exercise accounting in the public sphere (outside the home) and, on the other, how the social context represented both an obstacle and a driver for their access to the labor and professional field during the eighteenth and twentieth centuries, was of the patriarchal heyday and the greatest advance of accounting.

We found that there is a legacy of machismo and misogyny at the accounting level that has been institutionalized in gendering and gendered practices in organizations and in professional practice and that is still in force today. Previous research has shown that just being a woman hurts someone's status, pay, prestige, and promotion.

In this sense, the following three papers addressed the current situation of women and the gender gaps they face in the academic and business context, two of the main job options for a graduate.

In the academic environment, we find that the presence of women as authors, although it has improved over time, is still far from parity and, within the sample of authors in general and within the most productive authors, their presence it is a minority. In parallel, analyzing their participation as sole authors and strategic positions in the list of authors (first and last author), although their participation is still on the rise, it is still very low. Similarly, when observing the levels of citations by author, women's papers have a lower level of impact and reference. Taking into account the importance of publications in the current academic system, this may be the origin of the disadvantageous position in which they find themselves at the salary, hierarchical and promotion levels.

In the business scenario, in parallel, it was found that there are gender disparities and that they are related to the cultural characteristics of the context. Environments with a higher masculinity value promote a greater presence of women on boards of directors, while the long-term dimension represents a barrier for women on them. Likewise, regarding the performance, we confirm that the predominance of a culture characterized by economically oriented values determines that female directors adopt male stereotypes; that is, female directors of companies located in countries with higher values of economic orientation adopt male stereotypes and have a significant and positive interest in improving efficiency.

As can be seen, the previous results indicate that, although the presence and position of women has improved over time, they have experienced a gender gap that has impaired their progress, participation in high positions, their ability to promote and their remuneration, both in past centuries and in recent years, as well as in different environments of the accounting professional practice. Additionally, it can be seen that historical, social and cultural factors exert a clear influence on the access, progress and permanence of women professionally.

These conclusions have important incidences at the professional, business and academic levels, since although the detractors of gender diversity argue that heterogeneous groups report lower efficiency, integration and satisfaction, higher absenteeism and intention to leave and that they can even harm business performance (O'Reilly III, Caldwell, & Barnett, 1989; Pathan and Faff, 2013; Tsui and O'Reilly, 1989; Walt & Ingley, 2003), there are clear reasons for the inclusion of women at the academic, professional and organizational levels, such as the recruitment, retention and promotion of more qualified human talent, a higher quality of employee work, introduction of interpersonal,

multitasking and leadership skills as well as alternative points of view that improve knowledge, objectivity, ethics, integrity, dynamism and progress as well as the creative and innovative capital of the organizations, which allows to achieve an improvement in the ability to detection and response to opportunities and threats, decision making and problem solving, as well as a better understanding of the market and uncertain environments, improvement in costs and organizational reputation (Addis & Villa, 2003; Campbell and Mínguez Vera, 2008; Dhanani & Jones, 2017; Erhardt, Werbel, & Shrader, 2003; Krishnan and Park, 2005; Locke & Lowe, 2008; Lukka & Kasanen, 1996; Robinson and Dechant, 1997; Post and Byron, 2015; Rose, 2007; Terjesen, Sealy, & Singh, 2009; Tung, 2006).

Thus, the doctoral thesis (i) contributes to research and academic literature by presenting accounting as a phenomenon that reflects, responds to and perpetuates social and cultural patterns that obey patriarchal, macho, phallogocentric and misogynistic approaches rooted throughout the world; (ii) by analyzing the composition and situation of the research and professional accounting community, it allows to raise awareness and understand the nature, scope and real and potential consequences of gender asymmetries with a view to finding new ways of addressing it to achieve concrete changes that allow achieve inclusion, diversity, equity, justice and pluralism; (iii) contributes to the business, educational, political and legal system since it can serve as input for the development of policies that promote and/or reinforce gender diversity and equality at the organizational, social and cultural level.

## **CONCLUSIONES GENERALES**

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El objetivo de esta tesis doctoral es evidenciar la disparidad de género existente en el quehacer contable, a nivel académico y profesional, y observar su relación con factores históricos, sociales y culturales que pudieran haber originado o influido en la misma.

En desarrollo de dicho objetivo se llevaron a cabo cuatro estudios con enfoques alternativos y complementarios, tanto de corte cualitativo como cuantitativo, que abordan un horizonte temporal entre los siglos XVIII y XXI, tanto en el contexto académico, profesional y empresarial.

En el primero de ellos identificamos de manera sintética por una parte el proceso que debió surtir la mujer para ejercer la contabilidad en la esfera pública (fuera del hogar) y por otra cómo el contexto social representó tanto un obstáculo como un impulsor para su acceso al campo laboral y profesional durante los siglos XVIII y XX, era del apogeo patriarcal y del mayor avance de la contabilidad.

Encontramos que hay un legado de machismo y misoginia a nivel contable que se ha institucionalizado en prácticas sexualizantes y sexualizadas en las organizaciones y en el ejercicio profesional y que siguen vigentes en la actualidad. Investigaciones previas han puesto de manifiesto que el solo hecho de ser mujer perjudica el estatus, remuneración, prestigio y promoción de alguien.

En ese sentido los tres trabajos siguientes abordaron la situación actual de las mujeres y las brechas de género que enfrentan en el contexto académico y empresarial, dos de las principales opciones laborales de un egresado.

En el entorno académico, encontramos que la presencia de las mujeres como autoras, aunque ha mejorado en el tiempo, aún dista mucho de la paridad y es que, dentro de la muestra de autores en general y dentro de los autores más productivos, su presencia es minoritaria. Paralelamente analizando su participación como autoras únicas y posiciones estratégicas en el listado de autores (primer y último autor) aunque su participación va en ascenso aún es muy baja. De igual forma, al observar los niveles de citas por autor, los trabajos de las mujeres tienen un menor nivel de impacto y referencia. Teniendo en cuenta la importancia de las publicaciones en el sistema académico actual, este puede ser el origen de la posición desventajosa en la que se encuentran a nivel salarial, jerárquico y de promoción.

En el escenario empresarial, de manera paralela, se encontró que existen disparidades de género y que están relacionadas con las características culturales del contexto. Los entornos con mayor valor de masculinidad promueven una mayor presencia de mujeres en los consejos de administración, mientras que la dimensión de largo plazo representa una barrera para las mujeres en los mismos. Así mismo en cuanto a su desempeño, confirmamos que el predominio de una cultura caracterizada por valores de orientación económica determina que las consejeras adopten estereotipos masculinos; es decir, las consejeras de empresas ubicadas en países con mayores valores de orientación económica adoptan estereotipos masculinos y tienen un interés significativo y positivo en mejorar la eficiencia.

Como se puede ver, los anteriores resultados indican que, aunque la presencia y posición de las mujeres ha mejorado en el tiempo, ellas han experimentado una brecha de género que ha perjudicado su progreso, participación en altos cargos, su capacidad de promoción y su remuneración, tanto en siglos pasados como en años recientes, así como en diferentes entornos del ejercicio profesional contable. Adicionalmente, se puede ver que factores históricos, sociales y culturales ejercen una clara influencia en el acceso, progreso y permanencia de las mujeres profesionalmente.

Estas conclusiones tienen incidencias importantes a nivel profesional, empresarial y académico, ya que aunque los detractores de la diversidad de género argumentan que los grupos heterogéneos reportan menor eficiencia, integración y satisfacción, mayor absentismo e intención de abandono y que incluso pueden perjudicar el desempeño empresarial (O'Reilly III, Caldwell, & Barnett, 1989; Pathan & Faff, 2013; Tsui & O'Reilly, 1989; Walt & Ingley, 2003), hay razones claras para la inclusión de las mujeres a nivel académico, profesional y organizacional, tales como la captación, retención y promoción de talento humano más cualificado, una mayor calidad del trabajo de los empleados, introducción de habilidades interpersonales, multitarea y de liderazgo así como puntos de vista

alternativos que mejoran el conocimiento, la objetividad, ética, integridad, dinamismo y progreso así como el capital creativo e innovador de las organizaciones, lo que permite alcanzar una mejora en la capacidad de detección y respuesta a las oportunidades y amenazas, la toma de decisiones y solución de problemas , así como un mejor entendimiento del mercado y los entornos inciertos, mejora en los costes y la reputación organizacional (Addis & Villa, 2003; Campbell & Mínguez Vera, 2008; Dhanani & Jones, 2017; Erhardt, Werbel, & Shrader, 2003; Krishnan & Park, 2005; Locke & Lowe, 2008; Lukka & Kasanen, 1996; Robinson & Dechant, 1997; Post & Byron, 2015; Rose, 2007; Terjesen, Sealy, & Singh, 2009; Tung, 2006)

Es así que la presente tesis doctoral (i) aporta a la investigación y a la literatura académica al presentar la contabilidad como un fenómeno que refleja, responde y perpetúa patrones sociales y culturales que obedecen a enfoques patriarcales, machistas, falo céntricos y misóginos arraigados a lo largo del tiempo; (ii) al analizar la composición y situación de la comunidad de investigación y profesional contable, permite concienciar y comprender la naturaleza, alcance y consecuencias reales y potenciales de las asimetrías de género con miras a encontrar nuevas formas de abordarla para lograr cambios concretos que permitan alcanzar la inclusión, diversidad, equidad, justicia y pluralismo; (iii) aporta al sistema empresarial, educativo, político y legal ya que puede servir de insumo para el desarrollo de políticas que promuevan y/o refuercen la diversidad e igualdad de género a nivel organizacional, social y cultural.

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