

Intergenerational Evolution of Gender Bias in Spain: Analysis of Values Surveys

Pilar Antolínez-Merchán ¹ , Ángel Rivero Recuenco ² ,
and Elvira Carmen Cabrera-Rodríguez ³ 

¹ Faculty of Communication and Design, University Camilo José Cela, Spain

² Economy Department, University of Alcalá, Spain

³ Faculty of Entrepreneurship, Business and Legal Sciences, University Camilo José Cela, Spain

Correspondence: Pilar Antolínez-Merchán (pantolinez@ucjc.edu)

Submitted: 13 September 2024 **Accepted:** 20 November 2024 **Published:** 23 January 2025

Issue: This article is part of the issue “Violence, Hate Speech, and Gender Bias: Challenges to an Inclusive Digital Environment” edited by Max Römer Pieretti (Universidad Camilo José Cela), Beatriz Esteban-Ramiro (Universidad de Castilla-La Mancha), and Agrivalca Canelón (Universidad Católica Andrés Bello), fully open access at <https://doi.org/10.17645/si.i415>

Abstract

This article uses data from the World Values Survey (WVS) and the European Values Study (EVS) for Spain, covering the years between 2005 and 2022 (waves 5, 6, and 7) to analyse the evolution of gender bias in different dimensions: politics, education, economics, and family. The results indicate a positive trend towards the reduction of gender bias, especially in areas of political leadership and education. However, certain biases remain, particularly among older generations. The analysis reveals that variables such as sex, education level, religion, political orientation, and materialistic values have a statistically significant influence on gender bias. Young people demonstrate a higher acceptance of gender equality compared to older adults. However, the younger generations are exposed to ideological and moral influences that cause changes in their perception of politics and democracy. One-fifth of the sample surveyed did not consider gender equality relevant as a constitutive element of democratic regimes, which seems to indicate a relative fading of the political and moral significance of gender equality as an issue for a significant proportion of young Spaniards. Religion is the only variable linked with a higher probability of maintaining gender biases, and even accentuating them among young people, which would be indicative of a correlation between religion and the adoption of ideologically conservative positions, in line with the socio-political dynamics of polarisation and the growing influence of neo-conservative movements in Spanish society.

Keywords

gender bias; gender equality; gender stereotypes; values survey

1. Introduction

The Office of the United Nations High Commissioner for Human Rights defines gender stereotypes as “a generalised view or preconception about attributes or characteristics, or the roles that are or ought to be possessed by, or performed by, women and men” (OHCHR, n.d.). The OHCHR also points out that gender stereotypes are harmful to both women and men as they affect their personal and professional spheres, perpetuate inequalities, and become unlawful when they violate human rights and fundamental freedoms. According to Amurrio et al. (2012, p. 228), “gender stereotypes are the characteristics, features and qualities that are attributed to a person based on their sex.” These authors point out that these stereotypes characterise and control the behaviour patterns that are expected both of men and women and which determine the models of masculinity and femininity, condemning behaviour that falls outside accepted gender norms.

The advance towards gender equality is a complex task for the development of society as a whole. In this sense, in the latest work carried out by the United Nations Development Programme (UNDP, 2023), entitled *Gender Social Norms Index (GSNI): Breaking Down Gender Biases: Shifting Social Norms Towards Gender Equality*, it is highlighted that gender biases are a generalised problem on a global level, and, in the case of women, no progress has been made in the last decade.

The GSNI measures prejudice against women through people’s attitudes about women’s roles along four dimensions: politics, education, economics, and physical integrity. The index is constructed from the answers to seven questions in the World Values Survey (WVS). Regarding this index, the application of the UNDP (2023) survey reveals that nearly nine out of 10 men and women have fundamental prejudices against women. For example, among the data, it is highlighted that 49% of the world’s population considers that men are better political leaders than women, and 43% state that men are better business executives than women.

In the face of this inequality, the report highlights how governments play an important role in changing social norms and, therefore, it is recommended that their approach be carried out through education and implementation of policies that promote gender equality and legislative changes, which address women’s rights in all spheres of life.

It is precisely in the field of education that UNESCO speaks out on gender bias and stereotypes. In their report *#Hereducationourfuture #Breakthebias: Challenging Gender Bias and Stereotypes in and Through Education* (UNESCO, 2022), and concerning children and young people, it is reported that these stereotypes and gender biases are established in people’s minds from the earliest stage of their lives and limit their future, given that these stereotypes can influence the choice of toys they play with, which subjects they study, their subsequent educational journey and, in general, throughout their lives. According to this report, if education doesn’t question the discriminatory gender norms and proposes opportunities and skills for critical thinking, nothing will change. Understanding gender stereotypes in the context of adolescence involves analysing the socialisation processes and the socio-cultural context in which the education of these young people has taken place, given that the beliefs they express stem from their past and may contribute to their behaviour as adults (Perry & Pauletti, 2011).

In this line, we will consider the study by González-Gijón et al. (2024), in which the average age of participants oscillates between 12 and 19 years old. According to this study, gender stereotypes are more

deeply rooted in boys than girls, although both have a high internalisation of prejudices. On the other hand, cultural background plays an important role in reinforcing gender beliefs derived from the upbringing styles and cultural values that have been part of their socialisation. Castillo and Montes (2007), in whose study the average age of participants was between 17 and 72 years old, conclude that educational level and political orientation emerge as the variables that have the greatest influence on gender stereotypes along with age, highlighting the importance of generational context.

Different international studies have used the WVS, a survey internationally recognised for its usefulness in the study of political, economic, and gender attitudes (Inglehart et al., 2004), to analyse issues related to gender equality (Brandt, 2011; Hussain & Haj-Salem, 2023; Inglehart & Norris, 2003; Norris & Inglehart, 2002; Rebrey, 2023; Rizzo et al., 2007; Tesch-Römer et al., 2008; Wernet, 2016).

Inglehart and Norris (2003) focus on gender equality and cultural change as a pairing that needs to be complemented by economic and political changes in any society to ensure equality between men and women. This allows for the consolidation and reinforcement of social change with legal and structural reforms that produce substantial advances for women.

Tesch-Römer et al. (2008) indicate that gender inequalities are related to gender differences. The extent of gender differences varies according to the degree of social inequality between men and women and cultural attitudes towards gender equality in the different countries under study. Thus, Egypt and Iraq show optimal development in this area in contrast to other countries such as Jordan and Morocco. Moreover, it is in line with the argument previously put forward by Inglehart and Norris (2003), who highlight the need to promote a change in the social positions that women hold in different spheres (employment, politics, etc.) to ensure greater social inclusion.

These gender inequalities are exemplified in another study by Rebrey (2023) in Russia. This research shows that although women actively participate in different areas of work with a high level of education, this does not guarantee their professional development and success, mainly due to low salaries. This makes it necessary to include a gender perspective in addressing the gender inequalities that are still prevalent in the country.

Several studies have also focused on the context of Islamic culture, democracy, and gender equality. Norris and Inglehart (2002) highlight that gender equality is a crucial aspect in understanding the cultural and political dynamics in Islamic cultures, suggesting that perceptions of gender are central to the analysis of democracy in these contexts. Rizzo et al. (2007) focus on the relationship between gender and democracy, while Hussain and Haj-Salem (2023) investigate how perceptions of women's emancipation have changed in the aftermath of the Arab Spring. All the studies challenge the idea that Islamic culture is inherently incompatible with democracy and gender equality, suggesting that there is significant variation and potential for change.

Lastly, it is important to highlight the studies by Brandt (2011) and Wernet (2016). Brandt (2011) indicates that sexism not only legitimises gender inequality, but actively worsens it by increasing it. Wernet (2016) reveals the links between social structure, the intermediate domains of religiosity and education, and gender equality attitudes.

Concerning social structure, Wernet (2016) argues that the history of communism has a different impact on attitudes towards gender equality compared to attitudes towards homosexuality. While tolerance towards

the former is increasing, tolerance towards the latter is decreasing. The same structural factor influences the two attitudes differently.

In terms of secularity, Wernet (2016) notes that the less important religion is in an individual's life, the more likely he or she is to support gender equality. The research findings show that being educated, being a woman, and being less religious significantly increases this probability. Finally, Wernet (2016) references the fact that educational level predicts gender equality attitudes and that institutional support for education, especially in less developed countries, can shape attitudes and lead to more equal opportunities for women in society.

The evolution of gender prejudices in Spain is a topic of growing relevance in the current sociopolitical context. In recent decades, Spain has undergone significant transformations in its social and political structures, which have influenced perceptions of gender equality. The transition to democracy in the 1970s allowed for the inclusion of equality policies, while feminist movements have pushed for the recognition of persistent inequalities (Bustelo, 2014; Lombardo & Alonso, 2020). Furthermore, the economic crisis of 2008 created both setbacks and new opportunities for equality activism (Lombardo & Alonso, 2020). These dynamics have shaped social awareness in order to highlight the importance of gender equality in Spain.

This article contributes to the understanding of the roots of gender biases in Spanish society. The general objective focuses on analysing the evolution of gender biases by age groups across four dimensions (political, educational, economic, and familial), identifying the sociodemographic and ideological factors that explain these biases. The analysis is centred on the youth group (ages 18–29). The specific objectives are:

1. To compare attitudes towards gender equality between different age groups.
2. To identify trends and factors that have an influence on gender bias.
3. To analyse the socio-demographic, political-ideological, and evaluative factors that explain gender prejudice in Spain.
4. To determine the explanatory power of the selected variables on gender bias.

2. Method

In this study, data available for Spain from the time series of the WVS and the European Values Study (EVS) for the period 2005–2022 have been used (Inglehart et al., 2022). This dataset combines the surveys completed in waves 5 (2005–2009), 6 (2010–2014), and 7 (2017–2022). Table 1 presents the samples arranged by waves, indicating the study (WVS or EVS).

Table 1. Number of interviews carried out in Spain per wave in the value surveys, EVS and WVS, 2005–2022.

	Wave	Frequency
WVS (2007)	2005–2009	1.200
EVS (2008)	2005–2009	1.497
WVS (2011)	2010–2014	1.189
EVS (2017)	2017–2022	1.210

Source: EVS-WVS_TimeSeries_InternalUse_spss_v3_0 (Inglehart et al., 2022).

The aggregated data file used for the analyses is the EVS-WVS_TimeSeries_InternalUse_spss_v3_0, provided by the WVS data archive (Inglehart et al., 2022). Details on documentation concerning the sample design, the method of data collection, the institution and researcher responsible for each survey, and other relevant documentation can be found on the WVS website as well (<https://www.worldvaluessurvey.org/WSDocumentationWVL.jsp>)

2.1. Measures

2.1.1. Primary Outcome Variables: Gender Bias

In order to observe the gender bias of young people in Spain, six indicators have been selected based on questions from the Values Survey questionnaire that measure egalitarian and non-egalitarian attitudes. These six indicators which function as dependent variables in our research, have been grouped into four dimensions: politics, education, economics, and family. The first three dimensions and their indicators coincide with those used by UNDP for the elaboration of the gender social norms index mentioned above (the fourth dimension that is part of the UNDP index, the physical dimension, could not be taken into account as the corresponding indicators have not been used in the latest wave of the survey).

It is essential to recognise the limitations associated with the questions selected. First, the number of questions, which is limited to six, may not be sufficient to capture the complexity of gender attitudes in various cultural and social contexts. Furthermore, by focusing only on four dimensions, important aspects of the issue may be omitted. It is also relevant to note that since gender norms are dynamic, questions can quickly become outdated. However, despite these limitations, these questions provide valuable initial insights into perceptions of gender equality and allow for the analysis of changes in attitudes towards gender over time.

Additionally, by focusing solely on four dimensions, we might be overlooking important aspects of this topic. It is also relevant to note that, since gender norms are dynamic, the questions may quickly become outdated. However, despite these limitations, these questions provide valuable initial insight into perceptions of gender equality and allow for the analysis of changes in gender attitudes over time.

Once the variables were selected, they were standardised so that they were all on the same scale and could be compared. For this purpose, each indicator takes a value of 1 when a respondent's answers imply a bias and 0 when they do not (Table 2).

Table 2. Gender bias indicators and normalisation.

Dimension	Indicator	Description	Normalisation
Politics	E233 Democracy: Women have the same rights as men	Please tell me for each of the following things how essential you think it is as a characteristic of democracy. Use this scale where 1 means <i>not at all an essential characteristic of democracy</i> and 10 means <i>it definitely is an essential characteristic of democracy; women have the same rights as men.</i>	1 = values from 0 to 7; 0 = rest

Table 2. (Cont.) Gender bias indicators and normalisation.

Dimension	Indicator	Description	Normalisation
Politics	D059 Men make better political leaders than women do	For each of the following statements I read out, can you tell me how much you agree with each? Do you strongly agree, agree, disagree, or strongly disagree? "On the whole, men make better political leaders than women do."	1 = <i>strongly agree</i> and <i>agree</i> ; 0 = rest
Education	D060 University is more important for a boy than for a girl	For each of the following statements I read out, can you tell me how much you agree with each? Do you strongly agree, agree, disagree, or strongly disagree? "A university education is more important for a boy than for a girl."	1 = <i>strongly agree</i> and <i>agree</i> ; 0 = rest
Economics	C001_01 Scarce jobs: Men should have more right to a job than women	Do you agree, disagree, or neither agree nor disagree with the following statements? "When jobs are scarce, men should have more right to a job than women."	1 = <i>agree</i> ; 0 = rest
Economics	D078 Men make better business executives than women do.	For each of the following statements I read out, can you tell me how strongly you agree or disagree with each? Do you strongly agree, agree, disagree, or strongly disagree? "On the whole, men make better business executives than women do."	1 = <i>strongly agree</i> and <i>agree</i> ; 0 = rest
Family	D061 Pre-school child suffers with working mother.	For each of the following statements I read out, can you tell me how much you agree with each? Do you strongly agree, agree, disagree, or strongly disagree? "When a mother works for pay, the children suffer."	1 = <i>strongly agree</i> and <i>agree</i> ; 0 = rest

Note: The sample is made up of the subjects who were asked about the above indicators (3,595 respondents).

To extract an index that gives all dimensions equal weighting, the Alkire and Foster (2011) methodology was used. This is the same counting methodology used for the development of the UNDP Gender Social Standards Index (Mukhopadhyay et al., 2019). The weighted average of the normalised variables is calculated by assigning equal weights to each indicator (Table 3).

Table 3. Gender bias index calculation.

Dimension	Indicator	Normalisation	Weight	Final Weight
Politics	E233 Democracy: Women have the same rights as men.	1 (values from 0 to 7)	1/2	$2/6 \times 1/2 = 1/6$
	D059 Men make better political leaders than women do.	1 (<i>agree</i> and <i>strongly agree</i>)	1/2	$2/6 \times 1/2 = 1/6$
	Global		2/6	
Education	D060 University is more important for a boy than for a girl.	1 (<i>agree</i> and <i>strongly agree</i>)	1	$1/6 \times 1 = 1/6$
	Global		1/6	

Table 3. (Cont.) Gender bias index calculation.

Dimension	Indicator	Normalisation	Weight	Final Weight
Economic	C001_01 Scarce jobs: Men should have more right to a job than women.	1 (<i>agree</i>)	1/2	$2/6 \times 1/2 = 1/6$
	D078 Men make better business executives than women do.	1 (<i>agree</i> and <i>strongly agree</i>)	1/2	$2/6 \times 1/2 = 1/6$
	Global		2/6	
Family	D061 Pre-school child suffers with working mother.	1 (<i>agree</i> and <i>strongly agree</i>)	1	$1/6 \times 1 = 1/6$
	Global		1/6	

Notes: Gender bias index = $1/6 \times$ (women democracy) + $1/6 \times$ (men political leaders) + $1/6 \times$ (university) + $1/6 \times$ (jobs for men) + $1/6 \times$ (business executives) + $1/6 \times$ (working mother).

Regarding the interpretation of the gender bias index, the value in the index closest to 1 is interpreted as evidence of gender bias.

2.1.2. Predictor or Independent Variables: Socio-Demographic and Political-Ideological Variables

As for the predictor or independent variables, based on evidence from previous studies (Bissell & Parrott, 2013; Santoniccolo et al., 2023), two blocks of variables were included:

1. Socio-demographic variables: sex, education level, and income level.
2. Political-ideological variables: political-ideological self-placement, religion, and materialist/post-materialist index (Inglehart's 4-item scale corresponding to question Y002 of all survey waves).

Table 4 shows the variables used and their description, as well as the recordings made.

Table 4. Independent variables: Description and recoding.

Indicator	Description
X001 (sex)	Respondent's sex (Code respondent's sex by observation, don't ask about it!): (1) men; (2) women
X025 (highest educational level)	What is the highest educational level that you have attained: (0) less than primary, (1) primary, (2) lower secondary, (3) upper secondary, (4) post-secondary non-tertiary, (5) short-cycle tertiary, (6) bachelor or equivalent, (7) master or equivalent, (8) doctoral or equivalent
Recoding: X025R (highest educational level recoded in three groups)	0–2 (X025A-1) → 1 Lower (X025R); 3–4 (X025A-1) → 2 Middle (X025R); 5–8 (X025A-1) → 3 Upper (X025R)
X047 (Scale of incomes)	On this card is an income scale on which 1 indicates the <i>lowest income group</i> and 10 the <i>highest income group</i> in your country. We would like to know in what group your household is. Please specify the appropriate number, counting all wages, salaries, pensions, and other incomes that come in.

Table 4. (Cont.) Independent variables: Description and recoding.

Indicator	Description
Recoding: X047R (subjective income level recoded in three groups)	1–3 (X047) → 1 Low (X047_R3); 4–7 (X047) → 2 Middle (X047_R3); 8–10 (X047) → 3 High (X047_R3)
F034 (religious person)	Independently of whether you go to church or not, would you say you are: (1) a religious person; (2) not a religious person; (3) an atheist
E033 (left-right political scale)	In political matters, people talk of “the left” and “the right.” How would you place your views on this scale, generally speaking: (1) left...(10) right.
Recoding: E033 (left-right political scale recoded in three groups)	1–4 (E033) → 1 Left (E033_R3); 5–6 (E033) → 2 Center (E033_R3); 7–10 (E033) → 3 Right (E033_R3)
Y002 (post-materialist index; 4-item)	4-item scale: (1) materialist; (2) mixed; (3) post-materialist

In the materialist/post-materialist scale, respondents are asked to select two of their country’s most important objectives from the following four options:

1. Maintain the nation’s order.
2. Increase citizen participation in important government decisions.
3. Combat price increases.
4. Protect freedom of expression.

Respondents who selected “maintain order” and “combat rising prices” were classified as materialists, and those who chose “increase participation” and “freedom of expression” were classified as post-materialists. The remaining combinations (one materialist response and another post-materialist) are considered “mixed.”

2.1.3. Control Variable: Age

Variable X003 (age) has been selected where it asks: “This means you are [blank space] years old (write age in two digits).” Its recoding X003R2 (age recoded in three groups) was: (1) 18–29 years; (2) 30–49 years; (3) 50 years and over.

2.2. Statistical Analysis

In order to carry out our analysis, we used the software IBM SPSS Statistics (version 20). First, a descriptive analysis was carried out for the sample as a whole and for the different age groups to find out the evolution of the gender bias index by age.

Subsequently, a logistic regression analysis was developed to account for factors influencing gender bias in terms of age. The gender bias index was taken as the dependent variable. Two regression models have been run, taking into account two age groups (18–29 years and 30 years and over). The independent variables

included in the two models are those mentioned above transformed into binary variables, except for the ideological self-placement variable which, being a scale variable, did not need to be transformed. Table 5 shows the construction of these binary variables for the analysis.

Table 5. Independent variables included in the logistic regression models.

Original variables	Binary variables	Values
X001 (sex)	Sex (binary)	1 = man; 0 = woman
X003 (age)	Age (binary)	1 = 18–29 years; 0 = 30 years and over
X025 (highest educational level)	Low educational level	1 = low educational level; 0 = the rest
	Medium educational level	1 = medium educational level; 0 = the rest
	High educational level	1 = high educational level; 0 = the rest
X047 (scale of incomes)	Low income	1 = low income; 0 = the rest
	Medium income	1 = medium income; 0 = the rest
	High income	1 = high income; 0 = the rest
F034 (religious person)	Religious person	1 = religious person; 0 = not religious person
Y002 (post-materialist index; 4-item)	Post-materialist	1 = post-materialist; 0 = the rest
	Mixed	1 = mixed; 0 = the rest
	Materialist	1 = materialist; 0 = the rest

3. Results and Analysis

Table 6 provides a detailed view of how gender biases have evolved in Spain across the three studied waves: 2005–2009, 2010–2014, and 2017–2022. The indicators are grouped into four key dimensions: political, educational, economic, and family. Each indicator shows the percentage of unbiased and biased people in each wave, providing a measure of the changes in attitude towards gender equality in different years.

In general, the data shows a positive trend towards the reduction of gender bias in Spain in most of the key dimensions considered; the exception is in the political dimension (perception of equal rights for democracy), which shows a slightly increasing trend over the waves considered.

3.1. Breakdown

3.1.1. Political Dimension

In the category of essential equal rights for democracy: The view that women should have the same rights as men as it is essential for democracy increased slightly from 19.2% to 19.8%.

In the category of political leadership: The belief that men are better political leaders than women has decreased significantly, with the percentage of biased people falling from 20.9% to 9.45%.

Table 6. Gender biases by wave and indicator (Spain 2005–2022).

Dimension	Indicator		WAVE (2005–2009)	WAVE (2010–2014)	WAVE (2017–2022)
Political	Women having the same rights as men is essential for democracy.	Share of people with no bias	80.8%	80.4%	80.2%
		Share of biased people	19.2%	19.6%	19.8%
	Men make better political leaders than women do.	Share of people with no bias	79.1%	84%	90.6%
		Share of biased people	20.9%	16.0%	9.4%
Educational	University is more important for men than for women.	Share of people with no bias	86.7%	88.3%	95.5%
		Share of biased people	13.3%	11.7%	4.5%
Economic	Men should have more right to a job than women.	Share of people with no bias	82.2%	87.7%	88.7%
		Share of biased people	17.8%	12.3%	11.3%
	Men make better business executives than women do.	Share of people with no bias	81.9%	85.5%	92.7%
		Share of biased people	18.1%	14.5%	7.1%
Family	Pre-school children suffer with a working mother.	Share of people with no bias	Not asked	71.5%	73.7%
		Share of biased people	Not asked	28.5%	26.3%

Source: EVS-WVS_TimeSeries_InternalUse_spss_v3_0 (Inglehart et al., 2022).

3.1.2. Educational Dimension

Considering the importance of university: The idea that university is more important for men than for women decreased from 13.3% to 4.5%.

3.1.3. Economic Dimension

In the category of right to work: The belief that men should have more right to a job than women decreased from 17.8% to 11.3%.

In the category of business executives: The perception that men are better business executives than women has also decreased from 18.1% to 7.1%.

3.1.4. Family Dimension

Concerning the impact of working mothers on pre-school children: The belief that a pre-school child suffers if their mother works has decreased from 28.5% to 26.3% between 2010–2014 and 2017–2022.

3.2. Comparison of Attitudes Towards Gender Equality Between Different Age Groups

Table 7 shows the evolution of gender bias in Spain, broken down by ages (18–29 years, 30–49 years and 50 years or over), allowing a detailed analysis of how attitudes towards gender equality vary between different generations.

Table 7. Gender biases in Spain (2005–2022) by wave, age group, and indicator.

Dimension	Indicator	Age group								
		18–29			30–49			50 years and over		
		2005–2009	2010–2014	2017–2022	2005–2009	2010–2014	2017–2022	2005–2009	2010–2014	2017–2022
Political	Women having the same rights as men is essential for democracy.	16.3%	20.1%	22.3%	18.0%	17.5%	19.8%	21.9%	21.4%	19.2%
	Men make better political leaders than women do.	13.2%	11.0%	3.0%	17.5%	14.8%	6.5%	28.4%	19.6%	13.6%
Educational	University is more important for men than for women.	10.70%	10.7%	1.7%	11.9%	9.9%	2.7%	16.1%	14.0%	6.6%
Economic	Men should have more right to a job than women.	9.7%	5.2%	5.3%	17.2%	8.0%	7.5%	22.8%	20.1%	15.8%
	Men make better business executives than women do.	13.6%	13.2%	2.4%	14.5%	9.9%	5.1%	24.0%	19.7%	10.0%
Family	Pre-school children suffer with a working mother.	Not asked	21.8%	21.9%	Not asked	24.0%	24.0%	Not asked	36.4%	29.3%

Source: EVS-WVS_TimeSeries_InternalUse_spss_v3_0 (Inglehart et al., 2022).

In general, the data show a positive trend towards the reduction of gender bias in Spain in different key dimensions and age groups, with some differences in the different dimensions and age groups considered:

3.2.1. Breakdown

3.2.1.1. Political Dimension

In the category of equal rights are essential for democracy: Although there was a slight increase in the percentage of people with biases in the groups 18–29 years old and 30–49 years old, the group of 50 years or over demonstrated a decrease in these biases. This suggests that younger generations may be exposed to ideological influences that cause shifts in their perceptions of politics and democracy.

In the category of political leadership: The belief that men are better political leaders than women has decreased significantly in all age groups, which clearly indicates positive changes in women's acceptance of taking on political leadership roles.

3.2.1.2. Educational Dimension

Concerning the importance of university: The perception that university is more important for men than for women has decreased drastically in all age groups, especially among young people from 18–29 years old. This reflects a cultural shift towards equal educational opportunities for both genders.

3.2.1.3. Economic Dimension

In the category of right to work: The belief that men should have a greater right to work than women has decreased in all age groups, with a significant reduction in the 30–49 years age group. This indicates a greater acceptance of gender equality in the workplace.

Concerning business executives: The perception that men are better business executives than women also decreased in all age groups, especially among young people from 18–29 years, which shows positive changes in the assessment of gender equality in terms of taking on business leadership roles.

3.2.1.4. Family Dimension

On the impact of mothers' work on pre-school children: The belief that a pre-school child suffers if their mother works has decreased slightly in the group of 30–49 years old and 50 years or over, with a notable reduction in the group 50 years or over. This suggests a growing acceptance of working mothers and a decrease in gender stereotypes in the family sphere.

3.3. Analysis of Sociodemographic, Political-Ideological, and Evaluative Factors: Gender bias index

The gender bias index in Spain was elaborated using six indicators from the previously mentioned, both the WVS and the EVS. The index is calculated as the average of the normalised values of these six indicators, providing a quantitative measure of the level of gender bias across different age groups and periods.

The gender bias index could only be calculated for the waves 2010–2014 and 2017–2022 because the previous surveys did not ask about the indicator related to the family dimension.

Table 8 presents the gender bias index in Spain, broken down into waves of surveys and age groups for the periods 2010–2014 and 2017–2022.

Table 8. Gender bias index by wave and age groups (Spain 2010–2022).

Age groups	WAVE (2010–2014)	WAVE (2017–2022)
18–29 years	0.14	0.09
30–49 years	0.14	0.11
50 years and over	0.22	0.18
Total	0.17	0.13

Source: EVS-WVS_TimeSeries_InternalUse_spss_v3_0. (Inglehart et al., 2022).

The main findings according to age group are presented here:

1. Age group 18–29 years: A significant decrease is observed in the gender bias index in this age group, indicating positive attitudinal shifts towards the acceptance of gender equality among young people.
2. Age group 30–49 years: Although the decrease isn't as pronounced as in the youngest group, we can also see a positive attitudinal shift towards gender equality in this age group.
3. Age group 50 years and over: This age group presents the highest gender bias in both periods, although there is also a downward trend. This indicates that, although attitudes are changing, gender bias is more persistent among older people.

On a general level, the gender bias index decreased by 0.17 in the 2010–2014 wave and by 0.13 in the 2017–2022 wave. This confirms the general trend towards the reduction of gender bias and stereotypes in the Spanish population.

3.4. Explanatory Factors for Gender Bias in Young People: The Explanatory Power of the Selected Variables

The variables that could explain gender bias among Spaniards and whether these variables are the same for young people are discussed below. For this purpose, we tested whether there is a significant correlation between the dependent variable (gender bias index) and the independent variables. For the regression analysis, it was decided to discard the low- and middle-income scale variable and, in the post-materialist/materialist variable, the mixed category, given that the level of significance in all of them, as can be seen in Table 9, is greater than 0.05. For the rest of the variables, the correlation between the dependent variable and the independent variables is significant (p value below 0.05) and, therefore, they are kept in the model.

By applying a first regression model with the selected variables, we eliminated age and high income because their significance is higher than 0.05 (0.658 and 0.336 respectively) but kept the rest of the variables. The model that we obtained is presented in Table 10.

The data in Table 10 show the results of the regression model applied to explain the gender bias index by socio-demographic, political-ideological, and value variables in Spain between 2010 and 2022.

Table 9. Correlation between the gender bias index and potentially explanatory variables.

		Gender bias index
Sex (binary)	Pearson Correlation	.070**
	Sig. (bilateral)	0.001
Age (binary)	Pearson Correlation	.183**
	Sig. (bilateral)	0.000
Low educational level (binary)	Pearson Correlation	.172**
	Sig. (bilateral)	0.000
Medium educational level (binary)	Pearson Correlation	-.074**
	Sig. (bilateral)	0.001
High educational level (binary)	Pearson Correlation	-.132**
	Sig. (bilateral)	0.000
Low income (binary)	Pearson Correlation	0.043
	Sig. (bilateral)	0.073
Medium income (binary)	Pearson Correlation	-0.005
	Sig. (bilateral)	0.820
High income (binary)	Pearson Correlation	-.051*
	Sig. (bilateral)	0.031
Religious person (binary)	Pearson Correlation	.204**
	Sig. (bilateral)	0.000
Self-positioning in political scale	Pearson Correlation	.201**
	Sig. (bilateral)	0.000
Materialist (binary)	Pearson Correlation	.165**
	Sig. (bilateral)	0.000
Mixed (binary)	Pearson Correlation	-0.025
	Sig. (bilateral)	0.245
Post-materialist (binary)	Pearson Correlation	-.151**
	Sig. (bilateral)	0.000

Notes: ** The correlation is significant in the level 0.01 (bilateral); * the correlation is significant in the level 0.05 (bilateral). Source: EVS-WVS_TimeSeries_InternalUse_spss_v3_0 (Inglehart et al., 2022).

Table 10. Explanatory regression model of the gender bias index using socio-demographic, political-ideological and value variables. Spain 2010–2022.

Adjusted R2 = 0.100	Unstandardised coefficients	Unstandardised coefficients	Standardised coefficients	T	Sig.
	B	Deviation Error	Beta		
(Constant)	.040	.010		4.073	<.001
Sex	.050	.010	.116	5.037	<.001
Low educational level	.055	.010	.127	5.504	<.001
Religious person	.063	.011	.146	5.993	<.001
Self-positioning in the political scale (right-wingers)	.069	.013	.131	5.500	<.001
Materialist	.054	.011	.112	4.855	<.001

Note: Dependent variable: Gender bias index. Source: EVS-WVS_TimeSeries_InternalUse_spss_v3_0 (Inglehart et al., 2022).

Adjusted $R^2 = 0.100$ indicates that the model explains 10% of the variability in the gender bias index. Although it's not a very high value, it suggests that the variables included have a certain explanatory capacity.

Unstandardised coefficients (B) indicate the change in the gender bias index for each unit of change in the independent variable while maintaining the rest constant:

- Sex: The coefficient of 0.050 means that, on average, the gender bias index is 0.050 units higher for one sex compared to the other, and this effect is significant ($p < 0.001$).
- Low educational level: The coefficient of 0.055 indicates that people with a low level of education have a higher gender bias index of 0.055 units, which is also significant ($p < 0.001$).
- Religious person: The coefficient of 0.063 suggests that religious people have a higher gender bias index of 0.063 units, which is significant ($p < 0.001$).
- Self-positioning in political scale (right-wingers): The coefficient of 0.069 indicates that right-wingers have a higher gender bias index of 0.069 units and is therefore significant ($p < 0.001$).
- Materialist: The coefficient of 0.053 shows that people with materialistic values have a higher gender bias index of 0.054 units, which is equally significant ($p < 0.001$).

Standardised coefficients (Beta) allow the relative importance of each independent variable in the model to be compared.

- Sex (Beta = 0.116): Has a moderate effect on the gender bias index.
- Low educational level (Beta = 0.127): Has a slightly greater effect than sex.
- Religious person (Beta = 0.146): Has a greater effect between the variables included.
- Self-positioning in political scale of right-wingers (Beta = 0.131): Also has a considerable effect.
- Materialist (Beta = 0.112): Has a lesser effect between significant variables but is still relevant.

All the coefficients, including the constant, are highly significant (Sig.; $p < 0.0001$), indicating that there is strong evidence that these variables are associated with the gender bias index.

In summary, the regression model shows that being a man, having a low educational level, being religious, identifying politically as right-wing, and having materialist values are factors significantly associated with the gender bias index. Although the model does not explain a large part of the variability (adjusted $R^2 = 0.100$), these factors have a significant influence on gender bias. In order to apply the model by age groups we have considered two categories (18–29 years and 30 years and over) to simplify the analysis.

The results of the regression analysis by age group are presented in Table 11.

As shown in Table 11, all independent variables included in the model have an impact on gender bias in the 30-year-old or over age group. However, only religion is statistically significant for the youth group. It should be noted that the reduction of the samples, when disaggregated by age group, affects the explanatory power of the model in the case of the group of young people, whose sample N is reduced to 406 cases.

Religion is the only variable that can potentially explain gender bias among young people. In this sense, a specific analysis of the evolution of the religion variable, based on WVS and EVS data in its latest waves, shows

Table 11. Explanatory regression model of the gender bias index by age group using socio-demographic and political-ideological variables (Spain 2010–2022).

18–29 years					
Adjusted R2 = 0.041	Unstandardised coefficients	Unstandardised coefficients	Standardised coefficients	T	Sig.
	B	Deviation Error	Beta		
(Constant)	.059	.021		2.813	.005
Sex	.032	.023	.082	1.401	.162
Low educational level	.030	.024	.072	1.250	.212
Religious person	.071	.025	.167	2.842	.005
Self-positioning in the political scale (right-wingers)	.040	.033	.071	1.212	.227
Materialist	.037	.027	.079	1.367	.173
30 years or more					
Adjusted R2 = 0.106	Unstandardised coefficients	Unstandardised coefficients	Standardised coefficients	T	Sig.
	B	Deviation Error	Beta		
(Constant)	.037	.011		3.277	.001
Sex	.054	.011	.123	4.894	<.001
Low educational level	.059	.011	.135	5.332	<.001
Religious person	.060	.012	.138	5.148	<.001
Self-positioning in political scale (right-wingers)	.073	.014	.140	5.365	<.001
Materialist	.057	.012	.116	4.578	<.001

Note: Dependent variable: Gender bias index. Source: EVS-WVS_TimeSeries_InternalUse_spss_v3_0 (Inglehart et al., 2022).

that the weight of this variable has increased in a higher proportion among young people: Of all young people (18–29 years old) surveyed in the 2005–2009 wave, a total of 27.7% indicated that they were religious. In the 2017–2022 wave, the percentage increases to 41.5%. In the other age groups, an increase is also observed, but to a lesser extent: The 30–49 age group went from 39.2% to 42.4%, and the 50 years and over age group from 60.7% to 59.3%. These data would confirm the growing trend towards the adoption of neo-conservative positions in the new generations, with likely effects on the continuation of traditional gender stereotypes.

4. Conclusion

Overall, the results of the analysis show a positive trend towards the reduction of gender bias in Spain in most of the key dimensions considered. The exception would be the political dimension (perception of equal rights as a key element of democracy), which not only doesn't decrease but also shows a slight trend towards an increase in the waves analysed.

In terms of age groups, the result is similar: the analysis indicates a decrease in the reduction of gender bias in Spain, with some differences according to dimensions and age groups, which would be along the same lines as the aggregate data: The appreciation that equal rights for men and women are a key element of democracy

escapes the downward trend in gender bias. The analysis shows a slight increase in the percentage of people with a bias towards the variable cited in the 18–29 age group (higher in this group) and the 30–49 age group, but a steady decrease in the 50 years and over age group.

This suggests that younger generations may be exposed to ideological influences that cause shifts in their perceptions of politics and democracy. The fact that, in the case of young people, more than a fifth of the sample surveyed do not consider (formal) gender equality to be a relevant constituent element of democratic regimes, and that the trend is also increasing, seems to indicate not only an unfavourable stance on inequality, although this obviously cannot be inferred from the data, but also a relative loss of the political and moral significance of gender equality as an issue for a significant proportion of young Spaniards.

For its part, the gender bias index decreased from 0.17 in the 2010–2014 wave to 0.13 in the 2017–2022 wave, confirming the general trend towards the reduction of gender bias and stereotyping in the Spanish population. This reduction is greater in the 18–29 years age group, which shows a decrease in the gender bias index (from 0.14 to 0.09), indicative of positive attitudinal changes towards the acceptance of gender equality among young people. On the other hand, the age group 50 years and over has the highest rate of gender prejudice in the periods considered, although it also shows a downward trend. This indicates that, although attitudes are changing, gender bias is more persistent among older people.

Regarding the factors likely to explain the existence of gender bias, the regression model applied shows that being a man, having a low educational level, being religious, identifying politically as right-wing, and having a preference towards materialist values are factors significantly associated with the gender bias index. The most significant values are, firstly, religion (considering oneself to be a religious person) and, secondly, political-ideological positioning (on a left-right scale). On the other hand, positioning on the materialist/post-materialist value scale is the variable with the least significance (although it also has some significance).

The reduction of the samples, when disaggregated by age group, affects the explanatory power of the model, especially in the case of the group of young people, whose sample *N* is reduced to 406 cases. In any case, socio-demographic, political-ideological, and value variables are significant in gender bias in the 30-year-old and over age group. Only religion is statistically significant for the 18–29 years age group.

In any case, with the caveats derived from the aforementioned reduction in age samples, the data seem to suggest that the factors influencing gender bias may vary significantly between the general population and young people and that other factors not considered in the model may be more relevant for the latter. This invites further analysis that integrates other variables into the model.

Even so, the fact that religion is the factor with the greatest statistical significance for the sample as a whole, remaining the only explanatory variable for young people despite the reduction in its size in the breakdown by age group, calls for reflection.

Religion is certainly linked to a greater likelihood of maintaining the existence of gender bias, and even accentuating it among young people and, in general, in the population as a whole. This could be indicative of a correlation between religion and the adoption of ideologically conservative positions, in line with the socio-political dynamics of polarisation and the growing influence of neo-conservative movements in

Spanish society (as in Europe and the United States in general). This would be consistent with other studies, such as the aforementioned study by Wernet (2016), which indicates the existence of a positive correlation between religiosity and gender bias. Likewise, specifically in the case of Spain, a tendency towards dualization has been observed in the axiological positions of Spaniards, who tend to place themselves either in traditional and conservative positions (linked to the presence of religious attitudes), with a slightly greater weight in the overall group, or in more modern and secularised positions (whose weighting tends to be less; Rivero Recuenco & Antolínez Merchán, 2023).

In any case, it is important to reiterate that religion is the only variable that can potentially explain gender bias among young people. In this sense, a specific analysis of the evolution of the religion variable, based on WVS and EVS data in its latest waves, shows that the weight of this variable has increased in a higher proportion among young people, confirming the tendency towards the adoption of neo-conservative positions in new generations, affecting the continuation of the traditional gender stereotype (the percentage of young people positioning themselves on the right of the ideological scale has increased from 12.3% in 2005–2009 to 19.8% in the latest wave).

These assessments, which are still hypothetical, pave the way for further research.

5. Discussion and Prospects

The main contribution of this work is that it highlights the relationship between religiosity and gender prejudice. It calls for a deeper analysis of this relationship, which, in any case, requires further and specific research, given the limitations of the length of this article. Some progress is certainly made in this respect, by incorporating data on the increase in religiosity among young people in recent years, which are incorporated to complement the analysis of gender bias and its possible explanatory variables (religiosity in this case). However, a detailed analysis of the possible relationships between religiosity and gender bias, which may undoubtedly be related to other socio-demographic and attitudinal variables, is, as indicated above, a matter for further studies.

This article has not attempted to enter into policy recommendations. The study focuses on the socio-statistical determination of the issue. It would imply going beyond the framework of the research objectives to enter into other aspects that can be approached from positions of a more evaluative and political nature, although this reflection can also form part of subsequent research. In any case, it is understood, on a preliminary basis, that the social and ideological forces that seem to be driving the neo-conservative movements affecting Western societies are not easy to counteract. It is a complex problem that requires specific evaluative and political research.

It is certainly worth reflecting on the effectiveness of education and awareness-raising policies in a social context affected by global transformations that affect the value and ideological positions of citizens. These are transformations whose socially perceived risks do not seem to be adequately addressed by traditional political parties. One might even ask, as a hypothesis or conjecture, whether gender equality awareness campaigns (apart from the limitations of conventional advertising in today's information society, coupled with the phenomena of silos and information/communication bubbles, etc.) might be generating effects contrary to those intended, especially in the younger generations. However, given that it is a hypothesis, it can only be tested by further research.

Funding

This study is part of the TSH-Discourse project of the 10th Call for Research Grants of the Camilo José Cela University. The article is part of the activities of the Center for Research on Social Values at UCJC.

Conflict of Interests

The authors declare no conflict of interests.

References

- Alkire, S., & Foster, J. (2011). Counting and multidimensional poverty measurement. *Journal of Public Economics*, 95 (7/8), 476–487. <https://doi.org/10.1016/j.jpubeco.2010.11.006>
- Amurrio, M., Larrinaga, A., Usategui, E., & Del Valle, A. I. (2012). Los estereotipos de género en los/las jóvenes y adolescentes. In Eusko Ikaskuntza (Eds.), *XVII Congreso de Estudios Vascos: Gizarte aurrerapen iraunkorrerako berrikuntza = Innovación para el progreso social sostenible* (pp. 227–248). <https://www.eusko-ikaskuntza.eus/PDFAnlt/congresos/17/02270248.pdf>
- Bissell, K., & Parrott, S. (2013). Prejudice: The role of the media in the development of social bias. *Journalism & Communication Monographs*, 15(4), 219–270. <https://doi.org/10.1177/1522637913504401>
- Brandt, M. J. (2011). Sexism and gender inequality across 57 societies. *Psychological Science*, 22(11), 1413–1418. <http://www.jstor.org/stable/41320046>
- Bustelo, M. (2014). Three decades of state feminism and gender equality policies in multi-governed Spain. *Sex Roles*, 74, 107–120. <https://doi.org/10.1007/s11199-014-0381-9>
- Castillo, M. R., & Montes, B. (2007). Escala de estereotipos de género actuales. *Iniciación a La Investigación*, 2, 1–21. <https://revistaselectronicas.ujaen.es/index.php/ininv/article/view/198>
- González-Gijón, G., Alemany-Arrebola, I., Ruiz-Garzón, F., & Ortiz-Gómez, M. (2024). Los estereotipos de género en adolescentes: Análisis en un contexto multicultural. *Revista Colombiana de Educación*, 90, 164–184. <https://doi.org/10.17227/rce.num90-1464>
- Hussain, M. A., & Haj-Salem, N. (2023). Did the Arab Spring change female emancipation perceptions? *Gender in Management*, 38(4), 433–453. <https://doi.org/10.1108/GM-10-2021-0299>
- Inglehart, R., Basáñez, M., Díez-Medrano, J., Halman, L. C. J. M., & Luijkx, R. (Ed.). (2004). *Human beliefs and values: A cross-cultural sourcebook based on the 1999–2002 value surveys*. Siglo XXI.
- Inglehart, R., Haerpfer, C., Moreno, A., Welzel, C., Kizilova, K., Díez-Medrano, J., Lagos, M., Norris, P., Ponarin, E., & Puranen, B. (Ed.). (2022). *World Values Survey: All rounds—Country-pooled datafile* (Dataset version 3.0.0) [Data set]. JD Systems Institute & WVSA Secretariat. <https://doi.org/10.14281/18241.17>
- Inglehart, R., & Norris, P. (2003). *Rising tide: Gender equality and cultural change around the world*. Cambridge University Press.
- Lombardo, E., & Alonso, A. (2020). Gender regime change in decentralized states: The case of Spain. *Social Politics: International Studies in Gender, State & Society*, 27 (3), 449–466. <https://doi.org/10.1093/sp/jxaa016>
- Mukhopadhyay, T., Rivera, C., & Tapia, H. (2019). *Gender inequality and multidimensional social norms*. United Nations Development Programme, Human Development Report Office. https://www.academia.edu/66607003/Gender_Inequality_and_Multidimensional_Social_Norms
- Norris, P., & Inglehart, R. (2002). Islamic culture and democracy: Testing the 'clash of civilizations' thesis. *Comparative Sociology*, 1(3), 235–263. <https://doi.org/10.1163/156913302100418592>
- Office of the United Nations High Commissioner for Human Rights. (n.d.). *Gender stereotyping: OHCHR and women's human rights and gender equality*. <https://www.ohchr.org/en/women/gender-stereotyping>

- Perry, D. G., & Pauletti, R. E. (2011). Gender and adolescent development. *Journal of Research on Adolescence*, 21(1), 61–74. <https://doi.org/10.1111/j.1532-7795.2010.00715.x>
- Rebrey, S. M. (2023). Gender inequality in Russia: Axial institutions and agency. *Russian Journal of Economics*, 9(1), 71–92. <https://doi.org/10.32609/j.ruje.9.94459>
- Rivero Recuenco, A., & Antolínez Merchán, P. (2023). Valores, creencias e ideología: Factores culturales explicativos de las preferencias sobre cualidades a transmitir en educación. In P. Antolínez, J. Díez, J. García, J.M. León, F. J. Llera, M. Martínez, M. Reynés, & A. Rivero (Eds.), *La globalización de los valores en el mundo y en España: Cualidades que deberían enseñarse a los niños* (pp. 147–193). Centro de Investigaciones Sociológicas.
- Rizzo, H., Abdel-Latif, A. H., & Meyer, K. (2007). The relationship between gender equality and democracy: A comparison of Arab versus non-Arab Muslim societies. *Sociology*, 41(6), 1151–1170.
- Santonico, F., Trombetta, T., Paradiso, M. N., & Rollè, L. (2023). Gender and media representations: A review of the literature on gender stereotypes, objectification and sexualization. *International Journal of Environmental Research and Public Health*, 20(10), 1–15. <https://doi.org/10.3390/ijerph20105770>
- Tesch-Römer, C., Motel-Klingebiel, A., & Tomasik, M. J. (2008). Gender differences in subjective well-being: Comparing societies with respect to gender equality. *Social Indicators Research*, 85(2), 329–349. <https://doi.org/10.1007/s11205-007-9133-3>
- UNESCO. (2022). #HerEducationOurFuture #BreakTheBias: Challenging gender bias and stereotypes in and through education; the latest facts on gender equality in education. <https://unesdoc.unesco.org/ark:/48223/pf0000380827?2=null&queryId=0b05c5d1-1855-4c01-9dbd-824d7b2b83da>
- United Nations Development Programme. (2023). *Gender Social Norms Index (GSNI): Breaking down gender biases: Shifting social norms towards gender equality*. <https://hdr.undp.org/content/2023-gender-social-norms-index-gsni#/indicies/GSNI>
- Wernet, C. A. (2016). The impact of secularity on attitudes of gender equality: A multi-level analysis of 49 nations. *Comparative Sociology*, 15(4), 508–530. <https://doi.org/10.1163/15691330-12341397>

About the Authors



Pilar Antolínez-Merchán (PhD in sociology) is a professor in the Faculty of Communication and Design at Camilo José Cela University. She is a member of the UCJC Social Sciences Research Group (INCISO-UCJC). She is the representative of the sociology area of the Centre for Research in Social Values (UCJC-CIVAS) and the principal investigator (PI) of the project Politics and Society: Discourses on Human Trafficking (TSH-Discourse) of the 10th Call for Research Grants of the Camilo José Cela University.



Ángel Rivero Recuenco (PhD in political sciences and sociology) has more than twenty years of experience in social consultancy in the public sector. A specialist in research, planning, and evaluation, he has worked with various companies and administrations in the areas of social inclusion and programme evaluation. He has taught at the European University and Carlos III University in Madrid. He is currently an associate professor at EAE Business School and at the University of Alcalá.



Elvira Carmen Cabrera-Rodríguez (PhD in law) is a criminologist and specialist in victimology, and professor in the Faculty of Entrepreneurship, Business and Legal Sciences at Camilo José Cela University. She is a member of the UCJC Social Sciences Research Group (INCISO-UCJC) and of the research team of the project Politics and Society: Discourses on Human Trafficking (TSH-Discourse) of the 10th Call for Research Grants of the Camilo José Cela University.