

Sports participation and leadership: Gender and nationality disparities in Spain

Participación Deportiva y Liderazgo: Desigualdades de Género y Nacionalidad en España

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Abstract

Being physically active and engaging in sports activities are critical for improving health-, social-, and economic-related outcomes. Despite years of policy efforts, physical inactivity remains high, especially among specific demographic groups. This study focuses on gender and nationality differences in Spain. We use data from the 2020 Survey of Sporting Habits in Spain to perform a descriptive analysis of sports participation and examine its correlates. The results show that women and foreign nationals are less likely to practice sports. Additionally, we collect information from the High Council for Sports to examine women's representation in leadership positions in sports from 2016 through 2021. Despite recent increases following policy efforts, women remain a minority in all analyzed positions. We discuss the managerial implications of our findings for public policy and reflect on future research directions in this area.

Keywords: Gender, Nationality, Leadership, Participation, Sports.

JEL Codes: Z20, C20, C25

Resumen

Ser físicamente activo y participar en actividades deportivas son elementos clave para mejorar los resultados relacionados con la salud, lo social y lo económico. A pesar de años de esfuerzos políticos, la inactividad física sigue siendo alta, especialmente entre grupos demográficos específicos. Este estudio se centra en las diferencias de género y nacionalidad en España. Utilizamos datos de la Encuesta de Hábitos Deportivos en España del 2020 para realizar un análisis descriptivo de la participación deportiva y examinar sus correlaciones. Los resultados muestran que las mujeres y los extranjeros son menos propensos a practicar deportes. Además, recopilamos información del Consejo Superior de Deportes para examinar la representación de las mujeres en puestos de liderazgo en el deporte desde 2016 hasta 2021. A pesar de los recientes aumentos como resultado de los esfuerzos políticos, las mujeres siguen siendo una minoría en todos los puestos analizados. Discutimos las implicaciones directivas de nuestros hallazgos para las políticas públicas y reflexionamos sobre las direcciones futuras de la investigación en esta área.

Palabras clave: Género, Nacionalidad, Liderazgo, Participación, Deportes.

1. Introducción

Physically active individuals, who engage in structured sports activities or regularly exercise in informal settings, are less likely to suffer from multiple health-related conditions, such as cardiovascular disease, type 2 diabetes, hypertension, and certain types of cancer (Warburton & Bredin, 2017). Beyond the beneficial bodily adaptations to regular exercise and sports, research also reports social and economic benefits (Andersen et al., 2019). Given what is at stake, governing bodies are firmly committed to implementing policies that foster physical activity. In this context, the World Health Organisation (WHO) has published a Global Action Plan on Physical Activity 2018-2030 to guide countries in promoting physical activity (WHO, 2018).

In Europe, the Commission implements several projects linked to the Council Recommendation of 26 November 2013 on promoting health-enhancing physical activity across sectors and supports and coordinates the actions of member states (European Commission, 2022). For example, the Spanish Ministry of Health collaborates with other institutions, such as the High Council for Sports and the Spanish Agency for Food Safety and Nutrition, to elaborate and update recommendations for the population on physical activity and the reduction of sedentary lifestyles (Ministerio de Sanidad, 2022).

Despite these efforts, the latest Eurobarometer indicates that the level of physical inactivity in Europe remains high and has slightly increased over the years (European Union, 2022). Individuals often self-report a lack of time as the most critical barrier. However, research reveals troubling differences among demographic groups. Women and young individuals with immigrant backgrounds are less likely to engage in sports and physical activity.

In most European countries, men are more likely to engage in regular sporting activities than women, although this relationship is often moderated by age (van Tuyckom et al., 2010). Cultural norms, structural deficiencies in national sports systems, and educational attainments also influence the gender gap in sports participation rates (Scheerder et al., 2005). In Spain, studies show that men are more likely to practice sports —and with higher frequency— than women (García et al., 2011; Kokolakis et al., 2012; Lera-López & Suárez, 2019; Muñoz et al., 2014). The gender gap in sports participation, which was about 24.8 percentage points in 2000, remained stable during the economic crisis and decreased significantly to about 15 percentage points in 2015 (Lera-López & Suárez, 2019).

The situation for young people with immigrant parents is also noteworthy. This minority group participates less in sports than young people from the majority population. Research has highlighted this inequality in multiple countries over time, such as Denmark (Agergaard et al., 2016), Finland (Zacheus, 2010), Germany (Burrmann et al., 2015), Norway (Strandbu et al., 2019), the Netherlands (Elling & Claringbould, 2005), and Switzerland (Buser et al., 2022). These findings underscore the need to understand the role of preferences, self-segregation, and collective exclusion mechanisms (Gomez-Gonzalez et al., 2021; van Haften, 2019).

Disparities in participation should be considered within an overarching regulatory framework that often lacks role models from minority groups in leadership and managerial positions (Burton, 2015; Sartore & Cunningham, 2007). A large body of research analyzes the mechanisms behind the underrepresentation of minorities in head coaching positions, such as black coaches (e.g., Cunningham, 2020; Day & McDonald, 2010; Nessler et al., 2020) and women coaches (e.g., Darvin, 2020; Darvin et al., 2017; Gomez-Gonzalez et al., 2019), as well as the intersections of race and gender (e.g., Cunningham, Wicker, & Kutsko, 2021; Nessler et al., 2021).

Research also explores gender diversity among board members, primarily in sports clubs, coaching staff, and administrative units (Lee & Cunningham, 2019) and, to a lesser extent, in governing bodies (Valiente, 2022; Wicker & Kerwin, 2022). The gender representation gap has led to some policy efforts to reverse the situation. Spain serves as an illustrative example: the High Council for Sports has required national sports federations to increase the number of women on governing bodies to qualify for public subsidies (Valiente, 2022). The latest update, implemented at the end of 2019, mandates federations to have at least four women (or 40% of women) on their board of directors to be eligible for public subsidies (Consejo Superior de Deportes, 2019).

In this study, we utilize data from the 2020 Survey of Sporting Habits in Spain to provide an updated picture of sports participation and physical activity within the Spanish context and to gain insights into existing inequalities. Specifically, we focus on individual characteristics, such as gender and foreign nationality. Additionally, we describe the gender representation gap in leadership positions within Spanish national sports federations from 2016 through 2021 and explore the determinants of diversity.

The structure of the paper is as follows: Section 2 describes the data used in our empirical analyses and outlines the methodological approach. Section 3 presents the results, and Section 4 discusses the main findings, limitations, and opportunities for future research. Finally, Section 5 offers some concluding remarks.

2. Data and Methodology

2.1. Participation

The Spanish Survey of Sporting Habits (Encuesta de Hábitos Deportivos), a cross section survey, serves as the primary database for analyzing sports participation in Spain. Conducted every five years by the Spanish Ministry of Education, Culture, and Sport in collaboration with the High Council for Sports, the survey gathers data from a representative sample of 5,233 individuals. These individuals reside in family dwellings across Spain and are aged 15 years and older. In our empirical analysis, we draw from the 2020 edition of the survey, which gathered data in the closing months of 2020.

The questionnaire consists of seven blocks: personal data, home sports equipment, interest in sports and other activities, involvement in sports federations or organizations, support for sporting activities, sports practice, attendance at sporting events,

and sports information via audio-visual media¹. The survey's concept of sports encompasses activities like gymnastics and jogging, which could be categorized as exercise rather than sports, according to definitions by Khan et al. (2012). Walking and other physical activities related to household tasks, such as gardening, are excluded.

We use the information provided by the survey to describe gender and nationality differences in multiple variables related to interest in sports and sports practice. We also estimate several discrete variable econometric models to examine the correlation between gender/nationality and different sport-related factors, controlling for other sociodemographic variables. Specifically, we use probit models to analyze sports participation, holding a sports license, being a member of a sports club or gym, and participation in sports competitions. We employ ordered probit models for studying interest in sports, interest in sports practice, and frequency of practice². In our estimates, we exclude observations lacking information for all variables. Moreover, when studying sports practice variables, we also drop individuals severely limited in daily activities due to health problems.

The independent variables in our models are consistent with existing literature on this subject (Cabane & Lechner, 2015; Downward et al., 2012). These variables account for factors influencing individual preferences for sports, time and monetary restrictions, and variances in the availability of sports facilities. In particular, in addition to gender and nationality, we consider age (in intervals) because it may affect preferences towards sports as well as time constraints; level of education, which is a proxy for income — variable not available in the survey —. This proxy may also reflect differences in preferences or the awareness of the benefits of an active lifestyle. Additionally, we also consider parent's sports participation, given that parents' lifestyle habits can contribute to the formation of their children's preferences; employment status, which can be an indicator of the income level but also of the individual's time restrictions; and variables related to the household composition, household size, and marital status that may capture the time constraints faced by individuals. Finally, we include municipality size as an indicator of differences in the supply of sports facilities.

2.2. *Leadership positions*

We scrutinize gender representation in various governing bodies, including the general assembly, delegate commission, and boards of directors over time (this setting does not allow us to explore differences by nationality). We rely on official data from the Spanish High Council for Sports and 66 national sports federations for the years 2016 to 2021. We exclude the speleology federation due to incomplete information. The analysis drops one observation in 2016, as the football federation does not register economic data and four additional observations where representation information is unavailable for some organisms, i.e., general assembly, delegate commission, or board of directors.

¹ In addition, the questionnaire includes an appendix with questions about sporting habits during the COVID-19 lockdown and subsequent changes in habits.

² For more details on these models see Wooldridge (2010).

The dataset includes organizational characteristics; federation size (number of licenses and percentage of women licenses); economic characteristics: total income disaggregated in own resources, subsidies, and elite programs; and representation characteristics: number of members in the general assembly, delegate commission, and board of directors, and the number of women members respectively.

The organizational structure of all national sports federations is almost identical. The High Council for Sports coordinates and supervises the federations' activities, which include government, administration, management, organization, and regulation of their respective sports disciplines, as well as other tasks of an administrative nature (Ministerio de Educación y Ciencia, 1991). The federations regulate their internal structure and operations according to democratic and representative principles. The federations' organizations have several elective and designated governing organisms, which include the president, board of directors, general assembly, and its delegate commission. While the president, the general assembly, and its delegate commission are the representative bodies of the federation and are elected by vote, the board of directors has core executive functions and is freely appointed and revoked by the president (López & del Arco, 2014).

Our analysis includes descriptive efforts to trace the evolution of women's representation in these governing organisms, especially before and after the implementation of the gender quota in 2019. Additionally, we include several regression models to gain preliminary insights into associations and determinants of women's representation on the board of directors, general assembly, and delegate commission. As explanatory factors, we include the total revenue of the federations (excluding subsidies as a part is endogenous to the number of women on the board), the percentage of women licenses, the size of the respective governing organism, and a dummy to control for the pre- and post-quota periods. We estimate linear regression models, including or excluding federation-fixed effects for unobserved differences. Equally suited GLS and GLM models show similar results, available upon request.

3. Results

3.1. Participation

3.1.1. Descriptive analysis of gender differences in sports practice patterns

Table 1 provides descriptive statistics of variables related to interest in sports and the reasons for participating or not participating in sports, categorized by gender and nationality and extrapolated to the total population. On average, women show somewhat less interest in practicing sports than men, with the difference being more pronounced when examining general interest in sports. Regarding motivations for engaging or not engaging in sports, physical fitness ranks as the most important reason for both males and females. For women, health is the second most important reason, whereas for men, it ranks third, after entertainment. As for the

reasons given for not participating in sports, both men and women report similar barriers: lack of time and interest, followed by health and age.

TABLE 1
DESCRIPTIVE STATISTICS: INTEREST IN SPORTS AND REASONS
FOR DOING OR NOT DOING SPORTS

	Nationality		Gender	
	Spaniards	Foreigners	Females	Males
Mean interest in sports (1-10)	6.60	6.61	5.95	7.32
Mean interest in sports practice (1-10)	5.99	6.21	5.51	6.53
Reasons for doing sports (if practitioner) %				
<i>Entertainment</i>	35.42	39.28	29.28	40.47
<i>Keeping fit</i>	52.12	48.41	55.45	49.85
<i>Relax</i>	23.65	23.56	27.67	20.11
<i>Health</i>	39.40	31.84	44.88	33.82
<i>Social Relationship</i>	4.69	6.48	4.75	4.99
<i>Liking sports</i>	20.55	28.22	16.03	24.81
<i>Liking competition</i>	2.24	2.07	1.47	2.88
<i>Self-improvement</i>	4.06	0.78	2.93	4.95
<i>Profession</i>	1.37	1.61	0.63	2.10
Reasons for not doing sports (if not practitioners) %				
<i>Lack of suitable nearby facilities</i>	3.89	5.11	3.93	3.74
<i>Age</i>	30.50	6.54	28.01	29.00
<i>Health</i>	31.71	13.85	29.60	31.20
<i>Economic reasons</i>	4.54	13.96	5.49	5.21
<i>No one to practice it with</i>	2.57	5.96	2.33	3.25
<i>Lack of time</i>	41.47	62.74	42.71	43.03
<i>Lack of interest</i>	37.78	40.49	38.46	37.58

NOTE: Percentages are computed over the population of each group.

SOURCE: Own elaboration.

Table 2 offers further information about sports participation. The gender participation gap in 2020 stands at around 11 percentage points. Age-based breakdowns confirm that the rate of sports participation decreases with age for both genders, although men consistently report higher figures than women. Additionally, the maximum difference occurs between the ages of 35 and 44, a life stage where family responsibilities tend to be greater, particularly for women.

In terms of frequency of participation, most women engage in sports or exercise at least once a week. Men, on the other hand, are more likely to participate daily or almost

daily and also allocate more time to these activities-averaging an additional hour and a half per week. Gender differences are also evident in the types of sports practiced. Table 2 reveals that the percentage of women who participate in individual sports is substantially higher than that of men, a trend that persists when examining specific sports. Male participation rates in team sports like football or basketball (among Spain's most popular team sports) are at least double those of females. The opposite is true for light gymnastics, explaining in part why a higher percentage of women are members of gyms or sports clubs. However, when it comes to holding sports licenses or participating in sports competitions, male figures again double those of females.

TABLE 2
DESCRIPTIVE STATISTICS: SPORTS PRACTICE

	Nationality		Gender	
	Spaniards	Foreigners	Women	Men
Sports practitioners (at least once a year) %	59.64	58.67	53.94	65.51
Sports practitioners (at least once a year) by age group %				
<i>Age 15-24</i>	80.52	69.41	74.25	85.55
<i>Age 25-34</i>	76.79	75.49	72.26	79.04
<i>Age 35-44</i>	72.35	56.35	63.92	77.20
<i>Age 45-54</i>	63.78	47.67	57.18	67.29
<i>Age 55+</i>	41.03	46.61	36.73	46.69
Frequency of sports practice (if practitioner) %				
<i>Almost daily sport practice</i>	45.67	41.85	43.61	47.00
<i>At least once a week</i>	46.45	46.35	49.46	43.94
<i>At least once a month</i>	5.43	8.04	4.12	6.85
<i>Sporadic sports practice (less than monthly)</i>	2.44	3.76	2.81	2.21
<i>Mean of weekly minutes allocated to sports (if weekly practitioner)</i>	308.54	341.54	262.27	357.01
Type of sports practiced (if practitioner) %				
<i>Individual sports</i>	66.30	63.85	72.04	61.02
<i>Team sports</i>	11.52	12.84	9.03	13.80
<i>Both types</i>	22.18	23.31	18.93	25.18
Participation in specific sports (if practitioner) %				
<i>Football</i>	13.33	26.74	4.02	22.90
<i>Indoor football</i>	6.87	14.21	2.57	11.18
<i>Basketball</i>	8.65	13.95	5.63	11.66
<i>Light gymnastics</i>	48.39	42.20	64.51	33.56
<i>Intense gymnastics</i>	30.84	26.53	32.95	29.72
<i>Cycling</i>	31.82	22.82	24.17	37.56

TABLE 2 (Cont.)

	Nationality		Gender	
	Spaniards	Foreigners	Women	Men
Holding at least one sports license (if practitioner) %	13.94	9.00	8.91	17.72
Subscribers or members of gyms or sports clubs (if practitioner) %	44.63	38.13	46.52	42.99
Participants in sports competitions (if practitioner) %	15.79	9.74	8.39	21.59

NOTE: Percentages are computed over the population of each group.

SOURCE: Own elaboration.

3.1.2. Descriptive analysis of nationality differences in sports practice patterns

The Survey of Sporting Habits does not include information on immigrant background, but it does ask respondents about their nationality, offering three options: Spanish, foreign, or dual nationality. The survey data, extrapolated to the total population, indicate that approximately 9% are foreign nationals or possess dual nationality.

According to Table 1, interest in sports is largely consistent across different nationalities, although the interest in actually practicing sports is slightly higher among foreigners than among Spaniards. As for the reasons to participate in sports, the predominant motivation for all groups is physical fitness, followed by health for Spaniards and entertainment for foreigners. When it comes to reasons for not participating in sports, lack of time and interest top the list. Notably, economic considerations appear as a more significant barrier for foreigners, with 14% citing financial reasons, compared to just 4.5% of Spaniards.

Turning to sports participation, Table 2 shows that the percentages of Spaniards and foreigners who engaged in sports or exercise over the past year are comparable. However, these similar average figures mask substantial age-related variations in the sports habits of Spaniards and non-Spaniards. Among younger and middle-aged individuals, Spaniards participate in sports at rates substantially higher than their foreign counterparts. This trend reverses for individuals aged 55 and over, among whom foreigners are more active.

There are also differences in the frequency of practice and the time allocated to sports by practitioners. Foreigners are less likely to play sports or exercise almost daily, but those who play sports regularly spend more time per week on this activity than Spaniards on average. Specifically, foreigners exercise about half an hour more than Spaniards. As for the types of sports practiced — whether individual, team, or both— no significant behavioral differences are observed, although individual sports are slightly more popular among Spaniards. Interestingly, a greater proportion of foreigners engage in team sports like football or basketball compared to Spaniards, while more Spaniards opt for gymnastics or cycling.

Finally, when examining affiliations with sports organizations, only a small minority of active individuals hold a sports license. The percentage of foreigners with such

licenses is about a third lower than that of Spaniards. When it comes to membership in gyms, sports clubs, or other sports associations, Spaniards again outnumber foreigners (45% vs. 38%). These differences may partially account for the fact that a smaller percentage of foreigners participate in sports competitions (10% vs. 16%).

3.1.3. Econometric analysis of gender and nationality differences

Descriptive statistics offer insights into discrepancies in behavior by gender and nationality, but other factors may also influence the observed disparities. For example, foreigners and Spaniards have different age distributions. The proportion of Spaniards aged 55 or over is almost triple that of foreigners, while more than half of foreigners are between 25 and 44 years old, compared to 30% of Spaniards. Thus, the mean differences in sporting habits might be partly attributable to the effect of age rather than nationality. We, therefore, conduct several econometric analyses to study the association between gender, nationality, and sport-related variables while controlling for other sociodemographic factors that might also affect behavior. Note that the econometric modeling allows us to identify correlations or associations between variables, holding all else constant, but it does not establish causal relationships.

TABLE 3
MAIN RESULTS OF THE ECONOMETRIC ESTIMATES
ABOUT SPORTS PARTICIPATION AND INTEREST

	Nationality coefficients (Ref: Spanish nationality)	Gender coefficients (Ref: Women)
	Foreigner	Men
Interest in sports (Ordered probit)	-0.046 (0.063)	0.471*** (0.030)
Interest in sports practice (Ordered probit)	0.013 (0.064)	0.317*** (0.030)
Sports practice at least once a year (Probit)	-0.162** (0.081)	0.303*** (0.040)
Frequency of practice by practitioners (Ordered probit)	-0.064 (0.092)	0.054 (0.042)
Sports licence -if practitioner- (Probit)	-0.372** (0.156)	0.476*** (0.062)
Subscriber or member of gyms or sports clubs -if practitioner- (Probit)	-0.236** (0.105)	-0.066 (0.047)
Participation in sports competitions -if practitioner- (Probit)	-0.283** (0.144)	0.604*** (0.062)

NOTES: a. *** p<0.01, ** p<0.05, * p<0.1. Standard errors are in parentheses.

b. The estimated models incorporate, in addition to nationality and gender, the following explanatory variables: age, level of education, personal situation, number of people in the household under 15 years of age, number of people in the household aged 15 or over, sports practice by parents, employment status and municipality size.

SOURCE: Own elaboration.

Table 3 presents the results of the probit and ordered probit models described in Section 2.1. The table provides information on the coefficients corresponding to the main variables of interest: gender and nationality, and their significance levels. It is worth noting that the coefficients cannot be interpreted as marginal effects of the covariates (i.e., they do not show the change in the dependent variable for unit changes in the independent variable, *ceteris paribus*) because the models are non-linear. However, the sign of the coefficient indicates whether the effect is positive or negative.

Regarding gender, the estimates in Table 3 indicate that men have a higher interest in sports and sports practice than women. They are also more likely to engage in sports, although we find no significant differences in the frequency of practice among participants. Furthermore, men are more likely to hold a sports license and to participate in sports competitions. Finally, there are no significant gender differences in the likelihood of being a gym or sports club member.

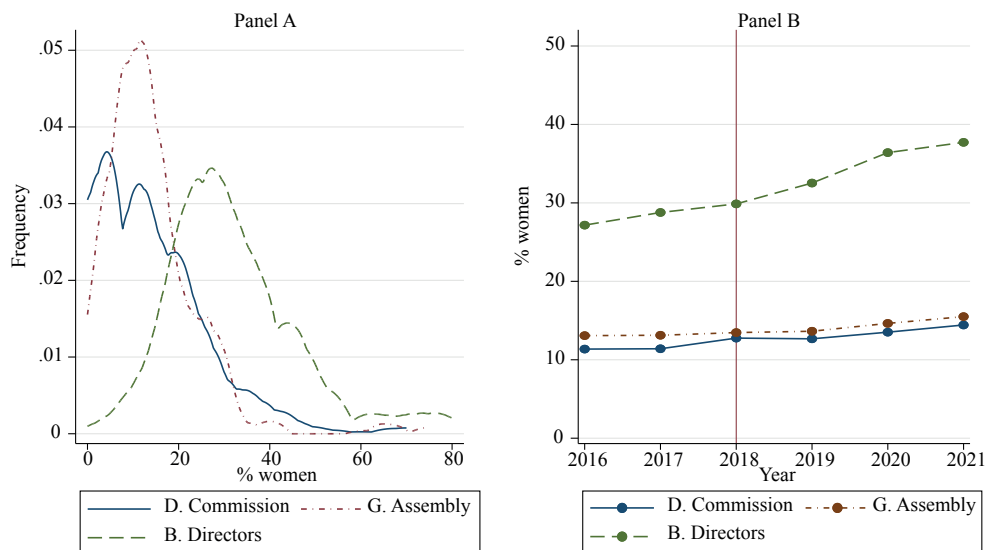
Regarding nationality, Table 3 shows that nationality does not significantly influence interest in sports or sports practice. However, it is significant when considering sports participation: the likelihood of playing sports is lower for foreigners. Nonetheless, no significant differences exist in the frequency of sports practice among participants. These findings contrast with the information provided by the descriptive statistics in Section 3.1.2 and suggest that the mean differences in the frequency of practice are not primarily due to nationality; when we control for other individual and family characteristics, nationality ceases to be a significant factor. Consistent with the descriptive statistics, foreigners are less likely to hold a sports license or be members of sports clubs or gyms, and they are less likely to participate in sports competitions.

3.2. *Leadership positions*

Figure 1 (Panel A) displays the uneven distribution of women across various governing bodies within national federations. Women make up 32% of the board of directors and approximately 14% and 13% of the general assembly and the delegate commission, respectively. Figure 1 (Panel B) illustrates how this imbalance persists over time. While the percentage of women on the board of directors has steadily increased over a six-year period, the percentage of women in the general assembly and delegate commission exhibits a more moderate trend.

The latest gender quota in Spain, enacted in 2019, mandates that national federations must have at least four women or achieve 40% female representation on their boards of directors. Figure 2 depicts the representation of women across the board of directors, general assembly, and delegate commission before and after the implementation of this quota. The percentage of women has increased in all bodies in the post-quota period, most notably in the board of directors.

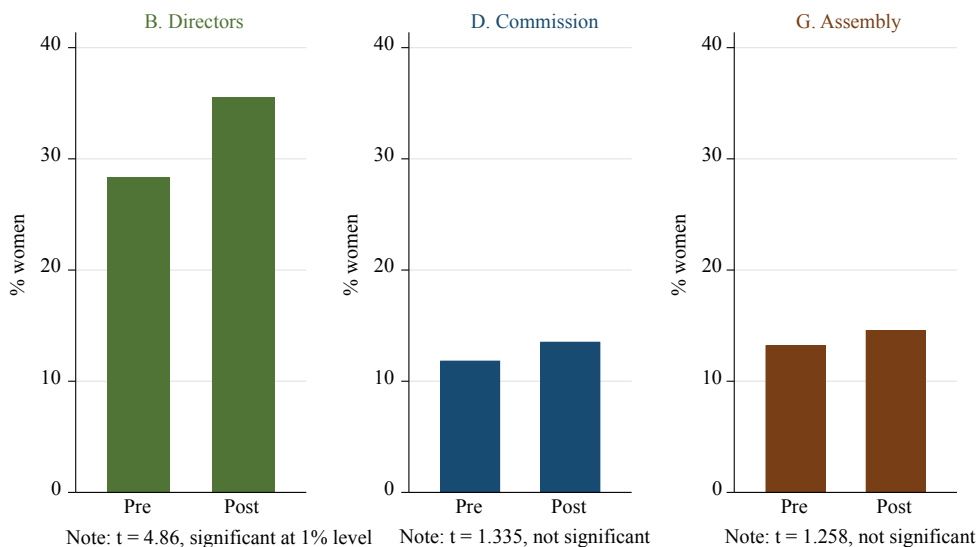
FIGURE 1
DISTRIBUTION OF THE PERCENTAGE OF WOMEN ON MANAGERIAL POSITIONS
(PANEL A) AND EVOLUTION OVER TIME (PANEL B)



NOTE: The red vertical line in Panel B shows the last year before the implementation of the gender quota.

SOURCE: Own elaboration.

FIGURE 2
REPRESENTATION OF WOMEN IN MANAGERIAL
POSITIONS PRE (2016-2018) AND POST (2019-2021) QUOTA



NOTE: Quota refers to the legal requirements imposed on national federations since 2019: at least four women and 40% women representation in the board of directors.

SOURCE: Own elaboration.

We explore federations' structural and financial characteristics as some factors can be correlated with the percentage of women in the different governing organisms. This analysis offers some preliminary insights, but it is limited by the number of available explanatory variables and the impossibility of proving causality. Table 4 shows the descriptive statistics.

TABLE 4
DESCRIPTIVE STATISTICS: FEDERATIONS

	N	Mean	SD	Min.	Max.
Federation	390	-	-	1	65
Number of licenses	390	57,764.65	140,612.62	338	1,095,604
Number of licenses (women)	390	13,241.38	23,515.94	27	138,004
Economic variables:					
Total budget	389	5,567,997.23	27,843,711.17	125,503	364,894,618
Own resources	389	4,407,498.05	27,125,034.53	26,447	356,224,326
Subsidies (CSD)	389	1,061,833.36	1,376,146.34	0	8,800,221
Elite programs (ADO)	389	98,665.84	180,949.99	0	1,296,450
Representation variables:					
General assembly – N members	389	70.50	31.54	14	180
General assembly – N women	389	9.97	9.44	0	60
Delegate commission – N members	388	10.92	3.00	3	18
Delegate commission – N women	388	1.36	1.39	0	7
Board of directors – N members	389	14.58	7.10	3	62
Board of directors – N women	389	4.04	1.51	0	11
Year	390	-	-	2016	2021

NOTES: a. The speleology federation is omitted from the sample as information is not available.

b. Economic variables drop one observation as the football federation did not report data in 2016.

c. Representation variables drop four additional observations as information is not available.

SOURCE: Own elaboration.

Table 5 presents the results of the linear regression. Models 1, 3, and 5 have the percentage of women on the board of directors, general assembly, and delegate commission as the dependent variables, respectively. Models 2, 4, and 6 include federation-fixed effects to account for unobserved differences. The signs and sig-

nificance levels of some variables vary across models, indicating complex relationships between gender diversity and the structural and financial characteristics of the governing bodies. Therefore, these preliminary results warrant further investigation and should be interpreted cautiously.

As expected, the percentage of women with licenses within the federations shows a consistently positive and significant effect across almost all models. The size of the governing body negatively influences the percentage of women among its members. Conversely, total income yields inconsistent results across models. The post-quota period also appears to positively influence the percentage of women in all three bodies, albeit most prominently on the board of directors.

TABLE 5
REGRESSION RESULTS: FEDERATIONS

	Dependent variable: Percentage of women					
	Board directors	Board directors	General assembly	General assembly	Delegate commission	Delegate commission
	(1)	(2)	(3)	(4)	(5)	(6)
Total income (excl. subsidies)	0.007*** (0.001)	0.004* (0.002)	-0.001* (0.000)	-0.002*** (0.000)	-0.001 (0.001)	0.004*** (0.001)
Percentage women licenses	0.261*** (0.037)	0.430* (0.224)	0.418*** (0.037)	0.224** (0.096)	0.327*** (0.041)	0.264 (0.217)
N board members	-1.360*** (0.081)	-0.602** (0.266)				
N assembly members			0.008 (0.011)	-0.050*** (0.019)		
N commission members					-0.346* (0.204)	-1.110** (-0.497)
Period post quota	7.520*** (0.941)	7.086*** (0.635)	1.062 (0.737)	1.251*** (0.335)	1.429 (1.118)	1.216* (0.627)
Federations FE	No	Yes	No	Yes	No	Yes
Constant	33.091*** (2.191)	24.645*** (4.08)	0.603 (1.634)	7.438*** (2.238)	5.643** (2.779)	26.174*** (3.956)
R squared	0.583	0.854	0.547	0.919	0.249	0.814
N	388	388	388	388	387	387

NOTES: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the federation level are in parentheses.

SOURCE: Own elaboration.

4. Discussion

Gender differences in sporting habits have been extensively analyzed in the literature (e.g., van Tuyckom et al., 2010; Muñiz et al., 2014). However, the 2020

edition of the Spanish Survey of Sporting Habits provides a recent snapshot of the situation. The survey also allows us to test for differences in sports patterns between Spaniards and foreigners, an especially relevant analysis since official statistics published in Spain rarely include information by nationality, a subject that has been largely overlooked.

In the economic literature on sports habits in Spain, gender differences are well-documented. Econometric studies typically incorporate a gender dummy variable or produce estimates separated by gender. Several analyses focus on the likelihood of participation, frequency, the number of sports practiced, and time allocated to these activities. In all cases, the estimates reveal that men are more likely to participate than women (e.g., Downward et al., 2011; Kokolakakis et al., 2012; Lera-López & Suárez, 2019; Lefèvre et al., 2020). Our results are consistent with these previous findings: men are more interested in sports, participate more, and are more likely to hold a license. Additionally, we show that the gender participation gap is around 11 percentage points, slightly higher than in 2015 (Lera-López & Suárez, 2019), indicating that the reduction in the gap has either slowed down or reversed over time.

As for the frequency of participation, we do not find gender differences in the frequency of practice among participants. In contrast, Downward et al. (2011) found that men practice sports more frequently than women. Lefèvre et al. (2020), who estimate a two-part model of participation and the number of sports practiced using the 2015 edition of the Spanish Survey of Sporting Habits, also concluded that men engage in more sporting activities than women. However, when disaggregated by type of physical activity, García et al. (2016) found that women's frequency of walking and practicing indoor sports and sports requiring facilities is higher than that of men.

The comparison between Spanish and foreign individuals provides some novel insights at a national level. Our models show that nationality does not significantly affect interest in sports or sports practice. However, the likelihood of practicing sports is lower for foreigners, who are also less likely to hold a sports license, be members of sports clubs or gyms, or participate in sports competitions. This result aligns with previous ethnic research on sports participation in other European countries (see, for example, van Haaften, 2019). While self-limiting behavior or preferences may contribute to the lower sports participation rates among individuals from minority groups, some evidence suggests barriers exist for those with foreign backgrounds who wish to join amateur sports clubs in Spain (Gomez-Gonzalez et al., 2021). These findings should encourage researchers and governing bodies to further investigate the mechanisms behind these trends and direct public policy efforts toward improving diversity and accessibility.

To the best of our knowledge, few econometric studies examine the association between nationality and sports practice in Spain. Most research papers do not include nationality or immigrant background as determinants of sports habits. An exception is the article by Lefèvre et al. (2020), which found that the likelihood of

engaging in sports and the number of sports practiced are higher among Spaniards. Future research should consider the specific factors influencing these differences, as well as the age at which these preferences develop, to inform policy aimed at bridging both the gender and nationality gaps.

Our analysis extends to examining sports practice and interests within the broader organizational and structural framework. The previous section presented an overview of the evolution of gender representation in national sports federations, key governing bodies for regulated sports practice in Spain. Valiente (2022) highlighted the minimal change over the last decade in the number of women serving as federation presidents, who make up less than 5% of these positions, and how the 2015 quota implemented for the government seemed to be effective in increasing the percentage of women in the board of directors. We expand this analysis both temporally and in scope.

Wicker and Kerwin (2022) demonstrated that some structural and financial characteristics of federations correlate with the percentage of women in various governing bodies. Our results are consistent with this, as the percentage of women's licenses within federations positively influences the number of women in leadership roles. However, the governing body's size has a significant negative effect on the percentage of women among its members, while total income shows inconsistent results.

This analysis provides some first insights into the complex relationship between the financial and structural characteristics of the federations and women's leadership. Our study is, however, limited to claiming any causal relationship, which requires further econometric models and causal inference identification strategies. In work in progress, we are analyzing how the gender quota may have causally led to some meaningful changes in processes and outcomes within the federations and digging into the mechanisms.

5. Concluding Remarks

This study uses data from the 2020 Survey of Sporting Habits and the High Council for Sports to report on current trends in sports participation and representation among women and foreign nationals. First, we show that the gender sports participation gap is far from disappearing, as the decreasing trend has halted in recent years. As in previous studies, men are more interested in sports and sports practice than women and are more likely to participate in sports and regulated settings. Only the frequency of practice by participants and the likelihood of joining a gym or sports club do not significantly differ by gender.

Second, we find that sports participation varies considerably between groups. While nationality does not appear to significantly influence interest in sports, the likelihood of participating in sports is lower for foreigners. This is especially true in regulated settings, where foreign nationals are significantly less likely to hold a

sports license, sign up for memberships at clubs, or participate in sports competitions. These findings alert us to potential mechanisms of exclusion and call for targeted policy efforts from governing bodies.

Finally, we examine the representation of women in leadership positions within national sports federations. Although public policy has effectively increased the number of women on boards of directors and, to a lesser extent, in general assemblies and delegate commissions, women remain a minority in all these bodies. This is particularly evident for the general assembly and the delegate commission. These findings have implications for the broader discourse on gender diversity and call for expanded efforts in this area.

References

- Agergaard, S., Michelsen la Cour, A., & Gregersen, M. T. (2016). Politicisation of migrant leisure: A public and civil intervention involving organised sports. *Leisure studies*, 35(2), 200-214.
- Andersen, M. H., Ottesen, L., & Thing, L. F. (2019). The social and psychological health outcomes of team sport participation in adults: An integrative review of research. *Scandinavian Journal of Public Health*, 47(8), 832-850.
- Burmann, U., Mutz, M., & Zender, U. (2015). *Jugend, Migration und Sport - Kulturelle Unterschiede und die Sozialisation Zum Vereinssport*. Wiesbaden: Springer.
- Burton, L. J. (2015). Underrepresentation of women in sport leadership: A review of research. *Sport Management Review*, 18(2), 155-165.
- Buser, M., Zwahlen, J. A., Schlesinger, T., & Nagel, S. (2022). Social integration of people with a migration background in Swiss sport clubs: A cross-level analysis. *International Review for the Sociology of Sport*, 57(4), 597-617.
- Cabane, C., & Lechner, M. (2015). Physical activity of adults: A survey of correlates, determinants and effects. *Journal of Economics and Statistics*, 235(4-5), 376-402.
- Consejo Superior de Deportes (2019). *Resolución de la Presidencia del CSD, por la que se convocan ayudas a las Federaciones Deportivas Españolas para el año 2019*. Retrieved from: https://sede.csd.gob.es/oficinavirtual/Pdf/051210_2019_Resolucion_convocatoria.pdf
- Cunningham, G. B. (2020). The under-representation of racial minorities in coaching and leadership positions in the United States. In S. Bradbury, J. Lusted, and J. van Sterkenburg (Eds), *Race, Ethnicity and Racism in Sports Coaching* (pp. 3-21). New York, NY: Routledge.
- Cunningham, G. B., Wicker, P., & Kutsko, K. (2021). Gendered racial stereotypes and coaching intercollegiate athletic teams: The representation of Black and Asian women coaches on US women's and men's teams. *Sex Roles*, 84, 574-583.
- Darvin, L., Pegoraro, A., & Berri, D. (2018). Are men better leaders? An investigation of head coaches' gender and individual players' performance in amateur and professional women's basketball. *Sex Roles*, 78, 455-466.

- Darvin, L. (2020). Voluntary occupational turnover and the experiences of former intercollegiate women assistant coaches. *Journal of Vocational Behavior*, 116, 103349.
- Day, J. C., & McDonald, S. (2010). Not so fast, my friend: Social capital and the race disparity in promotions among college football coaches. *Sociological Spectrum*, 30(2), 138-158.
- Downward, P., Lera-López, F., & Rasciute, S. (2011). The Zero-Inflated ordered probit approach to modelling sports participation. *Economic Modelling*, 28(6), 2469-2477.
- Downward, P., Lera-López, F., & Rasciute, S. (2012). The economic analysis of sport participation. In L. Robinson, P. Chelladurai, G. Bodet, P. Downward, *Routledge Handbook of Sport Management* (pp. 331-354). Routledge, London.
- Elling, A., & Claringbould, I. (2005). Mechanisms of inclusion and exclusion in the Dutch sports landscape: Who can and wants to belong? *Sociology of Sport Journal*, 22(4), 498-515.
- European Commission (2022). *Sport. For community cohesion and social inclusion*. Retrieved from: <https://sport.ec.europa.eu/policies/sport-and-society/physical-activity-and-health>
- European Union (2022). *Special Eurobarometer 472*. Retrieved from: <https://sport.ec.europa.eu/news/new-eurobarometer-on-sport-and-physical-activity>
- García, J., Lera-López, F., & Suárez, M. J. (2011). Estimation of a structural model of the determinants of the time spent on physical activity and sport: Evidence for Spain. *Journal of Sports Economics*, 12(5), 515-537.
- García, J., Muñiz, C., Rodríguez, P., & Suárez, M.J. (2016). Comparative analysis of sports practice by types of activities. *International Journal of Sport Finance*, 11(4), 327-348.
- Gomez-Gonzalez, C., Dietl, H., & Nessler, C. (2019). Does performance justify the underrepresentation of women coaches? Evidence from professional women's soccer. *Sport Management Review*, 22(5), 640-651.
- Gomez-Gonzalez, C., Nessler, C., & Dietl, H. M. (2021). Mapping discrimination in Europe through a field experiment in amateur sport. *Humanities and Social Sciences Communications*, 8(1), 1-8.
- Khan, K. M., Thompson, A. M., Blair, S. N., Sallis, J. F., Powell, K. E., Bull, F. C., & Bauman, A. E. (2012). Sport and exercise as contributors to the health of nations. *The Lancet*, 380(9836), 59-64.
- Kokolakakis, T., Lera-Lopez, F., & Panagouleas, T. (2012). Analysis of the determinants of sports participation in Spain and England. *Applied Economics*, 44(21), 2785-2798.
- Lee, W., & Cunningham, G. B. (2019). Group diversity's influence on sport teams and organizations: A meta-analytic examination and identification of key moderators. *European Sport Management Quarterly*, 19(2), 139-159.
- Lefèvre, B., Routier, G., Llopis-Goig, R. (2020). Sports participation in France and Spain: An international comparison of voraciousness for sport. *Poetics*, 81, 101429.
- Lera-López, F., & Suárez, M. J. (2019). Práctica deportiva y políticas públicas en el deporte en España. *Papeles de Economía Española*, 159, 226-240.
- López, A. R., & del Arco, F. J. (2014). Organización y funcionamiento de las federaciones deportivas españolas. *Revista Aranzadi de Derecho de Deporte y Entretenimiento*, 42, 113-135.

- Ministerio de Educación y Ciencia (1991). *Real Decreto 1835/1991, de 20 de diciembre, sobre Federaciones deportivas españolas*. BOE-A-1991-30862. Retrieved from: <https://www.boe.es/buscar/act.php?id=BOE-A-1991-30862>
- Ministerio de Sanidad (2022). *Actividad física para la salud y reducción del sedentarismo*. Retrieved from: <https://www.sanidad.gob.es/profesionales/saludPublica/prevPromocion/home.htm>
- Muñiz, C., Rodríguez, P., & Suárez, M. J. (2014). Sports and cultural habits by gender: An application using count data models. *Economic Modelling*, 36, 288-297.
- Nesslerer, C., Gomez-Gonzalez, C., Dietl, H., & del Corral, J. (2020). Race and employment: The historical case of head coaches in college basketball. *Frontiers in Sociology*, 5, 1-16.
- Nesslerer, C., Gomez-Gonzalez, C., & Gasparetto, T. (2021). Head coach tenure in college women's soccer. Do race, gender, and career background matter? *Sport in Society*, 24(6), 972-989.
- Sartore, M. L., & Cunningham, G. B. (2007). Explaining the under-representation of women in leadership positions of sport organizations: A symbolic interactionist perspective. *Quest*, 59(2), 244-265.
- Scheerder, J., Vanreusel, B., & Taks, M. (2005). Stratification patterns of active sport involvement among adults: Social change and persistence. *International Review for the Sociology of Sport*, 40(2), 139-162.
- Strandbu, Å., Bakken, A., & Sletten, M. A. (2019). Exploring the minority-majority gap in sport participation: different patterns for boys and girls? *Sport in Society*, 22(4), 606-624.
- Valiente, C. (2022). The impact of gender quotas in sport management: The case of Spain. *Sport in Society*, 25(5), 1017-1034.
- van Haaften, A. F. (2019). Ethnic participation in Dutch amateur football clubs. *European Journal for Sport and Society*, 16(4), 301-322.
- van Tuyckom, C., Scheerder, J., & Bracke, P. (2010). Gender and age inequalities in regular sports participation: A cross-national study of 25 European countries. *Journal of Sports Sciences*, 28(10), 1077-1084.
- Warburton, D. E., & Bredin, S. S. (2017). Health benefits of physical activity: a systematic review of current systematic reviews. *Current Opinion in Cardiology*, 32(5), 541-556.
- WHO, World Health Organisation. (2018) *Global action plan on physical activity 2018-2030: More active people for a healthier world*. Retrieved from: <https://apps.who.int/iris/bitstream/handle/10665/272722/9789241514187-eng.pdf>
- Wicker, P., & Kerwin, S. (2022). Women representation in the boardroom of Canadian sport governing bodies: Structural and financial characteristics of three organizational clusters. *Managing Sport and Leisure*, 27(5), 499-512.
- Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. (2nd ed). MIT Press.
- Zacheus, T. (2010). The significance of sport and physical activity during the acculturation and integration process of immigrants in Finland—the experts' view. *European Journal for Sport and Society*, 7(2), 155-166.