
ESTUDIOS / RESEARCH STUDIES

Spanish participation in the social science and humanities research projects within the 7th European Union Framework Programme (2007-2013)

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Abstract: The objectives of this paper are to describe the Social Science and Humanities projects involving Spanish participation within the Seventh EU Framework Programme (FP7) (2007-2013), along with the scholarly output generated by these projects, and to compare the findings with the data from FP6 (2002-2006) in order to track their evolution. First, we determine the most significant characteristics of the projects with Spanish participation (duration, funding, topics, type of institution, etc.). Second, we analyse the scholarly production derived from a sample of projects taken from the Scopus database to analyse some bibliometric features. The results show an increase in the leadership and prominence of Spanish institutions, compared to FP6-SSH. In terms of scholarly outputs, none of the sources used (CORDIS, OpenAIRE and SCOPUS) allows a detailed study of scholarly production, although this output is characterized by articles written predominantly in English, published in first-quartile journals. Moreover, data showed that research funding for SSH may have long-term effects, with some outputs acknowledging funding being published a decade after the end of the project.

Keywords: FP7, European Commission, Spain, Social Sciences and Humanities, research projects, scholarly publications, CORDIS, Scopus, bibliometric analysis.

Participación española en los proyectos de investigación en Ciencias Sociales y Humanidades dentro del VII Programa Marco de la Unión Europea (2007-2013)

Resumen: Los objetivos de este artículo son describir los proyectos de Ciencias Sociales y Humanidades con participación española en el Séptimo Programa Marco de la Unión Europea (FP7) (2007-2013), junto con la producción científica generada por estos proyectos, y comparar los hallazgos con los datos del FP6 (2002-2006) para hacer un seguimiento de su evolución. En primer lugar, determinamos las características más significativas de los proyectos con participación española (duración, financiación, temas, tipo de institución, etc.). En segundo lugar, analizamos la producción científica derivada de una muestra de proyectos de la base de datos Scopus, para analizar algunas características bibliométricas. Los resultados muestran un aumento en el liderazgo y protagonismo de las instituciones españolas en comparación con FP6-SSH. Ninguna de las fuentes utilizadas (CORDIS, OpenAIRE y SCOPUS) permite un estudio suficientemente detallado de la producción científica derivada de estos proyectos, si bien se caracteriza por artículos escritos predominantemente en inglés, publicados en revistas de primer cuartil. Además, los datos muestran que los fondos de investigación en estas

áreas pueden tener efectos a largo plazo, con trabajos que reconocen tal financiación publicados una década después del final del proyecto.

Palabras clave: FP7, Comisión Europea, España, Ciencias Sociales y Humanidades, proyectos de investigación, publicaciones científicas, CORDIS, Scopus, análisis bibliométrico.

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INTRODUCTION

The 7th Framework Programme (FP7) is part of a historical set of multi-year funding programmes by the European Union, which, since 1984, have aimed to “support research and development activities covering almost all scientific disciplines” (European Commission, 2023).

FP7 covered the period from 2007 to 2013, and its specific objective was “to contribute to the Union becoming the world’s leading research area. This requires the Framework Programme to be strongly focused on promoting and investing in world-class state-of-the-art research, based primarily upon the principle of excellence in research” (European Parliament, 2006). “FP7Cooperation promoted international cooperation within ten thematic priorities, SSH being one of them. FP7-Ideas was newly introduced to increase research excellence in Europe and Europe’s attractiveness for world-renowned researchers. Developing human potential and strengthening research infrastructure were addressed by FP7-People and FP7-Capacities, respectively” (Ardanuy et. al., 2023).

In line with the complementary approach established by the European Union between FP6 and FP7 (whereby “[t]he objectives of the Seventh Framework Programme should be chosen with a view to building upon the achievements of the Sixth Framework Programme towards the creation of the European Research Area and carrying them further towards the development of a knowledge-based economy and society in Europe which will meet the goals of the Lisbon strategy in Community policies” [European Parliament, 2006]), this study aims to analyse the role played by Spanish institutions in FP7 projects related to Social Sciences and Humanities (FP7-SSH-Spain) and compare them, as far as possible, with the results obtained in a previous work on FP6-SSH-Spain (Sulé et al., 2023). Therefore, the aim of this paper is to describe the main characteristics of this participation in FP7-SSH-Spain in terms of:

- Leadership in project coordination.
- Types of projects awarded according to funding schemes.
- Duration of projects.

- Funding awarded.
- Disciplines.
- Participating countries and institutions.
- Characteristics of the scholarly outputs resulting from research projects.

Previous studies (Kastrinos, 2010; Schögler and König, 2017; Kropp, 2021) have explored the gradual development of Social Sciences and Humanities research within the European Union, primarily through scrutinizing the policy documents guiding research priorities within FP calls. This paper diverges from those approaches by examining the attributes of Social Sciences and Humanities research projects funded under FP7. It analyzes the various forms of support offered by research funds and delineates the features of scholarly journal articles stemming from these projects.

In a recent study, Kropp (2021) characterized the status of Social Sciences within the European Union research policy as “fragile” and “marginal”. The formulation of the Horizon 2020 program appears to have solidified this subordinate position of the Social Sciences, viewing them primarily as supplementary to issues stemming from the natural sciences and related industries. Official data on research grants awarded between 2007 and 2020 (European Research Council, 2022) indicates the following breakdown of projects across fields of study: Life Sciences (33%); Physical Sciences & Engineering (45%); and Social Sciences and Humanities (22%).

As far as we know, there has not been any previous assessment of the effectiveness of Social Sciences and Humanities projects funded under FP7. Besides their relatively modest share of the budget allocated to these disciplines, challenges associated with employing bibliometric techniques in these fields could contribute to this oversight.

2. METHODOLOGY

2.1. Identifying funded projects in Social Sciences and Humanities with Spanish participation

In a similar fashion to the analysis of the FP6-SSH-Spain (Sulé et al., 2023), we first obtained a

list of all EU-funded projects from *CORDIS - the EU Research Projects website under the 7th Framework Programme (2007-2013)*. This list included a total of 25,782 projects, which is 15,684 more than in the 6th EU Research Framework Programme - constituting a remarkable increase of 155.3%.

Next, we selected all the projects belonging to the specific programme "Cooperation: Socioeconomic Sciences and Humanities" (253 projects), as well as projects from other programmes that included elements of Social Sciences and Humanities (SSH). To this end, the title, keywords and abstract of each project were examined. In cases of doubt, the project website—if available—was visited to determine the disciplines it covered. As a result, we obtained a total of 1,562 projects, which represents 6.1% of all FP7 projects, a considerable increase compared to the 2.7% of FP6.

From these 1,562 FP7 aforementioned projects related to Social Sciences and Humanities, those in which the coordinating or participating organization was from Spain were selected. This resulted in a total of 260 projects representing 16.6% of all SSH-related projects, a significant decrease compared to the 38.9% in FP6.

Of these 260 projects, 96 were in single-applicant schemes: 37 projects were under the IDEASERC programme, which aimed to support outstanding researchers and was a continuation of the FP6-NEST programme; 55 projects came under FP7-PEOPLE, which offered individuals the opportunity to follow a career in research and was successor to FP6-MOBILITY; and four were non-research projects, two of which were developed only by a Spanish governmental organisation. Because a rough comparison of FP6 and FP7 is not possible given the increase in single-applicant schemes in FP7 that were not available in FP6, we decided to remove the projects funded in single-applicant schemes in order to make the comparison with FP6 consistent. Thus, the final number of projects analysed is 164.

2.2. Retrieving the bibliographic production of funded projects

Previous research has demonstrated the difficulties associated with retrieving outputs of funded projects because the funding information in Scopus is heterogeneous and not standardized (Ardanuy et al., 2022). Furthermore, full retrieval of SSH outputs of the European Union's 7th Framework Programme is an extremely complex endeavour, as none of the sources (CORDIS, OpenAIRE or Scopus) appears to be comprehensive enough to guarantee the retrieval of all scholarly outputs

of SSH research projects (Ardanuy et al., 2023). On the other hand, Scopus is the only source that provides detailed information on the authors of a paper, their affiliation and their country.

In order to explore a homogeneous set of projects, the analysis of publications resulting from FP7SSH projects with Spanish participation was limited to the scholarly outputs of projects funded under the FP7-Cooperation-SSH programme. Of the 164 projects involving social sciences and/or humanities with Spanish participation, 107 belonged to the F7-Cooperation-SSH programme.

With the aim of analysing the scholarly outputs of these 107 FP7-Cooperation-SSH projects, four information sources were compared:

a) CORDIS: a public dataset, updated on 7 September 2021, containing a list of publications linked to FP7 projects self-reported by beneficiaries. Of the FP7-Cooperation-SSH projects, 3,098 scholarly outputs had been declared. However, the list included 266 duplicates that were removed, resulting in 2,832 outputs. Of this set, 1,347 outputs came from the 107 FP7-Cooperation-SSH projects with Spanish participation. Source: <https://data.europa.eu/data/datasets/cordisfp7projects?locale=en>

b) OpenAIRE: although OpenAIRE allows filtering by "funding stream", limiting results to FP7SSH only retrieved 353 records for all participating countries. Therefore, we performed individual searches for each of the publications listed in CORDIS. Searches were performed by DOI or, if unavailable, by combining title and authors. Using this strategy, we were able to retrieve 1,140 publications, 84.6% of those listed in CORDIS. Source: <https://explore.openaire.eu>

c) Scopus (strategy 1): we searched the publications listed in CORDIS in Scopus, using the same strategy described in point b), namely by DOI or, if unavailable, by combining title and authors.

Using this strategy, we were able to retrieve 1,049 publications, 77.9% of those listed in CORDIS.

d) Scopus (strategy 2): in June 2023, we retrieved the scholarly outputs with Spanish participation that acknowledged funding from any of the 107 FP7-Cooperation-SSH projects with Spanish participation. The purpose was to retrieve any additional scholarly outputs acknowledging FP7 support that had not been self-reported by the beneficiaries in CORDIS. The search equation is described in table I with the content of each cell joined to the others by the Boolean operator "AND". The search retrieved 256 records, all of them listed in OpenAIRE, but only 64 (25.1%) self-reported in CORDIS.

Table I. Scopus search strategy to retrieve scholarly outputs acknowledging funding from FP7Cooperation-SSH projects.

Part of equation	
FUND-ACR (EC) OR FUND-ACR (FP7)	Funding acronym
FUND-SPONSOR ("European Commission") OR FUND-SPONSOR ("7TH FRAMEWORK PROGRAMME") OR FUND-SPONSOR ("SEVENTH FRAMEWORK PROGRAMME")	Funding sponsor
FUND-NO (id1 OR id2 OR id3 ... OR id107)	Funding numbers id1 to id107 refer to the identification numbers of the 107 FP7-SSH projects
PUBYEAR AFT 2006	Publication year after 2006
AFFILCOUNTRY ("Spain")	Spanish affiliation

2.3. Data analysis

The data on projects provided by CORDIS was employed to analyse the Spanish participation in Social Sciences and Humanities research funded under FP7. Specifically, data was compiled on types of projects awarded, duration of projects, funding, disciplines and participating countries and institutions. Projects funded under single-applicant schemes were then removed from the analysis to explore leadership in project coordination.

Regarding publications, the results from the four data sources were combined in a single file to explore the overlap between the different databases. Records retrieved from CORDIS were analysed to estimate the average number of publications per project and the types of documents published. Additionally, the records from Scopus (strategy 2), that were much more complete in bibliographic terms and had been specifically indexed with the funding information, were analysed to show some trends in the years of publication, the language of the documents, the disciplines of journals, and their impact.

3. RESULTS

3.1. Description of Spanish FP7-SSH projects

3.1.1. Coordination

Out of 164 projects with Spanish participation, single-applicant schemes excluded, 21 were coordinated by a Spanish organization, representing 12.8 % of the total, a percentage double than in FP6-SSH-Spain, which was only 5.6%, according Sulé et al. (2023) who did not include single-applicant schemes. This increase in the coordination

percentage resulted in a climb from eighth place in FP6-SSH-Spain to third place, tied with Italy, in FP7-SSH-Spain, among countries that coordinated the most projects with Spanish participation.

Table II. Countries that coordinated the highest number of projects with Spanish participation.

Coordinating country	Number of projects	
Germany	25	15.2%
United Kingdom	25	15.2%
Italy	21	12.8%
Spain	21	12.8%
Netherlands	15	9.1%
Belgium	13	7.2%
France	11	6.7%
Austria	9	5.5%

3.1.2 Programmes

By programme type (table III), among the 164 projects with Spanish participation, FP7-SSH projects clearly predominated (65.2%), followed at a considerable distance by FP7-SIS (12.2%), and FP7-SECURITY and FP7-ICT (7.9%).

3.1.3. Duration

The duration of 164 projects with Spanish participation ranged from 17 to 65 months, with a clear predominance of projects lasting 35 months (approximately three years, 39.6%), 47 months (four years 17.7%), 41 months (three and a half years, 8.5%) and 23 months (two years, 7.3%).

Table III. Projects by programme types.

Programme type	Number of projects	
FP7-SSH	107	65.2%
FP7-SIS	20	12.2%
FP7-SECURITY	13	7.9%
FP7-ICT	13	7.9%
FP7-ENVIRONMENT	4	2.4%
FP7-INFRASTRUCTURES	2	1.2%
FP7-COH	2	1.2%
FP7-REGIONS	1	0.6%
FP7-GA	1	0.6%
FP7-INCO	1	0.6%
Total	164	100%

Compared to the duration of FP6-SSH-Spain projects, the most significant changes were the increase in projects lasting 37 to 48 months (70.2%) and the decrease in the remaining intervals. In any case, most of the projects had a duration between 2 and 3 years (82.3%, table IV).

3.1.4 Funding

Regarding the funds awarded, a comparative analysis with FP6-SSH-Spain data shows a significant increase in the share of projects with a higher

cost, equal to or exceeding 2 million euros (table V). This seems to indicate greater ambition in project design.

However, there was no clear relationship between the funding amounts and the duration of the projects (figure 1), in contrast to the FP6-SSH-Spain projects, which followed a logarithmic growth rate (Sulé et al., 2023).

3.1.5 Disciplines

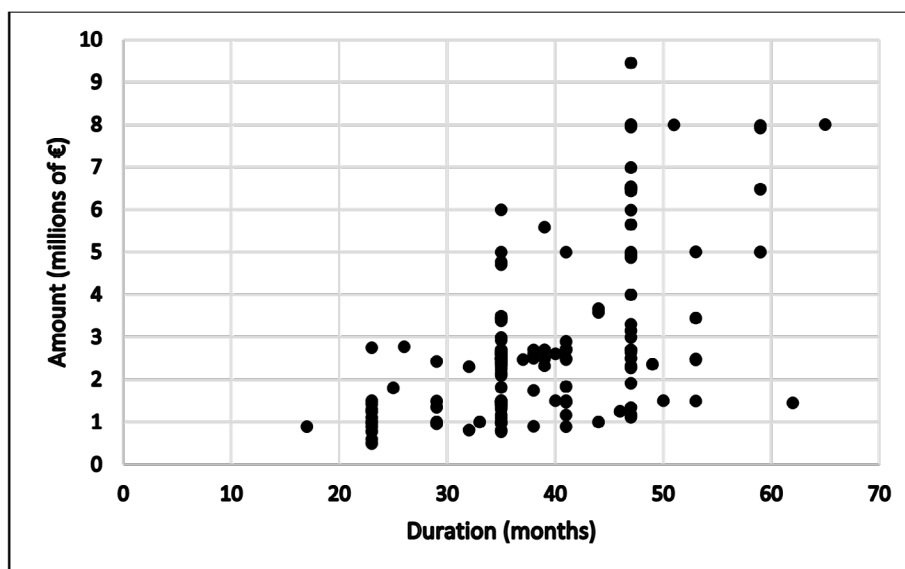
The results (table VI) show that 7 disciplines had 10 or more projects, with projects related to Economics (49.4%), Sociology (30.5%) and Political Science (23.8%) predominating. These three categories were also the top three disciplines among FP6-SSH-Spain projects. However, after third place there were some differences between the two programmes, as Public Administration and Management was ranked fourth (11.1%) in FP6-SSH-Spain, while this discipline dropped to seventh place (9.1%) in FP7-SSH-Spain. Law maintains its position, although with a higher percentage (FP6-SSH-Spain: 7.8%; FP7-SSH-Spain: 9.8%), while Criminology and Security Science appeared for the first time in FP7-SSH-Spain as disciplines with a significant number of projects. It should be noted that a project may deal with more than one discipline (1.8, on average).

Table IV. FP6-SSH-Spain / FP7-SSH-Spain comparison of project duration.

Months	FP6-SSH-Spain		FP7-SSH-Spain		Variance %
	No. Projects	% Projects	No. Projects	% Projects	
13-24	12	11.2	13	7.9	-29.5
25-36	50	46.7	75	45.7	-2.1
37-48	23	21.5	60	36.6	70.2
49-60	13	12.1	14	8.5	-29.7
61-72	9	8.4	2	1.2	-4.2
Total	107	100	164	100	

Table V. FP6-SSH-Spain vs. FP7-SSH-Spain comparison of project funding.

Cost	FP6-SSH-Spain		FP7-SSH-Spain		Variance %
	No. Projects	% Projects	No. Projects	% Projects	
1-500,000	8	7.5	1	0.6	-93.3
500,001-1,000,000	27	25.2	17	10.4	-58.7
1,000,001-1,500,000	27	25.2	36	22.0	-12.7
1,500,001-2,000,000	10	9.3	5	3.0	-67.7
2,000,001-2,500,000	6	5.6	37	22.6	303.6
2,500,001-14,500,000	29	27.0	68	41.5	53.7
Total	107	100	164	100	

Figure 1. Relationship between project duration and amount of funding.**Table VI.** Disciplines with ten or more projects.

Disciplines	Projects		Average number of participants
Economics	81	49.4%	13.0
Sociology	50	30.5%	13.3
Political Science	39	23.85	14.3
Education	26	15.9%	16.3
Criminology and Security Science	16	9.8%	12.9
Law and legal sciences	16	9.8%	13.1
Public Administration Science	15	9.1%	16.8

3.1.6 Participation: countries and institutions

Overall, the average participation per project was 13.3 institutions, 2.1 points lower than in FP6SSH-Spain. Among the disciplines with more than ten projects, Public Administration had the highest average participation, with 16.8 institutions per project (table VI).

An analysis of the countries involved in projects with Spanish participation (including the coordinator country) shows an average of 9.7 countries per project, which is very similar to the average of 10.0 for FP6-SSH-Spain. The maximum number of countries participating in a single project is 37 (*Trans-national Co-operation among National Contact Points for Socio-economic Sciences and the*

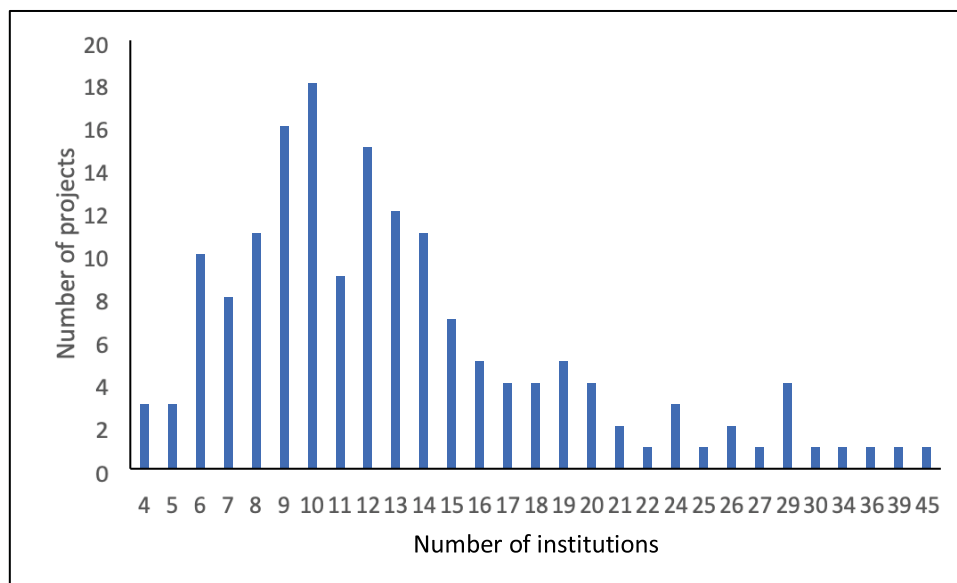
Humanities, coordinated by Deutsches Zentrum für Luft-und Raumfahrt eV).

If we consider the level of participation of each country (excluding Spain), at the top of the list we find the same countries that predominated in FP6-SSH-Spain: United Kingdom, Germany, Italy, France, Netherlands, and Belgium (table VII).

An analysis of the number of institutions (coordinator plus participants) shows an average of 13.3 institutions per project (figure 2), slightly lower than the average in FP6, which was 15.4 institutions. This decrease is related to the increase in the number of projects exclusively involving Spanish institutions.

Table VII. FP6-SSH-Spain / FP7-SSH-Spain comparison of the ten countries with the biggest participation in Spanish projects.

FP6-SSH-Spain		FP7-SSH-Spain		%
Country	Projects	Country	Projects	
United Kingdom	80	United Kingdom	143	87.2%
Germany	78	Germany	120	73.2%
Italy	67	Italy	110	67.1%
France	66	France	86	52.4%
Netherlands	60	Netherlands	82	50.0%
Belgium	48	Belgium	74	45.1%
Poland	42	Austria	62	37.8%
Hungary	38	Hungary	55	33.5%
Austria	36	Denmark	50	30.5%
Czech Republic	33	Sweden	47	28.7%

Figure 2. Number of institutions per project.

The institution that participated in the largest number of projects is the Katholieke Universiteit Leuven (21), followed by Spanish National Research Council (Consejo Superior de Investigaciones Científicas, CSIC) (19) and Universitat Autònoma de Barcelona (17) (table VIII).. This means an improvement in the participation of Spanish institutions since, in the analysis of FP6-SSHSpain, only one Spanish institution, Universitat Autònoma de

Barcelona, was among the institutions with the biggest participation, and it was only in sixth place.

There were 90 Spanish institutions that participated in at least one project. Focusing the analysis on their nature, the data shows a very small increase in the percentage of public organizations compared to FP6-SSH-Spain (table IX).

The classification of institutions according to the sector categories established by the *Frascati Man-*

Table VIII. Institutions involved in ten or more projects with Spanish participation.

Institution	Projects
Katholieke Universiteit Leuven	21
Consejo Superior de Investigaciones Científicas (CSIC)	19
Universitat Autònoma de Barcelona	17
Universiteit Utrecht	15
Centre national de la recherche scientifique	12
Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V.	12
London School of Economics and Political Science	12
Middle East Technical University	12
Universitat de Barcelona	12
Universiteit van Amsterdam	12
Aarhus Universitet	10
Københavns Universitet	10
Közép-európai Egyetem	10
Tartu Ülikool	10
The University of Manchester	10

Table IX. FP6-SSH-Spain vs. FP7-SSH-Spain comparison by type of institution public/private.

Type of Institution	FP6-SSH-Spain		FP7-SSH-Spain	
	No.	%	No.	%
Public	38	56.7	56	62.2
Private	29	43.3	34	37.8

Table X. FP6-SSH-Spain vs. FP7-SSH-Spain comparison of type of institution by sector.

Type of Institution	FP6-SSH-Spain		FP7-SSH-Spain	
	No.	%	No.	%
Higher Education	37	55.2	35	38.9
Public Administration	10	14.9	23	25.6
Company/Business	10	14.9	17	18.9
Non-profit Organization	10	14.9	15	16.7

ual (Frascati Manual, 2002) shows a result similar to FP6-SSH-Spain, with a predominance of higher education institutions, although their weight decreased considerably in FP7-SSH-Spain (from 55.2% to 38.9%, table X). This decrease is compensated for by the growth of the other three categories.

However, if the number of project participations of each one is considered, the predominance of higher education institutions is much more intense (higher education institutions were involved in 53.9% of the 164 projects with Spanish participation) compared to the others (Public Adminis-

tration, 22.1%; Company/Business, 12.3%; Non-profit organization, 11.8%).

On the other hand, in the case of higher education, the clear predominance of public institutions (31; 88.6%) over private institutions (4; 11.4%) is more intense than that found in FP6-SSH-Spain. The percentages are very similar in this case if the total number of projects of each institution is considered (88.8% and 11.1% respectively).

The geographical distribution of the 90 Spanish organizations participating in FP7-SSH-Spain

projects reflects a change compared to FP6-SSH-Spain. Specifically, the decrease in the number of institutions operating within the Community of Madrid. However, it should be noted that most of the organizations classified as "Nationwide" have their headquarters in Madrid.

The ranking of Spanish institutions with a minimum of five projects (table XII) is topped by the CSIC (21), followed by Universitat Autònoma de Barcelona (17), and Universitat de Barcelona (13). However, if we consider the funding per project,

Table XI. FP6-SSH-Spain vs. FP7-SSH-Spain comparison of autonomous communities.

Autonomous community	FP6-SSH-Spain		FP7-SSH-Spain	
	No.	%	No.	%
Catalonia	16	23.9	23	25.6
Nationwide	14	20.9	20	22.2
Madrid	13	19.4	11	12.2
Basque Country	3	4.5	9	10.0
Valencia	7	10.4	7	7.8
Andalusia	4	6.0	6	6.7
Castilla y León	3	4.5	4	4.4
Galicia	0	0.0	3	3.3
Balearic Islands	0	0.0	2	2.2
Aragon	1	1.5	1	1.1
Cantabria	0	0.0	1	1.1
Castilla La Mancha	0	0.0	1	1.1
Murcia	1	1.5	1	1.1
Navarre	2	3.0	1	1.1

Table XII. Spanish institutions with participation equal to or greater than five projects.

Spanish institutions	Projects	Coord.	Autonomous Community	Funding (euros)	% of Spanish funding
Consejo Superior de Investigaciones Científicas (CSIC)	19	2	Nationwide	48,811,540	10.6
Universitat Autònoma de Barcelona	17	1	Catalonia	63,332,059	13.81
Universitat de Barcelona	12	3	Catalonia	30,817,486	6.72
Universidad Complutense de Madrid	8	0	Madrid	19,789,822	4.31
Universitat Pompeu Fabra	8	0	Catalonia	35,076,623	7.65
Atos Spain S.A.	6	0	National	20,059,406	4.38
Universidad del País Vasco/ Euskal Herriko Unibertsitatea	5	0	Basque Country	18,400,518	4.01

the ranking changes substantially, with Universitat Pompeu Fabra, and Universidad del País Vasco/ Euskal Herriko Unibertsitatea topping the list.

Finally, regarding collaboration with other institutions (Spanish and international), table XIII shows that the average number of participants per project involving Spanish institutions participating in five projects or more was 8.82 institutions, while the institution whose projects had the highest average number of participants was Fundación Esade, with 18 participant institutions per project.

3.1.7. Recovered scholarly outputs resulting from FP7 SSH projects

Of the publications listed in CORDIS, the 107 projects with Spanish participation produced 1,347 publications. Of these, 207 do not appear in OpenAIRE (15.4%) and 298 in Scopus (22.1%). This corresponds to the use of the first three data collection methods mentioned in the methodology.

We also searched for scholarly outputs that acknowledged funding from any of the 107 FP7Cooperation-SSH projects using strategy 2 in Scopus. All 256 records retrieved in this way were found in OpenAIRE, but only 64 (25.1%) in CORDIS. It should be noted that the discrepancy between CORDIS and the other two sources may be partly due to missing information and inaccuracies in the former. On the other hand, it should be noted that OpenAIRE includes document types that are not covered by Scopus.

According to the publications listed in CORDIS, the 107 FP7-SSH projects with Spanish participation produced 1,347 publications, constituting an average of 12.6 publications per project. This figure is lower than the average of 15.4 publica-

tions produced by all the 253 FP7-SSH projects (Ardanuy et al., 2023), but it is well above the four publications per project calculated by Fresco et al. (2015) based on the scholarly publication data in OpenAIRE.

As previously mentioned, CORDIS data have many limitations for being used in bibliographic research. For instance, sometimes it is not possible to identify all the authors of a document. Therefore, it can only be estimated that less than 20% of the 1,347 publications have a Spanish author. Likewise, approximately 85% of the publications are journal papers, a similar figure to the percentage (83%) of publications resulting from the 253 projects funded under FP7-CooperationSSH programme (Ardanuy et al., 2023).

The results obtained for outputs that acknowledged funding from any of the 110 FP7-CooperationSSH projects with publications in Scopus (strategy 2) are not comprehensive enough for a detailed bibliometric study on authorship or journals, which is not the primary focus of this study, but rather aims to show only certain trends. Thus, it can be noted that the vast majority of the publications are written in English (96%), although some papers are in Spanish or Basque. Among publication types, there is a clear predominance of journal articles (93%), followed by reviews (4%) and other kinds of documents (3%). Only one document, a book chapter, is not a part of a serial source. These results are limited by the nature of the database, which is Scopus. It has already been shown that the estimate from CORDIS data on journal articles is lower.

The bibliometric impact of the journals was analysed on the basis of their quartile ranking using the SCImago Journal Rank (SJR) for the year in

Table XIII. Spanish institutions participating in five projects or more, ordered by the average number of participants (including the coordinator).

Spanish institutions	Projects	Participants	Average
Atos Spain S.A.	6	95	15.83
Universidad Complutense de Madrid	8	110	13.75
Universitat Autònoma de Barcelona	17	286	16.82
Universitat de Barcelona	12	211	17.58
Consejo Superior de Investigaciones Científicas	19	264	13.89
Universitat Pompeu Fabra	8	135	16.88
Universidad del País Vasco/ Euskal Herriko Unibertsitatea	5	64	12.80
TOTAL	164	2,184	12.322

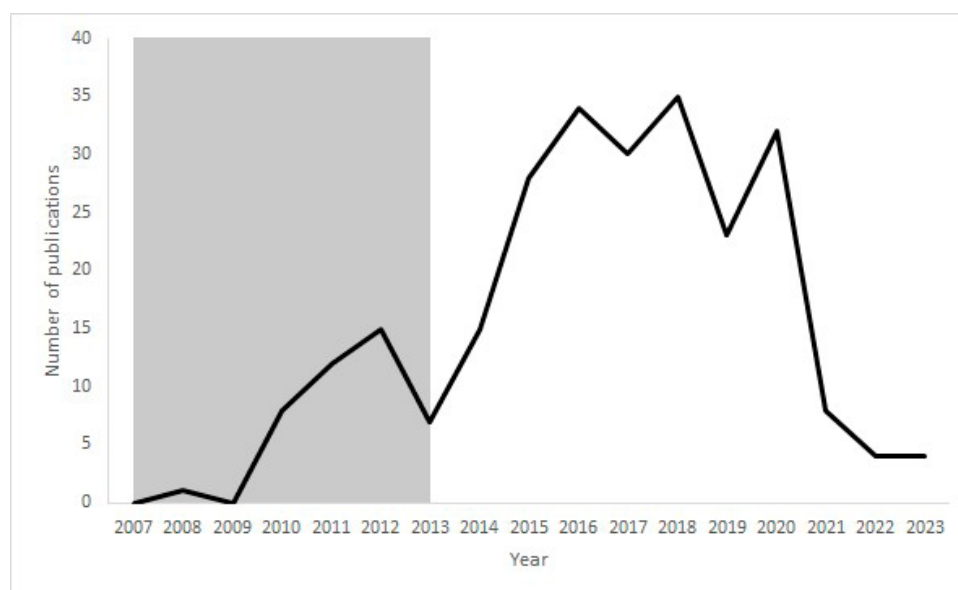
which the paper was published. The data show that approximately three quarters of the articles (77.3%) were published in journals in the first quartile, and 14.5% in journals in the second. These figures confirm the general trend to publish in high impact journals, a situation already observed in the analysis of Spanish participation in FP6 Social Science and Humanities research projects (Sulé et al., 2023), but also in general findings of a higher concentration of papers published in top quartiles (Moya-Anegón, 2020).

More interesting, however, seems to be the data on the year of publication because even though FP7 was active between 2007 and 2013, scholarly outputs continued to be published long afterwards with relatively high numbers of annual publications until 2020 and then decreasing quickly (figure 3). These results suggest that the impact of research funding in the Social Sciences and Humanities continues over the long term, and also that the projects sometimes take a long time to complete. Moreover, publication in the Social Sciences and Humanities

Table XIV. Journals by subject.

Scopus Subjects	No. journals	%
Social Sciences	129	29.0
Psychology	69	15.5
Economics, Econometrics and Finance	42	9.4
Neuroscience	32	7.2
Environmental Science	31	7.0
Medicine	22	4.9
Arts and Humanities	22	4.9
Business, Management and Accounting	16	3.6
Computer Science	15	3.4
Biochemistry, Genetics and Molecular Biology	11	2.5
Agricultural and Biological Sciences	10	2.2
Energy	10	2.2
Decision Sciences	9	2.0
Mathematics	8	1.8
Other	19	3.3

Figure 3. Scholarly outputs by year of publication (shadowing indicates years that FP7 was active).



involves much longer delays than in experimental science or technology (Björk and Solomon, 2013).

In addition, it should be noted that on the basis of the main thematic categorization of journals in Scopus (table XIV), although the predominance of Social Science journals is overwhelming, as would be expected considering the context, the FP7-Cooperation-SSH programme covers many areas of knowledge beyond the Social Sciences and Humanities. Journals can belong to multiple subject categories simultaneously, resulting in a total sum greater than 256.

4. CONCLUSIONS

This study of the FP7-SSH-Spain programme allows us to track the evolution of Spanish participation in FP-SSH projects through a comparative analysis with the data obtained by Sulé, Somoza and Ardanuy (2023) on FP6-SSH-Spain projects. In this way, a significant increase has been found in the leadership and prominence of Spanish institutions compared to FP6-SSH. The coordination of projects by Spanish institutions rose from only 5.6% in FP6-SSH-Spain to 12.8% in FP7-SSH-Spain, resulting in a climb from eighth place in FP6 to the fourth in FP7, among countries that coordinated the most projects with Spanish participation.

The biggest contributor to this Spanish dominance was the Consejo Superior de Investigaciones Científicas (CSIC), which was the Spanish institution with the biggest participation among all those involved in FP7-SSH-Spain, with 19 projects. The contributions of Universitat Autònoma de Barcelona (17) and Universitat de Barcelona (12) were also notable, ranking third and ninth among all institutions involved in projects with Spanish participation. In FP6-SSH-Spain, Universitat Autònoma de Barcelona was the only Spanish institution among those with the biggest participation, and it ranked sixth.

The comparative analysis also reveals bigger economic investments in a considerable portion of the FP7-SSH-Spain projects, compared to FP6-SSH-Spain. The percentage of projects with a budget of 2.5 million or more increased from 27.0% to 41.5%.

On the other hand, the average number of countries involved in projects with Spanish participation (including the coordinating country) was very similar to that of FP6-SSH-Spain (9.7 countries in FP7-SSH-Spain; 10.0 countries in FP6-SSH-Spain). This can be read as a stabilization in the internationalization of projects, but also as a lack of progression in a key element for research.

In terms of scholarly outputs, only 80% of the documents reported in CORDIS resulting from projects with Spanish participation were retrieved in OpenAIRE. Moreover, the degree of completeness of CORDIS is not very high, since more than a third of the total production derived from the FP7-SSH is not reflected there (Ardanuy et al., 2023). Neither is it a reliable tool in bibliographic terms due to the lack of control, despite the global magnitude of scientific projects charged to European budgets. Similar problems are noted with Scopus that only covers a small fraction of the journal titles listed in Ulrich's Periodicals Directory, while WoS covers even less (Mongeon and Paul-Hus, 2016) and some funding information cannot be correctly identified (Liu, 2020; Ardanuy et al., 2022). In conclusion, none of the sources (CORDIS, OpenAIRE and Scopus) alone could facilitate a detailed study of the international scholarly production resulting from European research projects.

Nevertheless, our results suggest that projects with Spanish participation produced an average of 12.2 publications each, a smaller number than the average for all FP7-SSH projects (15.4), but significantly higher than the four publications per project reported by Fresco et al. (2015) with information based on OpenAIRE. In addition to the coverage limitations indicated above, it is important to take into account the lack of updated information in CORDIS. Among the articles retrieved from Scopus two thirds had been published after 2016. The time distribution of publications suggests that the impact of research funding in the Social Sciences and Humanities continues over the long term and that any in-depth analysis of these disciplines should be drawn up years after the conclusion of the programme. Perhaps this should also be considered when determining the periods within which researchers are permitted to spend funding and provide research results, which may need to be longer than those for STEM areas.

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6. DECLARACIÓN DE CONTRIBUCIÓN A LA AUTORÍA

Ardanuy, Jordi: Conceptualización; Curación de datos; Análisis formal; Redacción – borrador original; Redacción – revisión y edición.

Sulé, Andreu: Conceptualización; Análisis formal; Redacción – borrador original; Redacción – revisión y edición .

Borrego, Ángel: Conceptualización; Análisis formal; Redacción – borrador original; Redacción – revisión y edición.

7. DECLARACIÓN DE CONFLICTO DE INTERESES

Los autores de este artículo declaran no tener conflictos de intereses financieros, profesionales o personales que pudieran haber influido de manera inapropiada en este trabajo.

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