
Main findings and proposals of the Spanish cluster policy evaluation: the AEIs Programme

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Abstract: National and regional governments have been defining and implementing clusters policies and programmes with the aim to identifying, launching and finally consolidating international competitive clusters in their respective territories. In this context, The Ministry of Industry, Tourism and Commerce of the Spanish Government have been implementing a cluster policy since 2007 known as the AEIs Programme. On completion of the first three years of the project, an evaluation has been carried out. 101 clusters have been selected by the Ministry and constituted as AEIs. These AEIs represent 2,268 firms and 493 institutions. These organizations account for a total of 450,734 workers, making up 2.4% of the total Spanish employment figure. This total rises to 6.5% if the indirect effects on the entire value chain are considered. The Ministry has financed these AEIs to the tune of €9 million, a small amount considering the huge knock-on effect of these clusters achieved over the last three years. This knock-on effect has attracted finance from other sources of more than €43 million; €196 million dedicated to collaborative R&D+i projects.

Keywords: clusters, Spain, cluster policy, policy evaluation

1 Introduction: Clusters as a spreading phenomenon.

This work focused on the interest in analyzing the results and impact of the Spanish “*Agrupaciones Empresariales Innovadoras*” Programme (hereinafter AEIs Programme) of the Ministry of Industry, Tourism and Commerce.

Before starting to analysis the performance of the Programme, it must be taken into account the challenges of the so-called new economy. These challenges determine how companies compete and the way in which countries and regions get positioned globally in terms of economic growth and development.

In this context, we have witnessed in recent years an “explosion” of clusters, making it necessary to ask about its roots, and how, given this trend at international level, these structures can help companies in their regional and local environments to compete, grow economically and more importantly, ensure the welfare of a society in a sustainable way over time.

For some time, authors such as Marshall (1890)¹, Porter (1990)² and Krugman (1992)³ attributed the positive performance of certain spatial concentrations to positive externalities that encourage innovation throughout the business tissue and its competitiveness. This phenomenon has acquired various names such as industrial districts or poles, but probably, the most popular is cluster. The cluster concept was developed from the experience observing that more competitive economies generally show patterns of specialization in one or more sectors localized at local and regional level.

The localization of economic activity is studied since the late nineteenth century by authors such as Marshall, to almost the beginning of the XXI century by authors such as Sovell, Ketels & Linqvist⁴. In these approaches the cluster concept has already risen as a fully competitiveness policy instrument.

The success of the cluster as economic phenomenon lies heavily on the proper balance between competition and cooperation resulting from the interaction of agents it involves. By the interrelationships that the cluster promotes, this phenomenon has been able to gather the efficiencies of high competition (which encourages the improvement, the benchmarking, and thus innovation) with the efficiency generated by positive synergies and complementarities from collaboration (but not resulting in oligopolistic alliances againts market efficiency).

This phenomenon, which in some cases has grown naturally, has widespreaded as an instrument of regional competitiveness policy. In the United States it can be identified more than 40 types of clusters at regional level⁵. In Europe, similar studies, have identified more than 2,000 clusters across the 258 European regions⁶.

Across the analysis of these experiences can be seen that the role of governments and business has not been always be the same: sometimes leading the initiative; other times as

¹ Marshall, A. (1890). “Principles of Economics” London MacMillan.

² Porter, M. E. (1990). “The competitive advantage of nations”. Free Press

³ Krugman, P. (1992) “Geografía y comercio” Antoni Bosch Editor. Barcelona

⁴ Sövell, Linqvist y Ketels (2003) “The Cluster Initiative Greenbook”.

⁵ Council on Competitiveness (2001): “The Cluster Mapping Project”. A study jointly developed by Monitor Group and the Institute for Strategy and Competitiveness of Harvard Business School.

⁶ European Commission (2007): “Innovation Clusters in Europe: A Statistical analysis and overview of current policy support”.

a complement or simply as a mere residual support. A similar analysis has been done for the European cases, studying cluster initiatives and policies at national and regional levels. In Europe, unlike the US, the public sector plays a proactive role in the different administrative levels (European, national and regional).

Table 1 Detection of clusters in some European countries

<i>Country</i>	<i>Number of clusters identified</i>
Denmark	41 clusters
France	100 clusters
Finland	10 national cluster & important number of regional clusters
United Kingdom	154 clusters
Austria	45 clusters

Source: Final report of the expertise Group on Clusters and Networks. DG Enterprise. 2002. Brussels

As a result Spanish Authorities have not been stranger to the popularity of this policy instruments and in 2007 the Ministry of Industry, Tourism and Trade (MITYC) launched a complete policy to support cluster initiatives through the AEIs Programme¹.

After 3 years of operation, the Ministry has decided to analyse the Programme to deepen the understanding of its scope and impact. The aim of this evaluation exercise is to draw some conclusions and recommendations for the future of the Programme.

Nevertheless, our paper focuses on the analysis of the Spanish case. It analyses the history of the cluster phenomenon in Spain, with special emphasis on the regional level (policies developed and success stories implemented). In this sense, Spain has some of the pioneer experiences at regional level such as Basque Country or Catalonia.

In this paper the authors presents the main results obtained from the analysis of the AEIs Programme within the context of international experiences and the regional and national cluster reality in Spain. The authors also proposed some recommendations for the future developments of the Spanish cluster policy in the years to come.

2. The Spanish Cluster Policy: the AEIs Programme

In Spain, the clusters initiatives and cluster policy have their origins in the earliest experiences that at regional level started to flourish at the beginning of the 90's.

The administrative decentralization that followed the adoption of the Spanish Constitution, directly led to significant regional autonomy. With this autonomy, the newly created regional governments began to take the initiative in promoting economic development in their respective regions.

¹ MITYC (2011) "El programa AEIs en el marco de las políticas de apoyo a clusters. Una valoración". Report elaborated by INFYDE. Access through: <http://www.ipyme.org/Publicaciones/ProgramaAEIMarcoPoliticInternacionales.pdf>

The theories of economic agglomeration, innovation systems and regional development were popularized as the main engines of the new models of economic prosperity. Besides, the fact that these models were also closely linked to regional context was one of the main causes of their progressive adoption as policy instruments in some Spanish regions.

The initial success of these pioneering experiences and the growing importance of these policy measures at international level contributed to the spread of cluster policy across the remaining Spanish regions.

Table 2 Cluster policy initiatives and studies across Spanish geography

<i>Region</i>	<i>Author/ year</i>	<i>Studies and references</i>
Andalucía	Antúnez, A. y Sanjuán, J. - 2007	"Análisis de clusters en Andalucía". Investigaciones Regionales. Nº 12, primavera 2008
	Costa, M.T. - 1988	"Descentramiento productivo y difusión industrial. El modelo de especialización flexible". Papeles de economía española. Nº 35
Cataluña	Trullén, J. - 2002	"Barcelona como ciudad flexible. Economías de localización y economías de urbanización en una metrópolis polinuclear". En "Desarrollo local: Teorías y Estrategias". Civitas. Madrid
	Hernández, J.M., Fontrodona, J., y Pezzi, A. - 2005	"Mapa de los sistemas productivos locales industriales en Cataluña". Generalitat de Catalunya. Departament de Treball i Indústria.
Castilla y León	ADE - 1997	"Identificación y análisis de clusters y microclusters en Castilla y León". Informe elaborado por Clúster Competitividad
	Juste, J.J - 2001	"Desarrollo local y mercado global: los sistemas productivos locales y la industria agroalimentaria en Castilla y León. Tesis Doctoral. Universidad de Valladolid
Comunidad Valenciana	Ybarra, J.A. - 1991	"Determinación cuantitativa de distritos Industriales: la experiencia del País Valenciano". Estudios Territoriales nº 37.
	Tomas Carpi, J.A. y Such, J. - 1997	"Internationalization of small and médium firms in four Valencia región industrial districts". Quaderns
Pais Vasco	Soler, V.- 2000	"Verificación de las hipótesis del distrito industrial: una aplicación al caso valenciano". Economía Industrial nº 334
	Monitor Company - 1991	Trabajo de identificación de los clusters vascos en el marco del proyecto "Competitividad Internacional de Euskadi". Vitoria
España	Larrea, M. - 2000	Sistemas productivos locales en la Comunidad Autónoma del País Vasco. Vitoria.
	Aranguren, M.J. et al - 2008	Identificación de clústeres en la CAPV. Orkestra. Instituto Vasco de Competitividad
España	Costa, M.T. - 1992	"Cambios en la organización industrial. Cooperación local y competitividad internacional, Panorama general" Economía industrial. Nº 286
	MICYT - 1993	"EXCEL Cooperación entre empresas y sistemas productivos locales". IMPI y Centro de Estudios de planificación
España	Giner, J.M. y Santa María, M.J. - 2002	"Territorial systems of small firms in Spain: an analysis of productive and organizational characteristics in industrial districts". Entrepreneurship and regional development. 14
	Santamaría, M.J. et al - 2004	"Identification of the local productive systems in Spain: A new approach". En 44 th European congress of European Regional Science Association. Porto 25-29 August.
España	Boix, R. Y Galletto, V. (2004)	"Identificación de Sistemas Locales de Trabajo y Distritos Industriales en España". Estudio de investigación financiado por la DG de Política de la Pequeña y Mediana Empresa.

Source: MITYC (2011) "El programa AEIs en el marco de las políticas de apoyo a clusters. Una valoración". Report elaborated by Infyde

In the early 2000s, the Ministry of Industry, Tourism and Trade, began working on developing a strategic framework to coordinate and articulate at national level the cluster policy in Spain. Its approach aims to complement the actions already being developed by regional authorities.

A clear example is the report "*Identification of Local Systems of Labor and Industrial Districts in Spain*", financed by the MITYC and published in 2004. It made a first identification of 237 industrial districts scattered throughout the whole Spanish

geography. The objective of this first study was to begin the debate on the cluster phenomenon in Spain, as well as present a first assessment on how to begin working towards the development of a world-class Spanish clusters.

According to this study, the 237 districts identified were responsible for nearly 47% of Spanish industrial employment, and about 30% of the total economy in terms of turnover and GDP. These figures show the similarity in terms of cluster significance to those analysed in the United States and Europe. Therefore, the Spanish case is not an exception to the cluster phenomenon that characterizes advanced economies. However, it must be pointed out that the phenomenon is qualitatively different.

Spanish cluster cases are found in traditional sectors such as tourism, metal-mechanic industries and primary activities (agroindustries). Besides, these clusters are highly localized in a few specific geographical areas. Most districts located across the eastern, central and northeastern regions of Spanish territory, with Catalonia and Valencia registering the highest number.

As a result, the Spanish Ministry of Industry, Tourism and Commerce developed a complete strategic framework to support these cluster initiatives and to enhance the appearance of cluster in those areas where this phenomenon has not been consolidated. The main instrument designed and implemented by the Ministry in 2007 was the AEIs Programme.

The “*Agrupaciones Empresariales Innovadoras*”, commonly known as AEIs, are cluster initiatives launched at regional level with the support of the Spanish Ministry of Industry, Tourism and Commerce (MITYC). The Programme is managed by the Directorate General of SME Policy to promote competitiveness through creation and development of innovative clusters with an international perspective.

An AEI is defined as "the combination, in a geographical area or specific industrial sector, of a number of companies, training centers and research units (public or private) involved in collaborative activities, seeking to obtain advantages and / or benefits from the implementation of joint innovative projects. This activity is organized around a target market and/ or sector as well as a branch of science and technology reference. The purpose of the AEI is to gain a sufficient critical mass, thus ensuring their competitiveness and international profile."

Thus, an “AEI” is an initiative of a regional cluster that includes companies, research centers, universities, intermediate innovation and knowledge infrastructures, regional authorities, etc. that are geographically located and share an interest in economic activity and/or a particular knowledge area. This definition roots from the concept of cluster developed by Porter (1990)² and further developed in some of their seminal works (Porter 1998³ and 2003⁴).

The AEIs Programme seeks to promote, through these innovative clusters, the joint action between companies generate cluster synergies and externalities. The most remarkable characteristic is that, as mentioned before, the AEIs Programme does not interfere, but rather complement, the actions carried out at regional level by regional authorities and other actors.

¹ Orden ITC/2691/2006 de 2 de agosto 2006 (2007 call programme of AEIs programme) – MITYC – DG SMEs policy

² Ibid 2

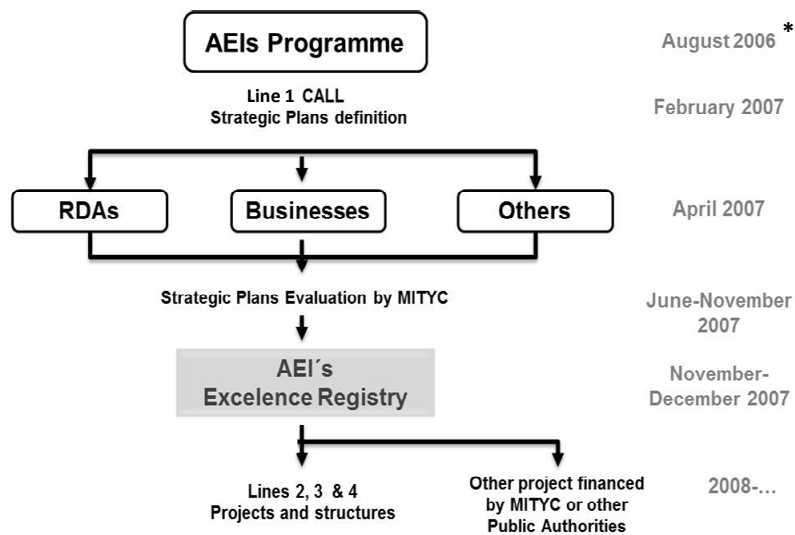
³ Porter, M.E (1998) “On Competition”. Harvard Business Press.

⁴ Porter, M. E (2003) “The economic performance of regions”. *Regional Studies* 37: 549-578

Companies access to the AEIs Programme through a nonprofit entity or business association constituted as AEI. One notable feature is the possibility that Regional Development Agencies (RDAs) can participate as promoters of AEIS. That is very important, especially in regional environments where the businesses are not so proactive and it is needed an encouragement by public administration. In fact, regarding the results from the Spanish reality, it is not unusual that AEIS initiatives get a heavy support from regional authorities during their initial phase.

According to the documents of the MITYC, the program also promote the formation of innovative cluster initiatives in locations where the potential improvements in terms of competitiveness were higher, or in other words, where current competitive levels were lower. In fact, the AEIs Programme has been defined taking into account the necessity of reducing the regional gap existing across the Spanish regions, especially between the most advanced and the less developed regions.

Figure 1. Main phases in the Spanish cluster Policy: AEIs Programme



Source: Authors
*Yearly tenders

In addition to this, the program sought priority to those groups who pursued an international dimension as well as those committed to innovation and knowledge as the source of their competitive advantage. In this regard, in the selection processes it was important the involvement within the AEI not only of businesses and regional authorities, but also of knowledge and innovation local and regional agents.

On the other hand, the program also appreciates AEIs with a sound strategic approach and a clear social capital asset. The evaluators of the Programme have stated that having a road map with specific joint projects to medium and long term was a key to get a positive assessment.

The AEIs Programme has been operating since 2007. In the first call only the implementation of strategic plans were financed by the Programme. The aim was to establish the strategic guidelines from which each AEI would pursue in the medium and long term the objectives of increasing the competitiveness and innovative nature of its

businesses. The finance of Strategic Plans was included under the line 1 of the Programme.

In the following calls (2008, 2009 and 2010), the Programme included other arrangements aimed at strengthening the AEIs created in the framework of the Programme. Other three lines were added: the financing of its structure and operations (line 2), of specific projects and of collaborative projects with other groups and clusters at national and international level (lines 3 and 4).

Table 3 Strategic lines supporting cluster development

<i>LINE</i>	<i>CONTENT</i>
<i>Line 1</i>	Strategic Plans elaboration support
Line 2	Coordination and management structures support
Line 3	R&D+I project preparation activities and R&D+I infrastructure support
Line 4	Cooperative R&D+I projects development

Source: Authors

The AEIS Program was designed as a competitive financing scheme. So, only the best initiatives with a clear long term focus, and international, knowledge intensive and innovative approach were selected to participate in the Programme.

Regarding the process followed by the Programme, a first stage identifies clusters that meet the criteria established by the MITYC's evaluators to be considered as an AEI, and the Ministry finances their Strategic Plans. Later, in a second phase, those Strategic Plans considered as excellents can opt for accessing to the Registry of Excellence. The membership to the Registry allows access to the other lines under the Programme: lines 2, 3 and 4. It also allows getting other sources of financing from the Ministry.

3. The evaluation of the programme: main findings

As it has been mentioned before, the evaluation of the AEIs Programme have been carried out through a number of phases covering not only the analysis of the data from the Ministry but also making a comparison to other international experiences considered good practices in cluster and cluster policy.

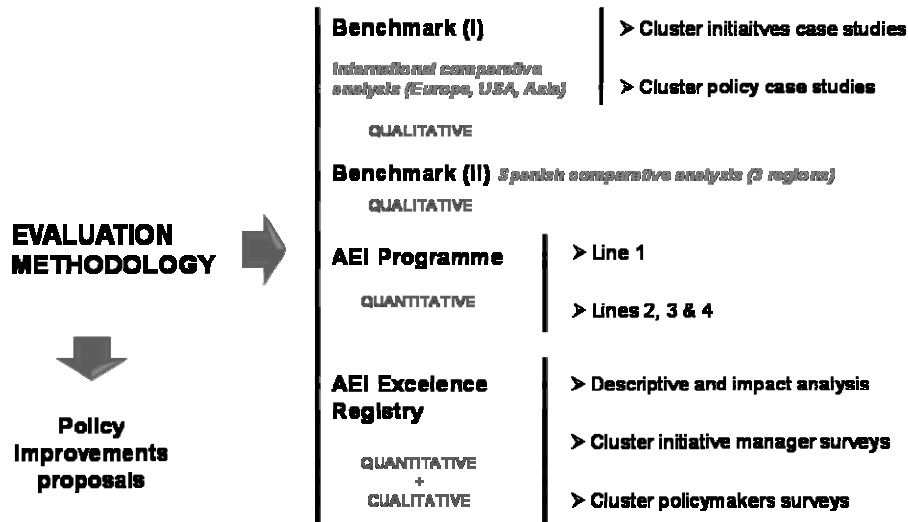
First of all, the study proposed a specific evaluation methodology taking into account both quantitative and qualitative approaches. The first one was carried out analyzing a set of good cases (US, Asian and European initiatives). These cases involved not only cluster initiatives but also a deep analysis of the policy frameworks where they were launched. In Spain this kind of analysis covered the national level and three regional cases (Basque Country, the Community of Madrid and Balearic Islands).

The second approach has been carried out from the data collected by the Ministry itself during the three years that the Programme run (2007-2010). The data set provided by the Ministry contains information about the performance of lines 1, 2, 3 and 4 of the

AEIs Programme, as well as the business and other entities members of the AEIs submitting project to the Programme during those years.

Finally, the evaluation has been completed with a survey analysis done to cluster managers and policymakers responsible for cluster policy in all the Spanish regions involved in the Programme. Next figure shows a brief summary of the methodology used in the study.

Figure 2. The evaluation and analysis framework



Source: Authors

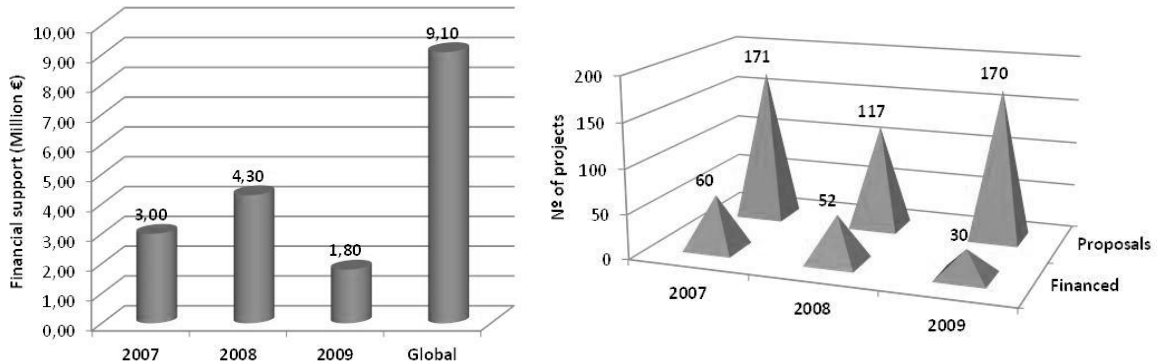
The very first results from the evaluation and the assessment of the different AEIs performance seems support the competitive financing approach imposed by the MITYC to the proposals received in the framework of the different calls. In general, the projects (AEIs) financed are characterized by a high quality and a sound innovative nature. They also accounts for a significant knock-on effect across regional business tissues.

The selective character of AEI Programme has contributed to finance those project truly innovative and with high knock-on effect in businesses

As it can be seen in the figures included, the AEIs Programme received a high number of proposals between 2007 and 2009 (458 projects in total) but only a small amount of them were considered to get financing (30% of total submissions). Besides, from the total projects financed, only 101 AEIs got access to the Excellence Registry (data from the beginning of 2010)

Regarding the total financing of selected initiatives, the whole period accounts for more than 9 million of Euros in total, with peaks in 2008 (4.3 million) and 2007 (3 million).

Figure 3. Results of Line 1 between 2007 and 2009



Source: Authors

The AEIs assessed as excellents could access on competitive basis to the other lines within the Programme to finance their management structure costs, their R&D+I joint projects and their international promotion activities. Even with a greater impact than line 1, lines 2, 3 and 4 truly contributed to raise and consolidate the knock-on effects derived from this cluster initiatives.

In addition to Strategic Plans elaboration, it has financed other activities to consolidate Spanish cluster performance through lines 2, 3 & 4.

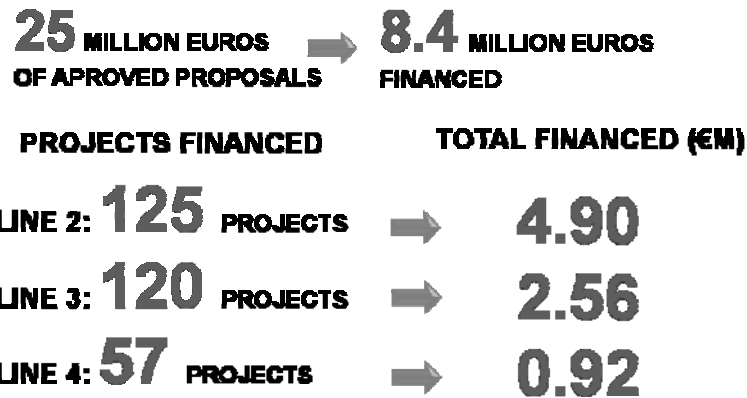
The financial support had a significant impact raising private investment (3 times higher).

The AEIs Programme throughout the lines (2, 3 & 4) finance another 8.4 million Euros. This financing allows raising the commitment of businesses and other actors involved in AEIs to 25 million Euros in total between 2007 and 2009.

The second line accounts for nearly 5 million (60% of the total financing of lines 2, 3 and 4). 120 R&D+I projects were financed by the Programme within the third line, reaching 2.5 million of Euros from the MITYC. The international cooperative projects accounts only for 0.9 million Euros¹.

Figure 4. Results from Lines 2, 3 & 4 between 2007 and 2009

¹ This line is going to be one of the priorities of the MITYC in the new call.



Source: Authors

4. The AEI Programme's Excellence Registry

The AEIs whose Strategic Plans (not necessarily financed by the Programme) have been assessed by the Ministry as excellent could become part of the AEIs of Excellence Registry. As mentioned, membership grants access to the other priority lines, as well as an easier access to other support programmes from the Spanish Government.

The AEI Programme established an Excellence Registry for those cluster initiatives with Strategic Plans evaluated by MITYC as excellents

AEI Registry membership allows accessing to the next phases of the Programme as well as to other support frameworks of the MITYC.

At the beginning of 2010, the number of AEIs included in the Registry of the Ministry accounted for 101. The nature of these cluster initiatives was quite heterogeneous both at geographical level and sectoral level. The Region of Catalonia accounts for the highest number of registered AEIs with a total of 22. Madrid was the second with 13 AEIs. Other regions with significant number of AEIs approved were Andalusia and Valencia (11 initiatives each) and Castilla y Leon (9).

Regarding these figures, it seems that the level of regional development is positively correlated to the number of AEIs in the Registry. Spanish, Competitiveness Regions account for 50 AEIs compared to 25 of the Convergence Regions. In fact, Convergence, Phasing-out and Phasing-in regions altogether account for the same number of AEIs than Competitive regions.

Regarding the "big numbers" the Registry involves 2,268 businesses and 493 entities (mainly regional development agencies, universities and technological centres). The organisations are responsible for more than 450,000 jobs in Spain.

Figure 5. Geographical distribution of the AEIs of The Registry

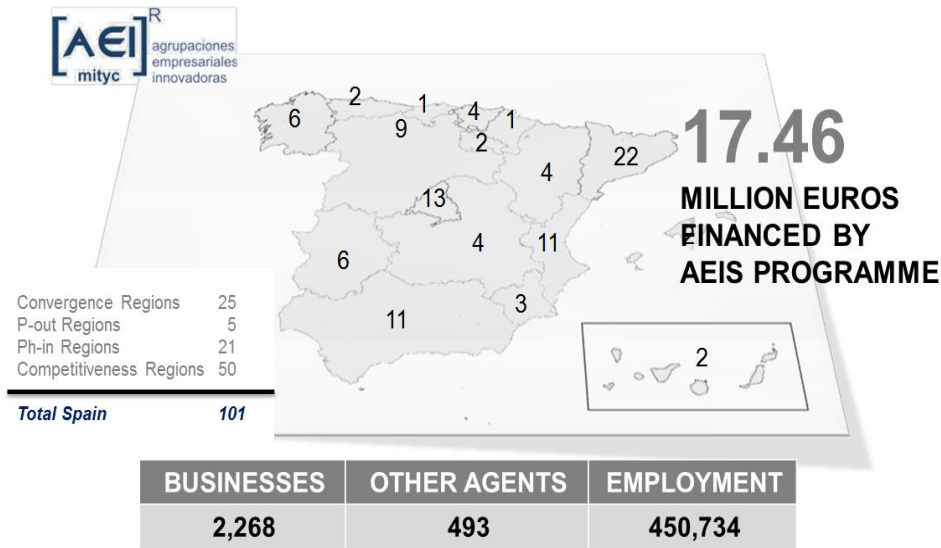


Table 3 Main figures of the AEIs Registry

Region	Total budget 2007-2009*	2009			
		AEIs	Businesses	Total entities	Employment
Andalucía	1,771,539.22	11	203	288	27,652
Aragón	1,295,857.90	4	89	99	37,039
Asturias	475,684.52	2	94	107	11,238
Baleares	49,097.82	2	50	59	516
Canarias	371,484.64	2	28	35	3,628
Cantabria	180,677.02	1	23	26	10,049
Castilla - La Mancha	292,565.32	3	38	49	3,551
Castilla y León	1,199,485.64	9	143	167	53,182
Cataluña	3,647,790.06	22	455	545	96,335
Extremadura	808,172.64	5	171	206	14,306
Galicia	1,385,886.98	6	353	377	50,022
La Rioja	243,452.81	2	29	37	413
Madrid	2,265,230.50	13	123	169	73,161
Murcia	544,035.62	3	49	60	10,130
Navarra	214,417.25	1	3	8	117
País Vasco	663,294.46	4	50	91	12,917
Valencia	2,048,011.06	11	367	438	46,478
Total	17,456,683.46	101	2,268	2,761	450,734

Source: MITYC

Financed by the AEIs Programme (MITYC)

Catalonia along with Madrid, Valencia and Andalusia got a significant share of total financing. They are the regions with highest number of AEIs, entities and impact on employment. It seems that the existence of a critical economic mass determine to a certain extent the number of AEIs and its level of excellence.

According to the estimates carried out during the evaluation of the Programme, the financing by the MITYC reached indirectly a significant share of the Spanish industrial

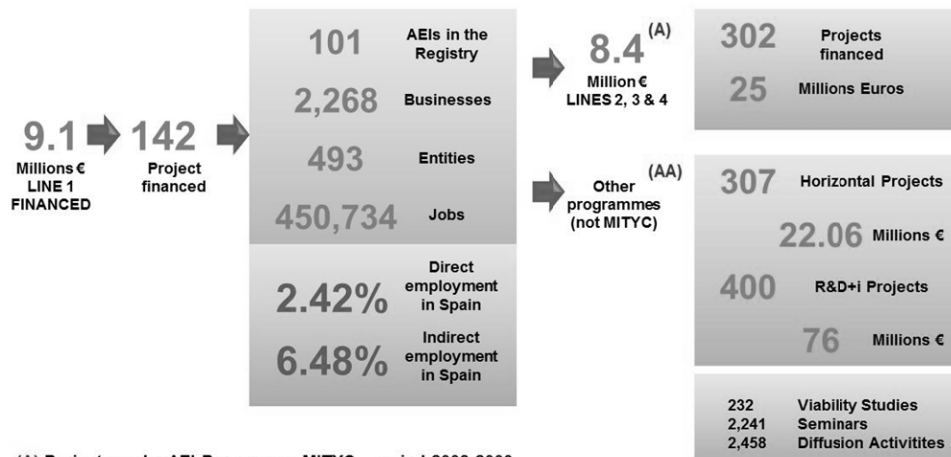
tissue. More than 450,000 jobs have been included in the Registry directly through the AEs. This accounts for nearly 2.42% of total Spanish employment. If indirect knock-on effects are taken into account¹, these figures reach more than 1.2 million of jobs and 6.48% of total Spanish employment. So, the AEs Program can be considered as a “cheap” policy in terms of its impact in Spanish economy.

<p><i>The work carried out with AEs allows to reach a significant percentage of total Spanish employment</i></p>	<p>450,734 DIRECT JOBS</p> <p>2.42% SPANISH TOTAL</p>
	<p>1,207,941 INDIRECT JOBS</p> <p>6.48% SPANISH TOTAL</p>

But the benefits of such a policy are not limited to direct and indirect impact on employment. The Programme also encourages the participation in other R&D+i support schemes, not only at regional and national level, but especially at European level.

Among these schemes and projects are those associated with horizontal activities (R&D+I projects with no sectoral approach), collaborative research and technology development, and the organization of seminars, workshops and meetings. Besides, the AEs also carried a significant number of viability studies as a prior phase to launch more formal collaborative projects.

Figure 6. A snapshot of the current situation and main results



(A) Projects under AEI Programme MITYC – period 2008-2009

(AA) Projects under other support frameworks - period 2008-Jul. 2010

Source: Authors

¹ See Castillo, J & Paton, J (2010) for a complete description of impact assessment methodology.

5. An evaluation from the point of view of beneficiaries and managers

Along with the quantitative data analysis of the results of the Programme presented before, it was carried out a survey to cluster managers and cluster policymakers in each region.

The survey to cluster managers was designed to identify the opinions and points of view of those involved in implementing the Programme through the management of these structures.

In this regard, questions have been grouped into five main blocks that refer to (1) the contextual framework in which different AEIs arise, (2) the nature of the “natural cluster” that the AEI represents, (3) the strategic orientation of the AEI, (4) financial aspects regarding its activity, and finally (5) aspects regarding the monitoring and evaluation of its performance.

One of the results from the survey to cluster managers was that businesses proactivity and commitment resulted critical to AEI consolidation rather than Public Administration support. Additionally, business commitment seems to come from the necessity to improve competitiveness (it appears to be the most important reason when launching the AEI).

Cluster initiatives are launched by business and business associations and to a lesser extent by Public Administration. In this sense, cluster formation roots from informal relations rather than the prior existence of formal agreements. However, in cases where prior relationships exist, the role of government (and universities) it has been key to finally launch the IEM.

In the Spanish context, the relationships within the cluster can be classified of medium intensity. The strongest relationships are those between enterprises themselves and less important with Public Administration and research institutions. However, when the AEI initiative was promoted by the Public Administration, the most intense relationships are those between companies and the government. When the university is the promoting actor, the relations with the administration are much lower.

The cluster managers highlight the importance that both foreign and local markets have for their enterprises, although until now the latter is still much significant that the previous one.

Regarding cooperation with other agents within the cluster, the managers emphasize the role of regional research institutions and to a lesser extent the importance of business services sector. The AEIs surveyed tend to collaborate more with other clusters at regional level. Collaboration with national and international cluster is not very common.

Regarding the finance needed to carry out their activities, the AEIs get it from their members. Nevertheless it is also very important the public support obtained from national and regional governments. The services provided by AEIs do not appear to be relevant regarding the raise of financing.

Finally, AEIs are considered as important tools that have allowed establishing links and communication channels between businesses, government and academia. The visibility within the sector and abroad is also another major benefit achieved.

Table 4 AEI Programme assessment from a cluster manager perspective

1	Private initiative is the main driver for the launch of a Spanish cluster.	
2	The need to increase competitiveness through knowledge and innovation is the main reason to “cluster”	
3	The majority of the funding comes from contributions of its members It can be considered as almost a self-financing instrument.	
4	The AEIs are built up from SMEs (70%) The AEIs focus on internal markets (58%) The relationships between clusters of different regions have not developed yet	
5	The role of each agent depends on the status of the cluster before its launch	
	What kind of relationship?	What kind of agent launched the cluster?
	<ul style="list-style-type: none">• Critical mass• Informal• Formal• Did not exist	<ul style="list-style-type: none">• Businesses• Academia• In cooperation• Public Authority

Source: Authors

In addition to the survey to cluster managers, it was carried out a second to policymakers responsible for defining and implementing cluster policies in their respective regions. Similarly, the questions considered have been grouped into five main blocks that refer to (1) the contextual framework that defines the different regional cluster policies, (2) strategic focus of the measures implemented, (3) the conceptual nature of the policies, (4) how they are defined and finally (5) the monitoring and evaluation practices developed.

In general terms, except in the case of the pioneer regions, the vast majority of cluster policy frameworks at regional level were set up after 2005-2007, when the AEIs Programme was launched by the Ministry.

These policies were based mostly on past experiences in other policy fields but not in strategic frameworks defined specifically for cluster initiatives.

The critical mass in a given economic sector has been the main reason to define a cluster policy. The clusters supported belong mainly to strategic sectors at regional level, with a significant weight in terms of total turnover, GDP or employment share.

In general, cluster policy is considered by policymakers as a useful tool for enhancing coordination between administrative departments within the regional government. This policy can help to achieve synergies and complementarities between the different public support programmes. Besides, most cluster policies are built through a mix of top-down and bottom-up approaches.

Regarding the data gathered and the survey results, it seems clear that the launch of many AEI initiatives as well as some of the regional cluster policy frameworks has been closely linked to the Ministry AEIS Programme support.

Therefore, AEIs Programme is considered not only as a key complement to identify, launch, develop and consolidate clusters, but as an incentive that has allowed to many regions (where there were no initiatives or policies in these field), to start working on a framework for integrating regional value chains and improve their competitiveness.

Table 5 AEI Programme assessment from a cluster policymaker perspective

1	Critical mass has been the main motivation to implement a regional cluster policy. Its aim is to promote the networking and achieve cooperative dynamics to improve competitiveness
2	The cluster policy has helped to improve interdepartmental policy coordination within the Administration
3	The “successful cluster benchmark effect” has been an important part in spreading clusters and cluster policy among regions.
4	The cluster initiatives have appeared in strategic sectors in terms of employment/turnover rather than in emerging activities
5	Cluster policy has extended the "bottom up-top-down“ approach as a participatory element in the definition of objectives and action plans

Source: Authors

6. Conclusions

In the US and Europe many clusters initiatives have recently been launched. National and regional governments define and implement clusters policies and programmes with the aim to identify, launch and finally consolidate international competitive clusters in their respective territories.

In this context, The Ministry of Industry Commerce and Tourism of the Spanish Government has implemented a cluster policy since 2007, known as “Agrupaciones Empresariales Innovadoras”, the AEIs Programme.

This Programme has been implemented in two stages. The first one was the financing of Strategic Plans by cluster proposals selected by the Ministry in a competitive process. The second was the financing of cluster’s management cost and collaborative projects among members at national and European level.

One of the main aspects of the project is that, although nationally focused, the cluster prioritization has remained at regional level. They were businessmen, academia, regional and local authorities who take the initiative to submit cluster proposal to the Ministry.

After three years of project, an evaluation was carried out. 101 clusters were selected and constituted as AEIs (clusters associations supported by specific financial frameworks). These AEIs represent 2,268 firms and 493 institutions (universities, R&D centres, public bodies etc.). These organizations account for a total of 450,734 workers, making up 2.4% of the total Spanish employment figure. This total rises to 6.5% if the indirect effects on the entire value chain are considered.

But, in addition to these quantitative direct and indirect impacts, there were identified other significant benefits of the Programme. According to cluster managers and policymakers responsible for cluster policy at regional level, the AEIs Programme has allowed to introduce the cluster approach in many regions where there were not previous initiatives nor experience in this field. Businesses highlight other intangible benefits such as advanced services provides by the new clusters, the increased visibility gained and the interrelationship with other agents acquired.

AEIS Program has contributed to generalize cluster approach in many regions and sectors not involved before in this kind of policies.

BENEFITS FOR BUSINESS

Advanced services, greater visibility and interrelationships with other agents

Besides, the AEIs Programme can be considered as a “cheap” policy. The Ministry has financed these AEIs to the tune of €9 million, a small amount considering the huge knock-on effect of these clusters achieved over the last three years. This knock-on effect has attracted finance from other sources of more than €243 million; €196 million of them were dedicated to collaborative R&D+i projects.

The evaluation has also gathered data from cluster managers and regional cluster policy managers about the initiatives at regional level. As a result of this assessment, the evaluation also proposes new lines to be developed in the following stages of the Programme.

AEIs Programme has contributed to formalize cluster policy approaches in Spanish regions.

It is required further developments in cluster support to satisfy the increasing complex necessities that AEIs are facing in the current competitive context.

The Spanish cluster policy, and the cluster policy that implemented in the majority of Spanish regions, must to consider the weaknesses and opportunities of these three years to further develop the cluster initiatives already set and those not supported yet. In line with the proposals of authors such Ketels (2006)¹, the study carried out proposes a set of policy recommendations to successfully advance in cluster consolidation:

Table 6 How clusters and cluster policy must evolve in the following years

1	To combine clusters, cluster policy and Smart Specialisation Strategies
2	To promote Regional Cluster Networks : RCS – Regional Cluster System
3	To promote Global Cluster Networks
4	To evolve from local clusters to regional clusters: the district rebirth
5	To promote «transversal» cluster initiatives that are launched everywhere (e.g. eco-industries)
6	Better definition of the role of clusters in Regional Competitiveness Strategies: participatory governance tools

Source: Authors

Regarding the Smart Specialization Framework enhanced by the Commission², the Spanish cluster policy must (1) define regional initiatives to get sufficient critical mass

¹ Ketels, C. (2006) “Michael Porter’s Competitiveness Framework: Recent learnings and New Research Priorities”. Springer Science.

² http://ec.europa.eu/regional_policy

and (2) at national level to define a road map to better identify global value chains and integrate them.

Clusters will be also a key element for regional growth as they are the engines for related variety¹ approach and the emergence of new activities.

Finally, clusters and cluster policy will be probably configured as new ways of generating a participatory and inclusive approach in terms of overall competitive policies considering economic, social and environmental dimensions.

Whatever the next step in cluster and cluster policy will be, what it seems clear is that the concept will get a dominant role in the configuration of new regional and national competitive strategies as stated in the Europe 2020 Strategy².

¹ Frenken, K, Van Oort, F., Verburg, T. (2007) “Related variety, unrelated variety and regional economic growth”. *Regional Studies*, Vol 41.5. Julio 2007

² EU Commission (2010) “EUROPE 2020. A strategy for smart, sustainable and inclusive growth”. COM(2010) 2020 final

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