Second Report on Competitiveness of the Basque Country: towards an innovation-based competitive stage

Executive summary
Second Report on Competitiveness of the Basque Country:
Towards an innovation-based competitive stage
Report on Competitiveness in the Basque Country Series
1. Toward an innovation-based competitive stage

The second Orkestra Competitiveness Report presents the results of the Basque Institute of Competitiveness’s research into competitiveness in the Basque Country. More specifically, the report deals with the way the Basque economy has evolved towards a new stage of innovation-based competition. This report is the Institute’s response to the trust placed in it by social and economic agents in the region and Basque society as a whole. The report sets out the main conclusions of research conducted since 2007, when the last report, on ways and means of improving the region’s competitiveness, was published.

The economic crisis that has dominated the two years since the last report clearly marks a turning point. Prospects that seemed “natural” then are today clouded with uncertainty. Consciously or otherwise, this has affected perceptions and attitudes regarding competitiveness. It is difficult to think in the long term when the here and now is so uncertain. We may even be tempted to believe that, in a time of shifting paradigms, there is no point in trying to build a vision that will guide us toward the future. Of course we do not know what is going to happen, but in this second report we take the view that we can tackle the challenges of the future by understanding and learning from the past, through a systemic analysis of industrial competitiveness. This report is therefore an exercise in long-term thinking at a time when the long term seems disturbingly vague. It is precisely in times of crisis that prospective thinking is most needed: imagining and designing a future that can only be built on the foundations of a long-term vision, with a commitment to change and with the active involvement of all concerned.

Since it was created, the Institute has worked to support the efforts of Basque competitiveness agents to understand the dynamics of the global economy and its impact on the region’s productive structure. Facing the challenges of enhancing regional competitiveness has been another permanent goal. This has contributed to a fuller understanding and further adaptation of the Basque model of competitiveness, the main characteristics of which were presented in the previous report. The following figure shows the model as adapted to the subject of this report.

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1 The characteristics of each competitive stage are described in the introductory chapter of this report.
Toward a new stage of innovation-based competition

To understand the model, we need to understand the transitions economies undergo as they evolve from one competitive stage to another. According to Michael Porter (1998), economies go through three stages of competitiveness. Initially, competitive advantage comes from a country or region’s “factor endowment.” The second stage is investment driven: competitive advantage comes from having the capacity to produce standardized, high quality goods and services relatively efficiently, while having lower costs (mainly wage costs but also environmental and regulatory costs) than more advanced economies. In the third stage, an economy thrives on its ability to innovate. In other words, its competitive advantage lies in efficiently and sustainably produce innovative goods and services at the technological frontier.

According to this model, other characteristics of innovation-driven competition are: (1) companies compete on the basis of unique strategies, often with global reach, and (2) when analyzed using the diamond model, the economy displays strengths in all facets of the diamond. At the innovation-driven stage there is usually also a large number of well established, internationally active industrial clusters and the regional economy includes a high proportion of advanced services. Moreover it is able to withstand external shocks and prioritise social and environmental sustainability.

At present the Basque Country is evolving from an “investment-driven” economy to an “innovation-driven” economy. When an economy makes the transition to a new stage, the characteristics of the previous stage do not simply disappear; rather, the principal characteristics of the new stage

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2 Competitive analysis using Porter’s (1998) “competitive diamond” considers: (1) factor conditions, (2) firm strategy, structure and rivalry, (3) demand conditions and (4) related and supporting industries.
predominate. In other words, the main features of the investment-driven stage, such as quality systems, remain relevant in the new stage, but other characteristics specific to the new stage are dominant. Also, as actors advance at different speeds, any strategy for moving toward the innovation-based stage of competition must include complementary sub-strategies for the broad spectrum of players involved.

The main question the report addresses is whether the Basque Country is making the transition toward the innovation-driven stage and how it can do so most efficiently. The report therefore analyzes Basque competitive performance to determine whether the Basque Country is competitive or not. Bearing in mind that companies, not regions, actually compete in the marketplace, we have analyzed the performance of the Basque Country as a whole as well as Basque business. According to Porter’s model of competitive advantage, competitive performance in the new stage should stem from innovation capacity. To determine the relationship between competitive performance and innovation capacity and assess whether the Basque economy is indeed “innovation-driven,” we analyzed regional competitive performance and the quantity and quality of innovation in the region and, where appropriate, the specific type of innovation and the institutions involved.

In the model used in this report, competitive performance is influenced by certain factors, which we have grouped under three headings: 1) “competitive diamonds” and the strategies derived from analysis of competitive diamonds, 2) the clustering of production and the main agents involved in clustering (including an analysis of the historical context) and 3) the framework for political action and the institutions embodying the competitive model.

The report is divided into two parts. The first contains a series of chapters focused on measuring the competitive performance of the Basque Country and its companies and linking the region’s performance to its competitive positioning as regards innovation. The second part contains analyses of the critical competitiveness factors of the Basque economy, which are the catalysts for the transition to innovation-based competition in the region.

2. Competitive performance and how it relates to innovation: the competitiveness paradox

Before we introduce our analysis of competitive performance, we need to position the Basque Country’s innovation system relative to those of other European regions. Our study shows the Basque Country belongs to a group of “central regions with medium prosperity and technological sophistication.” Progress would mean migrating to the group of “restructured industrial regions with financial and technological capacity,” which it is already close to achieving. This suggests the Basque Country is about to enter a stage in which competitiveness comes primarily through innovation. Along with Navarra, Catalonia and Madrid, it is one of the four most advanced regions in Spain. This confirms the previous conclusions.

Regional performance

To begin with, the report looks at the competitive performance of the Basque Country. An obvious starting point for measuring the competitive performance of an economy is to assess whether growth rates for its main output, i.e. per capita GDP, are appropriate and positive. The overall conclusion of this section is that Basque competitiveness, as measured by GDP per capita, compares favorably with other European countries (see figure below) and regions and also with the rest of Spain’s regions. The report therefore starts from the premise that the Basque Country is competitive in terms of its ability to generate income through the production of goods and services.
Innovation level

Having measured Basque competitiveness in terms of per capita income, the second key question is whether this competitiveness is based on innovation. Our conclusion in the report is that the Basque Country is something of a competitive paradox: the level of innovation, measured using the European Commission’s European Innovation Scoreboard, is lower than might be expected from current per capita income (see previous figure). In other words, the Basque Country scores significantly higher in per capita income than it does in innovation.

In the European Innovation Scoreboard the Basque Country ranks 55th out of 202 European regions. Although this is not a particularly bad position, the competitive paradox becomes apparent when we compare it with the region’s GDP per capita placing (30th out of 202).

As regards R&D expenditure considered on its own, the Basque Country comes 55th out of 146 EU-15 regions (i.e., above average). Compared to Spain’s other regions, however, it is second only
to Navarra (which has a unique, highly developed university system) and Madrid (which probably benefits from being the capital and home to a large proportion of Spain’s public research institutes). Given the general shortfall in R&D spending in Spain, although the Basque competitiveness paradox is evident in comparison to the rest of Europe, it ceases to apply within Spain.

One explanation for the Basque economy’s relatively strong GDP performance compared to Europe despite relatively low innovation performance (in terms of R&D spending and its place on the European Innovation Scoreboard) is that many Basque firms innovate through experiential learning and interaction rather than R&D expenditure. Taking this explanation and the upward trend in the usual innovation indicators into account, there is evidence that the level of competitiveness achieved to date is a fair reflection of the region’s capacity to innovate. This is because conventional innovation indicators do not strictly measure the innovation dynamic of Basque firms. Innovation in the Basque Country has been driven mainly by experience (DUI: learning by Doing, Using and Interacting). Other factors in the European Innovation Scoreboard, which gives more importance to science and technology-based innovation (STI, i.e. Science, Technology and Innovation), have been less important in the Basque Country.

An alternative explanation of the competitive paradox focuses on Basque entrepreneurial activity. According to the GEM (Global Entrepreneurship Monitor) 2008 report, the Basque Country has had a steadily rising TEA (Total early-stage Entrepreneurial Activity) rate since 2001; the early-stage survival rate is good; and the concentration of entrepreneurial activity in manufacturing industry is higher than in other regions. Nevertheless, in the innovation-based competitive stage, efforts to promote high-impact entrepreneurial activity should be selective and should be targeted and tailored to specific groups, depending on individuals’ and companies’ experience and functional and industrial diversification.

The future: the Basque Country needs to innovate

Looking to the future and the need to maintain the Basque economy’s competitive performance, a more profound analysis of the factors affecting GDP per capita reveals a simple fact: given the current population pyramid, with its high concentration of working-age people (aged 15-64) and relatively small proportion (approximately 15%) of under-15s, the Basque Country needs to prepare for a situation in which competitiveness may be adversely affected by a decline in the labor force. This prospect prompts at least two recommendations. First, population aging makes it even imperative to stimulate innovation and improve productivity in order to maintain and improve Basque competitiveness in the future. Second, immigration policy will have to be adapted to maintain and improve on current levels of competitiveness in the future. This conclusion coincides with the one reached by the “Déficit de Profesionales” (Labor Shortage) group at Foro de Competitividad Euskadi 2015, whose view of the strategic challenges facing the Basque labor market over the period to 2015 can be accessed at <www.euskadi2015.net>.

On the other hand, in light of our discussion of the competitiveness paradox, it is important to fully understand the mechanisms by which companies learn and innovate. Only then will we be able to
Define indicators that give a true reflection of the innovation that is actually taking place. To define such indicators, therefore, quantitative and qualitative studies of innovation by companies are needed. The report presents the dangers associated with various commonly used indicators. This suggests that caution is needed when setting goals defined in terms of indicator positions. If the agents of competitiveness do not fully understand the real changes required, they may simply improve their positioning relative to the chosen indicators, without achieving any real gain in competitiveness.

**Performance of Basque firms**

Besides the performance of the Basque Country as a whole, the report also analyzes the performance of firms, as key agents of competitiveness. The results of our analysis of the business and financial performance of Basque companies in the period to 2007 are positive. For example:

1) Return on equity of manufacturing companies is above the European average and, after 2007, also above the Spanish average.
2) Apparent borrowing costs and levels of borrowing are lower than in other Spanish regions.
3) Basque companies are also less dependent on short-term financing.
4) The trend in borrowing increased until 2005, when it leveled out and even declined slightly until 2007.
5) Operating profits and return on investments are also good.

In other words, Basque companies have performed well financially in recent years and are comparatively better placed than companies in other regions to cope with the crisis and the uncertainty regarding access to external funding.

As noted in our previous report, Basque companies are relatively small in today’s increasingly globalized economy. Nevertheless, the data in this report shows that the tendency for the average size of Basque companies to decrease has halted (though it is too early to draw definite conclusions, as cyclical factors deriving from economic expansion in recent years may be at work). To overcome this competitive weakness Basque companies have had to enter into cooperation agreements and alliances and participate in consortia with companies from outside the region to gain access to value-added projects, particularly those involving a contribution or transfer of technology.

Another strategy to compensate for the relatively small size of Basque companies is to create groups of companies. This allows firms to exploit synergies in R&D, marketing, internationalization, etc., all of which are important potential sources of competitive advantage in the innovation stage. The Basque Country has progressed in this respect, currently being the Spanish region with the highest percentage of companies that have other companies as shareholders, and also the highest percentage of companies with stakeholdings in other companies. In other words, Basque companies have pursued a policy of creating or participating in groups of companies, so that the Basque Country is now the leading Spanish region as regards the creation of corporate groups. In the innovation-based stage of competition it is important to continue to promote the development of business groups.

As regards the internationalization of the Basque economy, the report analyzes three indicators: export intensity, inward foreign investment and outward foreign investment. Considering that the Basque economy, given its size, cannot afford to ignore foreign tra-
and despite the positive trend in exports until the second half of 2008, when the economic crisis started to bite, we detected a need for a substantial increase in the region’s export intensity. A positive feature, however, if we consider the nature, rather than the quantity, of Basque exports, is that Basque companies have innovated in products and markets and so have evolved toward more complex export scenarios, as the export sophistication index described in the report shows. In the new stage of innovation-based competition it is very important that Basque companies increase the sophistication of their exports.

As regards outward foreign direct investment (FDI), the Basque Country is one of three autonomous communities whose share of total Spanish investments abroad is greater than its share of the Spanish GDP. Detailed analysis of outward FDI shows that for the Basque Country, as for Spain as a whole, investments are targeted mainly at developing countries. The level of investment in developed countries, especially in countries that are not traditional destinations for Spanish foreign investment, and in the BRICs (Brazil, Russia, India and China) is relatively low.

Conversely, the Basque Country’s share of the flow and stock of inward FDI is less than its share of Spanish GDP, which in this case can be considered a weakness. And if the competitiveness of the Basque economy is to be built on increasing use of technology, this weakness needs to be overcome.

As a complement to the above analysis, detailed examination of the kinds of goods and services that Basque companies export and the countries they invest in reveals a need to diversify, in exports and investments, toward countries that demand greater sophistication or technological value-added. This is consistent with Porter’s analysis, which establishes a positive correlation between the sophistication of domestic and foreign demand and the level of technological development.

Our general conclusion is that there are signs that the Basque economy is evolving toward parameters more characteristic of an innovation-based economy, such as increased sophistication of exports, creation of corporate groups and share of outward FDI. Scope for improvement lies in attracting inward FDI, boosting export intensity, diversifying exports and investments to more developed countries and increasing the average size of Basque companies.

To attract foreign capital, the innovation system needs to be made more attractive and the economic, infrastructure-related, social and political factors that make the region less attractive need to be debated and addressed.

All levels of government must make an effort to foster and finance foreign investment by making good use of national and regional resources and possibly also by developing financial instruments specifically for this purpose. In particular, they should provide decisive support for the development of innovative, high technology businesses in the Basque Country and to establish joint ventures between Basque firms and foreign companies. In addition, they need to support investment by Basque companies abroad in both developing countries (with the aim of exploiting low costs or following their customers) and in the more developed economies.

As regards reinforcing export intensity, the report’s message goes beyond purely quantitative considerations. It is not enough merely to export more. Basque companies need to draw a road map toward greater sophistication in the products and services they export. Building on existing competencies, these road maps should help companies gradually evolve toward new, more sophisticated products in which their existing competencies are still a strength, but which are more sophisticated than the ones they export at present. A useful tool for this purpose would be to encourage Basque companies to partner with other
Spanish and foreign companies in consortia, concessions and projects that force them to develop more sophisticated products and processes.

The innovation system

Having analyzed regional and business competitive performance, the report turns to the innovation system and makes a number of recommendations. The first recommendation is to maintain or even increase R&D intensity, as the indicators show that R&D investment is producing good results. To make further progress towards R&D excellence, however, the effectiveness of R&D expenditure needs to be assessed. A special effort is required to promote R&D in universities, as our analysis of R&D investors indicates that universities account for a relatively small percentage of R&D spending. The Basque Country’s relative disadvantage is even more apparent in its share of R&D expenditure by public research bodies, which are poorly represented in the region.

The Basque Country needs to develop elite technology centers, preferably in the context of European and national collaboration agreements, and to encourage Basque universities and technology centers to build closer ties with elite international institutions, to participate in specific programs and excellence projects and to support the presence of technicians in companies.

The second recommendation is to build a consensus, not only between local, regional and national governments but also among private actors, as to the role that each knowledge-producing agent (especially universities and technology centers) has to play in the system. To transform the knowledge generated by these players into business innovations, companies simply must have the capacity to absorb it. Likewise, technology centers and universities must make an effort to understand companies’ technology needs. Another recommendation is to continue to pursue policies aimed at generating the necessary absorption capacity, along the lines of the innovation agendas. The report stresses the need for individual Basque firms to combine their predominantly DUI-based (Doing, Using and Interacting) approach to innovation with more STI-based (Science, Technology and Innovation) innovation activities. Having the right mix of approaches will enhance companies’ innovation capability and prevent them from getting tied to technologies and activities that have become obsolete or that are more vulnerable to competition from emerging countries. Essentially, this means working hard at the “i” of R&D+i, while at the same time putting more effort and efficiency into the “RD.”

Consistent with this logic, another of our findings is that, although sufficient, the Basque Country’s R&D infrastructure could be improved and has several gaps, notably in universities, public research bodies and elite research centers. In line with the Basque innovation model, however, one of the best ways to improve innovation output is by providing the means for the agents of innovation to interact. Our recommendation is based on a simple but potentially very effective mechanism: establishing knowledge cogeneration mechanisms as a complement to existing knowledge generation and transfer systems. This means establishing arrangements that allow company employees to work on projects with university and technology center researchers as a team from start to finish. The mission of the Basque Institute of Competitiveness is precisely to “orchestrate” such arrangements between players.

A final recommendation, this time addressed to policy makers and the knowledge generation subsystem, is to steadily increase the funding available to researchers and the number of PhD holders among R&D staff in firms. This could be done by including internship programs and postdoctoral work experience in companies, or high-level university courses for company scientists to update their knowledge.
To conclude, there are signs that the Basque economy is evolving toward a more innovation-based competitive stage and steps should be taken to manage this transition.

3. Catalysts of the shift towards the new competitive stage: competitive diamonds, clustering, and the frame for political action and institutions for cooperation

The model of competitiveness used by the Institute in this report indicates that the following critical factors of competitiveness need to be more widely and fully understood and made more efficient: (1) the competitive diamond, (2) clustering and (3) the framework for political action and institutions for cooperation. By analyzing these factors the report looks at the way the Basque Country is advancing toward the new stage of innovation-based competition. This provides a more dynamic view of the process.

According to the model, one of the characteristics of the innovation-based competitive stage is a systemic view, i.e. an approach that sees the agents and their interactions as a system, and which seeks to understand each agent individually and also the complexity of their interactions. At this stage of competition it is no longer enough for each agent (company, government agency or collaboration or research organization) to understand its own situation. To build a common vision that leads to joint strategies and shared commitments, agents need tools that enable them to see themselves as part of a system, understand the roles of the other participants and visualize their interactions. This systemic view is very difficult to measure quantitatively, but it is crucial in order to progress toward the new stage.

The competitive diamond

Our first report helped establish this systemic view by analyzing the Basque economy in terms of Porter’s diamond model, identifying the various building blocks of regional competitiveness and analyzing their interactions. In this second report we further develop the systemic view by analyzing the competitive diamond for the different types of counties (comarcas) within the Basque Country (metropolitan counties, medium-technology industrial clusters, advanced industrial clusters, small rural counties and small industrial counties). Our main conclusion is that there are clear signs that the systemic view is starting to be adopted in county planning processes and that it is leading to some local clustering that holds promise for improvements on Basque competitiveness.

These trends have already produced results in terms of delivering Basque government and provincial government innovation policies at the local level. This indicates not only that the systemic view is taking hold at the county level, but also that synergies are being exploited between different levels of government in the Basque Country. We have no quantitative data, but in some of the counties we analyzed we found signs that clustering is affecting attitudes in companies, especially the smaller ones, about the need to develop more sophisticated strategies. The county thus appears to be the ideal level at which small companies can adapt to the general trend of globalized industries.

Nevertheless, we also found that the strategies adopted in relation to the new competitive stage varied across the Basque Country. Government policy and research therefore needs to be designed to cover the requirements of the main types of counties identified in the report. Given the relative demographic, social, political and institutional predominance of cities, a complementary challenge is to reinforce government policy and research on cities, their competitive strategies and their role as agents of innovation.

Need for systemic view to advance toward the new innovation stage

Local clusters benefit small firms

Explore the strategic role of the system of cities
In the report, we make recommendations to government based on the results of our analysis of the counties’ competitive diamonds. The first recommendation is aimed at local councils and all government agencies that interact with them. Though influenced by European and national policies, competitiveness and innovation policy in the Basque Country has traditionally been seen as the responsibility of the Basque regional government and the three provincial councils. In the new competitive stage, however, all levels of government have a role to play. Many town and city councils have delegated economic promotion issues to county development agencies (agencias de desarrollo comarcal), which produce their own assessments and action plans. Although all these plans are subject to political decision making at some stage, the level of policy maker involvement varies considerably. Yet these projects will be unworkable unless local policy makers are directly involved. Accordingly, our first recommendation to local and regional authorities is that municipal policy makers should be involved in making assessments and formulating action plans for industrial clustering. Municipal and county politicians must rise above their traditional role of delivering local services for local people and take an active role in economic development.

As regards the second recommendation to government, the high level of institutional development achieved to date needs to be acknowledged. Local and regional authorities have created a variety of institutions for collaboration to bring private and public sector actors together to carry out common projects. Besides assessing the efficiency and functions of the various agencies, it is important to establish coordination mechanisms for what is known as the multilevel approach to policy. Our recommendation is to maintain spaces for dialogue between different levels of government to ensure consistency in multilevel initiatives.

Third, in the context of the restructuring undertaken in response to the current economic crisis, regional and local governments are advised to monitor the political and economic developments emanating from Spanish central government and the European Union. The competitiveness of the Basque Country may be significantly affected by decisions taken at these higher levels concerning, for example, the restructuring of the automotive industry, renewable energy or the location of elite international technology centers.

To sum up, there are signs that over the next few years, in the context of the Basque model of competitiveness, county development agencies could play a central role in cooperation and clustering at local level in the Basque Country. This effort to drive decision making down to lower levels must be combined with measures to coordinate local decision making with the policies and initiatives of central government and the European Union. Because county development agencies play such a central role, the recommendations given in the previous paragraphs concern them directly.

The following recommendations are aimed specifically at selectively strengthening institutions for cooperation, particularly ones like the county development agencies.

The first recommendation is to develop the competencies of agency teams, so that they are properly able to manage the processes associated with the new competitive stage, including the clustering process. The agency management and technical teams need to deliver a range of services, while at the same time mobilizing county-level actors and exercising shared political and economic leadership. Doing this requires specific knowledge, skills and attitudes, without which the type of relational leadership the networks require is unlikely to develop.
Another catalyst of the transition toward innovation-based competition is clustering, mentioned earlier in the context of our competitive diamonds analysis. Clustering involves creating areas of public-private cooperation and entails generating a systemic view and policies designed to satisfy the requirements of the new competitive stage. Clustering creates points of confluence between companies throughout the value chain, innovation agents (companies, universities, technology centers, etc.) and the varied levels of government that define micro and macroeconomic policies affecting the competitive dynamic in the long run. The Basque government’s cluster policy is an example of this type of process. It is important to distinguish between a cluster (which is a natural phenomenon arising from economic relationships within the value chain or from other horizontal factors –knowledge, technology, etc. – and existing independently of whether or not there is a cluster policy) and cluster associations (which are institutions set up to help actual clusters exploit synergies and realize their full potential, thus enhancing their competitiveness). Cluster associations are therefore a response by public institutions to the existence of industrial clusters.

Data presented in the report show, for the first time, the relative weight in the Basque economy of businesses in cluster associations created under the Basque government’s cluster policy. Such companies account for 28% of employment and 32% of industrial added value and have competitiveness scores above the average for Basque companies as a whole. Cluster association member companies have higher sales growth, are more internationalized and have better innovation indicators than the rest. This shows that the Basque government’s cluster policy has brought together a very substantial proportion of the most competitive Basque companies, which again is a sign of progress toward the new competitive stage. Cluster formation is slow because it requires a major change of mindset from the participants. The degree of participation varies between companies, with small firms being least involved. To accelerate the process, companies must assimilate the cluster philosophy.

The first recommendation in our report derives from our assessment of the work done by cluster associations and the relative importance of their member companies. Our analysis indicates that clustering plays an important role and has great potential for sustaining the Basque competitiveness policy. The Institute has undertaken various studies to analyze the attitude of the actors affected by cluster policy. Our conclusion is that cluster policy should be maintained, as it affects factors such as social capital and joint interests, which are crucial for generating the interactions between agents that the innovation-based competitive stage requires.

The second recommendation, also directed at the Basque government, is to extend the cluster policy to other government departments or levels, which could also formulate policies to stimulate clustering. Cluster policy could then become a horizontal policy involving not only the government departments directly concerned, such as Industry and Transport, but also others, such as Education, thus helping to intensify public-private collaboration. This recommendation is based both on our cluster detection analysis and on the lessons learned from our study of the historical origins of clusters.

Cluster development needs to be understood as a dynamic process, so government policy should be permanently open to new types of clustering, mergers and collaborations between clusters and, where necessary, dissolution of clusters that prove inefficient. Our analysis suggests that

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**Clusters**

Strengthen and deploy the cluster philosophy

The cluster policy has brought together a substantial proportion of the most competitive Basque companies

Continue to implement cluster policy

Extend the cluster policy horizontally to other departments and other levels of government
clusters currently being developed and promoted are still highly relevant to the Basque Country, notably the fast-developing Energy, Aerospace and Marine Equipment clusters. In the transition to innovation-based competition, the productive structure of the Basque Country needs to evolve toward higher value added activities. Cluster policy can help drive the transition by being ready to support clustering processes in existing but still unclustered businesses and in emerging new business activities.

With respect to cluster associations, closer cooperation between association members is crucial. This requires that members become more fully convinced of the advantages of cooperation. This is our first recommendation to cluster associations: take steps to reinforce the cluster philosophy and implement projects of common interest. Training and participatory evaluation, both of which are already under way, should play an important role here.

Another recommendation (although interesting initiatives in this respect have already been undertaken) is that clusters should seek opportunities to work with other clusters. Cooperation can take place on different levels. First, clusters can cooperate horizontally, by exploiting synergies and sharing competencies and technologies, or even by jointly developing new technologies and competencies and engaging in knowledge-sharing activities. Second, clusters can collaborate at a supraregional level, i.e. clusters in the Basque Country with clusters elsewhere, exploiting synergies between different stages of each cluster’s value chain throughout Spain and the rest of the world. Third, collaboration between networks and clusters at an intraregional or local level can play a crucial role in boosting the capacity of small businesses to absorb innovation and expand internationally.

The Institute’s task is to act as facilitator in these processes. In fact, these meeting points for companies, public agencies and other innovation institutions are ideal for enhancing Basque competitiveness through the use of action-oriented research methods aimed at achieving synergies of excellence between research, teaching and interaction.

Despite the efforts of government and institutions for cooperation, no progress will be made unless companies appreciate the usefulness of clustering and believe in the potential of cooperation. Our main recommendation, therefore, targets companies, which should approach clustering with a willingness to understand the cluster philosophy and with an open mind in the search for new opportunities. Changing mindsets takes time, but it can be done through training activities such as those offered by the Institute (the Microeconomics of Competitiveness course) and others designed to raise awareness of the advantages of cooperation. This training effort should be ongoing and adapted to meet the real needs of Basque companies. One example is the training programs currently being implemented specifically for this purpose in China, which in the future could be started in other countries.
What we are recommending is not indiscriminate collaboration. Our analysis of the cluster legacy, in which we consider the historical origins of various clusters and how the clusters have affected competitiveness, shows that the goal must be to strike the right balance between competition and cooperation. This is an ability companies must develop: the ability to judge the mix of cooperation and competition that is most appropriate at any given time and that will strengthen companies’ individual competitive capacity. Whether clustering becomes a distinctive feature of the new competitive stage or not will depend on the ability of companies to internalize this principle and cooperate on projects they consider strategic.

Finally, the current economic crisis will redefine the relative importance of each economic activity and each actor in the global economy. The Institute’s mission is to understand the underlying dynamic and advise the various actors in their pursuit of a synergy of excellence between research, teaching and interaction.

**Framework for political action and governance**

As we have seen, the Basque Country has an extensive network of agents that influence the design and execution of regional industrial and competitiveness policies. Two other critical factors in our model of competitiveness are the framework for political and government action and the institutions for cooperation that drive cooperation in and between areas. In our report we analyze whether this framework and the organizations involved are in fact assimilating and putting into practice new (more participatory and more permeable) forms of governance through institutions for cooperation. Movements in this direction would be a sign that they are adapting to the requirements of the innovation-driven stage, as the combination of R&D+i for this stage requires an open concept of innovation, i.e. one in which innovation does not depend exclusively on elites but demands the broadest possible involvement of all concerned. Our conclusion is that recent years have seen intense efforts to create new structures (such as Inno-basque, Foro de Competitividad 2015, Gipuzkoa Berritzen, etc.) for this new mode of governance.

So there are signs of progress in the right direction. However, the next few years will decide whether the public and private agents of competitiveness involved in these institutions are efficient enough, there is no duplication, and the agents are capable of articulating processes and projects to flesh out these institutional structures. Otherwise, a rationalization of the network of institutions will be inevitable.

The report analyzes the role that research could play in supporting these processes. One of its recommendations is that researchers be trained in “action research.” Action research is research carried out with the participation of the agents concerned, so as to cogenerate new knowledge that leads directly to action and actually enriches research. This will strengthen the balance between research, action and participation in the cooperation networks and platforms discussed in the report.

A second recommendation, directly related to the previous one, is that researchers and consultants be involved in designing and implementing these knowledge cogeneration processes. They could thus act as bridges between cutting-edge knowledge in the various competitiveness-related research disciplines and the agents of competitiveness (companies, regional and local authorities, cluster associations, development agencies, technology centers etc.) in the Basque Country.

The report also contains recommendations directly targeting institutions for cooperation. Just as research needs researchers who have been trained to be more action-oriented, collaboration net-
works need leaders trained in relational leadership. Relational leaders acknowledge that they do not know everything and are skilled at building relationships and creating spaces for the exchange of ideas. Although they may often seem weak (because they have to listen, be patient, give time to others and be willing to accept their proposals), they can in fact be very influential. Rather than being above everyone else, they are in the middle; they do not tell others what to do, but articulate and drive processes to ensure that things get done. They are not executive leaders; their role is essentially as brokers and promoters. They do not rely on plans, but on something much more important: a shared project. In other words, they work with a shared understanding of what needs to be done and seek bottom-line agreement on how to do it. Above all, they must be effective in achieving objectives and efficient in managing resources. Relational leaders build trust and empower the weaker players.

Another recommendation for these networks is that they should facilitate genuine participation by the agents, which means that private agents must assume real responsibilities and the authorities must grant them space to exercise real power. This is a difficult process, but without real participation it will be impossible to establish a shared vision and translate knowledge into actions and projects. Our recommendation is to form discussion and working groups made up of the people most directly concerned, regardless of their institutional affiliation, as they will be able to contribute the knowledge generated in their daily activities.

To improve the effectiveness and efficiency of the institutional structures through which competitiveness and innovation policy is articulated, the report also offers recommendations to government agencies entrusted with the task of promoting these networks and participating in them. They must ensure that the networks correctly define the problems they address, that the people and institutions involved in knowledge cogeneration are the ones that deal with the problems first hand, and that the people who are learning are the ones with the power to decide on the solutions to the problems. Once this is established, network members should be given the time and scope to build trust, on the understanding that these are long-term processes which do not yield immediate results and which are best tackled collectively.

In short, participation and cooperation are challenges for all involved, whether public authorities or private companies. The purpose of the change is to allow agents with no previous say to take part in decision processes. For companies, such participation often demands time and resources, and management is not always convinced of the benefits of knowledge cogeneration and cooperation. To exploit the potential of these networks, participants need the right competencies, knowledge, skills and attitudes. Our recommendation to all participants, therefore, is to invest in acquiring the necessary competencies, which are the same competencies that will later enable them to put the knowledge generated in these networks to work in companies, so as to improve the competitiveness of individual firms and of the Basque economy as a whole.

4. Conclusions: improving competitiveness in a time of crisis

As the report makes clear, in the context of a far-reaching restructuring of its traditional industry undertaken three decades ago, the Basque Country chose to restructure its economy by adapting traditional industries to the demands of an open economy and also by diversifying toward
advanced and emerging industrial activities. This transformation was carried out on the basis of the existing industrial demand and production environment and was accompanied by a significant growth in knowledge-intensive business services.

Despite industrial renewal and transformation having been relatively successful, it remains unfinished. Our analysis of the types of European regions shows that the Basque economy needs to evolve from its current location in the group of “central regions with medium prosperity and technological sophistication” (which includes Aquitaine in France, Trento and Tuscany in Italy, Wallonia in Belgium and Catalonia in Spain) toward a group of “regions with high financial and technological capacity” with higher demands and higher standards (which includes Emilia-Romagna in Italy, Lower Saxony in Germany and Limburg in the Netherlands). In terms of Porter’s model (Porter, 1998), the Basque economy is in transition from a competitive stage focused on improving efficiency through investment to a stage focused on improving productivity through innovation, sustainability (eco-innovating) and the development of unique value propositions.

Like the one thirty years ago, the transition will have to be made in the middle of a serious crisis. Fortunately, growth in the Basque Country in recent years has been less dependent on the property industry and low-skilled immigrant labor than the rest of Spain. Although facing different challenges from the Spanish economy as a whole, the Basque regional economy nevertheless has to meet challenges on two fronts: first, the challenges of transforming its growth model and transitioning to a higher stage of competitive development; second, the challenges of dealing with the crisis currently affecting the Spanish and world economies, to which the Basque economy is closely connected.

On the first point, certain indicators show that the existing growth model is exhausted. The Basque country’s strong GDP figures are out of synch with its relatively poor innovation performance (R&D spending, patents, exports in high-technology industries, etc.). This “paradox of competitiveness,” analyzed in our report, highlights the need to search for more appropriate indicators of innovation, in coordination with other relevant institutions.

High employment rates prior to the current recession, combined with the ageing of the Basque population, show that regional growth in the future can no longer come from “getting more people into work.” At the same time, the slowdown in the growth of productivity rates since the late nineties, the composition and destination of Basque exports, the limited penetration of Basque companies in technologically more demanding markets, the region’s limited foreign investment capacity and the shortage of highly qualified human resources indicate that what is needed is an increase in innovation.

Much of the Basque Country’s competitive and innovative success to date (what we have termed the Basque model of competitiveness) was the result of combining competition with cooperation and of close collaboration and networking between public and private sectors. A case in point is clustering, which has taken place with the support of the Basque government. As pointed out earlier, however, the shift to a higher stage of competitive development requires an advance in other forms of cooperation and innovation.

Besides cooperating with other members of the cluster or the regional innovation system, companies and other actors in the Basque Country need increasingly to absorb knowledge from, and become integrated in, international networks, so that the “local buzz” is enriched and strengthened with the “global pipeline.”

The experience-based model of innovation and learning (the DUI model: Doing, Using and Interacting), which has been the main driver of competitiveness at Basque firms, must be complemented by more participatory, learning-intensive forms of work organization.

Without abandoning the DUI model (which, given the region’s sectoral and business structure, will continue to dominate and characterize the Basque model), the Basque economy must start to promote science and technology-based modes of innovation and learning (STI model), where it is still weak in comparison to the regions of Northern and Central Europe, although not where other
Spanish regions are concerned. In particular, it needs to improve the efficiency of its innovation system and correct the unfavorable ratio of technology output (e.g., patents) to technology input (e.g., R&D spending).

Given its production specialization and its dependence on the Spanish and European markets (and on industries that are suffering a sharp contraction in those markets, notably residential construction and the automotive industry), the Basque Country is starting to feel the effects of the current crisis, albeit after a delay. In view of these (very likely structural) factors that have immediate effects, our recommendation is to build on the strengths of the Basque productive structure and consolidate the region’s innovation system, especially its well developed capacity for cooperation and the relatively efficient system of public-private collaboration in policy making. This should allow the Basque Country to build competitive strengths or advantages for the future.

Fortunately, Basque companies in general approach the crisis from a relatively strong position: apart from being less involved in the construction industry, their levels of borrowing are lower than those of other Spanish and European companies and the proportion belonging to corporate groups is relatively higher, which gives them greater financial strength in the face of present adversity.

At the same time, beyond the limited penetration of Basque companies in the technologically most demanding markets, the fact that a significant number of them have successfully established themselves in foreign markets and have internationalized their production may help overcome the economic stagnation affecting the Spanish and European markets in particular.

To the structural challenges already facing the Basque economy, the world economic crisis adds the impact of certain external factors that require immediate response. The Basque Institute of Competitiveness is convinced that the responses chosen must not contradict, or even be chosen without taking into account, what is required in order to meet the more structural challenges of the Basque economy. The crisis is a call to action and, in that sense, an opportunity to take a decisive step forward, toward a new competitive stage based on productivity gains achieved by optimizing innovation and sustainability.

This new stage is built on the following vectors:

1. Promoting adequate, efficient R&D and supporting institutions involved in Basque industrial policy and the innovation system.
2. Developing the aspects of innovation that remain underdeveloped in the Basque model of competitiveness, such as marketing, organization, etc. Knowledge agents have a very important role play in this respect.
3. Increasing the size of Basque companies, so that they can take on investment-intensive projects.
4. Developing entrepreneurship, especially technology-based entrepreneurship.
5. Taking decisive steps to internationalize, with the aim of penetrating expanding markets and industries.
6. Attracting foreign know-how and investment;
7. Raising the necessary finance, if necessary by creating new financial instruments for (i) the internationalization of Basque companies, particularly toward technologically more demanding countries and higher value added industries, (ii) feasibility studies for Basque companies seeking to set up abroad, (iii) new value added investments in the Basque Country itself; and (iv) technology-based entrepreneurship.
8. Creating the appropriate institutional structures for political action and cooperation.

At institutional level, competitiveness policy should build on the significant achievements in agent-to-agent cooperation, as in the cluster network. At the same time, the cluster concept needs to be updated and opened up, so as to encourage alliances and joint projects across regions and industries. Cluster associations could be a channel for early detection of trends in industry and for
the design and implementation of private-public agreements and government policies. Speed in capturing knowledge and designing and implementing policies is particularly important in today’s uncertain environment. Cluster associations and other knowledge-generating and knowledge-mediating bodies could play an important role here.

Given its network of agents and their knowledge and competencies, the Basque Country clearly has enormous potential for learning and innovation, provided it activates the mechanisms for agents of competitiveness to learn from the experience of others. Our last two recommendations, which are key for the transition to innovation-based competition, concern these learning and innovation processes, which directly affect competitiveness. The first is that agents’ efforts to define and implement the shared strategy need to be integrated and coordinated. Over the next few years, local and regional authorities, companies, universities, technology centers, institutions for collaboration and others must establish a clear joint strategy as a basis for coordinating their efforts. The second recommendation is to ensure that focused institutions for cooperation are in place and that the necessary facilitating instruments are available. The Basque Country has a rich fabric of institutions for cooperation. The major challenge now is to ensure that they are capable of driving efficient knowledge cogeneration processes targeted directly at innovation.

In any case, given the extraordinary scale of the challenges, the tenacity of Basque entrepreneurs over the last thirty years is a good sign: they have shown great resilience in extremely difficult economic and political circumstances and a powerful commitment to Basque society.