The Innovative Actions Programme and policy learning: lessons from a Southern European region

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This paper is about the process of policy learning that, in the framework of the ERDF Regional Innovative Actions Programme, took place in the Centro region. It emphasises the shift from a linear approach towards an interactive mode of promoting regional innovation capacity and the resulting contribution to build up region's institutional capacity. The paper accounts for the background, change threads and outcomes of this shift.

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Introduction

The linear model of innovation, depicting a one-way flow between basic research, production and marketing, in general is not appropriate to deal with the complexity that characterises innovation. The innovative endeavour requires the capacity to manage new or recombined existing knowledge, which, in turn, implies the ability to engage in interactive processes of learning. Hence, innovation is, in its essence, a complex social and territorially based phenomenon, depending on the institutional and cultural contexts.

Taking this perspective, the roots of the wide interregional gap in terms of innovative capacity existing in the EU can be attributed to differences in institutional capacities to foster and sustain interactive learning arenas, rather than to differences in R&D financial endowments. In lagging regions, there is an innovation paradox between the comparatively greater need to invest in innovative activities and the relatively lower capacity to absorb funding and act purposefully. Accordingly, a linear approach to the promotion of innovation in LFRs, expecting that the reinforcement of R&D funding will automatically enhance the capacity of those regions to innovate, can be sharply counteracted.

This paper is about the process of policy learning that, in the framework of the ERDF Regional Innovative Actions Programme, took place in the Portuguese region of Centro, a southern European LFR. It emphasises the shift from a linear approach towards an interactive mode of promoting regional innovation capacity and the resulting contribution to build up region's institutional capacity. The paper accounts for the background, change threads and outcomes of this shift.

The regional innovation paradox

The recent approaches to socio-economic development emphasise innovation as a key driver of competitiveness in the context of the globalising society. It is argued that innovation depends on intangible resources and processes, namely knowledge, the most strategic resource, and learning, the fundamental process (LUNDVALL, 1992). Accordingly, innovation, regarded as new creations of economic significance requiring brand new pieces of knowledge or new combinations of existing knowledge, relies on

complex feedback mechanisms and interactive relations among science, technology, learning, production, policy and demand (EDQUIST, 1997). These mechanisms and interactive relations evolve in and are shaped by an institutional and cultural context. Hence, the innovative endeavour encloses strong social and territorial dimensions.

A first implication of the social and territorial character of both knowledge accumulation and interactive learning is that it contradicts the linear model of innovation, which reduces innovation to a one-way flow from basic research to applied research and subsequently to the development of new processes and products. As argued by MALECKI (1991), the linear model policy implications are straightforward: "*if the level of R&D is increased* […] *a corresponding increase in technological innovation should follow*", (id., p. 115). Nevertheless, the criticism of the linear model of innovation does not imply the rejection of the view pointing out that elements of the model remain appropriate for explaining particular knowledge flows relevant to feed innovative activities (the recent technological developments in fields such biotechnology provide illustrative examples).

A second and related implication concerns the acknowledgement that the ability to foster the capacity of a given territory to innovate depends not only on the characteristics of individual firms and entrepreneurs, but also on the wider institutional environment in which firms are embedded and with which they interact (COOKE and MORGAN, 1998).

Summing up, the predominant non-linear mode of innovation and its dependence on socially rooted interactive learning processes suggest that to unequal territorial and institutional contexts correspond different capabilities to stimulate innovation-driven competitiveness. Accordingly, when attempting to explain the existing innovation capacity gap among regions, there is the need to look at what GERTLER (2001) calls the distinctive and uneven economic geography of context.

In the European Union, there is plenty of evidence illustrating the wide territorial innovation gap (e.g., EUROPEAN COMMISSION, 2003). The evidence also suggests that this gap risks increasing, as the factors that favour innovation tend to be concentrated in the "*core*" regions (e.g. EUROPEAN COMMISSION, 1996).

Following RODRIGUES *et al* (2001), peripheral economies face significant barriers when attempting to enter the continuous interactive process shaping innovation and to permanently access to formal or informal networks where relevant technological and economic information and know-how is generated, absorbed and exchanged. The

quantitative aspects of human and financial inputs often steer the search for reasoning these inhibiting conditions that mark less favoured regions (LFRs). However, as suggested by LANDABASO (1997), this search should go further beyond: "…*the technology gap in the less developed regions can be seen not just in the differentials in financial and human inputs in the various regional science and technology systems but, most importantly, also in terms of their structural factors related to their productive sector, institutional framework and specific features of the regional demand for innovation*" (id., p. 10).

More importantly, LANDABASO (ibid.) also points out that the basic R&D effort in LFRs is "*less relevant as a source of innovation than in other types of regions*". OUGHTON et al (2002) refer to a regional innovation paradox, resulting from "*the apparent contradiction between the comparatively greater need to spend on innovation in lagging regions and their relatively lower capacity to absorb public funds earmarked for the promotion of innovation and to invest in innovation related activities, compared to more advanced regions*" (id., p. 98).

This argumentative line has obvious policy implications. An innovation policy focused on the quantitative reinforcement of R&D activities in LFRs is a necessary but not sufficient condition to improve the capacity to innovate in that type of regions. Arguably, in lagging regions, innovation policy should be mainly aimed at creating and consolidating the capacity, not only to absorb available innovation funding in purposeful ways, but also to deal with a more basic scarcity, which, recalling the wise words of HIRSCHMAN (1958), stems from the basic deficiency in organisation. Hence, a key question to tackle when developing innovation policies in the context of a LFR is how the region should organise itself in order to create and sustain over time knowledge and relational resources, as well as the capacity of mobilising key agents for action. Revisiting HIRSCHMAN, rather than finding optimal combinations for given resources or factors of production, the emphasis should be placed on "*calling forth and enlisting for development purposes resources and abilities that are hidden, scattered or badly utilized*" (id., p. 5), as "*the fundamental problem of development consists in generating and energizing human action in a certain direction*" (ibid., p. 25).

MORGAN and HENDERSON (2002) would synthesise the argument as the need to unlock institutional inertia. In a similar vein, we view it as the need to build up regional institutional capacities, that is, to foster the webs of relations underpinning collective learning processes and the design and implementation of arenas interlinking

government organisations, the private sector and other relevant regional agents involved in interactive governance and, thus, in collective action (HEALEY et al, 1999).

The acknowledgement of the need for shifting policy targets is mirrored in the evolution of the European Commission's regional innovation policy. In fact, in the last decades, there was a shift from the early emphasis on supply-push policies, mainly aimed at reinforcing the research infrastructure, to the focus on the intangible info-structures that may encourage regions to nurture endogenous innovation capacity (MORGAN, 2004). This change was shaped by the radical departure from a narrow conceptualisation of innovation, close to the linear model, to a broader conception enclosing managerial skills, quality standards and organisational capacity (MORGAN and HENDERSON, 2002). The RIS/RITTS exercise is a good example of this broader conception. As put by MORGAN (2004, p. 881), it "*did not take the region for granted by assuming there was a singular view, on the contrary it was predicated on the belief that there were many competing voices that needed to be refined into a commonly agreed strategy*". In addition, as the same author (id.) argues, innovation was recognised "*for what it really was, namely a collective social endeavour in which many organizations had a role to play, hence the significance it ascribed to social capital that is, a relational infrastructure for collective action which requires trust, voice, reciprocity and a disposition to collaborate for mutually beneficial ends*".

The Innovative Actions Programme is an experimental laboratory for the development of EU's regional policy and its adaptation to new challenges (European Commission, 2001). It draws on the past experience of initiatives such as the RIS/RITTS exercise and aims at deepening and broadening their range. The programme targets LFRs by helping them "*to devise a regional policy which effectively meets the new challenges of the future*" (id., p. 2). Three areas perceived as of strategic importance for LFRs shape the programme's framework:

- regional economies based on knowledge and technological innovation;
- e-EuropeRegio- the information society at the service of regional development;
- regional identity and sustainable development.

This framework, according to the EC (ibid., p. 3), entails an "*opportunity to experiment with more sophisticated ideas which may not usually be dealt in the context of programmes part-financed by the ERDF*", namely by developing and strengthening

synergies between key regional agents and facilitating interregional exchanges and collective learning.

The Innovative Actions Programme in the Centro region

The Centro region is located on the centre of Portugal, bounded on the north by the Norte region, on the west by the Atlantic Ocean, to the south by the Lisboa e Vale do Tejo region and to the east by the border with Spain. According to the last census (2001), the population is approximately 2.4 million inhabitants (about 24 % of total Portuguese population), corresponding to a population density of 84 inhabitants/km^2. There is an asymmetric distribution of population between the relatively dense coastal zones and the sparsely populated interior zones.

The regional economic structure is characterised by a the significant weight of primary (low productivity) activities (approximately 20% of total workforce) and a tertiary sector based on low innovative activities (about 45% of working population). Industry is predominantly based on SMEs belonging to traditional sectors of activity and generally presenting low technological content. The major sectors are metal products engineering, textiles and clothing, wood industry, food processing and non-metallic products industry. There are a number of regional firms and/or sectors presenting high competitive capacity, both at the national and international level (e.g. the mould and special tools industry).

Despite the weaknesses of this picture, one can argue that the region has the potential to follow enhanced development paths. Part of the potential stems from the number and diversity of higher education and other research institutes (e.g. the technological centres), together with the development potential associated to, on the one hand, sectoral diversity, and, on the other hand, the promising signs of emerging high specialised productive agglomerations (e.g. health-related industries, ICT).

The region's GDP is 81% of the national average and 54% of the EU average. There is a significant gap in terms of economic prosperity between the interior and the coastal zones. In relation to the national average, the GDP, within the region, ranges between 93% and 62%. The major economic activities are in fact concentrated along the Atlantic coast, despite the agglomeration of some manufacturing industries in a few cities located in the hinterland.

The Centro region has one of the highest employment rates in Europe (73,1%) and a relatively low unemployment rate (approximately 5,4%, against 7,7% at the national level, according to the most recent available data). The working force has a low level of qualifications, which is often regarded as a major hampering factor of regional economic development. Whilst approximately 67% of the region's working population has 6 or less years of school attainment, the number of workers with a higher education degree represents only 8.7%.

The Innovation Scoreboard (European Commission, 2003) offers a useful perspective on Centro region relative position in terms of innovative capacity. The *Regional Summary Innovation Index* (RSII) ranks the absolute innovation performance of each region. The Revealed *Regional Innovation Summary Index* (RRSII) refers to the relative performance of each region in relation to the EU and to the respective country[1].

Table 1 - Innovation Scoreboard: Centro and the leading EU regions in each country

Region	RSII	RRSII
Stockholm (Sweden)	1.00	1.00
Uusimaa (Finland)	0.95	0.97
Oberbayern (Germany)	0.91	0.95
Noord-Brabant (The Netherlands)	0.80	0.90
Southeast (UK)	0.73	0.87
Île de France (France)	0.64	0.82
Wien (Austria)	0.57	0.79
Southern and Eastern (Ireland)	0.48	0.74
Madrid (Spain)	0.45	0.72
Brussels (Belgium)	0.42	0.71
Lazio (Italy)	0.40	0.63
Attiki (Greece)	0.21	0.61
Lisboa e Vale do Tejo (Portugal)	0.21	0.60
Centro	**0.14**	**0.33**

Source: EC (2003)

As **Table 1** suggests, Centro innovative performance is relatively poor in the context of the EU. The characteristics of the productive fabric, together with administrative and organisational fragmentation, do not favour an innovation-based competitive strategy. Nevertheless, in relation to the nation, Centro ranks second, immediately behind the capital city region, Lisboa e Vale do Tejo (**Table 2**).

[1] For detailed information about the calculation methods of these indexes, see the 2003 European Innovation Scoreboard Technical Paper nr. 3, "*Regional Innovation Performances*".

Table 2- Innovation performance of Portuguese regions (NUTS II)

Region	RSII	RRSII
Lisboa e Vale do Tejo	0.21	0.60
Centro	**0.14**	**0.33**
Alentejo	0.12	0.23
Madeira	0.10	0.14
Norte	0.09	0.23
Açores	0.05	0.03
Algarve	0.03	0.03

Source: EC (2003)

This relative position of Centro within Portugal seems to be related with better performances *vis à vis* the other NUTS II Portuguese regions (excluding Lisboa e Vale do Tejo) in a number of innovation indicators, such as the percentage of population in lifelong learning and public investment in R&D as a percentage of GDP. The balanced geographical distribution of higher education institutes in the region (three universities and six polytechnics) can be associated to this improved position of Centro.

In terms of political and administrative structure Portugal has two levels of government, national and local (apart from Madeira and Azores archipelagos, in which there are elected regional governments). At the regional level, the management of development policies are carried out by decentralised units of the central administration, namely the CCDRs- *Comissões de Coordenação e Desenvolvimento Regional* (Commissions for Coordination and Regional Development), dependent on the National Ministry of Environment and Spatial Planning.

The continental part of the country has five CCDRs, acting in Norte, Centro, Lisboa e Vale do Tejo, Alentejo and Algarve regions. The CCDRs are endowed with administrative and financial autonomy. Their main statutory objective is to implement development policies at the regional level and to support municipalities towards integrated regional development. This governance and policy delivery structure, though decentralised, does not allow for an autonomous design and implementation of policies. Policy areas relevant to the development of a knowledge economy, such as education, business support, inward investment, science and technology, innovation, etc., are defined at the central level. However, the CCDRs, in the most recent years, partly due to the introduction of a new legal framework assigning new functions, are taking a more proactive attitude concerning knowledge-driven development strategies. The development of the ERDF Innovative Actions Programme in Centro can be regarded as part of this more proactive attitude.

Centro region has not benefited from the European RIS and RITTS initiatives. The new ERDF programme has been perceived as an opportunity to fill in this gap. Accordingly, in 2000, a number of regional agents (representing the three universities existing in the region, the regional entrepreneurial association, three technological centres, several not-for-profit R&D organisations, and the R&D unit of the national telecommunications operator), together with the CCDR, built up a bid which would be approved by the EC in December 2001.

The programme made available approximately 3.000 thousand € (about 80% of total investment) to finance a set of projects, under the framework of the three main strategic lines mentioned above, i.e. i) the development of a regional economy based on innovation and knowledge; ii) the development of an information society in the region; and iii) the reinforcement of regional identity and sustainable development. In addition, a transversal measure was defined, aimed at promoting the region's participation in innovation networks, perceived as relevant to gain awareness about experiences and good-practices evolving in other territorial contexts. It is worthwhile mentioning that this transversal measure was included as a result from the effort of some Steering Committee members to convince the other partners (the majority), initially sceptical, of the need for allocating funds directed at mobilising the region for innovation.

These strategic goals were the referential to structure the allocation of funds, as summarised in **Table 3**.

Table 3 – Strategic goals and lines of action

Regional economy based on innovation and knowledge	Information society	Regional identity and sustainable development
Mobilising for innovation	ICT	Valorising industrial waste
Health innovation system	Innovation marketplace	Valorising and managing forest natural resources
New materials	-	-

At the outset, the approach used to allocate available funding was a straightforward translation of the linear model of innovation. In fact, the programme regional management authority asked a small number of science and technology organisations operating in the region to apply for funding, by presenting piecemeal R&D projects. It was expected that those projects, because most of them to be developed in partnership with firms, would generate new processes and/or products able to enter the market.

From the 33 projects presented, 18 have been selected for funding. The allocation methodology, on the one hand, resulted in the concentration of funded projects in a small number of organisations, namely the universities and related R&D institutes, and thus in a small geographical area. In fact, the total number of funded projects was concentrated in only eight organisations, operating mainly in Coimbra and Aveiro, the two main university regional centres (**Table 4**).

Table 4 – The 18 funded projects

Project	Promotor	Investment (total - €)	Location
INOVAC- mobilising the region	CCDR	350.000	-
X-prot	Neurosciences Centre (University of Coimbra)	500.000	Coimbra
New ceramic materials	University of Aveiro	190.860	Aveiro
IPORCENTRO	Pedro Nunes Institute (non-profit organisation)	299.508	Coimbra
New alumina-based materials	University of Aveiro	170.000	Aveiro
SIMOD- health related ICT	University of Aveiro	206.000	Aveiro
Defense Net Appliances	CENTIMFE (moulds technological centre)	185.270	Marinha Grande
CENTURIS	Pedro Nunes Institute (not-for-profit organisation)	123.905	Coimbra
ICT applications (health sectors)	University Beira Interior	288.389	Covilhã
SITE- innovation "marketplace"	CCDR/ University of Aveiro	199.488	-
VALORCENTRO	University of Aveiro	119.126	Aveiro
Economic valorisation of waste (natural rocks)	University of Aveiro	112.500	Aveiro
Economic valorisation of waste (aluminium production)	University of Aveiro	137.325	Aveiro
Economic valorisation of waste (forest products)	University of Aveiro	121.221	Aveiro
Network of excellence *(paper filiere)*	RAIZ (paper industry technological centre)	282.494	Aveiro
Forest products waste management	University of Aveiro	76.509	Aveiro
New materials (from forest products)	RAIZ (paper industry technological centre)	150.460	Aveiro
Energy (biomass)	CBPE (not-for-profit organisation)	117.942	Coimbra
TOTAL	-	**3.630.997**	-

The geographical concentration of supported initiatives did not reflect the socio-economic diversity of the region, neglecting namely the innovation potential, as well the development needs, of the interior areas. The outcome of organisational concentration was that a number of key innovation agents, such as, for instance, the regional

polytechnics or the municipalities, were overlooked in this initial stage of the programme. In addition, the initial approach, because project-based, lacked an overall innovation strategy, which waned the coveted catalytic element to foster a culture of innovation throughout the region.

Nevertheless, due to the high quality of most of funded R&D projects (e.g. the X-PROT project, aimed at developing recombinant proteins, has been distinguished by the European Regional Innovation Award[2]), the programme confirmed the perception that the linear model, in some specific domains and/or initiatives, can be still relevant. It has also revealed to be an important asset to give credit and visibility to development options new to the region and to assert an array of perspectives of dynamic regional agents about the promotion of innovation. The first steps were given in discussing the regional innovation system, gathering relevant regional actors to share experiences, debate ideas and visions about the regional future.

However, the restricted number of agents involved in this debate was hampering the programme's capacity to mobilise the region, as a whole, for innovation. There was the need to bring in other regional agents and, simultaneously, stimulate new guiding frames of reference, able to prompt a widely shared vision on the regional future. This need was lively discussed within the programme's Steering Committee, but the linear approach to innovation, preferred by the programme management authority (as well as by the majority of the Committee's members), has prevailed.

Changing the policy paradigm…

The decisive turning point came with the nomination of a new CCDR's management board in 2003. The new management team, - namely two academics who entered the board -, was familiar to the most recent innovation-related theoretical developments and able to knit together various theory and conceptual strands, such as the systemic approaches to regional innovation, territorial strategic planning, the triple helix of university-industry-government relationships, and so on.

The conjugation of theoretical knowledge and political legitimacy was a necessary condition to change the policy paradigm. However, the full conditions to implement

[2] For detailed information, see http://www.x-prot.com.

change would be provided by the flexibility of the transversal measure mentioned above, which, in terms of the allocated funds, had remained untouched (perhaps signalling the linear and project-based focus of the former management team). Taken together, these two conditions allowed for a significant turn in the direction hitherto followed by the programme. Drawing on the synergetic seeds left by the initial stage, as well as on the quality of the funded R&D projects, the new management team has redirected the focus by targeting the need for extending the initiative to an enlarged number of regional innovation agents and creating a mobilising frame of reference. It has ignited a policy learning process supported by a theory-based action programme.

The perceived need for changing the paradigm guiding the programme and the acknowledgement that a learning process should be put in motion in order to succeed, led to the design of a coherent *step-by-step* methodology based on four intertwined instrumental initiatives: i) the valorisation and evaluation of results; ii) the extension of the social basis; iii) the process of learning with/from other experiences; and iv) the wider dissemination effort.

"Harmonising" the view on innovation: the initial steps…

The work aimed at valorising the programme results reflected an attempt to go beyond a mere evaluative stance. The 18 funded projects have been analysed to take stock of achieved developments, aiming, on the one hand, to devise opportunities for valorising the outcomes, and, on the other hand, to identify technological domains relevant to the regional productive fabric able to be enhanced by a closer interaction between firms and the science and technology system. Accordingly, the analytical emphasis was twofold. Firstly, it enclosed a learning process about hampering factors and good practices evidenced by the projects, in a way that lessons about how to improve the interaction between regional research and production could be drawn. Secondly, it comprised an effort to devise the matching potential between the regional technology supply and demand.

The scope of the initiative can, however, be extended further beyond. In fact, it was designed according to the aim of contributing to foster inter-organisational contacts and to create an initial focus group, presenting a "*harmonised*" view on innovation, both in conceptual and practical terms. The three teams (belonging to two universities and one polytechnic) entrusted with the development of the valorisation studies composed this

first focus group. It was, in short, a first step to enlarge the number of innovation agents speaking the same language and sharing views on how promote the regional innovation capacity.

In parallel, the CCDR endeavoured in creating an innovation specialised team within the organisation. This was a significant organisational innovation which, on the one hand, reflected the attempt to guarantee the skills and competences needed to cope with the challenges associated to the changing policy paradigm, and, on the other hand, contributed to make explicit, both internally and externally, the purpose to look at the region's development path in novel ways.

Regular meetings between the members of the focus group and the CCDR's team, as well as the remote exchange of information (e.g. the draft versions of the valorisation studies were distributed by all the teams involved), allowed for a high level of interaction which, by providing an open and lively discussion of preliminary results, nourished a process of interactive learning that would be central to the following stages. At the CCDR level, the "innovation team" discussed frequently the evolution of this first change step, generating and disseminating within the organisation new knowledge about the region.

Enlarging the social basis: the "G14"

The interactive dynamics put in motion during the previous stage would be enlarged to a representative pool of regional key innovation agents. The "*G14*", as soon the enlarged group would be labelled, brought together representatives of the whole higher education system (three universities and six polytechnics), the four technological centres (operating in textiles and clothing, ceramic and glass, moulds and leather industries), and the regional chamber of commerce and industry (the *CEC- Conselho Empresarial do Centro*, Centro's Entrepreneurial Council). The emphasis was placed on the mobilisation of the science and technology system to engage in pursuing the coherent organisational forms necessary to enable its elements to purposefully assume new functions in the promotion of regional innovation.

The quantitative aim of augmenting the number of partners involved mirrored the qualitative goal of spreading a common language and a shared perception about innovation. In short, the issue at stake was to induce new dynamics of inter-institutional engagement, particularly within the science and technology system, configuring a

learning process directed at gaining knowledge about, on the one hand, both the potential and the difficulties associated with the promotion of innovation in the region, and, on the other hand, the existing innovation enhancing opportunities and the challenges of structuring programmatic lines and efficient mechanisms to allocate resources for taking advantage of those opportunities. One can argue that the learning effort was a first attempt to know more about how the region should organise itself in order to improve its innovative performance.

The "*G14*" met regularly and its members exchanged information frequently. This interaction has been of crucial importance to discuss ambiguities and misunderstandings that, as one could expect in brand new institutional dynamics, emerged along the process, as well as to refine the messages to be transmitted in wider arenas of dissemination.

Learning with/from other experiences: visiting Tampere

The third step was designed bearing in mind, firstly, the further enlargement of the number of regional innovation agents involved in the ongoing learning process, and secondly, the need for bringing some sort of legimitation to the shifting policy options. Accordingly, the "*G14*" members, added by five regional entrepreneurs, the mayors of five municipalities and the CCDR's "innovation team" composed a delegation, of approximately 30 people, that would travel to Tampere.

Why Tampere? On the one hand, there were previous collaborations between one of the "*G14*"'s universities and one of Tampere's universities, that is, the visit "*logistics*" were easier to be put in place. On the other hand, and more importantly, there was previous knowledge indicating that Tampere had followed a development trajectory providing an illustrative example of a successful transition from a traditional economy into a knowledge-based economy.

The visit has been carefully prepared under the framework provided by three major questions whose answers the Tampere case could help finding: first, how the science and technology can be mobilised to act as innovation resource; second, how did Tampere organise itself in its knowledge-driven development endeavour; third, what was the nature of public policy developments sustaining that endeavour. Previously to the departure, relevant information about Tampere (e.g. scientific papers on the city history and development path, brochures, etc.) was prepared and distributed among the

participants, in order to help them focalizing the learning process on the factors that nourished change, such, as, for instance, the three-stage evolution of the *Hermia* science park management philosophy.

Already in Tampere, the Portuguese attendance has visited the two science parks (*Hermia* and *Finn-Medi*) and contacted some of their management members, as well as top representatives of the Pirkanmaa Regional Council, the Tampere City Council, the e-Tampere programme, Professia Oy, high-tech firms, as well as academic researchers. The broad range and diversity of perspectives conveyed a clear picture about the policies and programmes which are sustaining Tampere's development, as well as about the institutional conditions and "*practicalities*" of implementation. In addition, the central role played by the regional science and technology system in fostering a knowledge-based economy in Tampere has been purposefully evidenced. The same can be said about efficient ways of linking the regional, national and global markets and policy arenas.

One can argue that the aims pursued by the visit to Tampere were fully achieved. Besides an additional step to enlarge the social basis and to legitimate the effort to change, it has contributed to consolidate judgements about feasible ways of translating innovation theoretical and conceptual inputs into practice. It has also reinforced the perception, namely of the local government representatives, that municipalities, a crucial government layer in the dual Portuguese power structure, should endeavour in hitherto quite unexplored policy areas, namely innovation promotion, and participate in expanded interactive learning arenas. One of the participant municipalities is presently developing a local innovation strategic plan, - an innovation in itself at the municipal level -, to be delivered by the University of Aveiro. The preliminary arrangements were made in the hall of *Hermia*'s administration building…

Widening the dissemination…

The final step was aimed at broadening the dissemination of the "*harmonised*" view on innovation gradually constructed along the learning process. It has also opened up the opportunity to raise the awareness of the challenges inherent to the European Framework Programme for the period 2007-2013. A widely participated one-day seminar was held in the CCDR. Experts in national and European regional policy and

representatives of the National Innovation Agency, among other speakers, gave a set of presentations converging into three basic messages:

- Innovation is currently important for regional development and will be fundamental in the upcoming period of 2007-2013;
- There is a plethora of policy and programmatic instruments aimed at supporting the innovative endeavour;
- The region has to organise itself in order to take full advantage of those instruments and succeed in the transition to a knowledge-driven economy.

The experience developed under the framework of the Centro's Innovative Actions Programme, presented by some member of the "*G14*", was added by the outcomes achieved by similar efforts carried out in other Portuguese regions. The emphasis was placed on the lessons to be drawn from this sort of regional experimentalism approach, perceived as relevant to induce institutional change and endow regions with the ingredients that enable them to reinforce and sustain their competitive capacity in the globalising economy.

In brief, the seminar helped to spread a new perspective on regional innovation, i.e. a new frame of reference for action, and provided useful hints to open new ways of public policy-making and delivery.

Concluding remarks

This paper described a policy learning process carried out in the context of a LFR under the framework of a European programme aimed at promoting regional innovation capacity, based on a shift from a linear to an interactive paradigm. The change dynamics transformed an initiative which, at the outset, involved a few number of agents and relied on the expectations of a straightforward flow between research and the introduction of new products and/or processes in the market, into an opportunity to foster enlarged interactive learning networks and create new frames of reference for acting in the promotion of the regional innovation capacity. It was, in essence, a process of building up the regional institutional capacity for engaging in collective action.

The paper shown that, besides the flexibility of the programme funding structure, an essential condition for change to occur was the leadership assumed by academics who held management positions in the regional authority and were familiar with a variety of recent theoretical and conceptual insights about innovation. This familiarity endorsed

the perception of the need for changing at a first stance, and, subsequently, for engaging in interactive learning. It has also conveyed a solid support to a theory-led action programme, converging in a purposefully designed methodology that gave rise to four instrumental initiatives which, gradually, would contribute to enlarge the social basis of the programme and, because facilitating networking and learning, produce new knowledge to outline new frames of reference. In addition, a legitimating dimension, concerning the effort to link theory and practice, was well present in these instrumental initiatives.

The shift in policy paradigm opened up the opportunity to foster institutional and organisational change, as well illustrated by the regional authority itself, by attempting to develop internal competences specific to innovation promotion, or by the science and technology organisations, by endeavouring in the creation of new internal arrangements directed at improving their relationship with regional industry.

In addition, the lessons drawn from and the institutional dynamics created by the learning process provided new grounds for the design of subsequent regional development policies and the strategic positioning of the region *vis à vis* the challenges rose by the European Framework Programme 2007-2013. It has also informed the construction of a bid to the second round of the ERDF Innovative Actions Programme, presented by the CCDR in May 2005, in which the need to cope with the institutional and economic diversity of the region is clearly acknowledged.

During the summer of 2005, a new management board has arrived to the CCDR. At the moment, there is no available information about how the new team will tackle the issue of promoting innovation in the region or how it will take advantage of the institutional dynamics left by the initiatives described in this paper. Bearing in mind that there was not enough time to build up the institutional threshold able to sustain, independently of political changes, the dynamics stemming from the learning process, the only possible remark to be done is… let's wait and see.

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