

Private Sector Interaction in the Decision Making Processes of Public Research Policies

Country Profile: Italy

1. Political, institutional and economic framework and important actors

With an R&D intensity of 1.14% of GDP in 2003¹, Italy's investment in R&D is low in comparison with the average of OECD and EU countries and lags considerably behind the Barcelona target. The overall R&D investment per capita is 305.2 (current PPP, 2002) while it is 701.8 at OECD and 449.3 at EU-25 level². The main contribution to the overall R&D funding comes from Government (GERD/Gov was 50.8% in 1996, last year available for Italy, while it was 32.1% at OECD and 38.1% at EU level)³. The GERD performed by industry is lower than the OECD and EU average (2002): 48.3% in Italy, 67.8% at OECD and 63.4 at EU-25 level. The percentage of R&D performed and financed by industry on GDP in 2002 in Italy was 0.56, less than half of OECD (1.52) and EU-25 (1.15).

Figure 1 depicts the structure of the National Science and Innovation System.

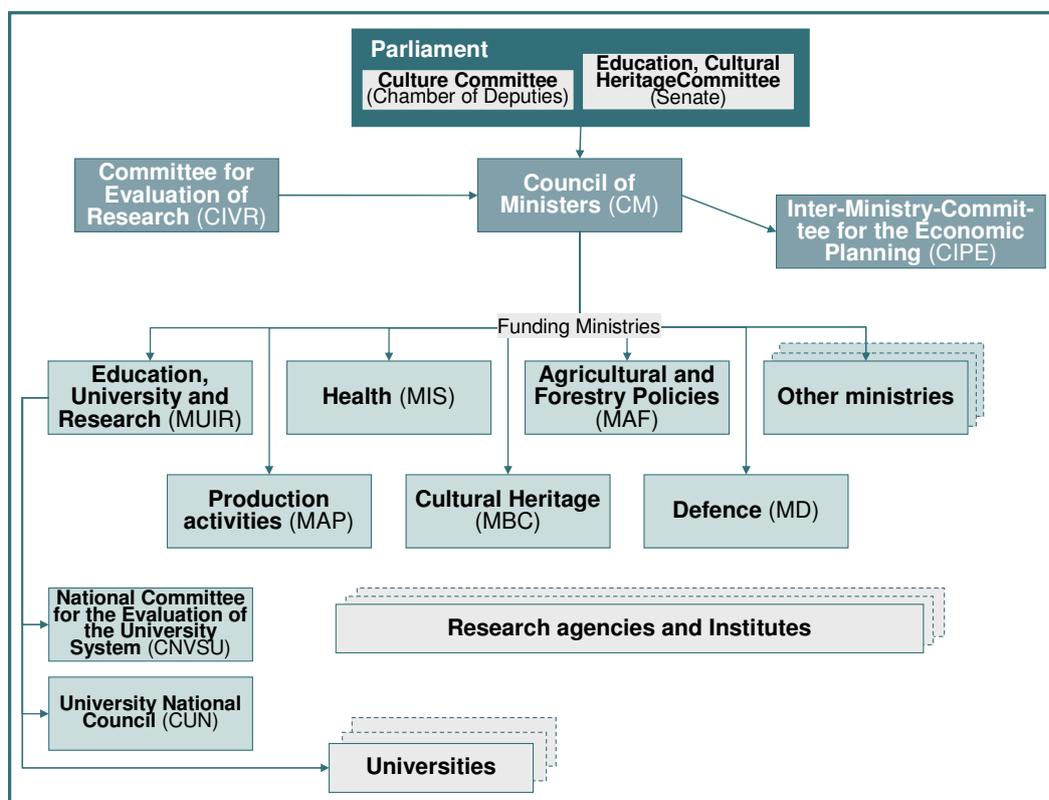


Figure 1: Structure of the Italian Science and Innovation System

a. Political and governmental authorities

The *Inter Ministries Committee for the Economic Programming* (CIPE) has the high level role of S&T policy coordination. CIPE is particularly competent on inter-sectoral and medium term interventions. Its role became more effective since a special section, dedicated to research and education, was created during the last decade. The sectoral administrations rule the technical and financial aspects of the policy implementation.

Under this regime, prior to the approval by the Ministers Cabinet, CIPE examines the Document of economic and financial policy (DPEF), which establishes the strategic direction and priorities for the scientific and technological research, the financial resources, the co-

¹ Source: Eurostat, *Science and Technology in Europe, Data 1990 – 2004*, Luxembourg, 2006

² Source: OECD

³ Source: OECD

ordination among the different public administrations, universities and research institutes. DPEF includes the economic and financial measures for the following year, and is submitted by the Ministers Cabinet' to the Parliament each year. CIPE approves the three year National Research Plan (established in 1998 by a legislative decree and launched for the first time in 2000). This Plan is one of the main instruments for coordination of research, technology and innovation in a system approach with a view on strategic leadership. In particular, it defines priorities and establishes the allocation of resources for a three year period. In addition, CIPE coordinates R&D programmes and appropriations by the public administrations. CIPE also deliberates on a special integrative inter-public administrations fund for research (FISR) and periodically evaluates the fulfilment of the National Research Plan.

At the Parliament level, two Commissions are specifically devoted to S&T policy issues: the *Cultural Commission* at the Chamber of Deputies and the *Public Education and Cultural Goods Commission* at the Senate of the Republic are particularly active within different control, assessment, studies activities. In this way they support the parliamentary initiatives on S&T.

Since 1989, the *Ministry of University and Research* (MIUR) plays a key role in the S&T and innovation policy definition and in research funding. MIUR is in charge of the steering, coordination and supervision of universities and public research institutes, including the main public research institution, the National Research Council (CNR). MIUR proposes and adopts the annual and multiyear programmes for S&T research, at general and sectoral levels. It is responsible for the three year National Research Plan, that draws up after a large consultation (see the following part on Stakeholder involvement). A large part of the public funding for R&D is under the Ministry's responsibility.

As to activities linked with specific domains (such as health, agriculture, transportation, and so on), each ministry is responsible for R&D funding in its domain of intervention, which includes research activities. The Ministry of Economic Development shares the responsibility along with MIUR for innovation aspects.

One other important advisory body is the *National Committee of Economy and Labour* (CNEL), grounded in the Italian Basic Law. It advises the Parliament and the Government and enjoys legislative initiative on social and economic matters. It is organised in Commissions, one of which is in charge of industrial issues, including innovation. The latter consists of experts and representatives of the Public and Private Sector, including autonomous employers, industrial firms and social associations. Beyond this, no other important advisory councils or comparable bodies exist.

The Conference of the Rectors (CRUI) acts as consultative body for the Higher Education policies.

Regions recently have acquired more responsibility through a change in the Italian Basic Law (L. 3/2003), which enables them, along with the State, to adopt autonomous S&T policies. As to the division of competences between State and regions, the 2004-2006 National Research Plan clarifies that the regional legislative authority is concurrent in S&T policy and that three typologies of intervention can be identified: - exclusively regional interventions, mainly those related to the local development; - exclusively State interventions, mainly related to the support to university and public research institutions, to large strategic projects/programmes and to their coordination; - some co-responsibilities, mainly in the area of regional interventions with larger scope (such as technological districts).

b. Intermediate bodies

Since 2000, the *National Research Council* (the main public R&D institution under the MIUR control, with a multidisciplinary coverage) has lost its role of project funding institution and intermediate agency. Each ministry is responsible for R&D funding in its own domain of intervention without participation of the Private Sector. The present role of CNR is to be the largest Italian research institution, covering all the scientific fields.

ASI (the Italian Spatial Agency) is now a relevant source of project funding. Private Sector representatives are involved in its Governing Body.

A shift in the RDI system came with the creation of an evaluation system devoted to all the national scientific system. The *National Committee for the Evaluation of Research* (CIVR) was established by the legislative Decree 204/98. It is an independent organisation, whose seven members (coming from the academic, scientific and private sectors) are appointed by the Government. The evaluation exercise is triennial and is addressed to assess the scientific performance of the public research structure (both universities and research agencies) and the national research programmes financed by MIUR. It is based on three bodies: the CIVR itself, the Panels (20) for the different scientific areas, and the Evaluation Committees, which work within the evaluated structures (NUV for the Universities). Another relevant body related to the University evaluation activities is the *Committee for the Evaluation of the University System CNVSU*, an institutional body belonging to the MIUR and in charge of establishing the general criteria for the evaluation of the university activities, elaborating and testing new evaluation methodologies and practices, realising an external audit programs of the universities and of each educational units and carrying out specific studies and collecting documentation. The results coming from the CNVSU assessment have an important impact on the Government resource allocation mechanism.

Finally, a general body composed of elective representatives of all the Italian Universities, the *National Committee for Universities* (CUN), gives scientific advice on items related to universities, if requested by MIUR or allowed by the law.

c. Research performing institutions

The Italian University system is currently made up of 77 university institutions, of which 12 are private organisations. Universities are autonomous bodies and their research agenda is completely determined by the researchers themselves. All Italian universities have the functions of both higher education and research. In order to pursue training and research activities of common interest, forms of collaboration may be established through the setting up of intra-university, national and international inter-university centres and consortia. Recently, due to the improvement of their social role, many university foundations have been set up, in order to ease the accomplishment of some bureaucratic fulfilment and to promote a larger visibility of the University. A positive University attitude toward research collaboration with the Private Sector occurs increasingly. This is illustrated by the growing role of the Technology Transfer Offices within the institutions and by the growth of the research contracts with industry which are managed by the University Departments. No representatives of the Private Sector are currently members of the governing bodies of the Italian Universities.

Public research agencies are state, non-university bodies whose institutional purpose is to carry out (and often promote) scientific and technological research. They have the capacity to manage complex equipment and to carry out large-scale national scientific programmes in strategic sectors which require the joint commitment of a number of players in the Public and Private Sectors. This sector is made up of about 70 different bodies. Recently, some public research agencies have been merged on the basis of similarities in their institutional mission (i.e. CNR merged two agencies, INFN for Physic and INOA for Optics, and all the Astronomic Observatories have been regrouped in a new agency, the INAF). The agencies have no education duties. Public scientific research comes also under the jurisdiction of individual ministries. This is due to two reasons. First, the various ministries control a number of centres, laboratories and services, which are instrumental to the ministries' needs. Moreover, they are duty-bound to co-ordinate external research activities carried out in the public or private sphere. The ministries mostly active in R&D are the Ministry of Health, the Ministry of Economic Development, the Ministry for the Agriculture and Forestry Policies and the Ministry for Cultural Heritage. Many informal linkages exist between these ministries and the Private Sector, but there is no formal involvement, e.g. through membership in governing bodies.

d. Private Sector

The Private Sector is coordinating its activities through its main industrial Association *Confindustria*, which is the representative of manufacturing and service enterprises. The association has an internal office devoted to the R&D policy. The General Association organisation is articulated through sectoral and local associations. Two of them are particularly active in studies, communication and proposals on R&D issues: *Farmindustria*, the sectoral association of pharmaceutical industry, and *Assobiotec*, the association collecting firms and technological parks operating in Italy in the Biotechnology fields. The mission of *Assobiotec* addresses specifically the collaboration with the national institutions for the definition of innovation policies, the promotion of strategic research programmes and the strengthening of the collaboration between research institutions and small and medium sized firms of all sectors applying biotechnological innovation. Furthermore, *AIRI*, the Italian industrial Research Association, plays a role of promoter of the public and private collaboration for research projects.

Private Sector companies are both performers of publicly funded research and additional funders of public institution research activity, mainly through research contracts, but still with a low contribution.

There are some relevant not-for-profit organisations with a role of funders of scientific research, such as the *Telethon Foundation*, which has supported a large number of research projects in the field of genetic diseases or AIRC, operating through large and complex action of funds' raising (Research Agency on Cancer). Not-for-Profit foundations mainly perform research activities in the health and biomedical fields, followed by cultural and environmental issues.

Some foundations have a role of 'motor of reforms' and think tank. *Cotec*, which is under the honorary chair of the President of the Republic, has the mission of contributing to the orientation of the national and European public decisions towards technological and industrial priorities. The Rosselli Foundation has the main scope of creating a think tank operating towards the public institutions for answering to some crucial socio and economic problem. Research is one of the fields in which the foundation is engaged.

2. National research policy decisions and Private Sector involvement

Instigation phase

The identification of policy actions, based on stakeholder demand and needs has been rare in the past and is not yet a regular activity for the Government. Three main types of hearings on research activity can be identified:

The most relevant example is the recent large consultation by the Ministry of University and Research - MIUR - for the preparation of the three year *National Research Plan (2004-2006)*. After the presentation of the 'guidance Lines on R&D', which identified national priorities on the basis of general analysis and criteria, MIUR has opened in 2003 the consultation of industrial associations and of Private Sector representatives. It was the first time that a similar exercise took place. All parties answered with comments and suggestions and the Research Commission of the main industrial association (i.e. *Confindustria*, see section 1) was involved in the elaboration of the Plan through elaboration on specific questions.

The second example is the *Road Map*: In 1997, the MIUR realised a survey on the demand of small and medium sized firms with the aim of introducing a regular activity of monitoring in some relevant geographical areas and sectors, to be eventually extended to all the national territory (the Road Map). The Private Sector involvement included discussions with experts on the obtained results for interpreting them in the light of the national industrial system characteristics. The results were included in a document (Lines for the reorganisation of the national system of scientific research) and presented to the Parliament. Even if this did not lead to immediate legislative provisions, the Road Map has an indirect effect on R&D policy deci-

sions, since it is taken into consideration as background knowledge for justifying the policy design and implementation in many documents (i.e. the National Research Plan).

The third case is the *Technology Foresight exercise*. The first comprehensive exercise of foresight was carried out by the Rosselli Foundation between 1994 and 1996. The Foundation's main objective is fundamental research applied to the economic, social and political fields. In addition, the Foundation acts as a think tank for Italian and European governmental bodies, with which it shares its knowledge and analyses. The aim of the Technology Foresight project was to identify the families of emerging technologies which seemed to be both relevant and critical for the growth of national industry and for its international competitiveness, and feasible in the light of existing R&D and industrial capabilities, structures and resources. The second Italian foresight activity, carried out between 2000 and 2001, was developed with the financial support of the PIUR. It drew heavily on the first study but provided the government with informative results about future science-based technologies and their relevance to the Italian industry and society. In addition, the approach was widened to include societal problems and opportunities. Particular emphasis was put on disseminating the results of the study. The applied methodology (Delphi analysis) included the use of panels of experts and a wide consultation process with the techno-scientific community through Internet. In both cases, representatives of the Private Sector have been included. These representatives were also important for the instigation phase of the technology foresight, as well as for its implementation. The second exercise, in fact, was a joint project, developed also with the contribution of many important actors of the Private Sector (Finmeccanica, Alenia, Italtel, ENI). In this case, the Private Sector partners played the double role of actors involved in the instigation phase and of funders of the exercise itself.

Design stage

Policy formulation takes place under the responsibility of the Ministries, especially the Ministry of Research and University. But there is an important role of control through design and assessment activity played by the Parliament's Commissions, which maintain informal relations with Private Sector representatives and develop sector/geographical analysis. The permanent Commission role is that of giving transparency to the State action into economy, reducing the risk of the State capture by lobbies and groups of interest.

The Italian Parliament defines the national priorities for the research and development policies by using different instruments, among which we can include also a specific action of the Commissions for Culture Science and Education existing in the two branches of the Italian Parliament (Camera and Senato, see Section 1). The Commissions carry out formal hearings on research policy topics regularly. These hearings include also representatives of the Private Sector (e.g. experts from industries and industrial associations) for collecting different information and advisory on the selected themes. The final report is drawn up by the members of the Commissions. Special surveys on subjects which need more in depth analyses are another instrument used by the Commissions. Even in these cases, representatives of the Private Sector are involved as experts on the analysed topic. In some cases, written documents can also be provided as background documentation, but the Commissions are in charge of the final report. In their analysis, conclusions and policy proposals which can be presented to the parliament, the Commissions take into account the different, needs and interests of all stakeholders, including the Private Sector.

A recent example of this activity has been the role of a Parliament Commission (X Commission, on Productive Activity) in the introduction of a R&D fiscal incentive within a Government norm (fiscal incentive for industrial investments- Tremonti bis law, 2001). In this case, the national industrial association Confindustria had a strong interest in modifying the Government measure and presented own proposals. But at the end Government norm was not modified. Another example has been the discussion on the Intellectual Property Right reform made by the Government in 2001 (new norms on the IPR title attribution, which gave the IPR title to the individual researchers instead of to the public institutions). The Commission's audit started around 2003 and subsequently the discussion was transferred into the Parliament. Also at this occasion, the industrial associations Confindustria and Farindustria had a view

which diverged from the Government position and presented a proposal for changing the design of the law. In that case, the claim of a disincentive for the private firms to invest in R&D and to collaborate with the public R&D institutions had an impact. As a result, the academic patent law was modified later in 2005.

A different example is the work carried out by the CNEL (the National Committee of Economy and Labour, see section 1). This organisation acts through the Commissions' working group activity, devoted to specific aspects, large debates and legislative proposals to the Parliament on different issues.

Implementation stage

Private Sector actors are less involved in the implementation stage. It happens mainly in two ways: when they participate in the design and management of a public R&D project or when they participate in the *ex ante* evaluation and selection of a publicly financed research project. In Italy we can distinguish two types of implementation:

The Ministry of University and Research organises events, such as conferences and debates, with the participation of scientific and industrial representatives. These events are aimed to maintain a dialogue among the parties and to collect suggestions and proposals, for example at the occasion of the presentation of political documents (i.e. the three year National Research Plan) or for building consensus on reform or political choices (i.e. general conference). These practices are largely adopted by the Regional governments, as well as by the other ministries which have important commitments to research and development (mainly the Ministry of Health, the Ministry of the Economic Development and the Ministry for the Coordination of the Agricultural Policies).

A kind of implementation activity can be considered the selection of projects made through an *ex ante* technical and financial evaluation by independent committees; this is the case for the bottom up industrial projects financed through law 46/82 and for a recent - 2001- MIUR project funding for basic research (FIRB). FIRB's targeted beneficiaries are Universities, public and private research organisations, firms, individual researchers. Each FIRB project passes an *ex-ante* evaluation, which is carried out by an independent Committee, on the basis of general criteria established by the MIUR together with CIVR (National Committee for the Evaluation of Research). FIRB projects should be submitted also to *ex-post* evaluation

Assessment/revision stage

At the end of the nineties, the law n. 204/98 and the Decree n. 381/99 reformed the Italian research central organisation and created the National Committee for the Evaluation of research (CIVR) for the assessment of the non-university public research organisations. CIVR members are appointed by the MIUR. They represent different scientific expertises as well as different research context: academia, public research institutes, Private Sector. The law established also the settlement of one Internal Evaluation Committee (CIV) within each of the public research agencies under the CIVR control. CIVs are panels of experts, nominated by the agencies themselves on the basis of criteria established by the CIVR. The panels consist of 5 to 7 members, including experts in the specific discipline or sector of activity (peers in the strict sense), experts in the economic assessment of the internal management, and potential users of the research activities. In most cases, Private Sector representatives are included as members of the panels.

In 2003, a new MIUR Decree n. 2206/2003 launched the first three-year evaluation exercise (VTR) which is now completed. CIVR is in charge of the VTR, aiming to assess R&D performed by the public research structure (both universities and academic research agencies) and the national research programmes. It is based on three bodies: the CIVR itself, twenty Panels for the different scientific areas and the Evaluation Committees, which work inside the evaluated structures (NUV for the Universities and CIVs for the agencies). The Panels, composed of high level peers coming from academia, Private Sector and international institutions, assess the research products, with the support of external experts (2 experts for evaluating each product). CIVR carried out large consultative processes with many organisations repre-

senting both the academic and the stakeholder interests, trying to harmonise their different needs and requests with the Government aims. The results of these consultations had an impact on the subsequent Committee directives for the VTR development and assured the institutions' consensus on the VTR scheme. Moreover, representatives of the industrial associations were also involved in the selection of the main criteria, which were to be applied by the CIVR for choosing the panellists.

Observations: possible barriers and current initiatives

The Private Sector is involved in all four phases of research policy decision processes, with the following characters: (1) Instigation is mostly based on large and informal consultation or on 'users/beneficiaries' survey, (2) design and assessment are the typical task of an important institution - the permanent commissions of the Parliament, which allows an open debate and judgement on the State intervention in the economy and which, interacting with the Parliament, can suggest legislative modifications.

The Private Sector presence is less frequent in the implementation stage, but there has been a very important case of private management/implementation of a public R&D fund. The most relevant example in the past has been the management of a public fund by a private agent, with *ex ante* and *ex post* techno-economic assessment and day-by-day implementation. These activities were carried out for the most important public funding of industrial research (Fund for Applied Research FRA) by the structure charged of the management of the programme (*Servizio Ricerca Applicata IMI*), since its beginning (1968). IMI was a private organisation with highly qualified personnel and an industrial culture, which had the role of managing the Fund (a totally new approach to private management of a public programme which was not easy to be accepted) and which transferred and socialised within the Italian industry a good knowledge of research management. Since the end of '90s, the management of the Fund was transferred back to the Public Administration - to the MIUR - and its techno-economic assessment was allocated to different private agencies.

A special National Committee for the evaluation of research assure a large consultation process in the design and implementation phases of the performance assessment exercises, which involves also the Private Sector.

The concept of focusing the involvement of Private Sector on the instigation and design stages seems to be widely accepted. There is a broad consensus that research policy decision making is the sole responsibility of the public sector with an efficient evaluation system as a key instrument for ensuring that research policy make appropriate contributions for the benefit of both sides.

A potential barrier to a more efficient Private Sector involvement and resulting improvement of the quality of decision seems to be the complexity of the national innovation system, with its multiple levels of decision making, and the absence of an adequate coordination with regional initiatives.

In recent years, both sides have made efforts to increase their interaction, working on more leverage from Public Sector investment in research, the development of research networks and on joint initiatives in priority action fields. Nonetheless, the main type of interaction remains the advisory role of the Private Sector.

3. Other important examples of policy decisions with Private Sector involvement

Regional research strategies

Two events characterise the policy to stimulate Private Sector R&D at regional level: the transfer of many instrument of incentives for Private Sector R&D from the national to the regional level, with a related increase of the financial resources available for the development of local Research and Innovation Systems with Private Sector participation (D Lgs 112/1998) and the European structural policy, which has mobilised a significant amount of regional financial resources. The Regions have devoted the resources mostly to six out of the 23 transferred instruments, including incentives for industrial investments and incentives for research

and development, which includes also support to innovation, patents and for the employment of research personnel. Regions with traditional industrial structures (Piemonte and Lombardia) have concentrated their resources on the support of industrial investments; two other regions (Emilia Romagna and Lazio) have concentrated their resources on supporting R&D activity. The regional legislation, at an aggregated level, has been concentrated on supporting industrial investment (process innovation); 11% is devoted to the creation of new firms and 3% to the support of industrial R&D.

The regional research strategies are open to Private Sector involvement. First of all, Regions and their financial agencies have a diffused practice of surveying the local industrial firm needs. A relevant part of their intervention is devoted to the promotion of local productive systems. The creation of industrial and technological districts is regulated by national (L. 140/1999) and regional norms. One example concerns Lazio: the *Agency for the local development* (Agenzia per lo Sviluppo Regionale) has the task of promoting and organising industrial districts. It receives proposals from local firms and other organisations, which have to fit some criteria, for gaining a financial support for R&D activities. Another relevant type of intervention concerns the technology transfer of public research results to small and medium sized firms, within identified geographical areas. This type of intervention is based on the collaboration among researchers, entrepreneurs and regional agencies, and can be developed through specific projects or the creation of infrastructures such as Laboratories for test and demonstrations. A problem, in a region with a concentration of S&T infrastructure, such as Lazio, is the coordination and the visibility of an organised supply of S&T services, and this aim is sometimes fulfilled through permanent (for a short term, i.e. one year) tables of discussion among the different actors: industrial associations, trade unions, transfer offices of the Universities, representatives of the local government.

In this same view, Regions participate with other private actors in consortia financing the creation of technological or scientific poles (or parks), with the double aim of promoting the localisation of new firms and supporting the activity of technological transfer and services to the small and medium sized firms.

Research policies of research organisations

As to the university co-operation with industry, in 2004 an agreement was signed between the Italian National Standing Committee of the Rectors - CRUI and the Confindustria, providing a new scheme for presenting to the Government joint proposals for reforming the University planning and governance systems. Furthermore, the agreement promoted initiatives for the technology transfer from the Universities to industry, as well as the collaboration for enhancing the mobility of researchers and the assessment of the University teaching and research activities. The reorganisation process, which is affecting all the agents of the science system, envisages a restructuring of research agencies, astronomical and astrophysical observatories, ASI, ENEA, and other research institutions, whose ordinary running is funded by the public administration. Various organising criteria (ways of performing the research activities, tools to be utilised, industrial relations, mobility of personnel, budgets...) that are established in the decree are going to be applied by all of the agencies and institutions of research and experimentation.

The main structural change affects the composition of the Governing Body (the Consiglio di Amministrazione), whose members (7) are appointed by the MIUR on the basis of suggestions made by different Ministries with relevant competences on R&D activities. Among these actors, a special position is attributed to the Ministry of Productive Activity, which is in charge of designating two members, chosen in general among academics or among experts with a high profile for science and research management. Direct involvement of the Private Sector is sought.

The public research agencies pursue diverse initiatives for including the Private Sector in the internal decision-making. The aim is to realise a more shared research agenda, which could assure a high level of knowledge and technology transfer. One means to achieve this is to support the creation of mixed structures for designing common research projects. This is the

case in the mixed laboratories of the Institute for the Physics of Matter INFN, now merged into CNR. Another approach is a recent agreement signed by CNR and Federchimica, the National Association of the Chemical Industries, for designing and realising common projects to be submitted to the interested Ministries (mainly MIUR and the Ministry for the agricultural policies) for funding.

There are some relevant not-for-profit organisations (see section 1) with a role of financing scientific research, such as the Telethon Foundation, which has supported a large number of research projects, especially in the fields of health and biomedical, followed by cultural and environmental issues.

Other policy decisions relevant for research

Fiscal incentives are considered as a means to stimulate research activities at both public structures and Private Sector firms. In recent years, especially the national industrial association (Confindustria), which had a strong interest in presenting some proposals, tried to contribute to the political debate on the introduction of a R&D fiscal incentive for industrial investments in this area (Tremonti bis law, 2001, Financial law for the 2004). But the impact of this consultative process was not effective; at the end Government norms were not modified. As to the educational policies, large consultative processes have been set up for the design of the undergraduate education cycles. Furthermore, other advisory activities have been provided by the industrial association for the reform of doctoral studies and for the mobility of graduates and the young researchers.

4. Overview: Types and extent of Private Sector involvement⁴

Formal and informal involvement of the Private Sector is growing through two main leverages the (*ex ante* and *ex post*) R&D evaluation activity and the growing role of regional R&D policies (see point 1). There are no examples of staff interaction and mobility from private to public leadership positions. Legal provisions toward improving the Public-Private Sector mobility have been drawn in the law n. 297/1999 (Provisions for the firms' R&D funding) as well as in the acts reforming the internal organisation of the Public Research Agencies, but the effectiveness of these acts was low because of the absence of economic and/or career incentives for the individuals.

General Dialogue and Informal involvement: representatives of industrial associations (such as Airi, the Association of the Italian industrial research; or Confindustria) are involved in the independent advisory boards charged of *ex ante* evaluation and selection of research projects, in which Private Sector representatives take part (such as the Commission of the FIRB programme). Good examples are also the large direct consultation made by the MIUR in a recurrent way during the preparation of the National Research Plan and the practice of indirect consultation (by delegating interviews to a consultant company) taken by some Region when they prepare their R&D Programmes.

Formal involvement: representatives of industrial associations are present in the CIVR, in charge of research (institutions and programmes) evaluation, through a complex process including institutions' self-evaluation on established criteria and evaluation by a panel of experts selected by CIVR. Moreover, representatives of the Private Sectors are included in the Scientific Panels in charge of the quality evaluation of the research products, within the VTR. The Main Boards of some of the most important public research agencies (CNR, ASI, INAF, ENEA), whose members are designated by the Ministry of the productive activity, include representatives of the Private Sector or academics which have a very long experience of work in collaboration with the industry.

Joint activity: at national, but above all at regional level, the Private Sector collaborates with Public Sector actors in consortia, which drive some initiatives, such as the creation of S&T infrastructures (S&T parks, S&T poles, Business incubators). As to the Higher Education sector, an agreement was signed between the Italian National Standing Committee of the

⁴ See Table 1 in Appendix 1 for a detailed overview over current use of identified instruments.

Rectors - CRUI and the Confindustria, the main association of the Italian industries, providing a new scheme for presenting to the Government joint proposals for reforming the University planning and governance systems.

Proactive involvement: the industrial Associations (Confindustria, Farindustria, Assobio-tec...) through their internal Research Commissions or functions produce policy documents that are largely diffused, where they present comments and proposals on R&D policy measures and which become part of the documentation on which the permanent Commissions at Parliament works.

5. Selected useful examples of transferable approaches and experiences

5.1 Consultation for the National Research Plan

The Ministry of University and Research, through its Technical Secretary, has organised a large consultation of the Private and Public Sector actors since 2003. It has taken almost two years to collect and evaluate different proposals; organising working groups on a list of strategic aspects; to re-elaborate and coordinate the proposals and analysis; to present and debate the draft versions with the different audiences and to finally write a conclusive text.

5.2 Private Sector involvement in the Three Year Research Evaluation Exercise VTR

In the VTR process which was described already on page 6, CIVR acts mostly as an intermediary between the State, the academic institutions and the stakeholders. Consultations were carried out with CUN, CRUI, with a large number of universities, with representatives of the main public research agencies, associations of industries, and other stakeholders. After the MIUR decree launching the VTR, representatives of the industrial associations were involved in the selection of the main criteria, which should be applied by the CIVR for choosing the Panels components. This phase raised a great interest and trust from the Private Sector on the whole VTR.

Appendix 1: Overview of identified instruments for Private Sector involvement and their use in Italy

Instrument	Intensity of use	Initiated by	Used for	Used in				Examples and remarks
				Instigation	Design	Implement.	Review	
General dialogue	Insight studies, roadmapping, foresight	Occasional	Both sides	Road Map	✓			
	Conferences							
	Brainstorming / task forces	Occasional	Both sides	CNEL Hearing		✓		
Informal decision involvement	Evaluation studies	Occasional	Both sides	CIVR VTR			✓	Transferable approach
	Advisory groups							
	Informal consultations	Regular	Public Sector	Regional Agencies for local development			✓	
		Regular	Both sides	Regional Agencies for technology transfer			✓	
Formal consultations	Occasional and regular	Public Sector	Formal Hearing or special survey promoted by the Parliament		✓			
Formal decision involvement	Task force							
	Participation in decision making bodies (observer status)	Regular	Public Sector	MIUR National Research Plan		✓		Transferable approach
	Participation in decision making bodies with (co-) decision right	Regular	Public Sector	FIRB ex ante evaluation			✓	Transferable approach
		Regular		CIVR evaluation			✓	
		Regular		Main Board within the research agencies			✓	
Administrative / supervisory boards								
Joint activities	Initiation of networks							
	Co-financing of projects / programmes							
	Public Private Partnership	Occasional	Both sides	Mixed laboratories			✓	
Staff interaction	(Temporary) Staff exchange							
	Staff mobility							
Unsolicited contributions	Statements, studies, white papers, etc.	Occasional	Both sides	Technology foresight	✓			
	Dialogue platforms	Regular	Both sides	CRUI-Confindustria agreement			✓	
	Research funding							

Table 1: Overview of instruments used for Private Sector involvement

Appendix 2: Selected relevant sources and literature

1. General and country information

Address and Information

Ministry for Education, University and Research MIUR, P.le Kennedy, 40, 00144 Rome, Italy
Phone +39 6 58491

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2. Important actors

www.camera.it ; www.senato.it	Italian National Parliament
www.cipecomitato.it	Inter-ministerial Committee for the Economic Policy CIPE
www.miur.it	Ministry of Education, University and Research MIUR
www.industria.it	Ministry of production activities
www.ministerosalute.it	Ministry of health
www.beniculturali.it	Ministry for cultural heritage
www.politicheagricole.it	Ministry for agricultural and forestry policies
www.difesa.it	Ministry of defence

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www.infrastrutturetrasporti.it	Ministry of infrastructures and transport
www.giustizia.it	Ministry of justice
www.comunicazioni.it	Ministry of communications
www.mef.gov.it	Ministry of economy and finance
www.esteri.it	Ministry of foreign affairs
www.welfare.gov.it	Ministry of labour and social policies
www.cru.it	Italian Standing Committee of the University Rectors CRUI
www.cun.it	Italian National Committee for the University CUV
www.cnvsu.it	National Committee for the Evaluation of University CNVSU
www.civr.it	National Committee for the Evaluation of Research CIVR
www.airi.it	Italian Association for the Industrial Research AIRI
www.confindustria.it	Italian Confederation for the Industry and the Labour Confindustria

3. Other

www.cnr.it	National Research Council CNR
www.infn.it	National Institute for the Nuclear Physics INFN
www.enea.it	Agency for the Energy and the Environment ENEA
www.fondazionerosselli.it	Fondazione Rosselli

4. Further information and feedback

This country profile has been prepared by a team coordinated by the Observatoire des Sciences et des Techniques (OST) under the leadership of Ghislaine Filliatreau. For further information and feedback, please contact the responsible authors under Ghislaine.filliatreau@obs-ost.fr