1. Political, institutional and economic framework and important actors

Romania has experienced continuous economic growth and a positive evolution of most macroeconomic indicators in recent years, mainly driven by investments and exports. However, Romania’s innovation performance remains weak compared to other EU countries. In the recent 2005 EU Innovation Scoreboard, Romania scored far below the EU average on almost all indicators.

During the period 1999-2003, Romania’s total R&D expenditures were at relatively stable level of around 0.40% of GDP, about one fifth of the of EU-25 average. In 2004, the total R&D expenditures reached 0.55% of GDP. The Private Sector’s share fell from 50.2% of total R&D expenditure in 1999 to 45.4% in 2003 again to rise towards around 50% in the following years.

The innovative profile of Romanian firms is still very low. According to the European Trend Chart’s 2005 country report, over 80% of them are non-innovator firms. This situation is largely due to the specific economic difficulties of the transition period, where a very low level of innovation expenditure in firms, around 3.6% of innovative firms’ turnover in 2004 (or 1.5% from the total turnover), was aggravated by a still insufficient level of public funding for innovation. The main economic fields with higher levels of innovation are still pertaining to more traditional industries, such as electronic and thermal energy, food and drinks industry, furniture production, metallurgy, mechanical engineering but also include transport and communications.

Yet, recent trends in the country’s position show some clear positive developments in relevant indicators such as science and engineering graduates (towards 50% of EU-15 average), lifelong learning, employment in medium and high-tech sectors and services (towards 70% of EU-15 average), public RDI expenditure and USPTO patents. Negative trends are recorded for instance for EPO patents and ICT expenditures.

Foreign direct investment (FDI) has been growing rapidly at a rate of 54% in 2004, mostly in industry (58.7%). The advantages of Romania come from a comparatively low level of real estate prices compared to other countries in the region, the cheap but qualified labour force for industrial needs, the existing production capacities and the tradition of industrial production.

The R&D landscape in Romania registered an important turning point starting with 2005, due to the commitment of the newly installed Government to the Lisbon strategy objectives, including a commitment to approach the 3% of GDP Barcelona target for R&D expenditures.

Public funds allocated to R&D registered a very dynamic increase with almost 60% in 2006, reaching 0.38% of GDP (as compared to 0.26% of GDP in 2005). Furthermore, the Law 379/2005 approving the state budget for 2006 provides a sustained increase rate of state budget funds for research for the whole period 2006-2009: Table 1 depicts the budget resources allocated for R&D in the period 2006-2009.

In recognition of the above mentioned challenges, the Romanian government has defined in the 2005-2008 Government Program four major innovation objectives and several measures to implement them. These include new technology transfer mechanisms to enhance long-term partnerships between the R&D sector and industry, an increase of total

<table>
<thead>
<tr>
<th>State budget resources for R&amp;D</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of estimated GDP</td>
<td>0.38</td>
<td>0.56</td>
<td>0.75</td>
<td>0.93</td>
</tr>
</tbody>
</table>

Table 1: State budget resources allocated for R&D during 2006-2009

1 Source: Law 379/2005: approving the state budget for 2006.
R&D expenditure to 1% of the GDP by 2007, a stimulation of Private Sector R&D and a restructuring and strengthening of the R&D governance system.

To restructure the national R&D and innovation governance structures, a range of measures were taken. These include the decentralisation of the decision-making system and an externalisation of the RDI management system, improvements to the innovation legal framework and a consolidation of the R&D system. Although progress has been made, further measures are needed to increase research and innovation performance and the application of R&D results by business in order to turn innovation into a driver of national competitiveness.

Figure 1 depicts the structure and main actors of the Romanian Research and innovation system.

---

**a. Political and Governmental authorities**

The Ministry of Education and Research (MER), through its specialised body, the National Authority for Scientific Research (NASR) is the main Romanian central public administration whose mission is to formulate R&D and innovation policies, to monitor their implementation and to assess their performance. In accordance with the 2005-2008 Government Programme and in the context of Romania’s near accession to the EU, the declared main objective of the NASR is to harmonise national R&D and innovation policies with the current orientations at European level in order to facilitate the preparation of the Romanian S&T community for the integration in the European Research Area. Therefore, the policy measures promoted by NASR aim to develop a stimulating framework for R&D and innovation activities, in line with the orientations and procedures promoted at EU level. The R&D policy-making process also involves all the other ministries for consultations and sector-specific proposal.

---

Special attention is given to enhancing the capabilities of researchers, R&D institutions and Private Sector partners to develop and manage complex R&D projects, involving viable networks, consortia and integrated research bases. In 2005, MER launched the *Elaboration of the national R&D and Innovation Strategy for 2007-2013*, aiming to re-evaluate and reconsider the priorities and objectives for the R&D and innovation field, in order to better contribute to ensuring a performing and sustainable economic and social development. The project focuses on the following main objectives:

- evaluation of the current organization and performances of the R&D and innovation activities
- elaboration of the national R&D and innovation strategy for 2007-2013, as well as of the implementation instruments and procedures, including the performance monitoring and evaluation system;
- elaboration of the National R&D and Innovation Plan for 2007-2013 (programs profile, expected results, evaluation indicators etc).

**b. Intermediate bodies**

The main *S&T consultative bodies* are as follows:

- *Inter-Ministerial Council for Science, Technology and Innovation* (CISTI) provides a forum to link R&D and innovation policies, strategies and programs at the government level;

- *Consultative bodies of the Ministry of Education and Research* address the issue of Private Sector involvement, but involvement is more of a formal nature than a really efficient public-private interaction:
  - *Advisory Board for R&D and Innovation*. With 35 members: approximately 65% are the most representative personalities of the scientific and technology community and 35% representatives of the economic organisations and sectors (ministries, professional associations, employers’ union organisations, Private Sector actors from several sectors etc). The Collegium is chaired by a President and supported by an executive office which includes 10 commissions of different scientific and technical fields, with 10-15 members each.
  - *The National Council for Research in Higher Education Institutions (CNCSIS)* includes representatives of the scientific community in universities organized in 6 committees of different scientific and technical fields.
  - *The Strategic Orientation Councils* work at the program level in the National Plan for Research, Development and Innovation (RDI), with the role to determine and update program priorities and objectives.
  - *The National Agency for Partnership between Universities and Economic–Social Environment (APART)* is in charge of the promotion and enhancement of the partnerships between universities and non-academic actors: firms, entrepreneurs, and public authorities
  - *Trilateral Social Dialogue Commission* – provides the institutional framework for consultation with social partners of the ministries, like trade unions, employers’ unions’ associations and syndicates. It is not specifically related to RDI, but the RDI issue may be raised whenever it is relevant.

- *Council for Research Grants of the Romanian Academy* - includes primarily high-level representatives of the specialized scientific research divisions of the Academy

- A special *Working Group* under the cabinet of the Prime Minister, starting in 2005 has been responsible for the identification of the most adequate ways to improve the business environment, including the elimination of administrative barriers in public RDI policy-making. The group includes high level representatives of 20 ministries and government agencies, building the National Plan for Development 2007-2013 and the
basis for a National Plan of Reforms to come out in 2006, according to the state member
level approaches of the revised Lisbon Strategy.

c. Research performing institutions

In Romania, there are several types of research performing institutions: 300 RTD institutes
and research centres (of which 41 are national R&D institutes, coordinated by 8 ministries,
including the Ministry of Education and Research), 56 public (with 742 faculties) and 30
accredited private universities with regular R&D activities and approximately 250 joint-stock
companies, public or private companies, which have R&D as their main activity. Universities
are involved in R&D activities through their departments and their separate research units.
Also, 23 technology transfer centres and 7 S&T parks are under development in different
regions of the country.

The Romanian Academy conducts its own research programs and has a network of 65
research institutes and centres, with a structure covering 14 specialized scientific divisions
active both the technical and natural sciences and in the social sciences.

In spite of the decline that affected the R&D system during the economic transition period, a
number of features do constitute a favourable premise for a better cooperation between
firms, R&D organisations and universities, thus facilitating the transfer and further
development of advanced technologies to the economic sector. These include: the dominant
share of researchers in technical and engineering fields - 54% of the total of 27253
researchers in a total R&D personnel of 40725 (2004); the significant share of students in
technical profile faculties: more than 25% in the total of 650335 students (2004/2005) in 82
universities; and a distinct orientation of R&D activities towards applied research. 4

Private organizations are important actors in research activities, providing several
benchmarking analyses, solutions and proposals for policy design in Romania, but they are
not involved constantly in RDI policy-making. A few examples are noteworthy:

The Romanian Centre for Small and Medium-Sized Enterprises (CRIMM) is a non-profit
organisation promoting the setting-up of new private enterprises and the development of a
dominant SME sector in Romania by many means, including the development of business
community and social dialogue to support policy-making. The Romanian Centre for
Economic Policies (CERP) has organised, as part of a PHARE-financed project, a team of
young economists advising the Office of the Prime Minister and maintains close research-
policy interaction with the Ministry of Integration, the Ministry of Finance and the National
Bank of Romania. The Romanian Academic Society has worked with the UNDP office in
Romania to issue regular Early Warning Reports under the eye of the Romanian Ministry of
Foreign Affairs. The Centre for Policy Studies and Comparative Analysis; Centre for
Economic Modelling; and New Europe College cooperate in numerous foreign-financed
projects of policy-relevant research. These organisations are involved in R&D advisory
activities occasionally. A few business organisations also have some R&D labs. The
consortium elaborating the RDI National Plan for 2007-2013 includes 4 private organisations
and SMEs, beside the two public institutes coordinating the consortium and the other active
members of it: 7 universities, 2 institutes from the Romanian Academy, 11 national research
and development institutes and 4 private consultants.

d. Private Sector

2004 has witnessed major events in the employers’ movement. At the end of 2003, there
were 12 nationally representative employers’ organisations in Romania and in 2004 one
more was added to the list - the Confederation of Employers in Industry, Services and Trade
(CPISC). Furthermore, following a change in the statute of the former Confederation of
Romanian Employers (CPR), a new top-level employers’ organisation emerged: the Alliance

---

4 Statistical Yearbook of Romania, 2005
Country Profile: Romania

of Employers’ Confederations in Romania (ACPR). Since June 2004, the latter is also a member of the Union of Industrial and Employers’ Confederation of Europe (UNICE).

As a Private Sector organisation, the Romanian Chamber of Trade organises among other activities more than 100 conferences a year.

These private associations occasionally address issues related to RDI and they are usually invited to participate in emerging discussions within the consultative bodies of the MER. For example, debates on amendments to the law dealing with the rights and obligations of researchers were held within the Trilateral Commission for Social Dialogue.

2. National research policy decisions and Private Sector involvement

Domestic RDI policy approached breakthroughs during the last 3 years:

- 2002/2003: promotion and adoption of the legal ‘package’ specific to the field of R&D and innovation;
  - sectoral R&D plans to cover the technological development gaps specific to each sector, are coordinated by the respective ministries;
  - the ‘nucleus’ R&D programs initiated by the R&D profile institutions and coordinated by the Ministry of Education and Research;
- 2005: the launch of a new program coordinated by the Ministry of Education and Research: „Research of excellence”, which promotes the development of a high quality and competitive research potential, infrastructures and activities with the better cooperation between the research sector and industry, in view of a better correlation with the priorities of the European Research Area, including those promoted by the future EU Framework Research Program for 2007-2013 (FP7);

The national RDI programs are coordinated by the National Authority for Scientific Research. They include:

- The “Research of excellence” program, (see above);
- The National Plan for Research, Development and Innovation - including the 15 RDI programs in various S&T fields, based on the major economic and social targets (launched as a pilot project in 1999 and updated in 2001, expanding its duration until 2006). Its main objectives are to increase the efficiency of R&D activities, to support collaborative R&D projects and to promote S&T excellence.
- The Program of Grants for Scientific Research, launched in 1996, which supports the formation of scientific careers and the development of research teams around scientific personalities, especially within the universities.
- The Nucleus research programmes are supporting public R&D institutes in fulfilling their research strategies in relation to specific sectoral development strategies.
- The INFRATEH program, coordinated by the MER, promotes the development of specialized infrastructures for technology transfer and innovation, especially at the regional level, including: technical assistance and information centres, technology transfer centres, incubators, S&T parks etc.

The main research programs coordinated by the Romanian Academy include:

---

6 Predescu, R., 2005
National priority projects (for high-complexity scientific and cultural matters, with great impact at national level);

Program of grants for scientific research (GAR – Romanian Academy Grants Program).

**Sectoral R&D plans**, launched in 2004, have a specific role. They are coordinated by ministries responsible for the respective sectors. They provide a useful tool for promoting research-industry cooperation in sector specific technological development areas. A successful example is the sectoral R&D plan led by the Ministry of Economy and Trade, which is mainly oriented towards the needs of industrial research in traditional economic sectors (energy, metallurgy and mining).

Yet, despite the improvements in the Romanian R&D and innovation policies, including the legislative and institutional frameworks, enterprises are still reluctant to leave the “subcontractor” status and to shift towards an innovative behaviour, involving higher degrees of risk, and thus leading to the development of their own R&D and innovation activities. The partnership in R&D activities between enterprises and universities/R&D institutions is still at a low level and strong improvements are needed in the practice of managing intellectual property rights (IPRs). Also the access of Private Sector enterprises to national or international R&D funding is still low due to apparently insufficient information or transparency. The legal framework and the necessary financial instruments directly oriented towards stimulating R&D and innovation activities in the economy (i.e. risk capital funds for high-tech start-ups, and spin-offs) are still missing. There is growing awareness that Romania must overcome these barriers to avoid that Romania becomes a ‘workbench location’ competing uniquely on the basis of its low manufacturing cost, without valorising its own research and innovation potential.

In recognition of these problems, the Government’s new action lines put significant emphasis on increasing the quality of research activities, strengthening and developing collaboration between R&D units and institutions, universities and enterprises and on increasing the capacity to align to the scientific and technical priorities and objectives specific with ERA standards. At present, the main cooperation framework between research and the productive sector consists of the national RDI programmes.

The main national programmes which promote and support cooperation enhancement between research units and the productive sector are the **National Plan for RDI (1999-2006)**, and the Programme **Research of Excellence (2005-2008)**. Their major implementation instruments are collaborative research projects carried out by research-industry consortia (approx. 80% of the total number of projects). Also, the programmes in the National Plan for RDI stimulate research performed by enterprises, especially in high technology fields, through the promotion of projects in support of:

- **Alignment of products, technologies and services**, as well as **enterprises operation mode**, to the technical and operational standards required for entering the European and international markets;

- **Modernisation of equipment and installations** and the introduction of **new technologies**, including: information, communication and bio-technologies, high precision technologies, micro and nanotechnologies, technologies based on new and improved materials.

The funding contribution from enterprises represents about 30% of the total budget of the National Plan for RDI.

In addition, the development of 23 technology transfer and innovation centres (9 incubators, 10 technology transfer centres, 4 technology information centres) and 7 S&T parks (in Arad, Bucureşti, Craiova, Cluj-Napoca, Deva, Iaşi, Râmnicu-Vâlcea, Timișoara, Tulcea), was authorised and financially supported through the INFRATECH Programme until present.

An important step forward was also made by the recent changes in the Fiscal Code. In 2006 tax incentives to foster innovation activities in enterprises were introduced, including a 100%
deduction of R&D expenditures when calculating taxable profit and an accelerated
devaluation regimes for procured intangibles and technical equipment.

Even though this is neither a generalised nor a continuous process, these efforts form a
basis for growing Private Sector involvement in the following public awareness building
initiatives and in recent decision making by the Romanian Government in the area of
research and innovation policy.

Instigation and design stages

Romania is engaged in a series of political and economic efforts in order to create the
necessary conditions to meet the Lisbon strategy objectives. Still, only limited co-operation
takes place between public actors, decision-makers and RDI providers, as well as between
these and the Private Sector.

Professional representatives and Private Sector associations are invited to join several
consultative bodies, such as the Advisory Board for R&D and Innovation, and the Trilateral
Commission for Social Dialogue, but their involvement in the proposal drafting was very
limited.

The development of a competitive economic environment oriented towards high technology
domains, directly depends on the increased capacity and competitiveness of the R&D
system, which must ensure the resources and infrastructure necessary for:

- the development of internal sources of high-level scientific and technical competence, as
  well as technical equipment and facilities necessary to develop technological sectors &
  domains, especially the high technology ones;
- ensuring a sustainable growth of economic competitiveness by supporting a constant
  increase of the enterprises’ capacity to cope with global technological evolution and
  competition.

These objectives were fully taken into account in the following parallel policy-making
processes:

1. The preparatory process for the 2007-2013 National Plan for R&D and Innovation will end
   in 2006 and will use specialized instruments for public consultation, foresight and
   strategic planning. The process of drafting the 2007-2013 National Plan for R&D and
   Innovation is based on a wide scale of partnership-oriented measures, functioning on a
   more clearly established legal basis, which includes public central, regional and local
   authorities as well as major organizations and associations which represent the economic
   and social environment, at both national and regional levels.

2. The elaboration of the National Development Plan (NDP) for 2007-2013 is based on a
   wide-spread partnership, functioning on a clearly established legal basis. It includes
   public central, regional and local authorities as well as major organisations and
   associations which represent the economic and social environment at both national and
   regional levels. NDP includes as a main priority, supported by a specific Operational
   Programme, the growth of economic competitiveness and the development of the
   knowledge-based economy, where the role of R&D and innovation is considered of
   outmost importance.

As already mentioned previously, the National Plan for R&D and Innovation encourages
partnerships between Public Sector research (including universities) and Private Sector
enterprises. As there are only a few large companies with high R&D expenditures in
Romania; the plan focuses on SMEs. In fact, partnerships with enterprises that are expected
to implement the results are obligatory when R&D activities in the projects complete the
experimental-demonstrative phase and reach the pre-competitive stage. Economic agents
that have in-house R&D departments can be exempted from this rule. Funding from the
programme budget is compliant with national state-aid regulations concerning R&D, which
are fully compatible with the EU ones. In addition to the programmes of the National Plan for
R&D and Innovation, Romania has programmes for the development of industrial and S&T
parks. In particular, the software park in Timisoara (Region West) has been successful in attracting business activities. Obviously Romania plans to stimulate R&D mostly through support for SMEs.

The Government’s further efforts to improve cooperation involve the support of technology clusters or the stimulation of research done by enterprises, especially in high technology fields. To this end, NASR also launched in 2005 a vast action for promoting technological platforms at national level, in correlation with the European ones.

NASR has planned a series of debate sessions, dedicated to particular European platforms. These meetings will be attended by partners from both the public R&D institutions and the business environment. They are considered as most significant for the respective European platforms. Currently NASR monitors 18 national platforms in fields such as hydrogen and fuel cells, water management, maritime transport, future manufacturing, nanoelectronics, nanomedicine, innovative medicines, sustainable chemistry, plants genomics and biotechnology, aeronautics.

The programme “Research of excellence” focuses also on facilitating the integration with European platforms. One of the goals of the programme is to unite R&D institutions, university departments and enterprises in order to develop integrated technological networks in leading technology fields.

As far as the NDP is concerned, the R&D-related measures in the economic competitiveness component will focus on investments in:

- development of R&D infrastructure in public universities and R&D institutes;
- development of poles of excellence in technological fields of high economic potential through stronger partnerships between universities, research institutes and high-tech SMEs;
- innovation activities of high-tech micro-enterprises and spin-offs, based on R&D results obtained in universities or research institutes;
- an accelerated introduction and use of advanced technologies and the development of specific R&D activities in all the economic sectors.

The National Agency for Small and Medium-Sized Enterprises (NASMEC) has also initiated the National Program for setting up and developing business and technology incubators. The main goal of the programme is to stimulate business development and innovative initiatives, the development of SMEs and the creation of new jobs. According to the OECD assessment (2005), it is necessary for Romania to adjust its concept of industrial parks to the European one. NASMEC, in collaboration with UNDP, launched in 2005, as a multi-annual program, five business incubators aimed at improving the creation of start-ups, at stimulating innovative SMEs, and at making the liaison between R&D and entrepreneurial culture.

The mechanisms for improving Private Sector involvement in the decision-making process have recently been implemented, but their efficiency depends on the capacity of the Private Sector to turn these opportunities into reality.

The decision processes related to national research policies have to address not only the question of the lack of involvement of the Private Sector, but also the main issues related to the relevant socio-economic context. For example, enterprises have little interest in forming strategic alliances (e.g. joint ventures, technology/know-how transfers, etc.) and there is little collaboration with academia to ensure that the education system is aligned to the skills required by industry, particularly in the more dynamic and fast-growing sectors. Also only few specialised RDI support services are available which limits assistance for industry to launch training schemes for RDI management. And many innovative enterprises have no marketing expertise.
However, a valuable business initiative related to RDI is the development of a “market” for R&D results through electronic services for online processing of the information on R&D supply and demand and available R&D results.

Implementation and assessment/revision stages

The government’s main priorities for strengthening institutional capacity over the next four years include the following:

- Establishment of mechanisms for cooperation among public authorities that elaborate and implement policies to facilitate technological transfer and research programmes,
- Grants for scientific research will be streamlined, organized by theme and coordinated with university and post-graduate research programs, in order to meet the market’s needs,
- Introduction of an unique system of evaluation for research development institutions, activities and staff; special attention will be devoted to establish proper selection criteria of private organizations that are functioning as technological transfer centres,
- Generalisation of competitive financing for research and development projects,
- Reduction of the “brain drain” in the National Research and Innovation System by granting financial incentives to researchers.

The most comprehensive Public Private-Partnership in Romania in the last 15 years was the drafting of the National Export Strategy, led by the Ministry of Economy and commerce with the assistance of the International Trade Centre UNCTAD/WTO (ITC). This is a remarkable example of going through almost all the stages of Public Private-Partnership building.

Besides complaints about insufficient R&D funding on a national level, employers claim that the Ministry of Education and Research 'had failed to convince that it truly understood the role of state institutions in a modern market economy and the importance of employers for the role of R&D in the economic development of Romania'.

The representatives of RDI trade union emphasised the usefulness of a social dialogue with employers’ organisations, pointing out that in many cases the partners had reached a common opinion, but quite the opposite of the one expressed by the government.

Both the Public and the Private Sectors need to become more dynamic. Most new RDI investment projects must be undertaken by the Private Sector, whilst the Public Sector has to gradually increase its direct involvement, but at a lower scale. The Public Sector needs to become more pro-active and responsive to Private Sector initiatives and needs. Concluding, the main constraints on R&D and innovation are considered to be

- the relatively low level of funds allocated to the development of human resources and infrastructure in the technology transfer and innovation domains,
- the low level of involvement of enterprises in R&D and innovation activities, and
- the regional disparities in R&D and innovation activities and infrastructure.

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

The development of regional research and innovation systems is still in its infancy. Yet, there are a number of regions where RIIS projects are under development with the wide participation of local authorities and of main organisations representing the local scientific, economic and financial communities, (e.g. North-East and Central Regions, Iffov County). In some regions, e.g. the Timisoara Region, these are already finalised. RIISs development, as well as the presence and technical profile of foreign direct investment in the regions have a

---

7 See also: www.cercetare.ro
8 Information based on the interviews made for the purposes of this study.
strong influence on the formation of poles of excellence and of technology clusters specific to the respective regions.

4. Overview: Types and extent of Private Sector involvement

General discussion & networks: in the second half of 2003 a process of consultation between the Public and the Private Sectors was initiated. The mobility of staff between the Private and Public Sectors increased visibly during this process.

(Co-)design & decision-making: in December 2003, through a Parliament decision\(^9\) the system of export promotion was changed: the monitoring of the system became the task of the newly-created Export Council on the basis of a Public Private-Partnership. Four commissions were created for strategy, competitiveness, marketing and branding; for monitoring export promotion instruments; for trade legislation, commercial defence and training and for current issues. The first one includes 23 working groups and one of them deals with the issue of promoting RDI in private enterprises in order to enhance export competitiveness. Within the RDI working group, representatives of the public authorities, academia, universities, research institutes, enterprises, professional associations met and agreed on the following:

- assessment of the interaction between research, innovation and economy in Romania, the effect of the RDI national strategy on trading performance and prospects;
- the key issues that are impeding the country’s competitiveness related to the RDI policy-making, main actors and interaction between the three research spheres;
- a strategic process and framework for overcoming the obstacles related to RDI to further export development.

Proactive involvement: initiatives coming from the Private Sector were relevant only for a few entrepreneurial unions. Private Sector leaders denounced tripartite dialogue being carried out mostly between the government and RDI trade unions, on one hand, and between the government and the universities and academies, on the other hand. They also stated that employers’ associations had obtained no results in the RDI decision-making negotiations over the last years, nor in the 2005 – 2008 National Plan of Innovation, as their organisations had been fragmented and had concerned themselves with minor, isolated issues

5. Selected useful examples of transferable approaches and experiences

5.1 Competitiveness through R&D in the Romanian Software and Services Industry

The Employers’ Association of the Software and Services Industry (ANIS) supports the development of the Romanian software and services industry, helping Romania become one of the regional leaders in software production and an acknowledged international exporter of high standard software products and IT-enabled services. One of the critical factors leading to Romania’s software industry becoming an internationally acknowledged competitor is in-house R&D. Their current involvement in supporting innovation is bi-directional.

First, one year ago, ANIS initiated a sector-level strategic plan called RISE (Romanian Itinerary to Software & Services Excellence). The mission of the R&D focus group was to identify the main obstacles to software and services innovation and to provide possible solutions. The conclusions were then forwarded to the Ministry of Education and Research.

Second, ANIS was invited by the Ministry of Economy and Research – Department of Export Promotion to join the elaboration of the National Export Strategy of Romania. ANIS argued that clustering, tech parks, academic partnerships and Government support are critical to promoting Romanian software R&D. It is by looking towards current constraints and international best practices that they can clearly see what can be improved. In this framework foreign dialogues, co-operations and partnerships play a special role.

\(^9\) Emergency Ordinance nr. 120
### Appendix 1: Overview of identified instruments for Private Sector involvement and their use in Romania

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Intensity of use</th>
<th>Initiated by</th>
<th>Used for</th>
<th>Used in</th>
<th>Examples and remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal contact / consultations</td>
<td>Regular</td>
<td>Both sides</td>
<td>Ideas exchanges</td>
<td>✔</td>
<td>No ‘official’ platforms, private events, e.g. corporate anniversaries</td>
</tr>
<tr>
<td>Conferences</td>
<td>Frequent</td>
<td>Both sides</td>
<td>Very different issues</td>
<td>✔ ✔</td>
<td>Romanian Chamber of Trade</td>
</tr>
<tr>
<td>Discussion platforms</td>
<td>Beginning to use</td>
<td>Public Sector</td>
<td>Integrated technological platforms issues</td>
<td>✔ ✔</td>
<td>MEDR launched in 2005 two discussions platforms on the future of industry – MANUFUTURE, and on the water supply and quality. Another 10 technological platforms are to be build soon. All are taking still the form of a series of conferences.</td>
</tr>
<tr>
<td>Networks</td>
<td>Growing</td>
<td>Both sides</td>
<td>Technology transfer issues, know-how issues, National Export Strategy issues</td>
<td>✔ ✔ ✔</td>
<td>National Export Strategy system, Technologic parks, incubators, industry offices linkages (OLI system), technological information centers (CIT system)</td>
</tr>
<tr>
<td>Staff mobility &amp; exchange</td>
<td>Not common / Beginning to use</td>
<td>Public Sector</td>
<td>Technological transfer at the individual level (innovator)</td>
<td>✔</td>
<td>Excellence Centres Program; but no legal basis. Labour Code does not stimulate short-term labour contracts.</td>
</tr>
</tbody>
</table>

Table 1: Overview of instruments used for Private Sector involvement (continued on next page)
<table>
<thead>
<tr>
<th>Instrument</th>
<th>Intensity of use</th>
<th>Initiated by</th>
<th>Used for</th>
<th>Used in</th>
<th>Examples and remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ad hoc studies</strong></td>
<td>Regular</td>
<td>Both sides</td>
<td>Scientific communications</td>
<td>✓</td>
<td>Group of Applied Economics: Lisbon Scoreboard, 2004</td>
</tr>
<tr>
<td><strong>Position papers</strong></td>
<td>Beginning to use</td>
<td>Either side</td>
<td>Proposals related to the problems in the business environment</td>
<td>✓</td>
<td>Foreign Investors Council drafted the ‘White Paper’ at the beginning of 2005</td>
</tr>
<tr>
<td><strong>Ad hoc meetings and workshops</strong></td>
<td>Beginning to use</td>
<td>Both sides</td>
<td>3% RDI expenses in PIB</td>
<td>✓ ✓ ✓</td>
<td>Press trust Adevarul organized last year a brainstorming meeting on the of “3%-target</td>
</tr>
<tr>
<td><strong>Formal consultations</strong></td>
<td>Growing</td>
<td>Both sides</td>
<td>Severe problems addressed and solutions building</td>
<td>✓ ✓ ✓</td>
<td>Trilateral Social Dialog Commission</td>
</tr>
<tr>
<td><strong>Advisory groups &amp; committees</strong></td>
<td>Regular</td>
<td>Either side</td>
<td>Recommendations</td>
<td>✓ ✓ ✓</td>
<td>National Plan for RDI elaboration</td>
</tr>
<tr>
<td><strong>Evaluation studies</strong></td>
<td>Beginning to use</td>
<td>Either side</td>
<td>Private involvement in public awareness for a few issues</td>
<td>✓</td>
<td>ICMENERG + ICPE + ENER: “Evaluation of the potential for new sources of energy in Romania”</td>
</tr>
<tr>
<td><strong>(Steering) committee participation</strong></td>
<td>Beginning to use</td>
<td>Public Sector</td>
<td>Drafting of normative acts in the consultative bodies</td>
<td>✓ ✓</td>
<td>Not a common practice</td>
</tr>
<tr>
<td><strong>Board memberships</strong></td>
<td>Not common</td>
<td></td>
<td></td>
<td></td>
<td>Not a common practice</td>
</tr>
<tr>
<td><strong>Task force</strong></td>
<td>Occasional</td>
<td>Both sides</td>
<td>Normative acts initiations</td>
<td>✓ ✓</td>
<td>Excellent Centres Program elaboration</td>
</tr>
<tr>
<td><strong>(Co-)funding of research</strong></td>
<td>Growing</td>
<td>Both sides / Either side</td>
<td>Research projects, infrastructure New domain approaches</td>
<td>✓</td>
<td>Excellent centres</td>
</tr>
</tbody>
</table>

Table 1 (continued) : Overview of instruments used for Private Sector involvement
Appendix 2: Selected relevant sources and literature

1. References

Section 1


EIRO (2004), European Industrial Relations Observatory On-Line – Romania Country Profile: RO0411102FRO.DOC

European Trend Chart on Innovation, Annual Innovation Policy for Romania covering period: September 2003 – August 2004

European Trend Chart on Innovation, Annual Innovation Policy Trends and Appraisal Report Romania 2004-2005

Government Document, chapter 17 - “Science and research”, results of the negotiation with EU

INSSE (2004), R&D activity in 2003


Vass, A. S. Sandu (2004), Current Issues of Research, Development and Innovation in Romania, Institute of National Economy, Bucharest


Zamfirescu, C., F. Filip , B. Bărbat (2005), Future Prospects in Romania: Scenarios for the Development of the Knowledge Society in Romania

World Economic Forum (2004), Romania’s performance in terms of Lisbon strategy

Section 2


CREST (2004), Open Method of Coordination (OMC) 3% Action Plan - Report of the CREST expert group on SME and Research

CREST-OMC Policy Mix Group of experts (2005), Preliminary draft of the Policy Mix Peer Review Romania

EC (2005), Community Competitiveness and Innovation framework Program Summary of the results of the public consultation, http://europa.eu.int/comm/enterprise

EUROSTAT (2005), R&D in the business enterprise sector of the European Union, Statistics in focus 4/2005

FOREIGN INVESTORS COUNCIL (2005), Immediate Measures to Increase Foreign Direct Investment in Romania, Bucharest

Section 3
European Commission (2004), *European Competitiveness Report*
MER (2005), Legislation, measures and programs in force
MER (2005), *Elaboration of the national R&D and innovation strategy for 2007-2013*

Section 4
Interviews with several representatives of the Union of Romanian Employers, the Ministry of Economy and Trade and the Ministry of Education and Research

Section 5
Interviews with Mr. Costin Lianu, Director of the Department of Export Promotion, Ministry of Economy and Trade and Mr. Florin Talpeş, President of The Employers’ Association of the Software and Services Industry – ANIS

2. Further sources and literature

Laws, regulations, measures:
GO no. 65/2001 regarding the set up and functioning of industrial parks;
GO 57/2002 on scientific research and technological development, approved by Law 324/2003,
Law no. 490/2002 on Industrial parks;
GO no. 14/2002 regarding the set up and functioning of technology and scientific parks;
Law 319/2003 on the statute of the R&D personnel,
Government Ordinance 14/ 2002 on S&T parks, approved by Law 50/2003,
Law no. 52/2003 on transparency of the decision-making process in public administration (“sunshine law”);
Law no. 50/2003 on Technology and scientific parks;
Law no. 161/2003 on the transparency in exercising public functions, in the judiciary and in business, and the prevention and punishment of corruption;
Law no. 511/2004 for the 2005 state budget that include public RD budget
Law no. 346/2004 on stimulating SME creation and development and GEO no.75/2004 for its completion;
Law no. 359/2004 on simplifying the SME registration and authorisation procedures;
Law no.149/2004 amending Law 64/1995 on judicial reorganisation and bankruptcy with its subsequent amendments;
Government Document, chapter 17 - “*Science and research*”, results of the negotiation with EU
GD no 1449/2005 regarding the organization and functioning of the National Authority for Science and Research

Programmes
GD no.1280/2004 for approval the Governmental Strategy for Sustaining SME Development;
GD no. 1461/2004 regarding Program for supporting the SMEs development through reimbursed the amount of taxation paid for the reinvested profit;
Government Decision 128/2004 regarding the INFRATEH program;
Government Decision 368/ 2005 regarding the “Research of excellence” program;
Existing studies about Private Sector involvement

Annual report on the RDI Government Policies, December 2005,

Fundatia Centrul Român pentru Întreprinderi Mici si Mijlocii (CRIMM) - Centrul Releu pentru
Inovare(CeRIn) – in progress;
Camera de Comert şi Industrie a României (Romanian Chamber of Commerce and Industry)
– at the beginning.

General and country information:

ANIS, “Assessment report: IT sector” prepared by Citizens Development Corps for the CHF
Consortium in Romania.
Anton, Anton, Romania In Era Cunoaşterii. Aria Românească A Cercetării, President of the
National Authority for Research and Development, State Secretary for RDI at the Ministry of
Education and Research, 2006.
EC, Regular Report on Romania’s progress towards accession 2004
EC, eInclusion revisited: The Local Dimension of the Information Society, 2005
European Trend Chart on Innovation, Annual Innovation Policy for Romania Covering period:
Economist Intelligence Unit, The 2004 e-readiness rankings.
eEurope+ Benchmarking Report, CEE 10 Countries Information Society Benchmarks
Country Analysis.
IMF, World Economic Outlook database, April 2005.
INSEAD, eEurope 2005 - A study of the degree of Alignment of the New Member States and
The Candidate Countries.
IPTS, “Factors and impacts in the IS – a prospective analysis in the candidate countries,
IPTS, Foresight Analysis on Information Society Technologies in EU25+. Lessons from
FISTERA.
Market Watch IT&C, No. 82, Ian-Feb 2006,,
http://www.marketwatch.ro/articles.php?ai=1185&filter=-1&st=0
National Report 2004-2005 - towards the European higher education area Bologna Process
Policy Mix Peer Review10 ROMANIA, June 2005, Preliminary draft,
0ROMANIA_28.07.05.doc
R&D and Innovation Policies in Romania, Report of the Policy Mix Review Team, September
CREST Policy Mix Peer Reviews – Country Report: Romania, final version, January 2006;
Romania’s National Development Plan - Sectoral Operational Programme - “Increase of
economic competitiveness”, draft, april 2006

10 This is the input provided by JRC-IPTS in collaboration with DG RTD-M1 for a first draft of Part A
of the report on the Romanian policy mix to raise R&D that will be the eventual outcome of the
peer review exercise. Important updates, additions and corrections have been provided by
Rolanda Predescu, who represents Romania in the CREST-OMC Policy Mix Group of experts..
The report will be completed in the next few months on the basis of the additional information and
expert views that become available as a result of the peer review process.
Country Profile: Romania

World Bank, Romania Restructuring for EU Integration-The Policy Agenda.
Zamfirescu, C., F. Filip , B. Bărbat (2005), Future Prospects in Romania: Scenarios for the Development of the Knowledge Society in Romania

Websites
Chamber of Commerce and Industry of Romania and Bucharest - http://www.ccir.ro
Foreign Investors' Council of Romania - http://www.fic.ro
Investment Compact South-East Europe – http://www.investmentcompact.org
Ministry of European Integration - http://www.mie.ro
Ministry of Economy and Trade – http://www.minind.ro
National Trade Register Office - http://www.onrc.ro
Romanian Foreign Trade Centre - http://www.traderom.ro
Romanian State Office for Inventions and Trademarks – http://www.osim.ro
Young Entrepreneurs Association – http://www.basepoate.ro

Further information and feedback
This country profile has been prepared by a team of IKU Innovation Research Centre under the leadership of Dr. Annamária Inzelt. For further information and feedback, please contact the responsible authors under iku@uni-corvinus.hu.