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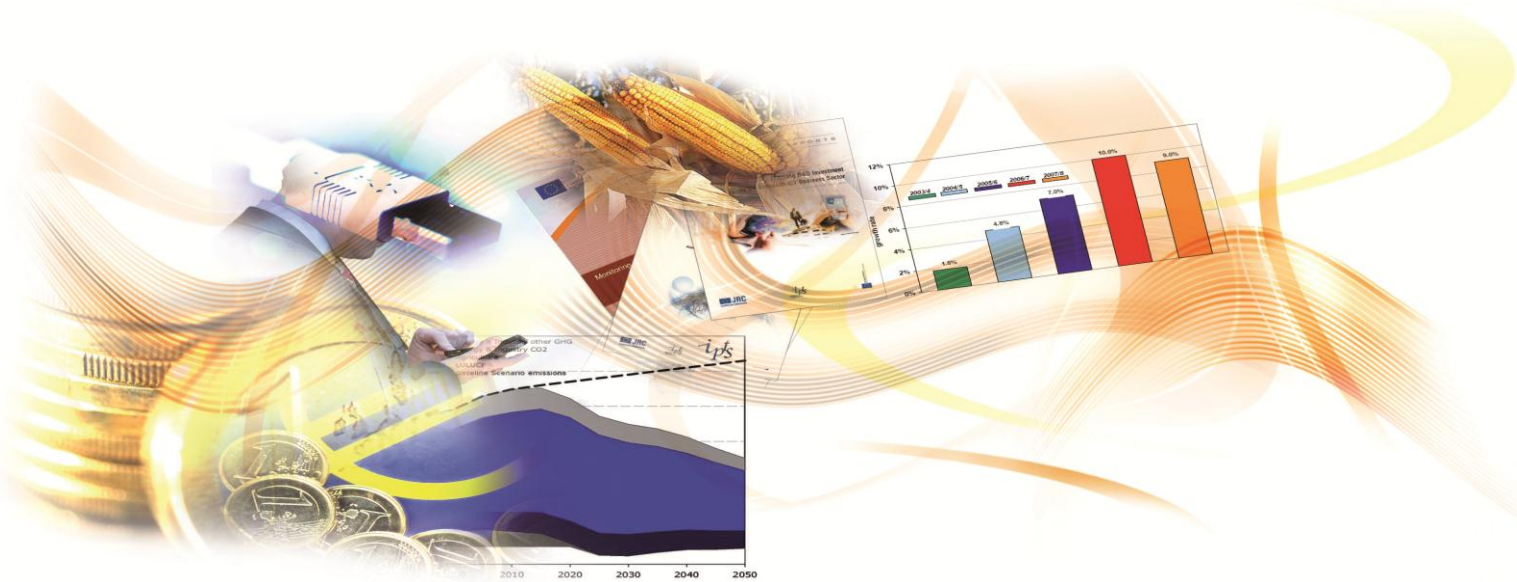

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Abstract

The Analytical Country Reports analyse and assess in a structured manner the evolution of the national policy research and innovation in the perspective of the wider EU strategy and goals, with a particular focus on the performance of the national research and innovation (R&I) system, their broader policy mix and governance. The 2013 edition of the Country Reports highlight national policy and system developments occurring since late 2012 and assess, through dedicated sections:

- national progress in addressing Research and Innovation system challenges;
- national progress in addressing the 5 ERA priorities;
- the progress at Member State level towards achieving the Innovation Union;
- the status and relevant features of Regional and/or National Research and Innovation Strategies on Smart Specialisation (RIS3);
- as far relevant, country Specific Research and Innovation (R&I) Recommendations.

Detailed annexes in tabular form provide access to country information in a concise and synthetic manner.
The reports were originally produced in December 2013, focusing on policy developments occurring over the preceding twelve months.

ACKNOWLEDGMENTS AND FURTHER INFORMATION

This analytical country report is one of a series of annual ERAWATCH reports produced for EU Member States and Countries Associated to the Seventh Framework Programme for Research of the European Union (FP7). ERAWATCH is a joint initiative of the European Commission's Directorate General for Research and Innovation and Joint Research Centre.

The Country Report 2013 builds on and updates the 2012 edition. The report identifies the structural challenges of the national research and innovation system and assesses the match between the national priorities and the structural challenges, highlighting the latest developments, their dynamics and impact in the overall national context.

The first draft of this report was produced in December 2013 and was focused on developments taking place in the previous twelve months. In particular, it has benefitted from the comments and suggestions of Elisabetta Marinelli and Mariana Chioncel from JRC-IPTS.

The report is currently only published in electronic format and is available on the ERAWATCH website. Comments on this report are welcome and should be addressed to jrc-ipts-erawatch-helpdesk@ec.europa.eu.

EXECUTIVE SUMMARY

During last 8 years, Albania has restructured its research and innovation system by initially reorganizing its institutional and legal framework (2005 – 2008) and then introducing, at the policy level, new strategies for research and innovation and higher education (2009 – 2013), along with identifying and implementing various programmes for public and competitive funding (2009 – 2013). The traditional system dominated a single institution was reorganised and R&D performance is now concentrated in public sector centres and institutes, higher education institutions, line ministries, and governmental agencies. Several developments were recorded also at policy level, although in financial terms the support to R&I did not progressively change along with the strategic objectives introduced at the first National Strategy for Science, Technology and Innovation (NSSTI 2009 – 2015). Obviously, the stagnation in economic and political development especially in the last years[1], seems to "seriously having influenced also the governance of national research and innovation policies"[2] and there is currently a lack of understanding where governmental policies are leading the sector. On the eve of the NSSTI revision, which corresponds with the composition of a new government in power (since June 2013), the restructuring of R&I system is entering in a new phase, where it is needed a revised institutional and strategic approach to research and education in general in Albania.

At the institutional level, during 2013 there were few changes taking place in the country., The previous Ministry of Education and Science (MES) is now recomposed as the Ministry of Education and Sport (MES), the previous Minister of Innovation, Technology and Information Communication (MITIC) is now recomposed as the Minister of Innovation and Public Administration, in addition to new ministries and structures being developed, such as the previous Ministry of Economy, Trade and Energy (METE), which is now divided in two ministries: Ministry of Economic Development, Trade and Entrepreneurship and Ministry of Energy and Industry. However, MES remains the supreme governing authority in the area of science and technology. This governance system comprises the Academy of Sciences of Albania, Universities, Ministries' Scientific Research Directorate and the R&D private sector. The technology policy is drafted upon the Albanian Strategy of Research, Technological Development and Innovations (ASTDI) (2009-2015). National Research Development Programs for Innovative and Technological Development are under the responsibility of the Agency of Research, Technology and Innovation (ARTI)[3]. Overall, the Albania research system is made up of 11 public and 38 private universities, 4 public researches institutes, 11 research centres related to the industry and agriculture area, agencies and other scientific research legal entities. Through recent legislative initiatives, it is to be highlighted the process of drafting and revising the 'Business and Investment Development Strategy 2014-2020'[4] by the Ministry of Economic Development, Trade and Entrepreneurship for the period 2014-2020, which in line with the program of the new Government, EU 2020 and SEE 2020 focuses on a competitive

[1] "Nations in Transit 2012", Pg. 2 -3 as cited in WBC-INCO.NET publication "R&D and Innovation in Western Balkans: Moving Towards 2020", 30 April 2014

[2] "R&D and Innovation in Western Balkans: Moving Towards 2020", Edited by Ines Marinkovic and Elke Dall, (Centre for Social Innovation, ZSI Austria). The publication is part of the project WBC-INCO.NET (Co-ordination of Research Policies with the Western Balkan Countries), 30 April 2014, Available at: http://wbc-inco.net/object/news/14115/attach/0_PUBLIKATION_WBCINCO_web.pdf

[3] WBC- INCO.net Report, Available at: http://wbc-inco.net/attach/WBC-INCO.net_AL-Report_Energy_2012_v02.pdf

[4] METE, Draft Strategy, Available at: http://www.mete.gov.al/doc/1_Korrik_2013_draft_strategjia_BI___final.pdf

Albania with a dynamic entrepreneurship and productive industry, where 'an important part of the strategy is given to innovation and entrepreneurship culture for SMEs'[5]. In addition, there is concrete initiative for establishing a National Spatial Data Infrastructure[6], which will enable the establishment of the Albanian Geospatial Infrastructure Authority as the institution responsible for the implementation of the INSPIRE directive, the establishment of the Geodetic Albanian Reference Framework[7] as a reference of European standards for "National GIS", as well as the establishment of the "National Geoportal", through which geospatial data and services related to these data will be accessed.

Budget cuts announced by the Albanian Ministry of Finances could also potentially affect the research and sciences funds allocated to respective institutions (MES, ARTI, ASA, Excellence Fund, BRIC, AIDA, etc). However, as reported in previous monitoring Country reports (2012 and 2011) some of the research programmes introduced in the National Strategy for Science, Technology and Information 2009 - 2013 (NSTI) were not granted funds at all or partially granted due to budget constraints even in previous governments (such as: National Programmes for Research and Development from 2012 – 2014, while Albanian Centres of Excellence in Science; National Technology programme; Research Infrastructure Fund; Research Eagle Grants; Business Incubation Programme; Albanian Cluster Programme at all). Most probably the programmes which are yet not financed will continue to be as such until end of the NSTI validation, while the ones which are ongoing are expected to be finalized. It remains to monitor and report progressively to what extent the budget cuts will be expanded to the current ongoing R&D programmes or/and introducing new ones during 2014. A brief overview of achieved and not achieved results set at the NSSTI until December 2013 is listed below[8]:

- The establishment of ARTI[9]. The Agency started work in March 2010.
- Raising awareness activities on the programmes for science, technology and innovation.
- Within ARTI, establishing the Training Centre on the European Programmes.
- Strategies development and actions in approximation with the European legislation: drafting Strategy for Science, Technology and Innovation for the years 2016- 2020.
- Inputs on the cross sectorial Strategy in the framework of the Strategy of Development and Integration for the years 2013- 2020.
- The Regulatory for the Ethics Code in Science
- The Programme of the Science Infrastructure (partly only on MES)

Not achieved:

- The Programme for Science and Technology (lack of funds)
- The Programme for the Centres of Excellence in Science (lack of funds)
- The Programme of the Research Infrastructure (lack of funds)

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[5]METE, Presentation by General Directorate of Policies, "**National (Sectorial) Strategic Document** "Business and Investment development strategy" **(Draft)** and Alignment With See Strategy 2020", 19 June 2013, Available At: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CCsQFjAA&url=http%3A%2F%2Fseeic.rcc.int%2Ffiles%2Fuser%2Fdocs%2Fevents%2Fseeic-13th_meeting%2FBashkim%2520Sykja-%2520The%2520alignment%2520of%2520BIDS%2520with%2520%2520SEE%25202020%2520Strategy.ppt&ei=ScHGUtOrA6mAywOH7IH4Cw&usg=AFQjCNFQgw3JnxavNVeQ2BK273_Wika4GQ&sig2=Z-HXyB8joTyz0gK3K9qFHQ&bvm=bv.58187178,d.bGQ

[6] Supported by Norwegian Government in financial and technical terms. Speech of Minister of Innovation and Public Administration, available at: http://www.inovacioni.gov.al/al/newsroom/fjalime/1-2-milion-euro-ndihme-nga-qeveria-norvegjeze-per-krijimin-e-nsdi-se1387317063

[7] KRGJSH-2010

[8] ARTI official communication

[9] DCM. Nr. 903, dated 26.08.2009. Available at: http://arkiva.mash.gov.al/File/Legjislacioni_MASH/Aneks%203-VENDIM%20Nr.903,%20dat%C3%AB%2026.8.2009%20-%20PER%20KRIJIMIN%20E%20(AKTI).pdf

- Collection of the statistics of the evaluation of the national scientific development (lack of information and coordination from the respective institutions)
- Establishment of a National Council for Science and Innovation (NCSN); MoES

As far as the performance of the national Research and Innovation system is concerned, the latest international assessment reports (EU progress report on Albania and World Bank Country Series Albania) state that overall, 'there has been very little progress in the area of science and research in Albania'[10]. Acknowledging that only 'some actions to stimulate innovation and to strengthen human capital building have been taken'[11], referring to the promotion activities of the Agency for Research, Technology and Innovation (ARTI) to increase participation in EU research programmes, there continues a 'low level of investment in research and technological development'. However, it is optimistic that some steps to build up human capital have been taken, mainly through 'increasing the resources of the Fund for Excellence and extending the Brain Gain programme in cooperation with the UNDP'. Overall, the international progress reports find that further capacity building and investment in research are still required to ensure integration into the European Research Area and contributing to the Innovation Union. Moreover, 'efforts should be made to improve the integration of the R&D and innovation system through explicit programs to increase official and citizen understanding of the linkages between research, development, and innovation across key stakeholders'[12]. Last, increased efforts for successful participation in the EU's next research framework programme Horizon 2020 will also be necessary'[13].

[10] EU Progress Report Albania, 16 October 2013, Available at: http://ec.europa.eu/enlargement/pdf/key_documents/2013/package/al_rapport_2013.pdf
[11] Idem
[12] World Bank Technical Assistance Project (P123211): Western Balkans Regional R&D Strategy For Innovation, 'World Bank Country Paper Series - Albania, October 2013, available at: http://www.worldbank.org/content/dam/Worldbank/document/eca/Western-Balkans-R&D-Albania.pdf
[13] Idem

TABLE OF CONTENTS

1 BASIC CHARACTERISATION OF THE RESEARCH AND INNOVATION SYSTEM

The country has a total population of 2,831,741 inhabitants, where 53.7% of population resides in urban areas[14]. In 2012, real GDP growth dropped to 1.1%, while in 2011 it was 3.1%[15], though forecasted to slightly increase to 1.8% in 2013 according to World Bank[16], revising upwards its earlier projection for a 1.6% y/y growth. GDP per sector[17] is composed of agriculture (20.4%), industry (19.1%), and services (60.5%) (2012). GDP reached around €9.7 billion 2012 (13.2 USD Billion), a slightly increase from 2011[18]. Albania is considered a middle income country, but its GDP per capita of €3,261.4 (458.30 Albanian lek (ALL) in 2011, with a 2012 forecast of €3,415.1[19]. In Albania, the flow of foreign direct investment (FDI), according to the Ministry of Finance has increased substantially from about 250 million in 2006 to €900 million in 2012, so it has more than tripled. Nevertheless, in late 2011, the flow of FDI was estimated at 7.7% of GDP, about 1.2% lower compared to the level recorded in 2010. It is a fact that the presence of multinational companies in the Albanian economy has a dominant and significant effect on economic development and is important to the revenue budget. Developments in FDI in the country reflect the preference of foreign investors in terms of lower production costs and potentially higher profit margins. The rapid growth of FDI inflows in the country is also partly a result of the improved business environment, as well as thanks to the opportunities created by the privatization of state enterprises.

Estimates corroborated in discussions held during the preparation of the National Strategy of Science, Technology and Innovation[20] 2009-2015 suggest that Gross Expenditure on R&D (GERD) was close to €15m in 2009[21]. However, the budget for R&D remains quite low also in 2013 and due to the lack of reliable statistics[22] it remains difficult to establish the level of investment in research as a share of GDP, which is around 0.35% of GDP[23]. This is the lowest rate in Europe and far below the EU-27 average of 2.01% in 2009[24]and the Lisbon target of 3%.

[14] CENSUS 2011, Albanian Population on 1 October 2011, INSTAT

[15] Vienna Institute for International Economic Studies, 2013, http://www.wiiw.ac.at/?action=publ&id=countries&value=1

[16] World Bank edition of Global Economic Prospects report, June 2013 While, according to Albanian Ministry of Finance (MoF) real GDP is forecasted to be 2.8% in 2013, the IMF and Albanian Government have revised more than once their GDP growth estimates for 2012 and 2013 (IMF to 0.5% as per January 2013) and 2013 (IMF to 1.3% as per January 2013). According to WB and IMF projections, the country's economic output is expected to gradually accelerate to 2% y/y in 2014 and to 3% y/y in 2015.

[17] http://www.theodora.com/wfbcurrent/albania/albania_economy.html

[18] Ministry of Finance (MOF), "Economic and Fiscal Programme 2013– 2015", January 2012

[19] Ministry of Finance (MOF), "Economic and Fiscal Programme 2013– 2015", January 2012

[20] The National Strategy for Science, Technology and Innovation reports all main figures in terms of Euros

[21] Figures in Strategy published in €—with 2009 average exchange rate of €1 /135.6 ALL, €15m is approximately 2.034m ALL. Council of Ministers, Department of Strategy and Donor Coordination, National Strategy of Science, Technology and Innovation 2009 - 2015, June 2009

[22] UNESCO representatives visited Albania in June 2013 in a organized meeting with ARTI and INSTAT in frame of the project on R&D statistics in Albania. Currently the Country report is in progress, available at: http://www.unesco.org/new/en/venice/about-this-office/where-we-work/southeast-europe/albania/

[23] EC Progress Report – Albania, October 2013, Available at: http://ec.europa.eu/enlargement/pdf/key_documents/2013/package/al_rapport_2013.pdf

[24] Eurostat, "R&D statistics explained"

The latest available UNESCO estimates indicate that GERD in 2008 was 0.15% of GDP and totalled $40.2 million (around €27.34 million[25]) in terms of PPP$, while the amount in local currency was reported as 1,665.5m ALL (around €13.651 million[26]). GERD per capita was indicated as $12.6 (€8.56) in PPP$, which represents only a tiny fraction (1.8%) of the EU-27 GERD per capita of €481.60 recorded in 2008. UNESCO data also show that 80.8% of R&D funding came from the state budget, 8.6% from higher education, with only 3.3% from business enterprises. Around 7.4% of GERD was funded from abroad in 2008, down from 12.0% in 2007.

R&D performance is concentrated in public sector centres and institutes, higher education institutions, line ministries, and the government sector: UNESCO statistics indicate that in 2008, 52.1% of R&D was performed by the public sector and 47.9% by higher education. UNESCO[27] also reports that GERD funded by business enterprises totalled 13.1m ALL in 2007 and 54.3m ALL in 2008 ($0.308m and $1.311m in current PPP$, respectively, or approximately €0.225m in 2007[28] and €0.891m 2008[29]).This is the first standardised indicator of the size of BERD in the country; other estimates suggest that the ratio of gross business enterprise expenditure on RTD to GDP is around 0.0025%[30].

[25] Source: European Central Bank, ECB reference exchange rate, US dollar/Euro equal to $1.4708/€1, 2008 data
[26] Source: Bank of Albania, Euro/ALL exchange rate for 2008 is 1 Euro = 122 ALL (average estimation).
[27] Beyond 20/20 WDS - Table View
[28] Source: European Central Bank, ECB reference exchange rate, US dollar/Euro equal to $1.3705/€1, 2007 data.
[29] Source: European Central Bank, ECB reference exchange rate, US dollar/Euro equal to $1.4708/€1, 2008 data.
[30] Estimates from discussions with MES officials, 2011

2 RECENT DEVELOPMENTS OF THE RESEARCH AND INNOVATION POLICY AND SYSTEM

2.1 National economic and political context

Last year, Albanian national context represented a period of many challenges and achievements in broader political and economic terms. Indeed they seem to have had an impact also on the main social indicators, especially on poverty rates, health and education sectors, access to basic services, infrastructure, etc. While there was no major development of direct relevance for research and innovation policy during 2013, there is a new political and economic background, which might impact directly or indirectly the research and innovation system in the near future by introducing new policy perspectives, pursuing the current ones, or even slowing down certain reforms constrained upon new circumstances of budget constraints.

First and most important political challenge was heading to the parliamentary elections (held on June 23, 2013) in line with all the prerequisites set by EU and Albania main international partners. As expected, the political campaign attired much of the attention of public debate during the first half of 2013, which was accompanied 'by an atmosphere of distrust between the two main political forces thus challenging the administration of the entire electoral process[31]. Upon this, after eight years of a government led by the Democratic Party (DP), the left wing coalition 'Alliance for a European Albania', led by the Socialist Party (SP) won a clear majority. Monitoring institutions assessed that 'a relatively smooth and peaceful electoral process made Albania closer to the EU membership and this makes it a major achievement'[32]. This is considered a crucial moment in Albania's democratic transition, as party leaders are considered now to have a real opportunity to establish new political agendas based upon substantive issues of concern to voters, such as unemployment and economy, health, education and fighting corruption. In terms of political programmes, although the main party's candidates were actively engaged in a lively campaign, by introducing a modern and innovative campaign framework, the substance on concrete plans/governing strategies and new policy perspectives as regard education, research and science remained weak. Notwithstanding, the new government is now expected to deliver on its campaign promises in the face of an increased demand for an accountable and responsive government. From the other side, the Democratic Party (DP), electing a new party leadership, is also expected to play a constructive role in the parliament and offer a reliable political alternative to the majority by providing sustainable policy options. In political terms, this election period was widely viewed as an important test for Albania's democratic development and its aspirations towards European Union accession. In this regard, the new government (mandated on September 2013) has aspired for a 'new beginning' in reforming different sectors of socio-economic concerns.

The latest policy reforms are included in a recent government programme, where priority is given to: a) *Integration into the European Union*, with a focus on democratization and transformation of the Albanian society, while considering the success of the process of European integration closely connected with an active and comprehensive communication that should involve all

[31] Final Monitoring Report, Albania Parliamentary Elections, June 2013, OSCE, Available at: http://www.osce.org/odihr/elections/106963

[32] NDI on ToR for Albania projects

stakeholders, in particular the social partners, civil society, academia and interest groups; b) *European Albania, in the region and in the world*, focused on foreign policy and contribution to national security and global security; c) *Rule of law and democratization of society* focused on major areas[33], where among others it acknowledges the need to ensure impartiality of civil society from the public institutions, and in particular the need to improve NGOs legislation and financial measures for regulating their activities. Development of the legal framework of NGOs seeks to promote the support of the local business sector, philanthropy and volunteer services; d) *Economic Development* focused on main areas[34], with a priority in closing up the transitory economic model and establishing a new economic model to guarantee sustainable growth, through new resources and focusing on some priority sectors such as: manufacturing, energy, tourism, agriculture and agro-industry, education and services. In this regard, priority support will be given to SMEs with particular emphasis on improving the management, staff training, quality standards and competitiveness, attract investment, intensify innovation and new technologies, etc.; e) *Public services* focused on main sectors[35], with a particular support to fund science and research development, acknowledging the scientific progress as an indication of the country's social, economic, and cultural development, as a factor of democratic consolidation, as well as a fundamental part of the European image of Albania.

Major challenge during 2013 was also posed to economy, especially to financial sector. Although, the macroeconomic stability was broadly maintained by the previous government[36], the increase in the fiscal deficit in 2012 and 2013 led to a further rise in the relatively high public debt, aggravating Albania's macro-financial vulnerability[37]. International financial institutions stated that progress on structural reforms remains insufficient and in particular, the privatization programme has practically stalled and the institutional set-up to protect property rights and enforce the rule of law is weak. However, development of information technology has been one of the sectors where reforms launched have improved public services. The Albanian Government has continued to be the main driver of the development in this sector either as buyer of services, or by stimulating the use and spreading of digital technologies[38]. Notwithstanding, the economic situation of Albania seems worrying most of the national experts and international institutions (IMF) upon declining macroeconomic and fiscal indicators, especially during the second half of 2013, a year of parliamentary elections. Recently, also the new mandated government had to accept the challenging financial figures 'especially due to lack of collection of tax revenues during 2013'[39]. According to the Albanian Government figures[40], the Albanian economy registered low positive growth rates during 2013, where real economic growth was about 1.9 percent, with a forecast to recover in 2014 at about 2.3%, 3% for 2015, 3.8% in 2016 and around 4.6% in 2017. However, Albanian government forecast seems to be more optimistic than IMF analysis, according to which the growth for 2013 is at 1.7% (est.),

[33] Life Safety, Property Safety, Equality and the rule of law, Organized crime , terrorism and trafficking, Parliamentary democracy, Local government, Public administration, Fight against corruption, Civil Society, media

[34] Economy; Employment; Natural Resources; Urban, Rural and Regional Development, Infrastructure, Macroeconomic and Fiscal Profile

[35] Education; Sports; Culture and cultural heritage; Gender equality; Youth; Health Care; Care and social inclusion; Former political prisoners; Veterans and war invalids; social Security, Housing

[36] Progress Report of the National Strategy for Integration and Development, 2o12 (published on July 2013)

[37] IMF Final Conclusions of the Mission to Tirana, Press Release, September 2013, Available at Ministry of Finance www.mof.gov.al

[38] Progress Report of NSDI 2010 – 2012, Department of Strategies and Donor Coordination, Available at www.dsdc.gov.al

[39] Normative Act of Albanian Government, Relation for State Budget Revision, Prime Minister Office, Available at Ministry of Finance, www.mof.gov.al

[40] Idem

while for 2014 it is expected to accelerate slightly to 2.1%, with an overall pessimistic scenario on the country growth until 2018 of not more than 2.5%. In fact, IMF concludes that 'fiscal deviations and a sharp decline in revenues, which occurred during the first half of 2013 are expected to lead the public debt to 70% of GDP at the end of 2013, compared with 59% in 2010[41]'. Accordingly, just recently the Albanian Government has drafted a normative act, through which it intends to make an inevitable interference on the budget law of this year. Therefore, the budget deficit will be almost doubled, going from nearly 48.9 billion ALL, which was stipulated in the original law of the State Budget for 2013, to 83.4 billion ALL. As the new government announced, the revised budget will be adjusted in line with the new composition of the cabinet and its new ministries and will address emergencies related to its programme, so as will cover priority sectors until end of 2013.

In parallel to the implementation of liberal policies of market economy, social policy has continued to target the development of balanced socio-economic growth through increased quality and access to education and health services. Despite the increase in wages and social benefits, Albania's decreasing annual real GDP growth between 2011 and 2013 have impacted poverty rates. According to a recent release of Albania Institute of Statistics (INSTAT) poverty rates have been increasing for urban areas and less in the rural areas, while shifting more at the Central and Coastal areas rather than mountain areas of the country, mainly due to demographic movements of population. Although labour market policies aimed at creating employment incentives and quality workforce by adapting a vocational education system to market needs, unemployment rate still remains at 13.3% in 2011[42], officially registered, whereas less than half of the population (46.3%) is still living in rural areas (CENSUS 2011[43]), which have experienced substantial population decreases in recent years (8% from Census 2001). Health, education, infrastructure and agriculture remain priority areas within public investment. However, the main public investments (about 55% of total public investment) also during 2012 - 2013 were concentrated on road infrastructure. In addition, the level of investment in research, as a share of GDP, is still difficult to establish, due to the lack of reliable statistics. However, it is estimated that the national level of investment in research and technological development is still very low and has not increased since 2010, despite the targets set in the national strategy for science, technology and innovation for 2009-2015. Public agencies have started to stimulate innovation among entrepreneurs by granting technology audits to SMEs with innovative ideas. Whereas, there are no developments to be reported with regard to increasing public spending on research and development (R&D). The budget for R&D remains quite low, at 0.35% of GDP in 2013. There is a lack of scientific research collaboration between universities and the investment of industry on R&D is weak. The 'brain gain' system of bonuses given to employees of the public administration who graduated abroad restarted in 2012 after being suspended in 2011[44]. At least, the newly appointed Minister of Education and Sports (previously entitled as Minister of Education and Science) was publicly engaged to support science in her first speech. The engagement would start with the establishment and creation of a National Fund for Science, "as a funding source of scientific research, project implementation and increasing autonomy through comprehensive renovation of science laboratories and research facilities"[45], aiming at bringing to

[41] Final Conclusions of IMF Mission in Albania, 27 September 2013

[42] Ministry of Labour, Social Affairs and Equal Opportunities, available at: http://www.instat.gov.al/media/100094/t3.xls

[43] INSTAT, available at: www.instat.gov.al

[44] Final EC Progress Report – Albania 2012, http://ec.europa.eu/enlargement/pdf/key_documents/2012/package/tr_rapport_2012_en.pdf

[45] Public declaration of Ms. Lindita Nikolla, designate Minister of Education and Sport during the Scientific Conference 'Challenges of Harmonization of Higher Education and Scientific Research in Albanian-Speaking

the national research system in Albania a "new way of education management oriented by outputs and results"[46].

2.2 Funding trends

Overall, understanding and foreseeing any trend in the funding flows of R&D and R&I in Albania is complex, generally due to a lack of understanding where the government policy is headed. From one side there are promising statements that research and innovation is important to Albanian progress in the region and yet the scientific progress is consider "as a forerunner of the social, economic and cultural development, as a factor for the democratic consolidation, and as a fundamental part of the European Albania image..."[47], and from the other side the pace of progress in the sector remains slow and the investment is through the lowest in the region. The latest publication on Western Balkans R&D and Innovation assesses through a tentative categorization that the research system of Albania is still in "a beginner phase"[48], as concerns research and innovation performance. Acknowledging the efforts of GoA to focus in establishing institutions and programs, during 2012 – 2013 less has been done as regards boosting investments in R&I through public-private partnerships, increasing public funds, and even more strengthen monitoring of baseline indicators.

Research and Development (R&D) activities in Albania, as stated in previous reports, are financed directly by the state budget, through national programmes financed by the MES, as well as through bilateral programmes, and international collaboration. Main mechanisms are outlined below:

- *Institutional financing*, allocated by the state budget to research institutions including the ASA, the Albanian Institute of Statistics (INSTAT), and research institutions of the ministries, and those which are implemented in research centres of the public universities, independent of the Ministry of Education and Sciences.
- ***Programme financing*** within the framework of the bilateral programmes established with MES
- ***Programme financing*** within the framework of the National Programmes for Research and Development through the ARTI
- ***Programme Financing*** within the framework of services provided for Information Society through MITIC
- ***Other financing,*** besides the state budget, includes:
    - International collaboration;
    - Collaboration with domestic organisations within Albania;
    - International programmes (UN, EU, etc.).
    - Financing from other public or private sector activities

territories', by the University of Tirana, 29 August 2013, available in English at: http://news.albanianscreen.tv/pages/news_detail/67417/ENG

[46] Public declaration of Ms. Lindita Nikolla, Minister of Education and Sport during the roundtable "Europeanization of the Albanian education system", organized by Austrian organizations in Albania supporting education and research projects, held on 16 October 2013, available only in Albanian at: http://mapo.al/2013/10/16/ditet-austriake-ne-tirane-objektivi-2014-europianizmi-arsimit-shqiptar/

[47] Deputy Minister of Education and Sports, Mr. Arber Mazniku for WBC-INCO.net publication report ""R&D and Innovation in Western Balkans: Moving Towards 2020", Pg. 18, published on 30 April 2014.

[48] WBC-INCO.net publication report ""R&D and Innovation in Western Balkans: Moving Towards 2020", Pg. 232, published on 30 April 2014.

The share of R&D funding is composed of 80.8% from the state budget, 8.6% from higher education, with only 3.3% from business enterprises. Around 7.4% of GERD is funded from abroad. The National Strategy of Science, Technology and Innovation 2009-2015 states that GERD accounted for less than 0.2% of GDP in 2009[49] and from various assessments it results to have only slightly increased to 0.35% in 2013[50]. While expenditure in R&D is evaluated at 0.15% of GDP and totalled around €27.34m[51] at NSTI 2009 - 2015, the funding only for innovation initiatives (as evaluated at the Business Innovation and Technology Strategy (BITS) 2011-2016) totals €10.31m, of which €4.8m is dedicated to the Innovation Fund. This is funded at 76.5% from the EU and other donors. There is no data available to measure the share of other funding sources and their trend, such as the regional budgets and private sector.

It is important to remark that updated statistical data on R&D are still missing (UNESCO Country Report from June 2013 official visit is in progress, while OECD and EUROSTAT indicators are not measured for Albania), therefore the below data will refer to national statistics (INSTAT, METE, MES, and international reports such as World Bank Country Report – Albania (released on October 2013).

2. 2.1. Funding flows

Overall, we can assess[52] that growth expenditure on R&D (GERD) showed some slight increase in the last year from 0.2% to 0.35% (as reported by the EC Progress report), however there are no data evidence on the GERD source and concrete expenditures on R&D programmes and activities (public vs. private), methods (competitive vs. institutional), themes (sectorial or generic). There is an understanding that international funds have been increased through projects supporting research activities (TEMPUS, FP7, etc) and might be their contribution has influenced the increased GERD. It remains a great challenge to evaluate the business sector investment in R&D and innovation, as it is still assessed as under invested.

There are two main factors that present challenges for funding of innovation policy in Albania—one is limited share of GDP dedicated to R&D and innovation in the country—the National Strategy for Science, Technology and Innovation foresees raising GERD from 0.2% of GDP to only 0.6% of GDP, which is still far below either the European average for 2009 (1.9%) and even farther from the Lisbon target of 3%. The other is the still constrained innovation creation and absorption capacity—which results in part from the fact that the country has tended to purchase innovations on the market rather than developing them domestically. Given the limits to government budgets that it can spend on innovation policy, it becomes evident that the addition funding will have to come from international donors and the private sector, including foreign investors which might set up research facilities in Albania to develop tailor-made products or technologies for the Albanian market.

From observation of the state budget 2013 and draft state budget 2014, the trend to finance research and innovation remains the same as in 2012 (slight increase in last year as showed in the table no.2) but the allocation of funds to R&D per se is not changing if not decreasing. It is noticeable that within the state budget totalled both for R&D, R&I and ICT services, the

[49] Council of Ministers, Department of Strategy and Donor Co-ordination, National Strategy of Science, Technology and Innovation 2009 - 2015, June 2009, Source: http://www.dsdc.gov.al/dsdc/pub/national_strategy_of_science_technology_and_innovation_final_draft_381_1

[50] EC Progress Report 2013 Albania

[51] Source: European Central Bank, ECB reference exchange rate, US dollar/Euro equal to $1,4708/€1, 2008 data

[52] Authors assessment

expenditures for information society activities have increased significantly if compared to research and innovation activities in the previous annual state budget. There persists a gap between planned funds in various policy documents (NAIS and BITS, but mainly NSTI for the lack of implementation of above mentioned programmes) and allocated funds to implementing agencies[53], which is mainly due to public budget shortages[54]. However, public agencies are also eligible to receive funds from bilateral and multilateral agreements of the GoA with international donors, so donor support is contributing also to implement some of the ongoing programmes. Although, over the long term the GoA opts to further increase international funds as a source in funding R&D in the country. Over the short term the Albanian government will need to ensure that the recently established key agencies (ARTI, BRIC, and NAIS) have access to promised public funding and sufficient institutional capacity to allow translating strategies in to concrete results.

Considering there is no further specialized analysis of the share provided by different funding sources this section deviates from the guidelines for data reasons.

2.2.2. Funding mechanisms

The NSSTI foresees that total cumulative funding for research activities during 2009-2015 will amount to €151.95m, including funding to HEI research institutes (€69.45m), MES research project funding (€30m), World Bank Research Infrastructure funding (€3.3m) and funding for the operation of ARTI (€3.25). The largest share (46%) is to be allocated to higher education research institutes—with the actual final share being much higher, given that universities can participate in National Technology Programmes and will benefit from the Research Infrastructure Fund. The budget shares take into account bilateral and multilateral donor support (including future IPA funds), but not contributions gained via participation of Albanian researchers or institutes in the EU's FP7 or other EU level research funding programmes. However, there is no data available from HEI and their research institutes on actual funding and expenditure on research activities.

The latest available UNESCO estimates indicate that Albania's GERD in 2008 was 0.15% of GDP and totalled $40.2 million (around €27.34m[55]) in terms of PPP$, while the amount in local currency was reported as 1,665,5m ALL (around €13,651m[56]). GERD per capita was $12.6 in PPP$ (€8.56), representing 1.8% of the EU-27 GERD per capita of €481.60 recorded in 2008. The lion's share of R&D funding (80.8%) came from the state budget, 8.6% from higher education, with only 3.3% from business enterprises. Around 7.4% of GERD was funded from abroad. The National Strategy of Science, Technology and Innovation[57] 2009-2015 states that GERD was close to €15 million in 2009[58], accounting for less than 0.2% of GDP[59]. Current data

[53] Authors assessments based on interviews with stakeholders
[54] Refering to the stakeholders statements (MES, ARTI)
[55] Source: European Central Bank, ECB reference exchange rate, US dollar/Euro equal to $1,4708/€1, 2008 data
[56] Source: Bank of Albania, Euro/ALL exchange rate for 2008 is 1 Euro = 122 ALL (average estimation).
[57] The National Strategy for Science, Technology and Innovation reports all main figures in Euros.
[58] Council of Ministers, Department of Strategy and Donor Co-ordination, National Strategy of Science, Technology and
Innovation 2009 - 2015, June 2009, Source:
http://www.dsdc.gov.al/dsdc/pub/national_strategy_of_science_technology_and_innovation_final_draft_381_1
[59] European Commission, Stabilization and Association Albania 2009 Progress Report, November 2010, Source:
http://ec.europa.eu/delegations/albania/documents/eu_albania/2009_progress_report_en.pdf

indicates that the budget for R&D in 2013 has slightly increased to 0.35% of GDP[60], but however its pace is slow to the amount planned at the NSTI (under the Strategy, GERD is to increase to 0.6% of GDP by 2015). UNESCO[61] also reports that GERD funded by business enterprises totalled 13.1mALL in 2007 and 54.3m ALL in 2008 ($0.308m and $1.311m in current PPP$, respectively, or approximately €0.225m in 2007[62] and €0.891m 2008[63]). This is the first standardised indicator of the size of BERD in the country—other estimates suggest that the ratio of gross business enterprise expenditure on RTD to GDP is around 0.0025%[64]. The NSSTI seeks to achieve 40% international funding of GERD by 2015—which can come from EU, other international donor or private investment sources. UNESCO reports the share of GERD funded from abroad is 12% in 2007 and 7.4% in 2008. The results from FP6/FP7 data suggest that European funding remains a marginal, if growing, contribution to the national research system. Albania is also participating in the Competitiveness and Innovation Framework Programme (CIP) in the period 2007 -2013. Albania is eligible for EIP, the first pillar of the CIP, but it is not yet participating in the Enterprise Europe Network or the EIP's financial instruments. In addition, the Albanian Government has expressed interest to participate as an associated country in Horizon 2020.

While not specifically aimed at R&D, the total funding dedicated to innovation[65] (latest data available 2011) is approximately €3.7m (all for grants) with an allocation rate of 39.4% (approximately €1.5m).[66] The ICT sector also receives foreign donor support mainly from the EU, Italy and the United States. Donors are supporting a methodical assessment of electronic communications and the integration of digital processes in the administrations of the main cities of Albania to improve government quality by speeding up the exchange of a larger range of information inside government, by increasing public administration transparency through ICT, increasing public access to information (GovNET)[67], and by providing technical assistance to NAIS, the Telecommunications Regulatory Entity, the Ministry of Finance and others. For example, one the latest initiatives being supported by international funding is the agreement of Albanian government signed with the Norwegian government, which will support with 1.2 million euro assistance, the establishment of the Albanian National Spatial Data Infrastructure, reinforcing as such the priority of GoA in the development of infrastructure, processing and use of geospatial data in Albania.

The table below shows the budgets of the different organizations that support innovation policy in Albania. METE has the largest budget, supporting not only business innovation but also AIDA which assists SMEs that seek to export. The most relevant organization is BRIC which implements the proposed BITS Programmes and Supporting Actions according to the innovation strategy. BRIC will provide funding (through the Innovation Fund) for SME projects and the renewal of SME technological equipment. The total planned budget for the implementation of the Business Innovation and Technology Strategy is about €10.3m for a period of six years (2011–2016). About 60% of the budget will be allocated to the Innovation

[60] EC Progress Report – Albania 2013
[61] http://stats.uis.unesco.org/unesco/TableViewer/tableView.aspx?ReportId=2658
[62] Source: European Central Bank, ECB reference exchange rate, US dollar/Euro equal to $1,3705/€1, 2007 data
[63] Source: European Central Bank, ECB reference exchange rate, US dollar/Euro equal to $1,4708/€1, 2008 data
[64] Estimates from discussions with MES officials, 2011
[65] Innovation funding in Albania refers mostly to support of information and communications technology activities and services, as a reinforced priority of the Albanian Government focused especially in fields such as: infrastructure, electronic government and the public services, education and know-how, electronic business, as well as provision of its respective legal framework.
[66] Pro Inno Europe/ Inno Policy Trendchart (2011), Annex 1
[67] http://www.e-albania.al/Pages/default.aspx

Fund and the respective Innovation Services and the remaining 40% for the Cluster and Incubation Programmes. The BRIC budget is to be financed by both international donor programmes (EU through IPA -€2.87m and IFIs- €5m) through grants and (soft) loans, and Albanian state budget contributions. The total national contribution will be around €2.4m (23% of the total budget). This contribution covers staff and operational costs of BRIC as a department within AIDA.

TABLE 1. BROAD SHARE OF AVAILABLE BUDGETS BY MAIN GOVERNMENT DEPARTMENTS AND AGENCIES

Source: Pro Inno Europe/ Inno Policy Trendchart (2011), Authors: Jnarazani, J Culver, Z Preci

Name of the organisation	Number of staff Responsible for innovation measures (% of total)	Innovation budget managed (2011)[68]	Estimated share of budget earmarked for specific policy measures
MITIC (now MIPA)	12 of 12 (100%)	€###m	• e.g. €##m earmarked for cluster development • Digital Albania
AIDA	20 of 20 (100%)	€ 29,061,870 (2010)[69]	• AIDA € 29,061,870 From this: • Support for SMEs €26,475 (Loan) • Institutional Support for BITS €2,587,050 (Loan)
BRIC	5 of 20 (25%) BRIC is under AIDA	€566,500	• Awareness Raising €28,650 • Business Innovation Services €182,650 • Innovation Fund €355,200
ARTI	3 of 15 (20%)	€431,65429 (2010 – 2012)	• National Research and Development • Programme: Information Technology €431,654
NAIS	40 of 40 (100%)	€5,065,514.28	• Computer equipment for ministries andgovernment agencies €142,800 • VAT payment for computer equipment for ministries and government agencies €142,800 • Purchase of office equipment €14,200 • Agreement with Microsoft €750,000 Total 2009: €1,050,000

Other financial instruments supporting R&D in Albania include third party funding focused on STI; donations from physical and judicial subjects at national and international levels; and the private sector at national and international levels. However, yet there are no specific budgetary data published on these modes of funding R&D in Albania. The table below reflects the limited data available on the funding flow of Albanian R&D. EUROSTAT does not yet report the respective data on Albania.

TABLE 2. BASIC INDICATORS FOR R&D INVESTMENTS*

	2009	2010	2011	2012	2013	EU28 (2012) **
GDP growth rate	3.3%	3.5%	3.1%[70]	1.3%	1.7%	-0.4%
GERD (% of GDP)	0.2	0.2	0.2	0.2	0.35	2.06
GERD (euro per capita)	n/a	n/a	n/a	n/a	n/a	529.6
GBAORD - Total R&D appropriations (€ million)	n/a	n/a	n/a	n/a	n/a	86,309.497
R&D funded by Business Enterprise Sector (% of GDP)	0.225	0.891	n/a	n/a	n/a	1.26 (2011)
R&D performed by HEIs (% of GERD)	n/a	n/a	n/a	n/a	n/a	24%

[68] Exchange Rate, Yearly Average 1 Euro = 139,0 ALL

[69] http://www.mete.gov.al/mat.php?idm=957&l=a

R&D performed by Government Sector (% of GERD)	73.7	47.9	n/a	n/a	n/a	12%
R&D performed by Business Enterprise Sector (% of GERD)	26.3	52.1	n/a	n/a	n/a	63%
Share of competitive vs. institutional public funding for R&D	n/a	n/a	n/a	n/a	n/a	0.025(EU15)

** The 2012 data is not available for Albania on EUROSTAT as an associate country*

***The EU average data is provided by IPTS, December 2013*

While, the overall GERD is assessed as slightly increasing[71], the state budget only for R&D activities allocated to respective agencies has been decreasing and some of the planned programmes have not started yet their implementation. This probably leads to the assessment that GERD is increasing thanks to international funding contributions. However, there are no data to complete this assessment with an exact share of international vs. public funding flows in R&D activities. However, it is interesting to notice that as more governments are allocating funds to innovation activities, moving from purely R&D to R&I funding, also in the Albanian government budget it is increasing the budget supporting information society activities (2014 draft budget[72]), This has occurred in accordance with the development of GoA sectoral priorities focused especially on ICT. In its state budget 2014 (as in the Table. 2), it is indicated that there is an increased budget allocated to information society services (responding to the National Agency for Information Society/ NAIS), while from the other side a slight decrease of budget allocated to services for technology and innovation (responding to Agency for Research, Technology and Innovation/ ARTI). The first institution/budget allocation includes only ICT and innovation activities, the second includes research and innovation activities. This shows also the trend of the GoA to support more the ICT investment as a priority sector for the economy, rather than research and innovation per se.

TABLE 3. DRAFT STATE BUDGET 2014 AS PER FUNDING FLOW TO ICT AND R&I[73]

Name of Institution/Programme	Total of Budget Expenditures 2013 (Euro)[74]	*Total of Budget Expenditures 2013 (thousand ALL)*	Total of Budget Expenditures 2014 (Euro)[75]	*Total of Budget Expenditures 2014 (thousand ALL)*
Services for Information Society	3,748,885	521,470	5,567,857	779,500
Services for Technology and Innovation	871,818	121,270	845,428	118,360

2.2.2.1 Competitive vs. institutional public funding

R&D financing in Albania is distributed through direct financing of research institutions pertaining to line ministries, university R&D financing, and competitive funds (when researchers are grant-seekers). Most of the funding for R&D continues to be from the state budget (80%) and R&D activities take place in the public research institutions and universities. Instead, the introduction of competitive or project-based funding is a relatively new feature of research policy in Albania. Referring to the NSTI, it emphasizes the introduction of competition for funds, even among public actors. There are no recent statistics on competitive vs. institutional funds, thus

[71] EC Progress Report 2013 "Albania"
[72] Ministry of Finance, Revised State budget 2013
[73] Idem.
[74] Exchange Rate as per Bank of Albania (December 2012 - January 2013), Average 139.1 ALL = 1 Euro
[75] Exchange Rate as per Bank of Albania (January 2014), Average 140 ALL = 1 Euro

the evaluation is based on stakeholders interviews, who stated that competitive funding has been decreasing, whereas institutional funding remains overall stable, with some minor changes on R&D and ICT sectors where the first has been slightly decreasing and the latest slightly increasing.

The state budget for the education sector in 2013 was 28044.6 thousand Euro (3,898,242 thousand ALL), or 20% less than the value predicted for this year in the Mid Term Budget Programme 2011 – 2013. This budget represents 2.7% of the GDP (slightly decreasing compared with 2.8% of last year). The budget allocation to Science Fund has also been decreasing from 1.2% of MES budget share to 0.7% (equal to 1,905 thousand Euro/265, 120 thousand ALL), from these 934.8 thousand Euro (129,941 thousand ALL) are allocated to Research Infrastructure. Share of state budget for institutional funding is given in the below tables.

TABLE 4. MES EXPENDITURES ON EDUCATION AND SCIENCE (IN %)

MES expenditures on Education and Science	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
% of expenditures for the education system from the total budget	15.2%	16.4%	16.3%	15.6%	15.8%	15.4%
% of expenditures for research activities from the state budget in the field of education	1.3%	0.62%	0.5%	1.6%	1.2%	0.7%
Share of GDP for scientific research	0. 4%	0.2%	0.2%	0.3%	0.2%	0.1%

Source: Final Monitoring Report - Draft State Budget 2013, SOROS Foundation

While, it results that budget reduction for science and technology has been a major concern also for ARTI during 2012 – 2013, though planned programmes supporting research projects through competitive calls have been decreasing, and few of them not even financed (NPRD 2013 – 2015).

TABLE 5. PUBLIC BUDGET ALLOCATION PER INSTITUTION

Institution	Public Budget Allocation (000 Euro) *	Public Budget Allocation (000 ALL)	Foreign Financing (000 Euro)
Academy of Sciences	676.3	94,000	
INSTAT	3568.3	496,000	
ARTI	872.4	121,270	
Services for Information Society (MITIC)	4376.5	608,330	2,158

*Note * Exchange Rate as per **Bank of Albania** (December 2012 - January 2013), Average 139.1 ALL = 1 Euro*
*Source: **Official Publication Center**, Official Gazette no. 170, 28 December 2012*

As mentioned earlier, competitive calls for projects or applicants are administrated by public agencies such as ARTI, BRIC, NAIS, and lately PROTIK basically in five main programmes divided in three groups of competitive funding:

2. Bottom-up'/'free-funding' projects

- *Research Eagles Grants Programme* seeking to increase the number of Master's and Doctoral graduates in science and engineering fields to carry out research or projects in Albania;

- *Science Promotion and Education Programme* which promotes science towards young people and funds some graduate schools to boost numbers of PhDs;

- *Research Infrastructure Fund*, which aims at improving the equipment and facilities available in the public and university research institutes to a level permitting research projects to be undertaken at international standards. Bids for such funding can be submitted by individual research institutes or by a university as a whole.

2. Research Networks

- *National Technology Programme* aimed at bringing together consortia of academic research institutes with the private sector or other public sector organisations in order to develop a medium-term programme of applied research with a social or economic impact.

Albanian Centres of Excellence in Science (ACES) seeks to develop four or five centres of excellence bringing together a minimum of 20 researchers from at least two separately affiliated research institutes.
All figures for future years should be considered as hypotheses at this stage.

TABLE 6. ESTIMATED FUNDS TO BE ALLOCATED FOR RESEARCH DEVELOPMENT *(IN MILLION EUROS)*

Types of Funds for R&D	2009	2010	2011	2012	2013	2014	2015	2009-2015
Baseline funding for HEI research institutes*	7.5	8.25	9	9.9	10.5	11.55	12.75	**69.45**
Research project funding (**MES**)**	6.5	"."	6.5	"."	8	"."	9	**30**
World Bank Research Infrastructure funding	3.3	"."	"."	"."	"."	"."	"."	**3.3**
Research Infrastructure Fund	0.15	4	4	4	5	5	5	**27.15**
Albanian Centre of Excellence in Science (ACES)	0.15	1.5	1.5	1.5	1.5	1.5	1.5	**9.15**
Research Eagles Grants	0.15	0.2	0.2	0.2	0.25	0.25	0.25	**1.5**
National Technology Programme(s)	"."	"."	0.15	2	2	2	2	**8.15**
Agency of Research, Technology and Innovation (ARTI)	0.25	0.5	0.05	0.5	0.5	0.5	0.5	**3.25**
Total funds	18	14.45	21.85	18.1	27.75	20.8	31	**151.95**

**According to the press release of 12 June 2008, the baseline funding from the education budget was to be US$6m € (4,304,160) in 2009*
***Based on information from MES concerning the current 132 projects being funded in the amount of US$5m (€3,586,800) over a 2–3 year period*
Source: National Strategy of Science, Technology and Innovation (2009-2015)

As analysed in the crosscutting National Strategy of Science, Technology and Innovation 2009 – 2015 (NSSTI), it is unlikely that the private sector will begin to invest in formal R&D in any significant way (in top-performing countries the private sector contributes 2/3 of the R&D funding), but the goal is to develop structured product development and innovation activities in a minimum number of firms. In the NSSTI, the budgetary framework for implementation of the STI strategy is spelled out for the period 2009–2015.

In addition, there are research institutes and/or individuals competing for funds in EU programmes, such as FP7, for which there is an increased participation of Albanian in years.

TABLE 7. OVERALL PARTICIPATION FP7 2007-2008/2013[76]

Albania	N° of proposals submitted	N° of proposals Short listed	Funding obtained in mill. €	Success rate (based on short listed proposals)
Cooperation	162	22	1.444.750	13,58%
Ideas	3	0	0	0 %
People	15	0	0	0 %
Capacities	64	12	917.088	18,75 %
Euratom	1	0	0	0%
Total	245	34	2.361.838	13,87%

2.2.2.2 Government direct vs indirect R&D funding[77]

The government contribution to the direct vs. indirect funding of research and innovation activities is mainly oriented to leverage private-sector R&D through offering firms direct support via grants or procurement rather than create fiscal incentives (such as R&D tax incentives). The current conditions are that, the supply of services and goods by/between certified contractors and their subcontractors engaged in research and development linked to hydrocarbon operations is exempted from VAT while Albanian legislation allows educational services activities to be exempt from VAT[78]. In addition, the government announced that it will exempt all private universities from VAT.[79] This is the first specific attempt by the government to ease financial conditions for the institutions of higher education, allowing them not to pay VAT on professors' and researchers' salaries, thus functioning as an indirect incentive for research careers. The latest development is an agreement between Albania and Kosovo on mutually removing VAT on books and the elimination of double taxation[80]. This would stimulate cross-border access to RIs from public research organization, higher education institutions, as well as public research centres are a target of this initiative. Moreover, the 'Innovation fund' (through a decision of CoM) provides financial support for innovating SMEs through inspections and 'Innovation and technology audits'. The fund is about EUR 285000 over four years and is managed by the Albanian Investment Development Agency (AIDA). The Agency for Research, Technology and Innovation (ARTI) has to finance the 2013 - 2015 phase of projects under the R&D National Programmes. In 2011, "51 projects were funded, under NPRD to the tune of EUR 965 000[81]. The National Competitiveness Programme is being run by the METE in cooperation with the EU project 'Supporting SMEs to become more competitive in the EU market' — by delivering

[76] ARTI Annual Report (from the official communication/stakeholder interview with the Director of NPRD programs)

[77] Government direct R&D funding includes grants, loans and procurement. *Government indirect R&D funding* includes tax incentives such as R&D tax credits, R&D allowances, reductions in R&D workers' wage taxes and social security contributions, and accelerated depreciation of R&D capital.

[78] http://www.iclg.co.uk/khadmin/Publications/pdf/3990.pdf

[79] http://lajme.shqiperia.com/lajme/artikull/iden/1046862867/titulli/Qeveria-heq-TVSH-ne-per-arsimin

[80] http://www.financa.gov.al/al/newsroom/lajme/shqiperi-kosove-heqje-reciproke-te-tvsh-per-librin-dhe-eliminimin-e-tatimit-te-dyfishte

[81] http://www.mete.gov.al/doc/albania_en.pdf

training and consultancy for SMEs and a training-of-trainers programme for business service providers.

2.2.3 Thematic versus generic funding

National priorities continue focus on sectors that are considered important in ensuring sustainable development and addressing societal challenges while stimulating growth and productivity. For the period 2012-2014, Albania Government has set in its "Economic and Fiscal Programme 2012 – 2014"[82] to continue prioritizing investments allocations to thematic/sectorial policies, such as education, infrastructure, health care, and agriculture. However, there is no availability of the data to measure the balance between generic and thematic/sectoral R&D policies, and the share allocated for specific thematic priorities (% of the total GBAORD) in Albania is missing. An overall assessment can be drawn based on thematic funding of National Programs of Research and Development (NPRD) in the below table.

TABLE 8. THE FUND FOR NATIONAL RESEARCH AND DEVELOPMENT PROGRAMMES 2010 – 2012

No.	National Programmes	Responsible Institution	Budget *2010 - 2012*	Budget Share
1	Social Sciences and Albanology	Agency for Research, Technology and Innovation	366,959.3 Euro (51,000.000 ALL)	13.4%
2	Information Systems and Technologies (ICT)	Agency for Research, Technology and Innovation	575,622.4 Euro (80,000.000 ALL)	21.0%
3	Biodiversity and the Environment	Agency for Research, Technology and Innovation	352,568.7 Euro (49,000.000 ALL)	11.9%
4	Agriculture (veterinary, zoo-technical), Food and Biotechnology	Agency for Research, Technology and Innovation	568,427.1 Euro (79,000.000 ALL)	20.8%
5	Health	Agency for Research, Technology and Innovation	330,982.9 Euro (46,000.000 ALL)	12.1%
6	Water and Energy	Agency for Research, Technology and Innovation	338,178.1 Euro (47,000.000 ALL)	12.4%
7	Materials	Agency for Research, Technology and Innovation	230,249 Euro (32,000.000 ALL)	8.4%

The national R&D programs (NPRD), coordinated by the Agency for Research, Innovation and Technology (ARTI) and funded from the state budget, are attributed through an open and competitive process to a centre, group, or individual to perform a research activity limited in scope, budget and time. Therefore falls into project funding category, which is made available through specific instruments directly to individual researchers or research units, to different types of institutions or individuals in the form of a competitive grant. According to budget share, there is a higher interest in ICT and agriculture R&D projects. The latest financing of NPRD was available for the period 2010 – 2012, and there is no recent data on their further financing for 2013 – 2015, mostly due to budget restrictions. Additionally, the table below gives a broad share of available budgets on research and innovation measures by category.

[82]http://www.financa.gov.al/files/userfiles/Programimi_EkonomikoFiskal/Programi_Ekonomik_e_Fiskal/economic_and_fiscal_programme_2013_2015_albania_en_4409_1.pdf

TABLE 9. BROAD SHARES OF AVAILABLE BUDGETS BY MAIN CATEGORIES OF RESEARCH AND INNOVATION MEASURES[83]

Broad category of research and innovation policy measure	Approximate total annual budget for 2010 (in euro)	Commentary
Governance & horizontal research and innovation policies	RDI strategy: TOTAL € 14.45m for 2010	Total planned budget of RDI strategy for 2009- 2015 is €151.95m 2010 breakdown: • Baseline funding for HEI research institutes €8.25m • Fund for research infrastructure €4m • Fund for centers of excellence in research €1.5m • Fund for new researchers/Research Eagles grants €0.2m • Fund for transfer of technology and innovation €0.15m • Agency for Research, Technology and Innovation €0.5m
Research and Technologies	ARTI: TOTAL €1m for 2010 "National Programs of Research and development" and "Bilateral Programs" totalling 140,000,000 ALL (€1,015,965.16, of which Bilateral cooperation with Slovenia is valued at €36,284.47 in 2010)	ARTI began operating in 2010 National Programs for Research and Development Budget 2010 – 2012 (planned) • Social Sciences and Albanology (€366,959.3 or 51,000.000 ALL) • Information Systems and Technologies (ICT) (€575,622.4 or 80,000.000 ALL) • Biodiversity and the Environment (€352,568.7 or 49,000.000 ALL) • Agriculture (veterinary, zoo-technical), Food and Biotechnology (€568,427.1 or 79,000.000 ALL) • Health (€330,982.9 or 46,000.000 ALL) • Water and Energy (€338,178.1 / 47,000.000 ALL) • Materials (€230,249 or 32,000.000 ALL)
Human Resources (education and skills)	Total €279,131 for 2010	Brain Gain program for 2010. Actual expenditures Project Total: $1,000,000, of which • UNDP Contribution $300,000 & Donor Funding Sought $700,000) April 2006-Dec. 2011, to continue in 2012-2013. • Also note above under NSSTI: Basic funding for HEI research institutions **€8.25m for 2010** Fund for new researchers/Research Eagles grants **€0.2m**

[83] Data source: Pro Inno Europe/ Inno Policy Trendchart (2011), new format revision from World Bank Technical Assistance Project (P123211): Western Balkans Regional R&D Strategy for Innovation, 'World Bank Country Paper Series - Albania, October 2013, available at: http://www.worldbank.org/content/dam/Worldbank/document/eca/Western-Balkans-R&D-Albania.pdf

Promote and sustain the creation and growth of Innovative enterprises	Business Innovation and Technology Strategy (BITS): supposed to start in June 2011	€10m over a 6-year period. Budget only for 2011: • Awareness Raising €28,650 • Business Innovation Services €182,650 • Innovation Fund €355,200 • Clusters Program 2012 start-up €141,650 • Incubation Program 2012 start-up €82,500 **TOTAL for 2011: €566,500**
Markets and innovation culture	No specific initiatives can be determined	See above—awareness raising –BITS as promoted by the BRIC is supposed to promote an innovation culture among SMEs

Source: Pro Inno Europe/ Inno Policy Trendchart (2011), Authors: Jnarazani, J Culver, Z Preci

2.3 Research and Innovation system changes

During the period 2012-2013, there were no major changes in the research and innovation system. However, is to be mentioned that in 2012 some of the Business Innovation and Technology Strategy (BITS) programmes were launched. Also, the public-private partnership ProTIK Innovation Centre, begin operations fully in 2013. Moreover, in the second half of 2013 there is a new elected Albanian Government (mandated in late September), which introduced a new configuration of its Cabinet. As such, the previous Ministry of Education and Science (MES) is now entitled the Ministry of Education and Sports, while there are not changes yet in the internal structures of its departments, councils and agencies (such as the Research Department, ARTI, Advisory Council of Education and Science, etc). In addition, the previous ex-officio post of the Minister for Innovation, Technology and Information Communication (MITIC) is now entitled as the Minister of Innovation and Public Administration. Whereas it is expected some new configurations also at agency level, further monitoring will be proceed in order to address any new system changes.

2.4 Recent Policy developments

The most important and recent policy documents drafted and much expected during 2013 are the National Strategy for Development and Integration 2013-2020 (NSDI) and the Business Development and Investments Strategy 2013 – 2020, replacing the previous respective strategies 2007 – 2013.

- *NSDI 2013 – 2020* represents the fundamental strategic document of Albania that harmonizes in a single strategic document the perspective of sustainable economic and social development, integration into the European Union and NATO structures, as well as achievement of the Millennium Development Goals. The Strategy comprised all sectors and cross-cutting strategies that had been developed by line ministries and spells out the medium- to long-term vision (2013-2020) of the development of Albania. It links the budgeting to national strategic priorities and goals in a single strategic planning process.
- *Currently, the draft National Strategy is published and was subject of discussions and comments by all stakeholders, including donors. The draft has reflected all of the comments and is available to be approved by the CoM in the upcoming months.*

- *Business Development and Investments Strategy 2013 – 2020*, represents a policy document drafted by the Ministry of Economy, Trade and Energy (METE), aiming to guide the government policy towards steady growth and dynamic development of Albanian business entrepreneurship, productivity and competitiveness, investment promotion and orientation and better use of financial, human and natural resources, as well to be able to respond to the challenges of development and integration, regional and global competition, by improving business climate, reducing administrative costs, creating partnerships between government and Business.While, progress has been made in terms of regional and international cooperation in research and development common initiatives, through drafting of two main policy papers, in which the Albanian Government engages to cooperate with UN organizations and address a regional approach to R&D and innovation policies. These main documents are expected to potentially affect the R&D policies to a better integration with the regional priorities and access more international support as regards support measures
- *Albania – United Nations Programme of Cooperation 2012-2016* represents a common action plan for 20 UN agencies (including IOM) with the Government of Albania for the coming five years. The programme substantiates the UN's contribution to national priorities and outlines a series of expected results in four priority areas: Governance and rule of law, Economy and environment, Regional and local development, and Inclusive social policy.
- *Regional Strategy for Research and Development for Innovation for Western Balkans* represents the regional strategy, a project worth €1,500,000 and financed from EU's multi-beneficiary Instrument for Pre-accession Assistance (MB IPA), and will identify existing research capacities. It aims to strengthen the innovative capacity of the Western Balkans by stimulating Research and Development (R&D) using the regional potential (Inter-governmental - a Regional Cooperation Council Project start up in 2013).

TABLE 1. LIST OF NEW POLICY DOCUMENTS

Country	Title of the policy document	Publication	Responsible organisation and link if possible
Albania	Draft National Strategy of Science, Technology and Innovation 2015 - 2020	ongoing	Council of Ministers
Albania	Business and Investment Development Strategy 2014-2020	2014	Ministry of Economic Development, Trade and Entrepreneurship
Albania	National Strategy for Development and Integration 2013-2020	2013	Council of Ministers
Albania	Business Development and Investments Strategy 2013 – 2020	2013	Ministry of Economy, Trade and Energy
Regional (Western Balkans)	Regional Strategy for Research and Development for Innovation for Western Balkans	2013 (expected)	Inter-governmental - A Regional Cooperation Council Project
Albania	Albania – United Nations Programme of Cooperation 2012-2016	2012	UN and Council of Ministers

While, most of the support measures were introduced during 2012, there are no additional ones during 2013, but rather evaluation and monitoring is expected until end of the year.

1. The assignment from Ministry of Education and Science of a new collaboration agreement between Albania and Italy 2012 -2014 shows for a diversification of funds and possibilities for further investment and support to innovation.

2. In terms of funding from aboard, just recently, the European Commission has finalised a series of measures to promote regional cooperation between Western Balkan countries totalling €272.75 million for the period 2012-2013[84]. The funding earmarked comes under the 2012-2013 Multi-beneficiary and Cross-Border programmes of the EU's Instrument for Pre-accession Assistance (IPA) and will support cooperation with international financial institutions to mobilise funding, help develop civil society, support education schemes such as student mobility programmes, and help beneficiaries meet the requirements for EU membership and align their standards with the EU. The programmes are implemented through specific projects on the country or at the regional level. The next step is the preparation, along with the beneficiaries, of programmes to set the frame for the yearly financial allocation.
3. The Albanian government has benefited for the period 2012 – 2013 from additional funds under the IPA funds for TEMPUS programme by doubling its budget from €1.9 million to €3.8 million[85]. TEMPUS Albania national priorities for 2012 – 2013 are: "Higher Education and Society": including: a) training of non-university teachers; b) knowledge triangle: education-innovation-research; c) development of lifelong learning in society at large; and "Governance Reform", are including: a) university management and student services; b) introduction of quality assurance; c) institutional and financial autonomy and accountability. Whereas, national priority for joint projects is the development of partnerships with enterprises, along with all priorities mentioned above.
4. Allocation of funds for both the Competitive and Innovation funds managed by BRIC/AIDA during 2012 - 2013, was a positive sign that the GoA intends to support SMEs and make them more competitive, but the delay in granting these funds has affected the development of projects. Some monitoring and evaluation will help to assess the impact of these funds to the beneficiaries.
5. While, state budget restrictions ceased to support ARTI implemented measures from 2012, so called the National Programmes for R&D. This is an indication that availability to support innovation has been reduced along with the budget cuts and this has affected the development of innovation projects.
6. Also, failure to grant funds for some programmes introduced at the NSTI 2009 – 2015 (such as: Fund for transfer of technology and knowledge, Cluster programme; Incubation Programme; Research Infrastructure Programmes; Albanian Centres of Excellence Programme; Research Eagle Grants) affects to a great extent the broadening concept of innovation policies towards addressing societal challenges, supporting research infrastructure in academia, supporting young researchers and innovative project from business and public sector.

2.5 National Reform Programme 2013 and R&I

While, the main progress has been made in strategic and operational management of research and technological development (RTD) programmes through the establishment of the National Agency for Research, Technology and Innovation (ARTI) back in 2010, the latest year has been slowing down reforms in the sector. As mentioned above, 2013 has been an electoral year and much attention was given to adjust economic concerns, democratisation of institutions, revision of electoral law and its administration and monitoring institution (CEC), judiciary, foreign affairs with a focus on Albanian integration status within the EU, as well as redistributing fund in basic

[84] EC Press release, 27 March 2013, http://ec.europa.eu/commission_2010-2014/rehn/headlines/news/2013/03/index_en.htm
[85] Tempus Albania, Information Days, available at: http://www.tempusalbania.edu.al/index.php?option=com_content&view=article&id=130&Itemid=146

services, such as health, education, infrastructure, etc. However, certain achievements might be addressed to education reforms, which in the course of the last two years, has enabled to increase the number of Albanian students participating in *Erasmus Mundus* programmes and bringing together scientists and researchers working together within regional and European common projects through the 7th research framework. Moreover, during 2013 there was continues research from all line Ministries to revise and draft a common National Strategy of Development and Integration (NSDI) 2014 – 2020, along with some ongoing evaluations of the previous NSDI.

However, as in late September 2013 there is a new government elected, which brings left wing coalition in power after 8 years, it might be of relevance for this report to look at its recent published programme for any perspective and/or policy options which might address R&I in the upcoming years. Although it is quite early to make any assessment on this preliminary programme, one can observe that, while the finalization of NSDI 2013-2020 is expected to take place in January 2014, there is already a focus to revise it accordingly to all cross-cutting sectorial strategies and in line with IPA II documents, along with updating the National Plan for Implementation of the Stabilization Association Agreement (SAA). In addition, the new programme of the government spells out the need to deepen the education reform through ensuring fair and transparent qualification of the academic staff and improvement of teaching and academic staff salaries; providing assistance to public universities to build and strengthen their career counselling centres; and pay particular attention to the education of Albanian young people in science, technical, agricultural subjects and through the application of appropriate resources and incentives[86]. Whereas, it acknowledges that the level of research and publications in the country is not at the adequate international standards, it promotes at the same time the individual achievements or several small groups of Albanian researchers inside and outside the country to be impressive. On this regard, much attention is promised towards an improved direction of research by public bodies and a better vision of science development in line with best European and international standards. Supporting the development of R&I will include subsidize measures towards academic and scientific institutions involved in research and innovation, while creating opportunities for combination of public and private resources in research funding.

2.6 Recent evaluations, consultations, foresight exercises

As it was assessed in previous country reports, the future of R&D and innovation policy in Albania bases on a mixed scenario, according to which the Albanian Government continues to keep it on top of its agenda (the revision of National Strategy for Development and Integration 2013 – 2020), however due to budget shortcomings and slow economic growth forecasted, as well as budget deficit to face upon, supporting science and research directly is not likely to happen in the near future. Therefore, the government is more likely to support measures which indirectly support research and innovation, such as: a) creating framework conditions by adapting new relevant laws or amending the existing ones (to be expected in 2013); b) strengthening the recently established national agencies (ARTI; NAIS; BRIC; PROTIK) and reinforcing the coordination and institutional mechanisms; c) increase human capacities to deal with new areas of ICT, S&T; d) procurement of innovation for upgrading its administration and electronic services for citizens, businesses and for public employees.

[86] Albanian Government Programme, Recent Public Release, September 2013, Available at www.kryeministria.al

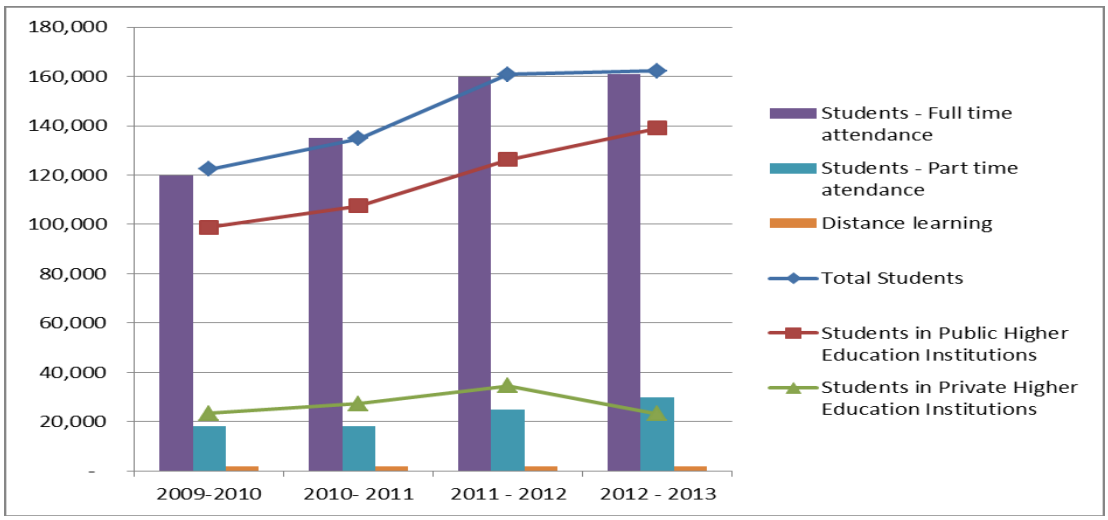
Since the innovation support programmes were only set up in 2011-2012, there is not any evaluation yet addressing solely the sector challenges and achievements. However, as mentioned earlier in this report, the most recent document published and available to the public, which tackles evaluation of achievements and failures in main national development sectors, is the Progress Report of NSDI capturing the period 2010 – 2012. The progress report is drafted by the CoM and coordinated by the Department of Strategies and Donor Coordination (DSDC). It includes comments and feedbacks from international donor community as main partner consulted. The progress report addresses evaluations on education and ICT.

Education

- In line with European Higher Education Area and the European Research Area, current developments in higher education ascertain according to this report the accomplishment of two of main challenges: (i) improvement of youth access and participation in higher education; (ii) implementation of the reformed three-cycle study structure, in compliance with the Bologna process, in all higher education institutions[87]. In addition, increasing institutional, academic and financial autonomy; introducing European quality standards, and accreditation of programmes and of the Higher Education Institutions (HEIs) have been a priority of policies implemented during the recent years. As such, the Bologna process was fully implemented during this period**.** The full implementation of the Bologna process, and the efforts to align education to the labour market have deeply reformed the current university curricula and have increased the variety of new contemporary programmes (some 173 new programmes in the three study cycles started in the 2011-2012 academic year, mainly oriented towards Information and Communication Technology), in accordance with the labour market developments locally and abroad.

- Moreover, development of private higher education is considered an achievement of the previous government as an important contribution the country's education progress. As such, students enrolled in private HEIs comprised 20 percent of the total number of the students enrolled in each of the academic years 2009-2010 and 2011-2012, whereas in 2012-2013 the number of private HEIs fell by 33 percent compared to the year before, resulting in a drop of its specific weight by 14 percent of the number of students enrolled during this academic year[88].

Figure 1. NUMBER OF STUDENTS IN HIGH EDUCATION BY ATTENDANCE



- The number of academic staff with a scientific degree and title in the public HEIs was 10,652 during the academic year 2011-2012 (full-time and part-time staff), and 5,221 lecturers had degrees and titles. In the public higher education institutions, the number of academic staff

[87] Progress Report NSDI, Department of Strategies and Donor Coordination, Available at www.dsdc.gov.al
[88] Progress Report NSDI, Department of Strategies and Donor Coordination, Available at www.dsdc.gov.al

with degrees and titles was 1,532 working full time, and 725 working part time. Also, the academic staff has received training both in Albania and abroad on the implementation of the new teaching methods and the introduction and use of new teaching technologies. In this regards, the mobility of lecturers and students through different European programmes has major role, along with the support measure of the *Brain gain* programme bringing back to the country's academic life lecturers with international experience (about 141 beneficiaries so far).

- As far as scientific research is concerned, the strength of the reforms relies more on further consolidation of the managing institutions of scientific research programmes, such as the National Agency of Technology and Innovation (ARTI). The report also assesses that much attention should be given in the future to policies which were not performing well last years, such as: ensuring the quality of teaching and research activities, strengthening the relation between the education and the labour market, diversifying higher education financing instruments, and institutional strengthening of HEIs through increased autonomy, public accountability, and reformed governing and management.

Information Communication Technologies (ICT)

On the ICT sector, things have progress more rapidly thanks to the expansion of the telecommunications market and development of e-government, which are considered as 'two main recurring features of the reform of this sector'[89]. As such progress is assessed in recent years towards e-government programme; establishment of the National Agency for Information Society (NSTI), and of its strategy; introduction of online communication systems in a variety of public institutions have expanded the GovNet's network including over 65 public institutions in total. As such, a series of electronic systems set up are considered achievements: (i) the electronic registration system of the judicial status of citizens of the Ministry of Justice (SEMD), (ii) the electronic publication of the Official Gazette and of the new legislation, (iii) the electronic service for the declaration of the judicial status, (iv) the electronic cabinet system (e_Cabinet); (v) the new platform for the e-management of the official acts (e_Akte) incorporating a system with more than 1500 users from all ministries; (vi) the modernisation of the Social Insurance System improving the record-keeping and the operation of the system; (vii) the pensions system has been computerised; (viii) the historical contribution data from employed people and the automated calculation of the new benefits and payment of benefits has been digitalised (until end of 2012, over 184 thousand beneficiaries are included in the system); (ix) on rural development, the improvement of the system for transfer of technology and innovation through extension services as a contribution to a better organisation of the value chains from the farm to the consumer; (x) on immovable properties, there is progress on intensified digitalisation of graphic and numeric data (digitalisation was completed for 147,415 properties end of 2012); (xi) the Public Procurement Commission established in March 2010 handles complaints independently in the field of procurement, concessions and public auctions; (xii) gradual digitalization of state graduation exams (Matura) aims to reduce corruption in the education system; (xiii) an electronic system "Police Case Management and statistical analysis system by digital maps" is being developed since 2012, aiming to increase the number of violations which were previously unreported. This system will be extended to all State Police structures by 2015. [90]. Finally, is it evaluated that developments on the ICT field would affect transparency issues and increase public trust on public institutions.

[89] Progress Report of NSDI 2010 – 2012, Department of Strategies and Donor Coordination, Available at www.dsdc.gov.al

[90] Progress Report of NSDI 2010 – 2012, Department of Strategies and Donor Coordination, Available at www.dsdc.gov.al

2.7 Regional and/or National Research and Innovation Strategies on Smart Specialisation (RIS3)

Smart specialisation for economic development is a recently introduced concept to Albania, through targeted support to Research and Innovation (R&I). As it will be the basis for Structural Fund investments in R&I as part of the future Cohesion Policy's contribution to the Europe 2020 jobs and growth agenda, this approach has been recently introduced to the Western Balkan region (WB). The aim to develop synergies with neighbouring countries, based on comparative advantages of their innovation policy. The first event held on the issue was in the frame of the 12th Meeting of the Steering Platform on Research for the Western Balkan Countries (WBC) in middle June 2012, hosted by ARTI in Tirana and the most recent one was held in middle April 2013 in Belgrade, Serbia. These events aimed to introduce and discuss the concept of Smart Specialization and its practical implications for the WB region on the road to Horizon 2020. The presentation of the Smart Specialization Strategy helps "understanding the need to prepare and plan well in advance the synergies between Horizon 2020 and other EU instruments"[91]. Currently, the initiative is reflected in implementing a common regional project (implemented by the Regional Cooperation Council) aiming to draft the first 'Regional Strategy for Research and Development for Innovation for Western Balkans'. The draft regional strategy is currently under discussion with main stakeholders' formal countries involved, including Albania.

[91] Coordination of Research Policies with the Western Balkan Countries: WBC – INCO. NET, available at: http://wbc-inco.net/object/news/10187

3 PERFORMANCE OF THE NATIONAL RESEARCH AND INNOVATION SYSTEM

This chapter is aimed to assess the performance of the national Research and innovation system and identify the structural challenges faced by the national innovation system.

Given the lack of a full set of data for Albania to compare to the Innovation Union Scoreboard Indicators, it is difficult to make a meaningful assessment based on the IUS methodology at this point in time. However, even without such an assessment, it can be concluded that Albania would fall into the category of modest innovators (which includes Bulgaria, Latvia, Lithuania and Romania). Regarding the enablers used in the IUS assessment, there have been improvements in the supply of higher education with the establishment of new private institutions and in the efforts to improve the curriculum as well as encourage students to study in ST&E fields. However, in the Global Competitiveness Report 2011-2012, Albania ranks only 100 out of 142 in the world in terms of efficiency enhancers like secondary level education and 89 out of 142 in terms of tertiary education. In terms of the percentage of individuals using the Internet, Albania (45%) ranks above Serbia (40.9%) and Romania (39.9%), but still below the levels of Bosnia and Herzegovina, Montenegro and Macedonia FYR. It would appear that in the areas of Internet and mobile telephony, Albania has made its most significant progress. This is also reflected in a high level of public sector innovation and procurement of high-technology products by different organs of the Albanian public administration. In fact, Albania ranks 58 in terms of "government Procurement of advanced technology products" and is well ahead of neighbours including Serbia (92), FYR Macedonia (110) and Croatia (122), though well behind Montenegro (33).

3.1 National Research and Innovation policy

Table 2. Human Resources

New doctorate graduates (ISCED 6) per 1000 population aged 25-34	
Percentage population aged 25-64 having completed tertiary education	
Open, excellent and attractive research systems	
International scientific co-publications per million population	
Scientific publications among the top 10% most cited publications worldwide as % of total scientific publications of the country	
Finance and support	
R&D expenditure in the public sector as % of GDP	0.35% (2013)
Public Funding for innovation (innovation vouchers, venture/seed capital, access to finance granted by the public sector to innovative companies)	
FIRM ACTIVITIES	
R&D expenditure in the business sector as % of GDP	
Venture capital and seed capital as % of GDP	
Linkages & entrepreneurship	
Public-private co-publications per million population	
Intellectual assets	
PCT patents applications per billion GDP (in PPS€)	
PCT patents applications in societal challenges per billion GDP (in PPS€) (climate change mitigation; health)	

OUTPUTS	
Economic effects	
Medium and high-tech product exports as % total product exports	
Knowledge-intensive services exports as % total service exports	
License and patent revenues from abroad as % of GDP	

3.2 Structural challenges of the national R&I system

Despite very good performance in attracting FDI and generating high economic growth over the past decade, Albania lags behind in innovation performance. This is evidenced by very low levels of GERD (estimated at 0.15-0.2% of GDP), low technology and innovation levels of firms and limited private enterprise R&D. UNESCO estimates that in 2008 only 3.3% of GERD was funded by business enterprises (compared to 80.8% by the government sector). FDI tends to have been concentrated in low technology areas of manufacturing and services. Albanian firms have preferred to purchase technologies (mainly imported) on the market rather than developing own solutions through R&D or process innovation--partly due to cost, partly due to lack of qualified personnel. In terms of USPTO patents grants, Albania is in the last category, with 0.0 patents per million of population. Therefore, Albania represents a low level of innovation and performance in the national research and innovation system. The following structural challenges provide more details on current developments of the Albanian research and innovation system:

1. **Lack of reliable and comparable statistics on R&D and innovation:** Until recently any assessments of Albania's research and innovation system have been frustrated by a lack of internationally comparative statistics. Such data are now becoming available due to the efforts of UNESCO and other international organisations in cooperation with the Albanian government. UNESCO recently published partial data regarding R&D funding and performance for 2007 and 2008, while Eurostat statistics are not yet available for Albania. Albania is not covered in the Innovation Union Competitiveness (IUC)[92] Report or the Innovation Union Scoreboard (IUS).

2. **Limited cooperation between universities and public research institutions with the private sector**

So far, Albania's innovation system has shown serious weaknesses in the lack of synergies and cross-fertilisation between research and business, which has impeded commercialisation of research results. In fact, in the Global Competitiveness Report, for the indicator "university-industry collaboration in R&D," Albania is among the lowest ranked in the world - 139 of 142 - and far behind its neighbours, Croatia (77), Serbia (81), Bosnia (84) and FYR Macedonia (92). There is a pressing need to link public research to market demand - such needs are largely addressed by imports rather than domestic R&D and production activities. Reliance on technology imports only marginally improves the prospects for increasing competitiveness and innovation in the economy. Initiatives such as the National Technology Programme and Albanian Centres of Excellence in Science (ACES), announced in the National STI Strategy, are aimed at promoting public-private research cooperation, and the intellectual property protection framework has been improved. Yet the two promotion initiatives have experienced delays in implementation, and there has as of yet been only limited intellectual property produced that requires protection. Furthermore, there is a lack of subsidies and tax incentives that might

[92] Nor in the Global Creativity Index, which focuses not only on education, S&T capacity, but also arts, music and design and openness to immigrants, minorities, and the gay, lesbian and trans gender communities.

stimulate companies to engage in R&D, and there is no legislation requiring foreign investors to perform R&D in Albania, even though they often introduce new technologies and techniques (i.e. offshore oil drilling, mining, recycling). New opportunities for private companies are foreseen in environmental protection and energy production. These could be promising areas for public private research and innovation cooperation, given that they also coincide with two of the national research priorities.

3. **Delays and inefficiencies in implementing strategies and programmes:** delays in the release of funding for support measures and insufficient staff capacity to effectively manage funds and programmes in new structures like ARTI, NAIS, and BRIC present major obstacles to the translation of strategy objectives into concrete results. These are among the most serious challenges being faced by the national research and innovation system and are hampering the realization of the country's national strategy. Certainly, research and innovation could eventually come from the private sector, but in Albania, where the public sector (including public universities and research institute) continues to play the key role in funding and producing R&D, such implementation problems take on an even greater significance. The systemic problems of the public sector are also undermining Albania's credibility as an international partner, for example ARTI's role an effective interlocutor in bilateral initiatives. Public Administration Reform is cited as one of the most important areas where Albania needs to improve, according to the Opinion on Albania's application (November 2010) - this particularly regards absorption capacity of authorities and timely planning.

4. **Remaining weaknesses in human resources development** are reinforced by slowness in achieving "brain circulation" and educating new researchers and PhDs in S&T fields. This is compounded by the need to educate and train an increasing number of knowledge workers in promising fields of the economy (energy, environment, agricultural biotechnology, ICT, etc). In the area of human resources, efforts have been made both to counteract the brain drain and to attract foreign professors or researchers. Private universities are playing a bigger role in developing human resources, but the level of quality tends to be low. While some new funds and programmes have been adopted to improve education and reward excellence, more needs to be done to attract students to S&T and engineering fields as well as to improve the employment prospects for graduates by specifically linking academic curricula to the needs of the real economy. University curricula need to be better oriented to training students to perform research that could be of interest to the private sector. Furthermore, there also needs to be improvement in the monitoring and evaluation of the university system in order to better understand the progress Albania has been making toward achieving international standard – a process that began with the adoption of the Bologna process. Again in the Global Competitiveness Report, while Albania is ranked a fairly high 45 for "quality of the educational system" and 42 for "quality of math and science education", it ranks only 100 out of 142 for "local availability of specialized research and training services."

5. **Low level of investment in innovation from business sector** In Albania the development of public-private partnerships has only recently began, most prominently in the ICT field as a positive initiative to boost innovation in business sector and the development of a knowledge transfer (PROTIK). Most of the new technologies and innovations used in the business enterprise sector are imported (either purchased on the market or introduced by foreign

companies operating in Albania) rather than developed in the country. There are currently no data available in order to assess the level of private R&D being undertaken by business enterprises in Albania (the ongoing national survey of enterprises, undertaken by INSTAT, might provide valuable data). However, there is little private initiative for research in the field of energy, agriculture, molecular biology, biotechnology, natural resources and other related fields. In addition, there is low absorption capacities of the business sector and the dominance of the low tech sectors in the structure of economy.

3.3 Meeting structural challenges

Challenges	***Policy measures/actions addressing the challenge*** [93]	***Assessment in terms of appropriateness, efficiency and effectiveness***
1. ***Challenge 1.*** ***Lack of reliable and comparable statistics on R&D and innovation***	UNESCO project to collect R&D statistical data in Albania with INSTAT and METE	The country report, which is planned to be delivered during 2014, is considered of high importance for the overall assessment of NSSTI efficiency and effectiveness and will better identify the appropriateness of the upcoming measures on R&D in the revised NSSTI document 2015 – 2020.
2. Challenge 2. ***Limited cooperation between universities and public research institutions with the private sector***	The support of new structures (ARTI, BRIC, NAIS) that were set up to cooperate with the private sector in research and innovation initiatives Incentives to universities to set up science parks or develop spin-offs and technology transfer centres could help stimulate cooperation with private companies.	The policy framework still lacks incentives for such cooperation • lack of subsidies and tax incentives • no legislation requiring foreign investors to perform R&D in Albania • a lack of consistency between supply and demand-side policy developments • lack of the funding for the programmes ACES, National Technology Programme which are designed to develop such cooperation.
3. Challenge 3 ***Delays and inefficiencies in implementing strategies and programmes***	NSSTI Cross-cutting Strategy for Information Society Strategy for Higher Education Reorganisation of research system Setting up of ARTI, NAIS, BRIC	NSSTI set goals for increasing R&D and introduced various funding programmes and measures with a budget for the period 2009-2015. Education system reforms undertaken, reorganisation of ASA, public research centres strengthened university research capacities. Structural weakness of institutions and actors which are supposed to implement policy due to inadequate staff, slow transfer or non-availability of funding. Political stalemate Setting up of institutions such as ARTI, NAIS, and BRIC to coordinate research programmes and funding for research has led to an improvement of overall public research and coordination mechanism.
4. Challenge 4	Strategy for Higher	The Excellence Fund and Brain Gain

[93] Changes in the legislation and other initiatives not necessarily related with funding are also included.

Weaknesses in human resources development	Education Brain Gain	programme were set up, respectively, to promote excellence in graduate studies and to support the return of Albanian researchers to the country. It has significantly improved circulation of youth, researchers, students and professors between Albania and the EU44.
5. Challenge 5 ***Low level of investment in innovation from business sector***	BITS Setting up of BRIC	Positive initiative to boost innovation in business sector and the development of a knowledge transfer. Low absorption capacities of the business sector and the dominance of the low tech sectors in the structure of economy

4 NATIONAL PROGRESS IN INNOVATION UNION KEY POLICY ACTIONS

The Albanian policy mix has generated mixed results in facing the identified structural challenges. It still has substantial progress to make in transitioning from an "efficiency-driven" economy to an "innovation-driven" economy, as indicated by higher levels of innovation and performance indicated by R&D levels, tertiary education in STE fields, HRST employment and the number of innovative SMEs and cooperation between public, higher education and private research performers as well as partnerships in international projects. As indicated in various country reports for ERAWATCH on Albania, major weaknesses remain in framework conditions for private investment in R&D and private-public cooperation and knowledge transfer. These are compounded by unattractive employment conditions for researchers, lack of effective mechanisms for monitoring and evaluation (though spelled out in the NSSTI) in order to develop and sustain overall quality and competitiveness, weak linkages between research and societal challenges as well as a low social valuation of R&D and scientific activity.

4.1 Strengthening the knowledge base and reducing fragmentation

As above mentioned, promoting excellence in education and science remains a challenge of current Albanian government. In its recent programme particular attention is given to the need for increasing significantly the proportion of students studying natural sciences and engineering in Albanian HEIs; stimulating greater interest in post-graduate education through greater state support for master's and doctoral studies, particularly those in engineering and the natural sciences; improving and extend the use of e-resources; and improving information technology skills at all levels.

At present, knowledge resource inflows are mostly limited to consultancy services provided by researchers and international consultants working for the World Bank, EBRD and UN organisations in Albania. Therefore, there is a need to identify the right instruments to make Albanian universities and research institutes more attractive to foreign academics. So far, internationally funded programmes are providing some application opportunities for the SEE countries, including Albania, to develop "brain circulation" in the form of academic exchanges and fellowships for returning scholars.

In terms of support measures, since 2009 it has been foreseen for the first time a special fund for the establishment of four *Albanian Centres of Excellence in Science (ACES)*. However, the measure is not yet implemented due to lack of funds. The purpose of the programme is the integration of national research activities and technological development in the regional and European scientific and technological activities. Groups of researchers would work together on an agreed medium-term (five-seven year) research 'road map'. The funding foreseen within the National Strategy of Science, Technology and Innovation (NSSTI) is for a five-year period. The ACES have to develop dedicated laboratory equipment or workspaces that could be used for innovative technology based firms. However, no progress was made on establishing Albanian Centres of

Excellence Programme as per time frame of NSSTI. In addition, *Science Promotion and Education Programme* is another initiative launched from the National Strategy of Science, Technology and Innovation 2009 – 2015 (not implemented yet). The scope is to support innovative doctoral training programmes. It aims to increase the number of Master and Doctoral graduates in the science and engineering fields. This objective is to be achieved through the financial support of the institutions with graduate/doctoral programmes as well as funding of individual researchers and projects. Last, the *Research Eagle Grants* is introduced through the National Strategy of Science, Technology and Innovation 2009 – 2015 (not implemented yet). The scope is to increase the number of graduates who undertake Master and PhD studies in science and engineering fields; fund young researchers to undertake PhD studies in Albania; promote the training of Albanian PhDs in the EU27; stimulate new researchers to launch research projects in Albania. This programme aims to increase the number of graduates who complete Masters and PhD programmes in science and engineering fields, giving priority to those who conduct research or postgraduate studies and projects in Albania. The programme will review the outcomes of the Brain Gain initiative and the detailed design of the new programme takes into account international good practice.

In legislative terms, there are no provisions yet to guaranty merit base recruitment of researcher. They are subject of the general regulations for recruitment of employees in the public sector, coordinated by the Public Administration Department (DAP) and internal regulations of the public agencies. While, there are no legal and other barriers which hamper cross-border access and portability of national grants, thanks to the support measure called Brain Gain programme, which has helped in policy development to remove certain barriers, such as: networking between researchers through an established updated database, networking with the Albanian public and private institutions for recruitment purposes, legal aspect regarding diploma recognition by the Ministry of Education and Science (MES); economic barrier in facilitating the returnees with scholarships/grants While, the Brain Gain programme is already implemented since 5 years, respectively, to promote excellence in graduate studies and to support the return of Albanian researchers to the country.

Notwithstanding, Albania has not drafted yet a HR Strategy for Researchers incorporating the Charter & Code. However, there is a Public Agency for Accreditation of Higher Education, which collaborates with agencies' networks for quality assurance in the European Higher Education Area and those operating internationally. It cooperates with the Albanian Council of Higher Education and Science to formulate the Minister of Education and Science recommendations for quality assurance in higher education and scientific research. In addition, as a main goal, it creates and maintains a database of reliable data for HEIs and programs offered the evaluation process, accreditation, ranking and analysis in higher education statistics for students, academic staff, research, facilities, etc. These data are used through a personalized search information module, which enables any user/other institutions for decision-making and policy-making to easily find the information they need, related to higher education in the country.

Research Infrastructures

Albania is continuing to have a lack of modern research infrastructure and state-of-the-art equipment, but efforts are under way to improve infrastructure, starting with support for the development of communication networks and IT systems. Major projects are co-financed by the EIB, along with other international financial institutions, such as the World Bank, which has also funded the equipping of teaching laboratories. At present Albania is actively working on a

reform of science and research statistics to comply with EU criteria. The establishment of a specific fund, if granted, known as the Research Infrastructure Fund, would help to improve the quality of the equipment and facilities available. Two programmes, the Research Eagles Grants Programme and the Science Promotion and Education Programme aim to increase the number of Master and Doctoral graduates in the science and engineering fields. This goal is to be achieved through the financial support of the institutions with graduate/doctoral programmes as well as funding of individual researchers and projects.

There is a main financial commitment of the Albania Government particularly important, which is the *Instrument for Pre-accession Assistance (IPA)*. The funding earmarked comes under the 2012-2013 Multi-beneficiary and Cross-Border programmes of the EU's Instrument for Pre-accession Assistance (IPA) and will support cooperation with international financial institutions to mobilise funding, help develop civil society, support education schemes such as student mobility programmes, and help beneficiaries meet the requirements for EU membership and align their standards with the EU. The programmes are implemented through specific projects on the country or at the regional level. The next step is the preparation, along with the beneficiaries, of programmes to set the frame for the yearly financial allocation. This is a European Commission measure to promote regional cooperation between Western Balkan countries.

4.2 Getting good ideas to market

Improving access to finance

Fiscal incentives and other financial instruments/measures aiming to facilitate access to private finance (including risk-capital) for R&D have not yet been introduced in Albania. The country is currently in the initial phases of identifying and implementing fiscal incentives and other financial instruments/measures to promote R&D. The following section outlines the initial efforts on this direction.

- *Tax incentives related to R&D costs:* Albanian legislation allows educational services activities to be exempt from VAT,[94] beginning on 1 October 2010. In addition, the supply of services and goods by/between certified contractors and their subcontractors engaged in research and development linked to hydrocarbon operations is exempted from VAT.

- *Fiscal incentives to promote research careers:* Recently the government announced that it will exempt all private universities from VAT.[95] This is the first specific attempt by the government to ease financial conditions for the institutions of higher education, allowing them not to pay VAT on professors' and researchers' salaries, thus functioning as an indirect incentive for research careers. Much work is still to be done in promoting R&D, though this was also declared as a priority by the government.

- *Tax incentives for research foundations have not yet been established:* The fiscal regulatory framework for non-profit organisations needs to be further clarified through a consultative process with

[94] http://www.iclg.co.uk/khadmin/Publications/pdf/3990.pdf
[95] Source: http://lajme.shqiperia.com/lajme/artikull/iden/1046862867/titulli/Qeveria-heq-TVSH-ne-per-arsimin

all relevant stakeholders. An Agency for the support of civil society, tasked with allocating state funding to non-profit organisations, has been established and the first call for proposals has been launched.[96]

- Last year, there was also a legal initiative in amending the Fiscal Package, specifically on some changes and additions to Law no. 9920, dated 19.5.2008, "Tax procedures for the Republic of Albania"[97]. The amended Law, proposed by the CoM, aims to exempt from VAT, the revenues derived from state institutions for achievements in science, sports, and culture activities. The main purpose if to stimulate scientific, sport and cultural activities as programmes coordinated and implemented by public institutions (including research activities). Through this amendment, there are no legal barriers for public institutions, whose scientific activities generate revenues, so as to be exempted from VAT. The latest development is an agreement between Albania and Kosovo on mutually removing VAT on books and the elimination of double taxation[98]. This would stimulate cross-border access to RIs from public research organization, higher education institutions, as well as public research centers are a target of this initiative.

Protect and enhance the value of intellectual property and boosting creativity

Albania has established a Patents and Trademarks Office (ALPTO)[99] for protection of intellectual rights.[100] This is a public institution under the Ministry of Economy Trade and Energy through which the Albanian state grants and administers the property rights of inventions, utility models, commercial trademarks and service marks, industrial designs and geographical indications. It is as yet unclear how successful this Office will be in stimulating further R&D in universities or private enterprises. In 2007, the Albanian Copyright Office (ACO) within the Ministry of Culture, Tourism, Youth and Sports, was established. It has initiated and signed memoranda of understanding with the National Council of Radio and Television, General Directorate of Taxes and General Directorate of Customs to fight the widespread piracy in the country but concrete actions have still not been undertaken. There is no other recent progress in terms of regulation, laws or other supporting mechanisms to boost creativity, innovation and enhance value of intellectual property in the country.
The current law is extensive, based on the best practices of developed countries, with provisions that might even be considered ahead of their time for a country like Albania. The law provides measures for both quick and early recognition of intellectual rights as well as strict punishment for those who violate them. Still, even with the legal framework in place to help promote and protect innovators and researchers in quickly commercialising their ideas, efforts to promote R&D in the country continue to be insufficient.

[96] European Commission, Stabilisation and Association Albania 2009 Progress Report, November 2010, Source: http://ec.europa.eu/delegations/albania/documents/eu_albania/2009_progress_report_en.pdf
[97] Amended on 21/11/2012
[98] Source: http://www.financa.gov.al/al/newsroom/lajme/shqiperi-kosove-heqje-reciproke-te-tvsh-per-librin-dhe-eliminimin-e-tatimit-te-dyfishte
[99] Source: http://www.alpto.gov.al/rubrika.asp?id=6
[100] Legal basis, Source: http://www.zshda.gov.al/docs/776936171927LIGJ%20(1).pdf

Public procurement

This section is not applicable for Albania current stage of public procurement of innovative goods and services. There is no information on specific policies to promote public procurement of products with high R&D and innovation content.

4.3 Working in partnership to address societal challenges

Albania's international cooperation in research and development takes place mainly in the form of bilateral, as well as EU and UN programmes. The Ministry of Foreign Affairs is in charge of signing new intergovernmental agreements on science and technology. Albania is participating in the work of the European Research Area Committee (ERAC) and has nominated a delegate observer to the Standing Committee for Agricultural Research (SCAR). It has also been invited to nominate delegate observers to the different ERA governance bodies. International cooperation, particularly with EU partners, is high on the national agenda. Albania is actively participating in several regional projects with the other Balkan countries and has recently concluded science and technology agreements with several neighbouring countries and other international partners FP7 is EU's main instrument for funding research in Europe and it will run from 2007 to 2013. Albania became associated with FP7 in 2008. Two FP7 instruments are particularly important for SEE countries: INCO-NETS and ERA-NETS.

Albania still relies heavily on bilateral and international donor support rather than endogenous dynamics and partnership cooperation in key sectors, though recent initiatives involving cross-border and bilateral S&T cooperation that have been launched in agriculture and renewable energy are highly promising. Policy measures point to the direction of improving innovation not only in the public sector, but also within SMEs operating in the priority sectors. However there needs to be greater emphasis on programmes linking public research to market demand. Market needs are largely addressed by imports rather than domestic R&D and production activities, unless these can be stimulated by additional funds or fiscal policies such as introducing tax credits for R&D. As a complementary measure over the medium term, there is a need to train an increasing number of knowledge workers for promising fields (energy, environment, agricultural biotechnology, ICT, etc.), necessitating revising university programmes to teach relevant and up-to-date courses as well as engaging guest professors from abroad. As confirmed by the Albanian government economic and fiscal program[101], for the period 2012-2014, Albania will continue to prioritize investments allocations to sectors such as education, infrastructure, health care, and agriculture. Over the short term the Albanian government will need to ensure that the recently established key agencies (ARTI, BRIC, and NAIS) have access to promised funding and sufficient institutional capacity to allow translating strategies into concrete results.

[101] Economic and Fiscal Program 2013 – 2015, Ministry of Finance, www.mof.gov.al

4.4 Maximising social and territorial cohesion

This section is not applicable for current stage of development in Albania. Smart specialisation for economic development is a new introduced concept to Albania, and so far there are only awareness and information activities about it.

4.5 International scientific cooperation

As mentioned above, Albania's current stage of science development is far from the European or international standards. The country has low level of technology production and innovation. Most of the scientific cooperation occurs through international co-operation and support, which brings to Albania advanced technologies (mainly in industry sector) or through common regional projects (mainly in social sciences and natural sciences). This co-operation has been substantially supported by many international organisations, as well as through the assistance of other countries in bilateral programmes. The largest part of the financial support came from the funds of the Stabilisation and Association Process, the CARDS programme, the Stability Pact for South Eastern Europe, the European Investment Bank, and the European Bank for Reconstruction and Development. Regarding multilateral co-operation in the area of science and research, Albania has closely co-operated with many specialised United Nations (UN) agencies, such as UNESCO, UNIDO, UNDP and UNECE. Some other international organisations, such as the World Bank, have also brought important expertise and have provided support in the area of R&D (mainly in infrastructure). In addition, many regional projects have been launched with the objective of promoting regional co-operation within South Eastern Europe. Regional scientific co-operation in Albania is currently being promoted by several regional organisations: for example, the Central European Initiative (CEI), the Adriatic-Ionian Initiative, the Stability Pact for South Eastern Europe, the Black-Sea Economic Co-operation (BSEC), and the International Atomic Energy Agency (IAEA).

As mentioned above, the mobility of researchers seems to be conceived mainly as a one-way process (i.e. outward flow of resources from Albania), as long as few or no measures are foreseen to allow Albania to compete with other countries in the region and attract foreign researchers/scientist. At present, knowledge resource inflows are mostly limited to project expertise. However, there are some sectors of interest, which could open up in the future opportunities for research in the country, provided that the research infrastructure is improved and legislative and/or policy measures are strengthen (intellectual property issues, etc). At the moment, Albania does not have any major project regarding transnational issues (global warming), but lately the hydropower plants are attracting a lot the attention of foreign investors upon great water resources that Albania offers. As such, if the project for the new Skavica HEC (named for the location) becomes a reality, it will become probably the largest international co-operation research and development project in which Albania has been engaged. In addition, Albania is the country where TAP project (transnational Adriatic pipeline) will be implemented (expected from 2014), which is expected to affect to a great extent socio-economic conditions of the areas where it will pass.

5 NATIONAL PROGRESS TOWARDS REALISATION OF ERA

5.1 More effective national research systems

At the national level, the multi-annual *National Strategy for Science, Technology and Innovation*[102] 2009-2015 is the main policy document outlining Albania's research and innovation strategy, where are spelled out specific priorities, institutional and legal framework to undertake research by public institutions, but also by private firms. It highlights the importance of foreign funding in developing Albania's innovation and research system. However, in the last three years the funding trend shows a reduction of competitive funding and delays in allocating the institutional funding in research, as a result of state budget restriction. UNESCO data show that 80.8% of R&D funding comes from the state budget, 8.6% from higher education, with only 3.3% from business enterprises. While, targets are set to increase public spending on research to 0.6% of the GDP by 2015, to increase the share of gross expenditures on R&D from foreign sources (EU programmes, e.g. FP7, and international donors) to cover 40% of all research spending between the years 2010-2015. However, gross domestic expenditure on R&D (GERD) continues to be about 0.3% of GDP in 2013 slightly higher than in 2009 (0.2%). Although, efforts have been made in last years to reorganize the research system for a better and efficient functioning of it, there are still structural weakness of institutions and actors which are supposed to implement policy, mainly due to inadequate staffing, slow transfer or non-availability of funding. Part of the reorganization of the system has been setting up of institutions such as ARTI, NAIS, BRIC and PROTIK to coordinate research programmes and funding for research, which have led to an improvement of overall public research and coordination mechanism. However, the national research system lacks behind from being a competitive market for researchers.

Evaluations per international standards (scoring or methodological principles of international peer review) are not common. However, there is an institutional evaluation, according to which the respective institutions provide to line ministries annual reports which include information about the performance of an institution during one year. These reports support the policy makers to assess the relevance of the institution's activities, progress towards the set goals, and might influence the decision-making for the upcoming years as far as regards the budget allocation, human resources, and setting of priorities. There is no formal initiative or legislation in place to ensure mutual recognition of evaluations that conform to international peer-review standards as a basis for national funding decisions. However, Albania Government has expressed her commitment to address evaluation results of international evaluation reports, such as the case of EC recommendations through EC Progress reports, etc.

5.2 Optimal transnational co-operation and competition

Albania's international cooperation in research and development takes place mainly in the form of bilateral, as well as EU and UN programmes. International cooperation particularly with EU partners is high on the national agenda. Albania is actively participating in several regional

[102] The National Strategy for Science, Technology and Innovation reports all main figures in Euros.

projects with SEE countries and has recently concluded science and technology agreements with several neighbouring countries and other international partners. FP7 is an important EU instrument for funding research, to which Albania became associated in 2008, but Albanian research institutes are ranking low with their funded project proposals although there is a positive trend in the last years. Two FP7 instruments are particularly important for Albania, as part of SEE countries: INCO-NETS and ERA-NETS.

As far as cross-border interoperability of national programmes is concerned, Albania has no legal barriers to permit joint financing of actions. In fact, Albania is substantially supported by many international organisations, as well as through the assistance of other countries in bilateral programmes and has received support from a number of important instruments. Albania is participating lately in the drafting of the "Regional Strategy for Research and Development for Innovation for Western Balkans", which represents the regional strategy - a project worth of €1,500,000 and financed from EU's multi-beneficiary Instrument for Pre-accession Assistance (MB IPA). The aim is to identify existing research capacities and strengthen the innovative capacity of the Western Balkans by stimulating Research and Development (R&D) using the regional potential. However, Albania is lacking behind in the region from investing in modern research infrastructure and state-of-the-art equipments, but efforts are under way to improve infrastructure supporting the development of communication networks and IT systems. Major projects are co-financed by the EIB, along with other international financial institutions, such as the World Bank, which has also funded the equipping of teaching laboratories. At present Albania is actively working on a reform of science and research statistics to comply with EU criteria.

5.3 An open labour market for researchers

In Albania, mobility seems to be conceived mainly as a one-way process (i.e. outward flow of resources from Albania), as long as few or no measures are foreseen to allow Albania to compete with other countries in the region and attract foreign researchers. While, there are no important restrictions to enter the labour market for researchers, the market itself is not competitive. At present, knowledge resource inflows are mostly limited to consultancy services provided by researchers and international consultants working for the World Bank, EBRD and UN organisations in Albania. Therefore, there is a need to identify the right instruments to make Albanian universities and research institutes more attractive to foreign academics. So far, internationally funded programmes are providing some application opportunities for the SEE countries, including Albania, to develop "brain circulation" in the form of academic exchanges and fellowships for returning scholars. There is an Albanian government initiative in amending the Law "On Foreigners". The Albanian Parliament adopted the law "On foreigners", which guarantees the treatment of foreigners seeking to enter, reside or work in the territory of the Republic of Albania, according to the criteria and standards of EU legislation. The law foresees that access to the Albanian labour market for EU nationals to be implemented without applying for a work permit and their treatment to be equal as Albanian citizens. Whereas, for Albanian recruitment of researcher there is no specific provision as refers to an open, transparent, and merit based recruitment. They are subject of the general regulations for recruitment of employees in the public sector and it remains to be seen if the general reform of the public administration (under consideration by the newly elected government), will address any provision for researchers and consider drafting a HR Strategy for them.

Various programmes, such as Excellence Fund and Brain Gain are supporting Albanian best qualified researchers through grants and scholarships to further enhance their research and academic experiences and *know how*. Also, some measures have been taken to strengthen human capital-building, such as establishing the national EURAXESS Portal (ARTI) and starting to set up a national network. The scope is to connect Albanian researchers with each other, however in the future it is aimed to provide them coordinated personalized information and services same as EU researchers benefiting from EURAXESS services, which currently is missing. As far as applying the principles for Innovative Doctoral Training, the Albanian government has for the first time allocated a special fund for the establishment of *Albanian Centres of Excellence in Science (ACES)*. The purpose of this programme is the integration of national research activities and technological development in the regional and European scientific and technological activities. The ACES have to develop dedicated laboratory equipment or workspaces that could be used for innovative technology based firms. However, no progress was made on establishing Albanian Centres of Excellence Programme as per time frame of NSSTI considering the lack of funds as main obstacle. In addition, *Science Promotion and Education Programme* is another initiative launched from the National Strategy of Science, Technology and Innovation 2009 – 2015 (not implemented yet), which was is supposed to support innovative doctoral training programmes. Along with the *Research Eagle Grants* (not implemented yet) these are initiatives which aim to increase the number of Master and Doctoral graduates in the science and engineering fields.

5.4 Gender equality and gender mainstreaming in research

As legal provisions are concerned, Albania has passed the Law on Gender Equality (No.9970, dated on 24.7.2008), according to which it is prohibited discrimination because of gender. In addition, the law establish for the first time gender quota (30%) in all elected and appointed positions (though non-compulsory), as well as determines the obligations of employers in labour relations to promote equality, to employ with no gender differentiation in any position or vacancy, at all levels of the occupational hierarchy (Article 16), to apply equal criteria in assessing the quality of the work, and to provide equal pay for work of equal value. However, from the other side there are no particular incentives to boost female participation in research, but under Albanian law women have equal access opportunities to both education and public research positions. According to official statistics, there is a higher percentage of female than male students pursuing higher education in general, while it would appear more difficult for women to gain professor status (22%), which cannot be explained by statistics of women with doctoral/PhD degrees (67%).

5.5 Optimal circulation, access to and transfer of scientific knowledge including via digital ERA

Knowledge has been stated as the main pillar of the country's development and at the centre of the upcoming new National Strategy for Development and Integration 2013-2020 (NSDI). Some of the main priorities on which the new NSDI will focus are: Albania – a developed country; an integrated country; Digital Albania, Open Government. The Strategy also seeks to reflect the fact that Albania seeks to build its ICT sector and support development of ICT skills among young entrepreneurs in order to increase the competitiveness of businesses. In fact, ICT is considered a

major driver for modernisation and innovation. Innovation priorities are outlined in *the Business Innovation and Technology Strategy (BITS)* which through BRIC assists SMEs in adopting new technologies, innovations and market strategies. Yet bottlenecks and delays in implementing programmes and strategies have led to slow progress in improving levels of performance and R&D output. While the innovation system is still weak in terms of viable partnerships between public research performers and the private sector, the new non-profit ICT Training and Resource Centre (PROTIK) is expected to encourage such partnerships in the priority ICT field. Currently, PROTIK[103] is involved in various awareness, education and training, network and partnership activities.

The newly elected government has spelled out its ambitions to further enhance the infrastructure capacities for a better access of citizens to e-services. Digital Albania was a successful program initiated by the previous government, and has gained priority also in the newly elected government, which is currently working on a new portal - E-Albania[104], providing e-services for citizens as a unique entry point to online government services. Online Services will serve increasing the efficiency of public administration service to citizens, increasing transparency and fighting corruption.

[103] http://protik.org/
[104]Source: http://www.e-albania.al/Pages/default.aspx#.UuZ2jdI1hdg

Annex 1. NATIONAL PROGRESS ON INNOVATION UNION COMMITMENTS

		Main changes	Brief assessment of progress / achievements	Policies to be monitored
1	**Member State Strategies for Researchers' Training and Employment Conditions**	**N/A**		
4	**ERA Framework**			**These are covered by the ERA Communication fiche – last revised in July 2013 and to be updated as a separate deliverable by 31.01.2014**
5	**Priority European Research Infrastructures**	**+)** There is much support for the development of communication networks and IT systems +)Albanian government initiative in amending the Fiscal Package	**+)** Established the National Agency of Information Society +) Proposed a specific fund, as *the Research Infrastructure Fund* -)lack of research infrastructure -)lack of reliable statistics	1) Allocating funds to the respective support measure to improve the quality of the equipment and facilities available 2) Albania is actively working on a reform of science and research statistics to comply with EU criteria. 3) it is removed the legal barrier for public institutions, whose scientific activities generate revenues, to be exempted from VAT and therefore stimulate cross-border access to RIs Public research organizations, HEIs, and research agencies.
7	**SME Involvement**			1) New partnerships between MS agencies and EC on EU R&I programmes with a focus on SMEs
11	**Venture Capital Funds**	**N/A**		1) Number of applications for EU Venture Capital funds passports 2) Introduction of favourable taxation regimes for Venture Capital and/or business angels 3) Policies and measures supporting set up business angel networks, to foster early stage capital funds, seed funds, business angels, corporate venturing and crowd-funding.
13	**Review of the State Aid Framework**	**N/A**		1) State aid measures (or related policy initiatives) and classified as aid for innovation clusters in the Community Guidelines for State Aids for R&D and Innovation
14	**EU Patent**	**N/A**		Ratification of the Agreement on a Unified Patent Court
15	**Screening of Regulatory Framework**	**N/A**		Ex-ante or ex-post screening of new or existing regulations regarding their impact on innovation

17	**Public Procurement**	**N/A**		1) Introduction of national target on public procurement of innovative goods and services 2) Public tenders launched that include innovation criteria 3) Public tenders launched for joint public procurement of innovation 4) Updates of national procurement policy with a specific objective of supporting innovation
20	**Open Access**	**N/A**		1) Introduction of policies promoting open access of results from publicly funded research 2) Policies on access and usage for research and education-related public e-infrastructures and for associated digital research services 3) Policies, measure or adoption of national strategies on electronic identity for giving researchers transnational access to digital research services
21	**Knowledge Transfer**	**N/A**		1) Policies and instruments launched to protect the results of publicly funded research; 2) Set up of national knowledge transfer(KT) strategies 3) New legal and other regulatory barriers to the transfer of knowledge between the public and the private sector 4) New initiative in support of R&D co-operation projects (including KT) between public/academic/non-profit sector research institutions and enterprises (including specific schemes to encourage the business sector to fund research in research institutions). 5) Creation of framework conditions through policies or other measures to incentivise and reward academics engaged in cooperation with industry 6) New 'partnerships' and joint collaborative research agendas signed between the public and private sector 7) Policies and measures that improve recognition and professionalization of KT activities and that strengthen the role played by knowledge transfer offices (KTO) 8) Newly created public funding schemes used to support the commercialisation of innovative ideas 9) New grant-based support schemes for testing commercialisation potential of research results 10) Policies and funding schemes used to encourage open innovation, co-operation and knowledge sharing and to create a more favourable business environment for SMEs, such as innovation/knowledge clusters,

				knowledge transfer platforms or voucher systems 11) New financial support schemes directed to enterprises or for services aimed at encouraging technology acquisition (licensing, joint ventures, testing, etc.) and knowledge transfer and other cooperation schemes between enterprises that aims to develop or introduce innovations. 12) New measures or schemes directed at public/private organisations in order to provide or coordinate the provision of specific innovation related services to enterprises (including technology transfer/brokerage, strategic and economic intelligence, manufacturing advisory services, quality and design advice, etc.)
22	**European Knowledge Market for Patents and Licensing**	**N/A**		1) New policies and instruments for developing knowledge markets for patents and licensing 2) National initiatives in trading platforms that match IP supply and demand and market places to enable financial investments in intangible assets 3) New initiatives providing support (incl. provision of information through road shows, open days, exhibitions, IP to promote business success, patent information centres, training, direct support to IPR) for patenting, trademarks, copyright, design rights and their commercial exploitation.
23	**Safeguarding Intellectual Property Rights**	**+)** established the Patents and Trademarks Office for protection of intellectual rights **+)**Albanian Copyright Office (ACO)	**-)** no concrete actions have still been undertaken	1) This institution grants and administers the property rights of inventions, utility models, commercial trademarks and service marks, industrial designs and geographical indications 2) Through ACO is possible to fight the widespread piracy in the country 3) No other recent progress in terms of regulation, laws or other supporting mechanisms to boost creativity, innovation and enhance value of intellectual property in the country.
24	**Structural Funds and Smart Specialisation**	**N/A**		Progress in designing the Smart Specialisation strategy.
25	**Post 2013 Structural Fund Programmmes**	**N/A**		Which is the status of the design of the new SF programmes?
26	**European Social Innovation pilot**	**N/A**		1) Measures and policies adopted that provide support to encourage social innovation including innovation driven by or centred around end- or intermediate users, including support to living labs, design innovation, creative labs, crowd-sourcing, etc.

27	**Public Sector Innovation**	**N/A**		1) Prizes launched by sector/topic, including number of winners and amount of prices, distinguishing ex post and inducement prices 2) Publication of government-owned data to be made available and that can be used as a resource for information
29	**European Innovation Partnerships**	**+)** Member of EIP	**+)** More access to financial instruments	1) National participation in EIP recently, not yet undergone through financial support.
30	**Integrated Policies to Attract the Best Researchers**	**+)** Implemented the Brain Gain programme since 5 years	**+)** a positive policy to bring back home, Albanian academics and researchers living abroad -) no specific policy to attract foreign researchers, innovators -) low level of competitiveness -) low level of wages +) removed legal barriers for international researchers to get employ in Albania	1) Integrated policy to return brain in Albania through financial support packages and removing barriers for diploma recognition, facilitating networking and employment options in academia and public administration. 2) Removed legal barriers to foreigner who want to be employed in Albania in both academia or research, however no policy in introduced to make the research attractive for internationals.
31	**Scientific Cooperation with Third Countries**	**N/A**		1) Policies, programmes or other measures promoting Science and Technology cooperation with third countries, definition of geographical priorities and integration in international fora. 2) International cooperation activities conducted in cooperation with other MS.
32	**Global Research Infrastructures**	**N/A**		National involvement in agreements on the development of RIs which, owing to cost and / or complexity, can only be developed on a global scale
33	**National Reform Programmmes**	+) Establishment of the National Agency for Research, Technology and Innovation / 2010	+) strategic and operational management of research and technological development	1) ARTI is the coordinating agency which guaranties the management of R&D projects and innovation development

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