HEALTH IN ALBANIA

NATIONAL BACKGROUND REPORT
April 2, 2009

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Ministry of Health   **National Background Report on Health for Albania**
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Executive Summary

> "The greatest wealth is health."
> ~Virgil

The Albanian Health situation in regards to R&D efforts needs a lot of institutional and organizational support. The *National Background Report on Health for Albania* has been conducted based on the 1) *National Strategy for Health in Albania 2007-2013*; 2) *National Program for Research and Development 2007-2009*; 3) *Draft National Strategy of Science, Technology and Innovation of Albania on 27 February 2009*; and cross-sectional data gathered by different ministries in the Albanian government.

There are no systematic R&D and innovation statistics, but estimates suggest an annual gross expenditure on R&D (GERD) of close to 15 million Euros, i.e. below 0.2 % of GDP. This is almost exclusively funded by the public sector and foreign sources. Although foreign aid amounts to 54 %, the Albanian government is able to make use of only 35 % of it. The Albanian health sector in its R&D and innovation efforts is lagging behind of OECD countries, but we are hopeful that will the proper guidance and expertise will overcome the current transitional problems.

Albanian health sector has some R&D and innovation priorities for the future that line up with the *National Strategy for Health in Albania 2007-2013*. We will need to develop the right strategies for these priorities in order to put them to action and expect outstanding results that will derive a better health for all. The consultation group has worked diligently in preparing this report and we hope that the Western Balkan Conference on Health will give the right results for all parties.

Introduction

Health is like munny, we never have a true idea of its value until we lose it.

~Josh Billings

Albania has a small size in income and population. Productivity is still low, despite the progress in restructuring. Currently, there are 750 medium and larger companies in low tech, while agricultural employment and rural population remains high; on the other hand exports are limited. In R&D for the Health sector in Albania are allocated 2 % of the total health budget. R&D is in its first phases and most of it depends on the foreign donations and investments, which shifts the national priorities toward those international. Overall, the health situation is as follows: Albania spends a below average share of GDP and of total public expenditures on healthcare. As a result, out of pocket spending is high, and this has serious equity, poverty and health sector stewardship implications. Public funds are not utilized to protect the poorest segments of society from health expenditure induced poverty. Public funds are allocated on the basis of inputs rather than the population's health needs and providers' performance. Health Insurance Institute (HII) is providing a substantial regional variation in coverage that will try to solve the inequitable allocation of funds to the regional hospitals. There are substantial sectoral inefficiencies, at both the primary and the secondary care levels. The current system of funding providers and allocating the capital budget further exacerbates these problems. At the same time, there are signs that the Albanian healthcare system is beginning to face expenditure pressures similar to those experienced in other transition economies, namely, an increased demand for higher cost healthcare.

Albania's health outcomes compare favorably with those of other middle income countries outside the ECA region, but lag behind those of other countries in the Southeastern Europe (SEE) Region. By most accounts, Albania's health outcomes compare favorably with those of other lower middle income countries outside the ECA Region, but not to other lower middle income countries in the SEE Region. On the basis of official data, Albania enjoys the longest life expectancy in the Balkans. Other sources put Albania's life expectancy below that of other countries in the SEE Region. Albania has the lowest healthy life expectancy in the Region.

In this study for Science & Technology in the Health sector for Albania, participated mostly governmental officials from these entities: 1) Ministry of Health (MOH), 2) Ministry of Education and Science (MES), 3) Institute of Public Health (IPH), 4) University Hospital Center "Mother Teresa," and 5) Faculty of Medicine (FM) at University of Tirana (UT).

1. Purpose, methodology and summary of the consultation process

The *purpose* of the national background report was to analyze the current situation of science and technology (S&T) in Albania, and more specifically the research and development (R&D) component in the Health sector.

The *methodology* that we used was through statistical analysis and extrapolations based on the data we found in regards to the questionnaire that was provided for this purpose by the consultant. We were able to find most of the data and answer almost all the questions thanks to the efforts of consultations with different parties. We based our findings on previous projects and strategies on health and compiled the best data possible, given the lack of concrete basic calculations specifically for the R&D in Albanian Health sector.

The *consultation process* was organized among six members of different health institutions. We met periodically face to face, and we worked together through electronic post to gather the necessary data for the questionnaire and individually to prepare the report. The consultation participants for this study on S&T in the Health sector for Albania were: 1) Dr. Arjan Harxhi from the Ministry of Health (MOH), 2) Dr. Edmond Agolli from the Ministry of Education and Science (MES), 3) Dr. Alban Ylli from the Institute of Public Health (IPH), 4) Dr. Ariel Çomo from the University Hospital Center "Mother Teresa," 5) Dr. Genc Sulçebe from the Faculty of Medicine (FM) at University of Tirana (UT), and the role of national analytical expert for this questionnaire and report was Mr. Genard Hajdini of Institute of Public Health.

2. The Health S&T system in Albania

The health system in Albania in the S&T field has room for advancement and further improvement. There are several public and less private institutions that deal directly with R&D

in the health sector. The Institute of Public Health commits almost 80 % of its work and resources to the R&D sector, while the Faculty of Medicine at the University of Tirana commits 30 % of its time and resources to R&D efforts, and most of its time to teaching, as well as clinical patients and outpatient visits. The hospitals do not usually perform clinical studies, since we do not have this research study method in place in our current state of practice.

In Albania there are other actors of interest that participate in R&D sector in health, such as the private universities, laboratories and institutions. They are in the fledgling phases and they still have to come out with their products and services in the market. So far, the main source of R&D in the S&T field of health in Albania is conducted by the public sector. These efforts are rather new in Albania, since when we moved away from centralized economy system, the restructuring process has been an upstream fighting battle. The situation for R&D in health is favorable, since more funds will be channeled in the right way through grants and electronic procurement through the Albanian government and foreign governments, donors and investors in the future.

There are no systematic R&D and innovation statistics in the Health sector in our country, but estimates suggest an annual gross expenditure on R&D (GERD) in total for the country of Albania is close to 15 million Euros, i.e. below 0.2 % of GDP. The MoH receives 2.6 % of GDP out of which we spend **0.05 %** of GDP in S&T for Health in Albania or **€3,743,000** for 2007-2008. This is almost exclusively funded by the public sector and foreign sources. Although foreign aid amounts to 54 %, the Albanian government is able to make use of only 35 % of it. The Albanian health sector in its R&D and innovation efforts is lagging behind of OECD countries, but we are hopeful that will the proper guidance and expertise will overcome the current transitional problems.

Albanian health sector has some R&D and innovation priorities for the future that line up with the *National Strategy for Health in Albania 2007-2013*. They are four main national development policy priorities that are in line with MoH strategy that are written on the next section.

2.1 The Albanian Health policy framework

The National Strategy for Health in Albania 2007-2013 states four main priorities:

1. Increase of capacities to manage services and institutions in more efficient way,

2. Increase of access toward the effective health services,

3. Improvement of health systems financing, and

4. Improvement of governance in the health system.

The Albanian health policy framework is in line with the above priorities, where a special place will be required to be taken also by the R&D directions in line with the innovation developments in S&T field of the health sector. The *National Program for Research and Development 2007-2009* has outlined also these priorities in the health field: 1) Prevention of diseases and risk factors; 2) Mental health; 3) Non-infectious diseases with special importance; 4) Infectious disease; 5) Quality Assurance of Health Systems.

2.1.1 The overall health policy framework

The overall health policy framework is decided upon the health priorities of our country based on the national strategies for health as mentioned above, while the priorities in the health field for R&D are also mentioned in Section 2.1. The policy framework is based on Albanian legislation and protected under the Constitution. Soon, we will pass into law the drafted bill for *Public Health Law* which will give a priority to public health and prevention of disease before they go to secondary or tertiary hospital care. Also, a big component of this bill is the R&D sector that together with the *National Strategy of Science, Technology and Innovation in Albania* will be a milestone for R&D in the S&T field of health and broader.

2.1.2 The elements of health research policy making

The elements of health research policy making are several, amongst worth mentioning are: 1) the role of Ministry of Health as a central health policy maker; 2) the

technical role of Institute of Public Health in setting the priorities of public health in the country based on health indicators' outcomes; 3) the educational and training role of the future health professionals in our country through the Ministry of Education & Science and especially the Faculty of Medicine at University of Tirana; 4) the treatment and healing role of University Hospital Center "Mother Teresa," as a hub of tertiary care; 5) the undisputed role of Health Insurance Institute in financing and controlling the cost allocation of resources in Albanian regional hospitals; 6) the role of statistics institute INSTAT in collection of indicators; 7) the role of World Health Organization (WHO), World Bank (WB), USAID, UNICEF, and many other NGOs and institutions in the policy making decisions and priorities; and 8) The Albanian parliament who decides based on the expertise of all stakeholders mentioned above that what law they need to vote, i.e. the *Public Health Law of Albania*, which is in process.

The national strategies and policies that have been prepared are: 1) National Strategy for Health in Albania 2007-2013; 2) National Program for Research and Development 2007-2009; 3) Draft Strategy of Science, Technology and Innovation of Albania on 27 February 2009; 4) *The Public Health Law in Albania*; which overall make up the policy framework in our country.

2.2 Overview of health research activities

We will organize regional conferences for the Western Balkan Countries on Health. Also, in the near future we plan to be able to allocate resources that we have in the proper channels by measuring the outcomes and the health products that will flow out of our policies and activities. Over the next 10 years, the main R&D policy issues and activities in the health S&T field will be in: 1) Public Health; 2) Health Information Systems—the build up of Database Warehouses; 3) Biotechnology and clinical research; 4) Accreditation and Quality Assurance of all healthcare system: hospitals, clinics, institutes through the national and international entities; 5) Establishment of high financial management of the Hospital and University Hospital Systems;

6) Albanian Centers for Excellence; 7) New Departments in Albanian Universities for PhD accredited programs.

2.2.1 Health research projects

There are several health research projects in two of the main components of R&D institutes in Albania: 1) Institute of Public Health and 2) Faculty of Medicine at University of Tirana.

Table 1. Projects in the Institute of Public Health (IPH) in Tirana, Albania in recent years.

List of Completed and Continues Projects at Institute of Public Health (IPH).		
Title of Project:	**Financed ~(USD)**	**Donor Organization**
1. Demographic and Health Survey	$1,000,000	USAID/Swiss/UNFPA
2. Behavioral & Biological Survey (HIV/AIDS)	100,000	Global Fund (GF)
3. School Surveys (YRBS, ESPAD)	30,000	UNFPA
4. Hepatitis Sero-prevalence Survey	30,000	MASH (MES)

5. PHC Service Capacities and Gaps
    a. Vaccination
    b. Cancer
    c. CVD
	100,000/40,000/
	10,000
		GAVI/UNFPA/MoH

6. Iodine Deficiency Survey	100,000	UNICEF
7. Nutrition and Obesity Surveys	20,000	MASH (MES)
8. Stress and Mental Health at the Workplace	10,000	MoH
9. Other Research (outbreak investigations, air & water pollutions, health indicators)	50,000	MoH
10. Virology Laboratory	100,000	World Bank
11. Molecular Biology Lab.	100,000	MoH
12. Chemistry (iodine)	30,000	MoH
13. Clinical Lab.	10,000	MoH
14. Air Pollution	100,000	WHO
15. New Vaccines	1,000,000	MoH + GAVI
16. Detection Programs STI (VCT)	50,000	Global Fund
17. Detection Program Chronic Disease	10,000	MoH
18. New Surveillance Systems (abortion, STI, birth defects)	20,000 x 3 = 60,000	UNFPA
19. Family Planning	100,000	UNFPA
20. Food Safety Assessment	15,000	MASH (MES)

(Source: IPH).

Table 2. Projects financed for R&D by the Ministry of Education for year 2008.

Budget of Ministry of Education for the Year 2008 in R&D:	In Lek/~Euro 130 Lek = €1	Title of Project
University of Tirana. Faculty of Medicine Q. S. "Nene Teresa" Tirana.	456,000/3,500	Brain mapping in surgery of cerebral brain cancers. Ridvan Alimehmeti
University of Tirana. Faculty of Medicine Q. S. "Nene Teresa" Tirana.	44,000/350	Brain mapping in surgery of cerebral brain cancers. Ridvan Alimehmeti
University of Tirana. Faculty of Medicine Q. S. "Nene Teresa" Tirana.	500,000/3,850	Risk factors for the cardiovascular diseases in Albanian autochthon population and in those immigrated in Italy. Mihal Tase
University of Tirana. Faculty of Medicine Q. S. "Nene Teresa" Tirana.	400,000/3,080	The organization of an Albanian center for diagnosis of early pregnancies and prevention of genetic malformations. Vahe Mokini
University of Tirana. Faculty of Medicine Q. S. "Nene Teresa" Tirana.	100,000/770	The organization of an Albanian center for diagnosis of early pregnancies and prevention of genetic malformations. Vahe Mokini
University of Tirana. Faculty of Medicine Q. S. "Nene Teresa" Tirana.	500,000/3,850	The improvement of diagnostic methods and the formation of medical scientific personnel in the field of infectious diseases. Arjan Harxhi.

(Source: MES).

2.2.2 Key competencies in health research fields

Some of the key competencies in the health research fields are lacking. We have had a great "brain drain" in Albania during these last 20 years. Almost 60-65 % of our university staff has left the country, although the government has presented a program called: "Brain Gain" that is trying to help return back some of the intellectuals that left. Also, the civic society has

presented another program: "Brain Stand," to convince the young researchers to stay and contribute in their country without leaving it like the rest of their peers previously.

Our health laboratories need to be accredited and more work is needed to be done in the future, so we can be reference laboratories like in most of the OECD countries. Some of the competencies are that we are trying to produce more human capacities for the health services. We need to mention that in the Faculty of Medicine we have opened the Public Health School in the recent years where we train public health researchers and practitioners. We do not have a very developed biotechnology industry sector, but some former state companies in a public-private-partnership exist today such as Profarma that produces medical drugs in Albania. Our medical school and secondary & tertiary hospitals together with IPH and its laboratories are our greatest assets of health research in the country.

2.2.3 Health research infrastructure

Health research infrastructure needs investment in the future. In our universities we lack proper laboratories for research. Also, we lack basic equipments, instruments, and facilities built by appropriate standards. In IPH we have a lot of laboratories that lack accreditation, although we might meet in country standards, we are afraid to compare and meet the accreditation standards set by OECD countries or the developed countries. We need to build proper health research facilities through government and donor funds that will meet the demands of the 21st century.

The most important health research public institutions are: Faculty of Medicine at University of Tirana, and Institute of Public Health; while private institutions on health programs are: The Lady of Good Council University (Catholic University) which is accredited and U.F.O University, Kristal University and Medikadent University, which are not accredited. As far as public and private research laboratories there are several that function in our country, but they are not geared toward research rather than diagnosis and biochemical analysis such are: Lady of Good Council Clinic, the Orthodox Clinic, Didaktalba, IKEDA Clinic, Globus Clinic, etc.

2.3 Key drivers of health research

Key drivers of health research are the policy making bodies such as Ministry of Health and Ministry of Education and Science. Also, the technical bodies of applied research in the health field are Institute of Public Health and Faculty of Medicine at University of Tirana. Other drivers are the NGOs that deal with health in Albania, such as: WHO, UNICEF, WB, USAID, SIDA, SNV, World Vision, Save the Children, etc.

2.3.1 Main health sector trends in Albania

Albania seems not to have experienced a fall in life expectancy after dramatic political and economic changes. Despite the fact, that life expectancy at birth is lower than most of developed European countries, it is somewhat higher that most of the countries of Eastern and Central Europe. Healthy life expectancy is lower compared to EU countries, including the new members after 2004.

Infant mortality remains high by EU standards, but is decreasing steadily. The same is true for child (under 5) mortality rate, while maternal mortality remains a concern and doesn't show clear trends of decreasing. Infant mortality shows significant differences among districts. It ranges from under 5/1000 to more than 35/1000

The epidemiological profile is changing: Levels of cardiovascular diseases, cancer and external causes of death are increasing. The burden of communicable diseases is decreasing in general terms, but some infections as HIV/AIDS are increasing. These diseases cause 0.5% of all deaths. There are 18 new cases of tuberculosis per 100 000.

There are 0.7 new cases of HIV infection per 100 000.The rates of sexually transmitted infections (per 100 000 per year) are low compared to EU figures: 0.2 new cases of syphilis and 0.6 new cases of gonococcus infection

Brucellosis remains stable during the last two years after more than ten years of an apparent epidemic increase. Most of the vaccine preventable diseases are under control with several of them in the way of eradication. During the last year, anyway, were reported some cases of measles after four years of 0 cases. Viral Hepatitis is still a problem for the country.

Gastroenteritis in children is decreasing with rates getting close to those of EU; The rate of children under 5 dying from diarrhea is 0.4 per 100 000.

Cardiovascular diseases are the leading causes of death; 52% of the total number of deaths. Within this group, the major killers are – ischemic heart disease: cause of 7% of the disease burden and 15% of all deaths: 128 deaths per 100 000. the indicator is lower than those reported by central and eastern European countries but higher than western European countries

Cancer is responsible for 14% of all deaths: 132 deaths per 100 000 populations. Cancer incidence remains lower than EU (There are 96 new cases of cancer per 100 000 per year, a quarter of the rate in the EU25), but is increasing. For some cancers as Breast Cancer the increase can't be explained by demographic changes only.

There are 4.2 new cases of cervical cancer per 100 000 per year: a rate slightly higher than that in the EU25. There are 20 new cases of breast cancer and 13 new cases of lung cancer per 100 000 per year

Mental health is another dimension of health affected by changes in Albanian population. Suicide rates, despite being lower than those reported by EU countries are steadily increasing. Neuropsychiatry disorders account for 20% of the total disease burden and 3% of all deaths.

➢ There are 4 suicides or self-inflicted injuries per 100 000.
➢ Unintentional injuries are responsible for 43 deaths per 100 000 per year, a figure much higher than rates of western European countries.
➢ Injuries from road traffic accidents cause 12 deaths per 100 000.
➢ Respiratory diseases cause 6% of all deaths: 47 deaths per 100 000 populations.
➢ Smoking accounts for 22% of the disease burden. Alcohol consumption causes 6% of the disease burden. Obesity causes an estimated 10% of the disease burden, and physical inactivity, 5.3%.

2.3.2 Main socio-economic challenges in Albania

Rebounding from the financial collapse of 1997, Albania performed very well in sustaining high rates of economic growth. Economic activity recovered and real gross domestic product (GDP) growth rates accelerated to an average annual rate of 7 percent over the period 1999-2005, allowing Albania's per capita GDP to approach middle income country levels. This growth record has been the highest among transition economies. Since transition, Albania's growth has been driven primarily by the improvements in the allocation of resources from low productivity sectors, firms, and activities to higher productivity ones.

Much of this economic performance has been underpinned by sustained fiscal consolidation and macroeconomic stability. The Government succeeded in reducing the overall deficit from 13 percent of GDP in 1997 to 3.4 percent in 2005, while the primary deficit declined from 7.3 to 0.3 percent of GDP during the same period. Lower public sector borrowing requirements resulting from fiscal consolidation sustained the downward trend in interest rates, and kept year on year inflation within the Bank of Albania's target range of 2-4 percent. However, signs of mounting inflationary pressures have emerged recently, largely driven by a higher than expected spurt in credit growth. A surge in imports in parallel with a deceleration in exports, and combined with the deterioration in the electricity sector performance during the last quarter of 2005, along with a slow down in the construction sector, are damaging growth prospects for 2006: the latter is projected to 5 percent in 2006.

During the transition, growth has been driven primarily by improvements in the allocation of resources as reflected in high rates of total factor productivity growth. Resources have been reallocated from low productivity sectors, firms, and activities (for example, subsistence agriculture) to high productivity ones (for example, export manufacturing). As a result, total factor productivity (TFP) growth explains almost all growth in the 1993-2003 period 6.1 percent of the annual average of GDP growth of 6.3 percent.

External migration has given an additional impetus to growth by boosting domestic consumption. This reflects the large-scale migration to Greece, Italy, and other countries in Europe; since 1990, about one-fifth of the total population has left and is living abroad. Migration has been an important strategy for coping with the lack of jobs and decent earnings opportunities at home. Official estimates indicate that remittances are the largest source of

foreign exchange, equivalent to almost 14 percent of GDP. This flow has stimulated domestic demand, especially in non-tradable activities such as construction and services, and has complemented the earnings of almost all resident Albanians.

Meanwhile, the contribution of factor mobilization and the accumulation of both labor and capital have picked up only modestly and face constraints. Investment rates rose after the financial crisis of 1997, but after 1999 they have declined and stagnated. This reflects, in part, sluggish foreign direct investment, which at 3 percent of GDP is at a low level compared to other transition and high growth economies. With consumption persistently high, domestic savings have declined after 2001. Both the migration of young workers and the low savings rate will continue to limit the growth of the factors of production and confirm the need to find sources of TFP growth.

In addition, high payroll taxes have discouraged formal employment and dampened labor demand. Three-quarters of the labor force is now employed in the informal sector. In addition, while formal sector wages are lower than the Southeastern Europe average, they have been rising in relative terms and are higher than those in competitors such as Bulgaria and Romania. A combination of all these factors, in addition to unfair competition, tax harassment, weak governance and corruption means that firms have a weak foundation for being competitive and explains why the export base is so narrow.

Meanwhile, the fight against poverty is far from over. While the rapid growth in incomes was the key contributor to poverty reduction, it was partially offset by increasing inequality, especially in the coastal and central areas. Rural poverty remains high, with the headcount still at 24 percent in 2005, compared to 11 percent for urban areas. Furthermore, the poor are primarily less skilled, with only primary education, and have less access to education in urban areas. They also tend to be employed in the informal sector without the protection of formal sector regulations. Wide variations in health and educational status as well as in access to services among regions are mirrored by variations in spending at the local level). (Source: World Bank, MoF, HII, INSTAT).

Defining the scope of human capital in Albania is a complex endeavour. It is the principal asset of every country and it is required by the local and regional labor markets; and therefore by

business enterprises which shape these markets. In these conditions at least two key factors determine the scope of human capital in Albania: demographics profile and labor market developments.

Three main phenomena characterize Albania's demographic profile: large internal and external migratory waves, decreasing mortality rates, and declining fertility rates. The 2001 census put Albania's population at 3,063 million. Based on projections from this census, the population was estimated at 3.1 million in 2004, in 2006 Albania counted a population of 3.14 million citizens, which is relatively young with a median age of 28.3 compared to 39 for Europe[1]. It is expected that the population will increase to about 3.7 million by 2025 [2].

Migration has been a dominating socio-economic fact over the past 15 years in Albania; and migratory flows have been international and internal, permanent and temporary. It is estimated that about 860,485 Albanians live abroad; which means that the stock of emigrants is about 27.5% of total population [3]. No other Central or Eastern European country has been affected so heavily by migration over such a short period of time [4]. A recently published annual report of the Albanian Central Bank declares that without remittances, Albanians would live with 2 US$ less per day [5]. Since the beginning of the transition there has been substantial internal migration from rural to urban areas, mainly to Tirana and Durres. Over the past seven years, the proportion of rural inhabitants has decreased by 13%, while the urban population has grown by 3.2% in 2002-03 and by 2% in 2003-04 [6].

The population of Tirana alone is estimated to have grown from around 200,000 in the early 1990s to close to 800,000 in 2005 [7]. Albania's growth since the transition has been impressive. Cumulative growth since 1990 is among the highest of all transition economies. Based on the latest reports Albania not only recovered, but exceeded the pre-transition GDP level. In 2007 [8] the estimated real GDP reached 152 (compared to 100 in 1989). High GDP growth rates have been accompanied by a massive reduction in poverty. The proportion of the population whose real per capita monthly consumption is below Lek 4891 (in 2002 prices), fell from 25.4% in 2002 to 18.5% in 2005. This means that roughly 235,000 of about 800, 000 poor

people in 2002 were lifted out of poverty. The extremely poor population, defined as those with difficulty meeting basic nutritional needs, decreased from about 5% to 3.5% [9].

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However, Tirana has a GDP index of 0.772, compared to a mere 0.252 for the mountain areas, and a Human Development Index [10] (HDI) of 0.830 compared to 0.632 in the mountains [11].

Labor market development in Albania has been influenced significantly by the transition reforms and other economic and social conditions of the country. The privatization process of state property is almost complete but in 2007 the share of agriculture (almost 20%) in the Albanian economy largely exceeds the share of industry (approx. 9.5%). Micro and small size enterprises (94% of the total enterprises) and the informality of the economy are other significant features, both in rural and urban areas [12]. The informal labor market, which is largely undocumented, with regard to its impact on employment and skills needs represents a substantial share of total employment. Albania is rated low in the most recent "Doing business 2008" report (World Bank) that covers the period April 2006 to June 2007, ahead only of Uzbekistan, Ukraine and Tajikistan in the 3 ranking of Eastern Europe and Central Asia (28 countries). The low ranking on the ease of doing business index means that the regulatory environment is not conducive to the operation of business. The index "Starting a business" ranking is also low (25th), as is the "Employing workers" ranking (18th). This leads to the conclusion that Albania does seem to have to address the wider agenda of investment and business environment, in a consistent fashion with the employment and skills agenda [13].

The socio-economic background described above indicates several important issues related to human capital in Albania. Adults and young people are confronted with changing the reality of the labor market, migrants from rural to urban areas are confronted with social exclusion, and those left behind are faced with poverty. Given the global trends where the labor market conditions and working contexts are becoming more and more divided between knowledge-intensive jobs on the one hand and more repetitive work on the other, Albanian citizens are faced with the need and opportunity to constantly adapt their knowledge and skills.

Therefore human capital development policy responses and the underlying macro-economic framework need to address the whole in a consistent fashion.

3. Integration of Albania in the European Research Area in the field of Health

The outcomes from the questionnaire on the integration of Albania in the European Research Area in the field of health are in the preliminary stage, when we set the priorities and write the strategies to follow in the footsteps of our European partners on this direction. Several points came out in the consultation group, such as follows: 1) Regulatory acts aiming at removing administrative barriers towards EU approximated legal framework; 2) Institutional Development and Organizational Strengthening in Research Management; 3) Regional cooperation and prevention strategies for Public Health; and 4) Common scientific research and trainings of our specialists.

4. SWOT analysis of the health research capacity in Albania

4.1 Strengths
✓Strong laboratories infrastructure.

✓Tradition and Knowledge Transfer.

✓Some Human Capacities.

✓Strong Logistics in the Field.

✓Center of Information on Public Health.

4.2 Weaknesses
✓Fragile Quality Assurance System

✓In Process of National & International Accreditation.

✓High Turnover Rate-Brain Drain.

✓Lack of R&D Coordination Office.

✓Low Absorption of Funds for R&D.

4.3 Opportunities

✓Strong National Network with Regional Directories of PH.

✓Well-positioned between University and MoH.

✓Supportive Legislation in Progress.

✓International Networks & Partnerships.

✓R&D has become a Priority: National & International Funds

4.4 Threats

✓New Governmental Structures overlapping with IPH and FM Functions.

✓PH Emergencies & Program Administration diverts energy & resources.

✓Aid Funds & "Easy Money" create a dependency on low expectations and impedes competitiveness

5. Health research priorities for Albania

The *National Program for Research and Development 2007-2009* [14] has outlined also these priorities in the health field: 1) Prevention of diseases and risk factors; 2) Mental health; 3) Non-infectious diseases with special importance; 4) Infectious disease; 5) Quality Assurance of Health Systems.

The main R&D priorities are: 1) The creation of 4-6 Albanian Centers of Excellence in Science (ACES) over a five-year period; 2) Currently public research spending is 0.2% of GDP and it should go up to 0.6% by 2013; 3) Gross expenditure on R&D from foreign sources notably from EU and international donors should reach 40% of all research spending in the years 2010-2013; 4) Double the numbers of researchers, through brain gain and training of new researchers (establishment of graduate schools; train 100 PhD(s); 5) Targeting a number of 100 companies (RTDI Survey) participating in R&D through own labs, participation in consortiums or contra; 6)

Create three new graduate departments in the Tirana universities and three outside Tirana; half of them should be in the priority areas selected.

5.1 Health Research priorities on the basis of the country's readiness

Health research priorities on the basis of the country readiness are: 1) Prevention of diseases and risk factors; 2) Mental health; 3) Non-infectious diseases with special importance; 4) Infectious disease; 5) Quality Assurance of Health Systems.

Also other points to be considered are: 1) Emergency alert and quick response toward natural and humanly caused catastrophes, accidents, and urgent situations; 2) Response to epidemics and pandemics in the country and region; 3) Allocation of resources toward public health research and response; 4) Clinical studies toward the most killing disease in the country both: infectious and non-infectious; 5) Accreditation and quality assurance of the laboratories and medical facilities in the country; 6) Public health and medical personnel capacities for country's readiness; 7) Facility and infrastructure building with contemporary standards with a good health systems information network in Albania.

5.1.1 Priority 1: Prevention of disease and risk factors

It is very important to focus our attention on the causes that bring us bad health. These health causing agents are the high risk living conditions such as: socio-economic inequalities, poverty, social exclusion, smoking, use of alcohol and drugs, physical inactivity, malnutrition and unsafe sexual behavior. Albania has been influenced dramatically after the 1990s and has exposed the individuals toward high risk health determinants. There are some data on smoking with a prevalence of 50% of the population, while other indicators exist also in other high risk behaviors that are exposed toward the environmental risks such as: quality of foods, water and air. Although the Albanian population in respect to aging, it remains a rather young population with one out of three people under 15 years of age, still this population can be affected by the high risks of health mentioned above. Some possible activities are:

- Transversal or intersectional studies that will aim in identifying and measuring the exposure toward the risk factors in the Albanian population.
- The link among environmental agents with occupational and health through ecological or analytical studies. Evaluation of prevention efficiency in this field and the need to pilot new strategies.
- We will measure the prevalence, and those that are prone to, in regards to several health risks: smoking, malnutrition, unsafe sex, alcohol, sedentary living.
- We will evaluate the measure of the effects in time and space over the population of the these agents: quality of drinking water, drinking water pollution, surface waters pollution, air pollution, noises, industrial pollution, etc.
- We will evaluate the applicability toward a cost-effective way and the impact in health for future health strategies, i.e. the adding of flour in drinking water, arsenic control, etc.

5.1.2 Priority 2: Mental health

Research in the field of mental health in Albania has inherited a much to be desired situation, especially in the lack of finances, lack of being a priority before the 1990s, and in regards with the lack of contemporary standards in diagnosing and treating as part of isolation and weak contacts with the most specialized research centers in the world. In the health strategy this is part of projections toward development of services much closer to the community at large. Some of the activities in the mental health are:

- Studies of the prevalence in relation to mental disorders. Study of mental health in the elderly in the healthy population and primary health care.
- Studies in the high risk communities with a purpose of identifying and measuring the impact of the phenomena of legal and illegal drugs in mental health. Study of double diagnosis in the youth.
- Standardization of methodologies to define the case finding and comparative analysis with other populations and the creation of basic data for comparisons in the future.

➢ Priority will be given to the interdisciplinary fields in R&D academic capacities through integration of neurosciences, social problems, behavioral problems, clinical and services.

➢ We will measure the burden on health of neuroses and humor disorders on different population categories and the factors that affect it.

➢ We will measure the socio-economic burden of mental health problems in Albania.

➢ We will calculate the loss of healthy life-years as a cause of a bad mental health in Albania, which will help to calculate an important indicator that is not previously calculated in our country; longevity without handicaps and chronic health problems.

➢ Collection of information in the population, in primary care, secondary and tertiary healthcare with the purpose of monitoring the "Goldberg filters" and the efficiency of the strategies in the treatment of patients with mental health problems in communities.

➢ Analysis of the burden of depressions and other disorders with psychiatric nature in suicides in our country.

5.1.3 Priority 3: Non-infectious diseases with special importance

The recent studies in the field of non-infectious disease have had a spontaneous character and in general have not functioned with representative populations. Due to a transitional demographic and epidemiologic pattern these cardiovascular, cancers, diabetes diseases and several similar ones seem to have a growing trend while in some industrialized countries they seem to be lower in the last two decades due to special care and monitoring. The strategies need to be geared toward diagnosis and treatment of them. We need in country studies in this field, since many of the imported foreign studies are not a good example of our current managerial, clinical, and financial capabilities in Albania. Some possible activities are:

➢ The build up of surveillance systems based on primary and secondary care or in University Hospital for the evaluation of the prone to several main non-infectious diseases with a high frequency and severity.

➢ The evaluation of the prevalence on these problems in a healthy population through designing of epidemiological proper studies.

➢ The build up and evaluation of programs in screening for hypertension based on primary health care, as an effective tool for early detection and treatment of it.

➢ Research in the field of diagnosis and the treatment of non-infectious diseases in order to direct the development toward evidence based medicine.

➢ The measurement of changes in time and space for: infarct of myocardium, coronary disease, cerebral-vascular accidents, heart rheumatism disease, neoplasm, diabetes, chronic obstructive bronchitis and bronchial asthma.

➢ The measurement of prevalence in adult population in primary care or in "healthy" population on: hypertension, hyper-cholesterol, glycerin (sugar levels).

➢ The measurement of the suspicious factors as causing agents of diseases through case-control studies or follow-up.

➢ Evaluation and quantification of the effect of some medical drugs in the development of the above mentioned diseases through randomized clinical studies.

5.1.4 Priority 4: Infectious disease

Infectious disease research has a rich heritage in our country. This has been supported from the frequency of these problems that have appeared in Albania time after time due to the high fertility that exposed much of the pediatric population toward the risks of infectious diseases, and these have been a high historical priority in the health field. Despite the successful achievements in lowering and eradicating several infectious diseases, in Albania as well as in the world is noticed a reappearance of "forgotten" infections or of those new ones in context with socio-economic conditions, therefore the actuality of study and scientific research in the sphere of infectious disease is valuable not only in our own country, but also in many other countries. There are several steps and activities that we can take place in, such as:

➢ Study of prevalence and incidence of infections such as Hepatitis virus B and C in the group age of adolescences and the population contingency with risk to develop this infection (Those with poly-transfusions, immune-deficiencies, contingencies of behavioral risks: drug users, MSM, healthcare professionals.

➢ Genetic profile of the virus of Hepatitis B found and compared with other European countries. This is a first time study in our country.

➢ Studies of sero-prevalence for the evaluation of effectiveness of vaccination programs remain current in every step of scientific development in the field of prophylaxis and the protection of mother and child health.

➢ Epidemiological studies and sero-epidemiological over HIV/AIDS infection and sexually transmitted disease, especially in vulnerable populations.

➢ Epidemiological and microbiological studies to evaluate the scale of spreading of hospital infections and models of resistance toward antibiotics.

5.1.5 Priority 5: Quality Assurance of Health Systems

Quality Assurance (QA) of health systems is our final priority for country's readiness. After the 1990s the medical services in Albania have undergone through a great pressure during the dramatic changes in Albanian society and economy. Due to this pressure the medical services have gone under many changes with an emphasis on lowering the *quality of service* accompanied with a lack of standards. The reforms on management and financing of health services have not been complete and not supported by in depth studies. The influence on scientific research with an emphasized direction toward the practical implementation would bring an improvement of quality indicators of health services in our country, including the training of the personnel, assurance of equal access for all, and the efficient use of resources.   The priorities of development as stated in the 10-year strategy for R&D of the Albanian health systems are looking for an important component of scientific research, for the purpose of effective measuring and approach toward the needs in the future. Some activities in QA of the health systems are:

➢ Analysis of the service system in complexity of its components in serving the reform of organization and improvement of quality.

➢ Studies of cost-effectiveness of hospital services, comparative analysis with different models of financing in aspects of reform toward the financing of hospital services in Albania. (Here, needs to be mentioned the role of Health Insurance Institute that has provided a financing scheme in all district hospitals).

➢ Qualitative evaluations with the engagement of community in regards to the disbursement of services and health problems in rural areas.

➢ Development of standards of quality in healthcare based on the principles of World Health Organization and the making of indicators to measure the quality and continuity. (Here, needs to be mentioned the role of the National Center for Quality and Assurance in Albania that has done a book with all health standards needed for QA and hospital accreditation).

➢ Measurement of the effect of the elements related to the quality, such as: infrastructure, training of personnel, access and equality, long-term health effects, the perception of quality from the customers of healthcare services.

5.2 Health Research priorities on the basis of future potential

The health research priorities on the basis of future potential are: 1) Public Health; 2) Health Information Systems—the build up of Database Warehouses; 3) Biotechnology and clinical research; 4) Accreditation and Quality Assurance of all healthcare system: hospitals, clinics, institutes through the national and international entities; 5) Establishment of high financial management of the Hospital and University Hospital Systems; 6) Albanian Centers for Excellence; 7) New Departments in Albanian Universities for PhD accredited programs in health sciences.

5.2.1 Priority 1: Public Health

In Public Health we will see the possibility of genetic screening for the inherited disease in the country. This is a field of interest around the world, especially after the advent and the discovery of the Genome project through DNA replication. This will allow us to screen for previously inherited disease on diabetes, developmental disease, mental disorders, cancer cell predispositions, etc.

5.2.2 Priority 2: Health Information Systems

Health information systems (HIS) has been initiated by Bill & Melinda Gates Foundation and has eventually reached Albania through two projects that have been initiated through the Health Matrix by WHO and another database warehouse project by the World Bank. We hope that by providing a total HIS in the whole country we will be able to receive the indicators through servers and on-line on real-time. This is especially important for improving the health services and management of information systems.

5.2.3 Priority 3: Biotechnology and clinical research

In biotechnology and clinical research we want to advance with research in gene therapy and adult stem cell research. Gene therapy is important in curing the diseased or the inherited genes in the newly emerging fetuses. Also, through adult stem cells research we can use the umbilical cords of pregnant mothers to be stored for future usage to repair the damaged tissues of more than 200 different cell functions. The importance is storage space and conditions under which they will be kept.

5.2.4 Priority 4: Accreditation and Quality Assurance in healthcare

Accreditation of our health institutions and hospitals is also a future priority, because we still lag behind the OECD countries on these standards. The hope is to be accredited in country as well as abroad by reputable accreditation agencies on healthcare standards. There are several accreditation agencies on healthcare that can be contacted on this matter. In Albania, there is a national agency that is responsible by the vested authority of the government with accreditation

of hospitals as well as another agency that deals with continues education and licensing of medical personnel.

5.2.5 Priority 5: High financial management

The financial management of healthcare systems is done in parts by the Health Insurance Institute that has recently taken charge of the financing of all district hospitals in the country. Also, the government of Albania allocates funds through its budget to the Institute of Public Health through the Ministry of Health and Faculty of Medicine at University of Tirana through the Ministry of Education and Science. In the future, the financial management will include R&D funds from grant programs through the EU and other donors, as well as public-private-partnerships (PPP).

5.2.6 Priority 6: Albanian Centers for Excellence

There is a plan to build 4-6 Albanian Centers for Excellence in Science (ACES) that will include dedicated laboratory equipment or workspaces that could be used for new technology based firms (pre-incubation, testing, certification, etc.). This has been drafted in the *National Strategy of Science, Technology and Innovation of Albania*.

5.2.7 Priority 7: New University Departments and Health Science PhDs

Science promotion and education toward young people will be provided with funding of a limited number of graduate schools in order to boost the PhD numbers in the future. Despite the "Brain Drain" and the "Brain Gain" programs together with "Brain Stand" initiative by the civic society, Albania will need to improve on the educational services both public and private, by increasing the numbers of graduates in the health sciences fields. The future is bright; therefore we need to open more new departments in the universities for health sciences for PhDs, so we can achieve our objective of more than 15 PhDs in 2007 for the future ten years.

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