"Barriers and drivers in fostering Triple Helix networks in Albania"

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Abstract

Triple Helix model is an innovative analytical concept, which creates synergy amongst university, business and government relations, stimulating knowledge-based economies. Albania is a country that sees its future in European Union, an entity based on the knowledge economy. As such, the country has to be swift in using opportunities that encourage the development of research and innovation. It needs policy-led structural transformations to cope with the rapid growth and competitiveness in the region. In this framework, the quality of the human capital is crucial for the successful steps towards socio-economic developments.

The European Union is actually at the final implementation phase of its stimulating strategy "Europe 2020", which highlights the education and research as the prominent elements to promote "a smart, sustainable and inclusive growth". Albania's relevant scenery, instead, seems quite unalike. There is actually a very low level of research investments (0.4% of GDP), which is reflected, amongst others, in the qualitative and quantitative level of human resources. It is mirrored, consequently, in the low number of successful applications in the EU research programs at the same time. This landscape becomes specifically evident at the public universities and research entities. The country needs to strengthen inter-institutional cooperation to make sure that adequate strategic documents are in place and realistically achievable. Private sector participation in such EU research and innovation programs remains very low, as well. Hence, respective measures in this dimension are indispensable, as well.

In this context, this paper endeavours to further contribute to the debate on the role of the university and its research structures in the framework of such new developments. It proposes a conceptual framework for analysing variation in the university role during the development of its own research capacities. This framework is based on the process, as such, is complicated taking into consideration the cultural country mind-set, where trust and institutional cooperation is not at the optimal levels, by sometimes constraining each-other's behaviour. Therefore, translating each-others functional relations and shaping trilateral expectations in an Albanian context remains an enormous barrier.

Keywords*: triple helix model, research platform, partnership of academia, business and government.*

I. INTRODUCTION

The triple helix of university–industry–government interactions is a universal model for the development of the knowledge-based society, through innovation and entrepreneurship. Since the triple helix concept was introduced in the early 1990s, it has received considerable international recognition. The powerful idea of the "triple helix" has been inspiring universities to become more entrepreneurial, firms to make their boundaries more porous, and governments to establish innovation-friendly environments [1].

The most developed countries have capitalized on creating new knowledge and innovation and adapting new technology to drive their progress in economic growth. Basically, they have changed into knowledge-based economies [2]. Being considered as their greatest asset, knowledge places them in the lead, compared to other countries that are still in the transition stage or are lagging behind, such as Albania. A knowledge-based economy refers to one that focuses on production and management of knowledge [3]. It also triggers knowledge distribution, which usually occurs through formal and informal networks and results in increased economic performance.

The source of strength in the knowledge-based economy of the twenty-first century are universities, which are increasingly viewed as key drivers of innovation and "major agents of economic growth." Therefore, many policymakers view research universities as "knowledge factories" for the new economy with largely untapped reservoirs of potentially commercializable knowledge waiting to be taken up by firms [4].

However, universities are more of followers of technological innovation than leaders: that is, "catalysts" rather than "drivers." [5]. In fact, evidence has confirmed that universities are powerful institutions for commercializing knowledge and simultaneously key drivers of regional innovation systems. This is largely reliant on empirical work produced in some of the world's most dynamic regional economies, such as Route 128 in Massachusetts and Silicon Valley in California [6]. But, some researchers argue that the mere presence of leading research universities does not mean that they will definitely trigger economic growth, despite being critical assets for such regional or urban economies [7]. However, some policymakers hold to the notion that universities are potential drivers of the new economy [8], with untapped reservoirs of commercialized knowledge waiting to be 'taken up' and applied by businesses [9].

Currently universities do not only generate new knowledge through primary research, they also provide technical support and specialized expertise and facilities for on-going firm-based R&D activities. In the recent past, governments have put pressure on universities by requiring them to conduct more applied research than the traditional basic research. These changes that have affected the universities' role are characterized by three major trends: 1) the linking of government funding for academic research with economic policy 2) the development of more long-term relationships between firms and academic researchers and 3) the direct participation of universities in commercializing research [10].

Therefore, while universities continue to fulfill their traditional roles of performing primary research and training highly qualified people, they were under the increasing pressure to expand their basic research activities to include more applied research of greater relevance to industry and to diffuse technical knowledge and provide technical support to industry. This shift reflects changing government expectations that public investments in basic research should produce a measurable economic return [11].

Finally, rather than acting as "ivory towers" insulated from their community, they act as "good community players" that facilitate local linkages and networks and create "anchors of creativity" that underpin the virtuous cycle of talent attraction and retention [12].

The purpose of this research is to review a number of recent reports on research and innovation (RI) in Albania and further look for new ways of increasing the impacts on RI investment which, according to this model, will be in simultaneously accompanied by an improvement of business innovation performance.

After the analysis of the national strategic documents, literature review and empirical research, an alternative perspective to foster Triple Helix networks in Albania is presented.

II. TRIPLE HELIX MODEL IN ALBANIA – A STATE-OF-ART ANALYSIS

The OECD defines innovation as "the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations" [13]

The Oslo Manual [14] identifies four factors that influence the effectiveness of the innovation process (i) framework conditions (ii) science and technology institutions (iii) transfer mechanisms (iv) firm-specific innovative drives. General framework conditions such as the macroeconomic environment, the fiscal system and access to finance shape the activities of the companies and their ability to conduct innovative activities. The efficiency of science and technology institutions drives the accumulation of knowledge. Transfer mechanisms enhance flows of information and skills between the various stakeholders in the innovation system and are crucial to ensuring that innovative ideas are actually brought to the market and contribute to the economic growth. Finally firms themselves need to seek, identify and exploit the potential for innovations to reinforce the innovation process. These four factors correspond to specific areas of policy interventions. Governments need to design measures to address potential barriers in each of these four domains and, most importantly, decide on the priorities that need to be set.

In this context, Albania, like other Western Balkan countries lags behind. Science, technology and innovation are considered to be fundamental factors for a knowledge-based economy. They are important at all stages of development, notwithstanding of different forms and ways. Capacities to develop basic and applied scientific research, to adapt and implement technologies in economic structures, to creatively develop new products and services, using innovative technology and disseminate them to the public, are fundamental for developing a competitive economy. According to the Global Innovation Index 2016, Albania ranks 92th in the world out of 128 countries where innovation has been measured. It is 39th (out of 51 countries) in Europe and has an efficiency ratio of 0.40 ranking 121th in the world in terms of efficiency.

Albania has only 245 researchers per million of population, representing less than 10 percent of the EU average of 3,166 researchers per million of population, based on UNESCO estimates for 2015. The country does not have yet a business incubator, or any science or technology parks. There are few institutional support services promoting innovation or linking universities and research centres with innovative SMEs, including an OECD-supported Triple Helix Competition in 2015-16 and the Swiss Entrepreneurship Programme for Western Balkans.

The low level of innovation in economy limits the potentials of the country to increase the productivity and engage in medium to high value added products. A recent report on Evaluation on EU Support to SME

Competitiveness in Enlargement and Neighbourhood Countries in April 2017), highlighted that despite the necessary strategic documents exist or are in preparation, Albania faces key challenges as a limited institutional support infrastructure to promote innovation within SMEs, while funding remains a bottleneck, becoming a vacuum in case of seed funding for start-ups and early-stage businesses.

In addition, if on one hand on the demand side there appears to be a shortage of potential new entrepreneurs and start-ups (the pipeline is weak, particularly among women), on the other hand physical space, where to transform ideas into tangible prototypes and products using state-of-the-art smart tools, still remains a big challenge.

In order to support the Innovative ecosystem - incubator/start-ups, two are the key institutions assigned for scientific research and innovation in Albania: the National Agency for Funding in Higher Education (NAFHE) and the National Agency for Scientific Research and Innovation (NASRI). NAFHE is responsible for the distribution of public funds which support activities performed by institutions of high education, including scientific research activities. NASRI evaluate, monitor and manage programs and projects in the fields of science, technology and innovation in Albania; it aims to fund projects in the field of small and medium business as well as transfer, modernization and renewal of their technologies. The Business Relay and Innovation Centre, which operates under AIDA, owns limited resources. The Ministry of Innovation and Public Administration has established the Innovation Hub, which is supporting pre-start-ups with a range of programmes on capacity building, awareness raising and networking with potential partners mostly in the ICT sector.

Some private-led initiatives are starting to appear in Tirana, providing institutional support to SMEs and innovation, but their scale is fairly small. Among them, Oficina is an Open Society Foundation for Albania initiative to support sustainable growth to innovative start-ups through decent pre-acceleration and acceleration programmes; CEBE (Center for Economic and Business Education) in an NGO that managed a UNDP programme for entrepreneurship, a pre-accelerator action that showed some good results, including in rural areas. The existing technology transfer offices (TTOs) operate under the auspices of the Ministry of Agriculture and act as consulting centres to the agricultural sector rather than as typical TTOs.

Despite these positive recent establishment of collaboration centres, the development of a knowledge-based economy remains one of the national challenges in Albania. Because national industry is quite weak, enhancing this kind of collaboration across different fields and institutions will require working with SMEs. Other key barriers include weak capacities of research institutions, low propensity to innovate in the business sector, poor framework for knowledge transfer as well as lack of co-ordination at the policy-making level. Furthermore, creation of a climate of trust between industry and research institutions has a great impact on both parties and is a game of mutual benefits.

Universities and research centers have a very rigid structure which does not enable researchers to orient their research towards the needs of the private sector [16].

III. CONCLUSIONS

The research shows that THM is a powerful analytical framework for assessing the efforts of different groups towards a common goal. The gap amongst the triple helix agents is still significant. A thorough improvement is

needed in dialogue between them through different modalities, such as mobility schemes to foster science and private sector cooperation.

Researchers and consultants lack the good and reliable data quality as their major concern together with the need to advance to research in several areas, therefore it is important to provide strategic consultation and more central government funding for knowledge/technology transfer activities and expert consultations on further enhancing the application of THM, as a proven successful mechanism towards sustainable economic development preserving at the same time the natural resources.

Universities in Albania need more investments in science, technology, and innovation to keep up with the dynamic economic environment. The government should not only lay down policies requiring universities to incorporate innovation into their curricula, but also follow the implementation process closely. It needs to increase research grants and subsidies and protect the knowledge commercialization and transfer process through governing policies and regulations. Such measure can smooth the transition into a knowledge-based economy, hence achieving economic growth and development and consequently positively influence in the country integration to the European Union.

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She is lecturer at the Polytechnic University of Tirana and PhD candidate at the Institute of European Studies, University of Tirana. Mrs. Lahi holds a Master in Business and Administration from the University of Tirana and the University of Nebraska. Her professional and research interest is focused on the Triple Helix Model, aiming to strengthen the cooperation between business, academia and the government. She has participated in more than five scientific conferences and is author of some articles on the potentials of applying Triple Helix model in Albania as well as using the model as an accelerator to attain the Sustainable Development Goals.