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The Role of the government in the University – Enterprise Cooperation

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Abstract

University – Enterprise cooperation considers an active and efficient cooperation of the Scientists, Industry and government. The university is a significant actor in this model as it not only produces the knowledge, but also creates new opportunities, protects intellectual property and converts the research outcomes into the market attractive product. This cooperation ensures the educational programs equip the students with the relevant competences, and makes research suited to the demand of the market and government. Implementation of that helps the university realize its third mission – serve the country and support its economic development. This paper presents our attempt to describe the role of the regional government in the University – Enterprise cooperation based on the regional university in Georgia. Despite the various studies regarding University – Enterprise cooperation implemented in Georgia mainly dealing with single components of the cooperation, we tried to highlight the significance of the government in this cooperation and its authentic character.

Keywords: university, enterprise, cooperation, government, expenditure.

1. Introduction

European educational policy considers the university as the centre for Higher Education provision, representing the unique institution to realize knowledge economy and bear special social mission (Commission of the European Communities, 2009, p. 14). 21st century highlights that economic progress mainly depends on knowledge and its application. It is commonly known as knowledge economy. However, economic progress has always been subject to new ideas and innovations. Ilia Chavchavadze in his speech at the public meeting in

1885 mentioned "No doubt, that knowledge is the tool, but it is the wealth itself; it is the wealth that follows the man wherever he goes. It follows him without any additional efforts from the man's side. No one is able to steal it, neither stop it; nowadays, knowledge is everything: it has more market than money, it is sharper than sword and stronger than mil cannon" (Chavchavadze, 1889). These words can definitely be considered as a historic definition of knowledge economy in Georgia that are still noteworthy. What has changed in today's definition of knowledge economy is that today for economy knowledge is as important as capital and natural resources. And it is the national economic asset and the basis of national competitive advantage (Peters & Humes, 2003, p. 1). Therefore, education, especially the higher education with its potential to strengthen productivity through the researches is considered to be the global panacea of the economic policy. Thus, nowadays, the university is not only the treasury of knowledge that focuses only on teaching and fundamental researches. University activities have always been oriented on knowledge production that is expanded to the activity of the university to reinforce its activities to play its role in the society development. Serving society describes the university third mission and states that the university may have: a) Social mission (services without monetary benefits); b) Entrepreneurial Mission (University is interested in increasing the turnover of finances); c) Innovative mission (through consultation contracts, through solving problems, etc.). Universities with their triple role (as providers of higher education, the latest research and innovation) represent the driving organization of European development. They have potential to meet the European target to become the leader of knowledge-based economy and society.

Subject of the research – study of importance of the government's role in the University – enterprise cooperation based on Batumi Shota Rustaveli state university technological faculty. Object of the research: Government and University – Enterprise cooperation practice process.

2. Problem Formulation and Methodology

2.1 The Research Methods

Desk research – to study international studies in this direction, and discussion and analysis of the world models of university-enterprise cooperation;

Qualitative research – in-depth interviews with administration of the regional university (3 people), with the representatives of the regional government (3 people), with academics from the technological faculties (12 people), the representatives of the business world (8), scientific workers of the research institutions (4 people), technological faculty graduates (10 people). The conclusions and recommendations of the research were presented to the focus group that was staffed with 6 people; out of them 2 were academics, one of them is a former accreditation expert and the other is acting faculty quality assurance service; 2 members represent enterprises and the last are the former graduates.

Selection - Applying stratifying method the technological faculties of Batumi Shota Rustaveli State University (BSU) were selected as well as the representatives of from the enterprises named as the closet partners by the technological faculties. In order to select a particular respondent, a purposive type of non-probability sampling was applied. To find a selective

unity, we contacted the members of general unity and identified people features interesting to our research, and then the following persons and etc. until the number of available members of the general unity is expired. Purposive type was given the advantage that the research was oriented on a depth analysis.

Research instrument - In order to conduct a research, the relevant questionnaires have been developed. For this we used the studies and the strategies developed by the ministry of Education and Sciences of Georgia, as well as the profile of participant university and its surveys. In order to verify the situation stated in the documents, and to understand the local specifications of each university, a qualitative research was conducted with the university management, and academic staff. The Semi-structured interviews were used for qualitative research. The conclusions and recommendations of the thesis work was presented to a focus group. Discussions were held and considered in finalization of thesis work.

2.2 Literature Review

New knowledge in the context of knowledge economy should be a prerequisite for economic growth and development. Competitiveness, both of enterprise, region or the government mainly depends on reflection of the scientific knowledge on the market and its transformation into the market demanded product. In order to implement this, proper functioning of three-dimensional Helix model that conveys efficient mutual-cooperation of science, industry and the state is given priority (Dzisah & Etzkowitz, 2008, p.105). The university is an important actor in this mode as the university is seen not only to have been producing new knowledge, but also new opportunities to protect the created intellectual property and convert the research outcomes into the market attractive product. Studies in European Universities are developed in such a way that the graduates are equipped with the competences necessary for the market and the research should be relevant to the market and state requirements, by which the University implements its third mission – to serve the community and facilitate the economic development of the region (country). The university that conducts market-ordered research, creates an innovative product that is economically profitable for each party. The university and entrepreneurial cooperation focused special attention after EU policy makers decided the EU to have the most competitive economy in the world.

The concept of "Triple Helix": University - Enterprise - Government cooperation was introduced into the sociology of knowledge innovative development by Henry Etzkowitz and Loyet Leydesdorff (2000) as a critical response to Gibbon's and et al. concept of the second type of knowledge. Etzkowitz compares the triple helix of University – Enterprise – State relations with the alternative models that are used to explain modern research systems in their social context (Etzkowitz & Leydesdorff, 2000, p.109). According to the triple helix thesis the university is an organization capable of playing an enhanced role in innovation, especially in the growing knowledge - based society. There is a so-called communication and expectation network in the University – enterprise cooperation that becomes prototype of Science-Economics-State cooperation. This network is generally based on the verbal agreement or general memorandum, in reality. The triple Helix is focused on overcoming these

communication and future expectation networks that form a new (institutional) systematization between universities, enterprise and government agencies.

Moreover, there are few more ways higher education effects on economic indicators. In particular, 1. Universities provide workforce that is an important point for economic growth (Sianesi & Van Reenen, 2003; Gennaioli et al, 2013); 2. Universities propose innovations in various field, e.g., in managerial field (Bloom et al. 2017) and possibly, new economical subjects; 3. Universities specify demand for certain goods and services. And finally, universities support the institutions sustaining the values related to democracy and economics (Acemoglu et. al., 2005).

3. Discussion and Research

In 2005, Georgia officially joined the Bologna process and aimed at integrating the educational system into the European education system by reforming the educational system. To achieve this goal, the university education fundamentally changed the approaches; new educational programs were developed; the approaches based on the interests of the state, student, labour market and the public were introduced. Also, authorization of higher education institutions and accreditation of educational programs was regulated at the level of legislation in the country that gives an efficient way to benchmarking of the self-esteem and quality of the universities with international standards. Despite continuous reforms in the education system, there is a low-product labour market that is a result of the so-called knowledge devaluation (vertical inconsistency), mismatch between the type of work demanded on the modern labour market and the professions that young people get today at higher education institutions (Amashukeli, et al., 2017, p.7). The international and local studies (Darchia, 2009; Andguladze, 2013; Bregvadze, 2013; Amashukeli, 2017; Javakhishvili, 2011) highlight absence of communication between education and enterprises in the post-soviet countries. In many cases, educational institutions don't realize new, the third mission of the university - to become a leader of knowledge-based economy and the society which has the role of the foremost performer in the modern world. On the other hand, neither enterprise nor organizations and the state itself consider higher educational institutions as a favourable and profitable partner.

There are several studies on University-Enterprise cooperation implemented in Georgia (Darchia, 2009; Andguladze, 2013; Bregvadze, 2013; Amashukeli, 2017; Javakhishvili, 2011). These studies mainly concern some aspects of cooperation. The aspects are: the impact of higher education on the formation of workforce, the strategic development of higher education and science in Georgia, the possibilities of research commercialization in Georgia, the role of universities in the development of the region etc.

The facets of this topic are reflected in different researches carried out by the International Institute of Policy, Planning and Management of Education, in the steps taken by the Government of Georgia, documents, regulations and strategies issued by the Ministry of Education and Science of Georgia. The strategy 2017-2021 states that despite many reforms, educational programs mismatch the employment market needs. The challenge is to develop

programs and research so that the graduates are equipped with the competencies necessary for the market, and the research should be relevant to the demand of the market and the state through which the university will perform its third mission - to serve the public and promote the region's economic development.

4. Research Outcomes

The study of the University-Enterprise cooperation has revealed that university academics believe the regional government and its structures are as the main partner of the University. Considering this statement, this papers studies the role of the regional Government in the university - industry cooperation and their interdependence.

At the same time, the state mainly decides what studies can/cannot be done by the university / research institutions. In several cases the Ministry of Finance and Economy / Ministry of Agriculture have addressed the research institutes of relevant profile to study and implement a specific project. (E.g. in 2013-2014 Kobuleti phytopathology Institute was asked to identify the quarantine organisms, including laboratory analysis of introduced forms samples from other countries on the quarantine organisms. Finally, this cooperation terminated due to disagreement between scientific findings and State interests. Later, the Ministry of Agriculture upgraded his lab and controlled the issue itself). In another case, the regional government (Ministry of Finance and Economics) offered the research institutes the research - based reimbursement that was rejected by the scientific workers. The state officials[1] consider that scholars simply do not want to agree on the offer because: a) they prefer lower responsibility and less money; b) they are not confident in their competence; c) their studies are largely irrelevant to the state needs. On the other hand, academics believe the offer is incompatible with law due to legal inconsistencies between the rule of selection on an academic position and the obligations the selection imposes on them[2].

According to the study, state officials, furthermore, do not have information on what research is conducted in the university. At the same time, they believe that the university does not take part in the implementation of the region's policy for a given moment or participates in a little bit. The position of the government officials in the region is as follows: the state is doing more for the university than on the contrary. On the other hand, the academics who participated in our study indicate that government is the cause of the research irrelevance taking into consideration that it is the largest partner of the university and does not provide information on the subject of necessary research.

Researcher Masako Ohkawa (1978, p.4) stated: "All over the world, all governments are always deeply involved in higher education, since the latter offers public benefit to the whole community. In particular, the government always plays a leading role in determination of the number of students and students' bodies. It also regulates the speed and direction of

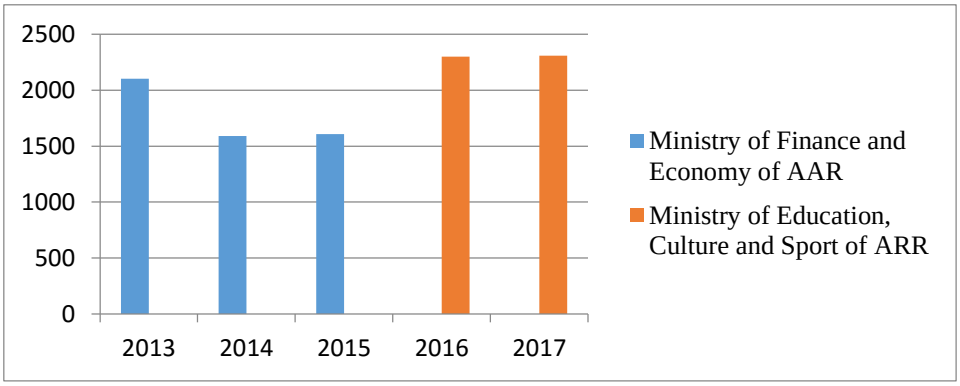
[1] High official of the MOFEA, decision maker

[2] M.D. HEI management

expansion of higher education institutions, as well as their current and capital expenditure methods".

According to the main data and direction document of the country, the State model of higher education financing is focused on strengthening the areas and specialties that are related to the country's development, social life and economic growth (Ministry of Finance of Georgia, 2019) as the state is the largest investor in the education system, 9, 911.241 Gel was invested in 2013-2018. Obviously, the investment in education is expected to bring benefits. We believe that the economic profit should be measured in a Cost Efficiency Ratio (CER) that can determine the effectiveness of state investments on education (Abuselidze, 2019). This coefficient determines the efficiency of investments on education by the state. For the purpose of spending (Abuselidze, et al., 2018) product funds effectively, it is reasonable to change the funding model. In this regard, we requested information from the Ministry of Finance and Economy of Adjara Autonomous Republic on the support of higher education development. Based on the received information (letter №01-01-10/2290, 16/05/2019), it was established that the Ministry of Finance and Economy has actually invested from the Republican budget of the Adjara Autonomous Republic.

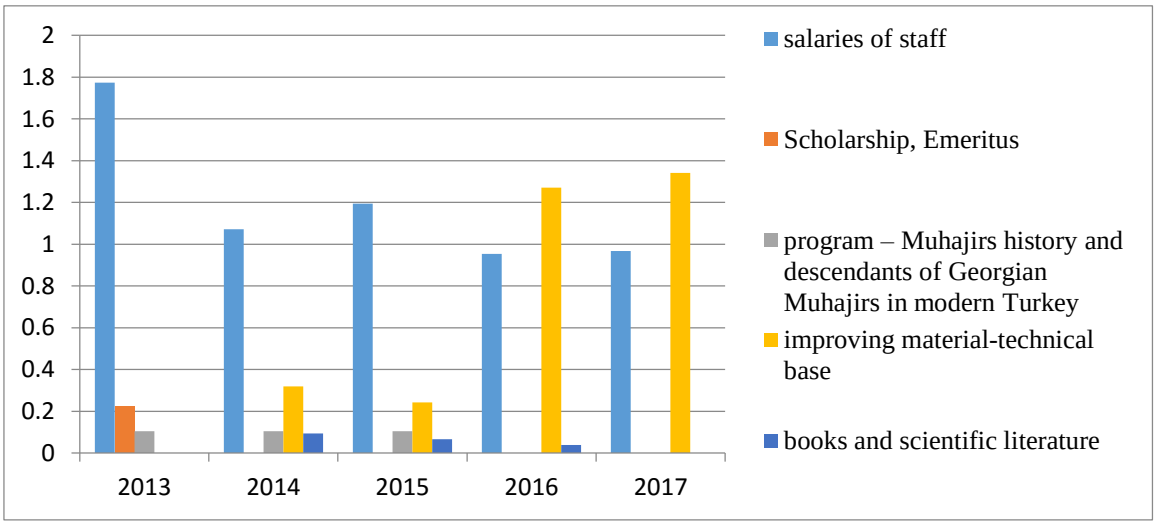
Figure 1: BSU assignations from AAR budget (2013-2018)



Source: composed by the authors based on the data provided by the Ministry of finances and economy of AAR

To meet the needs of Batumi Shota Rustaveli State University the following is assigned: subsidies (salaries of staff, scholarship, Emeritus, program – Muhajirs history and descendants of Georgian Muhajirs in modern Turkey), increase of non-financial assets (improving material-technical base, books and scientific literature). Primarily, it needs to mention that in addition to the direct investments in the BSU Infrastructure or Research Projects, the regional government finances the higher education scholars support program as well as the study of the students abroad in order to give additional assistance to the HEI, indirectly.

Figure 2: BSU budget financing mln Gel (2013-2018)



Source: composed by the authors based on the data provided by the Ministry of finances and economy of AAR

It should be noted that the study of the existing data, explanatory cards and reports revealed that a rule of issuance of funds from the budget is violated; there is no pre-determined results under which the budget is spent; moreover, there is no efficiency indicators (quantitative, or qualitative), that in turn obscures the state-university cooperation effectiveness.

Some government officials stated that university – enterprise – state cooperation would be interesting for them. They specified that the government may interest business to cooperate with the university, to increase the student quota for the practice. However, no clear strategy exists for this cooperation. The state officials who participate in the survey confirm that such communication channels are less efficient; moreover, they mention that the problem might also be that the government hardly looks into a number of issues and regulates them.[3] Moreover, as they claim government might not see a need of some research topics. Despite the fact that there is a development strategy[4] as a policy document, the regional governmental officials admit that the development of the region depends on the wishes of the investor, and, consequently, the irrelevance of the researches due to the government decisions might be a reasonable argument. Whilst, they still believe that the university is less likely to practise the applied researches.

The university administration and academics think that there is a logic in the opinion that the government is less likely to trust the scientific potential, perhaps, mainly due to fact that it may not be introduced to their scientific potential properly. Yet, the university administration is interested in the scope and purpose of the studied the various Ministries order to different organizations. They claim that the university should do research that should be used by the state as a recommendation. And, if there is no demand or application of the University studies

[3] G.B. AAR Ministry of Finances and Economy
[4] Government of Georgia, (2017).

by the Government, there is a question – Why such studies are being done? The regional government officials mention that the government that feels responsibility towards the university would be easier to cooperate rather than private companies. They assume the private business has no incentive to cooperate with university. It would work if only there were relevant knowledge at the university. The business/government would see its need and engage in the preparatory stages of large projects both private and investment ones. Generally, they are critical of the university's potential referring that in private (consulting) companies that mainly carry out investment projects for the state, there is more knowledge than in the university; "Why shall private companies share their knowledge on Modern Technologies? The business should not bring knowledge to the university, but it should get the knowledge from there. And, why shall business contribute to improving the quality of teaching of higher education or the qualification of lecturers who should be the authors of the innovations"[5].

It is noteworthy that the university tried to cooperate with enterprise but it was either short-termed or not successful. Despite mutual interests, the crossing point is believed difficult to be found. "You bring them on site, show your product. e.g. during last visit we showed that we could introduce ecologically clean product - juice to the kindergarten. They liked it and here it ended. The same is every time (moreover, the ministers change every year). Somewhere the chain breaks. Such an attitude. They are never interested in our studies"[6]. The representatives of the state structures participating in the research, as well as academics, believe that the university may need a structural unit that will be responsible for the cooperation, be able to generate revenues, find research projects, etc., but the potential for implementation is not studied. The academics themselves admit the huge role of the government in the development of the university, but they state that the government is not sure about the cooperation mechanism. No business organizations have the knowledge/tradition/practice to apply the university if necessary. The role of the state is great in spreading this knowledge. The academics emphasize that the university has neither mechanism nor knowledge on cooperation importance in the context of modernization of the study programs and novelty of researches. They see the necessity of promoting cooperation from the government.

Appreciating the government's support, at the same time, the university administration is concerned about government's attitude that makes them think that government considers the money given to the university as a lost one. e.g. The government has repeatedly attempted to join the research institutions that is currently under the University umbrella to the government structure. "The minister thought he should have owned this institute. As if it belongs to the other country"[7]. In addition, the university administration underlines doubling of the state costs through establishing the state funded structures the studies of which are done by/at the university.

[5]E.D. middle management at the Ministry of Finance and Economy of AAR

[6] M.G. HEI administration

[7] M.D. HEI high management

5. Conclusion and Recommendations

5.1 Conclusions

1. Along with the other activities, the government plays the role of so-called facilitator of University – Enterprise cooperation in the world practice, promoting enterprise - HEI cooperation through the introduction of preferential policy for enterprises, etc. Our research revealed that the regional government tries to replace the role of the enterprise in this cooperation and, in fact, represents the two sides of the cooperation triangle;
2. In addition to direct investment in university infrastructure or research projects, the government finances programs to promote higher education and train students abroad. Nevertheless, it doesn't consider the funding principles in accordance with the program budget. In particular, goals, action plans, outcomes, and outcome assessment indicators are not shown / in the allocations implemented so far, which creates a ground for believing that budgetary resources are spent in an inefficient manner.
3. Concurrently, the government remains the main determinant which researches universities/research institutions can/cannot to carry out. It is sceptical about the use of university potential and believes that consulting companies which mainly implement investment projects, have much more knowledge than universities. Withal, there is no dialogue or mechanism that could let both sides see the need and possibilities of cooperation;
4. At the faculty level there is no structural unit / person that would focus on the university enterprise cooperation activities and promotes them. Further, there is no knowledge neither at the university nor in the government how University- enterprise cooperation works.

5.2 Recommendations

Based on the results and discussion of study the following recommendations appear:

1. Development / discussion of preferential policies for enterprises and companies that finance education and / or cooperate with the university through participation in the research, etc.
2. Creation of a structural unit at the university e.g. university-enterprise cooperation centre which would serve all faculties to continuously improve the quality of academic education, with the initiative of the mutual transfer of knowledge and technology between the parties to cooperation, with the desire for improvement and innovation, with the establishment of contacts and simplification cooperation between the university and community.
3. It is important to establish communication channels: to organize the university-enterprise forum, the disseminate the information for entrepreneurs about professional consultations and research competencies of the university; to creation a television profile of academic activities at a regional public broadcaster;

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