JRIHE
JOURNAL OF RESEARCH AND INNOVATION IN HIGHER EDUCATION

Vol. 4, No. 1 (Spring 2023)
ISSN: 2960-4419 (Online)
https://doi.org/10.48341/697s-a287

# The many faces of research assessment: Case of independent Georgia

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**Suggested citation:** Macharashvili, L., and Gogadze, N. (2023). The many faces of research assessment: Case of independent Georgia. *Journal of Research and Innovation in Higher Education*, *4*(1), 1-27.

The article is available online at: www.rihe-journal.com

## Acknowledgement

This article contribution is based on course work the authors submitted in the Master in Research and Innovation in Higher Education (MARIHE), supported by the Erasmus Mundus programme of the European Commission.

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**Abstract**

The following paper investigates research assessment practices in Georgia, where due to the Soviet legacy, the university-based research is a relatively new phenomenon. Nowadays, research performance evaluation has become a challenge for the system. Research assessment in Georgia is fragmented, inefficient and ineffective: on the one hand, universities and research organizations are required to submit an annual report on their scientific activities to the Georgian National Academy of Sciences (GNAS), which resembles the administrative reporting and on the other hand, the National Centre for Educational Quality Enhancement (NCEQE) is responsible for research assessment in terms of External Quality assurance mechanisms, which is an extensive measure for the external QA of the entire institution. For the further development of Georgian research performance evaluation system, experiences of other post-Soviet countries: Estonia and Lithuania, could be considered. In both countries, research performance evaluation is organized by the Research Councils. Since the GNAS operates as a symbolic reputational organization in Georgia, research performance assessment should be organized by the Shota Rustaveli National Science Foundation of Georgia or/and the National Educational Centre of Quality Enhancement.

***Keywords:*** research assessment, research evaluation, research performance, research quality, research policy, research and development, external quality assurance, post-Soviet higher education, Georgia.

## Introduction

The paper investigates research assessment practices in Georgia. The purpose of the paper is to address the following research questions: (i) what the research assessment mechanisms in Georgia are; (ii) what the challenges of the existing research assessment system are; and (iii) how can research assessment be improved in Georgia.

The paper includes 8 sections: the “Background and Historical Context“ section describes the higher education and research system of Georgia from the Soviet period to 2003, while “The Era of Major Reforms” provides information about the fundamental changes

that took place after 2004. The section “Research and Development Policy in Georgia” includes an analysis of the structure of STI policymaking and the legal framework of the research assessment and focuses on the challenges of the current research performance evaluation system. Furthermore, the "Research and External Quality Assurance" section contains information about research- related criteria in external QA mechanisms, as well as an analysis of research assessment measures in Institutional Authorization and Program Accreditation standards. The paper also includes the international practices of research evaluation from post-Soviet countries similar to Georgia that may be relevant for the further enhancement of the current research performance assessment system. Discussions and conclusions are offered in the last sections of the paper.

## Background and historical context

### *Research and development in Georgia*

Georgia is a small post-Soviet country located in the South Caucasus. After the dissolution of the Soviet Union, the higher education and science system of Georgia has undergone profound changes. In order to evaluate the effectiveness of the reforms implemented in the higher education and science system of Georgia, it is crucial to analyse the historical context and the Soviet Union legacy in the system, the remains of which are dismantled by the reforms.

Before Georgia gained independence in 1991, the higher education and science area was a part of the centralized Soviet Union system. According to the Soviet tradition, higher education institutions (HEIs) were considered as teaching institutions, whereas research mostly was carried out by the research institutions under the Georgian National Academy of Sciences (GNAS) (Chakhaia & Bregvadze, 2018). Moreover, before joining Bologna process and shifting to the three-tier degree system in 2005, it was possible to continue post-graduate studies (Aspirantura) and pursue doctorate degree at some research institutions (Chakhaia & Bregvadze, 2018).

Research funding in Soviet Georgia was determined according to the political priorities and military imperatives. Moreover, military research was considered as an “elite” type of scientific research in the Soviet Union. Thus, there were 3 types of research performers

in Soviet Georgia: Tbilisi State University, research institutions under the umbrella of GNAS and secret military research organizations. The latter was separated from the University and the GNAS and had a special status and strong support from the Soviet Union (Sharvashidze, 2005).

Georgia gained independence in 1991, but soon after that, the civil war and ethnic conflicts started in Georgia. These had some crucial implications on the economy. Fundamental changes in the education and science system began in 2004, after the new government came into power. Before 2004, the GNAS remained as the main research entity in Georgia (Chakhaia & Bregvadze, 2018).

### *Pre-reform higher education system in Georgia*

Due to the roots in Soviet tradition, it is worth to analyze the Georgian higher education (HE) system separately from research and development (R&D). The University Tradition in Georgia Starts from 1918, when Tbilisi State University (TSU) was established, the first University in Georgia and Caucasus. TSU used to be the only entity with the status of university up to the dissolution of USSR in 1991.

Since the breakup of the Soviet Union and the opening of the private market for higher education, the number of HEIs in Georgia skyrocketed from being 19 in the beginning of 1991 to about 200 in 2004 (Bregvadze & Chakhaia, 2018; Gorgodze et. Al. 2020). Characterized by the general political instability and high level of corruption in all public spheres, the chaotic HE system mirrored the developments in the country and its great many private HEIs largely functioned as the diploma mills (Transparency International, 2002; Chankseliani, 2014). Lifespan of many of such institutions was not high, yet due to the instability in country and many internal as well as external challenges, many of them persevered and continued to exist till early 2000s (Sharvashidze, 2005). No measures for external quality assurance (QA) were present inside the system. According to the law on Education of Georgia (1997) the HEIs needed to get the license to be entitled to function, the law gave the responsibility to the ministry, academy of science and the patriarchate to develop the national standards for the HEIs, yet all this was mere formality, as in the practice no rigorous standards and evaluation mechanisms for HEIs existed (Sharvashidze, 2005).

## The era of major reforms

In the aftermath of the Rose Revolution in 2003, the cascade of reforms started to take place in every aspect of Georgian public life, including the higher education (Chakhaia & Bregvadze, 2018). Since then the Government of Georgia has been actively implementing various measures in the HE and R&D policies as in the overall process of the Europeanization of the Country.

### *The development of the Georgian science, technology and innovation system*

After 2003, the most prominent changes in the higher education and research system were changes in structure, funding and quality assurance mechanisms. In particular, the following steps took place:

1. Adoption of the legal framework for the Science, Technology and Innovation (STI) system governance – after independence, the government of Georgia implemented the legislative framework for STI system. Currently, the system is regulated by the following laws:
    - Law of Georgia on Science, Technology and Their Development (1994)
    - Law of Georgia on Grants (1996)
    - Law of Georgia on Higher Education (2004)
    - Law of Georgia on the Georgian Academy of Sciences (2007)
    - Law of Georgia on Innovations (2016)
2. Shift to the competitive project-based funding – to support high quality research, the National Science Foundation and the Foundation for Georgian Studies, Humanities and Social Sciences (Shota Rustaveli Foundation) were established in 2005. Five years later, these foundations were merged into the Shota Rustaveli National Science Foundation of Georgia (SRNSFG) (Tabatadze & Chachkhiani, 2022). Nowadays, the SRNSFG is the main research funding organization in Georgia (European Commission, 2017). The foundation provides state-funded grant calls for basic and applied research and different targeted programmes (SRNSFG Web site, 2022).
3. Implementation of a three-tier degree system and introduction of doctoral degree programmes – before the late 1990s, HEIs offered 5-year single-cycle study programmes, leading to a "Specialist" Diploma (equivalent to a Master's degree). The postgraduate studies "Aspirantura" were offered by Tbilisi State University and some research institutions. Graduates of "Aspirantura" received the "Candidate of

Sciences" diploma, which was a first level postgraduate degree. The second level higher doctorate called the "Doctor of Sciences" (Sharvashidze, 2005). After signing with the Bologna process, the two-tier doctorate system was eliminated in Georgia and PhD studies were introduced into universities (Chakhaia & Bregvadze, 2018). PhD studies became an important part of higher education and research integration

4. Integration of universities and research institutions – as mentioned above, before association with the Bologna process, research was mainly conducted by the research institutions within the Academy of Sciences. Universities were less involved in research activities and there was a weak link between them and research institutions. In 2005, by government decision, all research institutions were separated from the GNAS and became part of the Ministry of Education and Science of Georgia (MoES) (State Audit Office of Georgia, 2014). Later, between 2010-2011, research institutions were merged with public universities[1]. The reform aimed to integrate teaching and research within universities. This was a significant structural change and transition from the Soviet system to the European higher education area. However, some researchers argue that the implementation of the reform was unsuccessful: the merger remained formal, researchers are not involved in the teaching process and academic and research staff maintain separate statuses, resulting in lower salary opportunities for the latter. (Bregvadze, Medjad, & Bregvadze, 2014; State Audit Office of Georgia, 2014; Horizon 2020 Policy Support Facility, Background Report 2017; Tabatadze & Chachkhiani, 2022). The Academy of Sciences, on the other hand, remained as a symbolic reputational institution (State Audit Office of Georgia, 2014).
5. Establishment of Georgia's Innovation and Technology Agency - in 2014, under the governance of the Ministry of Economy and Sustainable Development (MOESD), Georgia's Innovation and Technology Agency (GITA) was established. The main purpose of the GITA is to support innovation and technology development and to promote technology and innovation transfer. It is noteworthy that before GITA's establishment, the SRNSFG was the only funding agency in Georgia (European Commission, 2017).

[1] Only 3 research institutions remained as Legal Entities under Public Law: 1) Korneli Kekelidze National Centre of Manuscripts, 2) Ivane Beritashvili Center of Experimental Biomedicine and 3)George Eliava Institute of Bacteriophage, Microbiology and Virology (Ministry of Education and Science Georgia Web site, 2022).

The current STI system of Georgia is fundamentally different from the Soviet one. It is noteworthy that before 2004, there was no Ministry of Science in Georgia: the Ministry of Education operated solely. In addition, during that time applied research and innovation policy was under the control of the state special committee at Ministry of the Economic and Sustainable Development and the Georgian Academy of Sciences remained as the main governing entity in the science area. In contrast to previous experience, the MoES is now the major STI policy-implementing body in Georgia (European Commission, 2017).

### *The rise and rise of quality assurance*

In the best Neo-Liberal tradition, the Government of Georgia in 2006 created an independent agency functioning as the legal entity of public law under the Ministry of Education (NEAC, 2006). The Agency was initially called NEAC (National Education Accreditation Center) and since 2010 it is called the NCEQE (National Center for Educational Quality Enhancement) (NEAC, 2006; NCEQE, n.d.). The initial wave of reforms was perpetrated by the Department for Accreditation in the ministry, under which the number of HEIs in Georgia was almost halved (NEAC, 2006). This was continued by the second wave of accreditation, which was already managed by the NEAC and ended up by further decrease in the number of HEIs in Georgia (NEAC, 2006). Up to 2011 the Institutional accreditation (Since 2010 renamed as Authorization, and further mentioned this way when covering post 2010 topics) was the only form of external quality assurance of HEIs in Georgia. In 2011 the programme accreditation mechanism was introduced and accreditation has become mandatory for diverse set of programmes, including the doctoral level Programmes (Law of Georgia on Higher Education, 2004). Georgian HE QA system has undergone major shift in 2018, when the system was brought to compliance with ESG 2015, after adopting the new sets of standards for both institutional authorization and programme accreditation, bringing structural changes in the evaluation mechanism and involvement of international experts in the evaluations (Tsotniashvili, 2020). Nowadays the authorization and accreditation operate parallelly within the system and both are mandatory for each HEI and educational programme (Law of Georgia on Quality Enhancement of Education, 2022). Since 2018 the involvement of international reviewers in the expert panels, as the chair of the panel, has been mandatory in in

institutional evaluations. Involvement of international experts in programme accreditation was mandatory only for certain types of programmes (e.g. Medicine) since 2018 (Authorization Charter, 2010[2]). From the beginning of 2023 the same approach has been adopted in regards to programme accreditation as in institutional authorization, drastically increasing the international involvement in NCEQE's evaluations (Accreditation Charter, 2011).

### *Types of HEIs in Georgia*

Nowadays there are three types of Higher Education Institutions in Georgia: University, Teaching University and College (Law of Georgia on Higher Education). The differences between them are written in detail in the law of Georgia on Higher Education. The colleges are allowed to carry out studies only on the Bachelor level, Teaching University should have a master level programmes, while the most important pre-requirement for the University status is the existence of PhD programme and the right of the University to grant the doctoral qualification (Law of Georgia on Higher Education). For October 2022 there are 33 Universities, 20 Teaching Universities and 2 Colleges functioning in Georgia. There are also 7 Spiritual HEIs, functioning under the Georgian Orthodox Church and specializing in preparation of clerics (MoES, n.d.).

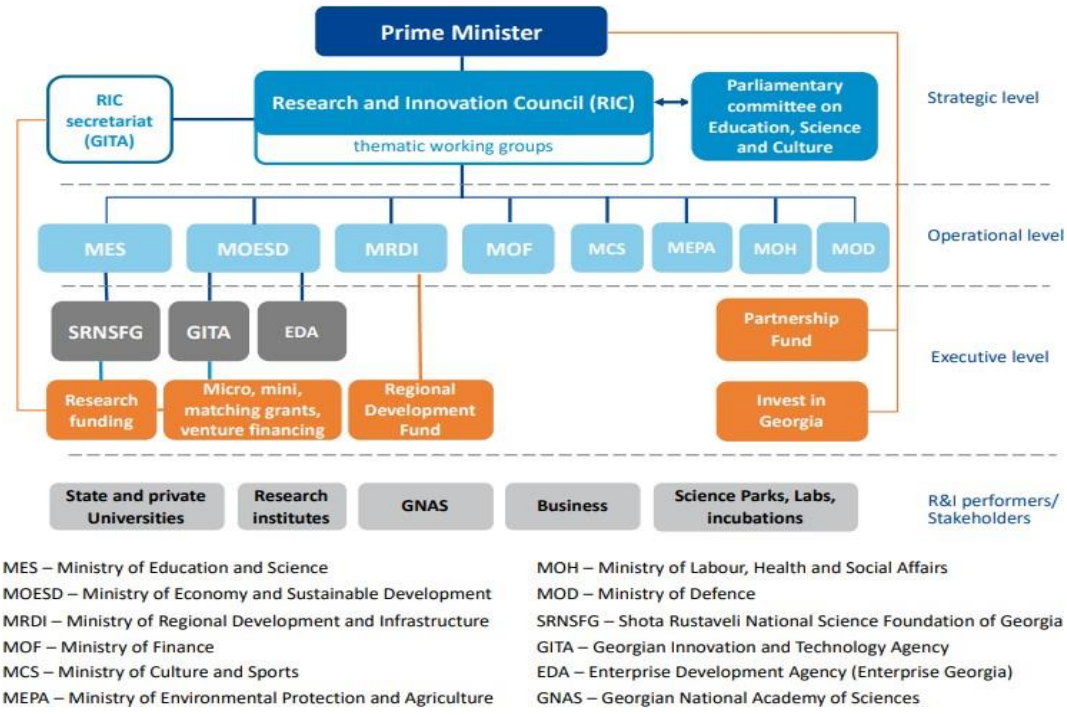
## Research and development policy in Georgia

### *Structure of policymaking*

The structure of the Georgian STI system is depicted in Figure 1, followed by brief introductions to the main institutions shaping and implementing STI policy in Georgia.

[2] Initial version of Authorization Standards, currently under usage dates from 2010, yet it is gradually edited with all the new changes appearing in the legislation. It is the reason why the 2010 document is indicated as the source for the changes in 2018. Changes in accreditation mechanisms and other legal documents have the similar dynamics.

Figure 1: Structure of the STI governance in Georgia. Source: European Commission, H2020 Specific Support for Georgia (2018, p. 27).




According to the law of Georgia on Science, Technology and Their Development (1994), the parliament of Georgia determines national STI policy, approves budgetary funding and monitors the implementation of the policy. Therefore, the parliament is responsible for policy strategy, while the Ministry of Education and Science is in charge of policy implementation and the Shota Rustaveli National Science Foundation operates as a policy executive entity. Besides, the law defines the Georgian Academy of Sciences as an advisory body, which is responsible for research performance evaluation and prioritization in the science and technology field (Law of Georgia on Science, Technology and Their Development, 1996; Law of Georgia on the Georgian National Academy of Sciences, 2007). In practice, the parliament, the MoES and the SRNSFG remain as the main governing bodies, while the GNAS operates like a symbolic reputational organization (European Commission, 2018).

In 2015, by the decision of the government of Georgia Research and Innovation Council (RIC) was created. The council is a strategic top-level coordinating body chaired by the Prime minister of Georgia. However, according to the EU experts report, the RIC does

not function properly and the coordination at the operational level (between ministries) is fragmented (European Commission, 2018). As a consequence, fragmentation of the coordination and cooperation at the operational level reflects on the executive level and hinders the proper functioning of the system (European Commission, 2018). For the proper functioning of the system, it is important to strengthen the strategic level and develop coordination instruments at the operational level.

Another fundamental issue is political instability – from 2004 till today, 12 ministers of education have been replaced (Ministry of Education and Science Georgia, n.d.). Such conditions have a negative impact on the STI policy and hamper the sustainable development of the system.

### *The legal framework of the research assessment*

The legal framework of the STI system of Georgia defines the responsible bodies for the research performance evaluation. According to the law on Science, Technology and Their Development, the research institutions are required to submit an annual report on their activities to the GNAS, while the Law on Higher Education defines that the HEIs quality assurance offices are responsible for the research assessment and quality enhancement (Law of Georgia on Science, Technology and Their Development, 1996; Law of Georgia on Higher Education, 2004). In addition, research quality assessment is a part of the HEIs obligatory Authorization procedure and Authorization standard 6 "Research, Development or/and Other Creative Activities" includes the research capacity assessment criteria and the indicators[3] (Authorization Standards, 2018).

Based on the aforementioned information, the legal framework of the STI system of Georgia defines the responsible bodies for the research assessment in terms of the internal and external quality assurance procedures. However, the State Audit Office report on the efficiency of the science management system reveals that the research performance assessment procedure in Georgia is fragmented, inefficient and ineffective: the GNAS evaluation resembles an administrative reporting, HEIs quality assurance offices are

[3] For more detailed information, see chapter "Research in Current Authorization Standards", p. 18.

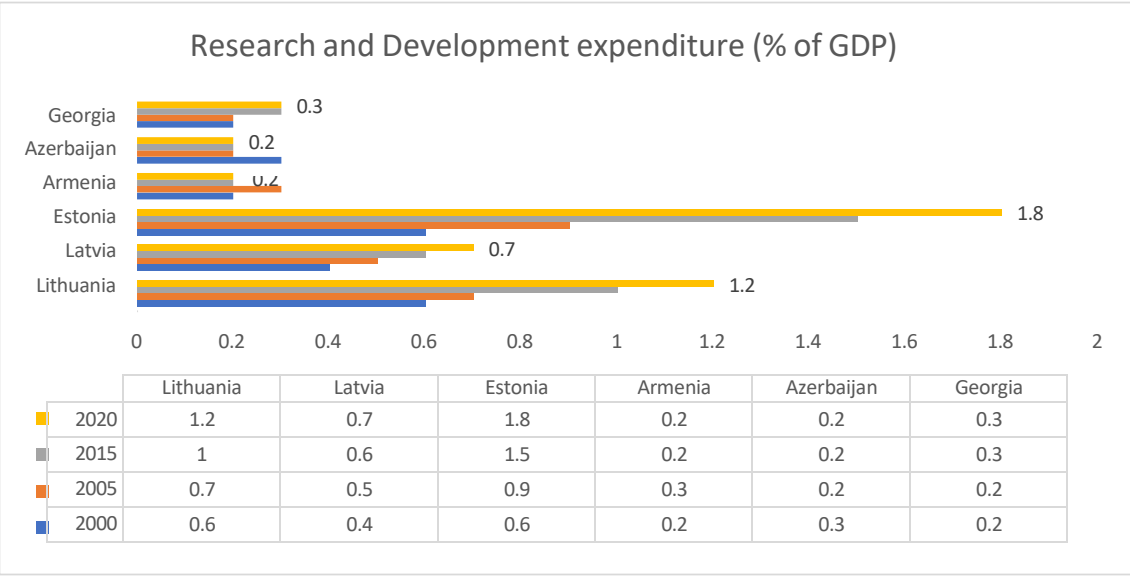
mainly focused on teaching quality assessment and the Authorization procedure cannot provide the whole picture of the system (State Audit Office of Georgia, 2014). The Authorization mechanism has been reformed in 2018 and more focus has been drawn on the research, yet some challenges still remain in this regard as it will be provided below.

### *Funding of R&D*

Since research performance assessment is closely related to research funding, it is deemed appropriate to discuss the existing research funding system of the country.

Georgia's public expenditure on research and development (R&D) is sub-critical (0.3% of GDP) and private funding from the industry is negligible (European Commission, 2018). According to the European Commission, the share of Gross Domestic Product (GDP) spending on R&D up to 1% is considered to be "Low", between 1%-2% - as "Medium", and above 2% as "High". Therefore, Georgia is classified as "low" level research funding country. If we compare the share of GDP spending on R&D between Georgia, Azerbaijan, Armenia, Lithuania, Latvia and Estonia (Figure 2), it is clear that the former Soviet and the current EU member Baltic countries spending on R&D are above the South Caucasus countries, also, Georgia's expenditure of GDP on R&D is a little higher compared to Armenia and Azerbaijan.

Figure 2: Comparison of R&D expenditure (% of GDP). Source: The World Bank DataBank, https://bit.ly/3MWvlRa




| | Lithuania | Latvia | Estonia | Armenia | Azerbaijan | Georgia |
|---|---|---|---|---|---|---|
| 2020 | 1.2 | 0.7 | 1.8 | 0.2 | 0.2 | 0.3 |
| 2015 | 1 | 0.6 | 1.5 | 0.2 | 0.2 | 0.3 |
| 2005 | 0.7 | 0.5 | 0.9 | 0.3 | 0.2 | 0.2 |
| 2000 | 0.6 | 0.4 | 0.6 | 0.2 | 0.3 | 0.2 |

The main research funding body in Georgia is the SRNSFG, which provides state grant calls for researchers and research institutions. The STI system of Georgia relies on project-based competitive funding since institutional funding from the MoES only covers research staff salaries at an inadequate level (European Commission, 2018). In reality, there is no baseline institutional funding for research. Such conditions create an unstable environment for R&D. Without sufficient funding, there is a risk that the entire STI system may collapse, with severe negative impacts on the economy (European Commission, 2018).

Given the insufficient and inconsistent funding and the overall size of the STI system, still there are more than 80 research priorities defined by the GNAS (in fact, no prioritization at all), with no clear linkages to the strategic economic areas and policy (European Commission, 2018). Thus, the current research funding model is intrinsically inefficient and ineffective.

Another fundamental issue for determining research priorities is the availability of reliable data and statistics on R&D. Georgia lacks a unified research information system that would enable evidence-based policy-making. Statistics on R&D are now dispersed among several institutions and are difficult to gather (European Commission, 2018).

Since there is no performance-based funding model in Georgia, the current research performance evaluation practice resembles an administrative reporting. In order to allocate research funding efficiently, identify weaker/stronger thematic areas, improve the quality of research and enhance the country's research and innovation capacity - it is crucial to reform the existing procedures of the research performance assessment and implement internationally recognized standards of the research performance evaluation.

## Research and external quality assurance

### *The role of National Center for Educational Quality Enhancement in Research Assessment*

The National Center for Educational Quality Enhancement is an agency under the Ministry of Education and Science, whose main responsibility is to support the quality of

higher education in Georgia via the institutional and programme assessments (Law of Georgia on Educational Quality Enhancement, 2010). NCEQE, in cooperation with the MoES develops the both Authorization and Accreditation standards and is responsible for the management of both mechanisms. The implementation of Authorization and Accreditation Mechanisms is done according to the relevant Charters, the orders of the Minister of Education and Science of Georgia (Law of Georgia on Educational Quality Enhancement, 2010). The decision concerning the Authorization and Accreditation is made by the Authorization or Accreditation councils, collegial bodies comprised of various academics and managers from different Georgian HEIs. Since 2019 the NCEQE is the member of The European Association for Quality Assurance in Higher Education (ENQA) and is registered in the European Quality Assurance Register for Higher Education (EQAR).

As the research institutes are since 2010 the integral part of the respective Universities, their legal functioning also depends of the authorization council's decision as no research institute can be under operation in unauthorized HEI.

### *Research assessment in authorization and accreditation standards*

There is no systematized review of the effectiveness of Authorization standards from 2004 to 2018. The National Education Accreditation Center's and later the NCEQE's yearly reports are some of the few sources where trustworthy information could be gathered on this topic. Generally, the Authorization and Accreditation standards have been developing gradually in Georgia, alongside with the development of HE system, retaining structural connection with the HE context of the country.

The initial institutional Accreditation standards from 2004 involved the basic, mostly numerical requirements and were designed to maximally reduce the number of HEIs, mostly private and with dubious reputation, most of which could not comply even with the most basic requirements (Jibladze, 2013). The topic of research had little to no importance in the sets of standards used during the first waves of accreditation, with even the word 'research' appearing only in relation to the space allocated per-student for teaching and research purposes (Accreditation Charter, 2006) in the main set of standards, while the material technical base for research was only mentioned as an additional

criterium for institutional accreditation. In 2010 the financing of the research has become one of the criteria for institutional accreditation as part of the standard about resources, yet no specificities were offered around this topic and research as such was not an independent or important part of the evaluation criteria (Authorization Charter, 2010). The authorization standards functioned in this form until the major reform in 2018, when an entire system for external QA was reformed and came into compliance with the requirements of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG, 2015). Research activity, albeit not being an integral part of the ESG 2015, has become one of the key criteria in authorization standards, due to the specificity of Georgian higher education system and the lack of other measures for the evaluation of resources and quality assurance mechanisms for research.

### *Research in current authorization standards*

Nowadays, the 6th of 7 authorization standards is called "Research, development and/or other creative work. The 6th standard is composed of 3 components: 6.1. Research Activity, 6.2. Research, support and Internationalization; 6.3. Evaluation of Research activity (Authorization Charter, 2010). Standards contain the detailed description of requirements concerning each of the components. The compliance to these standards is mandatory for all the HEIs, yet the form of the HEI is taken into notice during the process of evaluation and contexts are taken into notice, as the formal differences between the HEI types in Georgia is foremostly connected to their research activity. This means that the research capacity assessment is done according to the individual Universities' legal standing and mission, and requirements are higher for Universities (Darchia, et. Al 2019).

One of the direct albeit anecdotal indication of prevalence of research related topics in the modernized standard is the fact that Georgian words for research: კვლევა [kvleva] and science: მეცნიერება [metsniereba] used to be mentioned overall less then 10 times in the past criteria, while nowadays simple document search gives more than 60 results for each (Accreditation Charter, 2006; Authorization Standards, 2018).

Systematized analysis of the impact that the renewal of the standards had, is offered by Darchia, Et. Al (2019) in their comprehensive report of the implementation of new authorization mechanism in Georgia, where multitude of new developments in the

Georgian HEIs are attributed to the standards' focus on the research activity, yet the same research also indicated the need for further enhancement of the many structures and mechanisms at the HEIs developed to answer the authorization requirements. The quality of PhD theses was one other issue named in this review. Yet the nature of the problems outlined in the study, also indicate to the limits of the Authorization evaluation, when it comes to research capacity, as Authorization is broad evaluation, covering all aspects of the University life, and it is limited in time, as the evaluations typically last for 3-4 days.

### *Research in accreditation standards*

In the initial set of programme accreditation standards, the standards had, as in the case of authorization, little to no focus on research, with vague references as the HEIs focus on the internationalization of research activity, with no detailed explanation or guidance. Renewed accreditation standards were implemented since the beginning of 2018 within the frames of the abovementioned reform, which included far greater focus on the research (Accreditation Charter, 2011). This included the introduction of more thorough requirements in regards to the master/doctoral thesis supervision and the thesis evaluation, more robust research-related requirements to the core staff of the programme with the focus both on actual research achievements as well as the research opportunities and professional development, indications of integration of research in teaching and learning, as well as general scientific-research activities done by the students. In July 2022 the standards were further renewed. In the new set of standards, the doctoral education and research capability got even more attention, with the division of components relating to doctoral supervision into two: the supervision process and the competence of the supervisor, which previously used to be under the single component.

### *Analysis of research assessment measures in authorization and accreditation standards*

The systematized research in regards to the measures for QA in Authorization and Accreditation in Georgia is scarce, hence there is little written analytical data for this topic. The few existing studies are mainly developed by the Erasmus plus office of Georgia.

As the accreditation standards evaluate the educational programmes on all three levels, it is useful to indicate that the same set of standards used to be and are still utilized when evaluating bachelor, master and PhD programmes. This can be seen as discrepancy from Salzburg principles which indicates the core difference of Doctoral studies from other levels, due to its research orientation and promotes the doctoral-specific quality assurance standards (EUA, 2010). This position is shared by Darchia (2020), in one of the fewest research papers concerning the quality assurance perspectives for doctoral programmes in Georgia, where she also gives recommendations for the renewal of the accreditation standards for doctoral programmes, yet, those recommendations have not been fully taken into consideration in the final version of renewed set of standards. General feeling of more research orientation could be perceived in the renewed standards and even the novel topics covered, concerning the doctoral education, are not enough for the rigorous, research-oriented assessment of doctoral programmes and the need for further improvement is still present.

## The knowledge creation as seen by QA standards

The compliance to both the Authorization and the Accreditation standards are mandatory for all the Georgian HEIs, yet the thorough analysis of those same standards show the actual model of knowledge-creation that the QA standards promote, which could be understood as a nudge to certain way of thinking concerning the research activity in the Universities. Despite the many challenges of Georgian HEIs in research, the requirements themselves promote complex research approach with focus on integration with economic agents and setting the technological innovations and development as the goals. The basic and applied research are both promoted and the model of knowledge creation offered is close to both Mode 1 and Mode 2 of triple helix model, promoted by Gibbons et al. (1994) and it could at least theoretically be connected to the Mode 3 of knowledge production, promoted by Carayannis and Campbell (2009). This type of development could be perceived as big step forward, at list in a short-term perspective, taking into notice the fragile legacy upon which the QA mechanism was introduced at first place. Moreover, this could actually serve as a major development from the perspective of innovation and promotion of Entrepreneurial University in the Country, yet there are also threats, as in the long-term perspective, the nudging policy could be a source for decoupling of the policy and could give a way to isomorphic processes within the HEIs, as the champions

and outsiders may appear and the HEIs may increasingly become similar to each other. Dimaggio and Powell (1983) offer the model for organizational isomorphism, with three distinctive isomorphic developments: coercive (powered by the regulation and need for legitimacy), mimetic (way of mimicking each other) and normative (connected to growing professionalization). In the case of Georgian Authorization standards there is high risk of Coercive and mimetic isomorphism, as the HEIs with lesser experience in research may adopt the nudges of standards for the legitimization purposes and also the successful actors may appear on the market where other players may start to mimic their practices and behaviours.

On the other hand, there is still no clear research related vision in the accreditation standards. Standards do promote the integration of research in the teaching and learning and outline the importance of the research supervision, yet the general focus of accreditation standards remain T/L centred, and theoretical implications about the research QA are scarce (Accreditation Standards, 2022).

## Modes of research assessment - international practices

For the further development of the research assessment system of the country, it is crucial to share the good practices from other countries with similar socio-economic-historical background and implement internationally recognized standards of the research performance evaluation. This section provides information on the research assessment system of two post-Soviet and current EU member countries – Estonia and Lithuania.

### *Estonia*

#### *Regular evaluation of research by the Estonian Research Council*

In Estonia, research performance assessment represents the external evaluation procedure for the research and development institutions. Since 2010, the Estonian Research Council (ETAG) organizes two types of research performance assessment: regular and targeted evaluation. The regular evaluations are arranged once every seven years and refer to assess the level of a field of research. In contrast, targeted evaluations are carried out to develop research policies in specific fields. Besides, the positive result of the regular

evaluation is a prerequisite for public R&D institutions to get state funding and carry out doctoral programmes (Estonian Research Council, 2022).

The Ministry of Education and Research of Estonia approves a committee of foreign experts and their working procedures for regular evaluation (Estonian Research Council, 2022). The assessment criteria for the regular evaluation are the following:

- Scientific impact of research
- Sustainability and Potential of Research
- Societal importance of research

Each of the aforementioned criteria is assessed on a 4-level scale:

- Very Good
- Good
- Satisfactory
- Unsatisfactory

The committee's evaluation report is based on the self-report of institutions, the site visits and the data obtained from the Estonian Research Information System – www.etis.ee (Estonian Research Council, 2022). Besides evaluation, the committee can give suggestions to institutions for future development.

### *QA mechanisms*

With the main qualitative responsibilities on the research performance evaluation being upon the Estonian research council, the HAKA – Estonian Quality Agency for Vocational and Higher Education, also evaluates research in its institutional and programme group evaluation procedures. Both evaluations compose the mandatory Quality Assurance mechanism, that every HEI in Estonia should go through according to the law (Universities Act, 1995).

The quality assurance standards in Estonia are broad and guidance-oriented, they offer the general principles instead of much focus on details. The 11th Standard of the 12 in Estonian institutional evaluation criteria is named as the 6th standard in Georgia:

Research, Development and/or Other Creative Activity (HAKA, 2023). Its main focus is on the integration of research in every aspect of the institutional life, taking into account the teaching and learning as well as the societal impact of university research as well. The standards do not assess the quality of the research but rather the potential of the university to be research intensive and make good use of the same research in different aspects.

When it comes to the assessment of doctoral programmes, they are evaluated both by the ETAG and HAKA. With ETAG's evaluation being concentrated on the research excellence and funding perspectives, HAKA's evaluation is more of a toll for legitimization and registration of the PhD study programmes at Estonian Education Management system. Like the NCEQE, HAKA also uses almost the same standards as with the programmes of 1st and 2nd level of higher education, yet the standards have some PhD specific aspects as well. Most interestingly, there are indications about the doctoral education in the sustainability standard, giving the specificities of sustainability in doctoral programmes, which is linked with the connections to the field and the competence of the supervisors.

### *Lithuania*

#### *Comparative expert assessment by the Research Council of Lithuania*

Lithuania, like Estonia, also has external quality assurance procedures for R&D activities. The external research performance assessment procedure is called "Comparative Expert Assessment (CEA)". The CEA is organized by the Research Council of Lithuania and carried out every five years. The Research Council of Lithuania composes expert panels for the evaluation procedure. Each panel should include at least 6 experts in the field. The expert panels assess research and development institutions and its units. The results of the CEA is used to allocate 70% of state funding for public R&D institutions. The CEA uses the following assessment criteria:

- Quality of the R&D Activities
- Economic and Social Impact of the R&D Activities
- Development Potential

Each criterion is graded on a scale of 1 to 5. Experts are required to submit both individual and panel assessments. The evaluation of the expert panel is based on the data provided by the institutions and site visits (Research Council of Lithuania, 2022).

It is noteworthy that, besides research performance evaluation, the Research Council of Lithuania is responsible for the accreditation of doctoral programmes (Research Council of Lithuania, 2022).

As we see, both Lithuania and Estonia use quantitative and qualitative (peer-review) approaches for research assessment. Furthermore, they use almost similar criteria for research performance evaluation. The difference between the two practices is that in Estonia research assessment is arranged every 7 years and the participation of international experts in the evaluation is mandatory, whereas, in Lithuania, CEA is carried out every 5 years, with no mandatory requirement for foreign experts to participate.

### *QA mechanisms*

From the Quality Assurance perspective of the HEIs, the SKVC - Centre for Quality Assessment in Higher Education, evaluates the Universities' research capability in their routine institutional reviews (SKVC, n.d.). Just as in Estonian case, the criteria are far less detailed and are mostly oriented on the principles of research integration into the institutional life, rather than detailed guidance.

As of the programme accreditation, SKVC evaluates only the study programmes at 1st and 2nd levels of higher education, while the PhD studies are evaluated by the Lithuanian Research council. This may be one of the more radical cases of the split of responsibilities between the two agencies, as SKVC's responsibilities are distinctively teaching and learning related.

## Discussion

Over the last 15 years, the government of Georgia has implemented an extensive package of reforms aimed at transforming and modernizing the post-Soviet higher education and research system and integrating it into the European Area. The most prominent changes took place in higher education and research structure, funding and quality assurance

mechanisms. It is noteworthy, that according the Soviet tradition, higher education institutions (HEIs) were considered as teaching institutions, whereas research mostly was carried out by the research institutions under the Academy of Sciences (Chakhaia & Bregvadze, 2018). Same practice applied in Georgia: till 2011, research institutions and HEIs operated separately. Therefore, university-based research is a new phenomenon for the Georgian higher education and Science, Technology and Innovation (STI) system. Nevertheless, despite these improvements, reforms in the Georgian STI sector remain incomplete or unfinished (European Commission, 2018). The STI system of Georgia is facing severe challenges: problems such as the absence of evidence-based policy and priorities, lack of reliable data and statistics on R&D, low level of research funding and the quality of doctoral education are limiting the country's science and innovation potential and its impact on economic development.

One of the significant challenges of the Georgian STI system is the research performance assessment. The research evaluation procedure in Georgia is fragmented: on the one hand, the legislation obliges the Georgian National Academy of Sciences (GNAS) to assess the research performance, and on the other hand, the National Center for Educational Quality Enhancement to assess research quality (Law of Georgia on Science, Technology and Their Development, 1996; Law of Georgia on the Georgian National Academy of Sciences, 2007; Authorization Standards, 2022). Thus, legal framework of the external research assessment is overlapping. Besides fragmentation, the research performance evaluation system in Georgia is inefficient and ineffective: since there is no performance-based research funding model in Georgia and the GNAS operates as a symbolic reputational organization rather than an executive body, the current research performance evaluation practice from the GNAS resembles an administrative reporting, while the Authorization procedure, being a measure for external QA of the entire institution, only focuses on the assessment of the research capacity of universities.

The Authorization mechanism - institutional evaluation, has been developed significantly in recent years and nowadays offers well-written, complex and modern requirements for the research assessment, yet due to the historical lack of the experience of university-based research, as well as the fact that the evaluation of research and development practices are just a part of the overall evaluation, limited in its time and scope, it is in need

for further development to become a more rigorous form of research capacity assessment. Taking this into account the need for the establishment of more thorough mechanisms for assessing the research capacity and efficiency is evident and using the international experience in this regard could be something to consider for the Georgian policymakers.

The Authorization standards go as far as to suggest the model of the research as seen fit from the perspective of the Quality Assurance agency. This is a positive development, taking into account the past experience and disregard of the Research in the previous institutional evaluations and has a capacity to have major positive influence on the university-based innovation in the country, yet such a nudge could contain threat in the long-term perspective, for the chances of decoupling and isomorphism.

On the other hand, the doctoral programme assessment remains a major challenge for the system. It is rather clear that the accreditation standards need more research-oriented changes for further enhancement of doctoral studies and despite latest positive developments, the paradigm for PhD programme evaluation does not yet significantly differ from the evaluation of the programmes on other levels of higher education. The current approach to the assessment of doctoral programmes needs to be better aligned with the Salzburg principles and to become more enhancement-oriented. There is a need for the PhD specific standards which can assess the research capacity and quality of the PhD programme and support the improvement of doctoral education.

## Conclusion

In order to allocate research funding efficiently, identify weaker/stronger thematic areas, improve the quality of research and enhance the country's research and innovation capacity - it is crucial to reform the existing procedures of the research performance assessment and implement internationally recognized standards of the research performance evaluation. For the further development of the research performance assessment system of the country, it is deemed appropriate to share the good practices from other countries with similar socio-economic-historical background. In this regard, the case of Estonia and Lithuania, as two post-Soviet and current EU member countries, should be considered. In aforementioned countries, research performance evaluation is organized by the executive bodies - Research Councils. Since the GNAS operates as a

symbolic reputational organization in Georgia, research performance assessment should be organized by the Shota Rustaveli National Science Foundation of Georgia or/and the National Educational Center of Quality Enhancement with the clear and efficient division of functions, while retaining structural connection.

Furthermore, due to the fact that Georgia is a very small country, in order to further avoid conflicts of interest, the assessments should be carried out by the higher involvement of international experts (like in Estonia) in every type of research evaluation. The NCEQE has been particularly good at internationalization of its QA procedures, institutionalizing the involvement of international reviewers within the Institutional Authorization and Programme Accreditation, yet there is still a space for further improvement in this regard. The main challenge for the system remains the wide implementation and application of research performance evaluation mechanisms oriented on the actual enhancement of research quality rather than administrative reporting.

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