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Structural Change Promoting Gender Equality in the Lithuanian Science System: Requirements, Possibilities and Challenges

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ABSTRACT. The paper focuses on the EU level initiative to implement the structural change promoting gender equality in R&I organizations and concentrates on specifics of Lithuanian R&I system. Empirical findings of the survey (2015, Lithuania) reveal absence of solid opinion about, but positive approach towards the structural change among the national R&I policy makers in Lithuania.

Keywords: gender equality, structural change, science system, post-soviet society, EU

Introduction

Gender equality in science issues came to European Commission's (EC, hereinafter) agendas almost 20 years ago, i.e. in middle of 1990s (EC, 1996; EC, 1999, Marchetti and Raudma, 2010:16). However, in 2012, results of empirical evaluations of gender equality policies in science and research since end of 1990s demonstrated that the policies had rather weak effect on institutions and scientific cultures (Caprile et al, 2012:20). The measures, which were tackled at improving women's scientific careers, had especially good effect in individual cases; however, institutional obstacles and implicit norms and values usually remained unchanged by such measures. Also gender bias had been existing in research methods, techniques and epistemologies, but systematic discussion about and large scope studies of interrelation between individual profit and structural change were absent (Caprile

et al, 2012:179, 194). Responding to such situation, the EC's communication *A Reinforced European Research Area Partnership for Excellence and Growth* highlighted gender equality and gender mainstreaming in research under a calling "to end the waste of talent which we cannot afford and to diversify views and approaches in research and foster excellence" (EC, 2012:3-4). Following this document, all the European Union (EU, hereinafter) member states and all research stakeholder organisations were invited to take active part in fostering gender equality in research and innovation (R&I, hereinafter) (EC, 2012:12-13) by implementing the *structural change* (Sanchez de Madariaga and Raudma, 2012:10, 15). The gender equality in R&I tackled structural change is a systemic, integral long-term approach, which means increasing institutional awareness about gender and, thus, modernization of organizational culture. In general, the structural change has been introduced as bringing significant implications for equal opportunities, full realization of talents, attractiveness of scientific careers and total science quality (Marchetti and Raudma, 2010:13, 23-25). How the EU level concern and initiative is reflected on national political agendas? – this question is discussed in the paper reflecting Lithuanian case.

The context: gender and Lithuanian R&I policy

In Lithuania, gender in science issues were brought to discussions by EC FP6 project BASNET (BASNET Forumas, 2007) in 2007. The project lead to elaboration of national *Strategy on equal opportunities for women and men in science in Lithuania* (Novelskaite et al, 2012) and to many other initiatives on national policy level[1]. In general, gender equality is ensured by legislation in Lithuania (Novelskaite, 2016). Notwithstanding, gender equality in science in Lithuania is rather problematic issue in the country still. For example, despite there is higher proportion of women scientists and engineers in the total labour force than men in Lithuania (EC, 2016:45), the annual growth rate for women researchers is lower than that for men in the Lithuanian governmental sector (EC, 2016:75). In general, proportion of women in the grade A positions is lower in Lithuania than in almost all other the EU countries (EC, 2016:130), but a glass ceiling index is the highest (EC, 2016:136), etc. Hence, striving to reach the EU gender equality goals, further efforts are needed in Lithuania still.

The Structural change

The term *structural change* has been widely used in macro level analysis (e.g. Ahamer and Mayer, 2013; Minagawa, 2013; Mann and Huddleston, 2017; etc.). However, in the context of the EU science policy, the structural change may be perceived as connecting all levels of social prehension – these are macro (i.e. EU, national science system), meso (i.e. science organization), and micro (e.g. science manager, members of the community) levels. That is, the structural change is defined as the EC initiated and supported long-term wide-ranging change in research organization activities; the change, which is aimed at increasing attractiveness of research and creating conditions for sustainable and attractive careers in science (Avramov, 2011:9, 11). Prerequisites for reaching the aim are development of regulatory frameworks and institutional standards as well as development of guidelines for recruiting and retaining women in research organizations. Additionally, it requires strong support from the top-level management (EC, 2012b: 26-29, 30-40) because only efficient management practices create conditions for achieving essential transformations in research organizations. Meanwhile quality management and high-quality research can be achieved inducing and supporting a diversity of ideas and opinions, integrating a gender aspect into empirical studies, modernizing human resource management and work environment, etc.

There are several essential elements of the structural change (EC, 2012b: 26-29, 30-40) – knowing the research institution; gaining support from the top-level management of the research institution; ensuring efficient management practices at the research institution. Realization of these elements creates preconditions for achieving the essential transformations in the research organizations: ensuring of transparency in decision making, removal of unconscious stereotypical approaches form institutional procedures, sustaining quality of management and research by inducing and supporting diversity of ideas and opinions, improvement of empirical studies by integrating gender aspect, modernization of human resource management and work environment, etc. Meanwhile successful implementation of the structural change on the national level is possible only with united efforts of different science system constituting (i.e. science policy making; science quality ensuring; research conducting) institutions. Hence, a general question here is whether the EU member states (here – Lithuania) are capable of introducing such policy in their national R&I systems?

Methodology

Considering issues, which were emphasized in the previously presented conception of the structural change, the 3 groups of respondents were defined following principles of targeted expert sampling (see e.g. Blaikie, 2000). These were (a) representatives of science policymaking institutions (national Parliament, Ministry of Education and science) (n=24); (b) representatives of research quality ensuring (controlling) institutions (Lithuanian research Council, Agency for Science, Innovation and Technology, etc.) (n=20); (c) representatives of top management of Lithuanian research organizations (including universities) (n=323) (full lists of the selected experts (respondents) can be found in Novelskaitė and Giedraitytė, 2015). Thus, the top-level experts possessing exceptionally deep knowledge and the most-up-to-date information about Lithuanian science system as well as having professional experience of science policy making were selected. The respondents' contact information was collected from the official websites of Lithuanian science system institutions and organizations.

Correspondingly, three questionnaires (see e.g. Frankfort-Nachmias and Nachmias, 1993) for separate groups of the respondents were developed (see Novelskaitė and Giedraitytė, 2015) for the questionnaire survey (see e.g. Blaikie, 2000, Babbie, 2013, Frankfort-Nachmias and Nachmias, 1993, other). All questionnaires involved questions targeted at description and explanation of factual situation in Lithuanian legislation, science quality controlling institutions and research institutions (including universities). More specifically, on conceptual level, the questionnaires were created using EC *Gender Equality Strategy* (EC, 2012b:42-45) as a background. That is, the Strategy statements addressing separate groups of the R&I stakeholders were treated as highlighting the main issues and reformulated into questionnaire statements. Formulation of each question asked not only for clear statement (i.e. yes/no/don't know), but also for commentaries on any answer. Thus, the questionnaires were designed for collecting both quantitative data (defining the situation in terms of answering the question "how?") and qualitative information (describing contextual issues in terms of answering questions "why?").

The data were collected during Dec 2014 – Jan 2015 in several stages. Each respondent was contacted personally with invitation to take part in the survey. In results, only 6 of the selected science policy makers (response rate 25%) – several members of the Parliament and

officers of the Ministry responded to the invitation to take part in the survey by filling the questionnaire. Also, only 9 of the selected representatives of science quality ensuring (controlling) institutions (response rate 45%) responded to the invitation by filling the questionnaires. 53 managers from 22 science organizations (response rate 23%) responded to the invitation and sent filled questionnaires (it was received from 1 to 10 filled questionnaires from each science organization).

It must be mentioned that because the data collection procedure restricted possibilities of guaranteeing respondents' anonymity, specific procedures of preserving confidentiality of the provided information were undertaken by the research group. That is, first, the collected data and information were analysed only by research team; each member of the team undertook responsibility of not disseminating any information related to concrete person (or persons). Second, only generalized information was presented for wider public; the information was presented without any references to a particular respondent, but only to general groups (i.e. policy makers, science quality controllers, university managers).

Very small part of the study findings – the R&I policy makers' opinion about the gender equality tackled structural change in Lithuanian research organizations – is presented further in this paper. More specifically, this part presents results of content analysis (see e.g. Berg, 2009:338-377, Krippendorff and Bock, 2009, other) of the respondents' answers to the asking for "general opinion about structural change aimed at implementation of gender equality in science organizations". The analysis has been accomplished starting with close reading and identifying the main topics in the reflections, which are briefly describe in the following part.

The gender equality tackled structural change in Lithuanian research organizations: The R&I policy makers' opinion

In general, the R&I policy makers demonstrated intention to avoid concrete expressions and tried to transfer problematic emphases to other fields. That is, noting that "legal documents prohibit gender discrimination de jure, but there is no absolute guarantee for gender equality de facto", the gender equality in science issue was ignored entering broader and less defined fields. For example: "we need to change stereotypical attitudes towards gender equality in the society", "the changes are positive; ... there are discussions on the topic, there is

a separate project, etc." However, nobody specified what attitudes have to be changed, what projects do bring what impacts, etc. Thus, the representatives of the R&I policy makers avoided expressing a categorical opinion about the gender equality tackled structural change. One the one hand, they reported that "the general untidiscriminatory principle is right" and that "particular measures inducing women's and men's possibilities (e.g. flexible working hours, provided possibilities to improve professional and general skills, etc.) should be improved". However, on the other hand, they questioned rightness of a disposition that "there should be women's and men's balance 50/50% in all fields", because such disposition "simply contradicts progressive and generally accepted principles of specialization and person's possibilities to realize his/her strong features". Also, they mentioned a risk that "striving for realization of the [gender equality] principle by imperative legal norms may be even contra-productive". Again, on the one hand, one could think, that each person has a right to have personal opinion. However, in the present context, the contradictory opinions suggest absence of consensus on the policy making level.

Notwithstanding, several problematic aspects were revealed in the R&I policy makers' reflections. The one is concerned cooperation between the R&I policy making institutions and research organizations (including universities). More specifically, the respondents claimed that "we have no information that structural changes would be implemented in any of Lithuanian science and education organizations". Meanwhile the fact is that the II stage of the project "Family planet" was accomplished at Siauliai university in 2005 (http://www.family-friendly-university.su.lt/anglu/index.html). During the project, the university's structure had been amended by implementing special measures targeted at more efficient reconciliation of professional activity and family duties.

Another problematic aspect is "lack of reliable statistical data which could be used at ministerial level for evaluation of women's and men's representation at academic and administrative positions in Lithuanian science and research organizations". Again, on the one hand, that is true: there is a lack of up-to-date exhaustive statistical information about gender in R&I (notwithstanding yearly publications of Lithuanian Department of Statistics and periodical publications of EU such as *She Figures*). However, on the other hand, the information is absolutely sufficient to be aware about existence of gender disbalance in different fields of science and strongly gendered

academic hierarchies as well as to comprehend that changes are very slow (even if they are). In this context, it is interesting to bring to attention response of one of the R&I policy makers: noting that "I am not familiar with situation", s/he claimed that "any essential changes are not going on". It might be a rhetorical question: who, if not policy makers, would be responsible for introducing the needed changes?
Moreover, the R&I policy makers tended to transfer the responsibility for gender equality tackled structural change to science and education institutions: "in this stage, the organizations are suggested to decide themselves about necessity of implementing any [gender equality tackled structural] measures."

Conclusion

The EU level concern about gender equality in R&I and initiative to implement gender equality tackled structural change in research organizations is reflected on the Lithuanian national political agenda by introducing corresponding documents (Novelskaite, 2016). Hence, the necessary requirement for introducing the structural change are met. However, on the one hand, the contradictory opinions on the structural changes of the structural change prevailing among the R&I policy making persons denote a challenge for implementing the structural change; on the other hand, relatively positive disposition of the respondents gives optimism and suggests potentially absent resistance to related initiatives in the field. Indeed, integration of gender equality and gender aspect into Lithuanian R&I policy requires stronger united effort and development of systematic strategy, targeted at long-term institutional changes in European science system, remains rather strong (EC, 2014:6).

NOTES

1. Several initiatives which are worth mentioning are national project "Lyčių lygybės moksle skatinimas" (LYMOS) [in Lithuanian – "Inducement of gender equality in science"], No. VP1-3.2-ŠMM-02-V; EC FP6 project BASNET; EC FP7 project SAPGERIC.

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