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Artificial Intelligence and Gender Biases in Recruitment and Selection Processes

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Algorithms in recruitment and selection processes – for better or for worse?

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1. Gender bias from a Lithuanian perspective

1.1 General remarks

The starting point for a discussion appears to be not particularly optimistic – there is plenty of room for improvement in order to achieve the factual gender equality in Lithuania. According to the report of the European Institute for Gender Equality (EIGE) of 2019, progress towards gender equality did not improve in the country between 2005 and 2017 – with 55.5 out of 100 points, Lithuania was ranked 23rd in the EU on the Gender Equality Index [1] (see page 2 of this paper for a reference to EIGE report of 2020). As the result suggests, there are systematic issues stemming from deeply rooted stereotypes, power disbalances, traditional understanding of gender roles that reforms are unable to fix in a relatively short period of time. However, they are taking place. For instance, the year of 2017 was marked by the new Labour Code of the Republic of Lithuania (from now on, the Labour Code) entering into force [2]. Out of many valuable amendments at least two positive features could be highlighted in the context of combating gender bias in recruitment and selection processes.

1.1.1 Emphasis on non-discrimination in pre-contractual relations

Firstly, the adoption of the Labour Code meant that pre-contractual relations between the parties to an employment contract are governed by the labour law for the first time in Lithuania. Precisely, in the wording of the Article 41(1) it is envisaged that among other obligations parties should comply with the requirements of gender equality and non-discrimination of other grounds. Such expectations are combined with the possibility to apply to a labour dispute resolution body in order to seek compensation or use other remedies provided by the Labour Code (as per Article 41(2)). On the other hand, it is also worth noting that despite the promising mechanism, practical aspects of this norm remain rather complicated as illustrated in the Part 1.1.3 of this paper.

1.1.2 Equal opportunities in the organisational culture

Secondly, the implementation of the principle of non-discrimination was strengthened by adding the norm obliging the employers who have an average number of employees of more than 50 to adopt and publish the measures for implementation of the principles for the supervision of the implementation and enforcement of the equal opportunities policies (Article 26(6) of the Labour Code). In order to promote good practices among the employers the Office of the Equal Opportunities Ombudsperson

in partnership with the Human Right Monitoring Institute are implementing the project funded by the European Social Fund Agency [3]. The scope of measures encompasses: (i) “Equal Opportunity Wings” (an initiative to display the company’s progress in the field of equal opportunities; only 17 participating organisations); (ii) self-evaluation guidelines; (iii) e-learning materials; (iv) finally, the reference book that covers positive examples (including those concerning recruitment and employment practices) (note: scenarios of potential algorithmic discrimination have not been discussed).

A conclusion that repeatedly appears in institutional reports or comments of individuals working in human rights’ field is that the steps taken by the employers in favour of gender equality are often formal and declarative. The fact that Lithuania’s progress could be more effective may also be backed up by a very recent EIGE report of 2020 (analogous to the one mentioned in the beginning of this paper) – since 2017 country’s score has increased only by 0.8 points and is 11.6 points lower than EU average [4].

Further on, we are going to discuss several issues that remain exceptionally pertinent (and, in our view, are going to continue on growing in importance together with the emergence of algorithms in employment practices).

1.1.3 Investigations conducted by the State Labour Inspectorate (Labour Dispute Commissions) and the Office of the Equal Opportunities Ombudsperson

Numbers

Reportedly, in 2019 out of almost 10 000 disputes that were investigated in the Labour Dispute Commissions only 10 were fully (or partially) related to the discrimination at work [5]. In the first half of 2020 this number was as little as a total of 5 cases, thus displaying a completely passive state of play.

According to the statistics presented by the Office of the Equal Opportunities Ombudsman of the Republic of Lithuania, since the beginning of its activities in 1999, the majority of investigations regarding the potential discrimination were related to the ground of gender (about a half of them in the employment context), however, total numbers do not exceed 100 investigations per year [6].

Thus far there have not been any reported cases of algorithmic discrimination in Lithuania. Although while considering the inevitable emergence of algorithmic decision-making in the recruitment and selection processes, such low willingness to seek justice when it comes to gender equality is worrying. Discrimination caused by algorithms would be even more difficult to identify due to the lack of transparency, lack of technical knowledge, so there is a high risk that such cases might pass by without a notice thus making the current situation even more complicated.

Content

What is more, in the analysis of investigations typically carried out in one of the aforementioned institutions (Office of the Equal Opportunities Ombudsman), it is noticeable that the majority of them are related to allegedly discriminating job

advertisements [6]. Unjustifiable gender preferences are either expressed with: (i) nouns indicating particular gender; (ii) stereotypical occupations; or (iii) adjectives suggesting “masculine” or “feminine” character traits. As we are thinking about selections made with the help of algorithms, one of the most concerning realisations is related to language particularities. Most of the languages belonging to the Indo-European language family are not gender-neutral (genderless) thus requiring more attention before using them in intelligent systems. Potential translation problems should not be left in the last place either (understanding that the majority of software likely will be tailored to the languages / countries where the progress in the field of AI is more advanced) [7].

1.1.4 Sectoral issues

Despite the general steps taken by gender equality policy makers and already existing specialised initiatives aiming to promote inclusivity (e.g. “Women Go Tech” [8], “Women & Technology” [9]), the stages of planning and development of algorithms remain to be particularly sensitive to the gender equality problems. Although currently women have a share of 24 % in the ICT sector (which is relatively high in the context of EU Member States), this field is considered as an option for career only by 2 % of female Lithuanian high-school students [10]. Observation of such a low number prompts us to think that unless additional measures are taken, female would remain largely underrepresented in the field of ICT.

1.2 Particularities related to artificial intelligence (AI)

The usage of AI in the selection and recruitment processes in Lithuania appears to be marginal yet a more detailed analysis would be needed to evaluate the exact scope of the matter. This position can be explained by two reasons. Firstly, there is no publicly available aggregated data related to this type of AI applications and, secondly, companies / institutions themselves have made few public announcements about the employment of this technology (leaving the rest of the “iceberg” unknown). However, from a limited amount of examples one could still provide an illustration of a growing interest in AI-powered recruitment.

1.2.1 Ambitions of full automation

“CVsite.lt” – a recruitment platform created by UAB “Žmogiškųjų išteklių platformos” and funded by the European Regional Development Fund [11]. The project is still in the development stage (should be finalised by February of 2021); from the initial evaluation it appears that the company discloses very little information about the functioning of the platform. As identified from different parts of the website, AI is intended to be used for: (i) analysis of job offers; (ii) creation of standard CVs; (iii) evaluation of the character qualities of candidates. There is also a dubious statement in the context of algorithmic discrimination saying that the latter evaluation [of personality] may be used in a search for “higher level candidates”.

1.2.2 Partial automation

“jobRely” – a tech startup that uses “LinkedIn/email automation and conversational AI” in order to improve recruitment processes [12]. The functioning of this platform is

not fully automated as the sourcing is said to be mainly manual (unlike the outreach and following up on non-responders which are programmer).

1.2.3 Automation solutions for specific spheres

- “Devs.It” – a platform which leverages AI to assist employers in their search for the most suitable candidates for IT positions. In the press release the CEO of the company has indicated that their profiling system considers “personality, psychological characteristics and corporate culture” [13].
- “Intelektas LT” – a project aimed to create a platform which would provide assistance while evaluating and selecting the candidates for executive positions [14]. Although the main technology is envisaged to be the virtual reality combined with collection of biometric data as the candidates are making decisions in realistic scenarios, artificial intelligence is also regarded as an important tool for future management of database.

Coincidentally, the aforementioned platforms are aimed at the sectors where the situation concerning gender equality is already complicated. As described in the Part 1.1.3 of this paper, segregation in ICT sector could contribute to potentially unfair practices while using the first platform. Moreover, the domain of power in economic decision making already appears to be dragging the country down in equality ranking (females make up only 12 % among the board members of largest companies) [4], so the introduction of latest technological advances should not be attempted without a careful consideration from a gender bias perspective. In all cases, if described ideas of automation are continued to be developed, more transparency regarding the usage of algorithms is expected.

2. Policy debate

Public discussions related to the principle of non-discrimination in the context of AI (algorithms) are only beginning in Lithuania. As a response to the statements issued by the European Commission, a country has taken the following steps:

2.1 Lithuanian Artificial Intelligence Strategy

In March 2019 the representatives of the Ministry of the Economy and Innovation of the Republic of Lithuania, “Create Lithuania”, INFOBALT, Vytautas Magnus University, private companies that focus on AI-based products prepared the analysis called “Lithuanian Artificial Intelligence Strategy: a vision for the future” [15]. This document contains policy recommendations expressed in a form of principles and mechanisms for their implementation. The principle that is the most closely related to the algorithmic discrimination would be “to encourage transparency and fairness in AI application” (p. 9), though the general observation would be that there is insufficient consideration for this matter in the strategy. Among the solutions for implementing the principles of fairness and transparency authors provide the ideas of establishing AI ethics committee, national interdisciplinary centre and creation of “safeguarding mechanism” that would ensure that reasons behind the results of systems would be

explained to users. Regarding the terminology used in formulating the solutions, it must be noted that the question of discrimination has been “reduced” to the concepts of ‘bias’ and ‘ethics of AI’. It is understandable that the legal approach is missing in the strategy as the document was created without the involvement of the specialists from the legal field. However, such situation should be fixed and a more detailed approach is required in the context of algorithmic discrimination.

2.2 AI Think Tank

The Ministry of Economy and Innovation of the Republic of Lithuania in cooperation with the Agency for Science, Innovation and Technology (MITA) makes an active effort to implement the Lithuanian Artificial Intelligence Strategy. As a part of activities of AI Think Tank, there is an initiative to prepare a guide of non-discriminatory algorithms and ethical norms for AI scientists and developers. Also, once the evaluation period of AI White Paper consultation finishes, another subgroup of the Lithuanian AI Think Tank intends begin the assessment of legal regulation and specific recommendations while taking into consideration the concluding remarks provided by the European Commission.

3. Recommendations

In the title of this paper we posed a question: “Algorithms in recruitment and selection processes – for better or for worse?” bearing in mind the uncertainty that surrounds the budding debate of algorithmic discrimination in Lithuania. On the one hand, the prospective use of algorithms in selection and recruitment processes might appear attractive due to the long-term issues that the country is dealing with even without the emergence of technology. On the other hand, one needs to be particularly attentive when algorithmic decision-making is applied in sensitive sectors. Below-listed ideas could be taken into the consideration in attempts to achieve the balance:

3.1 Addressing the potential risk of (gender) discrimination of algorithms in recruitment processes

1. Possible certification mechanism for organisations willing to engage in the algorithmic recruitment (as a way to ensure their readiness from a human rights’ perspective) combined with regular external human rights’ audit.
2. Possible introduction of Equal Opportunity Officers who would be responsible for the ongoing risk management and mitigation as well as other proactive measures aimed at implementation of the non-discrimination principle in organisations.
3. Possible decision on gender quotas in AI development as a way to ensure inclusivity (and, in many cases, product safety).
4. Possible inclusion of ‘algorithmic discrimination’ to the list of protected grounds.

3.2 Raising awareness of the issue of gender bias in algorithms

1. Increased dialogue between lawyers and non-legal professionals in order to develop a common understanding of discrimination as well as knowledge exchange in other domains.
2. Increased education both externally (to the general public) and internally (to the members of organisation).
3. Targeted campaigns to promote the career in ICT to non-male individuals who are currently underrepresented.
4. Additional human rights' modules for students in the ICT field aimed at, *inter alia*, introduction with gender bias; additional modules for law students related to AI (algorithms).

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