# Gender Bias in the Recruitment Process of IT Startups in the Netherlands

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**Abstract.** In today's fast-changing and innovative world, startups must compete amongst themselves and other well-established companies to hire the best talent in order to succeed. Diversity within the recruitment process is typically not a priority, even though it is well known that a diverse team is beneficial for (business) outcomes. Through a multiple case study performed at 5 IT startups based in the Netherlands, we observed that gender bias is introduced from the first moment that the need for an employee has been identified until candidate hiring. This is a direct result from (1) a lack of resources (e.g., time and money), (2) urgency to find the first and best candidate, or (3) the awareness of the startup founders.

**Keywords:** Diversity & Inclusion · IT Startup(s) · Gender bias

## 1 Introduction

Diversity - both acquired (e.g., cultural background and experience) and inherent (e.g., gender and race) - results in business success [11]. An example study of McKinsey & Company showed that from the 366 public companies that were in the top quartile for ethic a (racial) diversity within the management, were 35% more likely to have financial returns above the industry mean [10]. This research reaffirmed the (global) importance of creating diverse and heterogeneous teams, because they produce better (business) outcomes, customer success and a higher job satisfaction [3].

Johnson, Hekman, & Chan [4] investigated the relationship between finalist pools and the actual hiring decisions. Their results suggested that if there is only one woman in a pool of four job finalists, the likelihood of hiring the woman will be 0%. Moreover, Johnson et al. state that by creating a new status quo amongst the finalist, by adding an additional woman, the decision makers may consider hiring a woman. However, the following issue remains: what if women do not get the chance to be selected from the hiring pool? We cannot expect that every single IT startup in the Netherlands is able to reach a fair ratio of 50:50 between their female and male employees. Simply put, there are not enough women to fill these seats [2]. However, we can aim to reduce gender bias within

**Supplementary Information** The online version contains supplementary material available at https://doi.org/10.1007/978-3-031-20706-8_23.


N. Carroll et al. (Eds.): ICSOB 2022, LNBIP 463, pp. 328–334, 2022.
https://doi.org/10.1007/978-3-031-20706-8_23

the recruitment process of IT startups in the Netherlands. So that at least the women in the hiring pool have an equal chance to get hired such as their male colleagues.

Section 2 describes the research method including the case selection and case description. In Sect. 3 we analyse the observed findings, which we combine with the literature study. Finally, we identify 7 types of bias that are introduced in several phases of a Dutch IT startup recruitment phases. In addition to the identified biases, we provide a conclusion, and future work in Sect. 4.

## 2 Research Method

The objective of this research is to raise awareness of the lack of gender diversity. We are particularly interested in observing and analysing biases in the Dutch IT startup domain. That is why the research question is stated as: *"What are possible sources of gender bias within the recruitment process of IT startups in the Netherlands?"*

We performed two steps in the research: (1) a small literature study, (2) a multiple case study consisting of a case survey and a case interview. The interview is a semi-structured interview in which six themes were followed as proposed by Krenzi [7]: (1) Identifying needs, (2) Drafting Job Description, (3) Publishing, (4) Screening, (5) Assessment(s), and (6) Selecting and offering. We followed an open interview protocol, for the semi-structured interview we created (introductory) open-ended questions to allow the participants to introduce themselves, their startups and to elaborate on their responses before proceeding with follow-up questions. Due to the sensitive topic, any points regarding the confidentiality or publication of data were regulated in the informed consent form, as published on Zenodo[1].

**Case Selection.** The context of this research are the IT startups in the Netherlands. The selected participants were IT startup founders with at least one employee besides the founder(s), to ensure that the founders are able to provide sufficient insights into the recruitment phase. Furthermore, the IT startups were no older than ten years. In total, 87 IT startups have been contacted using various methods (participated/contacted) e.g., face-2-face (2/10), email (0/31), LinkedIn (3/25), official website of an association or incubator (0/1), or a combination of approaches (0/20). In the end, 5 startups agreed to partake in the interviews.

**Case Description.** We present a summary of the cases and an overview in Table 1. We wanted the study to be inclusive, so we also included an "X" gender in our research. However, we did not encounter anyone who stated their gender as non-binary.

## 3 Observations and Analysis

This section presents the findings of the case studies performed at 5 IT startups. For six of Krenzi's [7] seven phases, we describe how potential bias was identified.

[1] https://doi.org/10.5281/zenodo.6554766.

**Table 1.** The case studies of the Dutch IT startups and their employee numbers. The final column addresses the genders of the employees, no non-binary genders were encountered.

| ID | Founded | Location | # Founders | # Employees | M/F/X *(excluding founder(s))* |
|---|---|---|---|---|---|
| **A** | 2021 | Utrecht | 1 | 9 | M: 4 (2 full-time and 2 part-time), F: 5 (1 full-time and 4 part-time), X: 0 |
| **B** | 2018 | Amsterdam | 1 | 12 | M: 6, F: 6, X: 0 |
| **C** | 2020 | Utrecht | 1 | 13 | M: 7, F: 6, X: 0 |
| **D** | 2020 | Utrecht | 1 | 10 | M: 6, F: 4, X: 0 |
| **E** | 2019 | Eindhoven | 3 | 5 | M: 5 (2 full-time and 3 part-time), F: 0, X: 0 |

The potential bias is scoped to the level of surface diversity, which is concerned with visible characteristics of an individual. The statements are solely applicable to the situation of the five startups, thus the aim is not to generalise outside of the scope of the research. The main goal was to observe what is currently happening and to illuminate the findings as a result of the interviews.

**1a. Identification of Needs.** Hiring new employees starts with the identification of needs [7]. Drafting a job description and the identification of the needs are (observed in each startup) considered as activities which are done simultaneously. None of the startups formalise the exactly identified need (e.g., recruitment policy). Founder A: *"I trust my experience whilst defining the needs, documentation is not a priority"*. Founder E concurs and states *"each project and situation results in a different need, we do not have time for unnecessary documentation"*. Each founder has unique reasons for hiring new staff. Founders A and D emphasise that the urge to hire an employee comes from the existing employees and their heavy workload. Whereas the other startups' urge starts from the founders perspective or its partners, which is a third party with whom the startup has a collaboration agreement e.g., the bank (loan requirement), educational institutions, or recruitment agencies. The interview revealed that the core values and intrinsic motivation of the startup founder will shape the values of the startup.

**1b. Bias in Identification of Needs:** We observed a lack of policies within the startups. Founder D stated *"the majority of startups do not have a policy. We aim to include (gender) diversity (and bias) from the start, whilst accepting the consequences in terms of investments in time and money"*. We noticed that startups only look at surface-level diversity (gender) at a later stage, which is typically already too late for bias elimination, either because they do not have the resources or because they do not deem this to be of interest.

**2a. Drafting a Job Description.** The job description communicates the requirements to the potential new employee or third parties. A formalisation of a job description is legally required in case that an employee's contract must be terminated. However, Kaleva [6] emphasises that biased formalization occurs when rules treat certain biases as neutral. As the job description is typically

drafted during the needs identification in startups, there is insufficient consideration for bias.

**2a. Bias in Drafting a Job Description.** The lack of a guideline and the direct translation from needs to job description (without taking the time to take gender bias into account) could be a significant cause of bias.

**3a. Publishing Strategy.** LinkedIn is the only social media platform used by the founders to (1) post vacancies, (2) ask their network for leads, and (3) if the previous activities do not result in any leads then the founders actively search for people themselves. Startups A - D are a direct result of relationships made during their time at the university. Startup E, started out as an university research project and is still mostly active and/or recruiting at the university. In this case, the founders' educational network is also the business network. The founders state that the reason for using these methods is that it is completely free. In case that no leads are found, then the founders use a HR specialist and/or mediator, which usually is a friend that offers their services for free. Founder A: *"I try to find candidates by either posting a vacancy on LinkedIn or asking my network. I only invest my own time if there are no suitable candidates. Per open vacancy I usually spend two days"*. Founder B found his senior employee during a hackathon, whereas founder C used its educational network to find his CTO (former fellow student). Startup B, D and E have a partnership with educational institutions to recruit students. However, none of the startups have a paid-based collaboration with employment agencies. The founders state that they find it hard to find candidates with technical skills and are willing to invest more time and money in recruiting and/or training the candidates (e.g., bootcamp) program).

**3b. Bias in the Publishing Strategy.** LinkedIn does not offer an anonymization function, so the introduction of gender bias within this phase may be the result of the Similarity-Attraction Paradigm, which states that individuals encounter positive reactions to similar individuals in terms of e.g., characteristics or experience. Moreover, this may also introduce (unconscious) bias within the recruitment, which can limit the potential for building a heterogeneous team. The Justification-Suppression Model explains that every single individual acts on their prejudice [1], this may be against gender, race or ethnic groups. Searching for candidates on LinkedIn, where the entire background of the candidate is presented (e.g., photo, race and professional experience) may cause for prejudice. Lastly, the Social Identity Theory provides an excellent explanation regarding the lack of diversity within a startup (e.g., filter bubble). If your network consists of young, white men with a technical background, then the platform's algorithm will primarily show similar individuals.

**4a. Screening.** Screening is the process of filtering candidates to scope down from a long-list to a short-list. The founders admit that they are not in the position to filter on other variables other than the minimal requirements due to having a small candidate pool of 1 to 10 applicants. Founder C states: *"I only filter out nonsense applications"*. Only startup D has completely anonymized the hiring (and screening) process and stated *"I am a young, white man, so by*

*default we (as in similar men) get a bunch of opportunities. We need to respect those who do not have the same privileges. Our job description explicitly stated that the hiring process would be completely anonymized, and that the applicants had to refrain themselves of sharing personal information. All documents were shared with an external mediator, a friend of mine. The mediator was forced to scrap a substantial amount of information from the documents, because none of the 10 applicants complied. This indicates that people are unaware of the impact of certain details. For instance, providing years informs us of your age but also gaps in your CV".*

**4b. Bias in Screening.** Only startup D has taken measures to minimize bias, even though all founders are interested in reducing bias. The presence of gender bias could be caused by (1) the (unconscious) bias of the person(s) who perform the filtering, and (2) the lack of predefined requirements during filtering. One of the biggest causes for gender bias is motherhood. The majority of women have gap(s) in employment, which may result that the startup favours a male candidate. Startup A confirmed this: *"the importance of a CV and motivation letter is to see if the person believes in our mission and vision. We are aware that the documents include personal information which may introduce a certain bias".* Founder D: *"we have noticed that [even in anonymized CVs] there is still a certain (unconscious) bias present, because the entire team speculates on the gender of the candidate based on the experience".*

**5a. Assessment.** Every founder states that they assess the application on the organisational fit and then on the skills or experience. Depending on the type of job (e.g., consulting or a technical role), this phase also includes a test or mock case. The aim to understand the thought process of the candidate. Startups C - E, also asses the technical skills of the applicants with an informal interview. Startup C stated: *"My belief is that you should want to have a diverse team. We have a diverse and multidisciplinary team, and we seek to have an equal balance in introvert/extrovert, in terms of interests and hobbies and male/female/non-binary ratio or sexual orientation. We are looking for the right fit, seeing as we are very open about the aforementioned topics and everyone knows and accepts this about each other".* Startup D invests more time in assessing whether the applicant fits the team, using a personality test. The vision of the founder is that *"organisations only look at diversity afterwards, but our aim is to get it right from the start".*

**5b. Bias in Assessment.** The founders state that there are some predefined interview questions, however this is highly dependent on the situation, context, or the urgency to find a suitable candidate. Moreover, in most cases only the founders are involved in this process.

**6a. Selection.** The founder has the final saying. Founders A and D emphasise that they do discuss their final decision with the team, because the fit is the final deciding factor, and not the skills or experience. Founder E said: *"startups have small teams, therefore there is no point in hiring a person if they do not fit within the team. Perhaps in more reputable companies there would be the oppor-*

*tunity to move the person to another department, if there is not fit. However, for us this is not possible".*

**6b. Bias in Selection.** All founders of the observed startups are young, white men, therefore their perspective may be limited and/or (unconsciously) biased. Which may result that their preference is a similar candidate (white, young man) instead of a woman. Startup B commented: *"We are aware that this is not an ideal hiring process. There is no anonymization, randomization or best practices, because we do not check nor verify on bias. If we would have the needed resources e.g., time and budget, then improving and standardizing the hiring process would be our priority".*

## 4 Recommendation and Conclusion

We observed that gender bias is present within each moment of the recruitment process of IT startups. From the first moment when the founder identifies its need until they select the candidate(s) to fill the position(s). Therefore, to answer the main research question, we recommend IT startup founders to be aware of the following seven observed gender bias sources per recruitment phase:

**Justification Bias (1, 2, 3, 4, 5, 6) -** The lack of time could increase the prejudices of IT startup founders about time, culture, national boundaries, and languages [1]. *Possible countermeasures:* HR Policy Document, Hiring Team, and Awareness Training.

**Lack of Cognitive Diversity (1, 2, 3, 4, 5, 6) -** The lack of formalization could increase the preference of IT startup founders for homogeneous groups over heterogeneous groups [13]. *Possible countermeasures:* External Recruitment Expertise, and HR Policy Document.

**Blind Spot Bias (1, 2, 3, 4, 5, 6) -** IT startup founders tend to think they have no (gender) bias, and they see it more in others than in themselves [9]. *Possible countermeasures:* Awareness Training, and Anonymized Hiring.

**In-Group Favoritism (4, 5, 6) -** The founders of IT startups prefer their own (social) network, which consists of comparable characteristics, behaviors, and attitudes (Social Identity Theory) [12]. *Possible countermeasures:* Using Other Recruitment Channels, and External Recruiter.

**Automation Bias (4, 5, 6) -** The founders of IT startup rely on automated systems and trust that the algorithms are actually correct (e.g., Filter Bubble phenomenon in combination of the Similarity-Attraction Paradigm) [8]. *Possible countermeasures:* Inviting More Candidates, and Awareness Training.

**Confirmation Bias (5, 6) -** IT startup founders tend to find and remember information that confirms their perception (e.g., lack of anonymized hiring and/or lack of formalization) [5]. *Possible countermeasures:* External Recruiter.

**Stereotyping Bias (5, 6) -** IT startup founders adopt generalized beliefs that members of a group will have certain characteristics (e.g., lack of anonymized hiring and/or lack of formalization) [5]. *Possible countermeasures:* Awareness Training, and Anonymized Hiring.

Based on the observations we conclude that there are various reasons as to why gender bias is present within the recruitment process of IT startups in the Netherlands. First and foremost, the startups are faced with a lack of available resources (e.g., money and time). Their focus is solely based on survival, which means (1) finding new customers, (2) securing funding, and (3) if money and time allows, find new employees. However, as stated by 4 out of 5 founders, they are either not in the position to explicitly search for a woman to fill the position. Or, they simply do not want to spend additional time (which in most cases is already scarce) to do this. We could provide a policy recommendation to provide incentives to startups for hiring a more diverse workforce, as diverse teams can be more productive and innovative and it benefits society when more diverse staff are working. We also noted a general willingness to work on diversity within the five startups, leading to the observation that there is a healthy ground for improvement. As future work we want to do more case studies with startups in other countries to see what other types of biases can be found.

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