

Employers' language requirements towards
international students in the pre-recruitment stage:
The case of Aalto University in Finland

MSc program in Management and International Business

Master's Thesis

Shuangyi Chen

May 2022

Author Shuangyi Chen

Title of thesis Employers' language requirements towards international students in the pre-recruitment stage: The case of Aalto University in Finland

Degree Master of Science in Business Administration

Degree programme Management and International Business

Thesis advisor(s) Rebecca Piekkari

Year of approval 2022

Number of pages 56

Language English

Abstract

In Finland, lack of proficiency in Finnish language has been reported as one of the prominent hurdles to international graduates' qualification-matched employment. To better understand the employment issues through a lens of language, this research aims to analyze the language requirements specified by employers in the pre-recruitment stage and discuss whether the required language could be considered as a form of discrimination on the local labour market.

Online job advertisement is regarded as an appropriate data source for analyzing the needed qualifications. The data sample was mainly collected from an online job portal named Aalto JobTeaser, which Aalto University students actively utilize for job searching. During the observation period, 2,355 entry-level job advertisements were gathered and coded, of which 705 vacancies were posted in English descriptions. The frequency of the requisite language skills is measured after parsing and extracting the relevant keywords from the English-writing job descriptions.

Content and statistical analysis were carried out based on the data samples, findings show that ads on Aalto job portal favour students with fluent Finnish skills. There are significant variations in the explicit language requirements across different job categories, occupational groups, and organizational types. International talents from the study field of technology have more employment opportunities than those from the field of business and design. Start-ups are showing more positive attitudes to hire international talents than large corporations, SMEs and public institutions.

Based on the data findings, no definitive conclusion could be made concerning whether the language requirements could be seen as a direct and overt form of discrimination. The reasons behind the language preference, on the other hand, could be linked to implicit discrimination, or the unconscious linkage of immigrants with negative performance labels. Furthermore, it is concerning that the requisite Finnish skills extensively listed on the job vacancies will discourage highly qualified international graduates from applying.

This study contributes to the current language issues in international human resource management research. It also adds understanding to the issues of language barriers in the early recruitment stage and employers' linguistic attitudes in country-specific setting. Research findings could shed light on skilled immigrant's employment and inform language-related policy choices in Finland, especially for envisioning how to attract and retain highly educated international professionals at both organizational and national levels.

Keywords language skills, language diversity, international graduates, skilled immigrants, employment, labour market research

Acknowledgements

This thesis has witnessed a long and unforgettable journey and received tremendous support during the exceptional covid time. I would like to express my sincere gratitude to the people who have ever helped me along the way.

My heartfelt thanks and appreciation go firstly to my supervisor Rebecca Piekkari, whose suggestions and encouragement have given me valuable insights into the language issues in the D&I and management studies. Working on a very hectic schedule, she still gives my paper a careful reading and detailed comments all through the thesis content, as well as recommends various webinars related to my dissertation. It is an honor for me to feel and learn all the positive energies from her personality, diligence and genuineness. The generous and constant support from Rebecca has literally built up shining moments on my thesis journey.

Thank you Dr. Hilla Back for devoting your time to reading my paper and giving me all the useful feedback. Also, I am grateful for all the technical support I received from Koski Milja at BIZ career service and my friend Xiaokun Xie, as well as interesting insights from Dr. Linyu Liu, all the students and the panellist from CEMS webinar.

Thank you, dear friends from Aalto Squad for always being 100% supportive and sharing your kindness. Then, I'd like to express a special thank you to Aalto University, both classmates and teachers here for coloring the canvas of my student life. Last but not least, my love and gratitude goes to my beloved family, my friends (you know who you are), and the band Sodagreen. Without you, I would not have had the courage to embark on this amazing adventure and get my life this far in Finland.

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1. Introduction

1.1 Background

The number of international students and the scale of diversity in Finnish universities have seen a remarkable growth in recent years. There are over 20 000 foreign degree students in Finnish higher education institutions in 2019, with a proportion of 7.4% of the whole population of degree students (Statistics Finland, 2021a). Aalto University is one of the most internationally oriented universities in Finland – around 25% of master-level students have international backgrounds. Meanwhile, employment opportunity is typically considered a decisive part of economic and social integration for immigrants (Heikkilä 2005), especially for the international students who transform themselves from the academic phase to working life upon graduation.

From an organizational standpoint, as companies trade more globally and interact with foreign customers frequently, there is an increasing demand for local companies to hire foreign talents who are familiar with their home-country market landscape. As reported, international students who are part of an immigrant group, are usually viewed as the desirable skilled human resources because they can bring not only professional credentials but also capabilities in multicultural communication and home-country-specific knowledge (Cerdin, Diné& Brewster, 2014). At a national level, facing the looming labour shortage issues, Finland also aims to attract more skilled workforce and retain highly educated graduates from universities.

According to a recent survey, near half of foreign students from different fields of study leave Finland one year after their graduation (Vipunen, 2019). It is widely reported that immigrants (including international graduates) struggle to find an ideal job in Finland and experience employment discrimination due to the lack of local work experience, language skills and social ties (e.g. Ahmad, 2011; Alho, 2020; Yle 2019, 2021a). Among the documented barriers, inadequate knowledge of Finnish skills is one of the prominent obstacles to international talents' qualification-matched employment (Laine,2017; Shumilova et al., 2012; Yle, 2021b), which in turn prevents the job seekers from using

and improving local language skills. There is a clear and alarming gap between the linguistic landscape in class [English] and the labour market [Finnish and Swedish] for most international students (Mathies & Karhunen, 2021). A native or proficient level of Finnish language capability has been clarified in many job listings, which greatly limits the available career opportunities for foreign talents. Analytical data from a recent report (Barona, 2021) shows that almost half of Finnish organizations are suffering from labour shortages during the pandemic. From the perspective of employers, inappropriate language requirements also restrict business organizations from finding suitable candidates and diversifying their talent pools.

As one of the Nordic countries, employers usually hope to hire Finnish-speaking employees due to the need to communicate effectively with local customers. However, when companies enact strong preferences for certain group over another in terms of language skills, it might exclude an entire group of candidates from consideration and create significant barriers to international talents at outset of the application process. In this regard, strict host-country language requirements from employers have become the one of major impediments for foreign workers to integrating into the Finnish labour market. It is difficult for most international students in universities to gain a fluent level of Finnish within their regular study period (two-year master's programme). According to a recent report, some students even feel that the "prerequisite fluent Finnish" for most positions are being used as an "excuse" by employers not to hire international workers (TEK, 2021). Admittedly, local language requirements are often seen as a major hurdle and a "grim tale" for most international students to pursue careers here.

Therefore, as one of the graduates who are struggling with job hunting in Finland, this phenomenon leads me to wonder – what kinds of language skills are required or preferred by employers, and to what extent do the language requirements limit employment opportunities for international students in Aalto University, and whether there is an evident bias in language-based hiring criterion that signals potential discrimination at the early recruitment stage. In order to analyze the stated requirements from Finnish employers, this study is conducted by collecting secondary data between April 2021 and Jan 2022 from an online job portal JobTeaser -- one of the most used online job portals that are helpful for international students in Aalto University to find employment

opportunities. This platform service and job data are also accessible to eight other Finnish universities as well as many universities of applied sciences in Finland. A total of 2,355 entry-level job ads were collected during the observation period, of which 705 vacancies were posted in English descriptions.

1.2 Research gap

Over these years, the phenomenon of employers' reluctance to hire immigrants has been investigated by extensive research and reports (e.g. Almeida et al., 2015; Carlsson & Rooth, 2007; Risberg & Romani, 2021; Rooth, 2010; Jones et al., 2016).

Particularly, there is a large body of literature focusing on the employment of immigrants in country-specific settings, analyzing employers' biased attitudes towards applicants from various ethnic backgrounds (see Booth et al., 2012; Liebkind et al., 2016; Zschirnt & Ruedin, 2016). In Finland, a recent field experiment from Ahmad (2020) discovers that employers on the Finnish labour market have prejudices against applicants with foreign backgrounds in the recruitment stage. The majority of the research have provided evidence on the discriminatory behaviours during the recruitment phase. However, the body of empirical studies that focuses on the pre-recruitment stage is small, where the imbalance of employment opportunities already has a significant impact on their entry efficiency into the local labour market. Researchers also recommend additional research on immigrants' employability throughout the hiring process (e.g. Dustmann & Fabbri, 2003; Leinonen, 2012; Keep & James, 2010). This study responds to this call by focusing on how the language impacts take place during the early stages of recruitment and the relevant linguistic attitudes from employers.

Some scholarships have analyzed the reasons of why migrant professionals struggle on the local market (Fernando et al., 2016; Oreopoulos, 2011; Risberg & Romani, 2021). The majority of reasons or motivations are located to individual traits (such as ethnicity, educational background, language skill, local work experience) or employers' characteristics (such as size, industry, international exposure). With regard to the analysis of labour market outcome, it is noteworthy that only a few of them pay attention to the cross-sector comparison of the interplay of both organizational and individual attributes, (see Almeida et al., 2015; Risberg & Romani, 2021). According to van Harten et al.

(2017), the focus of future research could be on factors that link individual features to the organization-specific circumstances. Therefore, this study will include both dimensions by linking the language skills requirements to the organizational types.

Literature in the stream of international business management and labour economics also highlights the importance of language as a career capital for immigrants (Angouri & Piekkari, 2018; Brannen et al., 2014; Itani et al., 2015). Through OLS estimation of the data of immigrants or surveys on migration experience, lack of proficiency in host-country languages is usually associated with lower employment outcomes and slower integration into the local labour market for international talents (e.g. Benson-Rea & Rawlinson, 2003; Dustmann & Fabbri, 2003; Leinonen, 2012; Shumilova et al., 2012). However, there has been relatively limited attention devoted to the study of labour market outcome differences through the lens of language requirements stated by employers.

There has been a recent upsurge that scholars have collected online job vacancies as a secondary data source to investigate the labour market at the pre-recruitment stage (Kurekova et al., 2015). Based on online job data, researchers analyze the labour market demand by quantifying the required qualifications (e.g. Beblavý et al., 2016 a; Fabo et al., 2017; Kuhn and Shen, 2013). Closer to my research field particularly on language, some papers emphasize the assessment of foreign language skills demand such as Fabo et al. (2017) investigates the most commonly requested language skills by employers on the labour market of Central and Eastern Europe. However, the body of studies on the analysis of the language demand in Scandinavian countries is scarce.

Turning from “how/when” to “whom”, it is worth mentioning that current research on employment issues aimed at a specific group – skilled immigrants -- are relatively limited (see Alho, 2020; Zikic, 2015 as exceptions). The suggestion is consistent with the opinions of Binggeli, Dietz & Krings (2013), who call for more attention to the *forgotten minority group* -- international students. Here, the group of skilled migrants means highly educated “with at least a bachelor’s degree or equivalent who have moved to work and live abroad” (Hajro et al, 2019, p. 329). It is no doubt that the group of international graduates is a critical component of skilled immigrants – the desired workforce for organizations to develop international business.

There are some scholarships that examine the experience of international graduates' job acquisition in terms of language ability (Alho, 2020; Heikkilä 2005; Shumilova et al., 2012), which discover that extensive Finnish language requirements play a major barrier to international students to find a job in Finland. Yet, studies that focus on examining the language requirements at a macro level are lacking, especially in the strand of highly educated immigrants' employment. As a response, this study aims to start filling some of this gap and examine the language requirements in the pre-recruitment stage by collecting job vacancies from the job portal platform of Aalto University, in order to reveal the language barriers that international graduates in encounter on the Finnish labour market.

1.3 Research objectives and questions

In general, my study aims to inspect language requirements from the perspective of employers and analyze how the language requirements limit international graduates' job opportunities on the Finnish labour market. This research also hopes to provide key insights into the underemployment phenomenon associated with language barriers for highly educated workforces. This thesis hopes to make academic contributions by giving statistical inspections on language skills from the demand side, as well as shed light on current studies regarding employment discrimination from a linguistic standpoint. Discussion based on the analytical results will locate in the realms of international labour management, particularly the intersection of language discourses and skilled immigrant employment concerns in a country-specific setting.

The results will provide practical insights on language requirements which will link the immigrant's qualification (language skills) to employer's characteristic (job categories, company size etc.) For a better understanding of "language barriers" on the Finnish labour market, analytical findings could be a starting point for future research on how language acts as an exclusionary pattern to hinder international talents' integration into the local labour market.

Employers usually state a variety of merits to evaluate suitable applicants and differentiate job seekers into distinct groups, with the language being one of the most common screening criteria. Thus, there is a need to examine the explicit language skills employers value and their aggregations of preference. Along these lines, my study will

collect the entry-level vacancies published by Finnish employers as the secondary data source and then summarize what kinds of language ability that is required for qualified applicants. In order to delve into the language barriers faced by international graduates in Finland, two general research questions are proposed:

1. What kinds of language requirements do employers impose on international graduates in the pre-recruitment stage?
2. Can these requirements be regarded as a form of discrimination on the Finnish labour market?

To study employment issues through the lens of language, in a general way, we need to figure out what kinds of language abilities are most commonly required or preferred by companies in their advertised job vacancies. This could be accomplished by collecting the job ads and calculating the frequency of required language skills shown in the job description field. Content and statistical analysis will be carried out to identify what kinds of language requirements specified on my collected job data. Analytical findings could reflect employers' attitudes towards international graduates on the basis of language ability. The terms of *required* and *preferred* are used interchangeably in this thesis to refer to the dynamics of employers' attitudes toward language-based selection criteria.

Specifically, an important issue in relation to the research topic is whether significant bias in language requirements will be observed across organizational features, and employers' hiring decisions. International students' job searching efficiency is influenced by the sectoral difference from the side of labour demand (Alho, 2020; Hawthorne, 2018). Therefore, my study will include a structural assessment of language requisites across the selected factors. Statistical data will demonstrate how explicit language requirements differ across various types of job categories, occupations and organizations.

The second question will be discussed based on the analytical findings of varying language requirements. In order to examine the potential discrimination from employers, it calls for theoretical considerations about employment discrimination and more fact-based evidence that analytical results give on the "biased" attitude or preference of employers. when the open positions online strongly exclude an entire group of candidates from consideration where language requirements are beyond a neutral and legitimate

criterion, some sort of discrimination is involved in the established mechanism of recruitment. That being said, hiring practices might be connected to a certain level of discrimination towards foreign job seekers if the data sample significantly shows a systematic bias (Jasinskaja-Lahti et al., 2012, p.139) in employers' preferential statement on language requirements.

Furthermore, my study hopes to provide some data evidence on the assessment of language barriers for international talents. Although this study is insufficient to provide thorough insights into the reasons behind language requirements, analytical results could provoke further societal and organizational reflections on whether current language-based criteria for international graduates are reasonable or realistic on the Finnish labour market. As stated before, analytical findings will be useful in revealing employer's language preferences for hiring the ideal candidates. The other way around, this research could be a starting point for future research on motivations and reasons for language selection merit – whether they stem from employers' explicit attitude (with conscious) or implicit (without conscious) intent (Rooth, 2010). The patterns behind the bias of language-based recruitment also call for future investigation on potential labour discrimination – considering the questions like whether the current language requirement is conscious or implicit benchmark that discourages international graduates.

2. Literature Review

One of the study objectives is to investigate the language requirements and corresponding impacts on the employment opportunities for international graduates in Finland. Thus, research topic is related to the strands of language research and international human resource management scholarships. Literature review covers the following interrelated fields about labour market research, discrimination studies, discussion about the relationship of immigrants' employment and discrimination, as well as the role of language in those topics. Relevant research and reports in the Finnish context are also displayed at the end of this chapter, in order to provide a sound background to understand language issues on the country-specific labour market.

To discuss the potential discrimination signals from the language requirements, it is important to understand the types of discrimination on the labour market and multifarious motivations or reasons behind the biased patterns. The second and third section will discuss the literature findings with a focus on skilled immigrant's employment and the employers' discriminatory behaviours. Among the social-economic and managerial discussions, topics concerning immigrants' employability and labour market discrimination have received a lot of attention. Specifically, the main empirical research and survey discussions about Finnish labour market are summarized at the end of this chapter.

2.1 Labour market research

2.1.1 Research in the recruitment stage

Labour market research belongs to an interdisciplinary study field that covers a wide range of topics. Here, I particularly review the scholarships that focus on labour market investigation in the recruitment stage. Within the labour market research, Keep & James (2010) argue that employers' preference or conceptualizations of required skill is a crucial but relatively neglected topic during the recruitment process. Questions like "who and what skills is being recruited" and "why employers need these qualifications and what's the outcome and related influence" were proposed in their review study to provide reflections on the recruitment and selection issues (p.3). Regarding the questions who is being recruited, existing board research have explored and addressed the relevance of recruitment patterns and discrimination on the grounds of ethnic origins, gender, age unemployment period, local working experience etc. (see Ahmad, 2020; Andriessen et al., 2012; Zschirnt & Ruedin, 2016 as examples). Responding to the second questions, some scholars turn research interests into the qualifications demand on different occupational or national job marketing settings.

Studies of analyzing the labour market demand through web-based data have started to emerge these years (Kureková et al. , 2015). In fact, previous empirical research already started collecting the printed job advertisements from traditional newspaper to study how different skills and abilities are required by employers years ago (see Jackson, 2007 as an example). Recent studies mainly pay attention to analyzing the labour market and

quantifying different skills required or valued by employers in occupation-, industry- or country-specific settings (See Table 1). Basically, scholars collect the online vacancies data then carry out content and statistical analysis to investigate and compare required qualifications stated by local employers in the hiring stage. For instance, Kureková& Žilincíková(2016) studied online job data from a job portal in Slovakia to understand the requested skills profile for student employment. Capiluppi & Baravalle (2010) used web spider technology to gather the vacancies from a popular website and analyzed the skills requirements for the IT-related positions in UK. One of the research assumptions of their studies is that job postings on various platforms communicate employers' needed qualifications as well as their thoughts on an ideal applicant.

Table 1: Summary of previous labour market research in the pre-recruitment stage

Topic	Author(s)	Key findings	Country
Compare the differences of requested skills at occupational level	Beblavýet al. (2016a)	Qualification requirements are both specifically stated for both low- and medium-skilled occupations Prior working experience was the most frequently requirement (52%), followed by language skills (38%)	Slovakia
Analyze skills requirements for IT-related positions	Capiluppi & Baravalle (2010)	Outlined the most required programming skill on the IT job market in UK in programming skills (no specific findings on language skill)	UK
Investigate the significance of foreign language abilities on the labour market	Fabo et al. (2017)	English(52%) and German(12%) are two most frequently requested language skills by local employers for the employers from all four Visegrád countries	Visegrád countries
Analyze employers' general requested skill profile on student jobs	Kureková& Žilincíková(2016)	(Language) requirements differ based on the sector of employment and interactive nature of the job instead of the academic background.	Slovakia

The studies in Table 1 have provided quantitative findings of employers' preferences for job qualifications and enrich the pertinent understanding of recruitment demand variations, which reinforces the findings from a project by CILT (2006) with 40

international cases study, which summarize the phenomenon that employers weigh the language ability significantly during the recruitment process. Muukari (2008) also analyzed the job vacancies published by a Swedish bank company to observe how language skills were mentioned in recruitment statements. A few findings have been highlighted about the language requirements. Firstly, the keywords such as “a must” and “a plus” were used in the job postings. Secondly, higher managerial level positions need a more diverse language competence profile compared to entry-level jobs. Thirdly, it seems that the required degree of language ability differs between functionally and geographically diverse units. A similar argument is also founded in Warhurst & Nickson(2007)’s survey on the UK job market, the weighting value of skills differ across different business sectors.

Most of the scholars have explored the general required skills profile on the local labour market with help of job ads data. Among those findings, language ability has frequently been highlighted as a selection criterion, which implies that organizations stress requirements of language knowledge during the recruitment procedure. Some of the reasons why employers value language skills in the recruitment process will be discussed in the following subsection of literature review. Reviewing relevant literature within the realm of labour market, Keep & James (2010) also express the concerns about the over-weighting the value of certain qualifications in the recruitment decision-making process. As a result, the needed qualifications could be used as a threshold and “useful tool” for limiting the number of applicants to assess and reducing information costs (p.11).

2.1.2 Role of language in labour market research

For a deeper understanding of labour market issues through a linguistic lens, literature review needs to include studies that explore the role of language in labour market research. With regard to linguistic considerations, this section mainly looks into two strands: (1) from individual perspective, the relationship between language skill and job market success; (2) current discussion about language practices and policy at the organizational level, especially during the recruitment phase.

In the subject of human resource management, there are several common viewpoints arguing that language should be regarded as "a measurable skill and capability that the

individual possesses to perform the job" (Angouri & Piekkari, 2018, p.14). From an individual perspective, language competency has been conceptualized as a critical human capital to perform well in workplace and a key factor for career success (Brannen et al., 2014; Itani et al., 2015). In this regard, a body of research explores the relationship between language skills and labour market outcome in country-specific settings, such as career mobility (Itani et al., 2015), wage premium (Miranda & Zhu, 2013), and employment opportunities (Alho, 2020; Dustmann & Fabbri, 2003; Schmaus, 2020; Frank, 2013).

Among various labour market research, scholars have also found a positive link between individual language ability and employment opportunities. For instance, Dustmann & Fabbri (2003) investigate the effects of language proficiency on employment possibilities and earnings of non-white immigrants in Germany. Their data analytical results show that language competency is positively connected to the employment probabilities and occupational achievement, with an employment advantage of about 17% for fluent English speakers. Corresponding to the competitive edge, a body of research have shown that the inadequate knowledge of host-country language is associated with lower employability. A similar finding is observed from the research of Frank (2013), who argues that fluency in official language plays positive effects in the job searching process for immigrants in Canada. After interviewing 31 international students about their job searching experiences in Finland, Alho (2020) discovers that graduates with inadequate Finnish fluency usually have considerably less competitive edge in job acquisition. Interestingly, through OLS analysis, Yao & van Ours (2015) found no clear indication of a link between Dutch language fluency and labour market outcome for male immigrants in the Netherlands. One of the explanations is that the vast majority of the Dutch population are able to hold a conversation in fluent English. This body of research have provided rich empirical evidence that host-country language proficiency is strongly linked to immigrants' employment success.

From the standpoint of organization, language has been highlighted as a key construct for multinational corporations (MNCs) research in international business and organizational research over the years (Brannen et al., 2014; Piekkari et al., 2005). Due to the increasing globalization of business tasks and resources, English has become a *lingua franca* in

many multinational corporations in an effort to enhance communicational efficiency across geographically diverse units (Fredriksson et al., 2006; Neeley, 2012). Employing the common corporate language is aimed to “harmonize internal and external communications” (Piekkari & Tietze 2011, p.267).

An early case study of Rebecca et al.(2005) found that the common corporation language policy could impact recruitment decisions. The case study has found that after two Nordic companies finished a merger across national boundaries, they needed to establish a new language competence system due to changes in common language policy. One of the solutions was “buying in” language by hiring the talents who are capable of targeted language skills -- “*Competence in English and Swedish was made a prerequisite for new recruits* “ (p.339). Some studies have also explored the reasons why companies in non-native English-speaking areas value the foreign language assets from employees, which could relate to the consideration of less training cost, the concerns of language barriers in international exposure, and the aspirations of global business success (CILT, 2006; Piekkari et al., 2014). Thus, companies are keen to state explicit language requirements on job ads with an attempt to screen competent candidate. The emphasis on language skills in hiring practices could be clearly deciphered from the respondents of ELAN study by CILT (2006) in the European context. In addition, an interesting finding by Muukari(2008) has discovered that employers weight the language skills in recruitment process differently. One HR manager from Finland does not stress the importance of foreign language skills in the hiring process, rather, this manager put emphasis on candidates’ attitude on whether they are well-prepared to continuously improve their language ability. Muukari (2008) also analyzed the language requirements on internal job advertisement in Handelsbanken—a Swedish bank company. The author has found that the required language skills for entry-level vacancies could be dependent on clientele and geographical features of the business unit (p.88).

On the other hand, in Nordic context, some scholars noticed that some organizations are reluctant to hire foreign candidates without adequate host-country language skills even if they are fluent in foreign languages. The perceived risk of higher training cost, working culture mismatch, communication barriers has been identified as the one of reasons

behind the hesitance (Dirdrich et al., 2011; Risberg & Romani, 2021; Shumilova et al., 2012).

Inadequate knowledge of host-country language skills is consciously viewed by employers as a signal of “lower cultural fitting” or inefficient work performance, which might result in a captious selection criterion for immigrants. Risberg & Romani (2021) organizations easily perceive immigrants as a risk of lower efficiency at work due to their inadequate dominant language proficiency, therefore they are less willing to hire immigrants even they are highly skilled in other qualifications. Similar documentation from Shumilova et al., (2012) also highlights the relationship between host-country language skill and the reluctance of employers to hire foreign candidates, “ *if you hire the foreigner who doesn't speak Finnish, this will make the work in whole team more complicated. Because they have to change the language for one person. That is something really preventing the manager to hire, because they have to think how much extra work we have to do because of one person.* ” (p.80) Diedrich et al. (2011) also discovered that, regardless of the type of duties and work, local language competency is becoming increasingly crucial for employment in Sweden. Similarly to Romani et al. (2019), a case study with a Swedish company indicates that the host-country language communication ability is considered as a sufficient condition to get employed and fit into the organization. One of the reasons behind fluent Swedish requirements is the similarity-attraction mechanism when local workers think that “*when we can choose, we choose Swedes; we are comfortable with Swedes*” (p.383). According to the current research from both sides, it seems that the role of language is multifaceted on the labour market with both “pros and cons” in terms of employment boosting.

2.2 Discrimination studies

2.2.1 Types of discrimination

Discrimination has received wide attention from the fields of social psychology, organizational behaviour and international human resource management. To understand why and how discrimination occurs, researchers propose a variety of conceptual explanations. Foundational theory about discrimination includes conflict theory (Wilkinson & Tomaskovic-Devey, 1996) and social identity theory (Tajfel, 1978; Tajfel

& Turner, 2004). In conflict theory, discrimination is commonly defined as a pattern associated with inequality and operated by the majority group with the aim to protect scarce resources and exclusive privileges. Drawing upon this protective logic, discriminatory practices reflect the power inequalities behind the employment exercise. In the place of social identity theory, scholars suggest that social groups are categorized based on intragroup similarities and shared attributes, which could be used to explain the differential treatment on the basis of group identification. Furthermore, people are keen to accept their fellow group members who share common characteristics in a positive light, which may contribute to intergroup prejudice (Reskin, 2000). Similar deductions are also made by Goldberg (2005) and Jasinskaja-Lahti et al. (2012), who state cognitive discrimination is about the positive attitudes towards members of in-groups (majority) and the negative judgment towards members of out-groups (minority).

In labour market context, a stereotype is a form of biased evaluation that leads employers to assign negative impression to certain groups of applicants and make decisions based on their shared characteristics rather than individual abilities. In this regard, employers could easily perceive some group traits such as ethnicity, gender, age, or mother-tongue language as a symbol of the 'outgroup', and prone to viewing the 'outgroup' as a signal of lower productivity, potential communication problems, and cultural differences (Jasinskaja-Lahti et al., 2012). When employers consciously expect large differentials in productivity between groups based on attributes such as gender or age, they are more likely to post restrictions on job advertisements which might result in the employment discrimination (see the empirical studies from Kuhn & Shen, 2013; Wu et al., 2018).

Another type of discrimination is known as *statistical discrimination*, which argues that discriminatory behaviour on the labour market stems from sociological prejudice and is enhanced by informational asymmetry (Phelps, 1972). Although employers usually conduct various selection methods to screen appropriate candidates, imperfect information exaggerates the costs of gathering information for all applicants (Aigner & Cain, 1977). As a consequence, employers tend to rely on subjective considerations or preconceptions (e.g. underestimating the work performance of women or some ethnic groups) to control the costing during the hiring process.

Related to the social identity and statistical theories, discrimination is usually associated with people's consciously biased evaluation and prejudice towards minority groups. Along with this stream, scholars have defined a certain form of discrimination as direct, explicit attitudes or actions towards targeted groups. Tomei (2003) introduces the concept of direct discrimination – 'rules and practices explicitly exclude or give preference to certain individuals solely on the basis of their membership of a particular group' (p. 402) and interpreted the cases in which job requirements overtly prevent groups of people with certain characteristics from applying. Wu et al. (2008, p.773) further develop the notion of overt discrimination –“employer systematically and explicitly requires of job candidates a particular ascriptive characteristic that is not intrinsically related to work performance”, such as gender and age. In this regard, direct or overt discrimination could be linked to recruitment operation of established procedures to intentionally exclude a particular group of applicants. To be notice, the concept of language is multifaceted and nuanced in organizational context, which is difficult to be categorized in an exclusive definition in strand of labour market management studies. More academic and practical discussion will elaborate in the following sections.

In some cases, discriminatory behaviour may not derive from conscious and explicit attitudes. Instead, relevant literature show that discrimination could be implicit, subtle and outside of employers' awareness (Bertrand, Chugh & Mullainathan 2005; Jones et al., 2016; Rooth, 2010). Some theories about the labour market discrimination are listed in Table 2. Rooth (2010) argues that implicit discriminations are often a result of unintentional but automatic negative associations towards minority. Subtle discrimination, including indirect, unconscious and implicit attitudes or behaviours, is difficult to detect in real-life situation but nevertheless harmful to subordinate group (Jones et al., 2016).

Table 2: Types of discrimination on the labour market

Types of discrimination	Author(year)	Description
Statistical Discrimination	Phelps(1972)	The perception of certain groups are related to sociological prejudice on their “average performance”
Implicit Discrimination	Bertrand, Chugh & Mullainathan (2005); Rooth (2010)	Unconscious or unintentional but automatic negative associations towards minority
Overt Discrimination	Tomei (2003); Wu et al. (2008)	Explicitly exclude individuals solely on the basis of their membership in certain groups

The audit studies from Rooth(2010) & Bertrand, Chugh & Mullainathan (2005) provide empirical evidence of implicit discrimination by examining the relationship between implicit association test (IAT) scores and employers’ hiring responses. Based on the finding, Rooth (2010) develops the idea that employment discrimination could be activated through both consciously biased attitudes and unconscious reactions, therefore, overt discrimination and subtle discrimination may be interwind in the hiring process.

Besides the typical types of discrimination, Ng(2007) introduced the idea of justification of discrimination – a justified statement of employment requirements that legally and subtly rule out other target groups. As Ng (2007) points out, language-based discrimination could be linked to both types of discrimination – overt and subtle forms when employers legalize language requirements to exclude foreign job seekers from consideration. The author believes that power inequalities exist behind language use when people utilize the language to enact discrimination in subtle forms and also routinize it in everyday discourse. In terms of *justification of discrimination*, Ng (2007) gives examples regarding different forms of discrimination at the workplace -- language requirement is being regarded as justified at the beginning, however, when the statement of specific language skills becomes legalized or routinized, the subtle discrimination against other target groups is concealed under the cover of language requirements. In this case, linguistic justification for discrimination can easily be used in the service of employers who want to rule out certain groups of applicants. “*legally, that it is not the*

applicants' national origin that disqualifies them but their failure to meet the language requirement.”(p.108). It is also notable that when implementing the language policy practices, some employers may simply follow recruitment conventions without meaning to discriminate, in which the language practices is unintentional and unawareness.

Since labour market discrimination is a relatively nuanced and multifaced concept in the streams of social psychological and managerial research, understanding various theories and forms of discrimination could contribute to a more structural review of the origins and logic of discriminatory treatment as well as the disparities in labour market outcomes. Researchers are striving to classify it on different grounds that could describe group features. In terms of the labour market discrimination, the disadvantaged situation of job seekers has typically been linked to grounds of gender, age, ethnicity, language skills, unemployment period, and local working experience (Jasinskaja-Lahti et al.,2012), among which the ethnicity and language competency are highly intertwined concerning the immigrants' employment issues.

2.2.2 Discrimination in hiring decisions

On the labour market, discrimination towards ethnic minority groups usually occurs at the recruitment stage. Thus, scholars conduct various studies to identify the discriminatory patterns and illustrate the rationale behind the discrimination in hiring decisions. Within this body of studies, two major research focuses prevail: – individual traits (Ahmad, 2021; Booth et al., 2012; Fernando, 2016) and employers' characteristics (Almeida et al., 2015; Fernando et al., 2016; Oreopoulos, 2011; Risberg & Romani, 2021). Those two aspects are frequently intersectant: micro-level individual traits (e.g. ethnicity, language skill, professional background) are used in identifying pattern of employment discrimination that shapes employers' evaluation of immigrants; the attributes of employers also affect how they value the individual traits during the hiring process(van Harten et al., 2017). Furthermore, as Tharenou & Kulik (2020) point out, analyzing the influence of organizational attributes (e.g., size, industry, diversity of team member and international exposure) could enhance evidence-based understanding of employability for contemporary business corporations.

An important exploration is to see how employers' subjective perceptions play a role in

the decision-making process. Based on theoretical explanations of relation risk, businesses protect themselves from risk by engaging in discriminatory behaviour and being reluctant to hire workers with immigrant backgrounds. Earlier research relates to the theory of risk, for instance, Chapman & Iredale (1993) characterized the recruiters as risk-adverse and prefer to hire ‘domestically trained person’ (p. 380).

A related example is Almeida et al. (2015), who conducted an interview to investigate the phenomenon of migrant skill underutilization, looking at the factors that influence employers’ preferences and opinions on the suitability of a candidate in Australia. Their findings demonstrate that a belief from employers -- ‘perception of fit’ may link the individual features (e.g. ethnic and heavy accents) to a negative perception of cultural fitting at work, which puts immigrants at a disadvantaged status on the labour market. Following up on Almeida et al. (2015)’s views, Risberg & Romani (2021) enriched the understanding of immigrant employability discrimination from organizational aspects, highlighting a protective logic of organizations within the relational theory of risk. According to their case study of a Swedish company, immigrants are implicitly perceived as a risk of lower efficiency and a threat to normality at the workplace due to “the level of their unknown skills and competences, their local language proficiency, their cultural differences, and their general unfamiliarity”(p.16).

In some cases, employers are prioritizing the local candidates in recruitment decision-making process if they discursively believe hiring migrants signifies something unknown and risky– which can be expressed in this quote by an in-depth interview in Risberg & Romani (2021, p.13) “*But if it is [a] local company (...) why would they hire someone, even with higher education, but who is not a Swede? Why? it’s safer, more comfortable, more convenient for them to take Swedes.*” This could be also mirrored in a panel discussion by Piekkari et al. (2022), where a panelist commented that “*The fear of the unknown is keeping companies from hiring foreigners, not only the language*”.

A study by Dirdrich et al. (2011) provides insights into how the competency and skills of immigrants are being evaluated by employers through the process of classification, where the signals of “Swedishness” are implicitly valued and features of “non-Nordicness” are depicted as outside the norms or deviation from the majority. In this process, “*Language*

was used to indicate 'Swedishness' ...and to discern 'the Other'” (P.284). The perception of deviancy towards migrant workers usually leads to or reinforces ethnic-based structural discrimination on the local labour market (Romani et al., 2019).

As stated above, there is the implicit assumption behind employers' hiring norms that recruiting foreign workers is an indicator of cultural unfitting and poor work performance. Thus, one of the major reasons companies are reluctant to hire foreign workers is because employers are concerned about the risk of not adapting to organizational working culture and a risk of lower productivity than local employees. Conversely, the preference of hiring locals may come from a subconscious sense of familiarity and safety. Rooth(2010) provides further evidence on the relationship of automatic and implicit associations of immigrants and discriminatory hiring practices through an empirical analysis. These negative implicit associations reinforce the stereotypes about immigrants' working performance. According to Rooth(2010)'s research findings, when the automatic negative association get stronger, employers are more reluctant to hire candidates with foreign backgrounds.

One of the mainstream research analyzing influential factors focuses on organizational features or structure. Almeida et al., (2015) and Risberg & Romani (2021) both support the views that organizational attributes -- size and the international orientation – influence employers' attitudes in hiring migrant candidates. According to a panel discussion about the employability of skilled migrants professionals in Finland (Piekkari et al., 2022, Panel discussion), hiring foreign-language speakers appears to be challenging particularly for organizations that are lack of experienced in international recruitment and not accustomed to using English in workplace. The study of Almeida et al., (2015) provides a novel lens to explore the interaction between organizational and applicant attributes in a specific industrial setting -- IT industry, and their results indicate that the decision markers with lower diversity exposure are less willing to recruit skilled professions who exhibit immigrant-related factors in religion, accent and non-Anglo names. On the other way, evidence also found that the higher degree of international diversification the top executive team is, the more likely they are willing to hire a foreign candidate (Nielsen & Nielsen, 2010). Regarding the occupational or industrial effects, current studies do not draw consistent conclusions about discriminatory differences. In Rooth(2010)'s

empirical analysis, the association of implicit stereotypes with ethnicity-based labour market outcomes (call-back rates) was not showing statistically differences across different occupations. On the other hand, some scholars suggest the observation that immigrants have less impediments to employment in high-tech industries. It could be the reason that technical qualifications and skills are more easily transferrable across social or cultural boundaries (Hall & Sadouzai 2010; Kostenko, Harris & Zhao 2012).

2.3 Research on immigrant's employment

2.3.1 Inequality in labour-market outcomes

Immigrants' employment study usually lies in the intersection of labour market research and discrimination discussions. Recent studies offer evidence of discriminatory tendencies towards immigrants and examined their disadvantages on the labour market compared to host-country applicants in Europe, such as Finland (Ahmad, 2020; Heikkilä 2005; Liebkind et al., 2016), Sweden (Carlsson & Rooth, 2007; Carlsson, 2010; Vernby & Dancygier, 2019), Norway (Brekke, 2006; Midtbøen, 2015), Netherlands (Andriessen et al., 2012), Germany (Schmaus, 2020). Most of the studies have shown that there are different levels of discrimination on the local labour market which further leads to inequalities for immigrants' employment chances.

Migrant workers are usually in a disadvantageous position compared to native workers. Drawing upon the concerns of employment opportunities for immigrants, researchers have investigated this topic using different approaches, such as in-depth qualitative interviews (Risberg & Romani, 2021), correspondence testing (Ahmad, 2020; Carlsson, 2010), surveys (Almeida et al., 2015; Dustmann & Fabbri, 2003; Shchegolev, 2016) etc. Most of them have reached the same conclusion: prejudice against immigrants from employer generates a variety of barriers and limits their access to jobs on the labour market, one of the direct outcomes will be unequal job opportunities between local candidates and foreign applicants.

Closer to our target group – international students (IS), Alho (2020) explores foreign students' job search experiences and examines the factors that contribute to their difficulties in finding work on the Finnish labour market; a study by Wilken & Dahlberg (2017) provides a similar conclusion that employment opportunities between

international students and local students are unequal. IS in Denmark struggling to secure a job in the local labour market, and some of them even “get trapped in semi-legal employment or low-status, low-paying positions”(p.1347). Another similar finding was previously demonstrated by Brekke (2006) in the context of Norway.

Regarding the methodology, researchers analyzing employment discrimination usually conduct a qualitative interview, case or audit study, and corresponding test to examine in the realm of social psychology and human resource management. One of the predominant methods that scholars use to investigate the occurrence of ethnic discrimination in the recruitment stage, is a field experiment called correspondence testing (Booth et al., 2012; Zschirnt & Ruedin, 2016). Practically, scholars using correspondence field experiments will send fictitious CVs to companies while varying only one target variable—such as ethnicity-sounding names. (e.g. Booth et al., 2012; Zschirnt & Ruedin, 2016). With this method, some literature provide experimental evidence that applicants with foreign names are less likely to be invited to an interview than local job seekers, such as the research of Ahmad (2020) and Booth et al.(2012). Zschirnt & Ruedin (2016) conducted a meta-analysis of 800+ correspondence experiments over the last 25 years, their research results show that on average, minority candidates with equal credentials would need to submit 50% more applications than majority candidates in order to be invited for a job interview (p.1122). The method of correspondence testing could give quantitative signs of how employment discrimination occurs in country-specific settings.

Both Brekke's (2006) study and Ahmad's (2020) experimental results demonstrate that candidates with foreign names will have greater difficulty being selected at the recruitment stage in Nordic nations. In the Finnish setting, the result of Ahmad (2020) has shown that candidates with foreign names experience more obstacles in the job-seeking stage simply because of their ethnic symbols shown in the applications. Similarly, Jasinskaja-Lahti et al. (2012) performed correspondent tests to assess the amount of ethnic discrimination at the hiring stage. The authors noticed that Russian candidates have to submit two times of applicants than Finnish candidates in order to be invited to a job interview. In general, a set of research offers indications that in Finland, varying degrees of employment discrimination exist against immigrants and the related negative impact on migrants' chances of getting qualification-matching jobs (Alho,2020; Laine, 2017;

Shumilova et al., 2012;). Further detailed reviews of the Finnish labour market will be elaborated on in the following subsection.

Besides, the link between immigrants' employment and language challenge is one of the recent research trends that has sparked increasing recognition in the stream of international labour studies (Almeida et al. 2015). In the majority of correspondence testing, scholars usually designate that all applicants have equivalent language fluency in their research design, therefore, the findings from those experiments usually do not specifically emphasize on language-based discrimination. On the other hand, in some social psychology and managerial studies, it is difficult to distinct language skills from the ethnicity, as linguistic information could be inferred from the names or origins of nation from the applicants' information and is a strong proxy for "foreignness" (Schmaus, 2020, p.83). A follow-up qualitative analysis on both ethnicity and language skill is from Oreopoulos (2011), who conducted both correspondence testing and audit studies to explore why immigrants suffer from a lower call-back rate in Canada. The author has found that after applicants sent identical resumes (only varied in names) to companies, responded employers expressed their subconscious concern about the association between foreign-sounding names with insufficient language abilities. "Foreign sounding names may be overlooked due to a perception that their English language skills may be insufficient on the job site..."(p.166). Although employers state that their concerns about language skills are related to working productivity, Oreopoulos (2011) still addresses that the likelihood of underlying discriminatory patterns could not be ruled out and the considerations of language issues in immigrants' employment problems should not be disregarded.

Many studies prove that employment opportunities are crucial to the process of integrating skilled immigrants into local society (e.g. Hajro et al, 2019; Jasinskaja-Lahti et al., 2007). Their research commonly implies that perceived discrimination on the job market will negatively influence immigrants' psychological well-being and impedes their socioeconomic integration (Carlsson et al., 2018; Midtbøen, 2015).

The inequalities existing on the labour market is not only a problem for individuals, but also for organizational and national competitiveness. Immigrants with specialized skills

are seen as a “source of strategic value for organizations” (Zikic, 2015) and the ideal workforce to fill the labour shortage (Scott et al. 2015). At the country level, a large body of literature supports the favorable benefits of attracting international talents on the national prospect, technological innovation and productivity improvement (Tharenou & Kulik, 2020; Dorquier & Peri, 2014). Along with the advantages of skilled immigrants’ integration, the literature in the field of international human resource management raises the concerns that it is harmful to social diversity and economic prosperity when less employment opportunities becomes a significant ‘motivation’ that drives competent immigrants to relocate to another country in pursuit of their career prospect.

2.3.2 Relevant studies on the Finnish labour market

This section basically introduces the overall situation in Finland regarding the research topic in language and labour market. The first subsection will summarize and elaborate some key findings about immigrants’ employment and the language problems on the Finnish labour market. The second part will give a brief overview about the research context – Finland in terms of its own landscape in population, employment and linguistic, which plays out Finnish own lingual, cultural and economic characteristics.

The context of Finland

Like many other European countries, Finland is undergoing globalization as well as a steady rise in immigrant population over the years. In Finland, residents with foreign origins stood at around 4.3% of the total population in 2010, while the proportion of foreign background groups has doubled to approximately 8% in 2020. Immigrants are mainly living in the Metropolitan region such as Greater Helsinki area (Statistics Finland, 2020). The varied ethnic composition also brings a linguistically diverse and heterogeneous landscape. At the same time, ageing problem and lack of labour force issues are widespread in European countries including Finland (Statistics Finland, 2021a).

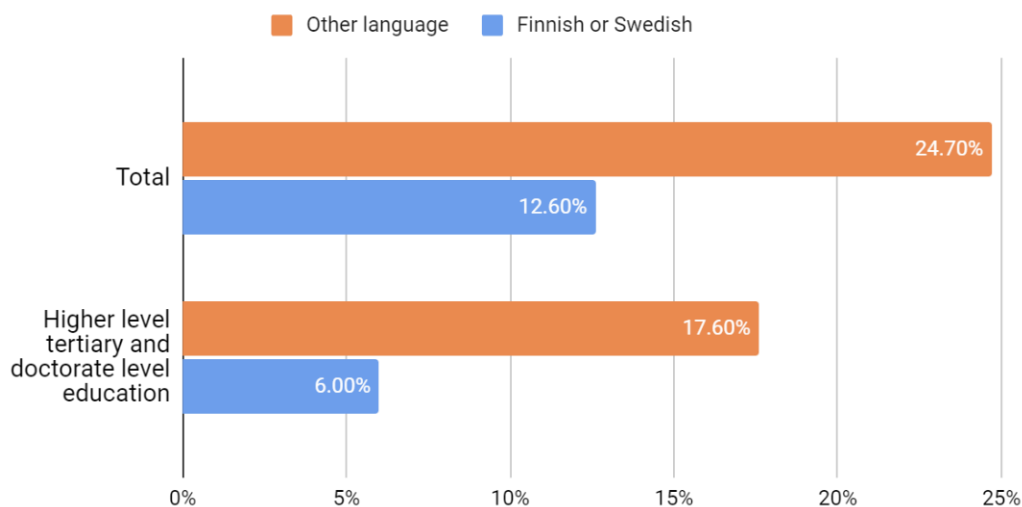
As one of the non-English speaking Nordic countries, Finland is a bilingual country with official languages in parallel use– Finnish and Swedish, which provides an academically interesting and practically useful research context. Surprisingly, the number of residents who speak Swedish as their first language accounts for only about 5.2% of Finland's total population. If we look at the number of foreign-language speakers, 7.8% of the whole

country’s population speak foreign languages as their mother tongues. The major foreign-language speaking groups refer to Russian (84,190), Estonian (49,551), English(23,433) and Suomalai (22,794). Although the native English speakers constitute a relatively small share among those groups, it is widely acknowledged that the average level of English proficiency is quite high in Finland. Geographically, the number of people with foreign native languages is multiplying rapidly in the capital region of Uusimaa, sharing a highest 15% of the population in 2020.

First, some facts and numbers should be noticed to unearth the labour market’s dynamics at organizational and national level. While a diverse set of employment-boosting programs and seminars for immigrants have been recently carried out to foster the diversity and inclusion in Finland, the disparities of labour market positions are still noticeable between the local and foreign groups. As shown by different indicators, the employment opportunities for immigrants are markedly lower than the local job seekers.

Secondly, both immigrants and native Finns have a lower unemployment rate when their general education level is higher. In December 2021, the unemployment rate was 24% among foreign-language speakers and 12.6% among Finnish or Swedish speaking residents in Helsinki(Statistics Finland, 2021b). The difference in employability is even greater by the educational level. The unemployment rate for foreign-mother-tongue groups with higher education is 17.6%, compared to 6% among native Finnish or Swedish

Figure 1: Unemployment rates by mother tongue and education level in Helsinki in Dec 2020



*Source: Statistics Finland

speakers (see Figure 1), which indicates educated immigrant groups are still at employment disadvantages compared to the Finnish majority.

At a national level, the unemployment rate for foreign-born labour aged 15-64 in Finland was 10% in 2019 (OECD, 2022), higher than many other European countries such as Norway(7.4%) and Denmark (8.4%). At the same time, the employment analysis concerning the employability to the group of international graduates are relatively scarce, such as the employment rate or the salary level upon graduation.

In Finland, the service sector employs the majority of the workforce and is expected to grow in the future. The industrial, technology, artistic, administration sectors account for the majority of unemployment. Interestingly, according to Statistics Finland (2021b), the number of working-age people employed in the fields of “Information and communication, Professional, scientific and technical activities” have considerably increased by 35% from 2010 to 2022, while many other occupational sectors are seeing a downtrend. Turning to the trace of international graduates’ employment in Finland, the most recent Vipunen (2019)’s report data demonstrates that there are considerable discrepancies in employment status across various occupational groups. Graduates in education and arts background are much less likely to stay in Finland with the lowest employment rate (less than 25% and 40% respectively). In contrast, more than 50% for engineers and ICT professionals are employed one year after graduation.

Empirical findings on the Finnish labour market

A diverse set of research has stated that foreign workers suffer from the discouraging employment landscape and have experienced different levels of discrimination on the Finnish labour market – some major findings are summarized in Table 3.

Table 3: Summary of previous research on the Finnish labour market

Topic	Author(s)	Key findings	From the perspective of
International students' employability	Alho (2020) Laine (2017); Mathies & Karhunen (2021); Shumilova et al. (2012)	The primary hurdles to international students finding qualification-matching employment have been highlighted as a lack of local language skills, social ties, and work experience.	Individual
Immigrant employment	Heikkilä (2005); Leinonen (2012)	One of the biggest challenges experienced by foreign labour-market entrants is a lack of language ability	Individual
	Ahmad (2020)	Even equally qualified, applicants with foreign backgrounds received far fewer invitations to job interviews than native candidates; the degree of discrimination is not evenly dispersed among immigrant groups.	Individual
language skills and career mobility	Itani et al. (2015)	Good language skills are positively associated with individual career mobility (for native language speakers)	Individual
workforce situation and attitudes of employers	ELY-keskukset (2020)	Only a few organizations are willing to hire employees who are not fluent in Finnish; More than a half of them believe Finnish is a key factor to perform well at work	Organization
	Barona (2021)	Many organizations identified language as a major obstacle to utilizing international workforce; Finnish is the most common corporation language in the interviewed companies (96%)	Organization
Policy review about international students' recruitment strategy	Jokila et al. (2019)	Finnish language skill is important for immigrants' social integration; local employers should provide more language training resources for foreign employees	Nation

As many other European countries, Finnish labour market has been identified with features of ethnic inequalities. A body of literature and reports the disadvantages of immigrants on the Finnish labour market (related studies see Alho, 2020; Leinonen, 2012; Koivunen et al., 2015; Shumilova et al., 2012; as examples), which is stem from the recruitment discrimination and prejudice from employers (Ahmad, 2020; Nichols & Virsinger, 2021). Some of those researches demonstrate that existing inequalities in the local labour market may be linked to immigrants' lack of local networks, work visa limitations, and a lack of proficiency in the host-country language. Heikkilä(2005) also found that the dualism – a job market segmentation was observed in Finland. There seems to be distinct employment sectors occupied by foreign and local workers respectively.

A more recent field experiment carried out by Ahmad (2020), shows that job seekers with foreign names need to submit more applications than candidates with Finnish-sounding names in order to be invited to an interview in Finland. Statistically, candidacies with Finnish names had the highest overall callback rate (39%) from employers, followed by English (26.9%), Russian (22.8%), Iraqi (13.4%), and Somali (9.9%). Besides, discrepancies in labour market outcome vary between ethnic groups on the Finnish labour market. It is notable that applicants with non-European backgrounds experience greater levels of ethnic-based discrimination than other groups. The contribution of Ahmad(2020) is significant as this study provides statistical evidence on how ethnic hierarchies exist on the Finnish labour market as well as relevant disparities in employment chances among immigrants.

Regarding the role of language in the job-seeking process, one of American immigrants in Leinonen (2012)'s interview, who said

“Finding employment as a foreigner has been nearly impossible outside of the Helsinki area. Foreigners are still treated with distrust and suspicion – of course, by law a potential employer cannot tell you that, but he can tell you the position is no longer available, and like other foreigners, I hear it all the time, despite my degree and work qualifications. I also hear about my lack of language skills, which is another well-known excuse that foreigners hear when Finnish employers are xenophobic.” (p. 219)

Getting a job in Finland is difficult for foreign graduates — Mathies & Karhunen (2021) state that rigorous language requirements have become an impediment to their acquittance of skills-matching jobs. Based on the self-report experience of international students, Alho(2020)'s research further confirmed the job market is challenging for international students who are not able to speak fluent Finnish. This is in line with some other studies of Clarke (2020), Jokila et al.(2019) and Shumilova et al., (2012), who all emphasize the importance of host-country language skills for the labour market and social integration in Finland. A survey conducted by Shumilova et al. (2012, p.58) indicates that 90% of the interviewed international students face language barriers in the process of job search in Finland. In this regard, Finnish government is trying to increase employment opportunities by introducing various talent boosting events and extending the expiration of job searching visa for international graduates etc. (Yle, 2022). On a national level, Finland highlights the national strategy for its attempts to attract and retain highly educated talents -- particularly for international master's degree students with limited working experience and host-country language skills.

From the organizational perspective, employers in Finland have developed a propensity for candidates who have a high level of Finnish ability to perform effectively at work, which naturally influences their attitudes and behaviour patterns in the recruitment stage. According to a survey from ELY-keskukset (2020) interviewing 1009 recruiters across the country, only less than a quarter of companies are willing to hire the candidates who don't have fluent Finnish skills, as half of the recruiters consider Finnish fluency to be a key factor to succeed at work. Language use also shapes the linguistic landscape in workplaces. An economic survey commissioned by Barona (2021) mapped the workforce situation and attitudes of 500 business organizations. In their report, 15% of the companies choose Swedish as their organization's official working language, whereas this figure was 96% high for the organizations whose working language is Finnish. In comparison, the number of organizations that use English as an official working language comprises about 40% of all the interviewee samples. At the same time, more than half of the organizations reckoned the language challenges as big challenges related to the use of international labour. Hiring foreign workers seems particularly challenging for firms who aren't accustomed to utilizing English at the workplace or have little experience in

recruiting international talents. Meanwhile, some survey data from a project (ELY-keskukset, 2020) shows that, in 2022, over 50% of the enterprise experiencing labour shortages hopes to employ international talents who are able to speak native-level Finnish.

2.4 Summary

From these reports, a clear tension between employers' language requirements and the employment difficulties of the international workforce could be observed. Finland seeks to attract skilled migrant professionals; at the same time, international graduates find it difficult to get employed because of their inadequate Finnish language skills. Host-country language requirement in the recruitment stage is one of the major barriers that international graduates encounter when they try to enter the local labour market. From the perspective of organizations, employers hope to diversify their workforce while the current situation is that they are being “conservative” in hiring non-Finnish speaking employees. The reasons behind the linguistic threshold are multifaceted and nuanced, in terms of both subjective cognitive processes and objective resource limitations within organizations.

According to current research, immigrant professionals are usually at a disadvantage on the labour market and have less employment opportunities compared to local workers (See Ahmad, 2020; Carlsson, 2010; Midtbøen, 2015 as examples). Some scholars argue that employers' discriminatory attitudes or prejudice, consciously or unconsciously, are one of the major reasons of underemployment problems towards highly educated skilled migrants through various case studies or empirical research (Almeida et al., 2015; Bertrand et al., 2005; Risberg & Romani, 2021; Shumilova et al., 2012).

The extensive literature provide clear evidence of the relationship between language ability and labour market outcomes for immigrant (Alho, 2020; Dustmann & Fabbri, 2003; Schmaus, 2020). Some scholars have also identified the discrimination patterns in the recruitment process based on the grounds of ethnic origin (Zschirnt & Ruedin, 2016) as well as employers' concerns about immigrants' local language proficiency (Ng, 2007), resulting in the inequalities in career chances. The reasons behind the concerns on candidate's language ability and organizational benefits include the subjective perceptions and objective resources allocations within business organizations (Almeida

et al., 2015). However, some questions are yet to be fully understood in terms of the language issues on the job market. First of all, how do language issues in the early stages of recruitment influence international talents entering the local job market? Whether and how language barriers prevalent on the Finnish labour market are being observed on employers' job postings? Moreover, Whether the language skills required therein represent some forms of discrimination? Based on those questions, the subsequent analysis will explore the relationship between international graduates' employment and language skills from the demand side by combining quantitative data with literature comments.

3. Research method and design

This chapter will put emphasis on methodological issues, including data source and collection procedures – from where, when and how I collected the data sample. Following that, a general analytical framework will be clarified to present how the content of the job data is gathered and coded for further analysis. The third section also briefs a recent upsurge of research interest in using online job data for social-economic issues. Specifically, a discussion is carried out about why online job postings are an appropriate secondary data source for my research topic.

3.1 Data collection and content

3.1.1 Data collection procedures

The general research design is to collect online job advertisements and decode the language requirements through content and statistical analysis. From April 2021 to Jan 2022, in total 2,355 job advertisements were collected from an online job portal Aalto JobTeaser. To narrow the scope of job data pertaining to my research topic, I set the selection criteria as “*Location: Finland; Experience: Student/Recent graduate*” and regularly extracted the eligible data into a spreadsheet for further data processing.

JobTeaser is an online platform where the employers actively publish entry-level positions that seek for highly educated talents in Finland. As international graduates are the target group, it is reasonable to gather entry-level job advertisements on an official platform, where students can easily access the job vacancies and quickly check the career opportunities online.

One of the research objectives is to identify explicit language requirements (what kinds of language skills are required and how commonly the employers expect them in the Finnish labour market) and quantify the required disparities across selected sections (such as job categories and organizational types). In this case, the processed data can be utilized to learn how demanding employers are in terms of language skills among the different types of job category or organization. Jobs advertised on different platforms communicates employer's desired credentials and skills about views on an ideal candidate. Therefore, the data source used in this study is directly derived from an online job portal.

The data samples should ideally be gathered from career website where students or graduates can easily access a wide range of job opportunities published by local employers. Regarding employment information, there are some popular online platforms that cover the student labour market in Finland. Several recruiting platforms especially in English service that are regularly utilized by companies and job seekers are listed below:

- a. LinkedIn.com
- b. jobsinfinland.fi
- c. Atalent.fi -- employment agencies
- d. Jobteaser.com -- Universities' career service

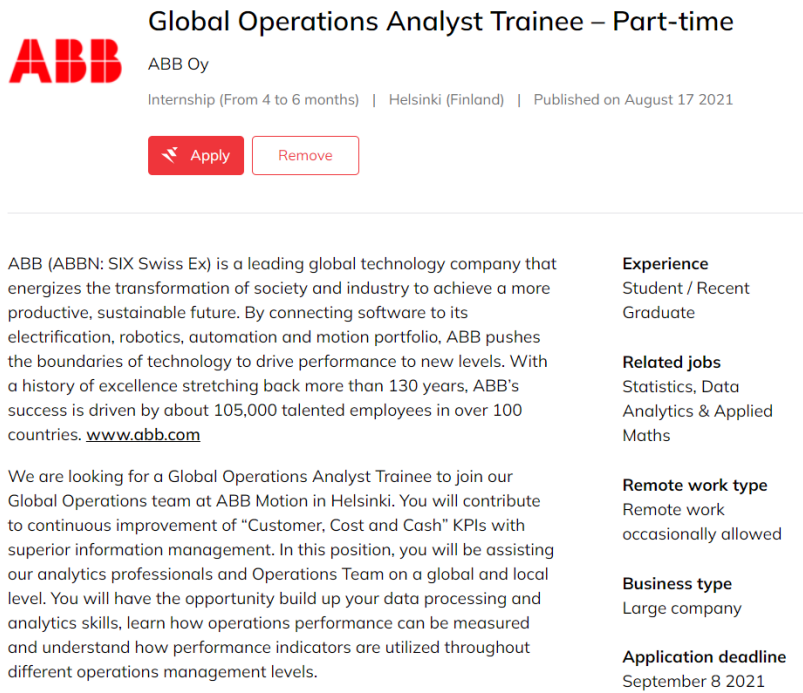
Among those online platforms, it is important to consider which of those web sites have relatively large numbers of jobs that particularly aimed at international students or graduates. Given that considerations, I decided to collect the job advertisements from Aalto university's career portal –JobTeaser. Aalto JobTeaser is an online job brokerage platform that has been in use since 2019 and then updated in November 2020 to collaborate with eight other Finnish universities as well as many universities of applied sciences in Finland.

This means the jobs published on this system are open not just to Aalto university students but also to people from other Finnish educational institutions. Regarding the accessibility concerns, users who have an active student or staff account are eligible to view the job postings and use related job-searching service on this website. That being said, the accessing rules of this job portal ensure a higher level of quality and reliability of the secondary-data source.

3.1.2 Data content

This section will begin with the introduction to the content structure of job ads and what kinds of information will be documented in a structured manner.

Figure 2: Screenshot of job posting on Aalto JobTeaser



Global Operations Analyst Trainee – Part-time

ABB Oy
 Internship (From 4 to 6 months) | Helsinki (Finland) | Published on August 17 2021

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The career website—aalto.jobteaser.com gathers the job vacancies that are comprised of several attributes according to its own classification system. Figure 2 is a screenshot of a piece of job advertisement displayed on Aalto Jobteaser. Table 4 below lists five attribute components which together constitute a general job announcement. The given forms help employers to navigate the job posting process and assist the students in screening the job openings in accordance with their own demands. The content and statistical analysis that follows will be based on those attributes.

Table 4: General information contents of data ads on Aalto JobTeaser

Job Titles	A heading that gives the student enough info and usually include a general idea about the field of duties and related graduate or intern programme
Job Description	Description field usually contain information on the responsibilities and required competence, including the language skills requirement
Place(s)	Location(s) of the job -- country, region or city where the position is located

Job Category	What kinds of professional backgrounds will be included in this job, employers will choose the best suitable alternatives - such as Programming, marketing, web design etc.
Organizational type	There are four alternative that fits into the description of business or organizational scale – <i>Start-up/ SME / Large company/ Government or Charity or Public institution</i>

Source: Aalto JobTeaser Jobs for recruiters guidance document

Those attributes include the job title, location, job category, company name and to which business types of the employers, and detailed job description that contains responsibilities and required competence for which employers expect or require for a qualified candidate. The predefined data frame significantly enables the data extraction in a structured and flexible way. Each job advertisement has been matched to a unique URL address, allowing me to trace the original information on the website and identify uniqueness for all observations. The indicator of job category enables me to deploy detailed controls for the type of jobs and allocate each ad into corresponding occupational groups.

Setting different indicators to filter the job ads allows us to screen data for a specific area. Therefore, in order to focus on a particular national and cultural context, the scope of job ads was set to be located in *Finland*. On JobTeaser, employers need to specify all the cities in which the vacancy will be located, such as Helsinki, Espoo, Tampere etc.

Since the research also aims to highlight the labour landscape for international graduates, on this ground the pre-selection filters have been made to target jobs that are not requiring candidates with years of working experience. The filters are able to confirm the scope of data to a specific labour market segment where employers are mainly trying to recruit students or recent graduates in Finnish educational institutions. The selection criterion also includes the language options for users to screen and narrow down the job vacancies, however, the “language” tags showing on the job ad page could not precisely refer to the versatile language skills required in the position. It is observed that a significant number of the jobs belonging to the English option call for other language skills for qualified candidates. After consideration, the inherent screening criterion of language on JobTeaser’s classification system will not be applied at the data collection stage and not be seen as a proxy for the language expectations. Rather, I will manually parse the job

description content that involves correlating sentences indicating different language requirements.

Data is primarily gathered based on the predefined classification system (location and experience filters) of this job portal and later coded in terms of the language requirements, which will be elaborated further in the next section. All the job advertisement are gathered and recorded between April 2021 and Jan 2022. This is a time period that the clear majority of the companies will post their trainee programmes or intern positions. Companies in Finland usually keep recruiting university students during the spring season all the way to the end of June. The reason behind those fluctuation is that it's the beginning of both a peak season for labour market demand and the economic recovery period. Therefore, part of data bias related to seasonal fluctuation could be reduced by months of observations. There are 2,355 entry-level job ads in total that are compatible with the screening criteria during the observed period. The descriptive data will be further listed in the next *Findings* chapter.

3.2 Analytical framework

One of the main objectives of the research is to better understand the influence that language requirements might place on the number of job opportunities available for international graduates in Finland. Accordingly, employer job advertisements may be useful in demonstrating how language constraints affect the employment prospects of international talent who are not equipped with host-country language abilities.

In order to check the conscious preference towards language skills shown in those job postings, we need to find out two major issues: firstly, the language that used in writing job vacancies before analyzing the detailed statement on language qualifications secondly, the explicit language requirements specified in the job description of English-writing vacancies.

The first step of the analytical process primarily concentrates on the languages (English vs. Finnish) used by employers to compose job description. A job published in English is mainly aimed at international job seekers in terms of the common readability in that language. Since this study is aimed at international graduates, the following analytical

process mainly employed the content and statistical analysis of the English-writing job advertisements. The next critical consideration to examine is whether employers emphasize certain language skills for the collected data sample.

Concentrating on English-posting job vacancies, I parsed content that have relevant meaning with language requirements from job description. Keywords related to working language requirements were extracted and classified into corresponding language clusters. Each posting was tagged in terms of whether or not the position requires Finnish, English or other explicit languages. In this step, all of the observations were coded and classified into different categories of language skillset. secondly, I categorized and matched each job posting to categorial clusters at the occupational and organizational levels. The next step was to calculate and compare the ratio of language skills required by different job categories, and occupational and organizational types.

I also removed some job ads with less than 3 posts for each occupational category, in total, 42 job categories are assessed as being adequately represented in all job adverts.



Figure 3: Classification of job categories into three groups

Additionally, as shown in Figure 3, those job categories will be divided into three major types: *Technology*, *Business* and *Design* depending on the nature of job responsibilities, in order to analyze language demand disparity at the occupational level.

3.3 Online job ads as secondary data source

This part discusses the reasons why this study chose current research approach and compare the adopted method to current approaches in labour market research. There is a new trend of collecting web-based data for the labour market research. Basically, scholars collect the online vacancies data then conduct content and statistical analysis to investigate certain aspects of the labour market, such as summarizing the required qualifications stated by local employers in country-specific setting. (e.g. Capiluppi & Baravalle, 2010; Kuhn & Shen, 2013; Kureková & Žilincíková, 2016).

In line with this tendency, Kureková et al. (2015) commented on methodological issues in the use of vacancies posted online, list the advantages and possible challenges concerning the use of online data compared to other mainstream approaches in analyzing the labour market issues. Firstly, screening available positions from job portals is usually the first step in the job-seeking process, which objectively communicates the employers' preference and requirements for qualified candidates. Employing content and statistical studies on job advertisements can provide a novel lens to better understand the required skill profiles stated by employers. Due to the versatile data content, researchers are able to adjust the research background in various occupational, industrial and national settings, as well as carry out a comparative study on the selected variables. It has been performed as a useful tool to enrich the discoveries in summarizing the employers' preference, "such as the distribution of the need for a certain skill" (Kureková et al. , 2015, p.14). Secondly, this method also shows a competitive edge in terms of collecting a large number of observations at a lower cost than the traditional surveys.

When reviewing the empirical research on labour market research and the extent of employment-based discrimination, methodical approaches can be divided into three major categories: (1) In-depth interview or case study; (2) experimental research which

mainly includes the correspondence experiment; (3) analysis on indirect data such as official statistics and second-hand online job vacancies.

In-depth interview and case study are powerful tools to sketch out the respondent's perception and views of discrimination and explore why employers conduct a certain form of treatment, such as their attitudes and behaviors towards minority groups during the recruitment period. At the same time, some scholars have expressed the concerns about limitation of qualitative interview or case study in looking at macro-level labour market disparities (Wu, Lawler & Yi, 2008; Jasinskaja-Lahti et al., 2012). On the other hand, correspondence testing has been shown to be a useful tool for detecting the systematic prejudice happening in the employment stage. They help to create a real-world environment by documenting response decisions from indigenous employers, resulting in less skewed estimates of intangible discrimination. (Zschirnt & Ruedin, 2016). More importantly, researchers can identify systematic evidence of the subtle discrimination at the recruitment stage by comparing the disparate hiring outcome across different groups (Booth et al., 2012).

Comparing the three methods in the labour market research, all of them have their own advantageous and limitations. Survey or interview research can undoubtedly give an in-depth understanding of the behavior and motivation for specific discriminatory patterns, while it still has some limitations – like being difficult to provide direct systematic differences in labour market outcomes at a macro level. Since the experimental design has been conducted in large-scale real world, the discriminatory effect could be acknowledged by comparing and analyzing the disparate outcomes from employers' reaction towards several targeted groups. On the other hand, the limitations of the correspondence experiment should be carefully considered, especially when the research aims to measure the protentional discrimination expressed in language requirement at the hiring stage. It is noteworthy that correspondence technique is unable to estimate the systematic language requirements from local employers at the pre-recruitment stage. Furthermore, Kureková et al. (2015) suggest the future exploitation of the rich source of online data as an input of labour market research. In order to gain a broad view of the dynamics of language requirements from the perspective of employers.

Methodological concerns are briefly discussed on the use of secondary data source, highlighting both advantages and limitations arising from the use of online job data.

Although there are still some debates over the methodological concerns, labour market research based on online job data is expanding as it presents prominent advantages to systematically understanding employer's preference and skills demand in relation to different variables. Given the trade-off and critical availability for data collection, researchers suggest the future exploitation of this rich source of data as an input of labour market research. My study questions attempt to analyze the content of job advertisements in Finnish labour market and identify explicit language skills that are called for in the pre-recruitment process. In this regard, the vacancy data from online job portal could be helpful in examining the employers' attitude towards international graduate in terms of language competency, from the overall language requirements to variations in specific language skills across occupational or organizational types.

In accordance with the arguments presented above, job vacancy is an appropriate secondary data source that communicates required language skills from the very beginning of the hiring process. With the help of those job advertisements, it is practically feasible to parse the sentences shown in the job ads and calculate the frequency of different language skills listed in job description. Analyzing the qualifications derived from online job openings could not only depict a broad picture of language requirements, but also show detailed variations across a variety of fields.

4. Findings

In general, the findings will first show an overview of the ratio of job postings written in English and Finnish respectively (language version of job description). Then content analysis will mainly focus on job advertisements with English-description that have been sorted out.

4.1 Languages used in job description

In total 2,355 job advertisements were gathered during the 10-month observed period. The result indicates that only 30% of positions are written in English description (705 job ads), while the other 70% of vacancies are posted in Finnish (1650 job ads).

The language employers use in job advertisements could be attracting or discouraging a specific set of candidates from applying. Here this study assumes that using Finnish to write a job ad gives an underlying tone of voice that employers are looking for candidates with a professional level of Finnish reading skills. Similarly, employers using English to write the job listing usually express ideas of requiring English proficiency. Here, Table 5 displays the basic distribution and descriptive features of all the collected job ads written in English and Finnish respectively--by organizational type, occupation, location etc.

Table 5: Descriptive statistics of collected job data

Number of vacancies published in	English	Percentage	Finnish	Percentage
Sum	705		1650	
<i>Organizational type</i>				
Large company	287	38.3%	493	29.9 %
SME	290	38.7%	831	50.4 %
Start-up	73	9.7%	76	4.6 %
Government/ Charity/Public institutions/Others	55	7.3%	250	15.2 %
<i>Number of companies</i>	288		331	
<i>Occupational type</i>				
Technology	346	49.1%	688	41.7 %
Business	317	45.0%	923	55.9 %
Design	42	6.0%	39	2.4 %
<i>Location*</i>				
Helsinki	317	-	221	-
Espoo	169	-	127	-
Tampere	134	-	75	-
Vantaa	50	-	44	-
Turku	40	-	30	-
Lahti	45	-	17	-
Jyväskylä	6	-	15	-
Hyvinkää	49	-	29	-

**Employers can select multiple locations for each job posting*

Around 70% of the positions are only posted in Finnish which is more than three times the number of English-posting vacancies during the data collection period, suggesting vacancies on Aalto JobTeaser mainly have intended to screen Finnish-speaking candidates. The figures in Table 5 lead to the second discovery, which links employers' characteristics to language dimension – acknowledging the ratio of language use (Finnish vs. English) in the job description field.

From an organizational standpoint, except for Start-ups, all other three organizational types have listed significantly more vacancies with job description written in Finnish than in English, especially small-and-medium-size enterprises (SMEs). Meanwhile, Start-ups have posted a fairly even number of job ads written in both English and Finnish. It indicates a phenomenon in which SMEs prefer to use Finnish in writing the job advertisements and start-ups have no obvious preference for the language used to post vacancies. Interestingly, for the collected Finnish-writing job data on Aalto JobTeaser, SMEs (50.4%) also post more than half of the positions, followed by large companies(29.9%) and Government/Charity/Public institutions/Others(15%). The pronounced bias is consistent with the fact that the majority of enterprises in the Finnish business ecosystem are SMEs (Statistics Finland, 2016). According to the data shown at an organizational level, two key findings are listed below.

Next, related descriptive data indicates that employers have published more English positions in technical domains (49.1%) than in business(45%), while conversely, more than half of Finnish positions lie in the field of business. According to the statistics, English job ads mostly concentrate on the sector of Technology (49%), followed by Business (45%) and Design (6%). Surprisingly, the number of design-related jobs advertised on JobTeaser is relatively low for both English and Finnish positions. This could be interpreted that the overall career options on Aalto JobTeaser are comparably limited for graduates who want to search for jobs in design or art domains. The number of English and Finnish job postings by locations is displayed in Table 5 as well. Geographically, most vacancies (both in English and Finnish writing) are available in the

capital region (Uusimaa-Helsinki) – Finland’s most populous and economically active region.

4.2 Explicit language requirements

The explicit language requirements will be further clarified in the subsequent analysis on the 705 entries of English-writing vacancies. On this step, I calculated the ratio of language-specific skillset for all English-posting announcements to decode the explicit language requirements. The percentage share of required language “package” is displayed in Table 6.

Table 6: The composition of different language requirements for all English-description job ads

Language requirements	Amount	Percentage
Only English	243	34.5%
Not specified	142	20.1%
English and Finnish	190	27.0%
English, Finnish is a plus	72	10.2%
Swedish is a plus or required	32	4.5%
Other European languages required	26	3.7%

Before looking at the explicit demand data, it is noticed that the vast majority of the job advertisements that state working language in *Finnish and English* usually come with descriptive words like “fluency, professional, native level, good knowledge/communication skills”, which means potential employees are expected to fully master Finnish or at least communicate smoothly during daily conversations, rather than an intermediate or basic level of Finnish skills. The keywords used in my collected job data are in well line with the findings of Muukari (2008) who collected and analyzed the internal job vacancies in a Nordic bank company.

The first thing to notice is that one-fifth of job ads do not specify any required knowledge in language as selection merit. In the targeted data sample, the absence statement in requiring language abilities falls into the third-most category, followed by Only English and English and Finnish. This may indicate that many English-writing occupations do not

require explicit language ability from applicants. On the other hand, explicit language requirements appeared in about 80% of all English job postings, giving scope to a variety of explicit language skills that are clearly demanded by employers. This ratio is a relatively high number compared to some similar studies, for instance Beblavýet al. (2016a) found that 38% of the collected job ads from a Slovak job portal specified requirements of language knowledge, a related study by Fabo et al. (2017) also states that requirements of English language fluency have shown in 52% of the observed vacancies for the four countries in Visegrad region. Outside Europe, an analytical study Beblavýet al.(2016b) shows that only 16% of job vacancies from employers in America explicitly require language skills. On the whole, the ratio of explicit language skills may manifest a strong indication that Finnish employers value and appreciate language ability during the recruitment process, which is consistent with the project findings of CILT (2006) in European context.

To structurally summarize employer's nuanced attitude, "Only English" and "Not specified" were grouped into the category "English is enough". Because the absence of a prerequisite in an English-writing advertisement implies that the employer just requires English competency. Thus, for all English-writing jobs, in total 54.5% of job ads only request proficiency in English language abilities.

What followed next – is the bilingual requirement with high-level fluency in English and Finnish. On average, 27% or more of the analyzed job ads call for good working proficiency in the Finnish language. The professional level of Finnish skills is seen as an advantage besides English, came in the third-place (with 10.2% share), indicating that there are a fair number of positions that either strictly requires or clearly encourage Finnish fluency. Surprisingly, as the other official languages in Finland, Swedish is not extensively stated as a requisite or desired language ability, accounting for less than 5% of all English-writing jobs. In conjunction with the report findings from Barona Economics Research (2021) -- 15% of the companies adopt Swedish as their organization's official working language, here my findings suggest that Swedish language ability is still not widely featured as a screening criterion for entry-level jobs in Finland.

When a position states “Finnish is considered as a plus”, it means that fluency in Finnish is not required, but would be beneficial for the applicants. Some of the job ads also specifically state that Finnish knowledge will be seen as a great asset. In other words, enterprises with a strong tone of voice on “though, Finnish is a big advantage” might be still inclined to hire Finnish-speaking people than foreign candidates. Some other languages commonly used in European such as French, German, Spanish, and Russian are requested in 3.7% of the English-writing positions, which is also similar to the analytical results of Fabo et al. (2017) identifying that around 2% of their acquired job data requires French, Italian and Spanish in the Visegrad region. After the identification of six required skills, I calculated the number of posts available for three occupational types, as well as their corresponding percentages (Table 7). The data shows that language requirements vary significantly by the occupational types– Technology, Business and Design.

Table 7: Specific language requirements differ across three language occupational types

<i>Occupational type</i>	<i>TECHNOLOGY</i>		<i>BUSINESS</i>		<i>DESIGN</i>	
Language requirements	Amount	Percentage	Amount	Percentage	Amount	Percentage
Only English	140	40.46%	91	28.7%	12	28.57%
Not specified	93	26.88%	34	10.7%	15	35.71%
English, Finnish is a plus	46	13.29%	21	6.6%	5	11.90%
English and Finnish	54	15.61%	126	39.7%	10	23.81%
Swedish is a plus or required	8	2.31%	24	7.6%	-	-
Other European languages required	5	1.45%	21	6.6%	-	-
SUM	346	100%	317	100.0%	42	100.00%

Tech-related positions commonly require only English or do not specify the language requirements showing a high level of accessibility to international talents. Careers in technology are more accessible to English-speaking individuals, with more than 66% of jobs stating that "English is enough". In comparison, demanding for Finnish language

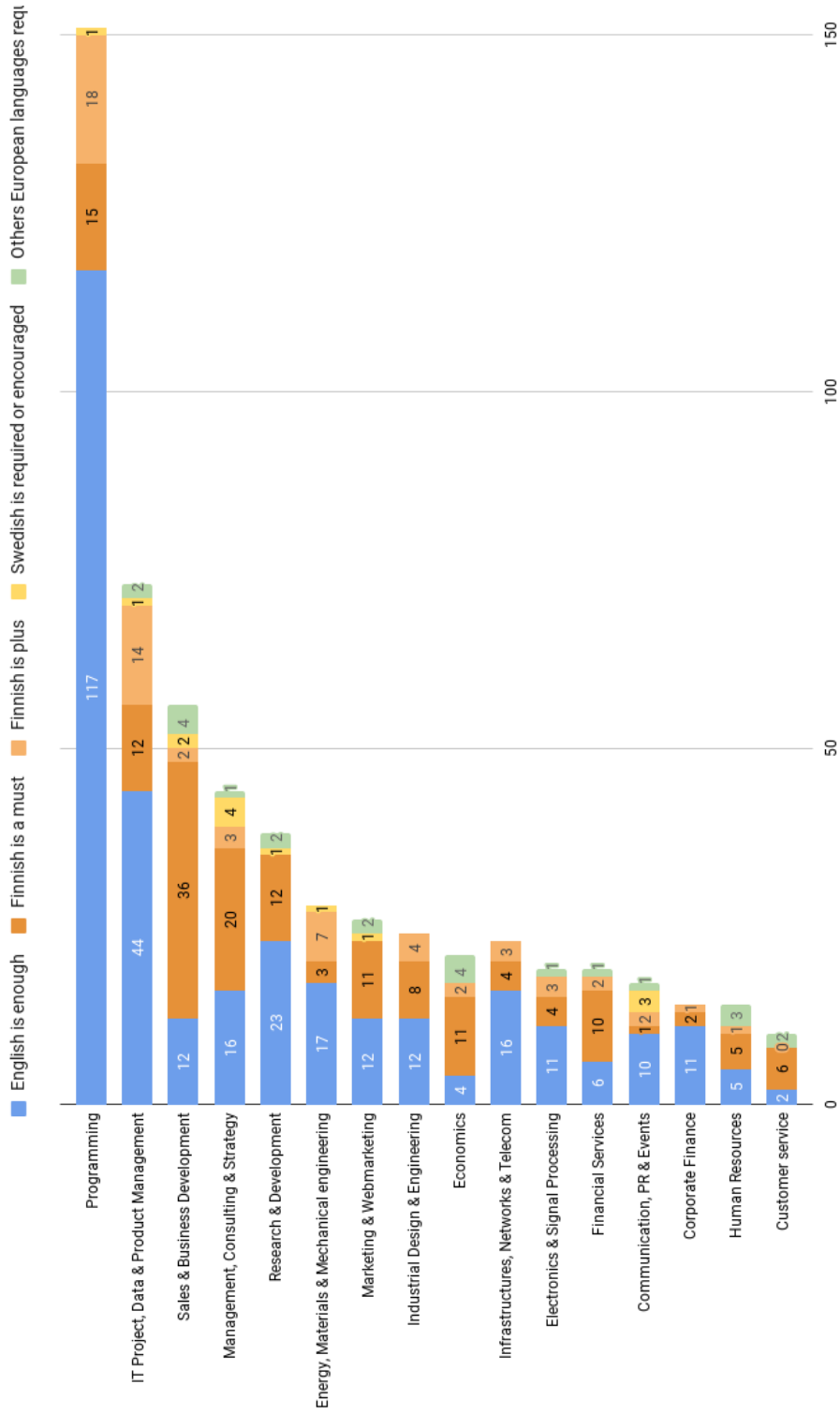
skills is more pronounced for business-related jobs. employment in business-related occupations prefers bilingual or multilingual talents with versatile language skills, especially seeking an ideal candidate who has excellent communication skills in Finnish.

Business jobs are more likely to request Finnish fluency -- nearly half of the postings states specific requirement or expectations of professional Finnish language to manage the job tasks. Horizontally, the demand for Swedish or other European languages for Business-related positions is featured a bit more prominently than for the other two disciplines -Tech and Design. Although the sample size in the Design sector is relatively small, still more than half of data samples lie in “proficiency in English is enough”, while the other half are concerned about Finnish language requirements or expectations. Given the small sample size, language requirements of design-related job vacancies should be discussed and analyzed with caution.

In summary, after comparing the discrepancies among three types of occupations Tech, Business and Design, findings clearly demonstrate that explicit language requirements differ substantially across different occupational types. As regards strict Finnish demand, there is a huge disparity in job opportunities for international applicants in the sphere of business (such as consulting, sales, management, and marketing). On the contrary, technological positions are less demanding in the local languages but more open to hiring English-speaking candidates.

Next, I visualized the explicit language requirement landscape across different job categories (Figure 4 includes the top 16 job categories by number). In line with the fact that software developers and programmers are two of the most in-demand occupations. Job ads in English Description conspicuously gather in Programming, followed by IT project, Sales & Business Development. Here I use distinct colour blocks to give an intuitive perception of the variations in language requirements across a wide range of job categories. In general, the language requirements differ greatly among different kinds of job categories. The majority of IT-related positions do not require Finnish skills in job statements, especially for the Programming jobs – more than 77% of stating that English is enough. It seems that most technical positions are at a moderate level of requesting host-country language skills.

Figure 4: Specific language requirements across 16 most-frequently advertised job categories



Finding 8 could be interpreted with similar arguments of Beblavý et al. (2016b) and Muukari (2008) the language requirements differ based on the interactive nature of the occupations and the functionality of different business units. Also, the research project from Shumilova et al. (2012), the report found that IT-related jobs are less demanding in fluent Finnish proficiency, because employers do not consider local language skills to be necessary for positions such as programming. It is a widely held belief that IT roles are emphasizing capability in software development using C++, Python or scripting languages rather than semantic language skills. On the contrary, Sales and Business development or management and consulting signals strict demand for Finnish language fluency due to customer interactive nature. A study from Demirci (2019) presents findings that degree students with STEM background is more likely to stay in U.S after graduation. One of the explanations could be international talents working on technology jobs are more likely to transfer skills across linguistic boundaries.

Aside from job categories and occupational types, analytical process should also consider the disparities among different size of organizations. After computing and comparing the language abilities required by different companies, Figure 5 summarizes the number of different language requirements stated in the job listing by four organizational types: Start-up, large company, SME, Government/Charity/Public institutions/Others. There are nearly 98% of the companies in Finland are SMEs, which has published the biggest number of job openings in recent years and employed 60% of the labour force (Statistics Finland, 2016), where IT-service and thriving game industry are the major drivers for these two sectors. However, most of SMEs still lack international recruitment experience or practices.

In a side-by-side comparison for the absolute value, the majority of employment opportunities for English-speaking candidates are offered by large corporations and small-and-medium size businesses (158 and 145 respectively), followed by Start-up enterprises (53). When assessing the proportion of different language requirements, start-ups share the lowest percentage of (required or encouraged) Finnish proficiency stated in their recruitment criteria(15%), in comparison with related percentage from SME (41%), Government/Charity/Public Institutions/ Others (40%) and large company(38%).

Figure 5: Specific language requirements across organizational types

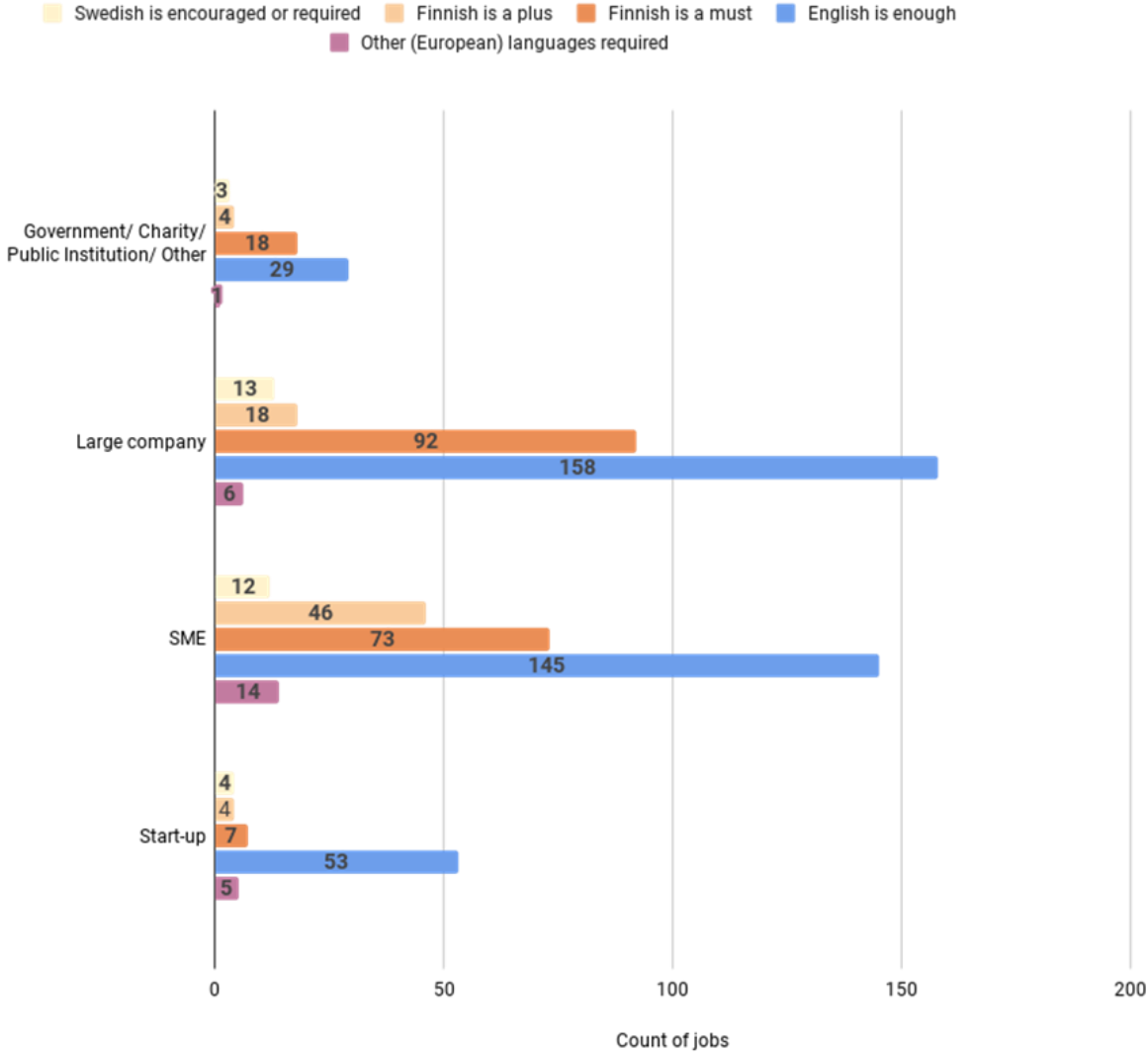
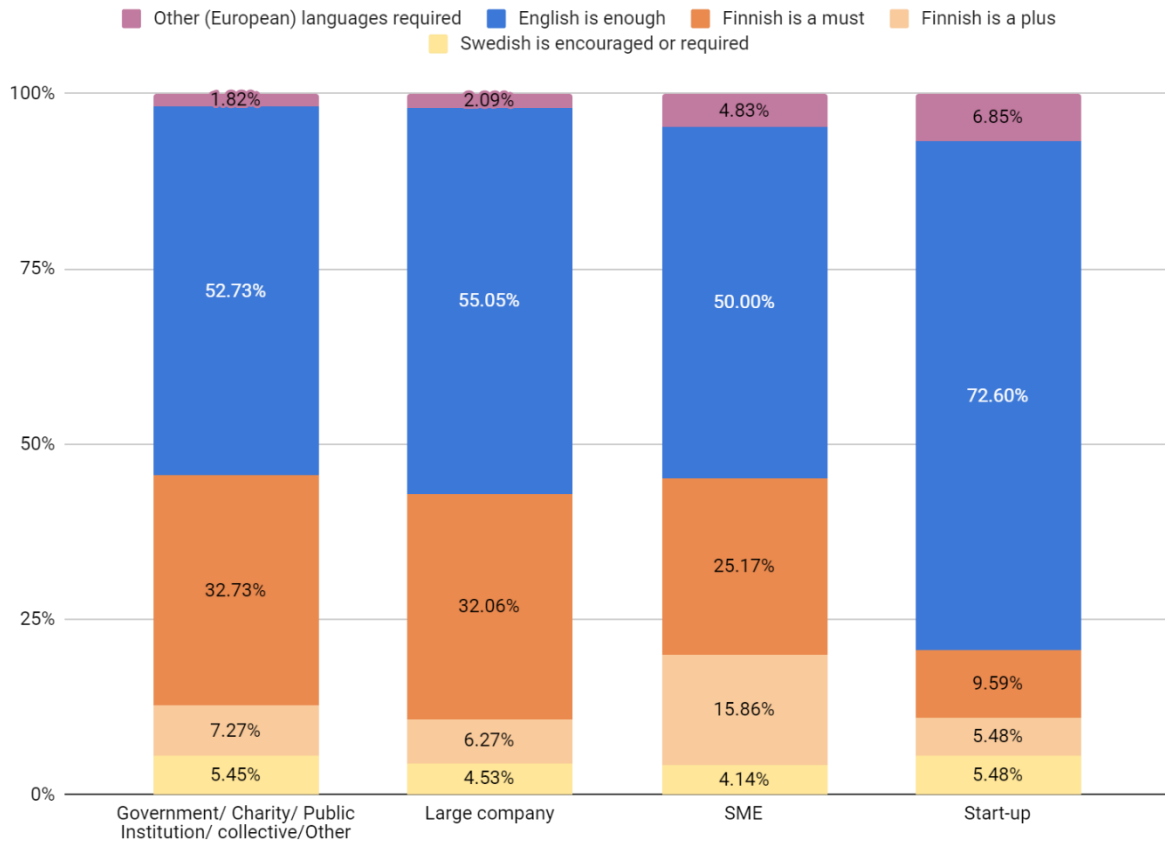


Figure 6: Variations of specific language requirements among organizational types



With Figure 5 and Figure 6, we can observe that the threshold for native language is fairly high in SMEs and government/public institutions, with quite a lot of jobs requiring or anticipating competency in Finnish communication skills. According to the survey from TEK (2021), international talents are the least likely to be hired for the government or public institution since most of the documents are written in Finnish and stakeholders at workplace are mostly native Finns. We could utilize the statistical discrimination model (Phelps, 1972) to explain the variation, SMEs usually have insufficient resource to thoroughly examine all applicants, therefore they are inclined to employ a biased hiring standard to reduce the screening cost. The instinct organizational limitation leads to involuntary recruitment discrimination (Risberg & Romani, 2021), while small-and-medium-size companies are prone to adopting some common standards and simplifying the screening process to reduce the recruiting cost. This disparity of employers' attitudes towards skilled immigrant employment has been partly explained in the work of Almeida

et al.(2015) -- large corporations have more resources and positive attitudes to hire international talents and gain benefits from that, such as expanding their global business.

5. Discussions

5.1 Main findings

In order to uncover what kinds of language skills are required by employers on the Finnish labour market, this study mainly undertook content and statistical analysis on approximately 2,300 entry-level job advertisements published on Aalto JobTeaser. The analysis of language skills that employers value, as well as their aggregations of preference, will extend understanding of linguistic issues in terms of international graduates' employment in country-specific setting. This chapter will interpret the findings and relate the discussions with my research questions:

- What kinds of language requirements do employers impose on international graduates in the pre-recruitment stage?
- Can these requirements be regarded as a form of discrimination on the Finnish labour market?

According to the data, job advertisements published on the Aalto JobTeaser favour candidates with fluent Finnish proficiency. It also demonstrates a clear indication that employers on the Finnish labour market emphasize language ability as selection merit in the recruitment process. Secondly, the explicit language requirements differ considerably across job categories, occupational sectors, and organizational types. Regarding the second question, language and discrimination are both multifaceted, multi-level and sophisticated issues in organizational management studies. Therefore, merely based on the data findings, no definitive conclusion could be drawn concerning whether the language requirements could be viewed as a direct and overt form of discrimination. Though, the reasons or motivations behind employers' linguistic preference on the local job market are still up for exploration as they might be linked to establishment or accumulation of subtle discrimination or biased attitudes. However, it is concerning that the requisite Finnish skills extensively listed in the job vacancies will generate job market inequalities and discourage qualified international graduates from applying.

Table 8: Summary of my research findings

Based on the findings in Table 8, 70% of all entry-level jobs listed on Aalto JobTeaser

Findings at the level of	Language use for all collected jobs	Explicit language requirements for collected English-writing jobs
Overall samples	Employers have published significantly more Finnish-writing jobs than English-writing positions (nearly 7:3)	More than 50% English-writing job ads state “English is enough” or no explicit requirements; 37% of English-writing job ads require or prefer Finnish skills. Only a small percentage of job ads require or prefer Swedish skills.
Organization	Expect for Start-up, all other three organizational types have published significantly more Finnish-writing positions than English writings.	The majority of employment opportunities for English-speaking candidates are offered by large corporations and SMEs. However, start-ups are substantially less demanding in Finnish fluency and more open to international graduates.
Occupation	Nearly half of jobs written in English are technology-related, followed by around 40% of vacancies for business-related employment.	Tech-related positions are significantly less demanding in Finnish fluency, while Business- and Design-related jobs frequently require a high-level of Finnish proficiency.

are advertised in Finnish description, whereas a significant portion of the remaining 30% English-writing positions still favour Finnish-speaking candidates. The accessibility of employment opportunities is significantly unequal between native candidates and international graduates from Aalto University, due to the limited amount of jobs available for non-Finnish speaking candidates. These findings support the arguments of Alho (2020), Laine (2017) and Mathies& Karhunen (2021): one of major impediments to international students getting qualification-matching work has been identified as a lack of local language abilities.

Overall, after parsing the keywords from online job ads, this study found that language competence has been stipulated as a selection criterion in 80% of English-writing job vacancies. This ratio is at a quite high level compared to a similar analysis on the Slovakia labour market (38%) by Beblavýet al. (2016 a) and on the U.S labour market (16%) by Beblavý

et al. (2016b). This might suggest that employers on the Finnish labour market are more likely to value language ability as requisite qualification during the recruiting process. Among all the collected English-writing job ads, more than one-third of positions are aimed to hire bilingual talents with both English and Finnish fluency. This result provides support to the findings from ELAN study (CILT, 2006, p.28&p.51) that employers emphasize foreign language skills in the recruitment stage to expand their global business, especially in the small countries whose first language is not English such as Scandinavian countries. One interesting finding is that, although Swedish is the other official language in Finland, the local labour market does not show an evident preference for Swedish skill

Furthermore, findings also show that the extent of requirements in high-level Finnish fluency varies significantly across occupational and organizational types. This could reinforce the argument of Muukari (2008) that the required level of language competency differs between different business units. For instance, Tech-related (such as Programming, IT-project and data management) occupations place much less emphasis on host-country language skills, whereas positions in the field of business (such as marketing or finance) strongly prefer the candidates with native-level Finnish language ability. Overall, “Finnish is a must” is featured prominently among Design- and Business-related positions, which means that international graduates with relevant professional backgrounds will face bigger language obstacles on the job market, especially when they are seeking for jobs with the attributes of customer interaction. This is in line with the research findings of Demirci (2019) and Vipunen (2019). They both found that international students with STEM backgrounds have more optimistic employment prospects after graduation, at least at the pre-recruitment stage foreign students could already access more openings in their study of the field.

Turning to the organizational level, the extent of Finnish fluency requirements is not equally distributed across different organizational types as well. According to Table 5, the majority of job opportunities for English-speaking candidates are actually provided by large corporations and SMEs. However, taking the percentages of different language skills into account, Finnish requirements is much less prevailing among the positions published by entrepreneurial companies. It is surprising to observe that large companies are more likely to state requisite Finnish skill rather than a moderate “prefer” statement

compared to SMEs and start-ups, which deviated arguments of Almeida et al. (2015) and Åslund et al. (2014) who stated that large corporations equipped with affluent resources are more willing to hire skilled immigrants and benefit their global business from international exposure. At the same time, smaller companies usually encounter problems of inadequate experience or lack of resources to consider hiring foreign candidates (Keep & James, 2010; panel discussion of Piekkari et al., 2022,). Considering large companies and SMEs are a momentous constitution for the Finnish economics and have employed more than half of national workforce, employers' strict language requirements inevitably hinder the employment prospect for non-Finnish speaking graduates. The signal of "welcoming international talents" of entrepreneurial companies is consistent with the argument from Brannen et al. (2014): if Nordic-based business organizations want to successfully emerge in the global business, they need to address foreign language requirements at an early stage to attract international workforce.

Above all, the findings of this study generally emphasize the importance of host-country language competence for international graduates' employment on the Finnish labour market. Furthermore, the degree of importance displays conspicuous discrepancy across job types and company sizes. The second research question was formulated on the basis of the data findings -- can the observed language requirements be regarded as a form of discrimination?

The data indeed observe evident discrepancy in employers' attitudes on "hiring non-Finnish-speaking candidates" across job categories, occupational groups and organizational types. However, language is a sophisticated, multifaceted, and nuanced topic in international business and human resource management (Piekkari et al., 2014). For instance, language could be operated as professional skills, cultural identity or a source of power under different situations in MNCs (Fredriksson et al., 2006). The reasons and mechanism underlying the language decisions at the pre-recruitment stage could be also highly complex due to the heterogeneity across organizations and job responsibilities.

The previous literature review has also discussed several types of discrimination and how those discriminatory patterns make an impact on the labour market. A form of overt and

direct discrimination could be seen as systematic and explicit requirements “that is not intrinsically related to work performance”(Wu et al., 2008, p.773). When it comes to position-dependent considerations (e.g. direct customer interactions), language skills specified in the job posting are mostly legitimate and appropriate. Thus, my study findings are insufficient to draw a firm judgment on whether the language requirements stated on the Aalto JobTeaser include an outright form of employment-based discrimination.

However, employers' concerns about international graduates might stem from factors beyond the expertise needs for the job responsibilities; rather, it could be the fear of uncertainty from employers, or their perceived risk of lower productivity and a higher level of the training cost when hiring non-Finnish speaking candidates (Almeida et al., 2015; Risberg & Romani, 2021). It is also possible that the statements in Finnish fluency are overstrict or habitual practices during the recruiting process, where the perceptual stereotypes or resource constraints lead to the establishment or accumulation of discriminatory treatments. In this regard, language not only performs as a symbol of working efficiency, but could be consciously or unconsciously linked to perceived risk or the fear of unknown (Rooth, 2010). Also, the explicit language requirements might mirror the argument of “linguistic justification for discrimination” by Ng(2007), who argues that implicit and subtle discrimination could happen if employers utilize the necessity of host-country language ability to exclude migrant groups by repeating or routinizing the language requirements, Therefore, there still needs future research work into investigating and measuring the language-based discrimination on the local job market.

5.2 Implications

Existing research demonstrates that immigrants' employment disadvantage is usually linked to employers' biased perception, where foreign workers with inadequate host-country language ability are often associated with a perceived risk of lower work performance and cultural fitting. In relation to previous research, the particular take on this topic is to look at the skill immigrants' employment issues from the lens of language requirements at the pre-recruitment stage and quantify the “language barriers” from the demand side. This study also contributes to the scholarship that explores the role of language in human resource management. Generally, I hope my research could provide

insights through the lens of language to the international graduate's employment issue. The implications of this study could be threefold – individual, organization and national. On the individual level, the analytical results can be beneficial for students, especially international graduates from Aalto University, by providing practical insights into and an intuitive picture of the “language barriers” at the early stage of job searching. For graduates, screening publicly available positions online is usually the very first step to transform themselves into the Finnish labour market. Although the research could not provide a full list of all language requirements on the Finnish labour market, still, international graduates are able to catch a glimpse of employers' language requirements at the beginning of job searching process, and compare the disparities from different dimensions, such as the how language requirements vary across job categories, occupational types or company size. International talents could get awareness of how many employment opportunities are available to non-Finnish speaking candidates and the extent to which explicit language requirements shape their career chances.

From the standpoint of organization, this study addresses the hiring practice regarding the recruitment criteria in language at the early recruitment stage. Since quite a few companies in Finland are suffering from labour shortage problems (Barona, 2021), inspections on language requirements could be an alarming signal for the related “language barriers” not only for applicants, but also for employers who are struggling with labour shortage nowadays. When necessity of Finnish fluency frequently being stated as selection merit, employers inevitably exclude non-Finnish speaking groups even those skilled graduates meet all other professional requirements. To tackle this problem, companies could re-evaluate the requisite language fluency statement properly – whether the host-country language ability demand is in line with the front-line communication activities, or is over-strict that alienates highly-educated talents. As Piekkari et al.(2014) suggest, employers could state “ language fluency as a ‘desired’ rather than ‘requisite’ competency”, which could allow leeway for companies to hire international workforce who are willing to take training lessons and improve their Finnish fluency after getting employed (p.118). International degree students are some of the easiest recruits for companies. It is also crucial for employers to recognize that they also stand to benefits from international graduates to be able to compete and succeed in the global business.

In addition, the Finnish fluency threshold is likely to perform as a deterrent to building a diversity and inclusive vision for Finland, as it significantly hinders the labour market integration of international graduates and even raises issues of social equality. In this regard, concerted efforts by policy makers, business organizations and universities should be encouraged. Active discussion could be conducted to institute conscious policy of improving the linguistic diversity and inclusive at different levels. As of now, a series of talent boost projects to promote labour diversity is undergoing in Finland, such as extending the job-seeking visa for international graduates, providing language training lessons for migrants and hosting various career webinars. Universities and companies can also provide collaborative projects to help international students get acquainted with Finnish working culture, or connect them with local organizations.

5.3 Limitations and suggestions for future research

There are several key limitations of this study that need to be aware of. One major limitation arises from the methodological concerns regarding the representativeness and generalizability of using online job vacancies as the secondary data source (Kureková et al., 2015). In Finland, not all the jobs are publicly advertised but a certain number of vacancies are spoken out through the “hidden market” – social ties and informal contacts in Finland (Alho, 2020). Moreover, candidates usually look for multiple platforms or channels to search for employment opportunities. Since the context of case study is set in Aalto University, as well as the online jobs data in this research were collected from a particular platform Aalto JobTeaser, coverage bias might come from the challenge of hidden job markets and the single data source. Besides, this study also includes the language requirements at occupational or organizational level. However, some data bias might exist towards specific industries or job market segments (Carnevale et al, 2014) if certain groups of employers are more likely to seek for candidates through personal connections or agencies. Also, the data collection process was basically operated during the covid pandemic, a time period that the employers might publish significantly fewer job ads than usual. The limited sample size poses a drawback of this research – whether the gathered job data shows good representativeness and to what extent the analytical results could be generalized. Therefore, given the complexity and dynamics of Finnish

labour market, it needs to consider whether the collected data adequately present a comprehensive picture of the student job market.

Secondly, although the literature review presents employment discrimination in different national settings, including discriminatory practices on the basis of ethnicity or language, this study does not provide adequate evidence on a general form of language-based discrimination towards international graduates existing on the Finnish labour market. Analytical findings of this research primarily seek to uncover the required language skills profile through the quantitative analysis of online job ads data. However, when it comes to the discussion on potential employment discrimination, these findings should be interpreted with caution. Since both recruitment practices and language concerns in managerial literature are multifaceted and complicated topics, analysis of job vacancies is an incomplete measure to summarize the whole labour market traits. The possibility of discriminatory behaviors and corresponding impacts need to be testified and examined with further studies, especially calling for more qualitative case study or survey to investigate the motivations or determinants behind employers' language-based recruitment decision and assess whether there is certain form of discrimination.

Accordingly, the analytical results of this study are suggested to be utilized as some data inspection at a macro level, and further research is needed to deepen and widen the knowledge of employment issues for international talents. Moreover, multiple channels of data source could be addressed in the future statistical analysis to complement the representativeness issues. Retrospective historical analysis could be considered for monitoring the changes or dynamics of language requirements. Here admittedly, this study has its own limitation on evidence-based understanding about why employers follow the observed patterns of language preference. For a thorough understanding of the occurrence and causes of discrimination through the lens of language, future research needs to direct more attention to investigating employers' linguistic attitudes and views about international workforce. Also, there has been a call for more analytical studies at the micro, mezzo or macro level to inspect the role of language in skilled immigrant's employment issues.

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