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ABSTRACT

The Impact of Regional Identity on Hiring Chances: An Experiment Examining Employer Bias

Regional mobility is crucial for addressing labour shortages, as jobseekers from one region may fill vacancies in another region with few local candidates. However, this requires a willingness amongst employers to consider candidates from across regional borders. This study examines the influence of regional identity on hiring decisions in the Belgian labour market, focusing on perceptions of Flemish recruiters towards Flemish and Walloon candidates. Through a state-of-the-art vignette experiment, genuine Flemish recruiters evaluated fictitious resumes of school leavers that signalled regional identity through their name, place of birth, residential address, secondary school location, and/or language proficiency. Walloon candidates consistently score lower on key hiring metrics. Structural equation modelling reveals that Flemish employers hold negative perceptions of Walloon candidates, particularly regarding availability, interpersonal competency, attitude, and willingness of employers, employees, and clients to cooperate with them. These findings highlight the persistent role of regional identity stereotypes in reinforcing labour market inequalities and impeding mobility as a strategy to mitigate labour market tightness.

JEL Classification: J61, J68, J71

Keywords: labour market, regional mobility, culture, perceptions, discrimination, Belgium

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1. Introduction

Regional labour mobility is pivotal in mitigating labour shortages, enabling jobseekers from one geographic area to address vacancies in another with limited local applicants (Feist, 2024; Niebuhr et al., 2012; Zimmerman, 2005). However, the effectiveness of this dynamic critically depends on employers' openness to hiring candidates from outside their immediate region (Eugster et al., 2017; van Ham et al., 2001; Winterhager & Krücken, 2015). While cultural differences between regions have been extensively linked to variations in economic performance, trust, and cooperation (e.g. Alesina et al., 2006; Guiso et al., 2006; Tabellini, 2010), their implications for intra-national hiring decisions have received comparatively less attention (Eugster et al., 2017). This study addresses this gap by examining how regional identity influences hiring discrimination intentions.

Belgium's primary regional divide between Flanders, the Dutch-speaking northern region, and Wallonia, the French-speaking southern region, offers a unique context to evaluate regional hiring discrimination and the underlying demand-side mechanisms. At present, the number of Walloon residents employed in Flanders remains low. This limited labour mobility is problematic, especially considering Wallonia's high unemployment rates and Flanders' high vacancy rates, as illustrated by Figure A1 in the Appendix (Eurostat, 2024). Various policy initiatives, including cooperation agreements between employment agencies in Flanders and Wallonia, have been introduced to enhance interregional mobility (Buysse et al., 2022; Duprez & Nautet, 2020; Valsamis et al., 2023). However, these measures have not significantly increased the employment of Walloon workers in Flanders (Buysse et al., 2022; Valsamis et al., 2023).

A possible explanation for these adverse labour market outcomes relates to negative stereotypes held by employers about workers from other regions. Both popular sources (Dermine, 2023; De Wever et al., 2012; Hooghe, 2016; VRT NWS, 2011) and the academic literature (Meuleman et al., 2017) indicate that despite being from the same country, Flemish employers frequently stereotype Walloon workers as less diligent and less productive than their Flemish counterparts. This study explicitly examines these stereotypes by investigating the extent to which regional identity influences Flemish employers' hiring intentions (research question 1, RQ1) and by analysing the differences in Flemish employers' perceptions of Flemish versus Walloon candidates (research question 2, RQ2).

We address our research questions by examining the evaluations of genuine Flemish recruitment professionals using fictitious CVs. These CVs systematically vary in candidate characteristics, signalling Flemish or Walloon identity, including name, birthplace, secondary school location, associated language proficiency, and residence. In addition, we examine the moderating effects of commuting distance and gender. Our findings reveal significant hiring discrimination against candidates perceived as Walloon. Discrimination is mainly triggered by candidates with a Walloon secondary education combined with no Dutch language proficiency and a Walloon place of residence. Flemish recruiters exhibit negative perceptions of Walloon workers, reflecting both statistical and taste-based discrimination, with the most pronounced adverse effects on perceptions of ambition, availability to work, and ability to get along with others.

Section 2 outlines the theoretical economic framework of discrimination by region-associated identity, focusing on statistical and taste-based mechanisms. Section 3 details the vignette experiment method, and Section 4 presents the results on hiring discrimination and differences in employer perceptions of Flemish and Walloon candidates, including a moderation analysis and an assessment of the robustness of our results. Finally, Section 5 concludes.

2. Theoretical framework

In examining regional discrimination in hiring practices, two central theoretical frameworks are particularly relevant: taste-based discrimination and statistical discrimination. First articulated by Becker (1957), taste-based discrimination theory posits that employers' hiring choices are influenced by their personal biases or by the perceived preferences of customers and other employees. Rather than relying on objective assessments of a candidate's skills or qualifications, employers may favour candidates from regions that align more closely with their cultural or social backgrounds. This type of discrimination creates a fictitious penalty, where employers act as though hiring a candidate from a different region incurs a disutility for them, their customers, or other employees and, therefore, entails a certain cost (Borjas,

2020; Combes et al., 2016). Empirical work has shown that perceived cultural or social distance exacerbates this bias (Lippens et al., 2022).

When applying this theoretical perspective to the Belgian context, the perceived cultural distance between Flemish employers and Walloon candidates may generate particular barriers to employment. Consistent with findings from other European labour markets (Gutfleisch & Samuel, 2022), Flemish employers may assume Walloon candidates will encounter cultural difficulties integrating into predominantly Flemish workplaces. Additionally, Flemish employers may be less willing to hire or collaborate with Walloon applicants, driven by potential conflicts with existing employees or customers (Meuleman et al., 2017). Furthermore, political debates advocating increased regional autonomy or even separation between Flanders and Wallonia have further entrenched the existing negative perceptions, exacerbating labour market divisions (De Keere et al., 2011; Meuleman et al., 2017).

Alongside taste-based discrimination, the theory of statistical discrimination provides additional explanatory insight. Developed by Phelps (1972) and Arrow (1973), statistical discrimination posits that employers, lacking complete information about individual candidates, rely on observable group characteristics, such as regional identity, to infer less observable traits related to productivity. In the Flemish-Walloon context, assumptions held by Flemish employers regarding perceived differences in (i) availability, (ii) interpersonal competencies, and (iii) work attitudes between Flemish and Walloon candidates appear particularly relevant. First, regarding availability, international research suggests that interregional workers are often perceived as less flexible due to factors such as longer commuting distances (Gutfleisch & Samuel, 2022). Second, language and cultural barriers between interregional workers may further complicate collaboration (Gutfleisch & Samuel, 2022). Third, both scholarly research and anecdotal evidence suggest that Flemish individuals have historically perceived Walloons as less productive or hardworking (De Wever et al., 2012; Meuleman et al., 2017). Though such stereotypes often lack objective empirical support, they nevertheless result in inaccurate statistical discrimination (Bohren et al., 2023). For instance, De Witte and Van den Broeck (2011) demonstrate that Walloon individuals value employment equally or even more than their Flemish counterparts, challenging prevailing stereotypes. While these overarching concepts are operationalised

specifically for the Flemish-Walloon context in Section 3.1, preliminary examples illustrate their relevance here.

3. Methods

3.1. Experimental design

Given our objective to examine differences in hiring opportunities between Flemish and Walloon candidates as well as understanding Flemish employers' perceptions towards candidates from these distinct regional identities, this study employed a state-of-the-art vignette experiment. Vignette experiments combine survey methodologies with experimental manipulations, facilitating causal interpretation while maintaining external validity through realistic scenarios and representative samples (Auspurg & Hinz, 2014). In this case, we asked genuine recruiters to evaluate systematically varied hypothetical scenarios—vignettes—that differed along predefined factors (candidate characteristics) and their corresponding levels (Sauer et al., 2011). This methodological choice is particularly appropriate for investigating hiring discrimination, as it yields nuanced insights into recruiter decision-making and perceptions (Baert et al., 2024; Dalle et al., 2024a, 2024b; Moens et al., 2024; Sterkens et al., 2023a, 2023b, 2024; Van Belle et al., 2018; Van Borm et al., 2021).

However, a limitation of vignette experiments is the intent-realism gap, reflecting a discrepancy between stated intentions and actual behaviour (Forster & Neugebauer, 2024; Wulff et al., 2020). To partially mitigate this concern, we included Steenkamp's (2010) Social Desirability Scale, distinguishing between Egoistic Response Tendencies (ERT) and Moralistic Response Tendencies (MRT) to account for variations in both the nature of socially desirable responses and respondents' awareness of them.

More specifically, the vignettes in this study were presented as resumes of hypothetical candidates, following Sterkens et al. (2023b). An example is provided in Appendix Figure A2. Sterkens et al. (2023b) justify this approach within hiring discrimination research as resumes enhance external validity and minimise the risk of disproportionately highlighting certain candidate characteristics. To further enhance external validity and ensure comparability, all resumes adhered to a standardised layout based on templates from the Flemish Public

Employment Services (PES, n.d.) and included realistic details such as date of birth (all candidates born in 2005, reflecting their status as school leavers), mobile phone numbers, email addresses, basic computer skills, and a note confirming possession of a driver's licence and personal car. Furthermore, the resumes were presented in Dutch, reflecting our participants' identity as Flemish recruiters.[1] An example resume is available in Appendix A2.

In addition to these common details across resumes, each resume varied systematically regarding candidate characteristics signalling regional identity: candidate name, place of birth, place of residence, secondary school location, and language proficiency. To address our research questions, we assessed the impact of these factors on hiring decisions and recruiter perceptions. These factors and their respective levels are detailed in Table 1.

< Table 1 about here >

The first factor signalling regional identity is the candidate's name. Candidate names were selected from the Belgian statistics office Statbel (2024) databases of the most common Flemish and Walloon names for individuals born in 2005. We selected 20 first names and 10 surnames per region, generating 40 unique combinations. This approach minimised socioeconomic biases associated with names (Dahl & Krog, 2018). The selection procedure was as follows: starting with the most common name for a given region, we conducted an initial check to determine if this name (or a very similar one) appeared more than 50 times in the other region. If it did, the name was excluded, and the next most common name was considered. The same procedure was applied for surnames. The second factor indicating regional identity is the candidate's place of birth, either in Flanders or Wallonia. For this factor, we identified the location of the nearest general hospital in both Flanders and Wallonia for 22 Flemish border municipalities. Third, fictitious addresses in either Flanders or Wallonia were generated for candidates' places of residence. The fourth factor, place of secondary education, involved selecting Catholic schools in either Flanders or Wallonia due to their comparability across both regions, thereby minimising potential confounding effects related to school reputation and quality differences. The fifth factor, language proficiency, was directly linked to the secondary education factor; candidates were always fluent in the language of instruction at their respective secondary schools. However,

[1] For resumes listing only French and English proficiency, it was noted that the resume had been translated into Dutch to ensure comprehensibility.

candidates were not necessarily fluent in the language of the region where they did not attend school. Nevertheless, all candidates were proficient in English. Including English fluency further improved external validity, reflecting its growing labour market relevance. Language proficiency was particularly important since local language fluency—in this case, Dutch—is central to recruiter perceptions of candidates' communication skills and cultural fit within the workplace (Adamovic, 2022; Edo et al., 2019; Fossati et al., 2020).

To be able to investigate the moderating roles of commuting distance and gender, our vignettes also included variations in these variables. First, commuting time was included based on previous research indicating that employers perceive cross-border workers as less flexible and reliable due to longer anticipated commuting times (Gutfleisch & Samuel, 2022). Consequently, commuting time varied systematically amongst our vignettes, allowing for an examination of the effects of regional identity independent of commuting distance. Commuting time was indicated through the candidate's address on the resume. We categorised commuting time into three levels: less than 30 minutes, between 30 and 60 minutes, and more than 60 minutes, reflecting realistic travel distances for job applicants (Carlsson et al., 2018b; Lewandowski et al., 2023). Second, gender was included as a candidate characteristic due to its well-documented theoretical and empirical relevance in hiring decisions. In the context of identity-based discrimination, several studies have hypothesised that cultural discrimination may be more pronounced for female candidates (Derous & Pepermans, 2019; Lippens et al., 2023). Including gender allows for an exploration of interaction effects between gender and regional identity. Moreover, its inclusion strengthens the external validity of the experimental design by increasing the realism of candidate profiles (Sterkens et al., 2023b).

The complete factorial design consisted of 2 x 2 x 2 x 2 x 3 x 3 x 2, or 288 potential combinations across seven factors. Instead of presenting all combinations to recruiters, a D-efficient randomisation algorithm (Kuhfeld, 2010) was used to select 75 vignettes. By accounting for the two-way interaction between secondary school location and language proficiency—factors intrinsically linked in our analyses—we achieved a D-efficiency score of 98.12 out of 100, indicating minimal loss of estimation precision compared to the complete factorial design. Subsequently, the selected vignettes were arranged into 15 decks containing five vignettes each, randomised for presentation. Additionally, blocking ensured

orthogonality among factors while maintaining balanced representation across levels (Auspurg & Hinz, 2014).

To further enhance external validity, these vignettes were presented across different jobs, which were selected based on three characteristics: bottleneck occupation (yes versus no), customer contact (high versus low), and coworker interaction (high versus low). These characteristics are expected to have a moderating effect on hiring discrimination. As described by Lippens et al. (2023) and in line with Baert et al. (2015), discrimination may be less pronounced in bottleneck occupations, where filling vacancies is more complicated, and the cost of excluding qualified candidates—such as Walloon applicants—is therefore higher. Consequently, employers may be more willing to consider candidates from minority groups, leading to reduced discrimination. Conversely, discrimination may be more pronounced in non-bottleneck occupations (Baert et al., 2015). For customer contact and coworker interaction, the expected moderating effect follows directly from Becker's (1957) taste-based discrimination theory, which suggests that positions requiring higher levels of interpersonal interaction will generate stronger discriminatory tendencies.

The 2 x 2 x 2 combinations of job characteristics resulted in eight distinct occupations, as presented in Table 2. These jobs were selected as follows. Bottleneck status was determined based on the 2024 bottleneck list provided by the PES, following the approach of Lippens et al. (2023). To operationalise customer and coworker contact, occupations were classified using O*Net (https://www.onetonline.org/) according to their levels of interaction with customers and coworkers. The selected occupations included production worker, receptionist, data entry clerk, customer service representative, cleaner and housekeeper, fast food worker, maintenance worker, and retail salesperson.

< Table 2 about here >

We contacted only those recruiters listed as contact persons for vacancies within the selected job categories, ensuring they had relevant experience. The experimental context was further aligned with recruiters' daily practices. Specifically, recruiters were instructed to act as hiring managers for a fictitious company, 'Peeters NV', located in the Flemish municipality closest to the language border corresponding to the job posting from which their contact details were sourced. Recruiters then evaluated five hypothetical candidates for one of the eight job categories relevant to their recruiting experience. Importantly, each

job description explicitly indicated that all candidates fulfilled the objective language and educational requirements for the position.

Recruiter evaluations consisted of the following statements. To address RQ1, recruiters indicated the propensity score that they would invite the candidate for an interview and eventually hire them, using an 11-point Likert scale ranging from 0 (completely disagree) to 10 (completely agree), following the seminal vignette design by Van Belle et al. (2018). Furthermore, to address RQ2, recruiters evaluated each candidate based on 15 statements that captured three clusters related to statistical discrimination and one cluster reflecting taste-based discrimination, in line with Section 2. Cronbach's alphas were calculated for each cluster of perceptions to assess the internal consistency of our theoretical clustering. All clusters achieved Cronbach's alpha values exceeding 0.80, indicating good internal consistency.

More concretely, statements related to statistical discrimination assessed recruiters' perceptions of candidate availability, interpersonal competencies, and work attitudes, reflecting assumptions about productivity. The specific statements are presented in Table 3. For the statements concerning availability, we based our items on the 'anticipated availability' scale by Vinkenburg et al. (2012): (i) the applicant will be able to work a substantial amount, (ii) the applicant will have a low number of sick/personal days, and (iii) the applicant will not be late for work or leave early. Since Vinkenburg et al.'s (2012) scale was specifically developed to measure availability differences between mothers and fathers and the second item reflects this particular focus, we replaced it with an alternative derived from Moens et al. (2023): 'the applicant will be available to work whenever needed'.

Regarding interpersonal competencies, we utilised the scale developed by Finkelstein and Burke (1998), which was specifically designed to measure managers' perceptions of job applicants. This scale evaluates perceptions of the candidate's (i) communication skills during a job interview, (ii) ability to get along well with others at work, and (iii) the perceived pleasure recruiters experience interacting with the candidate.

To evaluate signals related to work attitude, we employed a scale from a prior vignette study by Van Belle et al. (2020). Recruiters assessed candidates based on six statements regarding whether they perceived the candidate as (i) having the right work attitude, (ii) possessing sufficient maturity, (iii) being sufficiently responsible, (iv) displaying adequate

respect for authority, (v) having sufficient motivation, and (vi) showing sufficient ambition to perform well in the job.

Statements addressing taste-based discrimination were directly derived from Becker's (1957) theory, asking recruiters about their perceptions concerning the willingness of employers, colleagues, and customers to collaborate with Walloon candidates. These statements have been employed in similar experimental contexts by Baert et al. (2024), Dalle et al. (2024a), Van Borm et al. (2021), and Van Belle et al. (2018).

< Table 3 about here >

Following the perception measures, we verified the successful manipulation of the candidate characteristics by asking recruiters to classify, for each vignette, every factor signalling regional identity (e.g. candidate's name, place of birth, residence, and secondary education) as Flemish, Walloon, or of unknown identity. Recruiters were also asked to estimate the candidate's commuting time.

At the end of the experimental questionnaire, recruiters were shown each vignette again containing the different candidate characteristics and asked to provide their perception of the candidate's regional identity. Based on the complete set of candidate characteristics, recruiters had to classify whether they perceived the candidate as Flemish, Walloon, or of unknown regional identity.

After the experiment, a post-experimental survey was administered. In this part, we collected data on several potential moderator variables, including recruiter demographics, recruitment experience, and familiarity with Walloon workers. Furthermore, Steenkamp's (2010) Social Desirability Scale was part of this post-experimental survey.

3.2. Data collection

Data were collected via an online survey hosted on Qualtrics. Email invitations were sent to 3,004 recruiters whose contact details were retrieved from active job postings on the Flemish Public Employment Services website. To ensure relevance and maximise the likelihood that recruiters had experience with candidates from different regional identities, we selected job postings located within a 20-km radius of the language border, corresponding to the eight job categories included in our experiment.

The survey was launched in June 2024 with an initial email invitation, followed by a reminder sent one week later. Duplicate email addresses were removed to prevent multiple contacts. All communications, including the invitation, reminder, and survey content, were provided in Dutch. Before commencing the survey, recruiters were required to confirm their understanding of data processing procedures and provide informed consent. To encourage participation, recruiters completing the survey could choose to enter a raffle for gift vouchers. To minimise bias in responses, the experiment's description remained intentionally general, indicating only that the study aimed to gain insights into hiring decisions. By the close of data collection in August 2024, 370 recruiters had accessed the survey, resulting in a response rate of 12.32%.

Our final sample consisted exclusively of recruiters who completed the survey and passed an attention check.[2] Furthermore, to mitigate the potential distortion of results due to socially desirable responses, only recruiters scoring below the mean plus one standard deviation on both subscales of social desirability (ERT and MRT) were retained, following the approach of Van Belle et al. (2020). Finally, individual vignette observations containing invalid responses were excluded. This process resulted in a final sample comprising 399 vignette evaluations.

3.3. Descriptives

As described in Subsection 3.1, we collected the demographic and professional characteristics of the recruiters in our sample. Table 4 presents descriptive statistics segmented by the regional identity of the candidates as perceived by recruiters. The distribution of the recruiter characteristics aligned with previous findings on the broader population, as also reported in Sterkens et al. (2023b). The majority of recruiters (71.43%) identified as female, and most (78.94%) held a tertiary or other higher education degree. None of the recruiters had only a primary education, while a small minority had completed secondary education. Nearly half of the sample (47.12%) was between 36 and 50 years old. This age distribution was also reflected in recruitment experience, with a substantial

[2] The attention check required recruiters to select the number '0' (indicating 'strongly disagree') in response to a specific instruction embedded within the survey.

proportion (60.15%) having worked in the field for more than five years. Given our research focus, we also examined recruiters' prior experience with Walloon employees. Responses were evenly distributed, with a slight majority (52.33%) reporting positive experiences, while the remaining recruiters indicated negative or no prior experience with Walloon colleagues.

To evaluate the effectiveness of the randomisation process, we assessed whether candidate perceptions varied systematically across recruiter characteristics. Chi-square tests confirmed that the randomisation was successful, with no significant associations observed between the perceived regional identity of candidates according to the recruiter and recruiter characteristics, including gender, age, educational background, or recruitment experience.[3]

Additionally, the selected candidate characteristics served as clear signals of regional identity. Of the 399 vignette evaluations, Flemish and Walloon candidates were perceived in nearly equal proportions (42.36% and 40.10%, respectively), while 17.54% were categorised as having an unknown regional identity.

< Table 4 about here >

The role of specific candidate characteristics in shaping recruiters' perceptions of candidates' regional identity is presented in Appendix Table A1. A logistic regression analysis was conducted to predict the extent to which the different candidate characteristics contributed to recruiters' overall perception of candidates as either Flemish or Walloon while controlling for job and recruiter characteristics. Observations were excluded from the analysis if recruiters indicated that the candidate's regional identity was unknown to them. The results indicated that place of residence exerted the most substantial influence on recruiters' perception of the regional identity of the candidate. After exponentiating the coefficient ($\beta = 2.920$, $p = 0.000$), candidates residing in Wallonia were found to be 18.6 times more likely to be perceived as Walloon. The second most substantial effect was observed for secondary education combined with language proficiency. Attending a Walloon school and being fluent only in French and English increased the odds of being

[3] We also surveyed recruiters' mother tongue. As only three recruiters reported a mother tongue other than Dutch, this variable was excluded from further analyses. This low proportion aligned with findings from Sterkens et al. (2023b).

perceived as Walloon by 12.8 times (β = 2.550, p = 0.000). A Walloon birthplace increased the odds by 9.1 times (β = 2.210, p = 0.000). Name also emerged as a significant factor, although its effect was less considerable; having a Walloon name made candidates 2.7 times more likely to be perceived as Walloon (β = 0.992, p = 0.001).

Furthermore, it is important to note that commuting time also significantly influenced whether recruiters perceived a candidate as Flemish or Walloon. Specifically, candidates residing 30 to 60 minutes from the workplace were 2.46 times more likely to be perceived as Walloon (β = 0.901, p = 0.040), while those living more than 60 minutes away had a 2.39 times higher likelihood (β = 0.871, p = 0.025) compared to candidates with a commute of less than 30 minutes. Although no theoretical framework explicitly predicts this effect, one possible explanation is that recruiters associate longer commuting times with greater distance and cross-regional travel, leading them to infer a Walloon rather than Flemish identity. In contrast to the other theoretically grounded indicators of regional identity, differences in hiring decisions based on commuting distance do not constitute discrimination. In the following section, we therefore examine the role of commuting time as a moderator rather than as a signal of regional identity.

4. Results

To provide an overview of the findings, Figure 1 presents the average scores for hiring outcomes (RQ1) and perception variables (RQ2) by whether the recruiter perceives the candidate as Flemish or Walloon, according to the subjective measure discussed in Subsection 3.1. Candidates perceived as Walloon consistently score lower than candidates perceived as Flemish across all outcomes. Many of these differences are statistically significant, particularly regarding the propensity score of being invited for an interview or hired, as well as for 10 out of the 15 perception variables, at least at the 10% significance level.

< Figure 1 about here >

4.1. Impact of regional identity on hiring outcomes

First, to address RQ1, Table 5 presents a linear regression analysis of the interview propensity score on recruiters' perceptions of candidates' regional identity, both without and with control variables. Standard errors are clustered at the recruiter level. The results indicate that being perceived as Walloon significantly reduces the interview propensity score by 7.85 percentage points ($p = 0.028$). This disadvantage remains significant and slightly intensifies after controlling for job and recruiter characteristics ($\beta = –0.810$, $p = 0.022$).

In the second set of analyses in Table 5, we examine which specific vignette dimensions signalling regional origin drive these effects. Recruiters' perceptions are replaced by the actual vignette indicators while controlling for job and recruiter characteristics. The findings reveal the strongest negative effect for candidates who attended secondary school in Wallonia and are proficient only in French and English. This combination lowers the interview propensity score by 13.18 percentage points ($p = 0.009$). Additionally, residing in Wallonia reduces the score by 7.14 percentage points ($p = 0.007$). In contrast, having a Walloon name or being born in Wallonia does not significantly affect interview probability.

< Table 5 about here >

These results confirm that Flemish recruiters exhibit hiring discrimination against candidates perceived as Walloon. This hiring discrimination appears to be primarily driven by candidate characteristics that reflect long-term socialisation, such as secondary schooling, language proficiency, and place of residence. In contrast, static, time-specific indicators like names and places of birth carry less weight within a national context. This pattern is consistent with prior findings on EU-origin cues, which generally have a limited influence on hiring decisions, unlike markers associated with non-EU origins (Devos et al., 2025). A critical observation is that although the experimental design clearly states that all candidates meet the job's formal language requirements, recruiters may have ignored or questioned this information, thereby penalising candidates who do not speak Dutch.

4.2. Impact of regional identity on recruiter perceptions

To address RQ2, we estimate the first-stage regressions of a generalised structural equation model (GSEM), regressing 15 individual perception items on recruiters' perceptions of the

candidates' regional identity while controlling for recruiter and job characteristics.[4] Standard errors are clustered at the recruiter level. This model allows us to assess the effect of perceived Walloon identity on various candidate evaluations. The results, presented in Table 6, show that across all 15 perceptions, being perceived as Walloon consistently has a negative effect, reaching statistical significance at least at the 10% level. The three most prominent effects are found for perceptions of ambition, availability, and interpersonal skills. Compared to candidates perceived as Flemish, those perceived as Walloon are rated 4.70 percentage points lower in ambition ($p = 0.000$), 4.46 percentage points lower in availability ($p = 0.002$), and 4.36 percentage points lower in ability to get along with others ($p = 0.001$). These findings provide strong evidence of both taste-based and statistical discrimination by Flemish employers against Walloon candidates.

< Table 6 about here >

Subsequently, we repeat the GSEM analysis, replacing recruiters' perception of regional identity with the candidate characteristics. Table 7 depicts the results. Several characteristics that theoretically signal regional origin also produce significant variation in the perception indicators. First, having a Walloon name negatively affects perceived punctuality (–2.19 percentage points, $p = 0.029$) and availability (–2.80 percentage points, $p = 0.048$). Second, being born in Wallonia significantly reduces perceived motivation (–1.87 percentage points, $p = 0.049$) and has a weak negative effect on the expected willingness of coworkers to collaborate with the candidate (–1.52 percentage points, $p = 0.094$). Third, residing in Wallonia has a weak negative impact on the perceived ability to get along with others (–1.88 percentage points, $p = 0.073$). Finally, attending a Walloon secondary school while being proficient in only French (and English) leads to lower ratings on several outcomes: it weakly reduces the perceived quality of communication (–5.00 percentage points, $p = 0.055$) and significantly lowers perceptions of responsibility (–4.92 percentage

[4] When examining the indirect relationship between the recruiter's perception of the candidate's regional identity and interview propensities, mediated by the various perceptions, additional significant results emerge. Perceptions related to authority management and customer-related taste-based discrimination are significant at the 5% level, while perceived workload capacity and availability are significant at the 10% level. However, these mediation results cannot be causally interpreted. Therefore, detailed results of the second-stage regression are available upon request.

points, p = 0.037), respect for authority (–6.09 percentage points, p = 0.018), and ambition (–4.27 percentage points, p = 0.053).

< Table 7 about here >

4.3. Moderation analysis

In addition to our preregistered analyses, we conducted a moderation analysis to examine whether various indicators of regional identity interact with job, recruiter, and other candidate characteristics. As shown in Appendix Table A2, few statistically significant interactions emerge. Nonetheless, some notable patterns are observed.[5]

First, regarding job characteristics, a marginally significant interaction is observed between being perceived as Walloon (vs Flemish) and bottleneck occupations (–6.92 percentage points, p = 0.068). When using objective indicators of regional identity, residing in Wallonia (vs Flanders) and applying for a bottleneck occupation significantly reduces interview propensity (–17.21 percentage points, p = 0.013). These findings challenge the assumption that labour shortages reduce discrimination (Baert et al., 2015; Lippens et al., 2023). Instead, they align with Carlsson et al. (2018a), who suggest that tighter labour markets may intensify discrimination, as majority candidates disproportionately benefit from improved job opportunities.

Second, we analyse interactions with recruiter characteristics. No significant interactions are found between perceived Walloon identity and recruiter characteristics. However, when using candidate-based signals of regional identity, higher recruiter education levels amplify the disadvantage for candidates born in Wallonia (vs Flanders) (–12.30 percentage points, p = 0.039). Moreover, candidate signals of Walloon identity interact significantly with the age of the recruiter. For instance, a Walloon (vs Flemish) name or Walloon (vs Flemish) schooling paired with trilingual proficiency (Dutch, English, French) elicits more positive responses from recruiters aged 36–50 compared to those under 36 (increases of 12.82 and 20.70 percentage points, p = 0.049 and p = 0.047, respectively).

[5] A post-hoc D-efficiency analysis of the vignette sample, including the necessary two- and three-way interactions for the moderation analysis, yielded a D-efficiency score of 77.23 out of 100. While this score suggests potential power limitations, several significant effects remain.

Similarly, a Walloon (vs Flemish) name significantly increases interview propensity among recruiters aged 51+ compared to those under 36 (23.24 percentage points, p = 0.008). A potential explanation is that Walloon, and therefore French, names are associated with prestige in certain parts of Flanders due to historical legacies, whereas their perceived status has declined among younger generations (Ruyffelaert & Hadermann, 2012).

Third, we assess interactions between candidate characteristics. While a Walloon (as opposed to Flemish) name alone does not significantly reduce interview chances, its combination with other Walloon indicators does. For example, neither Walloon schooling (vs Flemish) and trilingual proficiency, nor a Walloon (vs Flemish) name alone, is penalised independently. However, their combination results in a significant reduction in interview propensity (–24.01 percentage points, p = 0.029). Additionally, the already negative effect of Walloon schooling combined with a lack of Dutch proficiency is further exacerbated when a Walloon name is included (–22.19 percentage points, p = 0.037).

4.4. Robustness checks

To ensure the robustness of our findings, we conduct several additional analyses. To start, we assess whether the results of our primary analysis concerning hiring discrimination against Walloon candidates (RQ1) remain consistent when using the alternative outcome measure of hiring propensity score instead of interview propensity score (Appendix Table A3). The results confirm that candidates perceived as Walloon (vs Flemish) by the recruiter face a significant disadvantage in hiring propensity score, with a reduction of 7.71 percentage points (p = 0.006) after controlling for job and recruiter characteristics. Furthermore, when replacing recruiters' perceptions of regional identity with candidate characteristics, the key patterns observed in the primary analysis hold, including the strong negative effect of Walloon (instead of Flemish) schooling combined with French and English language proficiency (instead of trilingual language proficiency) (–12.80 percentage points, p = 0.001) and of residing in Wallonia (instead of Flanders) (–5.35 percentage points, p = 0.010). By contrast, Walloon (vs Flemish) names and birthplaces remain statistically insignificant.

Additionally, we conduct robustness checks for RQ1 by repeating the main analyses on several subsamples. First, we restrict the sample to recruiters with more than five years of

recruitment experience (N = 332), thereby focusing on individuals with substantial expertise (in line with, e.g. Sterkens et al., 2023b). Second, we include only observations in which recruiters correctly identified all candidate characteristics intended to signal regional identity (N = 269). Third, we restrict the sample to recruiters who accurately estimated the candidates' commuting time (N = 304). The latter two restrictions ensure that the measured effects reflect the intended candidate signals as designed in the experiment. Across all subsamples, the results remain consistent with the main analyses (Appendix Table A4). However, in the subsample where all regional identity signals were correctly identified, the negative effect of being perceived as Walloon (vs Flemish) on interview propensity persists but is no longer statistically significant, while uncertainty about regional identity becomes positively significant (+11.98 percentage points, p = 0.037).

For RQ2, which examines employer perceptions, we re-estimate the generalised structural equation model using clusters of conceptually related items rather than individual indicators. The results (Appendix Table A5) confirm the main findings: candidates perceived as Walloon continue to score lower on perceptions related to availability, interpersonal competency, attitude, and taste-based discrimination. These results are robust when using candidate characteristics instead of recruiter perceptions (Appendix Table A6).

Finally, we apply multiple hypothesis testing corrections (Westfall-Young, Bonferroni-Holm, and Sidak-Holm) to account for family-wise error rates (Appendix Tables A7–A9). These adjustments lead to some attenuation in significance levels, particularly for individual perception variables within the statistical discrimination availability cluster, where only commuting time over 60 minutes remains significant. Nevertheless, the core patterns identified in the primary analyses remain robust.

5. Conclusion

Through a state-of-the-art vignette experiment, this study examined hiring discrimination and its underlying mechanisms based on regional identity. Although this form of discrimination remained largely understudied in the literature, it could pose a significant barrier to regional mobility—an important mechanism for addressing labour market

shortages. The focus lay specifically on hiring discrimination within Belgium, investigating how Flemish employers evaluated candidates signalling Walloon identity. Regional identity was conveyed through candidate characteristics such as name, place of birth, secondary school location (and associated language proficiency), and place of residence. Additionally, recruiters were asked to indicate their perception of the candidate's regional identity based on all available candidate information.

The study demonstrated that regional identity significantly affected hiring opportunities in the Flemish labour market. Candidates perceived as Walloon by recruiters had a lower propensity to be invited for a job interview than their Flemish counterparts. Among the characteristics used to signal regional origin, attending secondary school in Wallonia combined with proficiency in French (and English) had the most substantial negative effect on interview chances, followed by residence in Wallonia.

The findings further revealed that Flemish employers held a range of negative perceptions about Walloon candidates. These perceptions were grouped into four substantive clusters: three aligned with statistical discrimination—availability, interpersonal competencies, and work attitudes—and one aligned with taste-based discrimination. Within each cluster, significant differences emerged across individual perception items. The most substantial effects were observed for perceptions of ambition, availability to work when needed, and ability to get along with others. Robustness checks using an alternative outcome variable (i.e. hiring likelihood) and various subsamples (i.e. only recruiters with more than five years of experience and only observations where the recruiter correctly identified all candidate characteristics) confirmed the consistency of the results.

While the vignette experiment allowed for a causal interpretation of the effects of candidate characteristics on hiring outcomes, several limitations remained. The hypothetical nature of the design may not fully reflect real-world decision-making, and although social desirability bias was mitigated through targeted sampling, it could not be entirely ruled out. Furthermore, the strong penalty for candidates with a Walloon educational background and French (and English) language proficiency called for a critical reflection. Despite the experimental assumption that all candidates met the formal linguistic requirements for the job, recruiters may have considered this information unrealistic—particularly in the absence of Dutch proficiency—and penalised candidates accordingly.

Research on hiring discrimination and underlying perceptions related to regional identity remains scarce, but this line of inquiry may yield important contributions. From a scientific perspective, it could enhance external validity. Such research would be particularly relevant in contexts like Switzerland, where Eugster et al. (2017) show that, despite similar local labour markets and identical institutions, Romance language speakers search for work almost seven weeks (or 22%) longer than their German-speaking counterparts. From a policy perspective, the findings suggest that anti-discrimination measures should consider regional identity as a relevant dimension of diversity. Finally, the study has practical implications for job seekers: Walloon candidates applying in Flanders may wish to reconsider whether to include certain regional cues in their CVs. For instance, mentioning a secondary education diploma without specifying the school could serve as a potential strategy.

Declarations

Preregistration

The experiment was preregistered at OSF before data collection (doi.org/10.17605/OSF.IO/3ZB7M).

Ethics approval and consent to participate

Ex-ante ethical approval of survey research with informed consent is not required by the faculty of the research institution where the authors work.

Data and code availability

The full anonymised dataset and accompanying code are available through OSF (doi.org/10.17605/OSF.IO/3ZB7M).

Declaration of competing interest

The authors declare that they have no competing interests.

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CRediT authorship contribution statement

Louise Devos: Conceptualisation, Methods, Formal analysis, Data Curation, Writing – original draft, Writing – review & editing, Visualisation. **Louis Lippens:** Conceptualisation, Methods, Formal analysis, Writing – original draft, Writing – review and editing, Supervision. **Dagmar Claus:** Methods, Formal analysis, Data collection. **Stijn Baert:** Conceptualisation, Methods, Formal analysis, Writing – review and editing, Supervision, Funding acquisition.

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Figures and tables

Table 1

Candidate characteristics (vignette factors)

Candidate characteristics	Levels
Name	{Flemish name, Walloon name}
Place of birth	{Place of birth in Flanders, place of birth in Wallonia}
Place of residence	{Place of residence in Flanders, place of residence in Wallonia}
Place of secondary education	{Place of secondary education in Flanders, place of secondary education in Wallonia}
Language proficiency	{Fluent in Dutch, English, and French, fluent in Dutch and English, fluent in French and English}
One-way commuting time	{Less than 30 minutes, between 30 and 60 minutes, more than 60 minutes}
Gender	{Male, female}

Table 2

Job characteristics

Job	Bottleneck status	Level of coworker contact	Level of customer contact
Production worker	No bottleneck	Low	Low
Receptionist	No bottleneck	High	Low
Data entry clerk	No bottleneck	Low	High
Customer service representative	No bottleneck	High	High
Cleaner and housekeeper	Bottleneck	Low	Low
Fast food worker	Bottleneck	High	Low
Maintenance worker	Bottleneck	Low	High
Retail salesperson	Bottleneck	High	High

Table 3

Signals and accompanying statements

Signal	Statement
Statistical discrimination - availability	
Work a substantial amount	Applicants with such a profile usually are willing to work a substantial amount.
Punctuality	Applicants with such a profile are usually not late and do not leave too early.
Available to work whenever needed	Applicants with such a profile are usually available to work whenever needed.
Statistical discrimination - interpersonal skills	
Quality of communication during the job interview	Applicants with such a profile typically demonstrate good communication skills during job interviews.
Ability to get along with others on the job	Applicants with such a profile typically get along well with all kinds of people they encounter in the workplace.
Pleasure of interaction	Applicants with such a profile are typically considered pleasant to interact with.
Statistical discrimination - attitude	
Work attitude	Applicants with such a profile typically possess a good work attitude.
Maturity	Applicants with such a profile typically are mature.
Sense of responsibility	Applicants with such a profile typically have a good sense of responsibility.
Respect for authority	Applicants with such a profile typically have respect for authority.
Motivation	Applicants with such a profile usually possess sufficient job motivation.
Ambition	Applicants with such a profile usually possess sufficient career ambition.
Taste-based discrimination	
Employer collaboration	As an employer, I usually enjoy working with individuals with this kind of profile.
Coworker collaboration	The other employees in my organisation usually enjoy working with individuals with this kind of profile.
Client collaboration	Clients usually enjoy working with individuals with this kind of profile.

Table 4

Descriptives (fractions) of recruiters based on recruiters' perception of the regional identity of the candidate

	Total sample (N=399)	Regional identity of candidate: perceived as Flemish (N=169)	Regional identity of candidate: perceived as Walloon (N=160)	Regional identity of candidate: unknown (N=70)	χ^2
Gender					2.841
Women	0.714	0.751	0.669	0.729	
Men	0.286	0.249	0.331	0.271	
Age					3.030
21 to 35 years	0.361	0.385	0.375	0.271	
36 to 50 years	0.471	0.456	0.463	0.529	
51 to 75 years	0.168	0.160	0.163	0.200	
Highest degree obtained					2.414
Secondary	0.211	0.219	0.231	0.143	
Tertiary or other	0.789	0.781	0.769	0.857	
Experience with recruitment					2.928
Less than 1 year	0.073	0.077	0.056	0.100	
1 to 5 years	0.326	0.343	0.338	0.257	
More than 5 years	0.602	0.580	0.606	0.643	
Prior work experience with Walloons					1.237
Positive	0.531	0.533	0.513	0.571	
Negative or none	0.469	0.467	0.488	0.429	

Note. The chi-square tests examine whether candidate perceptions regarding the candidate's regional identity depend on various recruiter characteristics. No significant associations are found at the $p < .10$ level.

Table 5

Linear regressions of interview propensity score on regional identity

	(1)	(2)	(3)	(4)
Recruiter's perception of regional identity candidate (ref. = Flemish)				
Walloon	–0.785*	–0.810*		
	(0.351)	(0.346)		
Unknown	0.212	0.393		
	(0.434)	(0.422)		
Candidate characteristics (vignette factors)				
Walloon name (ref. = Flemish name)			–0.096	–0.064
			(0.235)	(0.244)
Born in Wallonia (ref. = born in Flanders)			0.151	0.075
			(0.217)	(0.223)
Living in Wallonia (ref. = living in Flanders)			–0.737**	–0.714**
			(0.255)	(0.259)
Secondary education and language proficiency (ref. = Flemish school, fluent in Dutch, English, and French)				
Flemish school, fluent in Dutch and English			–0.243	–0.157
			(0.399)	(0.374)
Walloon school, fluent in Dutch, French, and English			–0.305	–0.158
			(0.504)	(0.480)
Walloon school, fluent in French and English			–1.387**	–1.318**
			(0.499)	(0.495)
One-way commuting time (ref. = <30 min.)				
30 to 60 minutes			–0.446	–0.444
			(0.281)	(0.279)
Longer than 60 minutes			–1.936***	–1.938***
			(0.364)	(0.366)
Male (ref. = female)			–0.077	–0.087
			(0.220)	(0.220)
Job characteristics				
Bottleneck occupation (ref. = no)		0.432		0.364
		(0.535)		(0.549)
High level of customer contact (ref. = low)		–0.057		–0.123
		(0.535)		(0.543)
High level of coworker contact (ref. = low)		–0.521		–0.462
		(0.503)		(0.507)
Recruiter characteristics				
Male (ref. = female)		–0.083		–0.067
		(0.493)		(0.513)
Age category (ref. = <36 years)				
36 to 50 years		–0.131		–0.026
		(0.588)		(0.596)
51+ years		0.525		0.687
		(0.705)		(0.703)
Tertiary education (ref. = secondary education)		–1.186*		–1.167*
		(0.514)		(0.515)
Years of experience with recruitment (ref. = <1 year)				
1 to 5 years		–0.312		–0.410
		(1.238)		(1.262)
More than 5 years		0.079		–0.087
		(1.310)		(1.333)
Positive work experience with Walloons (ref. = negative or no)		–0.197		–0.216
		(0.493)		(0.507)
Constant	6.160***	7.325***	7.581***	8.784***
	(0.323)	(1.270)	(0.422)	(1.352)

*Notes. N=399. Abbreviations used: ref. (reference category). The model is described in Subsection 4.1. Standard errors are corrected for clustering of the observations at the recruiter level. Significance is indicated as *** when p < .001, ** when p < .01, * when p < .05, and † when p < .10.*

Table 6

Generalised structural equation model of individual perceptions towards the recruiters' perception of the regional identity of the candidate

Cluster of perceptions		Statistical discrimination: availability cluster			Statistical discrimination: interpersonal competencies cluster		
Perception		Work substantial amount	Punctuality	Available whenever needed	Quality of communication	Ability to get along with others	Pleasure of interaction
Recruiter's perception of candidate's regional identity	Walloon	–0.304* (0.139)	–0.406* (0.164)	–0.446** (0.147)	–0.387* (0.156)	–0.436** (0.137)	–0.272** (0.095)
	Unknown	–0.348 (0.231)	–0.334 (0.237)	–0.351 (0.285)	–0.216 (0.276)	–0.385 (0.252)	–0.150 (0.191)

Table 6 - continued

Generalised structural equation model of individual perceptions towards the recruiters' perception of the regional identity of the candidate

Cluster of perceptions		Statistical discrimination: attitude cluster					
Perception		Work attitude	Maturity	Sense of responsibility	Respect for authority	Motivation	Ambition
Recruiter's perception of candidate's regional identity	Walloon	–0.235† (0.131)	–0.383** (0.136)	–0.420* (0.166)	–0.379* (0.179)	–0.351* (0.151)	–0.470*** (0.135)
	Unknown	–0.015 (0.213)	0.08 (0.280)	0.123 (0.251)	–0.280 (0.255)	–0.070 (0.284)	–0.404 (0.299)

Table 6 - continued

Generalised structural equation model of individual perceptions towards the recruiters' perception of the regional identity of the candidate

Cluster of perceptions		Taste-based discrimination cluster		
Perception		Employer collaboration	Coworker collaboration	Client collaboration
Recruiter's perception of candidate's regional identity	Walloon	–0.355* (0.178)	–0.391* (0.157)	–0.375* (0.170)
	Unknown	0.207 (0.270)	0.079 (0.283)	0.158 (0.281)

*Notes. N=399. The model is described in Subsection 4.2. Standard errors are corrected for clustering of the observations at the recruiter level. Significance is indicated as *** when p < .001, ** when p < .01, * when p < .05, and † when p < .10.*

Table 7

Generalised structural equation model of individual perceptions towards candidate characteristics (vignette factors)

Cluster of perceptions			Statistical discrimination: availability cluster			Statistical discrimination: interpersonal competencies cluster		
			Work substantial amount	Punctuality	Available whenever needed	Quality of communication	Ability to get along with others	Pleasure of interaction
Candidate characteristics (vignette factors)		Walloon name (ref. = Flemish name)	–0.095 (0.120)	–0.219* (0.100)	–0.280* (0.141)	0.047 (0.112)	–0.117 (0.109)	–0.073 (0.068)
		Born in Wallonia (ref. = born in Flanders)	–0.128 (0.101)	–0.129 (0.116)	–0.135 (0.140)	–0.109 (0.094)	0.003 (0.084)	–0.065 (0.069)
		Living in Wallonia (ref. = living in Flanders)	–0.075 (0.117)	–0.184 (0.132)	–0.196 (0.143)	–0.034 (0.102)	–0.188† (0.105)	–0.077 (0.091)
	Secondary education and language proficiency (ref. = Flemish school, fluent in Dutch, English, and French)	Flemish school, fluent in Dutch and English	–0.057 (0.160)	0.371 (0.279)	0.378 (0.258)	–0.291 (0.188)	–0.146 (0.183)	0.038 (0.144)
		Walloon school, fluent in Dutch, English, and French	–0.315 (0.288)	0.001 (0.324)	0.148 (0.33)	–0.244 (0.319)	–0.268 (0.295)	–0.157 (0.288)
		Walloon school, fluent in French and English	–0.325 (0.216)	0.086 (0.258)	0.277 (0.273)	–0.500† (0.260)	–0.284 (0.219)	–0.224 (0.190)
	One-way commuting time (ref. = <30 min.)	30 to 60 minutes	–0.031 (0.146)	–0.150 (0.136)	–0.316† (0.171)	0.131 (0.137)	–0.052 (0.139)	–0.056 (0.086)
		More than 60 minutes	–0.139 (0.153)	–0.573** (0.185)	–0.579** (0.204)	–0.057 (0.145)	–0.043 (0.123)	–0.096 (0.111)
		Male (ref. = female)	0.136 (0.133)	–0.068 (0.147)	–0.152 (0.140)	0.037 (0.122)	0.018 (0.126)	0.016 (0.098)

Table 7 - continued

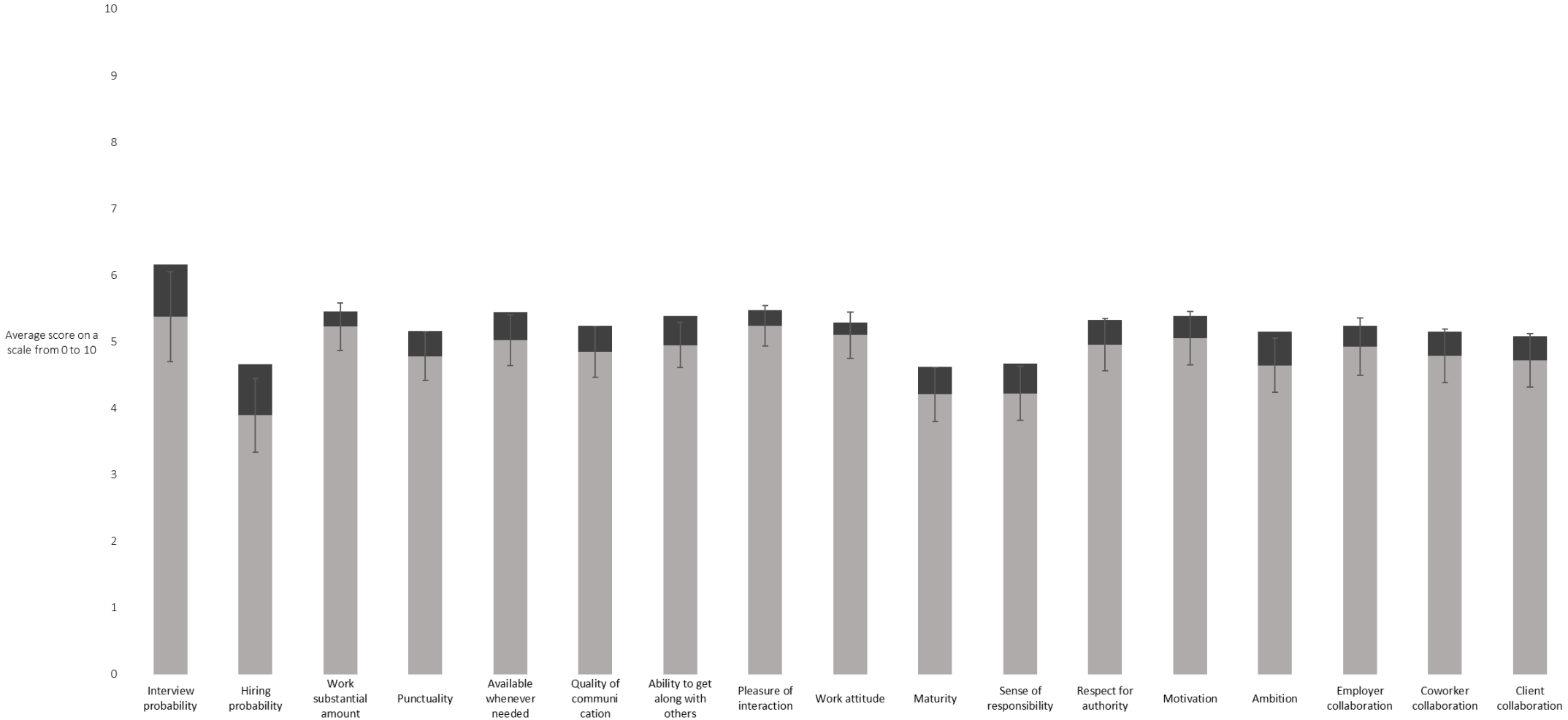
Generalised structural equation model of individual perceptions towards candidate characteristics (vignette factors)

Cluster of perceptions			Statistical discrimination: attitude cluster						Taste-based discrimination cluster		
Perception			Work attitude	Maturity	Sense of responsibility	Respect for authority	Motivation	Ambition	Employer collaboration	Coworker collaboration	Client collaboration
Candidate characteristics (vignette factors)		Walloon name (ref. = Flemish name)	0.056 (0.104)	–0.031 (0.115)	0.060 (0.106)	–0.076 (0.092)	–0.099 (0.089)	0.003 (0.083)	–0.039 (0.109)	–0.136 (0.105)	0.044 (0.094)
		Born in Wallonia (ref. = born in Flanders)	0.055 (0.086)	–0.116 (0.111)	0.067 (0.114)	–0.089 (0.111)	–0.131 (0.118)	–0.187* (0.095)	–0.144 (0.109)	–0.152† (0.091)	–0.012 (0.100)
		Living in Wallonia (ref. = living in Flanders)	0.05 (0.118)	0.049 (0.130)	0.007 (0.113)	0.022 (0.113)	0.022 (0.123)	0.001 (0.117)	–0.077 (0.134)	–0.092 (0.121)	0.028 (0.134)
	Secondary education and language proficiency (ref. = Flemish school, fluent in Dutch, English, and French)	Flemish school, fluent in Dutch and English	–0.053 (0.166)	–0.116 (0.174)	–0.301 (0.193)	–0.039 (0.205)	0.004 (0.216)	–0.285 (0.200)	0.007 (0.208)	–0.023 (0.214)	–0.184 (0.204)
		Walloon school, fluent in Dutch, English, and French	–0.034 (0.308)	–0.160 (0.287)	–0.358 (0.322)	–0.059 (0.327)	0.106 (0.331)	–0.242 (0.352)	0.168 (0.358)	–0.009 (0.341)	–0.216 (0.361)
		Walloon school, fluent in French and English	–0.268 (0.198)	–0.258 (0.234)	–0.492* (0.237)	–0.609* (0.256)	–0.126 (0.220)	–0.427† (0.221)	–0.194 (0.255)	–0.121 (0.243)	–0.341 (0.257)
	One-way commuting time (ref. = <30 min.)	30 to 60 minutes	–0.015 (0.102)	0.010 (0.116)	0.004 (0.106)	–0.039 (0.141)	–0.046 (0.114)	0.000 (0.119)	–0.103 (0.112)	–0.186 (0.123)	–0.208† (0.113)
		More than 60 minutes	–0.148 (0.137)	–0.195 (0.136)	–0.006 (0.12)	0.064 (0.122)	–0.246† (0.149)	0.025 (0.117)	–0.172 (0.172)	–0.327* (0.132)	–0.276† (0.144)
		Male (ref. = female)	–0.168 (0.108)	–0.012 (0.134)	0.086 (0.127)	–0.104 (0.125)	–0.141 (0.127)	0.051 (0.108)	–0.136 (0.122)	–0.150 (0.113)	0.055 (0.100)

*Notes. N=399. Abbreviations used: ref. (reference category). The model is described in Subsection 4.2. Standard errors are corrected for clustering of the observations at the recruiter level. Significance is indicated as *** when p < .001, ** when p < .01, * when p < .05, and † when p < .10.*

Fig. 1

Differences in scores on hiring outcome and perception statements between candidates perceived as Flemish and Walloon by recruiter



	Interview probability	Hiring probability	Work substantial amount	Punctuality	Available whenever needed	Quality of communi cation	Ability to get along with others	Pleasure of interaction	Work attitude	Maturity	Sense of responsibility	Respect for authority	Motivation	Ambition	Employer collaboration	Coworker collaboration	Client collaboration
Perceived as Flemish	6.160	4.663	5.456	5.160	5.444	5.237	5.385	5.473	5.284	4.621	4.675	5.325	5.385	5.154	5.243	5.148	5.083
Perceived as Walloon	5.375	3.894	5.225	4.781	5.025	4.844	4.950	5.238	5.100	4.206	4.225	4.956	5.050	4.644	4.925	4.788	4.719
p-value for t-test of equality	0.023	0.006	0.209	0.043	0.031	0.044	0.011	0.125	0.301	0.043	0.030	0.065	0.102	0.014	0.150	0.076	0.076

Notes. N=329. Error bars indicate 95% confidence intervals around the scores for candidates perceived as Walloon.

Appendix

Table A1

Logit regression of the perception of the candidate being Walloon according to the recruiter on candidate, job, and recruiter characteristics

	(1)	(2)
Candidate characteristics (vignette factors)		
Walloon name (ref. = Flemish name)	0.912** (0.304)	0.992** (0.305)
Born in Wallonia (ref. = born in Flanders)	2.092*** (0.345)	2.210*** (0.370)
Living in Wallonia (ref. = living in Flanders)	2.707*** (0.422)	2.920*** (0.408)
Secondary education and language proficiency (ref. = Flemish school, fluent in Dutch, English, and French)		
Flemish school, fluent in Dutch and English	–0.732† (0.377)	–0.804* (0.396)
Walloon school, fluent in Dutch, French, and English	0.850† (0.478)	0.988* (0.490)
Walloon school, fluent in French and English	2.411*** (0.525)	2.550*** (0.530)
One-way commuting time (ref. = <30 min.)		
30 to 60 minutes	0.821† (0.428)	0.901* (0.438)
Longer than 60 minutes	0.843* (0.390)	0.871* (0.389)
Male (ref. = female)	0.058 (0.323)	0.118 (0.352)
Job characteristics		
Bottleneck occupation (ref. = no)		0.029 (0.313)
High level of customer contact (ref. = low)		–0.527† (0.310)
High level of coworker contact (ref. = low)		–0.371 (0.305)
Recruiter characteristics		
Male (ref. = female)		0.836* (0.390)
Age category (ref. = <36 years)		
36 to 50 years		0.395 (0.395)
51+ years		0.166 (0.487)
Tertiary education (ref. = secondary education)		0.090 (0.411)
Years of experience with recruitment (ref. = <1 year)		
1 to 5 years		0.247 (0.497)
More than 5 years		0.654 (0.494)
Positive work experience with Walloons (ref. = negative or no)		0.274 (0.294)
Constant	–4.153*** (0.598)	–5.243*** (0.889)

*Notes. N=329. Abbreviations used: ref. (reference category). The model is described in Subsection 3.3. Standard errors are corrected for clustering of the observations at the recruiter level. Significance is indicated as *** when p < .001, ** when p < .01, * when p < .05, and † when p < .10.*

Table A2

Moderation analysis — linear regressions of interview propensity score on regional identity

	(1)	(2)
Recruiter's perception of candidate's regional identity (ref. = Flemish)		
Walloon	–1.225† (0.708)	
Unknown	–0.733 (1.415)	
Candidate characteristics		
Walloon name (ref. = Flemish name)		0.150 (1.406)
Born in Wallonia (ref. = born in Flanders)		1.777† (1.033)
Living in Wallonia (ref. = living in Flanders)		1.862 (1.598)
Secondary education and language proficiency (ref. = Flemish school, fluent in Dutch, English, and French)		
Flemish school, fluent in Dutch and English		–1.301 (2.069)
Walloon school, fluent in Dutch, French, and English		–1.224 (2.363)
Walloon school, fluent in French and English		1.817 (1.948)
One-way commuting time (ref. = <30 min.)		
30 to 60 minutes		–0.594† (0.322)
Longer than 60 minutes		–2.146*** (0.386)
Male (ref. = female)		–0.424 (0.303)
Job characteristics		
Bottleneck occupation (ref. = no bottleneck)	0.888 (0.598)	1.606† (0.892)
High level of customer contact (ref. = low)	–0.336 (0.619)	0.478 (1.044)
High level of coworker contact (ref. = low)	–0.332 (0.618)	–1.453 (0.951)
Recruiter characteristics		
Male (ref. = female)	–0.288 (0.557)	–0.032 (0.981)
Age category (ref. = <36 years)		
36 to 50 years	–0.319 (0.732)	–1.983† (1.150)
51+ years	0.622 (0.939)	–0.176 (1.179)
Tertiary education (ref. = secondary)	–1.551* (0.604)	–0.836 (1.149)
Years of experience with recruitment (ref. = <1 year)		
1 to 5 years	–0.329 (1.382)	–0.432 (1.456)
More than 5 years	–0.200 (1.498)	–0.440 (1.591)
Positive work experience with Walloons (ref. = negative or no)	–0.229 (0.615)	0.051 (0.902)
Interactions with recruiter's perception of candidate's regional identity		
Walloon x Bottleneck occupation	–0.692† (0.374)	
Walloon x High level of customer contact	0.419 (0.483)	
Walloon x High level of coworker contact	–0.217 (0.508)	
Walloon x Male recruiter	0.331 (0.463)	
Walloon x Recruiter 36 to 50 years	0.275 (0.513)	
Walloon x Recruiter 51+ years	0.031 (0.659)	
Walloon x Recruiter highly educated	0.449 (0.454)	
Walloon x Recruiter 1 to 5 years of recruitment experience	–0.180 (0.611)	
Walloon x Recruiter 5+ years of recruitment experience	0.182 (0.609)	
Walloon x Positive work experience with Walloons	0.071 (0.497)	

Table A2 - continued

Moderation analysis — linear regressions of interview propensity score on regional identity

	(1)	(2)
Interactions with candidate characteristics (vignette factors) signalling regional identity		
Walloon name x Born in Wallonia		–0.322 (0.722)
Walloon name x Living in Wallonia		–0.961 (0.867)
Walloon name x Flemish school, fluent in Dutch and English		–0.752 (1.018)
Walloon name x Walloon school, fluent in Dutch, English, and French		–2.401* (1.080)
Walloon name x Walloon school, fluent in French and English		–2.219* (1.047)
Born in Wallonia x Living in Wallonia		0.724 (0.642)
Born in Wallonia x Flemish school, fluent in Dutch and English		–0.025 (1.182)
Born in Wallonia x Walloon school, fluent in Dutch, English, and French		–1.123 (1.116)
Born in Wallonia x Walloon school, fluent in French and English		–0.758 (0.741)
Living in Wallonia x Flemish school, fluent in Dutch and English		–1.560 (0.987)
Living in Wallonia x Walloon school, fluent in Dutch, English, and French		–1.422 (1.276)
Living in Wallonia x Walloon school, fluent in French and English		–0.614 (1.358)
Walloon name x Bottleneck occupation		0.726 (0.565)
Walloon name x Job with high level of customer contact		–0.507 (0.718)
Walloon name x Job with high level of coworker contact		0.656 (0.646)
Born in Wallonia x Bottleneck occupation		–0.154 (0.566)
Born in Wallonia x Job with high level of customer contact		–0.942 (0.651)
Born in Wallonia x Job with high level of coworker contact		0.034 (0.576)
Flemish school, fluent in Dutch and English x Bottleneck occupation		0.331 (0.885)
Walloon school, fluent in Dutch, English, and French x Bottleneck occupation		–0.627 (1.074)
Walloon school, fluent in French and English x Bottleneck occupation		–1.708 (1.059)
Flemish school, fluent in Dutch and English x Job with high level of customer contact		–0.764 (1.103)
Walloon school, fluent in Dutch, English, and French x Job with high level of customer contact		0.471 (1.013)
Walloon school, fluent in French and English x Job with high level of customer contact		0.143 (1.279)
Flemish school, fluent in Dutch and English x Job with high level of coworker contact		1.442 (0.896)
Walloon school, fluent in Dutch, English, and French x Job with high level of coworker contact		0.906 (1.040)
Walloon school, fluent in French and English x Job with high level of coworker contact		0.522 (1.057)
Living in Wallonia x Bottleneck occupation		–1.721* (0.680)
Living in Wallonia x Job with high level of customer contact		0.404 (0.564)
Living in Wallonia x Job with high level of coworker contact		–0.405 (0.568)
Walloon name x Male recruiter		0.212 (0.647)
Walloon name x Age recruiter from 36 to 50 years		1.282* (0.642)
Walloon name x Age recruiter 51+ years		2.324** (0.853)
Walloon name x Tertiary education		0.241 (0.589)
Walloon name x Recruiter with 1 to 5 years of recruitment experience		0.531 (0.949)
Walloon name x Recruiter with 5+ years of recruitment experience		0.414 (0.985)
Walloon name x Positive work experience with Walloons		–0.364 (0.563)
Born in Wallonia x Male recruiter		–0.202 (0.615)

Table A2 - continued

Moderation analysis — linear regressions of interview propensity score on regional identity

	(1)	(2)
Born in Wallonia x Age recruiter from 36 to 50 years		0.151 (0.513)
Born in Wallonia x Age recruiter 51+ years		–0.686 (0.568)
Born in Wallonia x Tertiary education		–1.230* (0.585)
Born in Wallonia x Recruiter with 1 to 5 years of recruitment experience		–0.446 (0.886)
Born in Wallonia x Recruiter with 5+ years of recruitment experience		0.388 (0.721)
Born in Wallonia x Positive work experience with Walloons		0.210 (0.557)
Living in Wallonia x Male recruiter		0.427 (0.719)
Living in Wallonia x Age recruiter from 36 to 50 years		1.022 (0.623)
Living in Wallonia x Age recruiter 51+ years		0.181 (1.022)
Living in Wallonia x Tertiary education		–0.132 (0.705)
Living in Wallonia x Recruiter with 1 to 5 years of recruitment experience		–1.286 (1.185)
Living in Wallonia x Recruiter with 5+ years of recruitment experience		–1.270 (1.165)
Living in Wallonia x Positive work experience with Walloons		–0.357 (0.569)
Flemish school, fluent in Dutch and English x Male recruiter		–0.486 (0.836)
Flemish school, fluent in Dutch and English x Age recruiter from 36 to 50 years		0.763 (1.175)
Flemish school, fluent in Dutch and English x Age recruiter 51+ years		–0.944 (1.154)
Flemish school, fluent in Dutch and English x Tertiary education		0.053 (0.974)
Flemish school, fluent in Dutch and English x Recruiter with 1 to 5 years of recruitment experience		0.913 (1.866)
Flemish school, fluent in Dutch and English x Recruiter with 5+ years of recruitment experience		1.753 (1.923)
Flemish school, fluent in Dutch and English x Positive work experience with Walloons		0.001 (0.884)
Walloon school, fluent in Dutch, English, and French x Male recruiter		0.745 (0.879)
Walloon school, fluent in Dutch, English, and French x Age recruiter from 36 to 50 years		2.070* (1.024)
Walloon school, fluent in Dutch, English, and French and English x Age recruiter 51+ years		1.209 (1.253)
Walloon school, fluent in Dutch, English, and French x Tertiary education		–0.044 (0.983)
Walloon school, fluent in Dutch, English, and French x Recruiter with 1 to 5 years of recruitment experience		2.393† (1.415)
Walloon school, fluent in Dutch, English, and French x Recruiter with 5+ years of recruitment experience		1.248 (1.617)
Walloon school, fluent in Dutch, English, and French x Positive work experience with Walloons		0.013 (0.940)
Walloon school, fluent in French and English x Male recruiter		–0.830 (1.025)
Walloon school, fluent in French and English x Age recruiter from 36 to 50 years		0.471 (1.168)
Walloon school, fluent in French and English x Age recruiter 51+ years		0.682 (1.808)
Walloon school, fluent in French and English x Tertiary education		0.612 (1.347)
Walloon school, fluent in French and English x Recruiter with 1 to 5 years of recruitment experience		–1.793 (1.805)
Walloon school, fluent in French and English x Recruiter with 5+ years of recruitment experience		–1.751 (1.736)
Walloon school, fluent in French and English x Positive work experience with Walloons		0.009 (1.109)
Constant	7.746*** (1.473)	8.320*** (1.688)

*Notes. N=399. Abbreviations used: ref. (reference category). The model is described in Subsection 4.3. Standard errors are corrected for clustering of the observations at the recruiter level. Significance is indicated as *** when p < .001, ** when p < .01, * when p < .05, and † when p < .10.*

Table A3

Linear regression of hiring propensity score on regional identity

	(1)	(2)	(3)	(4)
Recruiter's perception of candidate's regional identity				
(ref. = Flemish)				
Walloon	–0.769**	–0.771**		
	(0.283)	(0.271)		
Unknown	0.294	0.411		
	(0.409)	(0.360)		
Candidate characteristics (vignette factors)				
Walloon name (ref. = Flemish name)			–0.168	–0.139
			(0.186)	(0.193)
Born in Wallonia (ref. = born in Flanders)			0.054	–0.010
			(0.188)	(0.191)
Living in Wallonia (ref. = living in Flanders)			–0.575**	–0.535*
			(0.210)	(0.204)
Secondary education and language proficiency				
(ref. = Flemish school, fluent in Dutch, English, and French)				
Flemish school, fluent in Dutch and English			–0.295	–0.249
			(0.336)	(0.308)
Walloon school, fluent in Dutch, French, and English			–0.177	–0.163
			(0.434)	(0.393)
Walloon school, fluent in French and English			–1.305**	–1.280**
			(0.419)	(0.383)
One-way commuting time (ref. = <30 min.)				
30 to 60 minutes			–0.647**	–0.648*
			(0.241)	(0.245)
Longer than 60 minutes			–1.447***	–1.449***
			(0.308)	(0.306)
Male (ref. = female)			–0.160	–0.147
			(0.172)	(0.176)
Job characteristics				
Bottleneck occupation (ref. = no)		–0.328		–0.406
		(0.412)		(0.421)
High level of customer contact (ref. = low)		0.445		0.404
		(0.426)		(0.436)
High level of coworker contact (ref. = low)		–0.520		–0.453
		(0.444)		(0.445)
Recruiter characteristics				
Male (ref. = female)		–0.003		0.005
		(0.498)		(0.516)
Age category (ref. = <36 years)				
36 to 50 years		–0.688		–0.587
		(0.457)		(0.467)
51+ years		–0.182		–0.025
		(0.687)		(0.689)
Tertiary education (ref. = secondary education)		–0.699†		–0.691†
		(0.392)		(0.394)
Years of experience with recruitment (ref. = <1 year)				
1 to 5 years		–0.091		–0.202
		(0.839)		(0.888)
More than 5 years		0.186		0.001
		(0.845)		(0.888)
Positive work experience with Walloons (ref. = negative or no)		–0.973*		–0.992*
		(0.431)		(0.435)
Constant	4.663***	6.186***	6.007***	7.612***
	(0.255)	(0.846)	(0.410)	(0.952)

*Notes. N=399. Abbreviations used: ref. (reference category). The model is described in Subsection 4.4. Standard errors are corrected for clustering of the observations at the recruiter level. Significance is indicated as *** when p < .001, ** when p < .01, * when p < .05, and † when p < .10.*

Table A4

Subsample analyses - linear regressions of interview propensity score on regional identity

	Subsample of recruiters with more than 5 years of recruitment experience (N=322)		Subsample of vignettes where recruiter accurately identified all factors signalling regional identity (N=269)		Subsample of vignettes where recruiter correctly identified commuting time (N=304)	
	(1)	(2)	(1)	(2)	(1)	(2)
Recruiter's perception of (ref. = Flemish)						
Walloon	–0.908*		–0.279		–0.527	
	(0.388)		(0.414)		(0.399)	
Unknown	0.471		1.198*		0.746	
	(0.496)		(0.563)		(0.491)	
Candidate characteristics (vignette factors)						
Walloon name (ref. = Flemish name)		–0.097		–0.464		0.085
		(0.289)		(0.336)		(0.294)
Born in Wallonia (ref. = born in Flanders)		0.044		0.343		0.350
		(0.260)		(0.287)		(0.245)
Living in Wallonia (ref. = living in Flanders)		–0.847**		–0.520		–0.718*
		(0.300)		(0.370)		(0.324)
Secondary education and language proficiency (ref. = Flemish school, fluent in Dutch, English, and French)						
Flemish school, fluent in Dutch and English		–0.056		–0.211		–0.293
		(0.400)		(0.485)		(0.445)
Walloon school, fluent in Dutch, French, and English		0.145		–0.254		0.214
		(0.532)		(0.576)		(0.497)
Walloon school, fluent in French and English		–1.137*		–0.971		–1.368*
		(0.552)		(0.629)		(0.561)
One-way commuting time (ref. = <30 min.)						
30 to 60 minutes		–0.645*		–0.436		–0.514
		(0.318)		(0.409)		(0.394)
Longer than 60 minutes		–2.078***		–2.444***		–2.357***
		(0.411)		(0.482)		(0.430)
Male (ref. = female)		–0.074		0.122		–0.453†
		(0.255)		(0.303)		(0.241)
Job characteristics						
Bottleneck occupation (ref. = no)	0.107	0.016	0.036	–0.393	0.569	0.434
	(0.582)	(0.597)	(0.598)	(0.648)	(0.521)	(0.537)
High level of customer contact (ref. = low)	0.417	0.261	0.048	–0.096	–0.039	–0.228
	(0.665)	(0.670)	(0.591)	(0.611)	(0.552)	(0.572)
High level of coworker contact (ref. = low)	–0.849	–0.746	–0.677	–0.823	–0.402	–0.494
	(0.528)	(0.528)	(0.586)	(0.604)	(0.554)	(0.567)

Table A4 - continued

Subsample analyses - linear regressions of interview propensity score on regional identity

	Subsample of recruiters with more than 5 years of recruitment experience (N=322)		Subsample of vignettes where recruiter accurately identified all factors signalling regional identity (N=269)		Subsample of vignettes where recruiter correctly identified commuting time (N=304)	
	(1)	(2)	(1)	(2)	(1)	(2)
Recruiter characteristics						
Male (ref. = female)	–0.042	–0.006	0.384	0.602	0.179	0.220
	(0.547)	(0.570)	(0.559)	(0.592)	(0.546)	(0.557)
Age category (ref. = <36 years)						
36 to 50 years	–0.504	–0.355	0.236	0.381	0.046	0.118
	(0.646)	(0.660)	(0.645)	(0.687)	(0.585)	(0.591)
51+ years	0.411	0.656	0.657	0.709	0.651	1.008
	(0.811)	(0.793)	(0.792)	(0.799)	(0.719)	(0.682)
Tertiary education	–1.000	–1.010	–0.806	–0.743	–1.415**	–1.324*
(ref. = secondary education)	(0.628)	(0.628)	(0.667)	(0.671)	(0.502)	(0.500)
Years of experience with recruitment (ref. = <1 year)						
1 to 5 years	–3.279**	–3.581***	–1.340	–1.604	–0.417	–0.790
	(1.157)	(0.965)	(1.609)	(1.784)	(1.305)	(1.415)
More than 5 years	–2.890*	–3.191**	–1.118	–1.170	–0.224	–0.751
	(1.199)	(1.018)	(1.641)	(1.789)	(1.349)	(1.465)
Positive work experience with	–0.224	–0.170	0.090	0.217	–0.272	–0.245
Walloons (ref. = negative or no)	(0.564)	(0.575)	(0.618)	(0.638)	(0.522)	(0.529)
Constant	10.425***	12.054***	7.452***	9.272***	7.132***	9.253***
	(1.293)	(1.217)	(1.829)	(2.006)	(1.330)	(1.533)

*Notes. Abbreviations used: ref. (reference category). The model is described in Subsection 4.4. Standard errors are corrected for clustering of the observations at the recruiter level. Significance is indicated as *** when p < .001, ** when p < .01, * when p < .05, and † when p < .1*

Table A5

Generalised structural equation model of clustered perceptions towards recruiters' perception of the regional identity of the candidate

Cluster of perceptions		Statistical discrimination: availability cluster	Statistical discrimination: interpersonal competencies cluster	Statistical discrimination: attitude cluster	Taste-based discrimination cluster
Recruiter's perception of candidate's regional identity (ref. = Flemish)	Walloon	–0.385***	–0.365**	–0.373**	–0.373*
		(0.109)	(0.118)	(0.123)	(0.164)
	Unknown	–0.344	–0.250	–0.094	0.148
		(0.229)	(0.227)	(0.235)	(0.259)

*Notes. N=399. Abbreviations used: ref. (reference category). The model is described in Subsection 4.4. Standard errors are corrected for clustering of the observations at the recruiter level. Significance is indicated as *** when p < .001, ** when p < .01, * when p < .05, and † when p < .10.*

Table A6

Generalised structural equation model of clustered perceptions towards candidate characteristics

Cluster of perceptions			Statistical discrimination: availability cluster	Statistical discrimination: interpersonal competencies cluster	Statistical discrimination: attitude cluster	Taste-based discrimination cluster
Candidate characteristics (vignette factors)		Walloon name (ref. = Flemish name)	–0.198* (0.096)	–0.048 (0.087)	–0.014 (0.073)	–0.044 (0.093)
		Born in Wallonia (ref. = born in Flanders)	–0.131 (0.095)	–0.057 (0.066)	–0.067 (0.072)	–0.103 (0.092)
		Living in Wallonia (ref. = living in Flanders)	–0.152 (0.109)	–0.100 (0.088)	0.025 (0.098)	–0.047 (0.122)
	Secondary education and language proficiency (ref. = Flemish school, fluent in Dutch, English, and French)	Flemish school, fluent in Dutch and English	0.230 (0.188)	–0.133 (0.144)	–0.132 (0.143)	–0.066 (0.196)
		Walloon school, fluent in Dutch, English, and French	–0.055 (0.277)	–0.223 (0.275)	–0.124 (0.268)	–0.019 (0.339)
		Walloon school, fluent in French and English	0.013 (0.215)	–0.336† (0.195)	–0.363* (0.182)	–0.218 (0.241)
	One-way commuting time (ref. = <30 min.)	30 to 60 minutes	–0.165 (0.112)	0.008 (0.099)	–0.014 (0.085)	–0.165† (0.100)
		More than 60 minutes	–0.431** (0.144)	–0.066 (0.116)	–0.084 (0.099)	–0.258† (0.144)
		Male (ref. = female)	–0.028 (0.110)	0.024 (0.106)	–0.048 (0.095)	–0.077 (0.105)

*Notes. N=399. Abbreviations used: ref. (reference category). The model is described in Subsection 4.4. Standard errors are corrected for clustering of the observations at the recruiter level. Significance is indicated as *** when p < .001, ** when p < .01, * when p < .05, and † when p < .1*

Table A7

Corrections for multiple hypothesis testing of linear regression of interview propensity score on regional identity

	Original p-value	Westfall-Young p-value	Bonferroni-Holm p-value	Sidak-Holm p-value
Recruiter's perception of candidate's regional identity (ref. = Flemish)				
Walloon	0.022	0.052	0.044	0.043
Unknown	0.354	0.365	0.354	0.354
Candidate characteristics (vignette factors)				
Secondary education and language proficiency (ref. = Flemish school, fluent in Dutch, English, and French)				
Flemish school, fluent in Dutch and English	0.675	0.878	1.000	0.894
Walloon school, fluent in Dutch, French, and English	0.742	0.878	1.000	0.894
Walloon school, fluent in French and English	0.009	0.021	0.028	0.028
One-way commuting time (ref. = <30 min.)				
30 to 60 minutes	0.115	0.121	0.115	0.115
Longer than 60 minutes	0.000	0.000	0.000	0.000

Notes. As elaborated in Subsection 4.4, corrections were applied to the regressions listed in Table 4, including all control variables. In the regression using only the recruiter's perception of the regional identity of the candidate, we accounted for the fact that the categorical variable has three levels (Flemish, Walloon, unknown). For the regression with candidate characteristics (vignette factors), we applied adjustments per categorical variable based on the number of categories within each variable.

Table A8

Corrections for multiple hypothesis testing of the generalised structural equation model of clustered perceptions towards recruiters' perception of regional identity

Cluster of perceptions	Perception	Original p-value	Westfall-Young p-value	Bonferroni-Holm p-value	Sidak-Holm p-value
Statistical discrimination: availability cluster	Work substantial amount	0.035	0.035	0.041	0.041
	Punctuality	0.020	0.034	0.041	0.041
	Available whenever needed	0.004	0.006	0.011	0.011
Statistical discrimination: interpersonal competencies cluster	Quality of communication	0.017	0.019	0.017	0.017
	Ability to get along with others	0.003	0.010	0.009	0.009
	Pleasure of interaction	0.008	0.015	0.016	0.016
Statistical discrimination: attitude cluster	Work attitude	0.082	0.088	0.092	0.089
	Maturity	0.009	0.042	0.043	0.043
	Sense of responsibility	0.018	0.058	0.073	0.071
	Respect for authority	0.045	0.088	0.092	0.089
	Motivation	0.031	0.088	0.092	0.089
	Ambition	0.002	0.012	0.010	0.010
Taste-based discrimination cluster	Employer collaboration	0.063	0.076	0.089	0.087
	Coworker collaboration	0.022	0.044	0.066	0.064
	Client collaboration	0.044	0.076	0.089	0.087

Notes. As elaborated in Subsection 4.4, corrections were applied to the model in Table 5 based on the number of perceptions within each conceptual cluster.

Table A9

Corrections for multiple hypothesis testing of the generalised structural equation model of perception variables towards candidate characteristics

		Candidate characteristics (vignette factors)											
		Walloon name (ref. = Flemish name)				Born in Wallonia (ref. = born in Flanders)				Living in Wallonia (ref. = living in Flanders)			
Cluster of perceptions	Perception	O	WY	BH	SH	O	WY	BH	SH	O	WY	BH	SH
Statistical discrimination: availability cluster	Work substantial amount	0.437	0.460	0.437	0.437	0.214	0.488	0.641	0.514	0.520	0.518	0.520	0.520
	Punctuality	0.033	0.088	0.010	0.096	0.275	0.488	0.641	0.514	0.150	0.333	0.451	0.387
	Available whenever needed	0.057	0.106	0.113	0.110	0.348	0.488	0.641	0.514	0.168	0.333	0.451	0.387
Statistical discrimination: interpersonal competencies cluster	Quality of communication	0.690	0.690	0.881	0.690	0.252	0.554	0.756	0.582	0.746	0.758	0.827	0.746
	Ability to get along with others	0.294	0.563	0.881	0.648	0.970	0.969	0.970	0.970	0.084	0.204	0.252	0.231
	Pleasure of interaction	0.310	0.563	0.881	0.648	0.347	0.562	0.756	0.582	0.413	0.647	0.827	0.656
Statistical discrimination: attitude cluster	Work attitude	0.597	0.946	1.000	0.967	0.533	0.778	1.000	0.822	0.686	0.993	1.000	0.999
	Maturity	0.792	0.960	1.000	0.967	0.289	0.701	1.000	0.793	0.710	0.996	1.000	0.999
	Sense of responsibility	0.573	0.946	1.000	0.967	0.555	0.778	1.000	0.822	0.954	0.999	1.000	1.000
	Respect for authority	0.401	0.886	1.000	0.923	0.438	0.778	1.000	0.822	0.852	0.999	1.000	1.000
	Motivation	0.267	0.737	1.000	0.845	0.270	0.701	1.000	0.793	0.864	0.999	1.000	1.000
	Ambition	0.974	0.972	1.000	0.974	0.053	0.224	0.315	0.277	0.994	0.999	1.000	1.000
Taste-based discrimination cluster	Employer collaboration	0.728	0.843	1.000	0.877	0.207	0.335	0.414	0.371	0.580	0.735	1.000	0.854
	Coworker collaboration	0.220	0.426	0.661	0.526	0.092	0.199	0.275	0.251	0.473	0.707	1.000	0.854
	Client collaboration	0.649	0.843	1.000	0.877	0.899	0.910	0.899	0.899	0.843	0.844	1.000	0.854

Table A9 - continued

Corrections for multiple hypothesis testing of the generalised structural equation model of perception variables towards candidate characteristics

		Candidate characteristics (vignette factors)											
		Secondary education and language proficiency (ref. = Flemish school, fluent in Dutch, English, and French)											
		Flemish school, fluent in Dutch and English				Walloon school, fluent in Dutch, English, and French				Walloon school, fluent in French and English			
Cluster of perceptions	Perception	O	WY	BH	SH	O	WY	BH	SH	O	WY	BH	SH
Statistical discrimination: availability cluster	Work substantial amount	0.717	0.676	0.717	0.717	0.271	0.543	0.812	0.612	0.138	0.322	0.415	0.360
	Punctuality	0.196	0.379	0.453	0.388	0.996	0.998	1.000	0.996	0.742	0.757	0.742	0.742
	Available whenever needed	0.151	0.379	0.453	0.388	0.663	0.845	1.000	0.886	0.318	0.492	0.637	0.535
Statistical discrimination: interpersonal competencies cluster	Quality of communication	0.135	0.302	0.406	0.354	0.449	0.643	1.000	0.761	0.062	0.139	0.187	0.176
	Ability to get along with others	0.431	0.639	0.863	0.677	0.379	0.611	1.000	0.761	0.205	0.359	0.409	0.367
	Pleasure of interaction	0.792	0.820	0.863	0.792	0.593	0.655	1.000	0.761	0.245	0.359	0.409	0.367
Statistical discrimination: attitude cluster	Work attitude	0.759	0.976	1.000	0.986	0.915	0.973	1.000	0.985	0.184	0.402	0.551	0.456
	Maturity	0.507	0.911	1.000	0.941	0.582	0.932	1.000	0.970	0.267	0.480	0.551	0.463
	Sense of responsibility	0.125	0.487	0.750	0.551	0.276	0.697	1.000	0.856	0.044	0.158	0.222	0.203
	Respect for authority	0.847	0.976	1.000	0.986	0.855	0.970	1.000	0.985	0.020	0.109	0.118	0.112
	Motivation	0.984	0.990	1.000	0.986	0.753	0.973	1.000	0.985	0.580	0.620	0.580	0.580
	Ambition	0.171	0.550	0.854	0.608	0.499	0.915	1.000	0.968	0.061	0.183	0.244	0.223
Taste-based discrimination cluster	Employer collaboration	0.973	0.988	1.000	0.994	0.645	0.766	1.000	0.917	0.458	0.574	0.916	0.706
	Coworker collaboration	0.919	0.988	1.000	0.994	0.979	0.986	1.000	0.979	0.621	0.616	0.916	0.706
	Client collaboration	0.382	0.594	1.000	0.764	0.563	0.746	1.000	0.917	0.200	0.313	0.599	0.487

Table A9 - continued

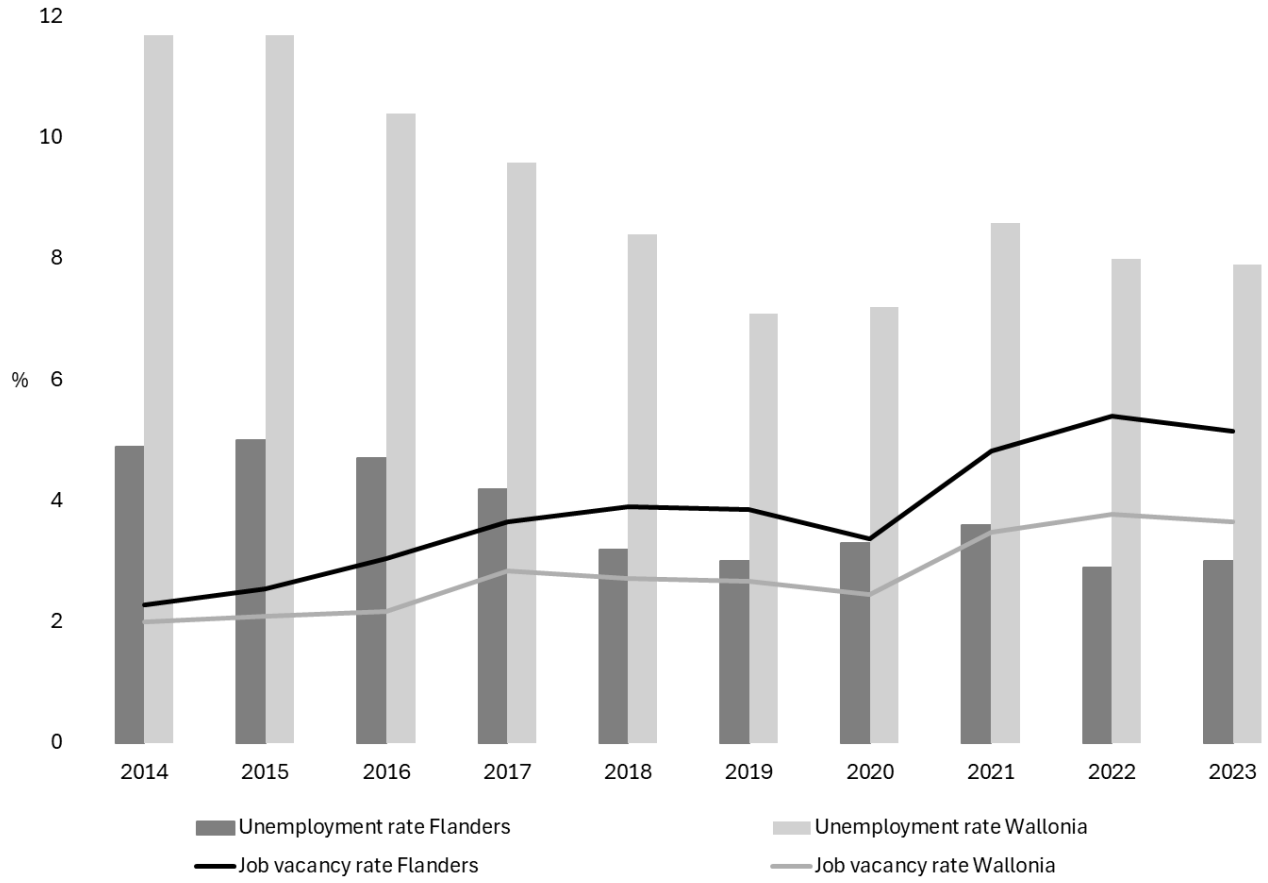
Corrections for multiple hypothesis testing of the generalised structural equation model of perception variables towards candidate characteristics

		Candidate characteristics (vignette factors)											
		One-way commuting time (ref. = <30 min.)											
		30 to 60 minutes				More than 60 minutes				Male (ref. = female)			
Cluster of perceptions	Perception	O	WY	BH	SH	O	WY	BH	SH	O	WY	BH	SH
Statistical discrimination: availability cluster	Work substantial amount	0.835	0.857	0.835	0.835	0.378	0.395	0.377	0.377	0.304	0.598	0.842	0.628
	Punctuality	0.273	0.472	0.546	0.471	0.003	0.019	0.008	0.008	0.641	0.657	0.842	0.641
	Available whenever needed	0.069	0.191	0.208	0.194	0.006	0.023	0.011	0.011	0.281	0.598	0.842	0.628
Statistical discrimination: interpersonal competencies cluster	Quality of communication	0.373	0.711	1.000	0.753	0.698	0.881	1.000	0.909	0.771	0.980	1.000	0.988
	Ability to get along with others	0.713	0.770	1.000	0.775	0.729	0.881	1.000	0.909	0.894	0.982	1.000	0.988
	Pleasure of interaction	0.525	0.770	1.000	0.775	0.400	0.704	1.000	0.784	0.877	0.982	1.000	0.988
Statistical discrimination: attitude cluster	Work attitude	0.885	0.999	1.000	1.000	0.292	0.679	1.000	0.749	0.128	0.465	0.771	0.562
	Maturity	0.935	0.999	1.000	1.000	0.151	0.467	0.754	0.558	0.931	0.923	1.000	0.931
	Sense of responsibility	0.971	0.999	1.000	1.000	0.961	0.961	1.000	0.974	0.513	0.831	1.000	0.884
	Respect for authority	0.774	0.997	1.000	0.999	0.610	0.922	1.000	0.941	0.393	0.804	1.000	0.864
	Motivation	0.684	0.997	1.000	0.999	0.100	0.369	0.601	0.469	0.276	0.719	1.000	0.801
	Ambition	0.998	0.999	1.000	1.000	0.837	0.961	1.000	0.974	0.648	0.853	1.000	0.884
Taste-based discrimination cluster	Employer collaboration	0.347	0.350	0.347	0.347	0.335	0.359	0.335	0.335	0.284	0.397	0.626	0.504
	Coworker collaboration	0.146	0.219	0.291	0.270	0.020	0.041	0.061	0.060	0.209	0.382	0.626	0.504
	Client collaboration	0.076	0.171	0.228	0.211	0.072	0.117	0.143	0.138	0.600	0.602	0.626	0.600

Notes. Abbreviations used: O (original p-value), WY (Westfall-Young p-value), BH (Bonferroni-Holm p-value), SH (Sidak-Holm p-value). As elaborated in Subsection 4.4, corrections were applied to the model in Table 6. For each level of candidate characteristics, we controlled for the number of perceptions within a single conceptual cluster.

Fig. A1

Unemployment and job vacancy rates in Flanders and Wallonia



Notes. This figure depicts unemployment and job vacancy rates for 2014–2023 for Flanders and Wallonia. Data retrieved from Eurostat (jvs_q_isco_r2 and lfst_r_lfu3rt indicators) on 13 January 2025.

Fig. A2

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INFORMATIE

Geboren op 10/11/2005 te Kortrijk

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In het bezit van een rijbewijs B en eigen wagen

OPLEIDING

Diploma technisch-secundair onderwijs: Tourisme – afstudeerjaar 2023

Institut des Ursulines (Tournai)

VAARDIGHEDEN

Talenkennis:

- Nederlands: vloeiend begrijpen, schrijven en spreken
- Frans: vloeiend begrijpen, schrijven en spreken
- Engels: vloeiend begrijpen, schrijven en spreken

Digitale vaardigheden:

- Microsoft Office: uitstekende kennis