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Diversity Speaks in Favour of Diversity

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Abstract

This article addresses diversity in hiring processes, its reasons and its consequences. Using the French OFER survey on the hiring practices of 3,584 firms in 2005, we investigate how firms organise the selection of job applicants and analyse the outcome of this selection in regard to the profiles of successful applicants. The data analysis reveals four types of screening processes: an informal process (*streamlined*) and three formalised processes (*written-based*, *testing*, and *professionalised*). The use of a type of screening process depends on the characteristics of the establishments and occupations and is associated with the recruitment channel. Finally, logit regressions show that each recruitment channel and each type of screening process favours and penalises different categories of applicants (e.g., women, unemployed or inactive individuals or individuals with no diploma).

Keywords: hiring process, screening methods, recruitment channels, diversity

JEL classification: J01. Labor Economics, M5. Personnel Economics, Z1. Economic Sociology

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1. Introduction

Are recruitment and screening practices able to offer hiring opportunities to a diverse range of candidates? Are some practices more enabling than others? Our aim is to provide new information to answer these questions while obtaining a meaningful result from of a French survey in which 3,584 establishments were asked to describe the characteristics of the last employee hired and the characteristics of the recruiting and screening methods used to generate this hire. Of course, processes are more or less selective in terms of level of requirement, and selection criteria have strong repercussions on the chance of applying and on the applicants' characteristics. However, regardless of the level of requirements, we can expect that the type of hiring process chosen by employers has an impact on the underrepresentation or overrepresentation of some groups of workers among new recruits. Courts have largely contributed to strengthening this idea in the United States, where it is closely tied to the issue of discrimination. The doctrine of disparate impact, introduced after the 1971 Supreme Court decision in *Griggs v. Duke Power Co.*, concedes that each hiring practice, even the more neutral practices, can sustain inequities by being more favourable to some groups to the detriment of others. The notion of "indirect discrimination" that has been adopted in Europe repeats the same idea, which is more concerned about the result of an biased method rather than the employer's intentions.

At the same time, it is also accepted that some practices are fairer and more equal than others. This second idea is supported on one side by the equal opportunity programs introduced by personnel and human resources (HR) experts (Edelman, 1992; Dobbin et al., 1993; Dobbin, 2009) and on the other side by the literature on discrimination. In this framework, informal procedures are often considered a major source of racial and sex-based discrimination. Referrals from networks may have a detrimental effect on those who are already disadvantaged in the labour market (Holzer, 1987; Russell, 1999; Ioannides and Datcher Loury, 2004), and informal interviews allow recruiters to make decisions based on their own subjectivity (Moss and Tilly, 2001). Conversely, the more open recruitment methods and formalised processes are often perceived as bringing guarantees of fairness (Windolf, 1986; Reskin and McBrier, 2000; Moss and Tilly, 2001; Bygren and Kumlin, 2005; Woodhams and Lupton, 2006; Holzer et al., 2006). Does that mean that all firms should adopt similar practices?

In this article, our first hypothesis is that the diversity of hiring practices, regardless of whether they seem to be formal or informal, can be interpreted as a necessity for firms with diverse needs. Our ambition, then, is to show that this diversity is also beneficial to the applicants. In this way, we follow Barbara Reskin's (2003) research agenda by investigating mechanisms of selection

adopted by firms and their outcomes on inequalities in the labour market. We move beyond the choice of the recruitment channels and pay more attention to the organisation of the screening process. Our first aim is to characterise this process rather than to take each method individually, to understand how information about the successful applicant has been collected and how the assessment has been shaped. Adopting this approach allows us to present an inductively based typology of the diverse screening process patterns among French firms. Second, we wish to measure the effects of the entire hiring procedure on the type of the last employee hired. We know if the employee is a man or a woman, but other variables, such as race and ethnic origin, are not available in French surveys for legal reasons and with respect for confidentiality. Other data are useful for characterising two vulnerable groups in the labour market: some of them have no diploma and some of them are inactive or unemployed when they apply. The question, then, is what type of hiring procedure enables individuals in these vulnerable categories to access employment.

The following section states our two main hypotheses: the diversity of hiring processes is explained by the diversity of firms' needs and leads diversity in the employees hired. Section 3 exposes the French survey OFER (*Offre d'emploi et recrutement*) and the seven variables retained to capture the diversity of screening processes. In section 4, a cluster analysis reveals four types of screening processes: *streamlined*, *written-based*, *testing* and *professionalised*. In the last section, logit regressions test the effect of the recruitment channel and the screening process on the type of employee hired at the end of the entire hiring procedure. We show that each one favours and penalises different categories of applicants.

2. Framework and Hypotheses

This study relies on two main hypotheses: i) the diversity of hiring processes fulfils the diversity of firms' needs and ii) the diversity of hiring processes allows for diversity in the profiles of newly recruited employees. The aim of the present section is to document both hypotheses by considering the literature devoted to hiring practices.

2.1. The diversity of firms calls for the diversity of hiring practices

Our first hypothesis takes the opposing view of the universalistic perspective, which focuses on the "best practices" that firms have to adopt to hire and manage labour, regardless of their strategy, their constraints or their environment (Boxall and Purcell, 2000). On the contrary, the diversity of firms implies the diversity of HR practices. Economics, management and sociological studies provide complementary explanations of how different economic and organisational

constraints and resources induce distinct hiring practices.

Diversity of firms and diversity of their labour management models can be explained by the varieties of capitalism (Amable and Palombarini, 2009); within national boundaries, internal diversity may be driven by regional and sectorial specific institutions (Wood et al., 2009); in other words, the institutional configurations surrounding the firms and their labour markets induce a plurality of organisational architectures (Aoki and Jackson, 2008). Even more, the heterogeneity of employee groups implies that the internal HR practices cannot be monolithic inside a firm (Lepak and Snell, 1999). For example, the issues and the tools of recruitment and selection differ according to the expected duration of the employment relationship: in the case of short-term relationships, the hiring issue is to identify workers who can do the job immediately (e.g., by testing job task performance), whereas in case of long-term and progressive relationships, the selection phase (e.g., by using assessment centre) is likely to identify workers with future potential who could benefit from further training (Lepak and Snell, 1999: 39).

For its part, the mainstream economics literature focuses on the trade-off between the hiring costs and the expected match quality (Holzer, 1987), and both of them vary with firm size and job vacancies. The higher the quality of the information a recruiter obtains during the hiring procedure (increasing costs), the more secure she is about her final hiring decision. The economic trade-off results in a high or low effort in information search, measured by the number and the type of hiring methods, which indeed vary with employer size and the expected productivity of the match (DeVaro, 2005; Sabatier, 2010; Pellizzari, 2011). Moreover, Rees (1966) proposes considering that recruiters can increase their information at the extensive margin in the labour market (to find available applicants) and at the intensive margin on each applicant (to assess his or her qualities). Using US data, Barron and Bishop (1985) measure extensive searches by the number of applicants interviewed prior to an employment offer and intensive search by the average number of hours the employer spends recruiting, screening, and interviewing each applicant. Finally, they show that establishment size has a positive effect on the extensive search and a negative effect on the intensive search.

Without neglecting cost-benefit arguments, organisational sociology has shown how the centralisation and formalisation of the internal labour market affect hiring choices (Marsden and Campbell 1990). A greater reliance on formalised practices and written procedures can be interpreted as a consequence of the bureaucratisation of larger firms and the efforts of personnel departments to expand and solidify their position (Dobbin, 2009). Formalised management practices can also be interpreted as an effort to avoid the arbitrariness of informal systems (Edelman, 1992). Dobbin et al. (1993) show that American firms have rejected quotas in

response to case law, and formal HR practices have been developed to codify and depersonalise hiring and promotion decisions. Furthermore, large firms are more vulnerable to allegations of discrimination because they are more clearly visible to the public, so they are more likely to implement formal HR practices and equal opportunity policies (Bygren and Kumlin, 2005). On the contrary, in small firms, employers can consider informal management as appropriate for the close working relationships as well as a source of flexibility (Woodhams and Lupton, 2006).

Here, we want to show that there are distinct and coherent types of screening processes and that they are not used interchangeably in firms. That is the first hypothesis (H1).

H1: *The way of selecting applicants varies with the establishment and the job vacancy.*

2.2. The diversity of hiring practices leads to the diversity of recruits

Our second hypothesis states that the diversity of hiring practices is likely to give more opportunities to a great variety of profiles to be recruited and consequently will avoid the exclusion of certain groups of workers from employment. Job search and employer search scholars have often highlighted that the type of recruitment channel and strategy used on both sides has a critical impact on the type of applicant recruited (Russo et al. 2001; Weber and Mahringer 2008). Some case studies take into account the channel used by minorities to apply, and they discuss step-by-step how the selection process influences the segregation of jobs (Petersen et al, 2000, Fernandez et al., 2000). From the firm side, it is easy to close the call for applications by using social networks or by using specific selection criteria (Windolf, 1986).

The contribution of the French Economics of Conventions School (Eymard-Duvernay et al., 2005; Kampelmann, 2009) is important to go further in this direction. According to this research program, qualification of goods (persons or products) is not a pre-established and objective fact. There is a great uncertainty about the “worth” of goods because there are several orders of worth—that is to say, several ways of defining, interpreting and assessing goods (Latsis et al., 2010). In the labour market, the hiring is a crucial situation where recruiters have to “qualify” labour and workers who do not have a worth *per se* (Eymard-Duvernay and Marchal, 1997). The attention is attracted to the instability of the applicants’ worth, depending on the choice of recruitment and assessment methods and on the way of using them, depending on the type of actors involved in the process.

These propositions have been tested on several occasions and for different countries by comparing the profiles of applicants hired through different recruitment channels (Bessy and

Marchal, 2009) or by analysing the impact of the introduction of innovative methods (Salognon, 2007; Marchal et al., 2007; Marchal, 2013). Recruitment channels and assessment tools appear as cognitive devices, filtering information about jobs and applicants and selecting what is relevant. They induce specific “markers of competency” (Marchal et al., 2007), increasing the perception of some qualities and skills versus others. As a result of processes chosen by employers, some applicants are more likely to be shortlisted. Some people are advantaged by certain hiring procedures while others are penalised in the same conditions. Putting the emphasis on direct contact with candidates, for example, does not lead to the same outcome as when the process begins with a strong pre-selection via the examination of CVs and application letters (Salognon, 2007). If the CV is considered as the main source of evaluation, a large period of unemployment or a lack of experience may be a source of exclusion. However, if results of psycho-technical tests are favoured, a period of unemployment is no more of a handicap.

These results are consistent with research taking place in frameworks different from the Economics of Conventions. Several authors observe that recruiters take into consideration distinct markers of competency from one stage of the process to another—for example, from the CV screening to interviews. The pre-screening is strict with unemployed workers (Manning, 2000) and with those who lack of work experience and/or education (Behrenz, 2001). However, these markers often lose relevance when candidates are invited to face-to-face meetings, where the CV stops mattering (Rivera, 2011). That is why, even if new criteria are not explicitly adopted, changing recruitment practices is likely to have an impact on the profiles of those hired. Such a phenomenon is observed in academic professions (Musselin, 2010): when processes of national competition based on national committees of peers are replaced by more decentralised processes defined according to specific norms of the recruiting institutions, new forms of competency are highlighted. As a consequence of this shift, new profiles are recruited.

By exploring representative data on hiring activities of French establishments, our ambition is precisely to show that distinct hiring practices lead to recruiting different profiles. That is the second hypothesis (H2) we wish to test.

H2: *A given way of selecting applicants is expected to favour and penalise different categories of people.*

3. Data and Methodology

In this part, we present the data and our methodology to characterise the hiring practices. A great contribution of our French survey is that it provides detailed information about the methods used for recruiting and screening applicants in a representative sample of French establishments.

It is unusual to have specific data focusing jointly on recruitment and screening methods and on their outcomes, with a few exceptions based on single-firm datasets (Fernandez et al., 2000; Petersen et al., 2000). While these case studies provide very rich information about the hiring process, it is unclear to what extent their results can be generalised. And, above all, they cannot capture the diversity of hiring processes observed in the labour market.

3.1. Data and summary statistics

Our data come from an original survey conducted in France during the first half of 2005: the *Offre d'emploi et recrutement* (OFER) survey. This study was carried out by the Research and Statistics Department (*Direction de l'animation de la recherche, des études et des statistiques*, DARES) of the French Ministry of Labour. In a first stage, a sample of 31,000 establishments was drawn from the administrative index *Sirene*, which covered all existing establishments in France. Of these, 20,072 establishments were contacted via a preliminary telephone screening to identify the establishments that had attempted to hire a worker during the previous 12 months. Finally, face-to-face interviews were conducted in 4,052 establishments. The respondent was the owner or director in 36.0% of the cases, an HR professional in 27.1% and someone else in 36.9%. The average duration of the interviews was 34 minutes; 10% were shorter than 21 minutes, and 10% were longer than 55 minutes. A total of 468 respondents declared that they had tried to fill a vacant position during the last 12 months, but they discontinued their search; they are excluded from this study. The 3,584 remaining observations provide a representative sample of French private sector establishments that hired at least one employee in 2004/2005³.

The establishments are distributed across seven industries, with the expected predominance of recruitment in the service sectors (Table 1). The larger surveyed establishments (with more than 50 employees) are involved in 43.8% of all hiring procedures and less than one quarter of the weighted procedures (24.7%) takes place in very small establishments (fewer than ten employees). More than one out of three establishments in the sample has no personnel department; furthermore, we will see later that the existence of a personnel department does not imply the systematic involvement of an HR professional during the selection process. Employers were asked whether they systematically recruited and screened applicants in the same way for all of their vacancies; it appears that 39.6% of them had implemented standardised recruitment procedures in their establishments.

³ The sample was stratified by industry and firm size and the data were rescaled according to the weight of the hiring procedures. Finally, the 3,584 observations represent 3,192,617 hiring procedures within 549,775 establishments. Temporary employment agencies as employers are excluded.

Table 1. Descriptive Statistics (Establishments, Job Vacancies and Recruitment Channels)

	%
Industry	
<i>Agriculture, fishing and food industry</i>	5.4
<i>Manufacturing</i>	10.3
<i>Construction</i>	7.7
<i>Commerce and transport</i>	27.2
<i>Financial, real-estate activities and business services</i>	22.1
<i>Personal and domestic services</i>	14.8
<i>Administration/Education, health and social services</i>	12.4
Establishment size	
<i>Less than 10 employees</i>	24.7
<i>From 10 to 49</i>	31.5
<i>From 50 to 499</i>	35.5
<i>500 or more</i>	8.4
Standardised recruitment procedures	
<i>Yes</i>	39.6
<i>No</i>	60.4
Vacant position must be filled within a week	
<i>Yes</i>	22.1
<i>No</i>	77.9
Permanent contract	
<i>No</i>	40.1
<i>Yes</i>	59.9
Full-time job	
<i>No</i>	23.1
<i>Yes</i>	76.9
Occupation	
<i>Blue collar</i>	36.0
<i>White collar</i>	41.3
<i>Technician, associate professional</i>	13.5
<i>Professional, corporate manager</i>	9.2
Internal cost in terms of time spent recruiting and screening	
<i>Less than an hour</i>	8.9
<i>Between an hour and a day</i>	51.5
<i>Between a day and a week</i>	31.4
<i>More than a week</i>	8.2
Recruitment channel	
<i>Public agency</i>	18.6
<i>Private agency</i>	10.8
<i>Advertisements</i>	12.3
<i>Direct applications</i>	23.4
<i>Personal and professional networks</i>	22.8
<i>Former employees</i>	9.8
<i>Other</i>	2.3

Field: establishments in the private sector (excluding temporary employment agencies) that hired at least one employee during the last 12 months. Source: OFER survey (2005). Weighted data.

As for the characteristics of the hiring procedures, in two cases out of ten, the vacant position had to be filled quickly (within less than one week). 40.1% of the positions are non-permanent, and 23.1% are part-time jobs. These characteristics are expected to vary by occupation. The OFER survey allows us to distinguish four types of occupations, from blue-collar workers to corporate managers. More than forty per cent of new recruitments concern white-collar workers. The internal cost of the procedure is captured in terms of time spent recruiting and screening: in

half the cases, it took between an hour and one day, and in three cases out of ten, it took between a day and a week. The extreme values are not widespread.

In 18.6% of the hiring procedures, the recruitment channel was the free-of-charge public employment agency, which is compelled to specialise its services for unemployed workers. The use of private employment agencies as recruitment channels (10.8%) is less frequent in France where the public employment service had a monopoly on all job placements before 2005. Newspaper and internet advertisements represent 12.3% of the recruitment channels; these methods imply a costly search for a candidate out of the extended internal labour market. Direct applications are the most common recruitment channel (23.4%). In this case, the employer's strategy is, above all, to maintain the firm's attractiveness in general, not to actively seek applicants each time it is necessary. The personal contacts and professional networks together account for 22.8% of the cases, whereas 9.8% of the successful applications come from former employees. Hence, in these latter cases, successful applicants are not perfect strangers to the firms.

Finally, women represent 47.4% of the successful applicants (Table 2). Young workers (less than 22 years old) represent 22.5% of new employees, whereas workers older than 50 represent only 5.5%. In total, 18.8% of new employees have no diploma (or their educational history is unknown), and 30.8% have an educational level under *Baccalauréat* (the certificate indicating completion of secondary school in France). Half of the employees hired were unemployed or inactive when they applied for a job, 36.3% were already employed, and 12.3% were students. Their race or ethnicity cannot be identified, as we noted above.

Table 2. Descriptive Statistics (Characteristics of the Successful Applicant)

		%
Sex	<i>Female</i>	47.4%
	<i>Male</i>	52.6%
Age	<i>18-22</i>	22.5%
	<i>23-25</i>	18.8%
	<i>26-30</i>	18.2%
	<i>31-39</i>	22.0%
	<i>40-49</i>	13.1%
	<i>50 or over</i>	5.5%
Educational level	<i>Unknown level</i>	9.0%
	<i>No diploma</i>	9.8%
	<i>Level under "Baccalauréat"</i>	30.8%
	<i>"Baccalauréat" (secondary school graduation certificate)</i>	18.9%
	<i>First university level (2 years after "Baccalauréat")</i>	15.1%
	<i>Higher university level (3 years or more after "Baccalauréat")</i>	16.3%
Previous labor market status	<i>Student</i>	12.1%
	<i>Already employed</i>	37.3%
	<i>Unemployed or Inactive</i>	50.6%

Field: establishments in the private sector (excluding temporary employment agencies) that hired at least one employee during the last 12 months. Source: OFER survey (2005). Weighted data.

3.2. Multidimensional characterisation of screening processes

The employers' search process and its outcome can be captured by directly considering the variable provided by the OFER survey: the channel that is responsible of the successful recruitment⁴. However, the same exercise cannot be repeated on screening processes that potentially require the contribution of a great variety of assessment tools and of actors. The first step, for us consists of choosing relevant variables to characterise how the screening processes are undertaken.

As DeVaro and Fields (2008) have shown, the reason or the effect of a particular hiring method depends on the other methods simultaneously used; they are expected to be complementary with each other. That is also the assumption of this article: there is not only a link between the recruitment phase and the screening phase but also a consistency between the screening methods themselves. We analyse the screening phase as an organised bundle of methods used by specific actors. Using a multiple correspondence analysis and a hierarchical cluster analysis, we decide to build a new variable to capture the screening process as a whole and its construction represents a large part of the analysis. Seven categorical variables have been retained to characterise the screening processes. The basic assumption is that some underlying ways of screening are

⁴ Using the same OFER survey, Sabatier (2010) studies all the recruitment channels chosen by a firm and the impact of their combination on the probability of filling a vacancy.

responsible for the covariation among the seven variables. Consequently, the choice of these variables to characterise the screening processes is determinant.

Three dimensions attract our attention: the choice of the screening devices, the intensity of selection applied through these devices, and the organisation of the process (Table 3). The two first dimensions aim to characterise how the “abilities”, the “competencies” or the “merits” of candidates are approached. According to our hypotheses, each assessment device enlists a certain idea of what is important to succeed in the job. Furthermore, the diversity of selection tools, including curriculum vitae (CV) examination, interviews, tests and job task performance, are taken into account. Each method provides recruiters with different information at different stages of the process. In particular, the treatment of information varies with the presence of the candidate at the time of her/his evaluation. Facing a job interview requires interpersonal skills that are useless if applicants have been eliminated earlier in the process, with regard to their tests results or the educational and career pathways mentioned in their CV. In addition, we admit that those who are tested in a working situation can be advantaged if they have some knowledge on how to counteract their lack of a diploma. Not only is the choice of the assessment tool important, but also the weight given to each of them can affect the outcome. These both dimensions are included in the first four variables chosen.

The relative number of applications rejected during CV examination. The ratio of the number of applications rejected during their examination is an indicator of the closure of the screening process: it is based on general and written signals that are analysed in the absence of the applicant. In the following multiple correspondence analysis, the ratio is converted into a categorical variable taking three values: from no rejected applications (39%) (this occurrence suggests that the CV is not used as a selection tool) to more than one out of two CVs rejected (28.5%), with an intermediate value (32.5%).

The number of interviews with the successful applicant. This variable is an indicator of an intensive search for information, similar to the indicators built by Barron and Bishop (1985). We consider the number of interviews that the successful applicant completed before receiving a job offer. In 46.7% of the screening processes, a single interview was sufficient, two interviews in 36.8% of the cases, and more than three interviews were needed in only 16.5% of the cases.

The number of tests. This variable is another indicator assessing recruiters' intensive search. The number of different tests used during the whole screening process can be determined. The most frequent ones are work samples and situational tests (13.3%), then, in descending order: knowledge and intelligence tests (11.3%), personality tests (10.0%), graphology tests (3.4%),

leaderless group tests (2.1%) and others. More than three quarters of the screening processes involved no tests in the OFER survey. Approximately 12.0% included one test, and 10.0% included two or more tests.

Real or simulated job tasks. This fourth indicator gives an idea of the contextualisation of work evaluation. In our French data, four times out of ten, recruiters asked applicants to perform a job task in a real or simulated working context. The evaluation may be informal: the candidate is put into the actual job, where he or she may spend some time doing real work. Another more formalised evaluation is the work sample method. It affords direct measurement of job performance by extracting samples of behaviour under realistic simulated job conditions. Finally, in highly formal situational tests, every individual performs the same tasks under the same conditions and is scored in a standardised way.

The last three variables aim to help clarify the extent to which the assessment process is organised and formalised. Organisational theory insists on the control exercised by personnel experts and on the role of job descriptions that put requisites in writing (Dobbin, 2009). The presence of a job description and HR professionals are determinant variables for grasping whether the process is improvised or planned and whether it is segmented into different stages. Another crucial point is the existence or not of coordination constraints between several actors.

Job description. The first variable captures the presence of a written job description, which suggests that a preliminary job analysis has been performed, not necessarily just before this hiring procedure but also in the past. The job description can indicate the position of the job in the establishment, the responsibilities and tasks of the function, and hence the requirements for performing that job. The selection criteria listed in the job description can be used to short-list candidates and to conduct interviews. By contrast, it is difficult to imagine that a set of fixed criteria has been applied in the absence of such a document. In the OFER survey, a job description has been written for 52.8% of the hiring procedures.

The involvement of HR professionals. Cohen and Pfeffer (1986) show that the presence of a personnel department is related to more stringent hiring standards. HR professionals may want to justify their role in the organisation by increasing hiring standards, but such practices are also consistent with professional role-derived beliefs about how things should be done (Cohen and Pfeffer, 1986: 20). We assume that it is not the presence of HR professionals in the establishment but rather their involvement in the screening process that changes the way of using devices. For example, an HR professional is expected to prepare and conduct an interview in a different way than the direct supervisor of the future employee. In fact, their presence is limited, only 32.7% of

the processes we study involved an HR professional.

The number of firm functions involved in the screening process. The last organisational variable raises the question of the coordination between actors coming from different departments of the establishment. We counted the number of functions, not the number of individuals, to emphasise the different viewpoints during the evaluation because different functions may have different goals. We assume that formalised means of selection are more common when the process involves more functions to coordinate actions and to reconcile their various viewpoints (e.g., more written documents, more frequent planned meetings). Frequently, only one type of actor was involved in the selection process (45.5%), very often the owner or director herself. Two types of actors were involved in 37.3% of the screening processes, and three or more types were involved in 17.3%.

4. The Typology of Screening Processes

The categorical variable that we have built to capture the types of the screening phase of the hiring procedures is presented in this part. First, the four categories of the variable are described with the seven active variables introduced in the data analysis. Then, the description is completed in terms of establishments, job vacancies and recruitment channels associated with the four types of screening processes.

4.1. Streamlined, written-based, testing and professionalised: four types of screening processes

A multiple correspondence analysis (MCA) is used to reduce the amount of information given by the seven previous indicators observed for the 3,584 weighted screening processes. The aim of the hierarchical cluster analysis (HCA) is then to group the screening processes (described by the new variables computed by the MCA⁵) in such a way that the profiles in a particular cluster are more similar to each other than they are to those of other clusters. The whole HCA can be presented in an upside-down tree diagram, showing the order in which screening processes are grouped and the increase in the information loss due to each fusion. By following the elbow criterion, that is, looking for a jump in the loss, we decide to cut the tree at the point associated with four clusters. Table 3 presents the results of the analysis.

The four empirical clusters allow us to set four ways of screening applicants. Each of them combines a characterisation of the devices used during the process, taking into account the

⁵ The analysis relies on the first five axes computed by the MCA, which correspond to approximately 50% of the initial inertia.

intensity of the selection and a characterisation of the organisation of the screening process. For each response category, the Tukey-Kramer test is computed to compare the mean for the cluster to the mean for the rest of the population of screening processes. The significant statistics show that each cluster has a statistically distinctive pattern⁶. A cluster is clearly distinct from the other, characterised by numerous ‘no’ or ‘zero’ categories; the associated type could be labelled informal, but we prefer the label *streamlined* in order to emphasise the very few methods or actors involved. The three other clusters present three different ways of formalising the screening processes, involving written tools, tests, and HR professionals, respectively, which are significantly over-represented in each pattern. They can be labelled: *written-based*, *testing* and *professionalised* screening processes.

Table 3. Characterisation of Clusters (% of screening processes in each cluster)

	<i>All</i>	Cluster 1 <i>Streamlined</i>	Cluster 2 <i>Written-based</i>	Cluster 3 <i>Testing</i>	Cluster 4 <i>Professionalised</i>
Number of observations	3,584	1,070	1,144	776	594
Weighted %	100	28.9	35.1	21.7	14.3
Job description:					
No written job description	47.2	84.2 ***	27.7 ***	43.0 ***	26.8 ***
A written job description	52.8	15.8 ***	72.3 ***	57.0 ***	73.2 ***
The relative number of applications rejected during the CV selection:					
No CV rejected	39.0	92.0 ***	14.4 ***	22.1 ***	18.0 ***
No more than one out of two	32.5	1.1 ***	39.6 ***	54.3 ***	45.7 ***
More than one out of two	28.5	6.9 ***	46.0 ***	23.6 ***	36.4 ***
The number of interviews the successful applicant had:					
No more than one interview	46.7	83.6 ***	32.3 ***	37.7 ***	21.3 ***
Two	36.8	9.7 ***	54.7 ***	53.7 ***	22.2 ***
Three or more	16.5	6.7 ***	13.0 ***	8.6 ***	56.5 ***
The number of tests:					
No test	76.9	95.0 ***	92.2 ***	35.8 ***	64.8 ***
One	12.6	4.6 ***	5.3 ***	33.4 ***	15.3 **
Two or more	10.5	0.4 ***	2.5 ***	30.8 ***	19.9 ***
Real or simulated job tasks:					
None	60.5	64.7 ***	85.3 ***	5.6 ***	74.0 ***
Real or simulated job tasks performed	39.5	35.3 ***	14.7 ***	94.4 ***	26.0 ***
Involvement of HR professionals:					
No HR professional	67.3	90.9 ***	68.6	71.6 ***	10.2 ***
At least one HR professional	32.7	9.1 ***	31.4	28.4 ***	89.8 ***
The number of firm functions involved:					
One	45.4	81.1 ***	33.7 ***	41.6 ***	7.8 ***
Two	37.3	14.5 ***	60.8 ***	47.2 ***	10.4 ***
Three or more	17.3	4.3 ***	5.5 ***	11.2 ***	81.8 ***

The Tukey-Kramer test is computed to compare the mean for the cluster to the mean for the rest of the population. *, ** and *** indicate that the Tukey-Kramer statistic is significant at the 0.1, 0.05 and 0.01 level, respectively. Field: establishments in the private sector (excluding temporary employment agencies) that hired at least one employee during the last 12 months. Source: OFER survey (2005). Weighted data.

The streamlined screening process. This cluster, which accounts for 28.9% of the weighted population,

⁶ The main problem for researchers is that any cluster-solution can be questioned; we show in Appendix how we addressed this problem.

is characterised by its lack of means: in the great majority of cases, there is neither a CV examination (92.0%) nor a test (95.0%), and applicants complete no more than one interview (83.6%) with only one type of actor (81.1%). The degree of formalisation is low. The presence of a written job description is rare. Even when a personnel department exists, no HR professional is involved during the screening process. Therefore, in this cluster, the employers do not rely on professional screening methods but on other markers of competency, which are more interpersonal and subjective. In some cases (35.5%), the way of performing job tasks is observed in a work situation.

The written-based screening process. This cluster—the largest one—contains 35.1% of the screening processes (weighted percentage). It is the first way of formalising the screening phase of a hiring procedure without incurring the costs of tests and HR expertise. In seven cases out of ten, a written job description provides some guidelines to settle the set of selection criteria, mainly used during CV examination. Actually, selection based on CV is an essential step of this pattern. In this cluster, we observe the highest mean of the category “More than one out of two CV is rejected” (46.0%) and the lowest mean of the category “No CV rejected” (14.4%). The recruiters rely on general and written signals to decide who must be rejected or not. Then, in most cases, in-depth information is obtained via two interviews with two types of actors (two different firm functions are involved). The *written-based* screening process rarely involves tests and is the most “de-contextualised” type for two main reasons: a substantial part of the selection process takes place in the absence of the applicants, whose competencies are decrypted through their CV, and the process does not take the work situation into account in 85.3% of the cases.

The testing screening process. The third cluster, containing 21.7% of the screening processes, is mainly characterised by its high frequency of evaluation based on the observation of real or simulated job task performance (94.4%). Knowledge tests, intelligence or personality tests are often used too: the cluster presents the highest occurrence of all types of tests (64.2%). In comparison with the precedent type, the closure by the CV examination is low: half the time, less than one application out of two is rejected by this method, which is coherent with a less frequent use of job description. Here, recruiters prefer rejecting applicants on the basis of poor test performance rather than ruling out them on the sole basis of their CV. In this screening process type, several actors with different functions can be involved to evaluate applicants, but the presence of an HR professional is less frequent than in the *written-based* or *professionalised* clusters.

The professionalised screening process. Finally, the fourth cluster contains 14.3% of the weighted population. Its two main distinctive features are that an HR professional is quite systematically involved (89.8%) and that at least three types of functions take part in the screening process (in

81.8% of the cases). In terms of tools, there are many interviews: three or more consecutive interviews are conducted in 56.6% of the cases with actors assuming various responsibilities in the establishment. These different features lead to depersonalisation of the hiring decision, which is spread over time and among several actors. The frequency of job description is the same as in the *written-based* process type but with a lower indicator of closure by CV examination: there are only 36.4% of hiring procedures with “More than one out of two CV rejected”. Thus, the CV examination is less selective, and more interviews and tests are used to obtain additional information about the applicants’ quality. The *professionalised* screening processes are expected to be the most expensive in terms of direct costs and opportunity costs (monetary expense and employee time spent screening). Note that in this *professionalised* type, real or simulated job task performance is not frequent.

The two following sections are devoted to describing which establishments have recourse to these screening processes, for which vacancies, and associated with which recruitment channel. Table 4 presents frequencies of establishments and job vacancy characteristics in the four clusters; it also reports the frequencies of the recruitment channels. Again, Tukey-Kramer tests are computed in order to assess the significance of underrepresentation or overrepresentation of each characteristic.

4.2. The Characteristics of establishments and job vacancies involved in the four types

Many studies have shown the determinant effect of employer size on recruitment and screening choices (Barron and Bishop, 1985; Holzer, 1987, 1998; Pellizzari, 2011). Barron et al. (1985) suggest that larger firms may expend more resources on screening workers’ abilities because they incur higher ex post costs to monitor each employee. On the contrary, it is presumed that smaller establishments do not have the financial and organisational means to implement a sophisticated screening process. Table 4 confirms that smaller establishments more often adopt a *streamlined* screening process, whereas in larger establishments, the *professionalised* type is significantly more common. The degree of formalisation in hiring techniques is also linked to the degree of centralisation and standardisation within firms (Cohen and Pfeffer, 1986; Marsden and Campbell, 1990; Bygren and Kumlin, 2005). Again, table 4 confirms this result. Establishments without standard hiring procedures are overrepresented among establishments that have adopted *streamlined* screening processes, whereas establishments equipped with standard procedures are overrepresented among establishments that have adopted *professionalised* screening processes. The less expensive way of formalising screening processes, mainly based on written job descriptions, is overrepresented in medium firms (from 50 to 499 employees).

Table 4. Distribution of Establishments, Job Vacancies and Recruitment Channels (% of screening processes in each cluster)

	Cluster 1 <i>Streamlined</i>	Cluster 2 <i>Written-based</i>	Cluster 3 <i>Testing</i>	Cluster 4 <i>Professionalised</i>
Establishment size				
<i>Less than 10 employees</i>	43.2 ***	17.6 ***	24.5	4.9 ***
<i>From 10 to 49</i>	33.8 *	32.4	31.5	24.5 ***
<i>From 50 to 499</i>	21,8 ***	41,7 ***	36,1	47,1 ***
<i>500 or more</i>	1.2 ***	8.3	7.9	23.6 ***
Standardised recruitment procedures				
<i>Yes</i>	25.9 ***	41.1	45.5 ***	54.5 ***
<i>No</i>	74.1 ***	58.9	54.5 ***	45.5 ***
Industry				
<i>Agriculture, fishing and food industry</i>	6.3	4.6	5.2	5.8
<i>Manufacturing</i>	8.0 ***	10.8	10.2	14.2 ***
<i>Construction</i>	13.5 ***	5.5 ***	6.0 **	3.7 ***
<i>Commerce and transport</i>	24.5 **	30.7 ***	28.0	23.1 **
<i>Financial, real-estate activities and business services</i>	17.3 ***	21.3	22.7	33.0 ***
<i>Personal and domestic services</i>	18.3 ***	11.9 ***	15.6	13.7
<i>Administration/Education, health and social services</i>	12.0	15.2 ***	12.4	6.5 ***
Occupation				
<i>Blue collar</i>	53,9 ***	29,5 ***	35,6	15,9 ***
<i>White collar</i>	34,2 ***	48,2 ***	44,1 *	34,9 ***
<i>Technician, associate professional</i>	8.0 ***	15.5 ***	12.0	22.0 ***
<i>Professional, corporate manager</i>	4.0 ***	6.8 ***	8.3	27.1 ***
Permanent contract				
<i>No</i>	52.7 ***	39.1	38.0	20.2 ***
<i>Yes</i>	47.3 ***	60.9	62.0	79.8 ***
Full-time job				
<i>No</i>	28.4 ***	26.4 ***	19.8 **	9.6 ***
<i>Yes</i>	71.6 ***	73.6 ***	80.2 **	90.4 ***
Vacant position must be filled within a week				
<i>Yes</i>	35.8 ***	17.1 ***	19.6 **	10.6 ***
<i>No</i>	64.2 ***	82.9 ***	80.4 **	89.4 ***
Internal cost in terms of time spent recruiting and screening				
<i>Less than an hour</i>	25.0 ***	1.6 ***	3.6 ***	2.2 ***
<i>Between an hour and a day</i>	56.7 ***	54.7 ***	53.4	30.1 ***
<i>Between a day and a week</i>	14.3 ***	37.1 ***	35.2 ***	46.5 ***
<i>More than a week</i>	4.1 ***	6.6 ***	7.9	21.2 ***
Recruitment channel				
<i>Public agency</i>	8.2 ***	22.9 ***	24.6 ***	20.0
<i>Private agency</i>	6.9 ***	11.2	10.6	18.4 ***
<i>Advertisements</i>	5.3 ***	12.5	13.8	23.3 ***
<i>Direct applications</i>	20.7 **	26.9 ***	25.9 *	16.4 ***
<i>Personal and professional networks</i>	37.0 ***	17.8 ***	17.9 ***	14.0 ***
<i>Former employees</i>	19.4 ***	7.1 ***	4.3 ***	5.5 ***
<i>Other</i>	2.5	1.7 *	2.9	2.4

The Tukey-Kramer test is computed to compare the mean for the cluster to the mean for the rest of the population. *, ** and *** indicate that the Tukey-Kramer statistic is significant at the 0.1, 0.05 and 0.01 level, respectively. Field: establishments in the private sector (excluding temporary employment agencies) that hired at least one employee during the last 12 months. Source: OFER survey (2005). Weighted data.

In a given firm, HR practices are likely to vary with position and qualification levels (Lepak and Snell, 1999). Here, we cannot observe the internal diversity of screening processes in each establishment; however, on the whole of the OFER survey, the way of screening does vary with the type of job vacancy. Table 4 shows that the *professionalised* type process is applied for higher

skilled occupational categories, such as technicians, professionals and managers. According to the economic argument, for an expected high-productivity match, it is cost effective to increase the number of methods or the use of the formal and potentially expensive ones (DeVaro, 2005; Pellizari, 2011). Conversely, in our French case, employers are less likely to adopt a costly *professionalised* screening process when they have to fill a blue- or white-collar job or a part-time or non-permanent job. For non-permanent and blue-collar jobs, the *streamlined* process is common, whereas white-collar jobs are overrepresented not in *streamlined* processes, but in *written-based* processes. They are expected to know how to present themselves on their CV when they apply for a clerical or administrative position and cover letters, which are often associated to CVs, allow recruiters to check their expression and writing skills. More insidiously, the CV examination can be a means to have a look at the picture sent by the applicant to control his/her appearance, especially if the vacant position involves direct client contacts⁷. Unsurprisingly, the fact that some jobs need to be filled within a week is more frequent when a *streamlined process* is adopted. It is a quick way of screening candidates and is less costly than others in terms of time spent hiring.

The screening process adopted can also vary with the establishment's industry. Constraint differences in terms of productive technologies and customer attitudes impact the model of labour management that is economically sustainable: for example, in cost-based competition that occurs in mass services, firms typically adopt low-cost management practices, complying minimally with labour laws, whereas firms in high-level professional services adopt sophisticated HR practices to secure high motivation and low labour turnover (Boxall, 2007). Thus, we can interpret overrepresentation and underrepresentation of industries among the four clusters as the result of the specificity of establishment types and qualification levels in each industry. That should be the case of the overrepresentation of the manufacturing industry and the financial and business services sector in the *professionalised* type because manufacturing firms are commonly large firms and firms in the financial and business services sector mainly employ professionals and managers. It is the reverse for the construction industry, where a majority of small firms mainly hire blue-collar workers and where there are many short-term contracts; that should explain their overrepresentation in the *streamlined* type. The establishments in the commerce and transport industry, which employ mainly white-collar workers, are overrepresented in the *written-based* type. It is the same case for the Administration/Education, health and social services sector, where diploma requirements are particularly widespread.

⁷ 41% of applicants for a white-collar job are asked to provide a photograph (this is the case for 27% of applicants for the other jobs).

4.3. The associations between recruitment channels and screening processes types

Table 4 presents evidence that the type of screening process is linked to the recruitment channel (that yields the successful application).

When a *streamlined* screening process is adopted, the frequencies of public and private employment agencies and of advertisements as recruitment methods are clearly lower than in the other clusters. These channels publicly post or advertise jobs (Reskin and McBrier, 2000) and extensively disseminate information throughout the labour market (Rees, 1966), so they generate larger applicant pools among which an important pre-screening process must be conducted. In this case, the *streamlined* process is not appropriate because, in this pattern, there are not any real selection devices to sort through the numerous applications: CV examination, tests and interviews are not frequent enough.

On the contrary, personal and professional networks and former employees as recruitment methods are highly frequent when the applicant is evaluated in a *streamlined* way and are underrepresented when the three other types are adopted, especially when the *professionalised* type is implemented. Social networks (personal contacts, professional networks, and former employees) often provide only one candidate. Thus, no further screening is necessary: a single interview confirms the “choice” made by the establishment’s networks. Rees (1966) explains that informal methods can be rationally preferred by certain recruiters because they convey more intensive and reliable information. In addition, social and professional networks also pre-screen potential applicants. Employees have enough information about the vacancy and the firm to be good gatekeepers and recommend only suitable people (Reskin and McBrier, 2000). The first screening thus operates outside of the establishment, and the information quality allows the *streamlined* screening process to be sufficient. Our empirical observations are consistent with the results of DeVaro (2008): informal recruitment methods and intensive screening methods are substitutable to assess abilities. In other words, the preliminary use of social and professional networks leads employers to save on their screening costs (Fernandez et al., 2000). The *streamlined* process is also sufficient in cases where former employees are recalled by the employer. Of course, in this case, the candidate’s performance has already been evaluated in a real work context during a past employment relationship; therefore, no more assessment is needed.

The public agency as recruitment method is overrepresented when *written-based* or *testing* screening processes are adopted. It is an extensive way of collecting information, which generates applications from strangers. Thus, recruiters need methods to select them, but these methods cannot be too expensive because public agencies, unlike private ones, are specialised in the area

of unemployed and low-qualified workers (Weber and Mahringer, 2008), and firms do not use an expensive screening process for these types of candidates (Pellizzari, 2011). Direct applications are also overrepresented in the both types.

When a *professionalised* process is adopted, and hence an HR professional is involved, other HR professionals (*i.e.*, private labour intermediaries) are also more frequently involved. Thus, external and internal HR experts are complementary and not substitutable. Newspaper and Internet advertisements are also overrepresented when a *professionalised* screening process is implemented. Advertisements are the exact opposite of social networks; there is no pre-screen at all (made by personal or professional contacts) and the recruiters need methods to select the applications. Contrary to direct applications, advertisements are a costly way of collecting CVs that involves monetary expense and the time of HR professionals writing the job advertisement content. In France, this recruitment method is used to reach highly qualified workers in the national labour market (Bessy and Marchal, 2009). Thus, advertisements induce the need to choose a professionalised way of screening numerous and valuable applications from highly qualified workers.

To conclude, there are obvious associations between the types of screening processes and recruitments channels. In the next part, we test their respective effects, with all other things being equal, on the type of worker who gets the job.

5. Who gets the job?

A given type of screening process can have a “disparate impact” because it may favour or penalise different categories of applicants. Table 5 reports three logit regressions of the probability that the employee hired is, respectively, a woman, an unemployed or inactive individual, and an individual without (known) a diploma. These three categories of people have a high level of unemployment in the French labour market. Gender is an “ascriptive” characteristic that is observable and raises the issue of discrimination (Reskin, 2003). The two other categories raise the issue of exclusion from employment of vulnerable populations, characterised by negative “signals” because of a lack of education or a supposed loss of productivity linked to a situation of unemployment. Both are overrepresented among long-term unemployment. We focus here on the estimated effect of the two selection phases (recruitment and screening) on the type of employee hired, after controlling for establishment and vacancy characteristics and the other characteristics of the hired worker.

Table 5. The Logistic Regressions of the Probabilities that the Successful Applicant Belongs to a Specific Category of Labour Force

	Woman		Unemployed or Inactive		No or unknown diploma	
	Estimates	Std. Err.	Estimates	Std. Err.	Estimates	Std. Err.
Screening process types						
<i>Streamlined</i>	ref.		ref.			
<i>Written-based</i>	-0.085	(0.114)	0.121	(0.103)	-0.620 ***	(0.132)
<i>Testing</i>	0.043	(0.121)	0.221 **	(0.108)	-0.608 ***	(0.141)
<i>Professionalised</i>	-0.210	(0.145)	-0.073	(0.135)	-1.287 ***	(0.229)
Recruitment Channel						
<i>Public agency</i>	-0.256 *	(0.139)	0.939 ***	(0.126)	0.190	(0.166)
<i>Private agency</i>	0.018	(0.141)	-0.622 ***	(0.133)	-0.148	(0.211)
<i>Advertisements</i>	-0.062	(0.145)	-0.058	(0.131)	-0.061	(0.208)
<i>Direct applications</i>	ref.		ref.		ref.	
<i>Personal and professional networks</i>	-0.264 **	(0.122)	-0.489 ***	(0.108)	0.080	(0.145)
<i>Former employees</i>	0.117	(0.158)	-0.702 ***	(0.143)	0.268	(0.179)
<i>Other</i>	-0.345	(0.259)	-0.309	(0.237)	-0.036	(0.363)
Number of observations	3,584		3,584		3,584	
- 2 log likelihood	3,826.55		4,363.84		2,621.33	
Adjusted Cox and Snell Pseudo-R ²	0.35		0.19		0.20	

Note: Equations also include establishment and vacancy characteristics (establishment size, industry, occupation, permanent contract or not, and part-time job or not) and the other characteristics of the employee hired (sex, age, educational level, previous labour status) when they are not the dependent variable in the equation. *, ** and *** indicate that the estimate is significant at the 0.1, 0.05 and 0.01 level, respectively. ref.: Reference category. Field: establishments in the private sector (excluding temporary employment agencies) that hired at least one employee during the last 12 months. Source: OFER survey (2005).

The impact of recruitment methods on the hiring of women. The first regression in table 5 reports two significant correlations between gender and recruitment channels. There is a negative effect of personal and professional networks (in comparison with direct applications) on the probability of hiring a woman. This first result is consistent with literature considering that women suffer from their weak social connections with those holding jobs (Ioannides and Datcher Loury, 2004). Using social networks to identify and select people is considered less favourable to woman because it tends to favour “ingroups” who are best introduced and to replicate the establishment’s demographic composition (Bygren and Kumlin, 2005). This result seems better established in managerial positions (Reskin and McBrier, 2000) than in others. On the job search side, the potential male advantage would come from opportunities of working more hours and travelling more to develop contacts and collect information (Petersen et al., 2000). Another argument is that women and men have different patterns of sociability: women have more home-centred social activity and neighbourhood or kinship links, which are less useful in providing information about jobs opportunities (Russell, 1999). The second result is less common: when the public agency is the channel conveying the successful applicant, the probability that the latter is a woman decreases. However, the significance at 10% leads us to remain prudent about this result. At last, the notable result of the first regression is the lack of a significant correlation, all other things being equal, between gender and screening process types. In other words, the three ways of formalising screening processes are no more or no less favourable to female candidates

than a *streamlined* process. How this lack of effect can be explained? We know more about cognitive foundations of bias, regarding gender and racial stereotypes, than about the role of assessment practices themselves, which could be favourable to either men or women. This “mentalist” perspective leads to open criticism of informal practices as a major source of discrimination because they allow personal and subjective opinion to influence decisions (Bielby 2000; Pager and Shepherd, 2008). On the other side, formal procedures do not give any guarantee of bringing equal opportunities. They are suspected of not being applied enough or of being manipulated by those who want to preserve their advantage (Reskin and Mac Brier, 2000; Lupton, 2000; Bielby, 2000). The way of eliminating discrimination and the degree to which formalisation could be able to reduce it remain open to debate (Pager and Shepherd, 2008).

The impact of recruitment and screening methods for people out of employment. The second regression estimates the probability of hiring unemployed or inactive people. Here, the recruitment channels are strongly correlated with the type of employee hired. Unsurprisingly, when the applicant is recruited through the public employment agency (instead of direct applications), the probability of finding someone out of employment increases (Russo et al., 2001). Conversely, private (profit or non-profit) agencies appear to be unfavourable to unemployed and inactive applicants. Head-hunter agencies are typically paid to hire people who are already employed. Non-profit intermediaries are mainly the French association for managerial employment, schools, and training institutions; their service is focused not on unemployed people, but rather on managers seeking a new job. As for personal and professional networks and the recalling of former employees, they seem to be unfavourable to unemployed and inactive people who are more isolated from job information networks: a great portion of unemployed individuals have friendship networks composed almost entirely of other unemployed people (Russell, 1999). After controlling for the effects of recruitment channels, a positive correlation remains between the *testing* process and the recruitment of an unemployed or an inactive person. This favourable effect is measured in comparison with the *streamlined* process effect; so it appears that unemployment is considered so negative that a process based on a sole interview is insufficient to counterbalance it. All other things being equal, the *testing* type of screening processes seems to give people out of employment an opportunity to change the employer’s prejudices about their poor signals and their lack of personal and professional recommendations. They gain a chance to access employment by showing their know-how or their abilities, their knowledge or their personality through test results. Long-term unemployed applicants usually lack the confidence to present themselves as valuable based on their work history; they need to prove their knowledge and abilities instead. That is also the conclusion drawn by Salognon (2007), studying an innovative

French “back-to-work” program named IOD (*Intervention sur l’Offre et la Demande*) that avoids the CV and the standard deskbound job interview.

The strong impact of screening processes for less-educated people. The last regression of table 5 shows that the type of recruitment channel conveying the successful applicant has no significant effect on the probability that the latter has no (known) diploma. On the contrary, the three formalised types of screening processes have a significant negative effect in comparison with the *streamlined* type. In other words, the lack of any formalised practices favours less-educated candidates. Formalised ways of screening are a less subjective way to assess people, especially from minority ethnic groups (Holzer et al. 2006), but it appears that CV examination, tests or interviews conducted by HR professionals do not provide recruiters with in-depth information counterbalancing the lack of diploma. On the contrary, the formalisation of the screening process tends to strengthen the diploma requirements. Albrecht and van Ours (2006) show that Dutch employers are more likely to deviate from their educational standards when an informal method is used. The consequence is the valorisation of less-educated people by establishment using a *streamlined* process and their exclusion from firms where a formalised hiring process is implemented. A diploma is a crucial signal in the French labour market (Marchal et al., 2007). If applicants lack this signal, the chance that their application will survive the screening phase of the *written-based* process (*i.e.*, the CV examination) is very low (Behrenz, 2001). As for the chance of being hired at the end of a *testing* type of screening processes, in comparison with the *streamlined* type, it appears lower for less-educated people. We may assume that these people are likely less used to evaluations or maybe more reluctant to be evaluated through different types of tests because of their school failures: there is a replication of the ‘sorting out’ process during the selection, which begins in school. Last but not least, the *professional* type has the largest negative impact on the probability of hiring an individual with no (or unknown) diploma. In this type, HR professionals are almost always involved and tend to introduce more stringent standards (Cohen and Pfeffer, 1986). Moreover, officials representing three or more of the firm’s functions are usually involved in the screening process. Therefore, even in processes regulated by HR professionals, other officials’ judgments play a role (Lupton, 2000; Reskin and McBrier, 2000). Each official who performs a different function may add his or her own criteria to the initial list of requirements, each one paying attention to a specific dimension of the vacancy to be filled. Consequently, the screening phase may be more selective because the number of requirements increases with the number of assessors in the firm.

Finally, in the French OFER survey, compared to *streamlined* processes (which can be criticised for being informal and subjective), *written-based*, *testing* and *professionalised* types of screening

processes do have “disparate impact”: they lower the chances of less-educated people. However, they are neutral in terms of gender. We observe a sole positive effect of a formalised process on the hiring of a vulnerable category of workers: *testing* screening processes give unemployed or inactive individuals a chance to access employment. As for the recruitment channels, they seem to have a more significant incidence than screening process types on the probability of hiring a female employee; they impact the chance of hiring an individual out of employment, but they seem to have no effect on the probability of hiring an individual with no diploma.

6. Conclusion

The approach used in this article intends to pay special attention to the organisation of the hiring process and to the impact of hiring practices on the type of worker who is hired. It takes advantage of a French survey where 3,584 employers were asked about their last recruitment.

Our first contribution is methodological. We postulate that screening processes are an organised bundle of methods combining specific tools and actors, and we propose an inductive typology identifying four patterns of screening processes: the *streamlined*, *written-based*, *testing* and *professionalised* screening processes. This analysis overcomes the traditional opposition between formal and informal practices. Only the first type of screening process can be considered informal, whereas the three others types refer to different ways of formalising procedures that further promote, respectively, written tools, tests and HR professionalism. The description of the four patterns confirms that they are not independently distributed among French establishments. Firms choose their way of screening according to the characteristics of their job vacancy and according to their economical, organisational and institutional constraints and resources. Their diverse needs explain the firms’ resistance to the normalisation of their hiring practices. Such a resistance has been observed in France when the implementation of the Equal Opportunity Act of 31 March 2006 was attempted (Marchal, 2013). Because several studies have revealed that discrimination begins at the first step of the recruiting process, the law anticipated imposing the use of anonymous curriculum vitae (CV) in any and all hiring procedures. An implicit norm was that each procedure must begin with the sorting of applications and must be followed by interviews with a limited number of candidates. However, practices extend largely beyond this norm: some firms use cognitive tests, others begin the process by initial telephone interviews or prefer to rehire ex-candidates or meet new applicants through their networks or in career fairs. All of these means are incompatible with the use of the anonymous CV, which focuses on the writing procedure. Furthermore, the results of the quantitative experimental study conducted in 2010 were a considerable surprise; they showed that both job applicants with immigrant backgrounds and applicants residing in sensitive urban areas were actually penalised by the use of

anonymous resumes. Even when formalised methods are used, discriminated groups can still be penalised.

Our second contribution raises the issue of the impact of methods used. Our results confirm that no process is completely neutral with regard to the characteristics of individuals hired. Three main characteristics have been tested: the gender of the new recruit, the lack of a (known) diploma and the out-of-employment situation. These three variables, which differ from those usually used in discrimination studies, allow us to analyse the “disparate impact” of hiring methods on vulnerable groups. Beyond the role of the channel used to recruit applicants, we attempt to isolate how the screening processes are involved in the valorisation of the applicants’ characteristics. As postulated by Economics of conventions, they filter different types of information and draw attention to distinct qualities and skills, and hence, they are likely to favour or penalise diverse types of applicants. Our logistic regressions demonstrate that some recruitment channels more negatively affect the success of women and unemployed or inactive people, while screening processes have a greater impact on success of people who have no diploma.

According to our results, diversity speaks in favour of diversity, as we subtitled this article: the diversity of candidates, of firms and of jobs, calls for the respect of the diversity of hiring practices. This finding provides an added argument to those who state that the formalisation of the procedures is not the best way of ensuring equality of opportunity (Noon et al., 2013).

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Appendix

The validation of cluster-solutions is an unresolved problem (Arthur 1992). Our analysis (an MCA followed by an HCA) requires a number of decisions for which there are only limited statistical and mathematical guidelines: the initial choice of variables to describe the screening processes; the number of axes computed by the MCA to retain; and the number of clusters to keep.

The common way to ‘validate’ a cluster-solution is to try other choices and to observe the impacts on the new cluster-solution: are the groups of individuals roughly unchanged? Do the clusters emerging from the altered analysis correspond to the same ‘typical’ patterns? Usually, when one changes the number of retained axes in the MCA, the elbow criterion leads one to keep a number of other clusters. Retaining an additional axis introduces more information to describe screening processes and hence to differentiate them from each other. So a new (and probably small) cluster might emerge, grouping the profiles that are similar according to this additional axis. However, the axes computed by the MCA are ordered, and the dissimilarities and similarities based on the information provided by the additional axis may be irrelevant for the analysis. On the contrary, removing an axis might make a cluster disappear. Finally, the major goal is to obtain a readable typology: not too many/few clusters, no very small cluster, and an easy interpretation of distinctive patterns. Besides, the internal validity of the cluster-solution is ascertained by splitting the sample by means of random selection and again comparing the subsequent cluster-solutions to each other.

We tried several options (on the whole population of screening processes and on random sub-groups) and found the four patterns discussed in the paper to be stable. The four clusters are not very sensitive to changes in the statistical analysis and depend essentially on the specification of the seven categorical variables (*i.e.*, our assumptions about what a relevant description of selection processes is). Actually, as Everitt (1993: 4) states, a division of objects or individuals based on a set of given characteristics is neither true nor false, and it should be judged largely on the usefulness of the results.

Therefore, we may consider that we have built a new categorical variable (with four categories), and its ‘validity’ is assessed in the fifth section. Do the logit regressions yield new insights into the relationships between selection processes and the kinds of workers hired? In a way, it is an external validation test (Cregan 2005). In case no significant correlations are found, the cluster-solution is not false, but it is of no use. Otherwise, without being ‘true’ (like a theory), the cluster-solution can be presented as a useful variable to characterise the selection of applicants by establishments, and it improves our understanding of the matching process in the French labour market.