

Job market signalling, labour market disadvantage and activation

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Abstract:

It is known that many characteristics associated with social disadvantage, such as ethnic minority status, low education, disability, old age, long term unemployment, are considered by employers as negative signals in a recruitment process while in reality they do not inevitably result in lower productivity. This fact is crucial for active labour market policy. In fact, many of those who are on benefit and are the target of activation efforts, are people who display many of the negative signals that make access to jobs difficult. Carefully thought welfare to work schemes need to address the obstacle of the statistical discrimination suffered by many among those who are on benefits.

In this paper we try, on the basis of an abundant literature from both economics and sociology, to identify signals that can play an important role in activation policy. We are particularly interested in signals that can offset labour market disadvantage. After reviewing a substantial literature, we identify four areas where further research is needed: 1) how given features can be interpreted as signalling a good fit with a specific jobs; 2) variation across companies in the way signals are interpreted; 3) how different signals interact with one another and 4) how signals can be manipulated. We believe that further research on in these four areas is urgently needed in order to improve our understanding of how job market signalling works.

Introduction

It is widely known that when hiring new employees, employers tend to consider “signals” i.e. observable characteristics of candidates that are assumed to be reliable indicators of someone’s qualities and particularly productivity. These signals may be varied, and may include nationality, race, age, gender, labour market status, appearance, education, and many other observable features. Considering them in a recruitment decisions allows employers to quickly reduce the number of potential candidates and identify a small group that they consider most promising. The idea that employers use signals when selecting candidates has been theorised by economists in the 1970s (see Spence 1973; Akerlof 1970). Since then a large number of empirical studies, some of which are reviewed below, have demonstrated the overall validity of the model.

The fact that signals play a big role in determining who has access to jobs is currently undisputed. However, the precise role that different signals play for different groups remains largely unknown. For example, immigrant status is often considered to be a negative signal. However, this is the case only for some nationalities in some jobs. Some immigrant groups may in fact be preferred over nationals for given jobs such as some low skill activities where nationals of high income countries would be regarded with suspicion. Most likely, signals convey much more information than simply a general indication of the value of a candidate. They may be used by employers to maximise the likelihood of a good fit between candidates and jobs.

Signals may also be manipulated. Appearance, for instance, can be adapted to the expectation of employers in a given labour market sector, improving thus the attractiveness of given applicants. The notion that signals can be manipulated is particularly interesting in the context of activation policies. These in general aim at increasing the employability of disadvantaged jobless people, who tend to display several negative signals (immigrant status, long-term unemployment, old age and unemployment, low skill status, etc.). These negative signals tend to be immutable, but could conceivably be counteracted by positive ones.

The objective of this paper is to examine, on the basis of the existing literature and of our own theoretical reasoning, the way in which job market signalling works for groups that tend to experience labour market disadvantage, i.e. that are known to be overrepresented among those who are at risk of durable exclusion from the labour market. We assume that a sound understanding of labour market signalling is an essential precondition for an effective activation policy. Activation measures that ignore the way in which recruiters use signals to select candidates are unlikely to be effective and may even be counterproductive, by sending out what in fact are negative signals.

A good example of the importance of taking signals into account when designing activation measures is provided by an experiment on job subsidies carried out in the US in the 1980s. The objective of the experiment, which took place in Dayton, Ohio, was to measure the impact that a hiring subsidy would have on the chances of a group of disadvantaged unemployed people to find a job. A randomly selected group of jobseekers received a voucher that they could present to prospective employers. If they were hired, the employer would receive a subsidy equal to 50% of wages for a period of 12 months. The experiment ran for 8 weeks. At the end it turned out that jobseekers in the control group, who had no voucher to offer to potential employers, were far more successful in entering the labour market. The most likely explanation for this counterintuitive outcome was that employers interpreted the availability of a generous subsidy as signalling bad quality applicants (Burtless 1985). A well intentioned measure turned out to be completely counterproductive simply because its potential signalling effect had been ignored.

The paper starts with a brief presentation of the model of labour market signalling. It then provides a review of the empirical literature on the role played by different signals. Most of this literature is concerned with the objective of demonstrating and measuring discrimination against given groups in the labour market. However, it also provides useful hints for a fuller understanding of how job market signalling works. In the final section, we set out a research agenda. We identify four areas which are particularly relevant to activation policy and on which very little research exists.

Job market signalling: the model

Selecting candidates in recruitment procedures is a task that involves a great deal of uncertainty for the employer. Candidates' true qualities can generally not be assessed with a simple job interview. What's more, candidates will tend to exaggerate their positive qualities and hide their less attractive ones. The result is a situation of information asymmetry between the recruiter and the candidate.

When faced with information asymmetry and uncertainty, recruiters tend to turn to statistical reasoning and to rely on easily observable signals, that are expected to provide reliable information on the true quality of candidates. For example, an employer who believes that members of a certain ethnic group are, on average, less productive than nationals, may decide to avoid all of them. This type of reasoning is known as "statistical discrimination". Statistical discrimination differs from prejudice or "taste discrimination", in that it is not based on dislike for certain groups but on rational statistical reasoning that may help efficient decision making in the context of uncertainty and information asymmetry (Schwab 1986).

The theoretical underpinnings of the model of job market signalling were provided by Spence (1973) and Akerlof (1970). Spence hypothesised that recruiters, given the uncertainty involved in candidate selection, will use signals as decision-making tools. "On the basis of previous experience in the

market, the employer will have conditional probability assessments over productive capacity given various combinations of signals and indices” (Spence 1973: 357).

Spence pointed out that the observable features that can have signalling value are of two kinds: those which cannot be changed by the applicant (gender, race, nationality, age), which he calls “indices” and those which in contrast, can be modified by a candidate, which he calls “signals”. In relation to modifiable signals, Spence considers essentially education. Individuals can invest in education and thus send out a signal for their intellectual skills, motivation, etc. Spence also points out that in order to have a signalling value, signals must be costly to acquire. Otherwise they will fail to distinguish good from less good candidates. The cost of the signal can be financial, in terms of time, or psychological. What matters is that the signal is not easily available to anyone (Spence 1973). Akerlof, making a more general point of markets characterised by information asymmetry, points out that that sellers have developed tools that can be interpreted as positive signals, such as a guarantee or a brand-name (Akerlof 1970). Marketing specialists have gone much further in identifying different ways in which signalling can help promote a new product in the context of uncertainty regarding its true quality (see e.g. Kirmani and Rao 2000).

The job signalling model allows us to make clear predictions in relation to the choices that recruiters will make in the context of uncertainty. Since the 1970s, a large number of empirical studies have shown that signalling plays an immensely important role in recruiting. Much of the research has focused on the impact of signals that cannot be modified, or indices in Spence’s language. However there is evidence that modifiable signals can also play an important role, as shown by the Dayton experiment reported above.

Against this background, the objective of this paper is to assess the relevance of the job market signalling model for activation policy. We believe that there are at least two elements in the model that have been largely ignored and that could play a crucial role in improving the effectiveness of activation policies.

First, both the theoretical model and the empirical research tend to consider the output of the signalling process as a one-dimensional ranking of candidates. In reality, we can expect signalling to play a more complex and precise role in terms of matching candidates to jobs. In short, a given signal is not good or bad in the absolute, but in relation to the specific job that is being filled. For instance, old age could be a negative signal for a job that requires flexibility but positive one for an activity which demands stability, conscientiousness and experience. For example, older salespersons tend to be preferred to younger ones in hardware or DIY stores, where the impression of experience associated with age is appreciated by costumers (Drakakis 2013). As we will show below, features associated with disadvantage (immigrant status, low skill) may be an asset when looking for low skill jobs. Research should try to better understand what role signals play in this matching process, rather than by simply suggesting a ranking of candidates.

Second, some signals can be manipulated. This observation is relevant to activation policy. The Dayton experiment shows that (unintentional) signal manipulation can produce a strongly negative signal. However, it is conceivable that equally strong positive signals could result from (intentional) manipulation. This hypothesis opens up promising avenues for activation policy.

Empirical evidence: what signals do employers rely on? ¹

The objective of this section is to provide an overview of what we know about the role played by signals in recruitment processes. The available empirical evidence provides clear support to the job market signalling model presented above. Methodologically, the impact of signals is studied in different ways. First, the majority of the studies reviewed below use the so called “paired CV (or resume) audit”. This method consists in the elaboration of fictitious pairs of CVs that are identical except in relation to the signal that is being investigated, for example nationality or ethnicity. These CVs are then used to respond to real job adverts and researchers will then measure call back rates. If these are influenced by the signal investigated, then it can be concluded it most likely has an impact on recruitment processes.

Other studies, instead, rely on surveys, which can be quantitative or qualitative. The problem with surveys is that employers will tend to provide socially desirable answers, so that surveys are unsuitable if the objective of research is to demonstrate the existence of discrimination. Surveys, however, have other advantages. First, a paired CV audit allows the study of one signal at a time, making it difficult to investigate the impact of combinations of signals. Second, in paired CV audits, the dependent variable is the call back rate, which differs from the fact of actually obtaining a job. Third, surveys are better suited to study the motivation of recruiters for using a given signal. Overall, we believe that both paired CV audits and surveys provide useful evidence in understanding how employers use signals to select candidates. For this reason, in this section we consider both types of studies.

The impression one gets from this abundant literature is that recruiters make their decisions on the basis of the observation of a complex web of positive and negative signals. The web of signals is particularly complex because it is to some extent job specific, and because it can also be partly manipulated by applicants.

Immigrant Status, ethnicity and nationality

Labour market discrimination based on ethnicity, race, immigrant status or nationality has received much attention in the economic literature. To assess whether employers use the race or ethnicity of a job applicant as a sorting criterion in the recruitment process, other possible confounding factors, like the educational level, experience and other factors that are assumed to influence the hiring decision, have to be excluded. A common way to investigate labour market discrimination against specific groups is the paired CV audit. Riach and Rich (2002) provide a systematic analysis of the results of racial discrimination audits conducted in nine countries over a period of thirty years and conclude that, when the US is excluded, “the rate of net discrimination recorded against blacks, Asians, and Arabs has never been less than 25%” (Riach and Rich 2002:499). For the US context Bertrand and Mullainathan (2004) as well as Pager et al. (2009) found that black applicants were less likely to receive a call back than white applicants with exactly the same resume. In fact, Pager et al.

¹ To select the relevant literature that is reviewed in this section, we performed a systematic search in the following databases: Social Science Citation Index (SSCI), Jstore, and Google Scholar. Using the keywords discrimination (in combination with statistical, sex, ethnic, racial, age, hiring and wage), employers’ attitudes, labour market signalling, screening in the labour market, paired CV audit, field experiment discrimination, employers’ stereotype, recruitment strategies, and following leads from article found in this way we expanded our data basis. This procedure allowed us to identify 56 relevant articles that focus on the impact of one or more signal(s) in the hiring process.

(2009) found that white applicants with a criminal record have the same chances of a call back than their minority counterparts without a criminal record. When sending equally qualified job applicants to job interviews, the authors could observe several hiring decisions that appeared to be based only on race. In addition, employers appear to apply more stringent hiring criteria for black than for white applicants. Similar results were found by Carlsson and Rooth (2007) who investigated labour market discrimination against job applicants with Middle Eastern-sounding names and Eriksson and Lagerström (2012) who analysed real data from an Internet-based CV database. In Switzerland, a paired CV audit demonstrated relatively high levels of discrimination against immigrant from former Yugoslavia. Discrimination was stronger in the German speaking part of the country than in the French speaking part (Fibbi et al. 2003).

The results of these studies indicate that employers indeed use ethnicity as a sorting criterion in the recruitment process. Since the setting of these studies allows observing job relevant skills like education and experience their results suggest that employers perceive ethnicity as a signal for relevant but otherwise unobservable skills.

The above studies allow identifying ethnicity as sorting criteria in the recruitment process. However, they cannot explain what ethnicity exactly means to employers. To investigate their meaning, it is necessary to explore employers' attitudes and perception of different groups in the labour market. Neckerman and Kirschenman (1991:440) show in qualitative interviews with employers that they perceive black applicants generally as lower-quality workers, lacking the work ethic, having a bad attitude towards work and unreliable. Moss and Tilly (1996) show that employers' emphasis on soft skills in the recruiting process in the low-skilled segment of the labour market leads to a disadvantage for black job applicants since employers see them as lacking precisely these skills. The findings suggest that employers in the US see race as a signal for low motivation and a lack of soft skills.

While the results of the above reviewed paired CV studies all reveal a racial bias in hiring decisions, the results from qualitative interviews with employers show that things may be more complex and that especially immigrant status is not only perceived as a signal for low-productivity but that the evaluation of immigrants and blacks depends on the type of job. In the low-skilled segment of the labour market working conditions are often harsh, wages low and the job is not associated with high prestige. As a result, some employers will regard applicants who are nationals with suspicion, as they usually avoid this type of jobs and may be considered to be hiding some negative feature (Bonoli and Hinrichs 2012).

Waldinger (1997) shows that employers often perceive immigrants as more motivated and displaying a better work ethic for low-skilled jobs than national blacks. In addition, many employers see immigrant status as a signal for loyalty since immigrants generally stay longer in the job, whereas nationals are more interested in higher positions and promotions. The same result was found by Moss and Tilly (2001) who show that employers often hold negative attitudes towards black and white job applicants but more positive ones towards Hispanic immigrants. If nationals apply for low-skilled jobs, employers may assume that they do so because of a lack of motivation and low aspirations, whereas immigrants' changes for high-status jobs are perceived as being low, independently of their educational background and abilities. Thus, employers perceive immigrant status as a signal for higher motivation, better social skills and work attitude. This interpretation of

employers' explanation for their preferences of immigrants over nationals for low-skilled jobs has been criticized by Zamudio and Lichter (2008). They suggest that the major issue for managers when hiring new staff is the degree of control. What employers praised most about immigrants is their greater compliance and the acceptance of any condition to work. It is thus not the higher motivation of immigrants but their better tractability that explains employers' preferences for them.

In addition to perceive immigrant status as a signal for higher motivation and better tractability in low-skilled jobs, ethnicity and immigrant status may signal different things to different kind of employers. Having the same cultural values and communication strategies is for example an important aspect in the service industry. In areas with a large share of immigrants or a specific ethnicity, employers may perceive immigrant status or ethnicity as a signal for better interaction abilities with clients. Carlsson and Rooth (2007) found that the degree of labour market discrimination depends also on company characteristics. Women are less likely to use ethnicity as a sorting criterion than men and larger companies and those with high turnover are less likely to discriminate based on the ethnicity of job applicants. The authors explain the latter findings with larger companies having a more comprehensive recruitment process with less statistical discrimination and the possibility to invite more candidates for the job interview.

Older workers

Compared to race or gender, direct age discrimination is relatively unexplored in the economic literature. Bendick et al. (1999; 1996) were among the first who explored discrimination against older workers by sending paired CVs to employers in the US. The authors examined discrimination at two stages in the recruitment process, in the pre- as well as in the interview stage. Their results show that in 41.2% of all cases older workers were disadvantaged by their age and that the majority of age discrimination occurred in the pre-interview stage. The results of similar studies in other countries support their findings. Ageism in the hiring process was found by Riach and Rich (2006) in France, Albert et al. (2011) in Spain, Riach and Rich (2010) in the United Kingdom and Ahmed et al. (2012) in Sweden. Analysing data from an Internet-based CV database, Eriksson and Lagerström (2012) identify that employers use ethnicity, employment status, gender, and age as sorting criteria. The extent of age discrimination, however, varies with the type of job, the channel of recruitment and gender. Discrimination due to age is found to be lower for sales- than for management positions and higher when employers use employment agencies to fill vacancies (Bendick et al. 1999). In addition, women seem to be more affected by age discrimination than men (Gringart and Helmes 2001). This latter finding underlines that fact that women are perceived as aging earlier than men (Itzin and Phillipson 1995).

Compared to race or gender, the examination of age discrimination provides a particular challenge. As Riach and Rich (2002) point out, one would expect that different age groups exhibit genuine differences in human capital. Older workers are generally expected to have more experience but less physical stamina. Therefore, the authors suggest acknowledging the heterogeneity and control for the expected differences rather than for comparability. Other suggestions for further research are to lower the age gap and to introduce evidence for "youthfulness" in older applicants' CV.

Taylor and Walker (1994) show in qualitative interviews with employers that 43% of them see age as an important consideration in the recruitment process. According to employers, the lack of appropriate skills, truncated pay-back on training, and difficulties adapting to new technologies

discourages the employment of older jobseekers. Thus, in the recruitment process employers may see age as a signal for skill deficits. However, the manner in which employers interpret age depends on the type of job and the requirements. The results of Taylor and Walker (1994) indicate that some employers turn themselves towards older workers, especially in the service sector, where the maturity of older workers is seen as an advantage. Hogarth and Barth (1991) show that an increasing number of employers in the service sector have taken steps towards accommodating an aging workforce. According to Loretto and White (2006), employers prefer older workers for direct contact with costumers since they have better interpersonal skills and are better in handling complains. That older employees can be an asset is illustrated by the example of the British DIY retailer B&Q. More than 20 years ago they began with actively recruiting people over 50, today 28% of the workforce contains of people over 50. A store staffed with only older workers produced 18% more profit with six times less turnover (Drakakis 2013). An additional advantage of older workers is seen in their higher commitment to work and employers perceive them as more motivated, reliable and loyal than their younger counterparts (Van Dalen et al. 2009; Loretto and White 2006; McGregor and Gray 2002). One possible reason for the higher reliability of older workers may be that they have fewer expectations about their career development and are more satisfied with their current employment situation, whereas younger workers are expected to move on and gain experience in different jobs. Altogether the above discussed findings indicate that the employers' perception of age depends on the type and requirements of the job. For positions that require a fast adaption to new technologies, employers may see age as a signal for outdated skills. However, for jobs that require a certain maturity or stability, being of older age may be perceived as an advantage.

Gender

Bielby and Baron (1986) show that a majority of occupations are sex segregated and that even when firms employ both sexes, men and women are assigned to different job titles. Women are often excluded from physical demanding jobs but given exclusively access to routine and attention requiring jobs. Research has shown that both male and female job applicants are subjected to discrimination in the labour market. Levinson (1975), Nunes and Seligman (2000) and Weichselbaumer (2003) all found evidence that discrimination against both sexes can be particularly found in "stereotypical" occupations. Discrimination against male applicants in typical female occupations was found to be much higher than against female in male occupations. Summarizing the findings of previous conducted research on sex discrimination, Riach and Rich (2002) conclude that women are often discriminated against in more senior, high status or high pay jobs. More recent research supports these previous findings. Petit's (2007) results show a discrimination of young female job applicants for high-skilled administrative jobs in France. No significant hiring discrimination could be found in low-skilled jobs and for women aged 37 and above. Albert et al. (2011) found that men are not only discriminated against in female dominated occupations but also in integrated occupations. In contrast, Booth and Leigh (2010) found discrimination against male applicants in occupations in which 80 percent or more are women but not for less female-dominated occupations. It seems to be not gender alone that serves as a signal to employers but the combination of gender and family characteristics like the marital status and children. Petersen and Togstad (2006) analysed the recruitment process of a large bank in Sweden and found no discrimination against women, if anything they found a female advantage when controlling for education, age, and experience. However, when including family status the results reversed. Whereas single women were preferred over single man, married or cohabitating men received offers

at a higher rate than married women. The same result could be found with respect to children. Childless women were preferred over childless men but among applicants with one child, women were less likely than men to get a job offer. For the Spanish labour market Albert et al. (2011) found that employers penalise the fact of being married but the penalty seems to be higher for women than for men. Employers may perceive young female married applicants as more likely to interrupt their career for the reason of family planning.

Based on an experimental setting, where the status of an employer or an employee is randomly assigned to participants, Larribeau et al. (2013) show that participants assigned to the employer status rely on the sex of an employee to evaluate his suitability for a job. Independently of the employers' sex, women were significantly lower classified than men. These studies indicate that employers indeed use gender as a sorting criterion in the hiring process. However, how employers interpret the signal interferes with other characteristics of the jobseeker like age or family status and is influenced by the society's perception of appropriate roles for men and women (Riach and Rich 2002).

Unemployed and long-termed unemployed people

Employers' perception of unemployed jobseekers and whether they base their hiring decision on employment status is of particular importance for the design of labour market policies. It is reasonable to expect that employers perceive unemployment as a signal for low productivity since it can be expected that firms lay off the least productive workers first and that job related skills will deteriorate during unemployment (Eriksson and Lagerström 2006). Eriksson and Lagerström (2006) show that unemployed searchers in a Swedish applicant database have a 3.4 percentage point lower probability of getting contacted by an employer than employed searchers with the same work experience, education, age, sex, and ethnicity. One important factor not investigated by the authors, but that can be assumed to play an important role, is the influence of the length of the unemployment spell. One can assume that a short period of unemployment, either between two jobs or after completing education, is not uncommon. Thus, what matters is not only the employment status but the length of unemployment. It is unlikely that the job-relevant skills of a jobseeker will decline during a short time of unemployment. Oberholzer-Gee (2008) was the first studying the discrimination of nonemployed jobseekers in a field experiment in the Swiss context. His results suggest that it is indeed not the unemployment status but the length of the unemployment spell that serves as a signal for productivity to employers. While a job applicant with an unemployment spell of up to six months is actually more likely to be invited for a job interview than an employed applicant, someone who has been without work for 30 months is 51 percentage points less likely to be invited than an employed searcher. Asking employers about the hiring of unemployed jobseekers, Oberholzer-Gee (2008) shows that the advantage of short-term unemployed is that they can start working immediately whereas individuals with unemployment spells for more than 24 months are suspected to have lost some of their relevant skills. In addition, Oberholzer-Glee (2008) finds evidence for rational herding; employers believe that the unemployed individuals were interviewed before and considered as unproductive since otherwise they would have been hired. Therefore, it is rational for the employer to disregard his private information and follow the others.

In a Swedish study, Eriksson and Rooth (2014) examined the influence of the length of the unemployment spell in a similar setting as Oberholzer-Glee (2008). Their results differ slightly from

those of Oberholzer-Glee (2008); compared to his results the negative effect of unemployment appears after a shorter period of unemployment, in addition, they found different effects of the unemployment duration for different skills level. While the call back rates for low-skilled jobseekers decrease dramatically at nine months of unemployment, the authors find no such effect for high-skilled jobs. The authors' interpretation of this difference is that employers in the high skill segment of the labour market find the length of the unemployment spell less informative; it can either signal low productivity or indicate a higher reservation wage. But even for low-skilled jobs, a short duration of unemployment does not lower call back changes. Eriksson and Rooth (2014) see these results as an indication that employers are aware that the matching of worker and firm takes some time. In addition to the labour market segment, the authors investigate the different effects of the unemployment duration for women and ethnic minorities. Their results suggest that a long unemployment spell is a stronger negative signal for native male than for women and ethnic minorities. These recent results indicate that unemployment is a quite complex signal to investigate. Employers' perception of job applicants does not only depend on the duration of unemployment but the importance of the signal varies also with the labour market segment, gender and ethnicity. However, the results make clear that the integration of long-term unemployed individuals in the labour market remains a particular challenge for labour market policies since the length of unemployment serves as a signal for undesirable worker characteristics. As Bonoli (2014) shows, a large share of employers perceive long-term unemployment as a negative signal. When ask about specific risks of hiring long-term unemployed, most employers mention the lack of motivation. However, employers' perception is again influence by some additional factors. Larger companies and those who use the public employment service to fill vacancies have a worse opinion of long-term unemployed individuals (Bonoli 2014).

Ex-offenders

A criminal conviction is often seen as associated with negative behaviour and poor job performance and is thus another source of disadvantage in the job market (Pager et al. 2009). Evidence suggests that having a criminal record has a significant negative impact on hiring outcomes (Pager and Quillian 2005; Pager et al. 2009). According to Pager et al. (2009), the negative effect of a criminal conviction is larger for black than for white job-applicants. They observe that personal contact with the employer can help to shape the employer's interpretation of a conviction in a positive way. However, the chance to get in personal contact and to present justifiable explanations for the conviction is lower for blacks than for white applicants. When ask in a survey, employers generally report far greater willingness to hire ex-offenders than they actually do in actual hiring situations (Pager and Quillian 2005). This difference between employers' self-reported attitudes towards ex-offenders and their actual behaviour towards this group is clearly larger for black than for white ex-offenders. (Pager and Quillian 2005).

Sexual orientation

A few studies have shown that the sexual orientation of job applicants can also be considered as a signal by employers. In paired CV studies, sexual orientation is typically signalled by mentioning volunteering work for gay/lesbian rights organisations on the fictional CV. Studies tend to find evidence of discrimination in call back rates especially against homosexual men (Tilcsik 2011). In a Swedish study, it has been shown that anti-gay discrimination is stronger in male-dominated professions and anti-lesbian discrimination in female-dominated professions (Ahmed et al. 2011). In an Italian study, Patacchini and colleagues found a fairly strong penalty for homosexual men (30%

less likely to be called for an interview), but no penalty for homosexual women (Patacchini et al. 2012).

Appearance

Physical appearance has been shown to matter both in recruitment and as a determinant of earnings. Hamermesch and Biddle found a clear relationship between the interviewer's rating of survey respondents' physical attractiveness and their earnings, most likely due to employer discrimination. Attractive workers earn 10-15% more than those rated as below average (Hamermesch and Biddle 1994). In a Swedish paired CV audit, photos attached to applicants' CVs were manipulated to make them appear obese. Candidates with an enlarged face were less likely to be called back for an interview by 6 percentage points for men and by 8 percentage points for women (Rooth 2009). In an Italian study, women rated as attractive were more likely to be invited for a job interview, especially for low skill occupations. No beauty premium was found for men, though (Patacchini et al. 2012). A more recent study by Hamermesch and colleagues found that in China, spending on beauty, controlling for a host of other factors, has a positive impact on earnings (Hamermesch et al. 2002). A few US studies have found a relationship between teeth quality and success in employment, though the available evidence is not always compelling. Part of this effect may be due to the signalling effect of bad oral health (Glied and Neidll 2010; Singhal et al. 2013).

Non-professional activities

It is common in CVs to list non-professional activities such as hobbies and sports. In a Swedish study (paired-CV-audit) applicants mentioning sports skills in their CVs were 2 percentage points more likely to be called back. The effect was twice as large for physically demanding occupations (Rooth 2011).

A frequent advice given to new- and re-entrants in the labour market is to volunteer if unable to find a paid employment. That volunteering increases employment chances seems to be common knowledge (Day and Devlin 1998). According to Day and Devlin (1998), volunteering individuals earn 6 to 7 percent more than their not volunteering counterparts. One explanation for this result is that volunteering serves as a signal for otherwise unobserved characteristics. However, with the setting applied by Day and Devlin (1998) other explanations like the acquisition of relevant skills or the access to networks of employment contacts have to be considered. To investigate whether employers screen job applicants according to their volunteer activities, further research with an experimental setting, where the effect of volunteering can be isolated, are necessary.

Job search related signals

Job seekers establish contact with employers through a variety of different channels and can provide different types and amounts of information to them. Some research suggests that the information conveyed by the job search behaviour of applicants may be interpreted as a signal. The Dayton experiment described in the introduction of this paper is one such example. A voucher that covered part of the salary of a job seeker was interpreted as a negative signal (Burtless 1985). In a Swiss study, Falk and colleagues found that some unemployed people who attended a course on basic computing skills were less likely to be invited for a job interview after the course than before. The effect was stronger for positions which required computing skills. The most likely explanation of this result, is that employers interpreted the fact of following a basic course as a signal of limited competence in computing (Falk et al. 2005).

On the basis of qualitative interviews, Bonoli and Hinrichs found that the channel through which an applicant establishes contact with an employer can also serve as a signal. For instance, some employers tend to regard the fact of being sent by the employment services as a signal for low motivation. They know that registered unemployed must apply to a minimum number of jobs every month and think that they may have applied out of obligation. In contrast, the fact of submitting an unsolicited application, better if delivered in person, is sometimes seen as a signal for strong motivation (Bonoli and Hinrichs 2012).

This effect, the interpretation of job search behaviour as a signal, is a clearly under-researched area within the field of job market signalling. This is unfortunate, because it seems highly relevant to activation. A better understanding of this effect would allow a more effective design of activation measures.

Understanding job market signalling: A research agenda

The vast literature discussed above provides compelling evidence in support of the job market signalling model. It is safe to say that recruiters rely on signals when selecting candidates to a significant extent. Signals, understood as easily observable features that are believed to be related to the applicant quality, play a role, most likely together with other features, such as skills.

We found a substantial gap in the literature, however. The vast majority of studies have the objective of demonstrating discrimination rather than trying to understand how complex webs of signals are interpreted by recruiters. As a result, we have several studies that focus on whether or not a given individual feature is interpreted as a negative signal. We know much less in relation to the role played by signals that are not associated with discrimination, such as those that can be manipulated by applicants (e.g. job search related signals). Yet, this type of signals is very important as far as activation policy is concerned. Overall, on the basis of the literature reviewed above, we can identify four areas where further research is urgently needed in order to improve our understanding of the complex way in which job market signalling works. These are discussed next.

Signalling a good fit

As seen above, some evidence suggests that signals are not simply used to rank candidates on a one-dimensional notion of quality or productivity. Some features are interpreted as signals of a good fit between a candidate and a specific job. One example is being an older worker and being looking for a job as a salesperson in a hardware or DIY store. More in general, whereas many studies find labour market discrimination against older workers (Ahmed et al. 2012; Bendick et al. 1999; 1996; Gringart and Helmes 2001), Taylor and Walker (1994) show that the perception of older employees depends on the characteristics of the job. Older workers are preferred for jobs that demand stability and reliability. Often they are also perceived as more mature than their younger counterparts and are thus recruited for jobs in the service sector, where maturity is an important feature and customers appreciate the knowledge of older employees (Hogarth and Barth 1991; Loretto and White 2006).

Another characteristic that does not serve per se as a good or a bad signal is the sex of a job applicant. Labour market discrimination could be detected against both, male and female job applicants. Again the use of sex as a sorting criterion depends on job characteristics. Women are often excluded from more senior, high status jobs and men from female dominated occupations

(Riach and Rich 2002). It could be shown that employers' perception of applicant's sex depends on other individual characteristics. Being married and having children could be found to be a positive signal for men but not for women (Petersen and Togstad 2006; Polachek 1975). Kricheli-Katz (2013) found evidence that the perception of controllability and choice affects the extent of discrimination. Whereas race, gender and age are traits that cannot be controlled by the individuals there exist other like appearance, motherhood or sexual orientation that are by some people perceived as choice based.

Another such example refers to immigrant status and job search in the low skill sector. Whereas many studies document the discrimination of immigrants over nationals, Waldinger (1997) as well as Moss and Tilly (2001) found that employers prefer Hispanic immigrants over US nationals for jobs in the low-skilled segment of the labour market, because they perceive them as more productive workers but also as more tractable. Employers' preference for immigrants leads to a further exclusion of black workers from the labour market, even though employers suspect also white workers to lack the relevant soft skills and motivation (Moss and Till 2001). These results suggest that the perception of ethnicity and race as a signal in the labour market depends on the segment of the labour market. In the low-skilled segment of the labour market, where working conditions are often harsh, national applicants may be regarded with suspicion. Employers in this segment of the labour market are aware that most applicants exhibit labour market problems (Bonoli and Hinrichs 2012). For ethnic minorities employers know that the reason for the application for low-skilled jobs is due to their ethnic background whereas nationals are assumed to do so due to a lack of motivation or relevant soft skills.

In addition to immigrant status, other features including ones associated with labour market disadvantage may turn out to be assets in some specific jobs. We clearly lack an understanding of how this mechanism could work, and more research is definitely needed here.

Variation across companies

The vast majority of the studies reviewed here do not differentiate between types of employers. Yet, some research suggests that while the job market signalling model is relevant to all employers, individuals effects may be related to employers' characteristics such as size, or recruiters' features such as gender or ethnicity. Carlsson and Rooth (2007) have found that the degree of discrimination depends not only on the kind of job but also on firm characteristics. Male recruiters and companies with less than twenty employees tend to use ethnicity more often as a sorting criterion. In addition, the race of a job applicant influences employers' perception about other individual characteristics that could serve as a signal. Atkinson et al. (1996) and Bonoli (2014) found that small companies tend to have a less negative image of unemployed people. The data presented by Bonoli (2014) suggests that small firms are also more likely to hire long term unemployed people.

While the job market signalling model has some general validity, the way it is applied by firms is not uniform, and we need a better understanding of it also in order to design more effective activation measures.

Interactions

In the complex web of signals that matter in a recruitment process, individual features interact with one another in a way that we are only beginning to understand. For example, Pager and Quillian (2005) show that ex-offender were generally less likely to be hired than those applicants without criminal record. However, the penalty of the conviction was much higher for black than for white job applicants. Interactions may be of particular relevance for disadvantaged groups. For example, it would be important to know which positive signals are most likely to offset negative signal such as long term unemployment or immigrant status.

Manipulating signals

Another important aspect is the manipulation of signals. With manipulation we mean that negative signals that are emitted by disadvantaged job applicants and are often immutable can be counteracted with positive signals. This is of particular importance for the design of activation policies that aim to integrate detached individuals into the labour market. Bonoli and Hinrichs (2012) show that especially in the low-skilled segment of the labour market, where individuals often have no formal qualifications, the signalling of motivation is of great importance. The design of active labour market should thus aim at developing measures that signal high motivation. Important for the development of specific action that should improve the attractiveness of a candidate is that the acquiring of the signal has some cost in order to distinguish good from bad candidates. Such actions could include telling job seeking individuals to show up early to ask for a job, to submit an unsolicited application, to invest time in a high quality resume, to list leisure activities that may be perceived as relevant for the job and can be considered as an investment in human capital formation. It is important to keep the potential signal of actions in mind when recommend them to job seeking individuals.

* * *

Overall this article has shown that labour market signalling is a complex process and that our understanding of how the process exactly works for different groups and in different segment of the labour market is still very limited. Especially for the design of active labour market policies, it is of great importance to understand employers' view of different features and to investigate what they exactly signal to them. It is not only one characteristic that serves employers as a signal but more important is to look at the complex web of different characteristics. Further research is necessary to improve our understanding of labour market signalling and to further improve the effectiveness of activation policies.

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