# Self-Employed but Looking:

# A Labor Market Experiment

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*Abstract*

We examine whether having previously been self-employed is a negative signal on the job market. In a UK field experiment where two applications of otherwise equally qualified individuals were sent out in response to the same vacancies in human resource management, we find that entrepreneurs systematically receive fewer responses than non-entrepreneurs. Empirical studies that treat market wages as the opportunity cost of remaining self-employed are therefore likely to overestimate alternative earnings to entrepreneurship.

*Keywords*: self-employment, entrepreneurial incomes, occupational choice, discrimination, natural field experiment

*JEL Codes:* J62, J71, C93, M51, L26

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## 1 Introduction

When entrepreneurs say they are "not in it for the money", the data seem to support them. According to a widely cited study by Hamilton (2000), for example, the median earnings of entrepreneurs in the US, measured in a variety of ways,[1] are lower than the relevant market wage at any moment. The shortfall can persist even after entrepreneurs switch back to paid employment (Bruce and Schuetze, 2004; Hyytinen and Rouvinen, 2008). A recent study by Baptista et al. (2012), using a longitudinal matched employer-employee dataset, lends further support to the notion that former entrepreneurs earn lower wages in dependent employment. They are primarily hired by small firms with a lower ability to pay.[2]

The poor financial prospects[3] of the average entrepreneur raise the question why anyone becomes or stays self-employed.[4] A versatile literature addresses it, offering various

[1] Hamilton's measures of entrepreneurial earnings are the firm's net profit, draw (the entrepreneur's salary), and draw plus change in the value of the firm's equity. After ten years in business, there is a 35% gap. Provided the firm survives for 25 years, its median present value at that point is still 25% lower than the present value of future wages had one spent 25 years in a job instead. These financial disadvantages cannot be explained by self-selection of low ability individuals into self-employment. Although not all studies of entrepreneurial income paint such a bleak picture (Clark and Drinkwater, 1998; Fairlie, 2005), evidence from Finland, Sweden, Japan (OECD, 1986) and Australia (Kidd, 1993) also suggests that entrepreneurs have income disadvantages compared to wage workers. In addition, entrepreneurs bear a greater income risk, which is often amplified by investments of personal funds that do not earn an adequate risk premium (Moskowitz and Vissing-Jorgensen, 2002; Heaton and Lucas, 2009; Benartzi, 2001).

[2] Some claim, however, that time spent in self-employment helps individuals build experience and skills that is rewarded in subsequent employment (Evans and Leighton, 1989; Kaiser and Malchow-Møller, 2011).

[3] We think of an entrepreneur's financial return as the combined income from all sources (including wages, bonuses, non-cash benefits, profits, and funds withdrawn from the business), after adjusting for work hours. This is also what we mean by self-employment income throughout the paper.

explanations. One possibility is that entrepreneurs systematically underreport their incomes to avoid taxes (Pisarides and Weber, 1989). Thus, data from surveys and official registries may paint a misleading picture of the incomes of the self-employed. In addition, idiosyncratic preferences, such as wanting to be one's own boss (Benz and Frey, 2008; Blanchflower et al., 2001; Frey et al., 2004; Parker, 2009), preferring flexible work hours (Hyytinen and Ruuskanen, 2007), or having a taste for skewed lotteries (Astebro, 2003; Astebro et al., 2009; Kraus and Litzenberger, 1976) can make self-employment attractive for some individuals, despite lower incomes. These idiosyncratic preferences may influence self-selection into specific sector, firms, and roles within firms. Several studies also suggest that entrepreneurs are over-proportionately affected by cognitive biases, such as overconfidence and over-optimism, causing them to overestimate returns and take poorly calculated risks (Arabsheibani et al., 2000; Astebro et al., 2007; Baron, 1998; Busenitz and Barney, 1997; de Meza and Southey, 1996; Fraser and Greene, 2006; Koellinger et al., 2007; Parker, 2009).

It has been argued that entrepreneurship has option value: it is always possible to quit and (re)enter employment if the venture is unsuccessful (Polkovnichenko, 2003). If future earnings potential is not at risk, then it makes good sense to test the waters and start a business that could yield large rewards (see also Hintermaier and Steinberger, 2005). In this paper, we report a natural field experiment that seeks to verify under carefully controlled conditions the premise that entrepreneurs can indeed reenter salaried employment as easily as non-entrepreneurs. Our study reveals employer preferences that would be difficult to elicit through direct questioning. Given the many non-pecuniary returns that can derive from self-employment, our focus is not on pay differences, but on potential job offers, i.e., invitations to

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[4] Hamilton points out that various labor-market theories are inconsistent with the empirically observed income patterns, including agency theory (Lazear and Moore, 1984), investments in one's own skills (Bitler et al., 2005), matching and learning models (Roy, 1951; Jovanovic, 1982), or superstar theory (MacDonald, 1988; Rosen, 1981).

job interviews. Over a period of a year (2011-2012), we mailed pairs of constructed applications in response to UK job ads that differed substantively only in that one individual's experience was acquired as an employee whereas the other had performed the same tasks in a personally owned business.

Standard research on occupational choice assumes that the employment opportunities for entrepreneurs and salaried workers with otherwise similar qualifications are equal (Amit et al., 1995; Douglas and Shepherd, 2002; Evans and Leighton, 1989; Hamilton, 2000; Kihlstrom and Laffont, 1979; Kolvereid, 1996; Kolvereid and Isaksen, 2006; Lucas, 1978; van Praag and van Ophem, 1995). If this assumption is true, we should not find differences in employer responses to applications of entrepreneurs and non-entrepreneurs in a natural field experiment. Thus, our study is an explicit test of this null-hypothesis.

The outcomes indicate that entrepreneurs do not have access to the same job opportunities as comparable peers who have spent their previous careers in paid employment. Hence, there is an additional personal cost to entrepreneurship that cannot be attributed to differences in observable qualifications. This result suggests that lower incomes of entrepreneurs compared to their "peers" in regular employment does not have to reflect irrational occupational choices; rather, it is difficult to identify true peers, since self-employment itself appears to convey a negative signal to employers.

## 2 Materials and Methods

### 2.1 Field experiments and correspondence testing

Natural field experiments – in contrast with other types, such as laboratory, artefactual, or framed field experiments – combine randomization and realism to take advantage of the most attractive elements of the experimental method as well as naturally-occuring data (Al-

Ubaydli and List, 2012; Harrison and List, 2004; List, 2011). Al-Ubaydli and List argue that a natural field experiment represents the cleanest possible manner in which to estimate the treatment effect of interest. Such experiments naturally resolve any bias issues, since subjects are not aware that they are participating in an experiment. Hence, a natural field experiment affords us with more control over the environment as such an experiment allows us to bypass the participation decision.[5] As a result, a natural field experiment offers the possibility of an improved connection from economic theory and empirical evidence to the real world (List, 2011).

Natural field experiments have been used in a variety of markets to study discrimination, for example, in housing (Ahmed and Hammarstedt, 2008; Baldini and Federici, 2011; Bosch et al., 2010; Hanson and Hawley, 2011), online auctions (Shohat and Musch, 2003), cars (Ayres and Sigelman, 1995), or insurance (Spencer et al., 2010). Studies of labor market discrimination typically focus on gender (Booth and Leigh, 2010; Neumark et al., 1996), race (Banerjee et al., 2009; Heath and Cheung, 2006; Kaas and Manger, 2012; Pager et al., 2009; Wood et al., 2009), age (Gringart and Helmes, 2001; Petit, 2007), or sexual orientation (Drydakis, 2009; Weichselbaumer, 2003).

Although these studies vary significantly in the treatment they test for, they generally use similar experimental designs. Two methodologies can be distinguished: a personal approach and an impersonal approach. Audit testing involves in-person interviews by coached participants with constructed backgrounds that differ only on selected dimensions. To eliminate individual appearance and bearing as a source of variability, correspondence testing is conducted in an arm's length manner, via mailed applications (for a detailed comparison between audit and correspondence testing, see Pager, 2007, and Riach and Rich, 2002). Our

[5] This aspect is opposed to common wisdom which argues that field experiments provide less control (Al-Ubaydli and List, 2012).

experiment uses correspondence testing. Two applications that are comparable in experience, skills and education, but vary in the one aspect of interest, i.e., self-employed vs not self-employed, were sent in response to each job vacancy. Employer responses were recorded and analyzed.

Recent studies employing the correspondence testing method include testing for racial discrimination in the UK (Bertrand and Mullainathan, 2004), Germany (Kaas and Manger, 2012) and Sweden (Carlsson and Rooth, 2007), discrimination by caste and religion in India (Banerjee et al., 2009), by age in Western Australia (Gringart and Helmes, 2001) and France (Riach and Rich, 2006), and by gender and sexual orientation in Austria (Weichselbaumer, 2003).

## 2.2 Experimental setting

Our natural field experiment was conducted in the UK because applications in the UK only require a CV and a cover letter, whereas it is customary in many other countries to include references, certificates, and other documents in the initial application. While many field experiments that investigate biases in the labor market focus on entry-level or low-skill jobs (e.g., Booth and Leigh, 2010; Drydakis, 2009; Kaas and Manger, 2012; Pager et al., 2009), the nature of our research question required us to create applicants with considerable work experience in a profession in which both regular employment and self-employment are not uncommon. We chose human resources management as a target occupation for three reasons.

First, in order to design plausible applications, and to match them to appropriate vacancies, we needed to have a detailed understanding of the typical career trajectories, skills and experiences found in the profession, which were given in human resource management. Second, vacancies for the chosen profession and level had to open up with sufficient

frequency to enable the collection of a reasonably sized dataset. This was also the case for human resource management.

Third, we chose to focus on an industry were self-employment occurs frequently and individuals with experience in working on their own account are not automatically perceived as "odd cases." UK labor market statistics show that approximately 10% of HR professionals are self-employed, so it can be assumed that recruiters have some experience with applicants who have such backgrounds. A scan of the position advertisements on online job boards revealed that a large number of vacancies for HR professionals were in the consulting business. Hence, the profile of the applicants was designed to match both HR positions in consulting and non-consulting firms.

The UK labor market statistics also show that self-employment is relatively high, at 25%, in the occupation group "professional, scientific and technical activities," which includes management and other consultancies (European Commission, 2011). Because the consulting sector seems to have a particularly high incidence of self-employment (except for construction and agriculture, in which HR positions are rare), we tracked whether each vacancy was in the consulting or non-consulting sector, to test for potential differences relating to employer experience with applications from entrepreneurs.

A comparison of the vacancies revealed that some HR jobs carry management responsibilities, such as HR manager or HR project manager, while others do not necessarily involve responsibility for a team, such as HR business partners, HR consultants, and HR-related specialists. The construction of the CVs allowed for applications to both types of positions, i.e., manager and non-manager positions, and we also tracked this aspect, since entrepreneurs might be considered a better fit for one vs. the other. The same set of applications was sent in response to each vacancy, which was either in a consulting or non-consulting HR job in the UK labor market.

## 2.3 Applications

***2.3.1 Curriculum Vitae*** All applications included a CV and a cover letter (see Appendix A and B for examples). To emulate a typical British CV, we studied online job boards and social media. We identified the design and range of content as well as the most relevant professional experiences, achievements, study programs, and affiliations listed. Unlike standard CVs in other countries, a British CV contains a personal statement in which the applicant gives an executive summary of the most important skills, experience, and characteristics. We constructed two master CVs, with the career trajectory up to the latest position at the bottom and the latest position and personal statement at the top.

To ensure comparability, the skills and training acquired during the first seven years, listed at the bottom of the CV, were the same, including the level of responsibility for projects and employees at different career stages. Moreover, the pace at which the applicants had been promoted or switched jobs varied only slightly. Both types of applicants had worked at medium-sized and large firms that still exist and existed during the time the applicants were supposed to have been working there. The locations of the companies were chosen so that the applicants had no unusual episodes of moving far in their histories.

Both types of applicants completed a Bachelor of Science in psychology and a Master of Science in human resource management. The universities chosen offer these study tracks and have a similar reputation (University Guide, 2011). The CVs show two affiliations. While both are members of the Chartered Institute for Personnel and Development (CIPD), a qualification frequently asked for in job advertisements, one is additionally affiliated with a psychological society, the other with a career management association. All these affiliations are common among HR professionals, as can be observed from real CVs posted online at social networks such as XING or LinkedIn.

The main variation between the two CVs was in the top part. After having moved through a total of three roles through promotions or employer changes, the fourth job title was either "Project Manager" in a known HR consultancy or "HR Consultant and Business Leader" in a personally owned consultancy. The job description and main achievements within this latest position are again very much alike, so that the only significant difference is that one has been employed and the other self-employed. The personal statement was matched to the latest position and highlighted the fact of self-employment. This design ensured that the applicants remained comparable in their experience, while the difference in their occupational status was apparent at first glance.

To guarantee that the academic and professional backgrounds would be evaluated as similar, reviews were conducted with HR experts and people with extensive knowledge of the UK labor market. Finally, we randomized the female and male applicant names, and the design of the CVs (bottom and top, and right-handed or left-handed CV design) throughout the data collection. This strict randomization ensures that gender, name, the specific details of past work experience and education, and the design of the CVs, all of which may influence the response rates, are not correlated with the self-employment status of the applicants. Hence, our design contained two variations (self-employed vs. not self-employed) in four aspects of the CV (name, gender, background, CV design), resulting in a total of 16 different CVs, each of which was checked for language and content by UK experts.

***2.3.2 Cover letter*** We compared various sets of cover letters and CVs from British job boards, online handbooks, and ghostwriters, and identified four main parts of a cover letter: (1) statement of the position one is applying for, (2) a description of one's strengths and main achievements, (3) a statement of why one is a good match for the position at hand, and (4) a brief description of one's career path. Two cover letters containing these four parts were constructed by two independent writers. This procedure ensured a personal style while

simultaneously disclosing the same amount of information. One cover letter stated explicitly that the applicant had been self-employed. The cover letters were matched with the corresponding CVs and the applicants' personal details. Again, all cover letters were checked for language and content by UK labor market experts.

### 2.4 Applicants

Our job candidates varied in two main respects: gender and occupational status. We created four fictitious applicants, female or male and self-employed or employed elsewhere. We selected names based on a list of the most common British surnames (British Surnames, 2011). These names were matched with common first names in a way that would preclude creating an awkward combination, e.g., alliterations such as "James Jones" were avoided. The result was two pairs of applicants, Catherine Evans and George Wright and, respectively, Ann-Marie Jones and Richard Harris. In half of the applications, the first pair was self-employed and the latter was not, while in the other half the designation was reversed.

The applications were sent out in pairs of either male self-employed and female employed elsewhere or female self-employed and male employed elsewhere. Both pairs were given an address in Manchester in a proper neighborhood, according to a guide from monster.co.uk (Monster, 2011). The street names and postal codes exist; only the street numbers are fictitious, being higher than the highest real street number.[6] Further contact details included the applicant's e-mail address and phone number.

Online guides and personal experience indicate that no correspondence in the first phase of the job application process is handled via postal address. In addition, it is even less likely to

[6] Here we opted to protect individuals living at real addresses by using the non-existent house numbers. Although there is a slight possibility that employers may have gone to the trouble of checking the addresses, we felt the alternative would have

receive a postal reponse for applications that were submitted electronically. Therefore, we expected no mail to be sent to the fictitious addresses. The e-mail addresses were created with two of the largest free e-mail providers and they consisted of variations of the names of the applicants. Finally, we purchased online phone numbers with a Manchester area code and a voice-mail installation, to record responses via phone. We expected that recruiters would always state their names and company and who they were trying to reach when leaving a voice-mail message.

### 2.5 Application procedure

We searched for open positions on the internet, primarily on two major online job boards, namely simplyhrjobs.co.uk and monster.co.uk, and all applications were sent electronically via the job board or via email. Although most applications for non-consulting jobs could be processed via the two job boards, consultancies either advertised their open positions exclusively on special consultancy job boards, such as top-consultant.com, or relied on the job seekers to search on their company websites for vacancies. The application procedure for jobs posted on the consulting job board was comparable to the non-consulting job boards. Consulting companies that only advertised their positions on their own websites required the use of an online application system. All online application systems permitted uploading of a cover letter, so that there was no difference in the information supplied between the three application procedures, i.e., e-mail, job board, and online application system.

We sent 100 applications to 50 job vacancies in 2011 and another 96 applications to 48 job vacancies in 2012. We aimed to apply to an equal number of manager / non-manager and

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been ethically problematic and risky for the experimental design, since a searchable history may be associated with a real address. If employers did look for a fictitious address, they could have assumed it was a typo, rather than deceptive.

consulting / non-consulting positions, but were ultimately constrained by the available postings, so the proportions deviated somewhat (see results section). We ensured that the 16 different CVs were randomized across these positions. Each vacancy received two applications as determined by the experimental matrix (see Appendix C). The CVs and cover letters were kept unchanged from their blueprints as much as possible; however, we included matching references to specific capabilities when they were explicitly asked for in the job description, e.g., experience in a certain business area or language skills. To avoid identification of the pairs, the applications were sent at different times: one in the morning and the other in the afternoon. Each job application was recorded along with information about the position (title, salary, permanent / temporary) and the firm (name, location, consulting / non-consulting).[7]

A major challenge we encountered during the application process was the prevalent use of recruitment agencies as mediators between the firm and the applicants. These recruitment agencies did not provide the firm's name and only gave limited information about the job. Avoiding all positions handled by recruiting agencies would have forced us to exclude too many vacancies. Therefore, we have incomplete information about the employer in some cases. We ensured that any contact person in an agency only received one pair of applications.

[7] The fact that companies in correspondence studies are not aware that they are part of an experiment may be viewed as an ethical concern. However, the costs imposed on employers by this study design is likely to be relatively small, since the time spent reading through two specific applications should not have been substantial and employers are used to spent significant resources on personnel selection. If subjects are aware of the experiment, they are likely to adapt their behavior to perceived expectations (Homan, 1991). Thus, correspondence studies like the present one may be viewed as the only realistic possibility to identify differential treatment of applicants.

### 2.6 Measuring responses

For every application we sent out, the response or non-response was recorded. Negative responses were never communicated via phone. Therefore, a voice mail was always categorized as an "invite." An e-mail usually asked for an interview, for more specific information (e.g., regarding salary expectations and notice period), or stated a rejection. These responses were recorded correspondingly as either "invite" or "negative."

Some agencies had a special response policy. If the applicant did not receive a call or e-mail response within a week, he could consider himself rejected. For these applications, a negative indirect response was recorded after the expiration of the mentioned period. Responses to postal addresses were not expected nor could they be processed, as the addresses were fictitious. In the event of a positive response, the recruiters were informed politely and in a timely manner that the applicant is no longer interested.

## 3 Results

### 3.1 Descriptives and correlations

Of the 196 applications that were sent out in total, four applications had to be excluded from the analysis because the position was placed "on hold" during the application process. Our analysis is thus based on 192 observations.

Tables 1 summarizes the distribution of applications. By design, of the 192 applications an equal number are by males and females ($N = 96$), and half are from self-employed individuals ($N = 96$). The flow of vacancies was such that nearly even numbers were for managerial ($N = 102$) and non-managerial ($N = 90$) roles, roughly a third of the positions were in the consulting sector ($N = 68$), about two-thirds were based in London ($N = 122$), and approximately two-thirds of the searches were handled by a recruitment agency ($N = 136$).

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INSERT TABLE 1 ABOUT HERE

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Table 2 reports responses by gender and self-employment status. Half of all applications received a direct response; 39% were rejections and 11% interview invites. Across all vacancies, fewer than 1% of self-employed applicants received a positive response, while 6% of the regularly employed did.

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INSERT TABLE 2 ABOUT HERE

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In Table 3, we show response rates and Fisher exact tests for the different subcategories of the sample. The number of observations is displayed in brackets below the corresponding percentage rates. Columns (1) and (2) contain the negative responses, distinguishing between indirect and direct negative responses. Column (3) shows the positive responses, and column (4) collects the *p*-values from Fisher exact tests for positive and negative responses. Also to be seen in column (4), applications for consulting positions and applications that were not handled by a recruiting agency were more likely to get a positive response. Furthermore, and consistent with findings by Neumark et al. (1996), women received fewer positive responses than men, although the difference is not statistically significant according to the Fisher exact test.

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INSERT TABLE 3 ABOUT HERE

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The next three columns list frequencies of positive responses for both applicants (column 5), only the self-employed individual (column 6), and only the person employed elsewhere (column 7). Column (8) reports a measure of net differential treatment for self-

employed applicants (Kaas and Manger, 2012; Riach and Rich, 2002). This index can take values between -1 and 1. A value of zero means that both groups are treated equally. A positive value means that self-employed applicants received fewer invitations and vice versa. Our observations yield net differential treatment to the detriment of self-employed applicants of 45%. The positive response rate for the self-employed is also consistently lower across subcategories. Differences with respect to gender, sector, managerial responsibility, location, and recruitment method exist, but the self-employed candidate always receives a lower fraction of invitations than the paired wage earner.

In column (9), we compute Fisher exact tests to examine if the index values in column (8) are significantly different from zero. This column was estimated with a crosstab using the observations of positive and negative responses for self-employed and not self-employed applicants. Column (10) looks at whether the number of positive responses for self-employed and non-self-employed applications differs by gender, sector, managerial responsibility, location, and agency recruitment, again using Fisher exact tests. Since self-employment is uncorrelated with the other independent variables by virtue of our experimental design, the Fisher exact tests in column (10) of Table 3 are similar in spirit to interaction effects in multivariate regressions. None of the tests in column (10) reach *p*-values smaller than 0.1.[8] In particular, gender does not seem to moderate the role of self-employment.

Table 4 shows correlations between the experimental variables, showing that self-employment status was indeed orthogonal to all other variables in the study. Furthermore, job characteristics (*London*, *manager*, *consulting*, and *agency*) were also orthogonal to candidate characteristics, but job characteristics were correlated which each other.

[8] When we use the less conservative chi-square test instead, only the hiring method (via recruitment agency vs. directly by the firm) significantly affects the relative success of self-employed applicants: they do worse when an agency screens candidates.

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INSERT TABLE 4 ABOUT HERE

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### 3.2 Regression Results

We estimated probit models as a robustness check of the bivariate evidence in Table 3 and to assess the multivariate effect of the vacancy-dependent variables on the likelihood of receiving a positive response from the firms. Specifically, we regress received responses on self-employment status, gender, sector, managerial responsibility, agency recruitment, place of position, name, and the order in which the applications were sent out.

Marginal effects (*dy/dx*) and associated *p*-values in the two left columns in Table 5 show that self-employed applicants and women are at a significant disadvantage: they are each about 10 percentage points less likely to receive a positive response. In addition, applications to positions that are not in the consulting sector have a smaller chance of generating an invitation.

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INSERT TABLE 5 ABOUT HERE

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Generally, we counted non-responses as rejections. To ensure that this classification does not drive our results, we also estimated the same probit model on the subsample of applications that received a direct negative or positive response. Marginal effects (*dy/dx*) and *p*-values for this specification are reported in the two right columns of Table 5. The disadvantageous treatment of self-employed and female applicants becomes even stronger (about 17 percentage points). In addition, when only direct responses are considered applications are less often successful when the position is non-consulting, involves managerial responsibility, or is located in London.

# 4 Discussion

## 4.1 Candidate explanations

***4.1.1 Differential Skills*** Our results leave little room to doubt that entrepreneurs experience adverse treatment in the observed portion of the UK labor market. Possible reasons range from discrimination, in the conventional negative sense of the word, to potentially justified discounting of self-employed backgrounds:[9] either because it creates a different, less relevant, skill set or because of what it says about the applicant's personality and work habits.

Entrepreneurs may lack skills that can only be gained in employment, particularly in larger companies. For example, formal training is more frequently offered in large than in small enterprises (Alliger et al., 1997; de Kok and Uhlaner, 2001; Tracey et al., 1995). Employers may value recent exposure to a large firm corporate culture. Furthermore, the type of experiences HR professionals gain might not be the same in small entrepreneurial firms and established businesses with a brand name. Consequently, employees of a major company may have valuable skills and personal networks that someone with a self-employment background lacks. To the extent that companies value experience that is specifically gained in large enterprises, entrepreneurs may simply offer less human capital to traditional employers, of a type that would not be easily measured.

***4.1.2 Statistical Discrimination*** A self-employed background may be a somewhat valid signal for employers that the candidate would not "fit" in the organization. Some of the qualities that may lead to entrepreneurial success, such as a bias for change, risk-taking, and

[9] Employers are, for example, aware that self-employment sometimes masks unemployment.

seeking control, or the tendency to adopt unusual points of view, are not necessarily conducive to traditional company careers (Markman and Baron, 2003; Tett and Burnett, 2003; Zhao et al., 2010). A past decision to enter self-employment may therefore signal to employers personality traits they do not desire.

Statistical discrimination occurs when missing information is inferred in a way that disadvantages the applicant (Arrow, 1972; Phelps, 1972; List, 2004). Recruiters are likely to rely on generalizations and stereotypes, based on characteristics they can observe: "most self-employed applicants have failed, and this is probably one of them" (when the applicant is, perhaps, a parent who quit a regular job to have a more flexible schedule). Such a reaction involves an objective use of the available information, yet may lead to mistaken judgments in individual cases. On average, a policy to not hire entrepreneurs may nevertheless be optimal from the perspective of some recruiters and their firms.

***4.1.3 Taste-Based Discrimination*** Disadvantages may not only arise from the employer's objective considerations of what a prior entrepreneurial career says about a candidate but could alternatively take the form of taste-based discrimination (List, 2007; Riach and Rich, 1991). Taste-based discrimination reflects outright prejudice; it is what we usually refer to as discrimination in ordinary language.

In a series of natural field experiments in product (cars) and information (advisory) markets performed by Gneezy et al. (2012), taste-based discrimination was observed against characteristics that were regarded as controllable (e.g., sexual orientation), while discrimination against uncontrollable traits tended to be statistical (e.g., race, gender, disability). If self-employment is regarded as a voluntary choice, it might therefore be a candidate for taste-based discrimination.[10]

[10] It would matter whether self-employed applicants are necessity or opportunity entrepreneurs, which is not established by our study design.

In general, it is difficult to identify discrimination and distinguish between types of discrimination empirically, because the true motives and thoughts of the decision maker remain unobserved in a correspondence study (Neumark, 2012).[11] This is particularly relevant for our study: we cannot be sure that differential treatment is not based on relevant experience and informed judgment of employers about applicants who chose to become self-employed. We caution therefore against interpreting our result that former entrepreneurs experience adverse treatment in the labor market as evidence of a particular kind of discrimination. Our experimental design is not geared toward distinguishing between competing explanations.

## 4.2 Implications

***4.2.1. Theory*** While the negative employer reactions to entrepreneurs that we find in our data can be rationalized, the primary interest for the theoretical literature is that they exist at all. Our findings imply that we cannot assume that a reference wage, which is constructed for a given entrepreneur based on observable characteristics other than the occupational status itself, is in fact a wage that the entrepreneur could attain in the labor market. Empirical findings that imply that entrepreneurs bypass better income opportunities in traditional employment (Hamilton, 2000) must therefore be treated with caution – even though there are some plausible and documented reasons why entrepreneurs might do so (e.g., non-pecuniary benefits, attitudes and beliefs).

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[11] While Al-Ubaydli and List (2012) argue that randomization in natural field experiments controls for differences in unobservable characteristics, Heckman and Siegelman (1993) as well as Neumark (2012) point out that the problem goes beyond variation in means, and discrimination can be falsely inferred when there are different variances in a relevant trait among different groups. For example, if the self-employed are known to exhibit greater variance in productivity, then they could be less likely to pass a desired productivity threshold, compared to the low-variance group of the regularly employed, even if they are on average equally productive. A way to test this may be to vary the level of qualifications, in order to have over- and underqualified typical applicants, which has different implications for whether higher variance is desirable or not for employers, and therefore which group would be hired.

Personal fit appears to be an important element in labor market outcomes, in addition to directly observable qualities like education.[12] When theories endow agents with productivities that are independent of the work environment, they are at odds with empirical realities and may be missing important relationships. Our experiment indicates that it is not only the supply side of the labor market (the entrepreneurs) whose choices are sensitive to personal qualities but also the demand side (the employers), who can infer such information from career histories.

***4.2.2 Efficiency*** It is possible that recruiter decisions in our study are simply efficient solutions to a costly screening problem. However, if the results are influenced by discrimination, they clearly point to some social costs. Desirable individual actions, such as experimentation with entrepreneurial ideas or dedicating time to one's family, would be discouraged by the knowledge that it is difficult to reenter traditional employment. On the business side, recruiting biases against the self-employed may engender systematic selection against the innovative capabilities these workers could bring and that are in principle much sought-after.

The quality of recruiting is inherently difficult to benchmark and evaluate, as those who were hired cannot be compared by subsequent performance with those who were not. In any case, the "innovativeness" of a workforce is difficult to quantify and attribute properly to human resources vs. company culture. It is therefore possible that biases will go unaddressed, unless a conscious effort is made to promote the consideration of former entrepreneurs for positions. As with gender or racial discrimination, this is, from the company standpoint, not so much a fairness issue as an opportunity to create comparative advantage by selecting from a strong, but relatively neglected, pool of potential employees. In the case of the self-

[12] Roessler and Koellinger (2012) is an example of a modeling approach that incorporates personal fit and the idea that entrepreneurs may be more productive in a supervisory than a supervised role.

employed, this pool is likely to offer unique capabilities that are difficult to obtain elsewhere – but also unique challenges.

## 4.3 Limitations and Extensions

***4.3.1 Limitations*** Our choice to investigate the research question by means of a natural field experiment was driven by three main considerations. First, naturally occuring data on applications and success rates of entrepreneurs are difficult to find. Second, an experimental design is more appropriate than a design that relies on self-reports because these reports may be biased for a variety of reasons (Smith, 1982). Furthermore, self-reports typically correlate with unobserved variables that also influence the outcome. An experimental design helps mitigate this unobserved variables bias by means of experimental control and randomization. Third, field experiments are preferable to laboratory experiments for our specific research question because we want to observe the job market opportunities of entrepreneurs in real life. Hence, external validity is important in our study, and natural field experiments fare very favorably in this respect (Harrison and List, 2004; Levitt and List, 2009).

However, because natural field experiments are conducted with naturally occurring data, it is often difficult to repeat them to verify results (Levitt and List, 2009). We addressed this potential concern by collecting our data in the same way in the same natural setting in two batches in 2011 and 2012. The results we report above are based on the pooled data from both batches. However, a separate analysis by batch shows qualitatively identical results, thus providing replication.

Another potential limitation of natural field experiments is that some specifics of the treatment cannot be controlled (Harrison and List, 2004). For example, one aspect we could not ensure in this study is that a pair of applications is reviewed by the same recruiter. However, we applied strict randomization to minimize such challenges (for more issues in

natural field experiments, see Campbell, 1957; Campbell and Stanley, 1966; Cook and Campbell, 1979; Meyer, 1995).

In addition, correspondence testing is subject to criticism. The vacancies that require a written application at the first stage of the recruitment process are usually "white-collar" jobs. For "blue-collar", i.e., manual, low-wage, jobs, an interview in person or on the phone is more common. This factor limits the potential generalizability of this study to a specific range of professions. In addition, receiving a positive response on a written application does not immediately translate into receiving a job offer, as further stages of the recruitment process, such as a personal interview, are yet to come. Additionally, the rejection of an applicant at this early stage is not entirely comparable to rejection at a later stage.

Moreover, correspondence testing does not expose all facets of differential treatment, only the decisive form of denying an applicant the opportunity to compete for a job (Riach and Rich, 1991). Because our experiment only recorded invitations to a job interview, the very first stage of the application process, we technically cannot conclude that the applicant would be hired or offered competitive compensation. However, it was our objective to test the chances of former entrepreneurs in this impersonal phase of the application process, which arguably represents the greatest barrier to receiving fair consideration for a position.

Furthermore, findings from correspondence studies like ours may not generalize if employers search for additional information about applicants (e.g., digital "footprints" of the applicants on the Internet) differentially among the treatment groups.

Two additional limitations exist with regard to the job search. First, because we only looked for vacancies on certain online job boards and consultancy homepages, firms that do not use these media are excluded from the dataset. Large non-consulting companies that post to their own employment websites are not part of the study. This selection could influence our findings if companies that advertise on their private websites would treat self-employed

applicants differently than companies that utilize job boards. We have no reason to believe that this is the case.

Second, the effect of recruitment agencies on the hiring process should be considered. On job boards, most online vacancies for experienced HR positions are posted by professional recruitment agencies that are hired by the company for help with the search. These agencies conduct the first scan of the applications and forward the most suitable candidates. While this factor can be regarded as a problem for the experiment, as firms do not directly evaluate the applications, recruitment agencies play an important role in the UK job market and their impact should not be ignored (a similar role is played by headhunters in the US and elsewhere). The hiring companies give clear instructions as to which criteria applicants of interest must meet. Furthermore, most companies maintain long-term relationships with the agencies, which allow them to become well aware of the wishes of their clients and to act as true representatives for the HR personnel of the hiring firm. Nonetheless, recruiting agencies invited self-employed applicants less often than firms we could apply to directly. One can conjecture that a less significant role of recruiting agencies in other countries would translate into less disadvantageous treatment of the self-employed, all else equal.

***4.3.2 Scope for generalization*** The results we report are for a specific type of job in the UK labor market, for firms of a specific size. Only medium to larger companies have Human Resource Departments and hire for specific HR jobs. While restricting the scope of our study is important to limit the number of possible explanations of our findings, future studies are needed to see whether our results can be replicated in different environments.[13] One might

[13] Al-Ubaydli and List (2012) argue that, under a liberal stance, empirical results are globally generalizable. Under a conservative stance (in contrast to a liberal stance), the results of field experiments are locally generalizable because the neighborhood of a natural setting is still a natural setting. Finally, under the most conservative stance, nothing is generalizable beyond the specific context where the investigation occurred. Since participants in natural field experiments are a representative, randomly chosen, not self-selected subset of the treatment population of interest, the causal effect obtained

also expect the timing and duration of self-employment to play a role;[14] these are aspects that could be varied in an alternative experimental design.

We constructed the experiment in a way that would minimize the likelihood of a negative effect of self-employment status by avoiding typical occupations of individuals with low skills and poor labor market opportunities who tend to pursue self-employment out of necessity (e.g., small shop owners). One might expect entrepreneurs to be at a greater disadvantage in occupations and cultures where self-employment is stigmatized by a typical association with failure.[15]

Different labor market institutions across countries may also influence the results. For example, the important role of recruiting agencies in the UK labor market seems to have contributed to the disadvantageous treatment of self-employed candidates in our study (Table 3).

***4.3.3 Challenges in identifying discrimination*** While our focus is on whether the self-employed face adverse treatment in labor market opportunities, the "why" is of obvious interest as well. As discussed above, discrimination is one possible explanation of adverse treatment. The alternative explanation is that self-employment is in itself informative about the expected productivity of the applicant.

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from this type of experiment is the average causal effect for the full population and not for a non-random subset that chose to participate (List, 2011).

[14] A recent paper by Kroft et al. (2013) shows for unemployed applicants that the likelihood of a negative response increases fastest in the first eight months of unemployment.

[15] Note that the UK was in recession at the time of the experiment, which might have biased employer perceptions of entrepreneurs who are applying for jobs. However, there are off-setting effects. While it is more likely that an application from an entrepreneur during recession is due to business failure, it is less likely that business failure is due to personal performance (which is what employers ultimately care about). So it is unclear that employers would have any stronger reason to suspect that self-employed applicants are of poor quality during a recession.

We can neither infer nor rule out discrimination as a source of the observed differences in treatment. Self-employment is an economic choice that is potentially informative, unlike the exogenous personal characteristics that are typically linked with discrimination (such as race and gender). The latter are beyond the individual's control and less informative about his or her value to an employer. The choice to enter self-employment could, however, be directly informative about unobserved applicant preferences and skill sets: e.g., it is well-documented that entrepreneurs have on average a greater desire for independence and tend to be less risk-averse or more optimistic.

These differences can be important to employers (as we know from informal feedback).[16] It would therefore be misleading to assume that the self-employed and the regularly employed are similar in productivity, even in a correspondence study like ours. But then we cannot attribute differences in treatment to discrimination.

## 5 Conclusion

We show through a natural field experiment set in the UK labor market that entrepreneurs face difficulties in switching back to traditional employment. Employing the method of correspondence testing, two fictitious applications were submitted in response to each of 98 vacancies, controlling for qualifications up to the last job. We manipulated gender and self-employment status of the last job, randomizing all other elements of the applications. The self-employed individuals were found to systematically attract fewer interview invitations.

[16] The role of self-employment is perhaps closer in spirit to the type of education (e.g., plumber or nurse) than to sex or race.

Our result suggests that the choice to become an entrepreneur can result in an involuntary lock-in, a factor that should be taken into account in planning one's future career. The fact that a significant share of companies deliberately choose not to invite former entrepreneurs for job interviews could reflect previous negative experiences, or prejudicial decision making that could hurt the innovative capacity of firms in the long run. In any case, our result provides a new perspective on why entrepreneurs remain self-employed by demonstrating that the commonly assumed labor market options are not necessarily available to them. The decision to remain self-employed may not be voluntary as is the premise in most studies of the returns to entrepreneurship.

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Table 1: Number of observations across applicant categories

| | | Self-employed | Employee | Total *N* |
|---|---|---|---|---|
| **Gender** | Male | 48 | 48 | **96** |
| | Female | 48 | 48 | **96** |
| **Sector** | Consulting | 34 | 34 | **68** |
| | Non-consulting | 62 | 62 | **124** |
| **Manager** | Manager | 51 | 51 | **102** |
| | Non-Manager | 45 | 45 | **90** |
| **Location** | London | 61 | 61 | **122** |
| | Non-London | 35 | 35 | **70** |
| **Recruitment** | By agency | 63 | 63 | **126** |
| | Not by agency | 33 | 33 | **66** |

Table 2: Response rates by gender and occupational status

| | | Indirect negative response | Direct negative response | Positive response |
|---|---|---|---|---|
| **Male** | **Self-employed** | 24 | 20 | 4 |
| | **Employee** | 20 | 17 | 11 |
| **Female** | **Self-employed** | 26 | 20 | 2 |
| | **Employee** | 25 | 18 | 5 |

Table 3: Response rates (numbers in parentheses), Fisher exact tests and net differential treatment by firm[a]

| | | (1) Indirect negative response | (2) Direct negative response | (3) Positive response | (4) Fisher exact tests (1,2) (3) | (5) Both positive response | (6) Only SE positive response | (7) Only E positive response | (8) Differential treatment of SE [(7)-(6)] / (3) | (9) Fisher exact tests (SE) (E) | (10) Fisher exact tests interactions |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **All vacancies** | | 0.50 | 0.39 | 0.11 | (-) | 0.02 | 0.01 | 0.06 | **0.45** | $p = 0.04$ | (-) |
| | | (95) | (75) | (22) | | (8) | (2) | (12) | | | |
| **Gender** | Male | 0.46 | 0.38 | 0.16 | $p = 0.11$ | 0.02 | 0.01 | 0.10 | **0.60** | $p = 0.09$ | $p = 1.00$ |
| | | (44) | (37) | (15) | | (4) | (1) | (10) | | | |
| | Female | 0.53 | 0.40 | 0.07 | | 0.02 | 0.01 | 0.02 | **0.14** | $p = 0.44$ | |
| | | (51) | (38) | (7) | | (4) | (1) | (2) | | | |
| **Sector** | Consulting | 0.31 | 0.47 | 0.22 | $p = 0.00$ | 0.04 | 0.01 | 0.18 | **0.47** | $p = 0.08$ | $p = 1.00$ |
| | | (21) | (32) | (15) | | (6) | (1) | (8) | | | |
| | Non-consulting | 0.60 | 0.35 | 0.05 | | 0.01 | 0.01 | 0.03 | **0.43** | $p = 0.44$ | |
| | | (74) | (43) | (7) | | (2) | (1) | (4) | | | |
| **Manager** | Manager | 0.52 | 0.39 | 0.09 | $p = 0.26$ | 0.02 | 0 | 0.05 | **0.56** | $p = 0.16$ | $p = 1.00$ |
| | | (53) | (40) | (9) | | (4) | (0) | (5) | | | |
| | Non-Manager | 0.47 | 0.39 | 0.14 | | 0.02 | 0.02 | 0.08 | **0.38** | $p = 0.23$ | |
| | | (42) | (35) | (13) | | (4) | (2) | (7) | | | |
| **Location** | London | 0.44 | 0.44 | 0.12 | $p = 1.00$ | 0.02 | 0.01 | 0.07 | **0.57** | $p = 0.04$ | $p = 0.62$ |
| | | (54) | (54) | (14) | | (4) | (1) | (9) | | | |
| | Non-London | 0.59 | 0.30 | 0.11 | | 0.03 | 0.01 | 0.04 | **0.25** | $p = 0.71$ | |
| | | (41) | (21) | (8) | | (4) | (1) | (3) | | | |
| **Recruitment** | By agency | 0.55 | 0.37 | 0.08 | $p = 0.05$ | 0.01 | 0 | 0.06 | **0.80** | $p = 0.02$ | $p = 0.16$ |
| | | (69) | (47) | (10) | | (2) | (0) | (8) | | | |
| | Not by agency | 0.40 | 0.42 | 0.18 | | 0.05 | 0.03 | 0.06 | **0.17** | $p = 0.75$ | |
| | | (26) | (28) | (12) | | (6) | (2) | (4) | | | |

[a] SE = Self-employed, E = Employee. Significance levels are two-tailed.

Table 4: Pearson correlations[a]

| | Response | SE | Female | Consulting | Manager | Agency | London | Name1 | Name2 | Name3 | Name4 | CV_bottom | Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SE** | -0.16** | | | | | | | | | | | | |
| **Female** | -0.13* | 0 | | | | | | | | | | | |
| **Consulting** | 0.25*** | 0 | 0 | | | | | | | | | | |
| **Manager** | -0.09 | 0 | 0 | 0.04 | | | | | | | | | |
| **Agency** | -0.15** | 0 | 0 | -0.34*** | 0.02 | | | | | | | | |
| **London** | 0.0001 | 0 | 0 | 0.29*** | -0.15** | -0.05 | | | | | | | |
| **Name1** | -0.09 | 0 | -0.58*** | 0 | 0.01 | -0.04 | -0.06 | | | | | | |
| **Name2** | -0.06 | 0 | -0.58*** | 0 | -0.01 | 0.04 | 0.06 | -0.33*** | | | | | |
| **Name3** | -0.06 | 0 | 0.58*** | 0 | 0.01 | -0.04 | -0.06 | -0.33*** | -0.33*** | | | | |
| **Name4** | 0.21*** | 0 | 0.58*** | 0 | -0.01 | 0.04 | 0.06 | -0.33*** | -0.33*** | -0.33*** | | | |
| **CV_bottom** | 0.03 | 0 | 0.04 | 0 | 0 | 0 | 0 | 0 | -0.05 | 0 | 0.05 | | |
| **Design** | 0.07 | 0.04 | 0 | 0 | 0 | 0 | 0 | 0.02 | -0.02 | -0.02 | 0.02 | -0.04 | |
| **First** | -0.07 | -0.04 | -0.21*** | 0 | 0 | 0 | 0 | 0.12* | 0.12* | -0.12* | -0.12* | 0 | -0.38*** |

[a] SE = Self-employed, Name1 = Ann-Marie Jones, Name2 = Catherine Evans, Name3 = George Wright, Name4 = Richard Harris, CV_bottom = "Leeds" (see Appendix A and B), Design = design1 (see Appendix A and B), First = first application sent, *p < 0.10, **p < 0.05, ***p < 0.01.

Table 5: Probit models with application response as the dependent variable, average marginal effects[a]

| | Full Data Set | | Non-Responses Excluded | |
|---|---|---|---|---|
| | ***dy / dx*** | ***p*-value** | ***dy / dx*** | ***p*-value** |
| **Self-employed** | -0.10 | 0.03 | -0.18 | 0.00 |
| **Female** | -0.11 | 0.04 | -0.17 | 0.05 |
| **Consulting** | 0.17 | 0.00 | 0.37 | 0.00 |
| **Manager** | -0.07 | 0.10 | -0.18 | 0.02 |
| **Agency** | -0.04 | 0.39 | -0.06 | 0.40 |
| **London** | -0.08 | 0.09 | -0.32 | 0.00 |
| **Name1** | -0.04 | 0.53 | 0.02 | 0.83 |
| **Name3** | -0.11 | 0.03 | -0.10 | 0.28 |
| **First** | -0.02 | 0.66 | -0.01 | 0.87 |
| **Model diagnostics** | | | | |
| **N** | 192 | | 97 | |
| **Pseudo $R^2$** | 0.23 | | 0.27 | |
| **Wald $Chi^2$ (10)** | 27.92 | | 22.63 | |
| **Prob > $Chi^2$** | 0.00 | | 0.01 | |
| **Log likelihood** | -52.40 | | -37.86 | |

[a] Standard errors are clustered for 96 firms. Manager = managerial responsibility, Agency = agency recruitment, First = first application, Name1 = Ann-Marie Jones, Name3 = George Wright, First = first application sent.. Reference categories are employed, male, non-consulting, no managerial responsibility, no agency recruitment, outside London, name2 (Catherine Evans), name4 (Richard Harris), second application sent. The results are robust for the exclusion of control variables.

**APPENDIX**

**Appendix A: CVs**

**Appendix A.1: Sample CV**
**self-employed, male, design 1, CV bottom "Leeds"**

**George P. Wright**

152 Reeves Rd
Chorlton
Manchester
M21 8DB
0161 408 0419
georgepwright@hotmail.com

**Profile**

**A proactive, dynamic, results-driven Human Resources professional with broad experience in all areas of HR, both as HR-Manager and main consultant and owner of an HR-consultancy. A strong HR generalist with particular strengths including: performance management, change management, and HR consultancy. Combines professional expertise with excellent interpersonal and communication skills, an outstanding project management competence and a strong business acumen.**

**Work Experience**

**HR Consultant, Business Leader** **2009 – 2011**

*[company name], Manchester*

Owned and managed a small consulting company consisting of a team of three consultants and supporting staff. Offered proactive support to a diverse set of clients over the full range of HR tasks. Provided direction and guidance during organisational changes, balancing the expectations and needs of the client organisations, their employees, stakeholders, and customers.

- Established standardised personnel selection procedures, including interviewing, testing and reference, and background checking in a variety of client companies across different industries.
- Supported a company-wide process of organisation development that addressed issues such as succession planning, superior workforce development, key employee retention, organisation design, and change management for a large telecommunications client

company.

- Provided leadership, interviewing, and communication skills training to a range of different client groups.

**HR Manager (Generalist role)** **2006 – 2009**

*[company name], Leeds*

Fulfilled HR generalist functions including recruitment and assessment, training, and management coaching. Key communicator between management and employees. Project leader on a number of initiatives for skill development and performance management.

- Established an in-house employee training system that addresses company training needs including training needs assessment, management development, the measurement of training impact, and training transfer.
- Partnered with management to communicate Human Resources policies, procedures, programmes, and laws.
- Played a key role in developing and executing performance management programmes, including 360° assessments.
- Formulated job descriptions for various positions and conducted wage and compensation surveys.
- Established HR departmental measurements that support the accomplishment of the company's strategic goals.

**HR Generalist** **2002 – 2006**

**HR Assistant**

*[company name], Leeds*

Carried out generalist HR duties such as employee recruitment and development, mediation and workplace conflict management, benefit administration, and employee record maintenance.

- Designed a new hire orientation programme that boosted productivity and cut workers' compensation costs.
- Assisted in the implementation of the performance management system that includes performance development plans and employee development programmes.
- Taught and supervised managers on the proper use of the performance management process.
- Recommended employee relations practices necessary to establish a positive employer-employee relationship and promote a high level of employee morale and motivation.

## Education

**Master of Science in Human Resource Management** **2002**

University of Manchester

**Bachelor of Science in Psychology** **2000**

University of Leeds

## Affiliations

- Chartered Institute of Personnel and Development
- British Psychological Society

**References are available upon request.**

## Appendix A.2: Sample CV
## not self-employed, female, design 2, CV bottom "Birmingham"

Ann-Marie Jones • 242 Triscombe Way • Manchester • M16 7TX

0161 408 36 94 • Jones.AMN@gmail.com

### Experience

2009 – 2012

**Project Manager**

*[company name] (HR consulting division), Manchester*

Served as project manager for consulting teams providing HR services to client groups across different industries and in all HR functions. Designed, developed and initiated strategies and initiatives aligned with the needs of the client businesses. Generated a number of new client accounts.

Main achievements

- Devised a recruitment and talent management programme spanning the full range of expert and management positions in a large telecommunications client company.
- Led organisational assessment, diagnosis and the implementation of an organisational change initiative for a pharmaceutical client company.
- Identified initiatives, made recommendations and trained managers and directors on succession planning and competency-based selection tools in several client companies across various industries including logistics, media, and food.

2005 – 2009

**HR Senior Generalist,**

**HR Generalist**

*[company name], Manchester*

Provided HR generalist services such as staffing and HR diagnostics, HR development, and leadership coaching. Led several initiatives and projects across different HR functions, including training, leadership planning and performance management. Managed employee communication.

Main achievements

- Revised job descriptions across all levels and categories. "Shadowed" and interviewed employees to construct an accurate picture of the duties and skills required for each position.
- Developed comprehensive training programmes and seminars, which were delivered to supervisors, technical employees, and management personnel.
- Implemented a leadership planning process, including individual development plans, and performance management.
- Installed an employee suggestion programme and a yearly employee satisfaction survey.
- Developed a system of HR department performance indicators that serve to monitor the department's contribution to the company's goal attainment.

2002 – 2004

**Junior HR Representative**

*[company name], Birmingham*

Fulfilled a broad range of HR functions, including staff selection, orientation, and training, monitoring of the company wage and salary structure, managing HR records, and investigating employee complaints or concerns.

Main achievements

- Played a key role in revising the standard recruitment and assessment procedure that significantly reduced early employee turnover and increased management's satisfaction with new hires.
- Trained management team on interviewing techniques and best practices, conducting workshops and one-on-one coaching sessions that contributed to sound hiring decisions.
- Assisted with the development of Human Resources policies for the company with regard to employee relations, HR procedures and laws.
- Conducted exit interviews to determine reasons behind separations.

## Education

2001 – 2002

**Portsmouth University**

Human Resource Management (MSc)

1997 – 2000

**University of Birmingham**

Psychology (BSc)

## Affiliations

- CIPD
- Employment Management Association
  (Society of Human Resource Management)

## Appendix B: Cover letters

### Appendix B.1: Sample Cover Letter 1
### Respective CV: self-employed, male, design 1, CV bottom "Leeds"

Dear Sir or Madam,

In response to your posting for *[position]* on *[website]*, I am enclosing my cv for your review. Given my proven record of work performance and success as an HR generalist and consultant in different settings, I am sure I can add value to your company.

Over the course of eight years I have gained extensive experience as an HR generalist and manager in a manufacturing environment and as a consultant for various other industries. Throughout my career I have demonstrated substantial skill and expertise in all areas of HR, both operational and strategic. My main achievements have been the development and implementation of a company-wide organization development process, launching an in-house employee training system, and aligning the HR departmental performance measures with the company's strategic goals.

In all of my roles I was not only able to apply and further develop my professional expertise, but I also displayed strong interpersonal skills and competence to lead people and to manage projects. In the latest step of my career I have founded and led a small HR consulting firm that has provided excellent service, enhancing HR standards and work productivity for my clients. However, eager to work in a continuous environment where I can see the long-term benefits of my efforts I have decided to move on.

The position you are offering presents the challenge I am seeking, since creating a department from scratch will give me the opportunity to employ all of my assets in pursuit of your company's strategic goals.

I would welcome the opportunity to further discuss the position with you during a personal meeting and look forward to hearing from you.

Yours faithfully,

George Wright

**Appendix B.2: Sample Cover Letter 2**
**Respective CV: not self-employed, female, design 2, CV bottom "Birmingham"**

Dear Sir or Madam,

As an accomplished HR Project Manager with more than 8 years of experience in generalist and consulting roles I am confident that I have the relevant skills and professional background for your advertised position as *[position]* on *[website]*.

As I pursue new career opportunities, I am looking for a rewarding HR Consultant position that provides me with the opportunity to apply my broad knowledge and experience in designing and implementing HR processes and policies in company-wide projects. Supporting your client's company in the implementation and improvement of HR projects while ensuring a strong stakeholder management would be an exciting challenge that I am convinced I will be able to meet successfully.

In my latest position as Project Manager in *[company name]*'s HR consulting division I advised a wide range of clients in various industries on HR matters primarily involving strategic HR decision making and organizational change management. I particularly enjoyed working with clients from financial as well as other service industries.

In previous roles at *[company name]* and *[company name]* I have proved my ability to serve as a strong and reliable link between employees and management. Achievements include designing compensation and benefit schemes, improving recruitment and staffing processes, as well as implementing training programs.

I believe I can add value to your client's company in this position through my years of experience and enthusiasm for HR management. Therefore, I would welcome the opportunity to meet with you personally to discuss my qualifications and candidacy in detail.

Yours sincerely,

Ann-Marie Jones

## Appendix C: Experimental Matrix of the first data collection batch (2011)[a]

| Nr. | Position | Manager | Sector | Name | Self-employment | Sex | CV Bottom | Design |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | Manager | Other | Richard Harris | yes | m | Leeds | Left |
| 2 | 1 | Manager | Other | Catherine Evans | no | f | Birmingham | Right |
| 3 | 2 | Manager | Other | George Wright | no | m | Birmingham | Left |
| 4 | 2 | Manager | Other | Ann-Marie Jones | yes | f | Leeds | Right |
| 5 | 3 | Non-Manager | Other | Richard Harris | yes | m | Birmingham | Left |
| 6 | 3 | Non-Manager | Other | Catherine Evans | no | f | Leeds | Right |
| 7 | 4 | Non-Manager | Other | George Wright | no | m | Leeds | Left |
| 8 | 4 | Non-Manager | Other | Ann-Marie Jones | yes | f | Birmingham | Right |
| 9 | 5 | Manager | Consulting | Richard Harris | yes | m | Leeds | Right |
| 10 | 5 | Manager | Consulting | Catherine Evans | no | f | Birmingham | Left |
| 11 | 6 | Manager | Consulting | George Wright | no | m | Birmingham | Right |
| 12 | 6 | Manager | Consulting | Ann-Marie Jones | yes | f | Leeds | Left |
| 13 | 7 | Non-Manager | Consulting | Richard Harris | yes | m | Birmingham | Right |
| 14 | 7 | Non-Manager | Consulting | Catherine Evans | no | f | Leeds | Left |
| 15 | 8 | Non-Manager | Consulting | George Wright | no | m | Leeds | Right |
| 16 | 8 | Non-Manager | Consulting | Ann-Marie Jones | yes | f | Birmingham | Left |
| 17 | 9 | Manager | Other | Richard Harris | yes | m | Leeds | Right |
| 18 | 9 | Manager | Other | Catherine Evans | no | f | Birmingham | Left |
| 19 | 10 | Manager | Other | George Wright | no | m | Birmingham | Right |
| 20 | 10 | Manager | Other | Ann-Marie Jones | yes | f | Leeds | Left |
| 21 | 11 | Non-Manager | Other | Richard Harris | yes | m | Birmingham | Right |
| 22 | 11 | Non-Manager | Other | Catherine Evans | no | f | Leeds | Left |
| 23 | 12 | Non-Manager | Other | George Wright | no | m | Leeds | Right |
| 24 | 12 | Non-Manager | Other | Ann-Marie Jones | yes | f | Birmingham | Left |
| 25 | 13 | Manager | Consulting | Richard Harris | yes | m | Leeds | Left |
| 26 | 13 | Manager | Consulting | Catherine Evans | no | f | Birmingham | Right |
| 27 | 14 | Manager | Consulting | George Wright | no | m | Birmingham | Left |
| 28 | 14 | Manager | Consulting | Ann-Marie Jones | yes | f | Leeds | Right |
| 29 | 15 | Non-Manager | Consulting | Richard Harris | yes | m | Birmingham | Left |
| 30 | 15 | Non-Manager | Consulting | Catherine Evans | no | f | Leeds | Right |
| 31 | 16 | Non-Manager | Consulting | George Wright | no | m | Leeds | Left |
| 32 | 16 | Non-Manager | Consulting | Ann-Marie Jones | yes | f | Birmingham | Right |
| 33 | 17 | Manager | Other | Richard Harris | yes | m | Leeds | Left |
| 34 | 17 | Manager | Other | Catherine Evans | no | f | Birmingham | Right |
| 35 | 18 | Manager | Other | George Wright | no | m | Birmingham | Left |
| 36 | 18 | Manager | Other | Ann-Marie Jones | yes | f | Leeds | Right |
| 37 | 19 | Non-Manager | Other | Richard Harris | yes | m | Birmingham | Left |
| 38 | 19 | Non-Manager | Other | Catherine Evans | no | f | Leeds | Right |
| 39 | 20 | Non-Manager | Other | George Wright | no | m | Leeds | Left |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 40 | 20 | Non-Manager | Other | Ann-Marie Jones | yes | f | Birmingham | Right |
| 41 | 21 | Manager | Consulting | Richard Harris | yes | m | Leeds | Right |
| 42 | 21 | Manager | Consulting | Catherine Evans | no | f | Birmingham | Left |
| 43 | 22 | Manager | Consulting | George Wright | no | m | Birmingham | Right |
| 44 | 22 | Manager | Consulting | Ann-Marie Jones | yes | f | Leeds | Left |
| 45 | 23 | Non-Manager | Consulting | Richard Harris | yes | m | Birmingham | Right |
| 46 | 23 | Non-Manager | Consulting | Catherine Evans | no | f | Leeds | Left |
| 47 | 24 | Non-Manager | Consulting | George Wright | no | m | Leeds | Right |
| 48 | 24 | Non-Manager | Consulting | Ann-Marie Jones | yes | f | Birmingham | Left |

[a] For the second data collection batch in 2012, we used a similar matrix, but switching the names of the self-employed and the non-self-employed candidate.