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DISCUSSION PAPER SERIES

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ABSTRACT

Does Marital Status Affect How Firms Interpret Job Applicants' Un/Employment Histories?*

This field experiment explores whether single and married female job candidates' un/employment histories differentially affect their chances of obtaining interviews through China's Internet job boards. It also considers whether firms' discrimination against, and/or preference for, candidates who are un/employed vary with the duration of unemployment spells. Resumes of fictitious applicants are carefully crafted in terms of realistic work histories and educational backgrounds. Candidates' experiences of unemployment and declaration of marital status are carefully controlled. Over 7000 applications are submitted to real job postings. Callbacks are tracked and recorded. Linear probability models are employed to assess the effects of particular resume characteristics in terms of obtaining interviews. The marital status of female candidates affects how recruiters screen their applications. While current spells of unemployment, whether short- or long-term, significantly reduce married women's chances of obtaining job interviews in the Chinese context, they strongly increase the likelihood that single women will be invited for interviews. Chinese firms appear to "forgive" long-term gaps in women's employment histories as long as those gaps are followed by subsequent employment. This paper is the first to explore how marital status affects the ways that firms, when hiring, interpret spells of unemployment in candidates' work histories. It is also the first to explore the effects of both marital status and unemployment spells in hiring in the context of China's dynamic Internet job board labor market.

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I   Introduction

In this project a large-scale field experiment is conducted to investigate how firms that advertise their position openings on Internet job boards respond to female applicants' un/employment histories and marital status. This project was conceived in response to evidence, both anecdotal and academic, that surfaced after the global financial crisis, of the existence of hiring discrimination against the unemployed based on their unemployment status. Although recent research has found stigma/scarring effects of long-term unemployment in Switzerland, Sweden, Belgium, Norway, and the United States, this project is the first to explore both how firms interpret the employment histories of single and married women and the scarring effect of unemployment spells in China.

In this paper, how Chinese firms use unemployment experiences as a proxy for productivity in hiring decisions is examined. Un/employment is explored in a nuanced way, comparing the rates of interview invitations received by candidates with either a short or long spell of current unemployment, which would presumably imply their immediate availability for work, to the rates of those who are currently employed, whose status presumably implies positive employability and competence. The effects of current spells of unemployment on rates of interview invitations are also compared to the effects of completed spells that are followed by subsequent employment. Whether Chinese firms discriminate for or against married women is investigated, as is the question of whether firms differentially interpret the implications of unemployment spells in the work histories of married and single women.

Sets of resumes for fictitious female applicants, age 30, that vary primarily according to their employment and marital statuses are created and submitted to real job vacancies posted on major Internet job boards.[1] Each resume is crafted to match the typical educational profile and work experience of real individuals working in the particular occupations of the job vacancies to which it will be

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[1] This project was reviewed and approved by the co-chairs of the Institutional Review Board of Bates College.

applied. Postings on three of China's largest Internet job boards for jobs in two major Chinese cities in two particular occupations provide the setting in which the applications are submitted. All suitable job ads posted in these locations and occupations within the time frame of this study are responded to, that is, all postings that request/require the types of credentials, educational attainment, and years of experience built into the resumes of this project's fictitious applicants. In this experiment, one third of the applicants identify/declare themselves as single, another third as married, and the final third does not reveal marital status. Although the applicants are divided into three separate marital status groups, firms appear to treat those that keep marital status private akin to those that are married. Given the very high rates of marriage in China of women by age 30, firms likely presume that applicants are married, unless single status is specified.

The following analysis reveals that firms hold very different expectations for married (and presumed married) women and single women. Current spells of unemployment, whether short or long, substantially reduce the likelihood that married women will be invited to job interviews. It is possible that recruiters interpret married women's current unemployment spells as being related to time out of the labor market for childbearing and consequently fear that family constraints will affect married women's work flexibility and productivity. In contrast, spells of current unemployment (which could provide a positive signal of immediate availability) have no negative effects for single women, but rather, have substantial positive effects on the likelihood of obtaining job interviews. However, hiring managers seem to equally "forgive" past long-term gaps in both married and single women's employment histories when those gaps are followed by subsequent employment. That is, there are no statistically significant differences in the rates of interview callbacks for the married (or single) women who have been continuously employed and the married (or single) women who have had a spell of unemployment followed by re-employment.

Studies related to both the effects of unemployment spells on hiring and the cultural and institutional factors related to women's marital status and their labor market outcomes in China are briefly reviewed and discussed in the following

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section of this paper. The design of the field experiment is described in Section III. The application submission and tracking process is explained in Section IV. Results are presented and discussed in Section V, and the paper concluded in Section VI.

II   Review of the Literature

Both cultural and institutional factors are likely to shape human resource managers' view of job applicants' marital status. In areas displaying strong institutional support for lengthy or costly maternity leaves, employers may prefer to hire women who have already married and completed their intended child bearing.[2] In other areas where affordable childcare is hard to obtain, employers may prefer to hire single women rather than women whose childcare responsibilities might interfere with their availability, flexibility, and overall productivity. Zhang, et al. (2008) report that in urban China, relative to men, only married women and mothers face significant disadvantages in terms of employment and earnings. Hughes and Maurer-Fazio (2002) find that marriage greatly reduces the economic standing of women relative to men.

Although a number of recent correspondence audit studies (Riach and Rich, 2006, Carlsson and Rooth 2008, Booth and Leigh, 2010, Carlsson, 2011, & Maurer-Fazio and Lei, 2015, Baert, De Pauw, and Deschacht, 2016, and Carlsson and Eriksson, 2017) have explored the role that gender plays in obtaining interview callbacks, only one (Petit, 2007) has focused on family constraints and none have focused on marital status per se. Petit investigates how gender and family constraints interact and affect women's chances of being selected for job interviews in the French financial sector. In her experiment, single childless women and men compete for jobs against each other and married women and married men (each with 3 children) do likewise. Petit finds significant gender discrimination against young single women, age 25, but none against those age 37 regardless of marital or family status. Petit speculates that the hiring discrimination against younger women

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[2] To give an example, a particular job posting encountered in this project, albeit one that is atypical, stated, "Women who have married and completed their childbearing are preferred."

that she observed in French firms may be due to employers' assumptions that young women are more prone to take costly maternity leaves.

While cultural and institutional factors are likely to influence recruiters' views of applicants' marital status, it is largely productivity concerns that shape their views of applicants' un/employment histories. Given the difficulties that recruiters face in ascertaining job candidates' likely productivity, they rationally screen applicants' work histories as inexpensive (and imperfect) indicators of future productivity. If recruiters believe that highly productive workers will either avoid/escape being laid off or will experience shorter periods of unemployment when laid off, they will interpret spells of unemployment, especially longer-term spells of unemployment, as negative signals of the applicants' unobservable productivity (Vishwanath, 1989). Recruiters might also be concerned about the potential for skill deterioration with long-term unemployment. Alternatively they might believe applicants with long spells of unemployment are in that state because recruiters at other firms have already interviewed them and ascertained they are of low productivity.

Turning to the literature on discrimination against the unemployed. Glyptis and Xi (1997) argue that many individuals suffer discrimination because of their membership in the "jobless" class, given that being gainfully employed conveys a perception of productivity. They argue that the jobless are subject to stigmatization and exclusion from the job market. Ho et al. (2011) investigate this stigmatization in the US labor market and find that reviewers judge unemployed candidates as less competent than currently employed candidates even those with virtually identical work experience. Van Bell et al. (2017) find that employers perceive long spells of unemployment as signals of low motivation. Eriksson and Lagerström (2006) find that being unemployed substantially reduces the probability of being contacted for an interview for otherwise equally qualified candidates in Sweden.

Recent field experiments have found that employers exhibit a reluctance to interview and/or hire the unemployed. Eriksson and Rooth (2014) explore the effects of various randomly assigned types of unemployment (current, past, short-term, long-term) on the likelihood of obtaining an interview callback in the Swedish

labor market. They report, that while recent unemployment substantially reduces candidates' rates of interview invitation, long-term unemployment followed by sufficient subsequent work experience does not impede their chances. In a US-based field experiment, Kroft, Lange, and Notowidigdo (2013) find that candidates' rates of receiving invitations to job interviews are negatively related to the duration of their unemployment spells, indicating that employers regard the length of an unemployment spell as a signal of a candidates' likely productivity. Ghayad (2013) also reports that in US labor markets, current unemployment spells of longer than six months are particularly harmful to job candidates' chances of obtaining interviews. Oberholzer-Gee (2008) finds that, in Switzerland, the job market prospects of the long-term unemployed diminish rapidly with increases in the duration of their unemployment spells. Oberholzer-Gee reports that managers are reluctant to offer interviews to the long-term unemployed because they believe such individuals were interviewed by other recruiters and found to be undesirable job candidates.

Baert and Verhaest (2014) compare the scarring effects on young people in Belgium of extended periods of unemployment to that of working at a job for which the applicant is overqualified. They too confirm the stigma effect of long-term unemployment found by others. Baert et al. (2016) compare the scarring effects of a year of former unemployment due to severe depression and a year of former unemployment that is unexplained on candidates' applications to contemporary short-term unemployment. They find that a year of unexplained unemployment has a scarring/stigma effect equivalent to that of a year of unemployment that is openly attributed to depression. Birkelund, Heggebø and Rogstad (2017) investigate whether discrimination against minorities compounds the discrimination against the long-term unemployed. They report hiring discrimination against the long-term unemployed and against minority candidates, but find no multiplicative effect of long-term unemployment and ethnic minority status.

It is important to consider which China-specific cultural and institutional factors could lead employers to prefer hiring married women over single women or single women over married women and to dissimilarly interpret the significance

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and/or implications of their spells of unemployment. In traditional China, the division of labor within households was strongly gendered. Work viewed as appropriate for women typically took place within the household and was seen as sustaining the family whereas work viewed as appropriate for men took place outside of the household and focused on income generation. In its socialist heyday (1949-1976), the Communist Party strongly promulgated women's participation in work outside the home as a form of liberation and means of attaining equality. The legacy of these traditional views has led to a situation where, even as their labor force participation rates increased, and the dual-earner household became the new norm, Chinese women continued to provide the vast majority of unpaid domestic and care work (Maurer-Fazio and Connelly, 2017).

In China, labor market liberalization yielded profound changes. Urban labor force participation rates fell substantially with women's rates declining more rapidly than men's and married women's rates declining more rapidly than single women's. Some of the drop in women's labor force participation may have been a matter of choice (Maurer-Fazio, Hughes, and Zhang, 2007 & 2010, & Maurer-Fazio et al., 2011), but women were both disproportionately laid off, as firms shed redundant workers, and less likely to be re-hired (Appleton et al. 2002, & Maurer-Fazio, 2006). With the reforms, firms cut back on the provisions of their maternity leaves and dismantled enterprise-provided childcare. Maurer-Fazio et al. (2011) document that by 2000 the presence of preschool-age children in a household substantially reduced married, prime-age women's rates of labor force participation. Of concern here is the question of whether those lower rates of labor force participation were due, at least in part, to firms' reluctance to hire mothers of young children?

It seems reasonable to expect that recruiters in China are likely to view mothers' expected provision of unpaid care work as limiting the time and energy they have available to apply to their jobs. With respect to the experiment described below, it is important to note that although the on-line application forms employed by China's largest job boards typically ask applicants to (optionally) signify their marital status, they do enquire about applicants' parental status. Thus, recruiters

might also make use their knowledge and/or presumptions of applicants' marital status to make assumptions about the parental status of women of childbearing age. If so, recruiters may differentially interpret the unemployment spells of married and single women, placing an interpretation of childbearing and child rearing, with its inherent negative productivity implications, onto the employment gaps of married women.

No previous studies have explored the scarring effects of unemployment spells or of unemployment duration in terms of how these factors affect hiring in urban China. Despite studies revealing that married women are penalized relative to single women in terms of lower earnings and higher rates of lay-off, there do not appear to be any studies that explore how marital status is treated in the recruitment efforts of Chinese firms, let alone how marital status might affect/interact with the role of un/employment histories. The field experiment conducted here fills part of this gap. It explores how recruiters view and value the un/employment histories of the prime-age college-educated women who conduct their job searches by means of China's large Internet job boards (an increasingly popular means of seeking employment). It explores the effects of current short- and long-term spells of unemployment on interview callback rates to both the effects of the absence of any unemployment spell (that is, continuous employment) and the effects of completed spells that are followed by subsequent employment. It explores whether recruiters place different interpretations on the un/employment histories of single, married, and presumed married women.

III   Experimental Design

The methodology employed here, that of correspondence (resume) audit studies, has been frequently used in recent years to establish the presence and extent of discrimination in hiring (based on a wide variety of factors such as race, ethnicity, caste, attractiveness, age, gender, immigration status, unemployment duration, and mental health)[3]. Correspondence studies combine the benefits of

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[3] See for examples, Baert et al (2015), Baert et al (2016), Baert & Verhaest (2014),

controlled experiments and realistic field settings. In them, sets of resumes are created for fictitious applicants. They are carefully designed with the goal of ensuring that candidates appear, on paper, to be equally productive and to have similar work histories and educational trajectories. The particular attribute under study, such as unemployment status, is controlled, as are moderating factors. Discrimination is measured by differences in the rates of callbacks/invitations for interviews received by individuals whose applications typically vary only in terms of the attribute(s) under study.

The experiment described here, is based on a dynamic and increasingly important and rapidly growing segment of China's labor market--its Internet job board sector. A broad range of Chinese firms embrace the boards, which tend to serve well-educated individuals (Kuhn and Shen, 2015). In China, many millions of applications are submitted on a daily basis to jobs advertised on its Internet job boards.[4] In 2012, more than one quarter of China's new college graduates landed their jobs through searches conducted by means of Internet job boards (iResearch China, 2013, Chart 2-2). ChinaHR.com, 51job.com, and Zhaopin.com, the three largest and most widely used of China's boards are employed in this experiment, designed to investigate the recruiting behaviors of Chinese firms faced with fictitious candidates that differ primarily in terms of their un/employment histories and marital statuses.

This experiment's research design is such that all of its female, age 30, fictitious candidates are university educated and have substantial work experience in relevant fields. Half of these candidates are currently between jobs (unemployed) and half are currently employed. Of those who are employed, some have experienced a gap in their employment histories that is followed by subsequent employment. Of those who are currently unemployed, some have been unemployed

 Bertrand and Mullainathan (2004), Birkelund, Heggebø, & Rogstad (2017), Eriksson and Rooth (2014). Maurer-Fazio (2012), Maurer-Fazio and Lei (2015), Oreopoulos and Dechief (2011), Pager (2007), Riach and Rich (2002), and Siddique (2011).

[4] Maurer-Fazio (2012, Table 1) documents approximately 50 million page views across three of China's job boards on a single, randomly chosen day (April 18, 2011).

for only 1 to 3 months and some have been unemployed for approximately a year. In China, Internet job boards' on-line application forms typically request, but do not require, that candidates supply information about their marital status. In this experiment, one third of the applicants declare themselves as married, one third as single, and one third keep their marital status private. Combining these two main factors -- marital status and un/employment status--6 basic types of candidate profiles are created in each location for each occupation to allow for variation in these key factors. Unique names, e-mail addresses, phone numbers, home addresses, and photos[5] are randomly assigned to each candidate. Each individual is assigned a commonly used Han[6] name.

Each resume is crafted to be as realistic as possible such that the fictitious candidates appear to meet advertised job requirements without standing out as outliers or superstars. The resumes are modeled on characteristic details observed in hundreds of resumes for the same occupations, collected by registering, as a firm searching to fill vacancies in similar fields, on one of the major boards.[7] From these downloaded resumes, sets of descriptions of relevant university majors, job experiences, certificates, training, and personal information are carefully extracted, recombined, and then slightly modified in a geographic sense to match the locations used in this study. For example, universities attended and past employers named in the extracted and recombined resume materials are altered to correspond to local universities and employers in the cities chosen for this project. These modifications, which build in local experience, are designed to eliminate, or at least mitigate, employers' potential concerns that a candidate might lack the right to work within the city[8] or might face difficulties in relocating.

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[5] The rights to use the model-released photos were purchased from Shutterstock.com. These photos were carefully selected to represent typical Han women age 30. Home addresses were selected in well-known middle class neighborhoods in each of the cities.
[6] The Han, China's ethnic majority, constitute 92% of the population.)
[7] The resumes downloaded, freely available to any firm registered on the particular job board, were devoid of applicants' contact information. That is, these resumes did not reveal candidates' names or addresses but were otherwise complete.
[8] China's household registration system (*Hukou* system) prevents individuals from freely relocating to more desirable areas for work.

Practical considerations have determined the occupations chosen for this experiment. Exploration of China's largest Internet job boards revealed that both the finance/economics and technology sectors had sufficient numbers of postings for the experiment to be carried out over the course of one summer and that recruiters for those occupations responded relatively rapidly to successful/selected applicants. Within the finance/economics sector, accounting jobs were sufficiently numerous and, similarly, within the technology sector, computer technical support postings were abundant. Another practical consideration in the choice of these two occupations is that neither required scans/proof (at the time that applications are submitted) of candidates' claimed professional certificates and/or specialized training.

Between June and August of 2010, more than 7000 on-line applications were submitted to over 1200 advertised job postings in the fields of accounting and computer technical support in the large metropolitan cities of Chengdu (population 8 million) and Shanghai (population 23 million).[9] These cities vary in terms of their geographic locations and prosperity. Chengdu, the capital of Sichuan province, is a key interior city that is considered a local center of transportation, commerce, and finance. Shanghai, located on China's prosperous Eastern seaboard, is considered a global city with notable influence on China's commerce, finance, technology, and transport.

The experimental design also includes variations in other observable productivity-related factors. The layout of the Chinese Internet job boards allows the uploading of up to 4 variations of each candidate's resume/profile and, once uploaded, allows for the choice of a particular version to submit to a particular job

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[9] Feasibility of implementation dictated the location choices here. The (then) undergraduate research assistants working with the lead author of this study (one of whom has become a co-author) were from Chengdu and Shanghai, respectively. They each spent time attending labor fairs and job markets and interviewing recruiters in their home locations before devoting their summer months to submitting and tracking applications.

posting.[10] Differences in productive characteristics for each individual are built into the experimental design. For each of the 6 candidates in each of the 2 locations for each of the 2 occupations, who differ from each other in terms of their combination of current employment and marital status, there are 4 resumes[11] that vary in terms of the length of the current spell of unemployment (if unemployed) and whether or not the candidate has a gap in their earlier employment history followed by subsequent employment. They also vary in the ranking of the university attended (key or normal), English proficiency (superior or normal), and the number of previous job changes (1 or 2). The ratio of variations employed corresponds to the ratios of characteristics observed in the sample of hundreds of resumes collected from real online applicants. For example, over 75% percent of the collected/downloaded accounting resumes describe their applicants' level of English as normal while a smaller share describes their English as superior. The set of resumes employed in this experiment is designed to not only realistically mimic the written descriptions, qualifications, and personal information of real applicants, but to also reflect the distribution of particular qualifications in the pool of collected resumes. So, for example, approximately 75% percent of the accounting resumes describe their applicants' level of English as normal.

IV   Application Process

Filters are applied in the job-seeking search process to limit the job postings to which the candidates submit applications to the postings seeking applicants with university education (with relevant majors) and between 5 and 8 years of relevant experience, an appropriate level for our fictitious, age 30, female, university graduates. Applications for which the candidates would be either over or under qualified are thus avoided. Sets of 6 applications (1 each for the currently employed and the unemployed, single, married, and marital status not revealed women) are

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[10] Chinese job boards require applicants to prepare their resumes by uploading information, section by section, related to their education, training, certifications, work histories, etc. The websites of each job board thus effectively build in the design of candidates' resume(s). What this means in practice is that there are no quality differences implied by differing resume styles, layouts, or font choices.
[11] This yields a total of 96 resume variations.

submitted to each suitable job posting in each of our occupations in each of our locations through the summer of 2010. By "suitable," it is meant that the candidates' characteristics match those of the advertised position. For each posting, 1 of the 4 resume variations created for each fictitious candidate is randomly selected and submitted. The resumes are sent to each job posting, at least one hour apart from each other. The order of submission of the 6 applications is also randomly determined for each posting. The vast majority of firms that pursue/contact the candidates do so by calling the mobile phones associated with each of the resumes. A smaller number respond via email or text message. Any action by a firm that indicates it is interested in the candidate and wants to follow up with an interview is registered and recorded as a callback. The research assistants answering the calls were trained to immediately inform the callers that they, (posing as the candidate), have just accepted another position and are no longer interested in that firm's job opening and to thank the firm for its interest in their application. They respond in like manner to firms' emails and follow up appropriately, usually with a phone call, to firms' text messages.

V   **Results**

Ratios of the numbers of interview callbacks to the numbers of applications submitted are reported as callback rates in Table 1. Reading down through the columns of this table allows comparison of the interview callback rates of candidates grouped by un/employment histories, location, and occupation. Reading across the rows allows observation of how marital status affects the callback rates of each group.[12] The first numerical entry of Table 1 reveals that on average candidates are contacted to set up interviews by 7 firms for each hundred applications they submit. Reading across the first row, it becomes apparent that the callback rates differ by marital status by 1 percentage point (that is, approximately 14% of the overall callback rate) from a low of 6.7% for single individuals to a high

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[12] These simple callback rates do not take into account variations in any of the other productive factors, (described above) that were purposely varied in the resume design.

of 7.7% for married individuals. (The callback rate for those who keep their marital status private, at 7.4% is closer to that of married women than single women, suggesting that firms reasonably presume, given extremely the high rates of marriage of women in China, that these women are married.) The differences between the callback rates of single and married women (and between single women and a larger group which combines both married and those who do not reveal their status) are statistically significant at only the 10% level. This weak preference of firms for married and presumed married candidates over single candidates may seem somewhat odd or unexpected, given the extra burdens of housework and care provision borne by married women (Zhang, Hannum, and Wang, 2008, Dong and An, 2014, Maurer-Fazio and Connelly 2017). Firms may view the typically lower wages and earnings of married women(Hughes and Maurer-Fazio, 2002, Zhang, Hannum, and Wang, 2008) as advantageous opportunites to save on wage bills.

(Insert Table 1 here.)

By reading down the first numerical column of Table 1, it can be seen that the currently and continuousely employed candidates have the highest rate of callbacks at 7.7%. The second highest callback rate, 7.4% belongs to the currently short-term unemployed (Row 4), giving the appearance that firms value the immediate availability of these candidates. The lowest callback rates belong to the those with long-term gaps in their work histories, regardless of whether those gaps are current or followed by subsequent employment (Rows 3 & 5). The differences between these various rates, however, are not statisticially significant. Few other distinctive patterns emerge from examination of Table 1 except that pronounced differences exist in callback rates across locations and occupations.[13]

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[13] Readers should reasonably expect that the experimental design would yield equal numbers of observations for each of the three marital status categories, given that an application for one currently employed and one currently employed person of each marital status was submitted to each job posting. The actual numbers of cases by marital status reported in the results section differ due to the dropping of all cases in which a candidate currently experiencing a long spell of unemployment also had a long gap in their employment history. Because no single women were

Multivariate regression analysis is employed to explore whether the effects of un/employment histories might vary by marital status after controlling for variations in the other types of productive characteristics built into candidate resumes. The results of linear probability models, with binary dependent variables indicating whether or not each candidate received an interview callback are presented in Table 2. The independent variables include controls for candidates' marital status, un/employment history, job stability (number of job changes), proficiency in English (normal or superior), university ranking (key or ordinary), occupation, and location. Robust standard errors are estimated, clustered at the firm level.

In considering the effects of various types of un/employment histories, the continuously employed serve as the base case. Therefore the coefficients on the variables controlling for the other possible types of employment histories should be read as the differential effect of that particular un/employment status relative to the currently/continuously employed. For example, the coefficient on the binary variable in the first column of the first row of the panel titled "Effects of Employment History" indicates that candidates who are currently employed but who had a long-term gap in their past work history have interview callback rates that are 2.1 percentage points lower than those who have been continuously employed.

(Insert Table 2 here.)

In Table 2, striking differences are revealed in the ways that firms interpret current unemployment spells for single (Column 2) and married (Column 3), and presumed married applicants (Column 4). Single applicants who are currently unemployed, whether short term or long term, receive substantially higher rates of callback from firms than do the single applicants who are currently employed with no gaps in their work histories. In contrast, married applicants who are currently unemployed (short term or long term) are substantially less likely to receive

assigned this particular combination of characteristics, all such cases were dropped from the analysis to allow consistent comparisons across the three marital status categories.

interview callbacks than their currently employed counterparts. In each case, these results are statistically significant at the 1% level. T-tests also reveal that the differences in the coefficients on current short and long unemployment between the regressions for single and married applicants (and single and presumed married) are statistically significant.

The preference for currently unemployed single applicants over their currently employed counterparts might imply that recruiters value their immediate availability. Oberholzer-Gee (2008) finds in Switzerland, where employed workers are required to give an unusually long, 2 to 3 months, notice before switching jobs, that short-term unemployed workers are actually preferred to those with jobs as evidenced by their receiving higher rates of invitations for job interviews than do the employed. China's labor market institutions differ substantially from Switzerland's—no long notices are required of employees to permit a change in employers. Eriksson and Rooth (2014), and Baert et al. (2016) also find no stigma against the short-term unemployed and explain their results as due to recruiters' appreciation of the applicants' immediate availability for work and to recruiters' understanding that worker/firm matching takes time. This presents an interesting puzzle—why do Chinese employers/recruiters appear to penalize married women's unemployment status while valuing it in single applicants? Recruiters' expectations about family constraints may be a part of the story. That is, recruiters might believe that currently unemployed married women are unemployed because of choosing to take some time out of the labor force for childbearing. If so, the recruiters might also believe that the presence of infants in a household and the potential difficulties obtaining childcare will constrain mothers' reliable availability for work.

Interestingly, while Chinese recruiters make clear distinctions in their hiring preferences by marital status for currently unemployed versus currently employed workers, they do not seem to hold differentiatial valuations on the importance of unemployment duration across marital status groups. That is, the interview callback rates for single women who are long-term unemployed and short-term unemployed are not only substantially above the rates for the employed but they are identical in size. And similarly, while the coefficients on spells of current unemployment for

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married women (and for the presumed married) are negative and large, the differences between the coefficients for short and long term spells are not substantial.

In the first row of the panel labeled, "Effects of Employment History," in Table 2, it can be observed that employers in China appear to "forgive" gaps in both single and married women's work histories when such gaps are followed with subsequent work experience. This result is similar to that of Eriksson and Rooth's (2014) finding, based on the American labor market, that long-term unemployment spells in the past do not matter in employers' hiring decisions. They suggest that the negative signal/scarring effect of a long spell of unemployment is mitigated by subsequent work experience.

While women are not penalized in hiring for past gaps followed by current employment, married women are penalized for current unemployment spells. In the Chinese case, where most women have married and given birth before age 30, subsequent employment might signal not only employability but also the successful resolution of childcare concerns. The question arises, of course, about what recruiters might assume or infer regarding long gaps in single women's work histories, given that it is still quite uncommon for women to give birth outside of marriage in China. While Baert et al. (2016) explore the stigma effects of a year of unexplained unemployment to a year explained by severe depression and find them to be equally scarring in terms of reduced callbacks, it seems that Chinese recruiters are comfortable with employment gaps left unexplained.

To summarize, multivariate analysis reveals that firms react differently to the contemporary unemployment spells of single and married women. Such spells increase the probabilities of single, and reduce the probabilities of married, women's interview callbacks. Firms' positive valuation of the availability of the short-term unemployed is tempered by their concerns about how married women might balance work and care provision. Women who have been out of the labor market in the past but who have clearly resolved the factors contributing to the unemployment spell (be they related to childbearing, health or other concerns) are not treated in a discriminatory fashion.

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VI   Conclusion

This paper analyzes whether recruiters in China differentially perceive the implications of various types of unemployment spells (short, long, current, past) of job candidates who vary by the marital status declared on their applications. Previous research by Oberholzer-Gee (2008), Kroft, Lange, and Notowidigdo (2013), Ghayad (2013), Ericsson and Rooth (2014), Baert and Verhaest (2014), Baert et al (2016), and Birkelund, Heggebø, and Rogstad (2017) reports significant scarring effect from long-term spells of unemployment in American and European labor markets. One surprising result of the field experiment reported here is that there is no equivalent scarring effect of long-term unemployment found in the tested sectors of Chinese labor markets. Chinese recruiters do not seem to differentiate between short and long-term spells of unemployment for single or for married women.

They do, however, perceive very differently the implications of contemporary unemployment spells by marital status. Such spells (whether short term or long term) appear to be strongly valued in single applicants, but devalued in married applicants in the sense of substantially reducing their likelihood of being invited to job interviews. Recruiters simultaneously interpret single women's spells of current unemployment positively as signals of immediate availability while negatively interpreting married women's current unemployment spells, perhaps as signals of recent childbearing with concomitant complications related to infant care, flexibility, and productivity.

The analysis underlying this paper is limited to exploring only the first part of the hiring process—obtaining a job interview. Furthermore, its fictitious applicants are all female and age 30. In addition, they are all university graduates with a fair amount of work experience. They have applied only for accounting and computer technical support positions. They have responded to job postings in only two very large metropolitan areas. In many ways this project can be considered a pilot project. It would be valuable to extend its analysis to explore and compare how un/employment histories and marital statuses affect male candidates' chances of obtaining job interviews in comparison to female job candidates. It would also be

interesting to extend this analysis to include wider ranges of occupations, years of work experience, and educational requirements. Finally, it would be valuable to also set up similar field experiments to explore the effects of un/employment histories and marital statuses in other locations, be they in other parts of China or other parts of the world.

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Table 1: Applicant Interview Callback Rates (%) by Marital Status and Un/Employment History

Group	All Applicants		Single Applicants		Married Applicants		Applicants with Private Marital Status	
	Callback Rates (%)	Number of Applications	Callback Rates (%)	Number of Applications	Callback Rates (%)	Number of Applications	Callback Rates (%)	Number of Applications
All Applicants	**7.26**	7,299	**6.69**	2,438	**7.68**	2,383	**7.43**	2,768
By Un/Employment Status								
Currently Employed with No Gaps in Employment	**7.70**	3,129	**7.03**	1,052	**7.69**	1,052	**8.40**	1,024
Currently Employed Following Long Term Gap in Employment	**6.55**	1,023	**7.83**	332	**6.95**	332	**5.00**	360
Currently Short Term Unemployed (No other employment gap)	**7.40**	1,730	**7.36**	367	**7.78**	367	**7.08**	720
Currently Long Term Unemployed (No other employment gap)	**6.63**	1,417	**5.24**	687	**8.15**	687	**7.75**	374
By Occupational Status								
Accounting	**8.88**	5,290	**8.63**	1750	**9.03**	1739	**9.00**	1,801
Computer Technical Support	**2.99**	2,009	**1.74**	688	**4.04**	644	**3.25**	677
By Location								
Chengdu	**10.09**	3,450	**9.63**	1132	**10.32**	1143	**10.30**	1,175
Shanghai	**4.73**	3,849	**4.13**	1306	**5.34**	1240	**4.83**	1,303

Table 2: Effects of Un/Employment History & Marital Status on Rates (%) of Interview Callbacks for Women Age 30

Regression Results -- Linear Probability Models

Dependent Variable: Callback (0/1)	Whole Sample			Single			Married			Marital Status Not Revealed		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Effects of Marital Status:												
Married	0.015	0.014										
Marital Status Not Revealed	0.006	0.011										
Base Case: Single												
Effects of Employment History:												
Currently Employed following Long-Term Gap in Employment	-0.021	0.009	**	-0.020	0.020		-0.030	0.022		-0.040	0.021	*
Currently Short Term Unemployed (No other employment gap)	-0.006	0.008		0.071	0.026	***	-0.106	0.026	***	-0.120	0.026	***
Currently Long Term Unemployed (No other employment gap)	-0.007	0.009		0.072	0.020	***	-0.079	0.029	***	-0.098	0.023	***
Base Case: Currently Employed No Gaps in Employment History												
Effects of Job Stability:												
Resume reveals only one job change	0.013	0.007	**	0.024	0.020		0.031	0.020		-0.013	0.022	
Base Case: Resume reveals 2 job changes												
Effects of English Language Skills:												
Have Superior English Skills	0.011	0.007		0.003	0.011		0.010	0.014		0.012	0.011	
Base Case: Have Ordinary English Skills												
Effects of University Ranking:												
Attended Key University	0.010	0.007		0.015	0.014		-0.009	0.020		0.006	0.014	
Base Case: Attended an Ordinary University												
Effects of Occupation:												
Applied for Computer Technical Support Positions	-0.047	0.008	***	-0.032	0.011	***	-0.016	0.015		-0.016	0.013	
Base Case: Applied for Accounting Job Posting												
Effects of Labor Market Location:												
Applied to Shanghai Job Posting	-0.044	0.010	***	-0.065	0.016	***	-0.054	0.018	***	-0.061	0.016	***
Base Case: Applied to Chengdu Job Posting												
Constant	0.096	0.012	***	0.017	0.013		0.106	0.020	***	0.045	0.028	***
Number of Observations	**7,299**			**2,438**			**2,383**			**2,478**		

SE: Robust standard errors clustered at the firm level.

***, **, * denote statistical significance at the 1, 5, 10 percent levels, respectively

Data Source: Authors' field experiment