Penalized or Protected?
Gender and the Consequences of Non-Standard and Mismatched Employment Histories*

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ABSTRACT

Millions of workers are currently employed in positions that deviate from the full-time, standard employment relationship or work in jobs that are mismatched with their skills, education, and experience. Yet, little is known about how employers evaluate workers who have experienced these employment arrangements, limiting our knowledge about how part-time work, temporary agency employment, and skills underemployment affect workers' labor market opportunities. Drawing on original field- and survey-experimental data, this article examines three interrelated questions: 1) What are the consequences of having a non-standard or mismatched employment history for workers' labor market opportunities?; 2) Do the consequences of these labor market positions differ for male and female workers?; and 3) What mechanisms account for the consequences of having a non-standard or mismatched employment history? The field experiment demonstrates that skills underemployment is as scarring for workers as a year of unemployment, but indicates that there are no penalties for workers with histories of temporary agency employment. Additionally, while men are penalized for part-time employment histories, women face no penalty for part-time work. The survey experiment provides evidence that employers' perceptions of workers' competence and commitment mediate these effects. These findings shed light on the consequences of changing employment relations for the distribution of labor market opportunities in the "new economy."

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Millions of workers are employed in positions that deviate from the full-time, standard employment relationship or work in jobs that are mismatched with their skills, education, and experience (Kalleberg 2000, 2007; Smith 1997; Tilly 1992; Bureau of Labor Statistics 2005; Bureau of Labor Statistics 2013). Working in part-time positions, through temporary help agencies, and at jobs below their skill level have become common experiences for American workers. At the same time, the consequences of these employment arrangements may be more significant than ever. Employers are increasingly filling vacancies with job candidates from the external labor market (Cappelli 2001; Hollister 2011), candidates about whom they have less direct information than if they were promoting workers from within their organizations (Leung 2014). These marked changes in employment, often considered key aspects of the "new economy," mean that workers' employment histories and experiences, including histories of non-standard or mismatched employment, are increasingly important in the hiring process. However, limited research has examined how these types of employment histories shape employers' evaluations of candidates during the job applicant screening process. Yet, understanding the consequences of non-standard and mismatched employment for workers' hiring outcomes is necessary for a more holistic account of contemporary labor market stratification.

To address this limitation of existing research and extend the sociological understanding of the consequences of non-standard and mismatched employment, this article addresses three interrelated questions. First, what are the consequences of having a history of part-time work, temporary agency employment, or skills underemployment for workers' future labor market opportunities? Second, given the gendered history of these employment arrangements –

particularly part-time and temporary agency employment – in the United States, do these consequences vary for male and female workers? And, finally, what mechanisms can assist in explaining the consequences of having a non-standard or mismatched employment history?

Workers labor in non-standard employment arrangements – part-time work and temporary agency employment – as well as mismatched employment positions – skills underemployment – for a variety of reasons. Sometimes these types of positions are sought as an alternative to unemployment. In other cases, they are utilized as a way to balance competing demands outside of the workplace. Little scholarship, however, has examined the direct effect of these positions on workers' future employment outcomes. On the one hand, these types of employment positions may serve to protect workers from the negative effects of long-term unemployment by signaling to future employers that a worker has maintained his or her skills and is motivated to work (Becker 1964; Marler et al. 2002; Ruhm 1991). This line of thought suggests that any job – even a non-standard or mismatched position – should improve a worker's future hiring outcomes over remaining unemployed and, potentially, limit the penalties a worker faces compared to having a full-time, standard employment history. If this is the case, as some policy prescriptions suggest (see Stafford 2012), then there may be an important role for non-standard and mismatched employment in promoting opportunity for workers.

Alternatively, histories of non-standard and mismatched employment may result in penalties for workers similar to those of long-term unemployment. If employers screen out workers with non-standard or mismatched employment histories in favor of workers with histories of standard, full-time employment that matches their skill level, then concerns arise about the labor market becoming segmented into jobs that provide mobility opportunities and those that are "dead ends" (Kalleberg et al. 2000). In this case, access to full-time, standard

employment at one's level of skill and experience may serve as an important axis of stratification in the labor market.

The consequences of different employment histories may also depend in important ways on the gender of the worker. Unlike skills underemployment, part-time work and temporary agency employment arose in the U.S. economy as heavily feminized types of work (Kalleberg 2000; Hatton 2011) and may be considered an indication that a female worker is on the "mommy track" (Williams 2001). Thus, part-time and temporary employment could serve as a proxy for a worker's parenthood status, resulting in a "motherhood penalty" and greater disadvantage for women than men (Correll et al. 2007). However, it is also possible that employers have incorporated into their understanding of female labor force participation that women may have a spell of non-standard work or unemployment, limiting its influence on women's hiring outcomes. For men, by contrast, employers may identify such a history as a signal that the male worker was unable to find a full-time, standard job and therefore raise concerns about him as a potential employee. This could lead to more severe penalties for men than women. Thus, while the protective or penalizing nature of non-standard employment is likely to vary by a worker's gender, the direction of the difference remains uncertain.

Existing scholarship that addresses questions about the consequences of non-standard and mismatched employment has relied largely on standard labor force survey data (see Addison, Cotti, and Surfield 2009; Addison and Surfield 2009; Booth; Francesconi, and Frank 2002; Mavromaras, Sloane, and Wei 2013). While providing important insights, these studies are limited in their ability to address the research questions articulated above for two primary reasons. First, the labor force survey data used in prior research focuses on the supply side of the labor market – tracking workers' employment histories as well as their employment outcomes

(e.g., unemployment duration) and earnings – and is therefore unable to disentangle the relative contributions of supply- and demand-side factors in contributing to the observed labor market outcomes. This article, by contrast, is interested in identifying the direct role of employers' demand-side preferences in shaping the consequences of non-standard and mismatched employment histories. Second, as with nearly all observational (i.e., non-experimental) research, existing scholarship on non-standard and mismatched employment may suffer from unobserved selection processes. In other words, the workers who end up in non-standard and mismatched positions may differ in important, and unobservable, ways from workers who remain in standard, full-time employment, biasing estimates from survey data about the consequences of these types of labor market positions (see Autor and Houseman 2009).[1] The experimental research designs used in this article are able to alleviate these concerns about unobserved selection.

To focus directly on how employers' demand-side preferences shape the consequences of non-standard and mismatched employment histories and alleviate concerns about unobserved selection processes (see Pager 2007), this article analyzes original data from two experiments: 1) a field experiment examining actual hiring decisions in five major U.S. labor markets; and 2) a survey experiment conducted with hiring decision-makers at U.S.-based firms. The primary manipulations in both experiments were the most recent work histories that were presented on the applicants' resumes. Each application was randomly assigned twelve months of recent employment experience consisting of a full-time job, a part-time job, employment through a temporary help agency, a job below the applicant's skill level, or a spell of unemployment. Other attributes of the applicants' resumes were held constant – all applicants had a college education,

[1] Even in cases where person-specific fixed effects are used to control for unobserved time-invariant worker characteristics, unobservable time-varying characteristics are still not controlled. Additionally, person-specific fixed-effects estimates are based on data for workers who transition between full-time, standard employment and non-standard or mismatched employment, which does not account for the differences between individuals who do and do not end up in these employment arrangements.

participated in similar activities in college, and had worked for the same number of employers. The experiments also manipulated the gender (male vs. female) of the worker using gendered names. The data generated by these experiments provide causal estimates of the effects of non-standard employment histories for workers' future labor market outcomes and how these consequences vary by gender. Together, these data shed new light on the consequences of changing labor market institutions while probing whether the gendered nature of particular types of employment relations translate into distinct consequences for male and female workers.

NON-STANDARD AND MISMATCHED EMPLOYMENT

While there are many types of non-standard and mismatched employment, including independent contracting and on-call work, this article focuses on three employment situations – part-time work, temporary agency employment, and skills underemployment – that fall into two overarching employment classifications: non-standard work and mismatched work. Non-standard employment is generally thought to consist of three characteristics: 1) work that is *not* performed full-time; 2) work that is *not* expected to continue indefinitely; and 3) work that is *not* performed at the legal employer's place of business, nor under the legal employer's direction (Kalleberg 2000). Part-time work and employment through a temporary help agency thus clearly meet these criteria. Mismatched employment occurs when there is a lack of fit between an individual's skills or preferences and the characteristics of the job in which he or she works (Kalleberg 2007). Laboring in a job that is well beneath a worker's level of skill, education, and experience – often referred to as skills underemployment (Maynard and Feldman 2010) or overqualification (Vaisey 2006) – is a classic example of mismatched employment. Importantly, these two classifications may overlap. Under certain conditions, part-time work and temporary

agency employment can also be mismatched employment. For example, when a worker wants a full-time, permanent job, but is only able to obtain a part-time position or work through a temporary help agency, he or she would be in a mismatched employment relationship (Kalleberg 2007; McKee-Ryan and Harvey 2011).

Researchers have identified multiple factors that are implicated in the rise of non-standard and mismatched employment (Kalleberg 2000; Vaisey 2006). Global economic integration has increased competition for U.S. firms, creating incentives for companies to outsource work to lower-wage countries and implement more flexible, non-standard employment relations for their U.S. employees (Kalleberg 2009). Legal changes in the United States have also paved the way for employers to alter their relationships with their employees and increase their use of non-standard labor (Gonos 1997; Autor 2003). Additionally, changes in key labor market institutions, such as the decline in the power of organized labor (Clawson and Clawson 1999), have likely enabled the emergence of more non-standard positions in the U.S. labor market. Technological changes that improved communication and information systems also played a role in the increase of flexible, non-standard employment relations by, for example, enabling employers to easily coordinate their labor needs with temporary help agencies (Kalleberg 2000; Shilling and Steensma 2001). Additionally, the changing education landscape and shifts in the occupational structure of the U.S. economy are likely implicated in the rise of skills underemployment (Vaisey 2006). Some researchers have also suggested that workers' changing preferences for more flexible schedules and working conditions have played a role in the rise of part-time and temporary work (see Ofstead [1999] for a discussion). Regardless of the cause, part-time work, temporary employment, and skills underemployment have become common experiences for workers in the United States.

Part-time employment is generally defined as working less than 35 hours per week and is the most prevalent form of non-standard work. Nearly 20% of the U.S. workforce is employed in part-time positions (Bureau of Labor Statistics 2013; Kalleberg 2000). Compared with full-time workers, part-time workers tend to receive lower pay and fewer fringe benefits (Kalleberg et al. 2000). However, there is significant variation in the pay and benefits of part-time work (Tilly 1992). Since 1970, the growth in part-time work has been concentrated among "involuntary" part-time work. Involuntary part-time workers make up approximately a quarter of the part-time worker population (Kalleberg 2000). Although the gender gap in part-time work has declined over time, there remain significant gender differences in participation in part-time work. Currently, approximately 60% of part-time workers in the United States are women (Bureau of Labor Statistics 2013).

Temporary help agency employment captures those workers who are on the payroll of one firm (the "temp agency") but who perform their tasks on a temporary basis at a separate firm. Employment through temporary help agencies (THAs) has risen dramatically over the past 30 years. The THA sector grew at an annual rate of over 11% between 1979 and the late 1990s, which was over five times more rapid than the growth in nonfarm employment (Kalleberg 2000; Autor 2003). Since then, the level of THA employment has remained relatively stable at these higher levels. Importantly, a majority of workers (roughly 60%) work in THA positions involuntarily (Bureau of Labor Statistics 2005). While women historically dominated THA employment as the sector developed after World War II (Hatton 2011), THA workers are now roughly half male and half female (Bureau of Labor Statistics 2005).

Finally, skills underemployment – a type of mismatched employment – describes workers who are employed in jobs for which they have excessive skills, education, or experience

(Erdogan and Bauer 2011). There is less research on skills underemployment than part-time or temporary work, in part due to the challenges with operationalizing the construct using survey data. However, Vaisey (2006) finds that skills underemployment (defined as excessive education for one's job) increased significantly between 1972 and the early 2000s. Additionally, there is evidence that workers who are skills underemployed receive lower pay than individuals with similar skills and experience, but that they receive higher pay than the workers in the jobs that they are performing (McGuiness 2006). One key difference between skills underemployment and the two types of non-standard work histories that are examined in this article is that women have not been historically over-represented in skills underemployed positions (Vaisey 2006).

PENALIZED OR PROTECTED?

Social scientists have examined the forces behind the rise of non-standard and mismatched employment in the United States and the consequences of these employment histories for workers currently in those positions (Autor 2003; Epstein et al. 1999; Kalleberg et al. 2000). Limited scholarship, however, has examined how employers evaluate candidates with these types of employment histories during the job application process. Thus, additional research is needed to understand how experience with non-standard or mismatched employment may shape workers' *future* labor market opportunities, specifically their ability to get a job. At its core, this issue is about the demand side of the job matching process, examining how employers perceive workers with non-standard and mismatched employment histories and, ultimately, which applicants employers choose to hire. While there is a voluminous literature on how employers make hiring decisions (for example, see Oyer and Schaefer 2011; Rivera 2012; Moss and Tilly 2001), I develop and extend theoretical insights from research on unemployment scarring (Ruhm

1991; Gangl 2006) and scholarship on the "ideal worker" construct (Correll et al. 2007; Turco 2010) to understand how non-standard employment histories may shape the job applicant screening process.

Potential Penalties for Non-Standard and Mismatched Employment

The literature on the scarring effects of unemployment examines if and how histories of unemployment affect workers' future earnings and employment opportunities (Ruhm 1991; Gangl 2006). This framework is particularly useful in understanding why and how histories of non-standard and mismatched employment may negatively affect workers' hiring outcomes compared to workers who remain in full-time, standard positions at their skill level. Sociologists and economists have articulated two primary pathways through which unemployment may negatively influence workers as they move through the labor market: 1) a human capital pathway, and 2) a negative signaling pathway.

First, the human capital pathway suggests that: "an unemployment spell not only precludes the accumulation of work experience but may also bring the deterioration of general skills" (Arulampalam, Gregg, and Gregory 2001, p. F577; see also Becker 1964). Thus, unemployment histories are hypothesized to scar workers because they lead to the erosion of human capital and preclude the accumulation of new skills. By contrast, the negative signaling pathway argues that unemployment serves as a signal to future employers about unobserved, negative worker characteristics (Eriksson and Rooth 2014). During the hiring process, employers are often faced with dozens, or even hundreds, of applications for a single vacancy. Because obtaining information about the quality of a worker from a job application can be difficult, employers may use unemployment histories as a signal of worker productivity (Arulampalam,

Gregg, and Gregory 2001; Eriksson and Rooth 2014; Kroft et al. 2013).[2] In other words, a history of unemployment on a resume may signal there is something unobservable and negative about the worker. While both a human capital and a signaling pathway may contribute to unemployment scarring, when studying the demand-side hiring behaviors of employers, the human capital mechanism and the signaling mechanism are empirically indistinguishable. At the initial point of applicant screening, employers are not able to directly observe whether a worker has lost human capital due to an unemployment spell. Thus, insofar as employers are concerned about human capital deterioration when making hiring decisions, it likely manifests in the content of the negative signal sent by a history of unemployment. The signaling pathway of unemployment scarring is therefore the component of the literature that will be theoretically developed and empirically examined below.

Similar to a history of unemployment, a history of non-standard or mismatched employment may also send a negative signal, or signals, to future employers. To theorize the multiple signals that may be sent by histories of non-standard and mismatched employment, I turn to sociological scholarship about cultural conceptions of the "ideal worker" (Turco 2010; Correll et al. 2007; Davies and Frink 2014). While the contours of what it means to be an "ideal worker" vary with time and place, certain aspects remain relatively consistent. The "ideal worker" is generally highly competent, committed to his or her full-time job, free from the competing demands of family life, and has an unblemished employment history. Summarizing this notion, Correll et al. (2007) write: "According to this 'ideal worker' belief, the best worker is the 'committed' worker who demonstrates intensive effort on the job through actions that appear to sacrifice all other concerns for work" (p. 1306). Limited research has examined the ways that

[2] The signaling pathway articulated in this literature is not entirely different from notions of statistical discrimination (see Phelps 1972).

changing labor market institutions – specifically the prevalence of non-standard and mismatched employment – render the attainment of the "ideal worker" status nearly impossible for a large share of the workforce. But, the very nature of these types of jobs may violate prescriptive norms about what an "ideal worker" should be – competent and committed. Thus, employers may perceive workers with histories of non-standard or mismatched employment as lacking competence and/or commitment when compared to workers with full-time, standard histories of employment.

Competence – the first dimension of the "ideal worker" construct – is closely tied to the productivity signal articulated in the unemployment scarring literature. Negative competence signals are likely to be strongest if a potential employer perceives a job applicant's recent employment history as resulting from an involuntary job loss, followed by the inability to find full-time, standard employment at his or her skill level.[3] Skills underemployment – and mismatched employment in general – is almost always involuntary and, thus, likely sends strong negative signals about a worker's competence. Similarly, involuntary part-time work and temporary employment may suggest to an employer that a job applicant is not competent or productive enough to obtain and maintain a full-time, permanent job. In fact, when part-time work and temporary employment are involuntary, they represent a form of mismatched employment because there is a lack of fit between the worker's characteristics or desires and their job (Kalleberg 2007). Thus, involuntary part-time work and temporary employment are types of both non-standard employment and mismatched employment. Insofar as employers perceive a worker's non-standard employment history as involuntary – and therefore mismatched – that employment history is likely to have similar consequences to those of skills

[3] By involuntary job loss, I am specifically referring to being fired or laid off, rather than being displaced due to a plant closing (see Gibbons and Katz 1991).

underemployment and those consequences are likely to result from negative perceptions of the applicant's competence.

A history of non-standard or mismatched employment may also send a negative signal about a worker's commitment. Even though survey data suggests that there are few systematic differences between the reported commitment levels of full-time, standard workers and other types of workers, particularly part-time workers (Kalleberg 1995), employers may perceive workers with non-standard and mismatched employment histories as less committed. For example, if a future employer perceives the move into non-standard employment as *voluntary*, the employer might infer that the move resulted from an individual's "preference" about the type of employment relationship they would like. Research indicates workers may select into non-standard employment, particularly part-time employment (Williams 2001), as a way to manage the challenges of balancing employment and family responsibilities. Because these decisions are often heavily gendered, the consequences of voluntarily moving into non-standard employment may also be different for men and women. This issue will be discussed in detail below. Finally, it is unclear whether a history of skills underemployment would send a negative commitment signal to future employers. The involuntary nature of most skills underemployment may limit its negative signal regarding workers' commitment.

In sum, employers' concerns about applicants' levels of competence or commitment may result in penalties at the hiring interface for workers with histories of non-standard and mismatched employment.

The Protective Force of Non-Standard and Mismatched Employment

While non-standard and mismatched employment histories may limit workers' future labor market opportunities compared to workers with full-time, standard histories, it is also possible that these employment positions provide workers with an advantage over long-term unemployment. Insofar as employers prioritize an applicant's competence (including their skill and productivity) during the hiring process, workers who have a job – even a non-standard or mismatched job – should fare better at the hiring interface than unemployed workers who – by definition – have not been working (Becker 1964; Korpi and Levin 2001; Lockwood 1991). Compared to workers with histories of long-term unemployment, employers will likely perceive applicants with histories of part-time work, temporary agency employment, and skills underemployment as keeping their skills more updated (Nollen 1996; for a discussion of this issue, see Yu 2012), improving the competence signal that they send to future employers. This benefit over long-term unemployment is likely particularly strong for part-time or temporary workers who remain employed in their desired occupation. Indeed, some employers may even perceive histories of temporary agency employment as benefitting a worker's general skill development because temp workers gain experience in different organizational contexts (Marler et al. 2002). This protective competence signal is likely weakest for skills underemployment, which is employment outside of a worker's occupation.

Non-standard or mismatched employment may also send positive commitment signals to future employers compared to workers who remain unemployed. Taking a part-time position, temporary job, or job below their skill level may signal to future employers that a worker is willing to do "whatever it takes" to remain employed, even if he or she has to take a job that is not the most desirable (i.e., non-standard or mismatched). Additionally, employers may think

that workers who have histories of involuntary non-standard employment or skills underemployment as being more committed, if hired, because these workers would be grateful to have moved on to a better employment opportunity.

This line of thought undergirds much of the thinking about workforce development in the United States. "Work first" policy initiatives, for example, prioritize moving workers from joblessness into any job, regardless of the job's match for the worker's education or experience (see Autor and Houseman 2010). Additionally, the media often takes the stance that workers are better off working in any job rather than remaining unemployed, suggesting, for example, that "… doing something – anything – is better than having an extended blank on your resume" (Stafford 2012). While there are theoretical reasons to believe that having a job – any job – will provide workers with an advantage over joblessness during the job application process, research to date has not been able to support or reject this claim.

Empirical Grounding

While the empirical literature on the effects of long-term unemployment consistently finds negative consequences for workers' future employment outcomes (Ruhm 1991; Arulampalam et al. 2001; Gangl 2006; Gregg 2001; Eriksson and Rooth 2014; Kroft et al. 2013), the limited empirical literature on the consequences of non-standard and mismatched employment is mixed. Addison and Surfield (2009) find that jobless individuals who obtain non-standard employment (of multiple kinds) are more likely to be employed than the jobless who continue to search for work – both one month and one year later – and have similar employment continuity to full-time, permanent employees. This finding suggests that non-standard employment may serve to buffer workers against the negative effects of unemployment. However, Mavromaras, Sloane, and Wei

(2013) use panel data from Australia and find that workers with histories of skills underemployment are more likely to be unemployed in the future compared to workers with employment histories that match their skill level, suggesting a scarring effect for histories of skills underemployment. Some research has also documented negative associations between histories of part-time and temporary employment and workers' future earnings, compared to workers who remained in full-time employment (Ferber and Waldfogel 1998).

The limited and varied empirical findings in this literature as well as the use of observational data leave open important questions about the direct relationship between non-standard or mismatched work and future employment outcomes and whether they serve to protect or penalize workers as they move through the labor market. The associations found in prior research may result from supply- or demand-side factors, both observed and unobserved, making it difficult to infer causal relationships or identify the role or employers' behavior in shaping the consequences of these different employment histories. The experimental methods utilized in this study, however, remove concerns about unobserved supply- and demand-side factors and enable an analysis of the ways that employers' behaviors shape the consequences of histories of non-standard and mismatched employment.

THE GENDERED CONSEQUENCES OF EMPLOYMENT HISTORIES

While significant progress toward gender equality was made over the last half of the 20th Century, recent evidence suggests that some of that movement has stalled in recent years (England 2010; Gerson 2010). In the world of work, women are still underrepresented in executive positions (Leahey 2012) and receive lower wages, on average, than men (White House 2014). While multiple forces likely contribute to persistent gender labor market inequalities,

occupational sex segregation (England 2005), the increasing demands for long hours in particular occupations (Cha 2010), and workplace policies predicated on a masculine notion of the "ideal worker" (Acker 1990; Jacobs and Gerson 2004) play key roles in perpetuating gender stratification. This last mechanism, the gendered construction of the "ideal worker," is directly implicated in understanding how the consequences of part-time work and temporary agency employment histories may differ for male and female workers.

While the "ideal worker" construct appears gender neutral at first glance, demands outside of the workplace such as childcare and household work often fall disproportionately on women. These competing demands for many women likely intersect with unsupportive workplace and social policies in the United States that make it more challenging for women to live up to the "ideal worker" standard (Acker 1990; Kelly et al. 2010; Gornick and Meyers 2003; 2009; Davies and Frink 2014). Even if women are able to balance work and family demands, employers are likely more concerned about this set of issues for women than they are for men.

In contrast to the masculine construction of the "ideal worker," part-time and temporary employment – although not skills underemployment – arose in the United States as highly feminized positions in the labor market (Williams 2001; Hatton 2011).[4] Part-time jobs have historically been viewed as part of the "mommy track" (Williams 2001) – an employment option for women attempting to balance the "competing devotions" of work and family life (Blair-Loy 2003; Feldman 1990). Similarly, temporary agency employment developed as a form of women's work (Rogers 2000; Vosko 2000). Hatton (2011) argues that as the THA industry began to emerge after World War II, industry leaders were intentional about defining temporary

[4] Although skills underemployment has not been feminized in the same ways as part-time and temporary work, this does not imply that women's work in general is valued equally to men's work in the labor market. Previous research provides compelling evidence that women's work and labor, on average, is not as valued as highly as their male counterparts' work and labor (see Reskin 1988).

jobs as "women's jobs" to avoid confrontations with organized labor. Importantly, though, female workers now make up roughly 60% of the part-time worker population – a lower proportion than in the past – and there is now approximate gender parity in the THA sector (Bureau of Labor Statistics 2005; Bureau of Labor Statistics 2013).

How might the gendered construction of the "ideal worker" intersect with the gendered histories of part-time and temporary work during the job application process? On the one hand, employers may make assumptions about the selection processes that lead workers in to non-standard employment positions. For female applicants, histories of part-time or temporary employment may lead employers to perceive them as being on the "mommy track," having significant demands outside of the workplace that will conflict with their ability perform on the job. Indeed, experimental research has found that women are assumed to be in part-time positions to deal with domestic and family duties (Eagly and Steffen 1986). Thus, non-standard employment for women may serve as a proxy for motherhood, raising concerns about women's competence and commitment. In turn, women may face greater penalties than men for non-standard employment histories, similar to the way that mothers, but not fathers, have been shown to face penalties at the hiring interface (Correll et al. 2007).

On the other hand, employers may have already incorporated in to their evaluations of female applicants that women's employment histories are more likely to include non-standard employment, or even employment gaps. Thus, a female worker's history of part-time or temporary work may provide employers with limited new information about a woman's compliance with the "ideal worker" standard. For men, however, part-time or temporary work or employment gaps may trigger employers' concerns about whether there is something deficient about them, making them unable to find a full-time, standard job (Eagly and Steffen 1986).

Additionally, men with part-time and temporary employment histories may be seen as violating standard "breadwinning" models of masculinity (see Cha 2010). And, significant research documents the ways that violating gender stereotypes can result in social and economic sanctions (i.e., "backlash effects") (Rudman and Phelan 2008). These perspectives suggest that men will be more heavily penalized than women for histories of part-time and temporary agency employment at the hiring interface.

There is some preliminary empirical support for the aforementioned line of thought. For example, researchers have found that temporary work is associated with long-term penalties in the United States and the United Kingdom for men, but not for women (Addison, Cotti, and Surfield 2009; Booth, Francesconi, and Frank 2002). In Canada, there is some evidence that women are more likely than men to exit temporary jobs for full-time employment, suggesting that temporary work is less scarring for female workers (Fuller 2011). And, in the United States, histories of part-time work are associated with lower future earnings for men and women, but the negative effects are stronger for men (Ferber and Waldfogel 1998). Experimental research has also found that men are penalized more heavily than women for taking a leave of absence or needing to leave work for family reasons (Allen and Russell 1999; Butler and Skattebo 2004). While taking time away from work is different from having a history of non-standard employment, it may trigger similarly gendered responses from employers. Together, existing theoretical perspectives indicate that the effect of non-standard employment histories will vary by the gender of the worker. Although, whether men or women will face more severe penalties remains unclear. Given that there are limited differences by gender in experiencing skills underemployment in the United States, there is little reason to think that employers will treat men and women with this type of employment history differently from one another.

METHODOLOGICAL CONSIDERATIONS

The aforementioned empirical studies on the consequences of non-standard employment histories rely on observational survey data (Addison, Cotti, and Surfield 2009; Ferber and Waldfogel 1998; Mavromaras, Sloane, and Wei 2013), leaving open the possibility that workers' selection into non-standard employment, employers' demand-side preferences, or some unobservable worker or employer characteristics are driving the associations that are found. To my knowledge, only one U.S.-based study has attempted to deal with these endogeneity concerns by using a quasi-experimental research design. Autor and Houseman (2010) address the problem of selection bias by exploiting the random assignment of people in Detroit's welfare-to-work program to different types of job placements (i.e., a temporary help agency placement vs. no job placement). Importantly, they find quite different results depending on whether or not they correct for unobserved selection processes. Specifically, after correcting for selection, they find that temporary agency employment is actually no better for workers than remaining unemployed. While the generalizability of the Autor and Housemen (2010) study beyond the low-skilled welfare population in Detroit is unknown, their findings clearly suggest that selection bias makes identifying the causal effects of temporary employment difficult using observational data. Given this challenge, experimental research designs that alleviate concerns about selection bias and bias due to omitted variables – and that specifically enable a direct investigation of employers' demand-side preferences – are vital to furthering our understanding of the consequences of non-standard employment histories.

To address the methodological issues in existing research and identify employers' responses to workers with different employment histories, I implemented complementary field

and survey experiments that examine the effects of non-standard employment for male and female workers' hiring outcomes. In the analysis, I first utilize data from the field experiment, where fictitious job applications were sent to apply for real job openings, to examine how non-standard and mismatched employment histories intersect with gender to affect hiring outcomes in the actual labor market. The field experiment, however, only provides information about whether an employer responds positively to the job application. It does not provide any details about the mechanisms linking histories of non-standard or mismatched employment to future employment outcomes. To identify these processes, I analyze data from the survey experiment, which used the same experimental manipulations as the field experiment and collected information on hiring decision-makers' perceptions of job applicants' competence and commitment. Thus, the survey experiment enables an analysis of the mechanisms that may account for the consequences of non-standard and mismatched employment histories. Together, these methods provide a unique lens into the ways that various employment histories intersect with gender to shape workers' experiences at the hiring interface while removing concerns about unobserved selection processes of omitted variables bias. I proceed first with the field experiment and then move on to the survey experiment.

THE FIELD EXPERIMENT

What are the consequences of non-standard and mismatched employment histories for workers as they apply for jobs? And, how do these effects differ by the gender of the worker? To examine these questions, I analyze original data from a field experiment where I submitted 2,420 applications to 1,210 job openings between November of 2012 and June of 2013.[5] After sending

[5] The findings may be influenced by the particular economic climate in which the study was conducted: the recovery from the "Great Recession." On the one hand, in times of economic distress, employers may be more likely to

each application, I tracked the callbacks (i.e., positive employer responses) received by each application. The overall callback rate for the field experiment was 7.4%, which is consistent with previous studies that use similar methods (Correll et al. 2007; Bertrand and Mullainathan 2004).

There were two axes of variation in the field experiment. First, the experiment varied the most recent employment experience on the applicant's resume. Each resume was randomly assigned 12 months[6] of recent work experience that was a full-time job, a part-time job, a job through a temporary employment agency, a job below an individual's skill level, or a spell of unemployment. The second axis of variation in the experiment was the gender of the applicant, which was signaled using gendered names.[7] The male names were Jon Murphy and Matthew Stevens and the female names were Katherine Murphy and Emily Stevens. A resume and a cover letter were included with each job application. Each cover letter was crafted with similar language, while also accurately reflecting the work history presented on the resume. The cover letter for each experimental condition remained consistent across employers, except that each cover letter was personalized with the employer's name and the job title for the open position. Since two resumes were submitted for each job opening, I constructed two resume templates that were similar in content, but aesthetically distinct.[8] Each resume indicated that the applicant graduated from one of two large, public universities in the Midwest with similar rankings by U.S. News and World Report. Thus, an important scope condition of the findings is that they are

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perceive non-standard and mismatched employment histories as being outside of the worker's control and therefore penalize them less. It is also possible, however, that in times of economic distress, more individuals are unemployed and looking for work, enabling employers to be more selective during the hiring process. Future research would be well served to examine this set of issues.

[6] A "treatment" period of 12 month was selected because of the need to keep the duration of the treatment equal across conditions and the need to use an amount of time that would be appropriate for each non-standard employment history.

[7] A separate set of field-experimental conditions included a set of African American racialized names to examine how race shapes the effects of non-standard and mismatched work. Those findings are presented separately.

[8] There is no statistically significant difference in the callback rate for the distinct resume templates.

limited to workers with a college education.[9] After graduating from college, each resume indicated that the applicant had a first job that lasted for just under two years. Each applicant then had a second job that lasted for nearly four and half years. Then, all applicants transitioned to a new job, which is where the experimental manipulations were implemented. The standard, full-time resumes were pre-tested before using them in the experiment and they received similar ratings on key dimensions of perceived skill and experience.

Histories of non-standard and mismatched employment were carefully signaled on workers' resumes.[10] Part-time work was presented on a worker's resume by including "part-time" in parentheses after the occupational title for the most recent job on the full-time, standard resume. This method of signaling part-time work experience is consistent with how workers often present this information in on-line resume banks. While it may seem odd that workers would indicate a part-time employment history on their resumes, the penalty may be even stronger for workers who are not forthright in their application about working part-time, but for whom this information is revealed later on in the job application process. Temporary agency employment was presented on the applicant's resume as working through one of two leading temporary help agencies and in the worker's chosen occupation (e.g., accounting, management). The description of the tasks and responsibilities completed as a temporary worker were very similar in content to those presented on the full-time, standard resume. While the part-time and temporary agency employment histories were in the worker's occupation of choice, skills underemployment – for all workers – was denoted as working as a Sales Associate at a large retail store, working with customers in the retail space. The year of employment in this position followed approximately six years of work experience in professional, skilled jobs and, thus,

[9] This study examines college-educated workers, in part, for methodological reasons. Many low-skilled jobs for workers without any college education are not posted on national job websites.
[10] To determine how to signal each employment history, I examined resumes in on-line resume banks.

clearly indicates that the worker is employed at a level below their skill and experience. Finally, a spell of unemployment was presented on workers' resumes by indicating that their most recent job ended one year before the application date.[11] To ensure that the resumes in the unemployment condition had the same number of employment experiences as the workers in the other conditions, a summer internship in college was added to the resumes for the "unemployed" workers. Appendix A presents examples of the experimental treatments used in the field experiment.

Applications were submitted to four different job types that varied in the level and type of skill they required as well as their gender composition: sales, accounting/bookkeeping, project management/management, and administrative/clerical job types. The resumes submitted for each job type had an employment history with relevant experience for that occupation. The applications were submitted to job openings in five major U.S. labor markets – New York City, Atlanta, Chicago, Los Angeles, and Boston – to add geographic diversity to the analysis. The employment histories for each applicant were geographically specific to the labor market in which the applicant was applying. Each resume also included a local phone number and a local address. Each phone number had its own voice mailbox and a unique gender-specific voice recording where employers could leave messages for the applicant. The applicants' street addresses were located a few blocks away from each other in each city. The addresses were real, but the apartment numbers were fictitious.

The sample of job openings for the experiment was drawn from a leading national on-line job posting website and therefore represents a broad cross-section of job openings. Using a

[11] Unemployment was signaled through dates that the applicant did not have a job. The formal definition of unemployment is that an individual does not have work *and* is looking for work. The second component of the definition is not formally signaled, although the jobless individual is clearly looking for work at the time that the application is submitted. Importantly, to the employer, unemployment and joblessness are indistinguishable and, thus, I refer the condition with a spell of joblessness as the "unemployment" condition.

national job posting website ensured some level of consistency in the jobs being posted across labor markets. To collect the job openings that met the search criteria for the experiment, I worked with a computer programmer to design a script that executed the needed searches. Each search was for a particular job type (e.g., administrative assistant), within a 20-mile radius of each city, that was posted over the previous 30 days, and that could be applied for directly through the job posting website.[12] After collecting the job openings that matched these requirements, duplicate postings from the same employer were removed to reduce the likelihood that employers would perceive the resumes as fictitious.

After the final set of job openings was selected for a given job type in a given city, I randomly assigned each job opening to a demographic category (male or female) and to applications with two different employment histories. However, the randomization ensured that each employer received at least one application with either the full-time or unemployment treatments. Two applications were sent to each employer, separated by one day. The names at the top of the resumes, the formats of the resumes, and the order of the resumes were randomized and counterbalanced to ensure that these aspects of the job application would not be correlated with the treatment. The distribution of the characteristics of the applications submitted in the field experiment is presented in Appendix B.

The primary outcome variable for the field experiment was whether the applicant received a positive response or callback from the employer via phone or e-mail. Responses were

[12] In a few cases, I limited the search to jobs posted within fewer than 30 days. In these cases, the computer script would not run for the full 30-day search period, but worked for these shorter amounts of time. The level of education included in the search criteria was also different across occupations. For accounting and sales jobs, the education level was limited to jobs requiring an Associates or Bachelors degree. For the project manager/manager openings, the search was limited to jobs requiring a Bachelors degree. Finally, I did not limit the administrative assistant searches by education because many employers did not specify any education level requirement for this job type. Additionally, some job openings required completing intensive applications on the employers' website, which the IRB protocol did not cover and which often required essay questions that would have made it more difficult to ensure that differences in answers were not responsible for driving the differences in callbacks. Thus, applications were not submitted for these job openings.

coded as callbacks if the employer requested an interview with the applicant or if the employer asked the applicant to contact them to discuss the position in more depth. Auto-generated responses and simple requests for more information were not coded as positive responses.

Field Experiment Results

In Figure 1, I present the main field-experimental results as a bar graph with the callback rate for each employment history category, broken down by the gender of the worker. For statistical tests, I use *z*-tests for differences in proportions and present results for two-tailed tests throughout. The results are nearly identical when I use logistic regression models with standard errors clustered at the level of the job opening (results presented in Appendix C).[13] I begin by examining the consequences of non-standard and mismatched employment histories for men and then turn to the consequences for women. I then compare the callback rates for men and women *within* each employment history category.

Male job applicants received a 10.4% callback rate in the full-time condition. In the other conditions (Part-Time: 10.4% vs. 4.8%; $|z| = 2.18$, $p < .05$; Skills Underemployment: 10.4% vs. 4.7%; $|z| = 2.07$, $p < .05$; Unemployment: 10.4% vs. 4.2%; $|z| = 3.11$, $p < .01$), male job applicants received a statistically significant lower callback rate than in the full-time condition. The one exception, however, was temporary agency employment (10.4% vs. 7.1%; $|z| = 1.21$, $p = .23$), where no statistically significant effect was detected. The results also indicate that, for men, none of the non-standard or mismatched employment history categories received statistically significantly higher callback rates than the unemployment condition. Together, these results indicate that part-time work and skills underemployment are as scarring for male workers as a year of unemployment. However, temporary agency employment histories for men are

[13] The findings are consistent when controls are included for occupation and labor market.

statistically indistinguishable from both histories of full-time, standard employment at a worker's skill level and histories of unemployment.

[Figure 1 About Here]

While the callback rate for women in the full-time, standard employment condition was on par with the callback rate for men (10.4%), the consequences of the various work histories appear quite different for female job applicants. Skills underemployment is the only employment category where female job applicants received a callback rate that was statistically significantly lower than the full-time condition (10.4% vs. 5.2%; $|z| = 2.05$, $p < .05$). In terms of temporary agency employment and unemployment, the callback rates are slightly lower than in the full-time, standard employment condition, but these differences are not statistically significantly different from having a full-time history. Of particular interest is that there is no reduction at all in the callback rate for women with histories of part-time work (10.4% vs. 10.9%). Women with histories of part-time employment – the most heavily gendered labor market position under investigation – do not face any penalties compared to women with histories of full-time employment. Overall, there seem to be limited negative consequences of part-time work, temporary agency employment, and unemployment for female job applicants, but strong penalties for histories of skills underemployment.

Finally, I compare the callback rates for male and female job applicants in each employment history category. In the full-time, standard condition, male and female job applicants received the same callback rate from employers, 10.4% for men and 10.4% for women. The next cluster of columns examines the positive responses for resumes with the part-time employment history. Here, there is a statistically significant gender difference. Men with a part-time history received positive responses 4.8% of the time, compared with a 10.9% positive

response rate for women with part-time histories ($|z| = 2.14$, $p < .05$).[14] Men and women with temporary agency employment histories had similar callback rates of 7.1% and 8.3%, respectively ($|z| = 0.42$, $p = .68$). Both the male and female applicants with a skills underemployment history also received callbacks from employers at similar rates (4.7% for men and 5.2% for women; $|z| = 0.23$, $p = .82$). However, a marginally significant gender difference emerges for histories of unemployment. For applicants with histories of unemployment, men received positive responses 4.2% of the time, compared with 7.5% for women ($|z| = 1.89$, $p = .059$).

What might explain the different callback rates for male and female applicants with part-time work histories? One possibility is the gender composition of the different occupations under investigation in the field experiment. Indeed, the gender composition of occupations in the field experiment ranges from 38% female in management occupations to 73% female in administrative and clerical occupations.[15] It is therefore possible that the gender-differentiated consequences of part-time work histories are a function of the occupation within which the application was submitted. In more heavily feminized occupations, for example, part-time work may be less stigmatizing for women, resulting in stronger penalties for men. Alternatively, men in female-dominated occupations may face a broad set of benefits and privileges that insulate them from being penalized for part-time work. It is also possible, however, that the deeply held stereotypes about gender and employment histories transcend a worker's occupation, resulting in similar gendered patterns across occupations. To empirically examine this issue, I compared the

[14] There is also a positive and statistically significant interaction between having a part-time history and being a female applicant in a logistic regression model predicting callbacks (see Model 3 in Table C1).
[15] Estimates from the Current Population Survey indicate that 38.2% of workers in Management Occupations are female, 48.6% of workers in Sales and Related Occupations are female, 72.9% of workers in Accountants and Auditors Occupations and Bookkeeping, Accounting, and Auditing Clerk Occupations are female, and 73.3% of workers in Office and Administrative Support Occupations are female (Bureau of Labor Statistics 2014).

callback rates for male and female job applicants with a history of part-time employment, broken down by occupational category. The results are presented in Figure 2, below. The descriptive evidence indicates that in each occupation female applicants with part-time employment histories receive a higher callback rate than male applicants.[16] Thus, it does not appear as if the gendered nature of particular occupations is driving the gender-differentiated consequences of part-time employment histories.

[Figure 2 About Here]

The field experiment demonstrates important heterogeneity in the consequences of different types of employment histories by the gender of the worker as well as by the type of employment history. While male applicants with histories of part-time employment, skill underemployment, and unemployment are heavily penalized at the hiring interface, female applicants are only negatively impacted if they have histories of skills underemployment. The results also indicate that female job applicants with histories of part-time employment and, to some extent, unemployment fare better than their male counterparts at the hiring interface. And, temporary agency employment does not appear to penalize male or female applicants compared to having a history of full-time, standard employment. The field-experimental findings, however, are not able to provide insight into the demand-side mechanisms underlying employers' responses to job applicants with different employment histories. For that task, I turn next to the results from the survey experiment.

[16] Given the large reduction in sample size when analyzing the data by occupation, these differences generally do not reach statistical significance. I also examined interactions between each occupation and each employment history. Likelihood ratio tests, run separately for male and female applicants, provide evidence that the consequences of the non-standard and mismatched employment histories do not differ by the occupation to which the application was submitted.

THE SURVEY EXPERIMENT

While the field-experimental results provide compelling evidence about the effects of non-standard employment in the actual labor market and how they differ by gender, those data cannot examine the reasons why non-standard employment histories shape employers' evaluations of job applicants. Thus, to complement the field experiment, I conducted an Internet-based survey experiment with individuals in U.S. firms who make hiring decisions for their companies. The survey experiment was conducted between December 6, 2012 and January 4, 2013. Most hiring studies that use experimental methods are conducted on undergraduate or graduate students (e.g., Correll et al. 2007). The survey experiment presented here therefore advances research methodology in this area by surveying individuals who make actual hiring decisions and who work in five broad occupational groups: human resources managers, human resources assistants/associates, business executives, mid-level managers, and business owners. The respondents in the sample are part of an on-line, opt-in panel and, thus, are not a random probability sample. Any potential limits on generalizability, however, do not impact the ability to generate internally valid, causal estimates of the effects of interest from the survey-experimental research design.

Descriptive statistics about the 903 respondents in the survey experiment are presented in Table 1. Roughly half (52.9%) of the respondents are male, 74.6% are white, the vast majority has at least a college degree, and 26% work in firms with 500 or more employees. To provide a sense of how the respondents in the survey experiment compare to national estimates of similar individuals, Table 1 also includes a "National Estimates" column. Importantly, though, the national estimates are not exactly comparable to the characteristics of the survey sample and, thus, are provided mainly as a guide for the reader. Additional details about the characteristics of

the sample of respondents, how the national estimates were generated and differ from the survey-experimental sample, as well as the sample selection process are discussed in Appendix D.

[Table 1 About Here]

Once a respondent was qualified to participate in the survey, he or she was asked to review and evaluate two experimentally manipulated resumes for an open accounting clerk position at his or her company. The accounting position was selected because non-standard work is common in the accounting profession and most companies have somebody who performs an accounting or bookkeeping role. It also parallels the accounting/bookkeeping category of jobs applied to in the field experiment discussed above. The two axes of variation on the resumes in the survey experiment were the same as in the field experiment. The most recent employment history of the applicant (full-time, part-time, temporary agency, skills underemployment, or unemployment) was varied along one axis and the gender of the applicant, using the same names as in the field experiment, was manipulated along the other axis. Each respondent was randomly assigned to review either two male resumes or two female resumes that had different employment histories (at least one of which was either a full-time or unemployed resume). Thus, the gender manipulation was between subjects, which reduces concerns about social desirability bias by making it less likely that the respondent would identify gender as a key issue interest, and the employment history manipulation was within subjects. The format and order of the resumes as well as the names at the top of the resumes were randomized and counter-balanced.

Variable Construction

After reviewing each resume, respondents were asked to evaluate the applicant. To parallel the outcome variable in the field experiment, respondents were asked on a five-point scale: “How

likely would you be to recommend that your company interview this applicant?" Responses to this item were then converted into a dichotomized variable with the "very likely" category equal to "1" and the other categories equal to "0"; 27.3% of job applicants were "very likely" to be recommended for interviews. Coding the "interview likelihood" variable in this way makes sense theoretically because only the applicants who attained the "very likely" category on the "interview likelihood" measure in the survey context would have been likely to receive callbacks in the field-experimental context. Thus, the dichotomous measure in the survey experiment most closely parallels the outcome measure in the field experiment.[17]

Respondents were also asked to evaluate the applicant along a host of dimensions to capture the potential mechanisms leading to the consequences of non-standard and mismatched employment: perceived competence and perceived commitment. I combined the following items to generate a scale of perceived competence. Respondents were asked: "On a scale from one to seven, how strongly do you agree or disagree with the following statements about this applicant?" Responses ranged from "strongly disagree" to "strongly agree." The statements used to create the competence measure were: "the applicant is competent," "the applicant is productive," "the applicant is skilled," "the applicant has relevant work experience," and "the applicant has adequate accounting experience." Additionally, the competence scale included the following items with five response categories: 1) "Compared to similar employees who already work at your company, how quickly do you think this applicant would learn how to perform new tasks?" and 2) "Compared to similar employees who already work at your company, how much

[17] When the full interview likelihood scale is used, the results diverge slightly. While female applicants are more likely than male applicants to remain in the highest interview likelihood category ("very likely"), if they do not receive the highest interview likelihood rating, they are more severely penalized than men. When women do not receive a "very likely" interview recommendation rating, they generally receive a rating of "somewhat likely," two points down the scale. Men, however, are more likely than women to face some penalty for non-standard employment. When they are penalized, though, they generally receive the "likely" rating, one point down the scale (results available upon request).

relevant experience in accounting and bookkeeping does this applicant have?" These items combined with a Chronbach's alpha of 0.89 and the standardized scale is used throughout.

The other key mechanism articulated above is perceived commitment. To generate this scale, I combined four survey items. Using a seven-point scale, respondents were asked to respond to the statement: "the applicant is committed." Then, on a five-point scale, respondents were asked: "Compared to similar employees who already work at your company, how committed do you think this applicant would be to their job if they were hired?" Also on a five-point scale, respondents were asked: "If your company needed to ask this applicant to work extra hours, how likely is it that this applicant would meet that request?" Finally, respondents were asked: "If this applicant were to be hired at your company, how long do you think that they would stay?" The five response categories ranged from "Less than 1 year" to "More than 4 years." These four items combined with a Chronbach's alpha of 0.72 and the scale used in the analyses is standardized.

The key explanatory variables for the analysis are the different employment histories on the resume that the respondent reviewed – full-time, part-time, temporary agency, skills underemployment, or unemployment – and the gender of the applicant. All models include controls for the order that the resumes were reviewed, the name at the top of the resume, and the format of the resume.[18] Listwise deletion is used to deal with missing data and only respondents who provided interview recommendations for both applicants that they reviewed are kept in the analytic sample.[19] All analyses adjust for the fact that respondents evaluated two resumes by clustering the standard errors by respondent.

[18] Results are consistent when these controls are excluded.
[19] There were 13 respondents who only provided an interview recommendation for one of the two applicants that they reviewed.

Interview Likelihood

The first analyses examine whether non-standard work histories affect employers' responses about whether they would be "very likely" to recommend that their company interview the applicant. In essence, this analysis seeks to determine whether the main findings from the field experiment replicate in the survey-experimental context. Since the interview likelihood variable is binary, logistic regression models are used in the analyses. I first examine the consequences of non-standard employment histories separately for male and female job applicants. Then, I test whether gender differences *within* each employment history category are statistically significant.

Model 1 in Table 2 examines the consequences of non-standard and mismatched employment histories for male applicants. The results demonstrate that men with histories of part-time employment, skills underemployment, and unemployment are heavily penalized in terms of their interview likelihood. For example, male applicants with histories of part-time work have 40% lower odds (*exp*(-0.513 = 0.599)) of being "very likely" to be recommended for an interview compared to male workers with full-time, standard employment histories. There is also a marginally significant negative effect of temporary agency employment for men ($p < .10$). Wald tests indicate that none of the non-standard or mismatched employment history categories are statistically significantly different from unemployment. Thus, the consequences of non-standard and mismatched employment for male applicants in the survey experiment are very similar to those found in the field experiment.

[Table 2 About Here]

Next, Model 2 in Table 2 examines the consequences of non-standard and mismatched employment histories for female job applicants. The only employment history category where female job applicants are statistically significantly penalized is the skills underemployment

category. The scarring consequence of unemployment for women is marginally statistically significant ($p < .10$). There are no discernable differences in the interview recommendations for women with histories of part-time or temporary employment and a history of full-time employment. There are also no statistically significant differences between having a history of non-standard or mismatched employment and having a history of unemployment. Again, the findings for female applicants in the survey experiment are aligned closely with the results presented in the field experiment.

Importantly, the results presented in Table 2 do not test for differences in the interview recommendation likelihood for male and female job applicants *within* each employment category. This is where the results diverge between the field and survey experiments. While the field experiment found that female job applicants received higher callback rates than male applicants in the part-time work and unemployment history categories, this is not the case in the survey-experimental context. There are no statistically significant differences in being "very likely" to be recommended for an interview between male and female applicants *within* employment history categories in the survey experiment. Why might this discrepancy exist between the field and survey experiments? While it is difficult to address this issue empirically, the difference may be related to social desirability biases that arise in the survey context, which may limit respondents' use of applicant's gender in their evaluations (Schuman et al. 1997; Heerwig and McCabe 2009). There is also evidence that social categories, such as race and gender, are more likely to be used as heuristic devices when time is scarce (Fiske 1998). In the field experiment, hiring managers are likely screening hundreds of applicants in a short time period, making gender stereotypes more likely to be activated than in the survey context where the respondents had as much time as they wanted to review two resumes. Finally, the survey

experiment asked respondents to review resumes for one job type – an accounting clerk position – whereas the field experiment examined four occupational groups, which included but were not limited to accounting and bookkeeping positions. Thus, it is possible that differences in the job types under investigation may contribute to the different gender findings in the field and survey experiments.[20]

The Mediating Effects of Perceived Competence and Commitment

Finally, I explore whether employers' perceptions of job applicants' competence and commitment can account for the reduced interview likelihood faced by applicants with certain histories of non-standard and mismatched employment. Importantly, since the gender differences *within* each employment history category are not statistically significant in the survey experiment, it is not possible to test for the mechanisms underlying gender differences in the consequences of non-standard employment.

To examine whether hiring decision-makers' perceptions of applicants' competence and commitment can account for the consequences of non-standard employment histories, I utilize the average causal mediation analysis framework proposed by Imai, Keele, and Tingley (2010) as a test of formal mediation.[21] Traditional models for mediation analysis are based on linear structural equation modeling. However, as Imai et al. (2010) argue, those methods are not generalizable to nonlinear models, such as the logistic regression models used to examine the binary "interview likelihood" outcome. Additionally, the mediation analysis technique proposed

[20] However, I replicated the survey experiment with a non-random sample of respondents from Amazon.com's Mechanical Turk and asked them to evaluate resumes for a managerial position. Again, I found no moderating effects of gender on the "interview likelihood" of workers with a part-time history, which provides some evidence against the argument that the discrepancy in the gender findings between the field and survey experiments is due primarily to the occupation under investigation.

[21] Each mediation analysis presented in this article was conducted using 1,500 simulations.

by Imai et al. (2010) is developed from the "potential outcomes" framework for causal inference, removing the model-specific causal identification assumptions necessary when utilizing structural equation models.[22]

For clarity of presentation, Figure 3 summarizes the key findings from the mediation analysis (the full mediation analysis results are presented in Appendix E).[23] Figure 3a presents the results for male applicants and Figure 3b presents the results for female applicants. Only the statistically significant mediation pathways are presented. As Figure 3a demonstrates, perceived commitment explains 40.4% of the effect of part-time work on interview recommendations for men. The results also demonstrate that nearly 70% of the effect of skills underemployment for men can be explained by perceived competence, while approximately 30% can be explained by perceived commitment. For women, perceived competence explains nearly 95% of the negative effect of skills underemployment on their interview recommendation likelihood. It is interesting to note that while perceptions of both competence and commitment mediate the effects of skills underemployment for male applicants, only perceived competence acts as a mediator for female applicants with histories of skills underemployment. This gender difference could be an interesting avenue to pursue in future research. Together, these empirical results provide compelling evidence that perceived competence and perceived commitment are important mechanisms linking histories of non-standard and mismatched employment with workers' hiring outcomes. However, these findings also reveal the heterogeneous reasons why different employment histories are scarring for workers and that those reasons also vary with the gender of the worker.

[22] Imai et al. (2010) also provide techniques for examining the sensitivity of the mediation analysis findings to the key identifying assumptions of the approach. The sensitivity parameters for the mediation analyses presented here were in line with previous studies (see Imai et al. 2010), suggesting that the findings are generally robust.
[23] Appendix E also uses a regression-based framework to examine the role of perceived competence and perceived commitment in explaining the effects of non-standard and mismatched employment.

[Figure 3 About Here]

DISCUSSION AND CONCLUSION

The rise of non-standard and mismatched employment relationships over the past four decades has occurred at the same time as employers have become increasingly reliant on the external labor market to fill vacancies. Thus, workers' employment histories have arguably taken on a more important role in the hiring process. Yet, limited research has examined how job applicants' histories of non-standard and mismatched employment shape employers' decision-making during the job applicant screening process. Employers may perceive workers with non-standard and mismatched employment histories as being less competent or committed, penalizing them compared to workers with full-time, standard employment histories at their level of skill and experience. At the same time, however, any job may be better than no job in the eyes of future employers. Therefore, it is also possible that non-standard and mismatched work may buffer workers against the scarring consequences of long-term unemployment.

The set of theoretical issues explored in this article has been difficult to empirically examine with existing data sources. To address these limitations, the analyses presented above draw on original data from a field experiment and a complementary survey experiment. The findings demonstrate that skills underemployment is deeply scarring for both male and female job applicants. Indeed, a history of skills underemployment is as scarring for workers as a year of unemployment. As hypothesized, skills underemployment sends strong negative signals about both male and female applicants' competence. For male applicants, histories of skills underemployment are also penalizing because they send a negative commitment signal. Given recent evidence that jobs in the middle of the skills distribution are lost at high rates during

economic recessions and that these jobs tend not to rebound as the economic climate improves (Jaimovich and Siu 2012), the negative effects of skills underemployment found here likely have broad implications for the employment opportunities of workers as the recovery from the "Great Recession" continues.

The results also indicate that the consequences of part-time work histories are contingent on the gender of the job applicant. While men face severe penalties for part-time work histories, women experience no penalties. And, this pattern is consistent across all four occupations in the field experiment, which vary heavily in their gender composition. Contrary to the theoretical argument articulated above, however, part-time work leads to penalties for male workers because it raises concerns about their level of commitment. This is unexpected given that employers would likely perceive male applicants with a part-time history as involuntarily in that position and, thus, part-time histories would be expected to trigger employers' concerns about male applicants' competence. Future research would be well served to further explore this issue.

Finally, there are no discernable penalizing or protective effects of a history of temporary agency employment for either male or female job applicants. The lack of a meaningful consequence of temporary agency employment is intriguing. Perhaps temporary agency work positively signals to future employer that a worker has obtained broad and varied knowledge and skills from working in different companies (Marler et al. 2002). It is also possible that well-known temporary agencies, such as the ones used for the resumes in this study, provide a positive signal to future employers about the quality of the worker (see Autor 2009) – potentially marking them as a "good" employee. These potential explanations could be fruitful avenues for future scholarship.

Together, these findings indicate that there are highly varied consequences of different types of employment histories – consequences that also vary by the gender of the worker – as well as distinct signals that are sent by these histories of employment. Yet, this article is not without limitations. First, the empirical findings leave open important questions about the mechanisms underlying the gender differences in the consequences of part-time work histories. Additionally, the discrepancy between the gender findings in the field and survey experiments raises important methodological questions about how, when, and why demographic characteristics (such as gender) produce evidence of bias and discrimination in survey experiments. While previous survey and lab studies that have conducted employment experiments using student samples have found moderating effects of the worker's gender (Correll et al. 2007; Castilla and Benard 2010), the sample for the survey experiment in this article consisted of actual hiring decision-makers and the gender differences that emerge are relatively muted. Research disentangling why these discrepancies exist would assist in moving forward survey-experimental methodologies.

The analyses presented here are also limited to employers' decision-making at the initial applicant screening stage. Thus, I do not have information on final hiring decisions, wage setting, promotions, or terminations. But, previous research suggests that there are penalties for part-time employment histories in terms of future compensation (Ferber and Waldfogel 1998), which could be explored in more depth in future research. Additionally, all applications were submitted in response to on-line job postings and I am therefore not able to examine whether these results may look different when applications are submitted through informal referral networks. The experimental manipulations are also limited to workers' most recent work experiences. Future research would be well served to examine whether the consequences of non-standard and

mismatched employment vary with the timing of those spells in a worker's employment trajectory. Finally, the empirical results are limited to college-educated workers of a particular age in particular labor markets and occupations. While there are theoretical reasons to believe that the findings may generalize beyond the empirical scope of this project, empirically testing the generalizability of these findings – particularly, whether similar patterns emerge in the low-skilled labor market – is an important avenue for future inquiry.

Notwithstanding these limitations, this article makes important contributions to research on the changing nature of employment in the United States. First, the article extends theoretical insights from the literature on unemployment scarring by demonstrating the utility of that framework for understanding the consequences of other types of labor market positions. At the same time, the article advances theories of employment scarring by conceptualizing the negative signaling pathway not just as pertaining to perceived competence, but also including concerns about workers' commitment. Additionally, the findings contribute to sociological scholarship on inequality by demonstrating that access to full-time, standard employment contracts that utilize one's skills appears to have become a key stratifying force in the "new economy." While the effects of non-standard and mismatched work are varied, part-time employment for men and skills underemployment for both men and women severely limit workers' labor market opportunities. Workers with these histories may find themselves stuck in undesirable labor market positions, facing challenges as they attempt to transition into more stable employment. This finding encourages a shift from research to date that has focused primarily on the consequences of non-standard and mismatched employment for workers' earnings, benefits, autonomy, and control while they are working in a non-standard position. More research is

needed to understand how these types of employment arrangements may have consequences for workers' labor market mobility and, ultimately, their long-term economic and social trajectories.

The gender differences in the scarring effects of part-time work (and, to some extent, unemployment) also contribute to sociological theories of the "ideal worker." The findings suggest that employers have already incorporated certain types of employment experiences into their understandings of female labor force participation. Men, however, appear to be expected to maintain full-time, standard – in other words, "primary breadwinner" – employment trajectories. Thus, while women face many barriers to attaining the "ideal worker" status in employers' eyes, it appears that they are able to maintain a level of favorability among future employers even if they have a history of part-time work, or even unemployment. This is not the case for men. A history of part-time work appears to violate what it means for men to be "ideal workers." This is possibly because non-standard work violates prescriptive gender stereotypes, resulting in "backlash effects." And, as the mediation analysis demonstrates, part-time work for men is perceived as indicating an underlying negative attribute of lower levels of commitment.

The findings from this research also complicate "work first" public policy prescriptions that argue that any job is better than no job. Many workforce development programs are based on the premise that assisting a worker to obtain employment, any employment, will serve as a "stepping stone" to better jobs in the future. While there are certainly good reasons that people take any job that they can find – specifically in cases where economic hardship is imminent – the experimental data presented here raise questions about whether all types of jobs actually open up new labor market opportunities for workers. Indeed, certain types of employment positions appear to send negative signals to future employers about workers' competence and commitment.

The theoretical development and empirical findings presented in this article advance sociological scholarship about the consequences of the changing economic landscape. The increase of non-standard and mismatched employment relations in the United States affects workers not just while they are in those positions, but in certain cases also limits their opportunities as they attempt to transition in to their next job. Additionally, there is important gender variation in the consequences of part-time employment, shedding light on the complex ways that gender infuses the contemporary labor market. Together, these findings develop sociological knowledge about how changing economic structures shape workers' employment opportunities and begin to identify the mechanisms through which those consequences operate.

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APPENDIX A – FIELD EXPERIMENT TREATMENTS

Below, I provide examples of the different employment histories used in the field experiment. The examples are for the Administrative Assistant openings that were applied to in Boston, Massachusetts. The employers' names have been altered. Each of these treatments was the applicant's work history for the 12 months prior to submitting the job application.

1. Full-Time, Standard:

Technology Company – Boston, MA June 2012 – Present
Office Manager & Executive Assistant

- Coordinate all office management tasks, which includes working with computer and phone system vendors, maintaining necessary levels of office supplies, and managing all office filing systems.
- Answer and screen incoming phone calls, coordinate travel arrangements, and draft memos and letters for executive staff.
- Plan and coordinate all aspects of meetings for executive staff and key stakeholders.

2. Part-Time:

Technology Company – Boston, MA June 2012 – Present
Office Manager & Executive Assistant (Part-Time)

- Coordinate all office management tasks, which includes working with computer and phone system vendors, maintaining necessary levels of office supplies, and managing all office filing systems.
- Answer and screen incoming phone calls, coordinate travel arrangements, and draft memos and letters for executive staff.
- Plan and coordinate all aspects of meetings for executive staff and key stakeholders.

3. Temporary Employment Agency:

Temp Agency – Boston, MA June 2012 – Present
Temporary Administrative Assistant
Serve as a temporary Administrative Assistant through [Name of Temp Agency]. Assignments at different companies have included:

- Answering incoming phone calls, scheduling travel arrangements, and writing letters and other correspondence for executive staff.
- Coordinating conferences, meetings, and retreats for staff, managers, and clients.
- Developing and improving office coordination systems, such as ordering supplies and updating administrative technology.

4. Skills Underemployment:

Large Retailer – Boston, MA June 2012 – Present
Sales Representative

- Provide high-quality customer assistance in merchandise selection and other service areas.
- Maintain high level of cleanliness and a welcoming environment on the retail floor.
- Build and strengthen relationships with repeat customers.

5. Unemployment: The most recent job was omitted in the unemployment condition. To ensure that this resume was of a similar length to and had the same number of work experiences as the resumes in the other conditions, a college internship was added the applicant's work history. The internship was the following:

Anonymous Bank – Boston, MA Summer 2004
Summer Intern

- Assisted with meeting and conference planning, scheduling, and answering phones.
- Drafted memos and correspondence and participated in special projects on an as-needed basis.

APPENDIX B – DISTRIBUTION OF FIELD EXPERIMENT APPLICATIONS

[Table B1 About Here]

APPENDIX C – FIELD EXPERIMENT REGRESSION RESULTS

[Table C1 About Here]

APPENDIX D – ADDITIONAL INFORMATION ABOUT SURVEY EXPERIMENT

While the sample for the survey experiment was discussed in the body of the manuscript, this appendix provides additional information about how respondents were selected for the survey experiment as well as how the "National Estimates" against which to compare the survey-experimental sample were generated in Table 1.

Sample Selection

To reach the sample of hiring decision-makers, I worked with Qualtrics, a survey research company. Electronic invitations to participate in the survey were sent to 49,930 potential respondents who are part of an on-line, opt-in panel. Of those individuals, 11,920 (24%) responded to the invitation to participate in the survey. Although this response rate appears relatively low, it is line with response rates for organizational surveys given the challenges with getting organizational actors to respond to surveys (Baruch and Holtom 2008). After answering the necessary screening questions, 1,816 (15%) of those respondents were qualified to participate in the survey. Respondents were screened based on three criteria: 1) providing informed consent; 2) responding "yes" to the following question: "As part of your job, do you make decisions regarding whether or not to hire job applicants?"; and 3) meeting one of five broad job type criteria: human resources manager, human resources associate/assistant, business executive, mid-level manager, or business owner. Qualified respondents were then randomly assigned to two different groups – one for the analyses presented here and one for a separate study. Thus, the final sample for the below analyses contains 903 respondents who are hiring decision-makers at their company.

Generating National Estimates

To provide a guidepost against which to compare the respondents in the survey experiment, I generated national estimates for a population similar to the population targeted for the survey experiment. While the national estimates for the "Firm Characteristics" provide valid information about the national distribution of firms by size and industry, the national estimates of "Respondent Characteristics" correspond less cleanly with the characteristics of respondents in the survey-experimental sample. There are two primary reasons that the national estimates for "Respondent Characteristics" are not exact replications of the survey sample: 1) the five occupations of respondents in the survey experiment do not neatly correspond with standard occupation classifications, and 2) it is not possible in national survey data to know whether an individual has the authority to make hiring decisions.

However, to approximate the occupations of the respondents in the survey experiment, I drew data from national-level Current Population Survey estimates for four standard occupational classifications: General & Operations Managers, Human Resources Managers, Human Resources Workers/Specialists, and Human Resources Assistants, Except Payroll and Timekeeping.[24] I then aggregated the data across these four occupational groups (reweighting the data by the size of the population in each occupation) to generate the "National Estimates" that are presented in Table 1. While not perfect, these estimates are still useful as a rough point of comparison for the survey experiment. These estimates indicate that the survey sample is similar to the national data in terms of gender and race. However, the sample is slightly more likely to contain respondents with higher levels of education and respondents with lower earnings than the national estimates.

[24] National job tenure estimates, by detailed occupation, were not available and therefore are not included.

APPENDIX E – ADDITIONAL MEDIATION ANALYSIS RESULTS

In this appendix, I first present the complete findings from the mediation analysis presented in the body of the article. Then, following the presentation of results in similar studies (see Correll et al. 2007), I present the mediation analysis using a regression framework. The full results from the mediation analysis are presented Table E1. All of the estimates in the table were generated from the average causal mediation analysis procedure proposed by Imai et al. (2010). Table E1 presents the average mediation effect of perceived competence (panel E1a), and perceived commitment (panel E1b), separately for male and female applicants. All of the mediation analyses examine the interview likelihood for each type of non-standard and mismatched employment compared to full-time, standard employment at the applicant's skill level. While not presented in the body of the manuscript, Table E1 also includes the perceptions that mediate the consequences of histories of long-term unemployment. Table E1 presents both the average mediation effect as well as the estimated proportion of the total effect that is mediated. The statistically significant mediation effects (where the 95% confidence interval does not include zero) are bolded.

[Table E1 About Here]

Next, I present the mediation analysis using a regression framework, which may be more familiar to many readers. To do this, I implement the "interview likelihood" regression models presented above (Table 2), while controlling for perceived competence and commitment, separately. If perceived competence and commitment account for the effects of non-standard and mismatched employment, the coefficients for each employment history would be expected to attenuate and lose statistical significance once the relevant mechanism (e.g., competence or commitment) is included in the model.

Models 1 and 4 in Table E2 are the same as Models 1 and 2 in Table 2, respectively. Then, to examine whether perceived competence serves as a pathway linking non-standard and mismatched employment histories with male applicants' likelihood of being interviewed, I implemented Model 2 in Table E2. Model 2 replicates Model 1 – the "interview recommendation" likelihood model for male applicants – but includes "perceived competence" in the model. As can be seen, the coefficient for skills underemployment is reduced from -0.747 in Model 1 to -0.386 in Model 2 and loses statistical significance. This finding suggests that perceived competence plays a role in mediating the negative consequences of skills underemployment for men. Model 3 examines the mediating consequences of perceived commitment for male applicants. The coefficient for part-time work is attenuated in Model 3, compared to Model 1, and loses statistical significance, which indicates that perceptions of commitment likely are important in explaining the consequences of part-time work for men.

[Table E2 About Here]

Model 5 examines the role of perceived competence in accounting for the consequences of skills underemployment for female applicants. The coefficient for skills underemployment is reduced from -0.610 in Model 4 to -0.049 in Model 5 and loses statistical significance, indicating an important role for perceived competence in mediating the consequences of skills underemployment for women. Finally, Model 6 explores how perceived commitment influences the consequences of non-standard and mismatched employment for female applicants. The coefficients and statistical significance levels in Model 6 are very similar to those in Model 4, suggesting that perceived commitment plays a limited role in mediating the consequences of skills underemployment for women. The results from the regression-based mediation analysis generally correspond to the findings using the Imai et al. (2010) method.

TABLES & FIGURES

Table 1. Survey Experiment Respondent and Firm Characteristics

	Sample Percent/Median	National Estimates
Respondent Characteristics		
Male	52.9%	49.3%
Race/Ethnicity		
White	74.6%	83.8%
Black	11.5%	8.6%
Hispanic	8.9%	8.5%
Asian	6.8%	5.1%
Other Race	2.2%	--
Education		
High School or Less	7.6%	16.3%
Some College	17.6%	31.6%
College	53.7%	35.4%
Graduate School	21.2%	15.8%
Income (Median)	$67,500	$81,462
Age (Median)	40.5	44.3
Job Tenure in Years (Median)	5	--
Firm Characteristics	**Sample Percent**	**National Estimates**
Number of Employees		
Fewer than 10	17.4%	78.6%
Between 10 and 99	37.9%	19.6%
Between 100 and 499	18.8%	1.5%
500 or more	26.0%	0.3%
Industry		
Agriculture, Mining, Construction	5.4%	13.6%
Education and Health	16.6%	11.8%
Financial and Information	16.3%	10.3%
Leisure and Hospitality	7.5%	10.0%
Manufacturing	14.4%	4.7%
Professional and Business Services	16.8%	24.7%
Public Administration	4.9%	5.6%
Retail	9.3%	11.7%
Transportation, Utilities, Wholesale	8.3%	8.5%
Other	0.7%	0.2%
Sample Size	903	

Notes: National estimates of the respondent characteristics are derived from various sources at the Bureau of Labor Statistics. Details are discussed in Appendix D. National firm characteristic estimates are from the U.S. Census Bureau, 2008 Statistics of U.S. Businesses. Collapsing some categories from the Census data was necessary to align the data with the survey firm size and industry categories.

Table 2. Logistic Regression Models of the Consequences of Non-Standard and Mismatched Employment Histories on Being "Very Likely" to be Recommended for an Interview

	Male Applicants (1)	**Female Applicants** (2)
Employment History		
Full-Time (omitted)	--	--
Part-Time	-0.513*	-0.255
	(0.236)	(0.220)
Temporary Agency	-0.445	-0.127
	(0.235)	(0.222)
Skills Underemployment	-0.747**	-0.610**
	(0.270)	(0.233)
Unemployment	-0.447*	-0.320
	(0.195)	(0.182)
Constant	-0.734***	-0.513***
	(0.178)	(0.163)
n (clusters)	439	452
n (observations)	878	904

Statistical Significance (two-tailed tests): * $p < .05$; ** $p < .01$; *** $p < .001$

Notes: Clustered standard errors in parentheses. Log-odds presented. All models include controls for the order in which the resumes were presented, the format of the resume, and the name on the resume.

Table B1. Distribution of Applications Submitted in Experimental Audit Study

	Frequency	Percent
Employment History		
Full-Time	665	27.5%
Part-Time	361	14.9%
Temporary Agency	327	13.5%
Skills Underemployment	342	14.1%
Unemployment	725	30.0%
Total	**2,420**	**100.0%**
Demographic Group		
Male	1,198	49.5%
Female	1,222	50.5%
Total	**2,420**	**100.0%**
Labor Market		
Atlanta	318	13.1%
Boston	484	20.0%
Chicago	404	16.7%
Los Angeles	484	20.0%
New York City	730	30.2%
Total	**2,420**	**100.0%**
Occupation		
Accounting/Bookkeeping	372	15.4%
Administrative/Clerical	416	17.2%
Project Management/Management	828	34.1%
Sales	804	33.2%
Total	**2,420**	**100.0%**

Source: Experimental audit study data.

Table C1. Logistic Regression Models of the Consequences of Employment Histories for Receiving a "Callback" from an Employer, by Applicant Gender

	Male Applicants (1)	Female Applicants (2)	All Applicants (3)
Employment History			
Full-Time (omitted)	--	--	--
Part-Time	-0.821*	0.0484	-0.821*
	(0.341)	(0.272)	(0.341)
Temporary Agency	-0.419	-0.251	-0.419
	(0.285)	(0.305)	(0.285)
Skills Underemployment	-0.859*	-0.748*	-0.859*
	(0.397)	(0.348)	(0.397)
Unemployment	-0.960**	-0.352	-0.960**
	(0.294)	(0.255)	(0.294)
Interactions			
Part-Time X Female	--	--	0.869*
	--	--	(0.436)
Temporary X Female	--	--	0.168
	--	--	(0.417)
Underemployed X Female	--	--	0.111
	--	--	(0.528)
Unemployed X Female	--	--	0.608
	--	--	(0.389)
Female Applicant	--	--	0.00457
	--	--	(0.254)
Constant	-2.158***	-2.154***	-2.158***
	(0.179)	(0.181)	(0.179)
n (clusters)	599	611	1210
n (observations)	1198	1222	2420

Statistical significance (two-tailed tests): * $p < .05$; ** $p < .01$; *** $p < .001$

Notes: Clustered standard errors in parentheses. Log-odds presented.

Table E1. Mediation Analysis of the Role of Perceived Competence and Commitment in Explaining the Effects of Non-Standard and Mismatched Employment Histories on Interview Recommendations

E1a. Perceived Competence

	Male Applicants		Female Applicants	
	Average Mediation	**Proportion of Total Effect Mediated**	**Average Mediation**	**Proportion of Total Effect Mediated**
Part-Time	-0.008	0.098	--	--
	[-.042, .028]	--	--	--
Temporary Agency	-0.037	0.470	--	--
	[-.074, -.000]	--	--	--
Skills Underemployment	**-0.090**	0.685	**-0.109**	0.941
	[-.128, -.053]	--	**[-.150, -.066]**	--
Unemployment	**-0.032**	0.366	**-0.077**	1.000
	[-.063, -.001]	--	**[-.114, -.041]**	--

E1b. Perceived Commitment

	Male Applicants		Female Applicants	
	Average Mediation	**Proportion of Total Effect Mediated**	**Average Mediation**	**Proportion of Total Effect Mediated**
Part-Time	**-0.037**	0.404	--	--
	[-.072, -.000]	--	--	--
Temporary Agency	-0.031	0.335	--	--
	[-.068, .006]	--	--	--
Skills Underemployment	**-0.040**	0.318	-0.034	0.301
	[-.077, -.003]	--	[-.073, .004]	--
Unemployment	-0.008	0.098	**-0.035**	0.497
	[-.038, .023]	--	**[-.070, -.001]**	--

Notes: 95% confidence intervals in brackets. Estimates derived from 1,500 simulations and standard errors are clustered by respondent. Bolded "Average Mediation" estimates indicate that the confidence interval does not include zero.

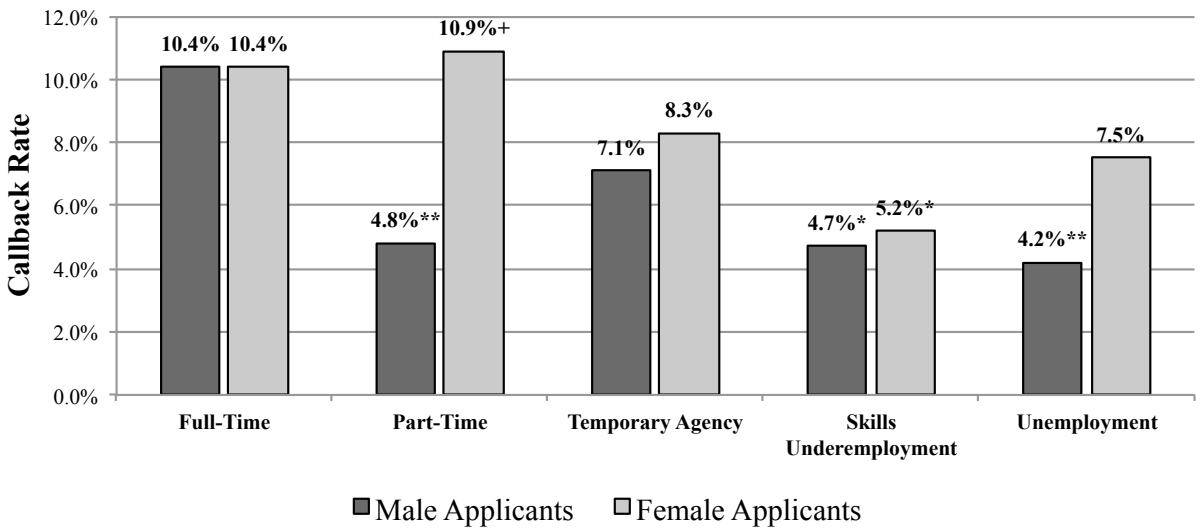
Table E2. Logistic Regression Models of the Consequences of Non-Standard and Mismatched Employment Histories on Being "Very Likely" to be Recommended for an Interview, Including Mediator Variables

	Male Applicants			Female Applicants		
	(1)	(2)	(3)	(4)	(5)	(6)
Employment History						
Full-Time (omitted)	--	--	--	--	--	--
Part-Time	-0.513*	-0.641*	-0.436	-0.255	-0.153	-0.100
	(0.236)	(0.288)	(0.280)	(0.220)	(0.267)	(0.246)
Temporary Agency	-0.445	-0.348	-0.501	-0.127	-0.001	-0.133
	(0.235)	(0.273)	(0.288)	(0.222)	(0.267)	(0.266)
Skills Underemployment	-0.747**	-0.386	-0.762*	-0.610**	-0.049	-0.553*
	(0.270)	(0.318)	(0.344)	(0.233)	(0.271)	(0.260)
Unemployment	-0.447*	-0.461*	-0.583**	-0.320	0.055	-0.220
	(0.195)	(0.232)	(0.222)	(0.182)	(0.228)	(0.210)
Perceived Competence	--	2.293***	--		2.386***	--
	--	(0.227)	--		(0.286)	--
Perceived Commitment	--	--	2.139***		--	1.864***
	--	--	(0.186)		--	(0.181)
Constant	-0.734***	-1.177***	-0.899***	-0.513***	-1.305***	-0.914***
	(0.178)	(0.233)	(0.226)	(0.163)	(0.238)	(0.214)
n (clusters)	439	439	439	452	452	452
n (observations)	878	878	878	904	904	904

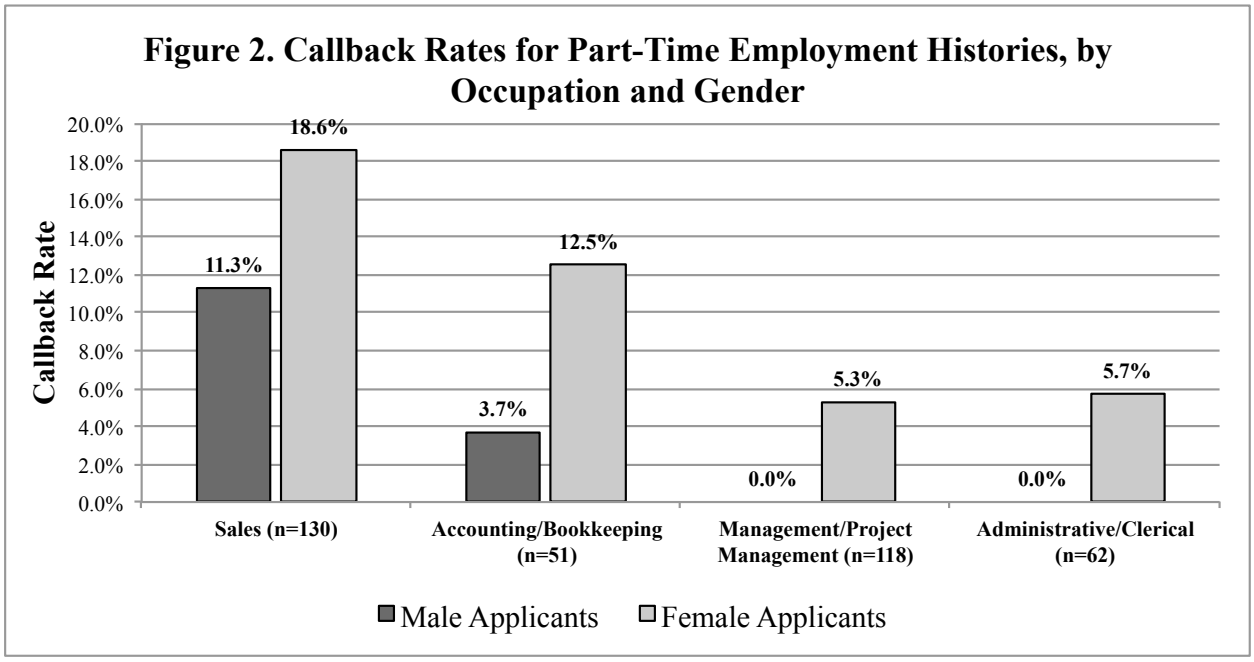
Statistical Significance (two-tailed tests): * $p < .05$; ** $p < .01$; *** $p < .001$

Notes: Clustered standard errors in parentheses. Log-odds presented. All models include controls for the order in which the resumes were presented, the format of the resume, and the name on the resume.

Figure 1. Callback Rates, by Employment History and Gender



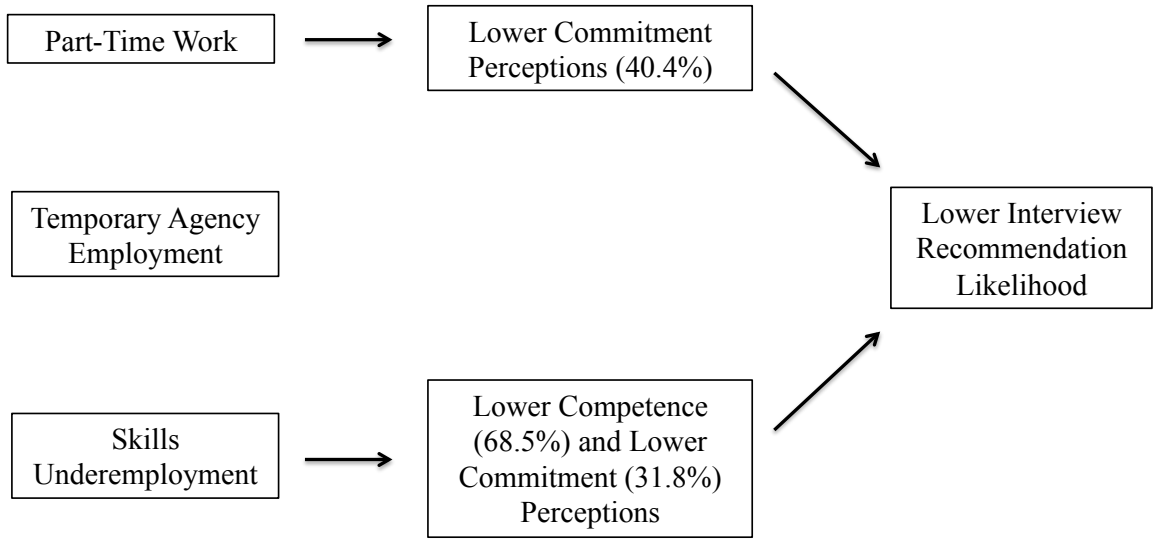
Statistical significance (two-tailed tests) comparing given employment history to full-time employment history: * $p < .05$; ** $p < .01$; *** $p < .001$
Statistical significance (two-tailed tests) comparing male and female workers in the same employment history category: $^{+}p < .05$
Notes: All statistical tests are *z*-tests for differences in proportions.
Source: Original experimental audit study data.



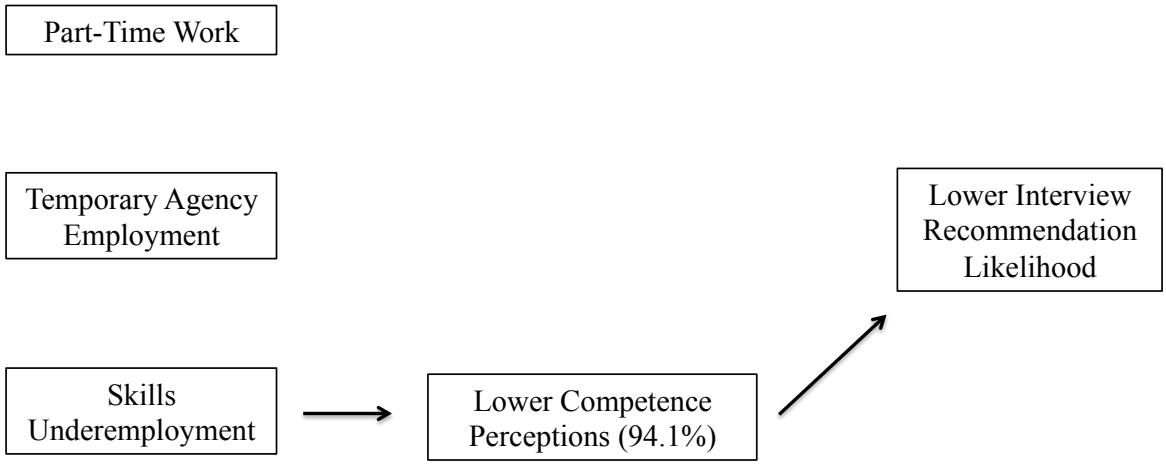
Source: Original experimental audit study data.

Figure 3. Summary of the Mediating Effects of Perceived Competence and Commitment on Interview Recommendation Likelihood

3a. Summary of Mediation Analysis for Male Applicants



3b. Summary of Mediation Analysis for Female Applicants



Notes: Proportion of total effect mediated included in parentheses. Each employment history category is compared to a history of full-time, standard employment at the worker's skill level. Only the statistically significant mediation effects (at the .05 level) for male and female applicants are presented. The full mediation analysis results are presented in Appendix E.