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Employability and job search behavior: A six-wave longitudinal study of Chinese university graduates

Introduction

A considerable amount of research attention has been devoted to the concept of employability (Clarke and Patrickson, 2008; Rothwell et al., 2008; Kang *et al.*, 2012) revealing its multi-facetedness (Forrier and Sels, 2003). Rothwell *et al.* (2008) defined graduate employability as 'the perceived ability to attain sustainable employment appropriate to one's qualification level'. Being studied from different angles employability is perceived as a component of higher productivity (Fugate *et al.*, 2004). It has impact on health and wellbeing of employees (De Cuyper *et al.*, 2009). Employees are encouraged to take responsibility for how to respond to challenges with regard to work, their employment and organizations (Hiltrop, 1995; Clarke and Patrickson, 2008).

In the higher education context policy makers and managers have to face a paradox: making the higher education system available for the masses and ensuring the employability of the graduates and the efficiency of the system (Chillas, 2010; Kulkarni and Nithyanand, 2013). In recent decades, there has been a trend of shifting from an elite to a mass higher education system across developed countries and emerging countries such as China (Shen and Darby, 2006; Li *et al.*, 2008; Scurry and Blenkinsopp, 2011). China presents a prime example of a country shifting to mass higher education (Zhiwen and Van Den Heijden, 2008; Li and Zhang, 2010). In 1999

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4 the Chinese government expanded the higher education sector in response to the trend
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6 of international trade and the shortage of highly qualified manpower (Bai, 2006).
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9 The number of graduates with a bachelor degree from higher education institutions
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11 was 5,754,245 in 2010, 6,081,565 in 2011, 6,247,338 in 2012 and 6,387,210 in 2013
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13 (National Bureau of Statistics of China, 2014). According to Yang (2014),
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15 employment rates for recent graduates were 67.1% in 2009, 72.2% in 2011, and 71.9%
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17 in 2013. University graduates are meeting tremendous difficulties in securing jobs that
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19 matched their qualification (Li *et al.*, 2008; Wang and Moffatt, 2008; Li *et al.*, 2010;
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21 Wang *et al.*, 2012), hence there have even been concerns about their ‘over education’,
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23 ‘over qualification’ and ‘underutilization’ (Scurry and Blenkinsopp, 2011).
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29 Graduate employability has become a major concern for all higher education
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31 stakeholders including universities, governments, employers and the graduates
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33 themselves. Cai (2013) pointed to the potential imbalance between the supply of
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35 labor and the skills required by the labor market. Concerns are raised about how
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37 seriously stakeholders address the over-education. Seen by Li *et al.* (2008) and later
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39 by Li *et al.* (2010) as an evolving trend since the middle of the 1990s in China, the
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41 over education in the country is arguably of a temporary nature as the percentage of
42
43 highly educated workers in China has not reached the corresponding figure of the
44
45 international average. Despite being portrayed as a contemporary phenomenon and
46
47 shared optimism regarding over education of the graduates in China (Li *et al.*, 2008),
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49 researchers including the authors of this paper believe that measures need to be taken
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51 to address the potential threats imposed by over education. The potential
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4 consequences include devaluation of education (Dolton and Vignoles, 2000), decrease
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6 in productivity of individuals (Tsang, 1987) and may lead to a wage penalty in the
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8 short to medium term (Diem and Wolter, 2014).
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11 For these reasons, graduate unemployment is now considered by many
12
13 researchers to be a serious socio-economic issue (Jin *et al.*, 2009; Moorman, 2011),
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15 which has an impact on the experience of student learning and their confidence in
16
17 finding a job after graduation.
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21 Graduate employment has been a critical benchmark for measuring
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23 performance at an institutional level seen through the prism of institutional constraint
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25 (such as hukou for instance) (Wang and Moffatt, 2008), yet examination of how
26
27 individual students get employment has received less attention (Harvey, 2001). Due
28
29 to the vast changes taking place in the labor market, including job deterioration,
30
31 employability has become the central concern for prospective graduates (Berntson *et*
32
33 *al.*, 2008; Kang *et al.*, 2012) and universities have been criticized for not sufficiently
34
35 preparing their graduates for employment. It is therefore important to understand how
36
37 graduates' perception of their own employability impacts on their job search process,
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39 so as to develop relevant support strategies for their chances of success after
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41 university education.
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51 In the human resources development and vocational study literature, most
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53 studies have focused only on the effects of employability on reemployment, salary,
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55 job satisfaction, and job performance (Clarke and Patrickson, 2008; De Cuyper *et al.*,
56
57 2009), with little attention to the effects of perceived employability as a motivational
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4 factor. Moreover, the antecedents of job search behavior have been extensively
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6 analyzed by a number of experts using theory of planned behavior (Kanfer *et al.*, 2001;
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8 Saks *et al.*, 2005), yet limited research has examined the role of graduate perceived
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10 employability on the process.
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14 Furthermore as acknowledged by Wang and Moffatt (2008) studying graduate
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16 job search in China involves a range of constraints mainly due to difficulties in
17
18 obtaining the data and the nature of the job search phenomenon, which is still not that
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20 widespread. Yue *et al.* (2004) revealed the importance of academic performance and
21
22 that the information support from the university positively influenced a graduate's
23
24 ability to find a job with no noticeable effect on job search intensity and specific
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26 search skill trainings. Zhou (2003) also identified that university support has a
27
28 positive impact on the probability of getting the job. In a more recent study Wang and
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30 Moffatt (2008) provided evidence of the positive relationship between efforts made by
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32 the graduates and job search outcome; the role of the university was also
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34 acknowledged due to the ability of the latter to assists in the university-labor market
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36 transition. In their article focused on postgraduate Chinese students Li *et al.* (2010)
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38 called for maximization of the utilization of job search related information channels,
39
40 thus reducing information asymmetry between the graduates and the job market. In
41
42 a recent study by Li *et al.* (2015) conducted in 14 higher education institutions from
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44 four cities in China, evidence was provided to show that those graduates who search
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46 for jobs more frequently have more chance of being successful in finding a job with a
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48 higher starting salary, whereas higher job search associated expenditures do not lead
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4 to a greater probability of being successful in finding a job.

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7 The aim of this study is thus to fill the gaps in the literature by drawing upon
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9 Higgins' (1997) regulatory focus theory to study the role of graduate perceived
10
11 employability in their job search behavior. Using a strong research design with
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13 repeated measures by collecting six-wave longitudinal data with a sample of
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15 university students in China, we attempt to find out: a) how perceived employability
16
17 affects the trends of job search self-efficacy and intensity, and b) how job search
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19 self-efficacy, subjective norms, intention and intensity change over time.
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25 The study is unique in its ability to integrate the construct of perceived
26
27 employability and the theory of planned behavior as a more holistic approach to
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29 explain the job search behavior of university graduates. Our study extends the theory
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31 of planned behavior in studying graduate job search behavior, and provides evidence
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33 to support the prediction regarding perceived employability based on regulatory focus
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35 theory, hence helping to generate a better understanding of the motivational variables
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37 in relation to graduate job search behavior.
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46 **Theory and hypotheses**

47 ***The theory of planned behavior***

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50 The theory of planned behavior has been widely cited in the job search literature
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52 and is considered to be a solid model to study the job search mechanisms (Fugate *et*
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54 *al.*, 2004; Song *et al.*, 2006; Mcardle *et al.*, 2007; Zikic and Saks, 2009). The model
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3 was developed to explain how goals and plans determine behavior. According to this
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5 theory, the best predictor of behavior is the intention to perform the actions. Job
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7 search intention can act as the most immediate predictor of job search behavior (Song
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9 *et al.*, 2006) and intention is directly predicted by subjective norms, attitudes toward
10
11 the actions, and perceived behavioral control (Ajzen, 1991).
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17 Subjective norms are individual's perceived social pressure to perform or not to
18
19 perform the behavior (Ajzen, 1991). In the literature, subjective norms are formed by
20
21 beliefs of unemployed individuals on the basis of expectations of others to exert effort
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23 toward finding a job (Wanberg *et al.*, 2005). The central role is played by the pressure
24
25 to conform to the behavior of the influencing group of people (Asch, 1951). The
26
27 individual may face approval or sanctions from the people, especially the ones who
28
29 are closest to the job seeker, for example, family, relatives and friends (Vinokur and
30
31 Caplan, 1987).
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38 In the process of job search, the intention is formed on the basis of the
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40 magnitude of effort put into the process by the individual. Attitude toward the
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42 behavior is reflected by an unemployed individual's cognitive or affective evaluation
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44 of the effort. Thus one individual may think that the process of finding a job is routine
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46 and even futile, whereas another individual believes that hard work is needed in order
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48 to find a job. As intentions capture the motivational factors that determine behavior,
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50 there is a positive influence of stronger intention on the performance and as a result
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52 on greater intensity (Wanberg *et al.*, 2005).
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4 Perceived behavioral control, which refers to the expected difficulty, has been
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6 operationalized as job search self-efficacy, an individual's confidence in performing
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8 job search behavior well (Song *et al.*, 2006; Zikic and Saks, 2009).
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12 Many studies analyzing job search behavior took into consideration job search
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14 intensity, seen by some contributors as the frequency of actions which are undertaken
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16 by the job seeker (Van Hooft *et al.*, 2004; Saks *et al.*, 2005) or as the amount of time
17
18 that a job seeker spends searching for jobs (Wanberg *et al.*, 2010), whereas others
19
20 believe that job search intensity is reflected in the degree of efforts performed by job
21
22 seekers (Blau, 1993, Sun *et al.*, 2013).
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28 The current study follows the approach used by Song *et al.* (2006) and Kanfer *et*
29
30 *al.* (2001), in which they measure job search intensity as frequency of an individual's
31
32 job search behaviors, for instance sending out resumes and having interviews. In
33
34 contrast to the approach used by Wanberg *et al.* (2010) which assess the intensity in a
35
36 short period of time, our study considers the long-term job search dynamics.
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41 Recently a number of studies have applied the theory of planned behavior to test
42
43 the relationships among the variables of job search attitude, subjective norm,
44
45 self-efficacy, intention, and intensity (Van Hooft *et al.*, 2004; Wanberg *et al.*, 2005;
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47 Song *et al.*, 2006, Zikic and Saks, 2009). Following this strand of studies we posit the
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49 following:
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54 **Hypothesis 1.** (a) *Job search self-efficacy, (b) attitude and (c) subjective norm*
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56 *are positively related to job search intention.*
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4 **Hypothesis 2.** (a) *Job search intention and (b) self-efficacy are positively*
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6 *related to job search intensity.*
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9 **Hypothesis 3.** *Job-search intention mediates the relationship between: (a) job*
10
11 *search self-efficacy, (b) attitude, (c) subjective norm and job search intensity.*
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14 ***Perceived employability and self-efficacy***

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21 A considerable amount of research attention has been devoted to the
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23 conceptualization of employability revealing its multi-facetedness (Forrier and Sels,
24
25 2003). The concept gradually developed over the last century, reflecting the labor
26
27 market demand (Froehlich *et al.*, 2014). In the early stages, employability was
28
29 characterized largely by the view from an economic perspective to meet the needs of
30
31 achieving full employment. Therefore the focus of employability was on attitudes
32
33 towards work and self-image. Later the development of employability concept
34
35 presents the existence of a diverse range of views on what determines employability
36
37 and its role. Moreover, employability is also seen as a form of adaptability of
38
39 individuals which has been studied extensively from an organizational change
40
41 perspective (Fugate *et al.*, 2004; De Cuyper *et al.*, 2008; Van Emmerik *et al.*, 2012).
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48 Rothwell *et al.*, (2008) examine employability from the perspective of individuals, i.e.
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50 what they believe their chances of successfully getting a particular type of work are.
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52 Specifically, they define the term as: ‘the perceived ability to attain sustainable
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54 employment appropriate to one’s qualification level’. We adopt this definition in the
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4 current study because it fits in with our research context and central concern.
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6 Perceived employability is conceptually related to self-efficacy, which is defined as
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8 the 'beliefs in one's capabilities to organize and execute the courses of action required
9
10 to produce given attainments' (Bandura, 1982). But the two are distinct constructs.
11
12 Berntson *et al.* (2008) empirically verified that the measures of employability and
13
14 self-efficacy were distinct from one another and that perceived employability has
15
16 positive effects on self efficacy. Thus,
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22 **Hypothesis 4.** *Perceived employability is positively related to job search*
23
24 *self-efficacy.*
25
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27 ***Perceived employability and job search behavior***

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30 Perceived employability is a self-concept which is an important contributor to
31
32 global evaluations of the self (Marsh, 1986), and self-evaluation is an important
33
34 source of intrinsic motivation (Shamir *et al.*, 1993). According to Higgins' (1997)
35
36 regulatory focus theory, the motivational principle that underlies self-regulation
37
38 behavior, such as approaching pleasure and avoiding pain, is regulatory focus. There
39
40 are two types of regulatory foci: promotion and prevention. The promotion focus is
41
42 concerned with positive outcomes and the individual is eager to pursue potential
43
44 success, in contrast, the prevention focus is concerned with security or avoiding
45
46 failure and the individual tends to use vigilant strategies guarding against mistakes in
47
48 order to ensure safety and maintain a satisfactory state (Higgins, 1997). Scholer *et al.*
49
50 (2014) show that more positive self-evaluations support the promotion focus, whereas
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52 less positive self-evaluations support prevention focus. As they put it, 'the ways in
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4 which individuals think and feel about themselves play a significant role in guiding
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6 behavior across many domains in life' (Scholer *et al.*, 2014), such as search for a job
7
8 after graduating from university. Following theory of planned behavior, this includes
9
10 variables such as job search attitude, intention and intensity.
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14 Thus, we posit that:

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16
17 **Hypothesis 5.** *Perceived employability is positively related to job search*
18
19 *attitude.*
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23 **Hypothesis 6.** *Perceived employability is positively related to job search*
24
25 *intention.*
26

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29 **Hypothesis 7.** *Perceived employability is positively related to job search*
30
31 *intensity.*
32

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34 The unique framework of the research is represented in Figure 1.
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40 [Figure 1 here]
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Method

Procedure and participants

A 6-wave anonymous questionnaire survey was conducted on a stratified sample of Chinese university graduating students who were not preparing for further study. In the beginning of the first wave, 709 participants from 16 provinces (five in East China, two in South China, two in North China, three in Central China, one in Northeast China, two in Northwest China, one in Southwest China) and 52 universities (11 'Project 985' universities, 9 'Project 211' universities, 32 other universities) attended the survey. Of these participants, 346 (48.8%) were men, 362 (51.1%) were women; 281 (39.6%) were from urban areas, 408 (57.5%) were from rural areas; 301 (42.5%) were students of liberal arts, 130 (18.3%) were students of science, 262 (37.0%) were students of engineering; the average age is 22.86, while the standard deviation is 0.98.

All the participants were asked to participate through disseminated email invitations and classroom announcements. As there are two teaching semesters in China (autumn and spring), the authors of the study expected that the main job searching activities of 2013/2014 graduates took place from October 2012 to January 2013 and from March 2013 to May 2013 respectively. During these two periods the six-wave survey was carried out on a monthly basis. The survey was divided into two parts (A and B) in Wave 1, in which Part A included stable demographic characteristics (i.e. control variables) and employability, whereas Part B measured job search self-efficacy, job search attitude, subjective norm, and job search intention.

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4 The four variables in part B of Wave 1 and job search intensity were found to be
5
6 unstable over time in the job search process. This is also confirmed by Wanberg *et al.*
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8 (2005), Wanberg *et al.* (2010) and Sun *et al.* (2013), therefore they are measured
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10 repeatedly from Wave 2 to Wave 5. Wave 6 only contained the measure of job
11
12 search intensity. The dates for data collection are as follows:
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14

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16
17 Wave 1 survey

18
19 (A): 15th October 2012 – 22nd October 2012;
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22 (B): 25th October 2012 – 1st November 2012;
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26 Wave 2 survey: 26th November 2012 – 3rd December 2012;
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29 Wave 3 survey: 4th January 2013 – 11th January 2013;
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32 Wave 4 survey: 18th March 2013 – 25th March 2013;
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35 Wave 5 survey: 18th April 2013 – 25th April 2013.
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38 Wave 6 survey: 20th May 2013 – 27th May 2013.
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41 To reduce attrition due to non-response, we tracked participants unless they
42
43 stopped searching for another job. In total, 709 university graduating students took
44
45 part in the Wave 1 survey (A). We provided the questionnaire survey to 709
46
47 graduating students in the Wave 1 survey (B), 694 effective questionnaires had been
48
49 obtained (of which 159 people had found jobs). We provided the questionnaire survey
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51 to 550 graduating students in Wave 2, 344 effective questionnaires had been collected
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53 (of which 56 people had found jobs). We provided the questionnaire survey to 494
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4 graduating students in Wave 3, 245 effective questionnaires had been obtained (of
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6 which 57 people had found jobs). We provided the questionnaire survey to 437
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8 graduating students in Wave 4, 181 effective questionnaires had been received (of
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10 which 35 people had found jobs). We provided the questionnaire survey to 402
11
12 graduating students in Wave 5, 113 effective questionnaires had been received (of
13
14 which 46 people had found jobs). We provided the questionnaire survey to 356
15
16 graduating students in Wave 6, 67 effective questionnaires had been received. Each
17
18 wave of the samples lost some participants mainly because they were not willing to
19
20 continue to participate in the survey or were not able to complete the distributed
21
22 questionnaires within a required timeslot. To conduct lagged analysis, we matched
23
24 each individual's job search self-efficacy, subjective norm, attitude, intention at Wave
25
26 t with that person's job search intensity at Wave $t+1$. One advantage of using the
27
28 repeated measures in our graduate sample is to help to minimize the impact of
29
30 potential endogeneity, an issue of explanatory variables being correlated with the error
31
32 term which might cause incorrect estimates.
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42 **Measures**

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45 *Perceived employability.* The questionnaire used in this study was based on the
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47 work of Rothwell *et al.* (2008). A 16-item scale was used to assess perceived
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49 employability (e.g. 'I achieve high grades in relation to my studies'). Items were
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51 scored on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).
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55 Reliability (coefficient alpha) is 0.86.

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58 *Job search self-efficacy.* The researchers adapted items from Song *et al.* (2006)
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4 and the participants were asked to indicate how confident they were of being able to
5
6 do those eight activities related to job search self-efficacy. Items included, for
7
8 example, 'Making the best impression and getting the point across in an interview'.
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10 The responses ranged from 1 (not at all) to 5 (a great deal). Reliability (coefficient
11
12 alpha) across the five waves is 0.83.
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17 *Job search attitude.* This scale consists of instrumental (three items) and
18
19 affective (four items) job search attitude measurements. The instrumental job search
20
21 attitude measurement developed by Song *et al.* (2006) was employed by the
22
23 researchers. An example of the instrumental item is 'How useful is it for you to spend
24
25 enough effort in the next month to find a job' (from '1=very useless' to '5=very
26
27 useful'). Affective job search attitude was adapted from Van Hooft *et al.* (2004) and
28
29 the participants were asked to indicate whether the job search for them is interesting,
30
31 enjoyable, pleasant or boring (reverse scored). The responses ranged from 1 (strongly
32
33 disagree) to 5 (strongly agree). Reliability (coefficient alpha) across the five waves is
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35 0.78.
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43 *Subjective norm.* Two items were adapted from Song *et al.* (2006) to measure
44
45 the subjective norm, an example being 'In the next month, how much effort does your
46
47 spouse or the person closest to you think you should spend to get a job?'. The
48
49 responses were on a 5-point scale with anchors 1 (no effort) to 5 (a lot of effort).
50
51 Reliability (coefficient alpha) across the five waves is 0.84.
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56 *Job search intention.* Job search intention was measured with two items (Song
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58 *et al.*, 2006). For instance: 'In the next month, how hard do you intend to look for a
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4 job??. Items were scored on a 5-point scale, ranging from 1 (no effort) to 5 (a lot of
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6 effort). Reliability (coefficient alpha) across the five waves is 0.87.
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10 *Job search intensity.* The questionnaire consists of 19 items, 16 of which were
11
12 adapted from Blau (1993). Some amendments to the original set of items were needed
13
14 as a number of them were specifically designed for company employees. An example
15
16 item is 'Read the help wanted/classified advertisement in a newspaper, journal, or
17
18 professional association'. In order to be more relevant to the Chinese context, three
19
20 additional items based on the actual situation in China were incorporated. The
21
22 researchers asked the participants to respond on a 5-point scale (from '1=strongly
23
24 disagree' to '5=strongly agree'). Reliability (coefficient alpha) across the five waves
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28
29 is 0.92.
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32 ***Control variables***

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35 Due to the potential influence of the demographic characteristics of the
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37 graduates (gender, age, and origin of the participants (i.e. native place)), the
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39 researchers introduced these variables to control their impact on job search behavior.
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43 ***Analyses***

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46 Data were analyzed by means of SPSS19.0, Mplus 7.0 and HLM6.08. Given
47
48 that the data of this study are hierarchically nested within individuals, the researchers
49
50 conducted two levels of analysis: within-person (Level 1) and between-person (Level
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52 2). Job search efficacy, job search attitude, subjective norm, job search intention, and
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54 time dimension were formed into Level 1 variables, due to multiple within-person
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3 observations. Level 2 analysis consists of control variables and perceived
4 employability measures. All the variables from Level 1 and Level 2 analysis were
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6 group-mean centered as a way to avoid multicollinearity of the interaction terms with
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8 their corresponding main effects. The adapted centering methods are consistent with
9
10 the results.
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15 16 17 **Results**

18 19 *Descriptive statistics and confirmatory factor analyses*

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22 Descriptive statistics are provided in Table 1, which shows the means, standard
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24 deviations, reliability coefficients, intra-class correlations (ICCs) of the key variables,
25
26 and inter-correlations at both between-person and within-person analysis levels.
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31 [Table 1 here]
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34 The ICCs of variables in various waves indicated that there is a significant
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36 amount of within-person variation across months, and therefore within-person level
37
38 analysis was legitimate in this study. The results indicated that the correlation between
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40 perceived employability, job search self-efficacy, attitude, subjective norm, intention
41
42 and intensity were significant, except the relationship between perceived
43
44 employability and subjective norm.
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50 Before testing the hypotheses, we first conducted a set of confirmatory factor
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52 analyses (CFAs) to evaluate the measurement models for the constructs (i.e.
53
54 employability, job search self-efficacy, subjective norm, attitude, intention, and job
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56 search intensity). According to Bagozzi and Yi (1988) and Hooper *et al.* (2008), the
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4 generally accepted cutoff criteria are: ratio of χ^2 statistics to the degree of freedom (df)
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6 not larger than 2 is a good fit; comparative fit index (CFI) larger than 0.90 indicates
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8 satisfactory fit (larger than 0.95 is a good fit); a non-normed fit index (NNFI) or the
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10 Tucker-Lewis index (TLI) larger than 0.90 is a satisfactory fit (larger than 0.95 is a
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12 good fit); a root mean square error of approximation (RMSEA) smaller than 0.07 is a
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14 good fit, and a standardized root mean square residual (SRMR) smaller than 0.08 is a
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16 good fit. The results of the CFAs in Table 2 show that the indices of CFI and TLI were
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18 satisfactory and the remaining indices are a good fit.
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24 [Table 2 here]
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27 *Tests of hypotheses*

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30 To test Hypotheses 1 – 3, we followed the procedures suggested by Baron and
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32 Kenny (1986) and the results are presented in Table 3. Firstly, we regressed the
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34 dependent variable (job search intensity) on the control variables (gender, age, and
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36 origin) and the independent variables (job search self-efficacy, attitude and subjective
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38 norm). The coefficients indicate job search self-efficacy, attitude and subjective norm
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40 are positively associated with job search intensity, while gender is negatively
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42 associated with it. Secondly, we regressed the mediating variable (job search intention)
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44 on the control variables (gender, age, and origin) and the independent variables (job
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46 search self-efficacy, attitude and subjective norm). The coefficients indicate that job
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48 search attitude, subjective norm (with the exception of job search self-efficacy) are
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50 positively associated with job search intention, while gender is negatively associated
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52 with it. Finally, we regressed the dependent variable (job search intensity) on the
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4 control variables (gender, age, and origin), the independent variables (job search
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6 self-efficacy, attitude and subjective norm), and the mediating variable (job search
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8 intention). The coefficients indicate that job search self-efficacy, attitude, subjective
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10 norm and job search intention are positively associated with job search intensity,
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12 while gender is negatively associated with it. Based on the above evidence we can
13
14 conclude that Hypothesis 2 was supported, while Hypotheses 1 and 3 were partially
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16 supported. In particular, job search efficacy did not predict job search intention
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18 significantly, and thus job search intention did not mediate the relationship between
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20 job search efficacy and job search intensity.
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27 [Table 3 here]
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30 To test Hypotheses 4 – 7, we estimated four multilevel models with
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32 between-person main effects and the results are presented in Table 4. As expected,
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34 individuals with higher perceived employability significantly predicted a higher mean
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36 level of job search self-efficacy, job search attitude, job search intention and job
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38 search intensity over time, thus Hypotheses 4 – 7 were supported.
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42 [Table 4 here]
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45 ***Supplementary analysis*** 46 47

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49 Given the longitudinal nature of our data, we further used a set of unconditional
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51 HLM models to examine within-individual change over time for each repeated
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53 measure (job search self-efficacy, attitude, subjective norm and job search intensity)
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55 before we tested our hypotheses, and the results are presented in Table 5. We found all
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4 the variables (except job search attitude) decreased over time. It was found in the
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6 literature that workers who are less likely to get jobs become discouraged and
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8 eventually reduce their search intensity. An individual may change the level of
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10 job-search intensity (i.e. fewer job applications sent) over time for reasons including a
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12 personal tendency to get discouraged or increased uncertainty about what to do next
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14 in the job search (Wanberg et. al., 2005). It is rather interesting to note that job
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16 search attitude does not show significant decrease over time.
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22 [Table 5 here]
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25 As shown in Table 5, the slope coefficients for job search self-efficacy,
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27 intention, and intensity (with the exception of job search attitude) reflected a
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29 significantly negative linear trend over time. To test whether perceived employability
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31 plays a moderating role on the time trend of job search self-efficacy, intention and
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33 intensity, we established a set of multilevel models, and the results are presented in
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35 Table 6. The intercept terms (perceived employability for time slope) on both job
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37 search self-efficacy and intensity were positively significant, while the intercept term
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39 on job search intention was statistically insignificant. It indicates the individuals who
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41 had not yet found a job and with higher perceived employability suffered much faster
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43 decreases on both job search self-efficacy and intensity during graduate job hunting.
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50 [Table 6 here]
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Discussion and conclusion

The main purpose of this study was to explore the role of graduate perceived employability on the job search process by extending the theory of planned behavior. The results of this study have both theoretical and practical implications.

Theoretical implications

The present research has three major contributions to theory. First, the major finding is that graduate perceived employability has a positive significant effect on job search self-efficacy, attitude, intention and intensity. This finding suggests that graduates who perceived a higher level of employability (this can be obtained through higher education) are more confident of being able to perform the job search process well, have a positive attitude and intense intentions of looking for a job as well as putting much effort into the job search. These findings represent an important extension of job search research, which has often been neglected it as one of the key factors influencing job search behavior (Zikic and Saks, 2009).

Second, this study shows that all the repeated measuring variables (except job search attitude) decreased over time. Upon completion of their studies, the longer the graduates stay unemployed, the less effort they put into the job search process. After four years of studying at the university, job search will give them higher perceived employability, so they engage in promotion-focused regulatory behavior, i.e. they are eager to look for a job, and try their best to find a job. As time passes, those being rejected several times adjust their self-perception of employability to a lower level and focus on prevention regulatory behavior to avoid more job search failure

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4 (Higgins, 1997; Scholer *et al.*, 2014). Unsuccessful job searchers experience a decline
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6 in self-efficacy (confidence loss), intention and intensity, therefore a negative trend
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8 for those variables was observed over time in the present study. Furthermore, the
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10 findings of the study indicate that job search self-efficacy and intensity declined less
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12 for individuals with higher levels of perceived employability. The results add further
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14 evidence to the regulatory focus theory (Higgins, 1997; Scholer *et al.* , 2014) as
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16 applied in the job search context. However, we also find that the subjective norm
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18 decreased over time. This contradicts the conclusions made in Wanberg *et al.* (2005).
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20 It is possible that after Chinese university graduates fail in their job search, parents
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22 will help their children to find a job through their social network due to the Chinese
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24 cultural concept: guanxi. We found that the slope for job search attitude was not
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26 statistically significant. This is also in contrast to the finding of Wanberg *et al.* (2005)
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28 that job search attitude shows a negative trend over time. This difference may be
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30 attributed to the different samples, their study examined unemployed individuals who
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32 have already been in the labor market for some time.
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42 Third, the theory of planned behavior within the Chinese context was examined.
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44 The results partially supported the theory of planned behavior in predicting job search
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46 behavior in the Chinese context. Job search attitude and subjective norm were
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48 positively related to intention. Job search intention and self-efficacy were significant
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50 predictors of intensity. Job search intention partially mediated the effects of attitude
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52 and subjective norm on intensity. Job search self-efficacy, however, did not predict
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54 intention. Accordingly, job search intention mediated the effects of attitude and
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4 subjective norm on intensity. Previous research on the relationship between job search
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6 self-efficacy and intention brought mixed results (Van Hooft *et al.*, 2004).
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10 Self-efficacy does not have an effect on job search intention. Some research
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12 implies that self-efficacy doesn't have a significant effect on job search intention (Van
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14 Hooft *et al.*, 2004; Song *et al.*, 2006), while other research shows that self-efficacy
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16 has a weak effect on job search intention (Van Hooft *et al.*, 2004; Zikic and Saks,
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18 2009). The lack of consensus may be due to the following two reasons: firstly, on one
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20 hand job search intention was enhanced as a result of enhancement in self-efficacy,
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22 when job seekers become more confident in searching for a job, they will have strong
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24 job search intention (Ajzen, 1991); on the other hand, it is also conceivable that when
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26 their job search efficacy is high, they may have low job search intention because the
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28 job search process becomes less challenging (Sun *et al.* , 2013). Secondly, the strong
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30 effect that job search attitude had on job search intention in this study may weaken the
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32 influence that job search self-efficacy had on job search intention (Van Hooft *et al.*,
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34 2004). In the same vein Song *et al.* (2006) reached a similar conclusion in the Chinese
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36 context. However, our results were a little different from the results in Song *et al.*
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38 (2006) and shed light on the existing literature in a sense that subjective norm and job
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40 search attitude have positive effects on intention, while self-efficacy does not have an
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42 effect on intention.
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51 52 ***Practical implications*** 53 54

55 The results of the present research have two major implications for practice.
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57 First, our findings show that high self-efficacy and intention motivates job search;
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4 improving graduates' confidence in the job market is essential. Accordingly, to build
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6 confidence in the job market, universities can contribute, for example, by providing
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8 workshops to students for job searching skills, CV improvement and interview skills
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10 (Van Hooft *et al.*, 2004; Wanberg *et al.*, 2005). Additionally, friends and families'
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12 support and encouragement can also enhance graduates' confidence. In this research,
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14 four components are structured to produce the overall measure of university graduates'
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16 perceived employability: self belief (confidence in one's own skills and abilities), my
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18 university (the strength of the university's brand), my field of study (the status and
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20 credibility of the field of study) and the state of the external labor market (perceptions
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22 of the external labor market) (Rothwell *et al.*, 2008). Graduates' perceived
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24 employability can be enhanced through strengthening these four components so that
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26 their self-efficacy and intention are enhanced.
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34 Therefore, it is suggested that universities adjust their support accordingly. For
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36 example, perceived employability enhancement can be achieved as a result of
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38 transformations in university curriculum design, development of new modules and
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40 programs focusing on the actual needs of employers in light of recent advancements
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42 in information technologies and cross national higher education initiatives (Wilton,
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44 2008). Therefore upon the completion of the degree, the graduates are more
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46 self-confident and have positive attitudes towards job search initiatives, which reflect
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48 in their skills, abilities, ambition, and their awareness about job opportunities. Thus
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50 the student's and consequently parents' dilemma of considering the degree for their
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52 children as an opportunistic investment is resolved in a way that reinforces the need to
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4 enhance perceived employability through higher education. Additionally, building a
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6 strong university brand, reputation and enhancing the corporation with recruiters
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8 would also provide more potential job opportunities for graduates (Zikic and Saks,
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10 2009).
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14 Second, our findings show that self-efficacy, intention and intensity gradually
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16 decline over time as a result of a number of unsuccessful job search attempts. This
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18 suggests that for unsuccessful job seekers, more support and help from the university
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20 to enhance its graduates' self-efficacy, intention and intensity are needed. Therefore in
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22 addition to setting employment goals, university careers advisors can develop or (te
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24 Wierik *et al.*, 2014). The engagement in various activities organized by the university,
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26 such as development of the database of potential employers, participation in
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28 on-campus job fairs or attending workshops on how to develop effective resumes,
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30 may help to guide students not just along the path of goal clarification, but along the
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32 job search process. Mentoring programs can focus on expansion of employment
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34 information including how to use alumni resources and networks. As a result the
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36 graduates know that the job search activities eventually lead towards finding an
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38 appropriate job and thus individuals with low intentions will gain confidence in
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40 dealing with difficult situations which require handling the consequences of being
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42 unsuccessful in the process of job search. Thus instead, for instance, of individuals
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44 with high subjective norm relying heavily on support from their parents (through
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46 guanxi), the substantial resources of the alumni group can be used in supporting
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48 graduates' job search (Marmaros and Sacerdote, 2002).
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Limitations and future studies

This study has several limitations that provide avenues for further research. First the participant attrition rate is high in this study, a typical issue in all studies using a repeated measure design (Sun *et al.*, 2013). Future research should take some measures to reduce participant attrition, and to increase the statistical power of the model.

Second, this study only focused on the job search dynamic process (whether an individual is able to find a job or not), future research should take into account the outcomes of job search (i.e. employment status, starting salary and job satisfaction), as well as other factors such as salary increment, job security and promotion in the future.

Third, between-person and within-person variables were only included on the basis of the theory of planned behavior; external variables of industrial globalization, educational globalization, and continual education/economic reform may have a mediating effect on the job search process (Wanberg *et al.*, 2005). Repeated measures of external factors (for instance unemployment rate and consumer sentiment index) should be adopted in future research and integrated into job-search behavior, thus enhancing the model through minimizing the omitted variable bias. Finally, it would provide additional insights if further research includes the data of actually finding a job into this study's research model.

Conclusion

Graduate employability is a key concern for all stakeholders, particularly at a time when the higher education system is increasingly available for the masses. Despite the growing research interest in graduate employability (Cai, 2013) and job search (Berntson *et al.*, 2008; Zikic and Saks, 2009), few studies have attempted to integrate graduate perceived employability and the theory of planned behavior into one framework. In this study, we integrated employability and the theory of planned behavior into one framework to analyze the process of Chinese university graduates' job search behavior. Our findings reveal that perceived employability has a positive and significant effect on job search self-efficacy, attitude, intention and intensity. Thus the study advances our knowledge of graduate employability and its relationship with job search behavior.

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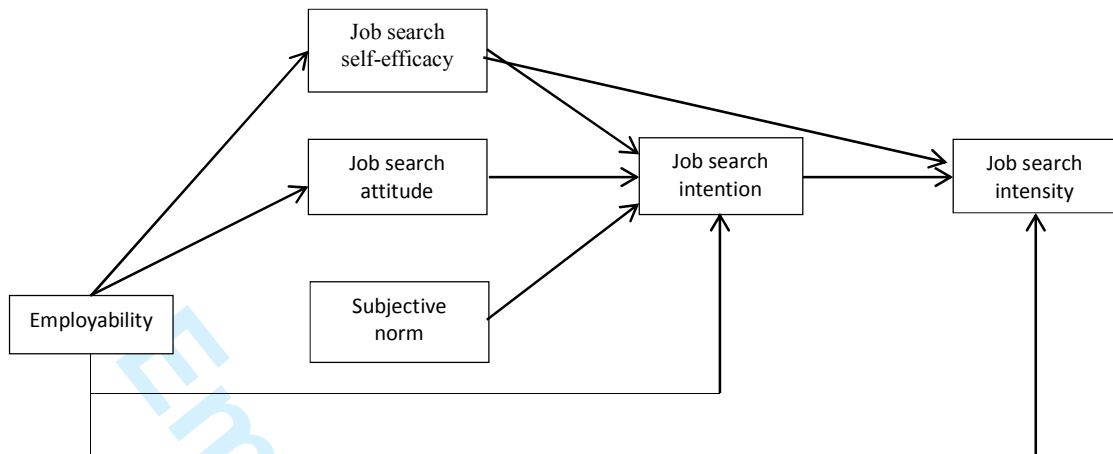
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Figure 1 Employability and the theory of planned behavior



Employee Relations

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Table 1 Descriptive Statistics and Between-Person and Within-Person Correlations

	N	M	SD	ICC	1	2	3	4	5	6	7	8	9
1. Gender	709	.51	.50		-								
2. Age	709	22.86	.98		-.10**	-							
3. Origin	709	.59	.49		-.03	.09*	-						
4. Employability	709	3.07	.58		-.18**	.05	.03	.86					
5. Job search self-efficacy	695	3.26	.52	.281	-.07†	.01	-.06	.30**	.83	.25**	.05†	.12**	.33**
6. Job search attitude	553	3.11	.52	.326	-.10*	.01	.01	.24**	.39**	.78	.47**	.55**	.38**
7. Subjective norm	553	3.25	.69	.305	-.05	.02	.03	.07	.18**	.49**	.84	.60**	.26**
8. Job search intention	553	3.173	.78	.333	-.06	-.01	.04	.12**	.25**	.53**	.62**	.87	.38**
9. Job search intensity	349	2.97	.49	.403	-.14**	.07	-.04	.16**	.33**	.43**	.24**	.36**	.92

Note. Numbers in the lower diagonal of the correlation matrix are between-person level correlations. Numbers in the upper diagonal of the correlation matrix are within-person level correlations. Reliability coefficients are in the diagonal.

†:p<.10,*:p<.05, **:p<.01; For gender:0-male,1-female; For origin: 0-urban, 1-rural.

Table 2 CFA Results for the Measurement Models

	χ^2	<i>df</i>	χ^2/df	<i>CFI</i>	<i>TLI</i>	<i>RMSEA</i>	<i>SRMR</i>
Model 1: Baseline: employability, 1 st wave: job search self- efficacy, subjective norm, attitude, intention 2 nd wave: job search intensity	1804.248	1301	1.387	0.916	0.907	0.032	0.051
Model 2: Baseline: employability, 2 nd wave: job search self- efficacy, subjective norm, attitude, intention 3 rd wave: job search intensity	1727.984	1306	1.323	0.906	0.897	0.033	0.058
Model 3: Baseline: employability, 3 rd wave: job search self- efficacy, subjective norm, attitude, intention 4 th wave: job search intensity	1761.740	1312	1.343	0.898	0.889	0.035	0.063
Model 4: Baseline: employability, 4 th wave: job search self- efficacy, subjective norm, attitude, intention 5 th wave: job search intensity	1688.837	1322	1.277	0.909	0.902	0.032	0.058
Model 5: Baseline: employability, 5 th wave: job search self- efficacy, subjective norm, attitude, intention 6 th wave: job search intensity	1643.672	1291	1.273	0.915	0.906	0.033	0.066

Table 3 Predicting Job Search Intensity with TPB Variables

Variables	Job search intention	Job search intensity	
Intercept	3.161**	2.941**	2.941**
Control variables			
Gender	-.129*	-.117*	-.116*
Age	-.007	.029	.029
Origin	.078	-.059	-.059
Main effects			
Job search self-efficacy	.005	.215**	.204**
Subjective norm	.391**	.128*	.086†
Job search attitude	.591**	.267**	.204**
Job search intention			.104**
Model fit			
Deviance	2715	1409	1403

†: $p < .10$, *: $p < .05$, **: $p < .01$; For gender: 0-male, 1-female; For origin: 0-urban, 1-rural.

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Table 4 Hierarchical Linear Modeling Model with Controls and Employability Used to Predict TPB Variables and Job Search Intensity over Time

Variables	Job search self-efficacy	Job search attitude	Job search intention	Job search intensity
Intercept	3.227**	3.108**	3.153**	2.955**
Control variables				
Gender	-.015	-.075 [†]	-.119 [†]	-.141**
Age	.001	.005	-.002	.026
Origin	-.081*	.001	.079	-.073
Main effects				
Employability	.250**	.185**	.116*	.120*
Model fit				
Deviance	2656	2017	3061	1628

[†]: $p < .10$, *: $p < .05$, **: $p < .01$; For gender: 0-male, 1-female; For origin: 0-urban, 1-rural.

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Table 5 Hierarchical Linear Modeling Descriptive Examination of Intercept and Slope of Repeated Measures

Variable	Intercept		Slope	
	Coefficient	Variance	Coefficient	Variance
Job search self-efficacy	3.3076**	.2710**	-.0432**	.0269**
Subjective norm	3.3118**	.5000**	-.0421*	.0349**
Job search attitude	3.1219**	.2827**	-.0179	.0190**
Job search intention	3.2774**	.7528**	-.0771**	.0546**
Job search intensity	3.0905**	.2940**	-.0773**	.0156**

†: $p < .10$, *: $p < .05$, **: $p < .01$.

Table 6 Hierarchical Linear Modeling Model with Controls and Employability Used to Predict Slope of Repeated Measures

Variables	Job search self-efficacy	Job search intention	Job search intensity
For intercept			
Intercept	3.303**	3.282**	3.107**
Control variables			
Gender	-.030	-.124†	-.151**
Age	.005	-.001	.027
Origin	-.081*	.079	-.078
For time slope			
Intercept	-.038**	-.071**	-.076**
Employability	.078**	.034	.033†
Model fit			
Deviance	2632	3017	1595

†: $p < .10$, *: $p < .05$, **: $p < .01$; For gender: 0-male, 1-female; For origin: 0-urban, 1-rural.