

Financial Strain and Regional Unemployment as Barriers to Job Search Self-Efficacy: A Test of Social Cognitive Career Theory

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Social cognitive career theory (SCCT) emphasizes the potential impact of contextual barriers on vocational self-efficacy, interests, and goals. However, most tests of SCCT to date have focused exclusively on person-level, perceptual barriers rather than objective, macroeconomic barriers that may influence large groups of people. In this study, we examine how the effects of personal experiences with financial strain among a sample of adults who are unemployed are qualified by regional unemployment rates. Results indicated that financial strain has a direct, negative relation with job search self-efficacy, and indirect, negative relations with job search outcome expectations and search goals. These direct and indirect relations are moderated by unemployment rates and are only significant for participants residing in U.S. counties with high unemployment. These findings highlight the importance of taking into account broader contextual influences when studying vocational outcomes and demonstrate the applicability of incorporating macroeconomic barriers and supports into SCCT in future research.

Keywords: unemployment, job search self-efficacy, career aspirations, career outcome expectations, financial strains

The global recession that began in 2008 has resulted in renewed scholarly attention to unemployment and financial insecurity in the United States and Europe among vocational psychologists (e.g., Bingham, 2011; Johnson & Jackson, 2012). To date, some U.S. states have unemployment rates over 11% (e.g., Rhode Island and Nevada; U.S. Bureau of Labor Statistics, 2012), and the incidence of long-term unemployment is growing. Consequently, there is a need to better incorporate factors related to subjective and objective unemployment into major theories of vocational choice and adjustment.

The objective of this study was to test a model grounded in social cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994) that demonstrates how perceived financial strain detracts from job search self-efficacy, job search outcome expectations, and future search goals among adults who are unemployed. Rather than focusing exclusively on perceptual affordances, we also test the extent to which these relationships are moderated by an objective, community-level affordance: the local unemployment rate (see Figure 1).

SCCT and Contextual Affordances

SCCT (Lent et al., 1994) is an application of Bandura's (1986) social cognitive theory with domain-specific theories of vocational

interests, choice, performance, and satisfaction. This theory emphasizes the triadic interaction between key person variables: self-efficacy, outcome expectations, and goals within a particular career domain (e.g., mathematics or job seeking; Lent, 2005). *Self-efficacy* refers to judgments about one's capability to perform behaviors in a particular domain, whereas *outcome expectations* refer to the anticipated consequences of those behaviors. SCCT posits that high self-efficacy and outcome expectations encourage people to set personal goals to progress in that domain (Lent et al., 1994; Lent, Brown, & Hackett, 2000).

The choice model of SCCT also describes how contextual affordances (i.e., barriers and supports) impact vocational goals, activities, and performance attainments. Barriers and supports are situational conditions that inhibit and facilitate vocational outcomes, respectively (Lent et al., 2000). Past research has documented a variety of person-level variables that serve as contextual affordances in SCCT. For example, field research demonstrates that perceptions of mentorship, peer encouragement, and support from siblings and caregivers act as affordances (e.g., Flores & O'Brien, 2002; Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003; Lent et al., 2001, 2003). Although the body of research supporting SCCT includes examination of both personal (e.g., social status and social class, race/ethnicity; Navarro, Flores, & Worthington, 2007; Thompson & Dahling, 2012) and environmental (e.g., discrimination, caregiver or friend support; Flores & O'Brien, 2002; Lent et al., 2003; Thompson & Subich, 2011) affordances that act as barriers or supports to career development, no research exists examining objective, macroeconomic conditions that may act as barriers.

Lent et al. (2001) amended the choice model of SCCT in an important respect by clarifying that contextual barriers and supports can have direct influences on self-efficacy. Although the original choice model (Lent et al., 1994) suggested that contextual

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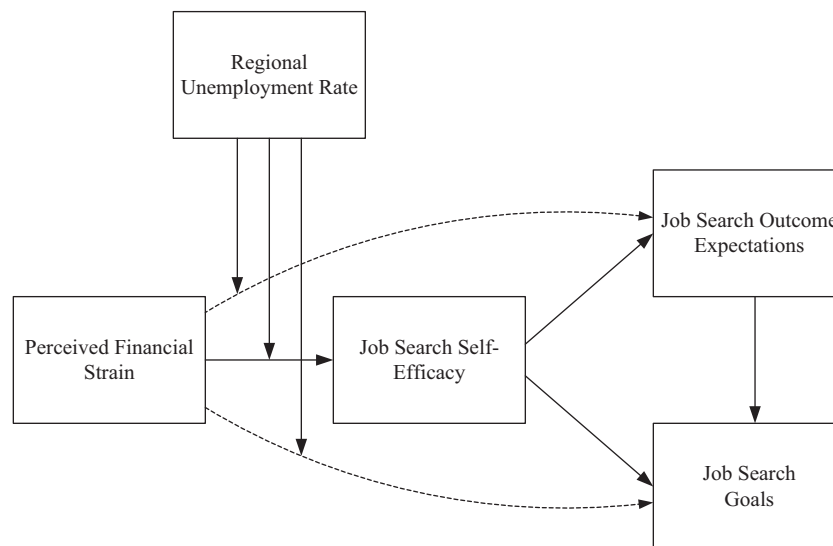


Figure 1. Proposed model of the direct and indirect relationships of perceived financial strain with social cognitive outcomes, including the moderating effects of regional unemployment rates. Dashed lines indicate conditional indirect effects.

barriers and supports only influence relationships late in the model between career interests, goals, and actions, more recent social cognitive research by Bandura (2000) presented evidence that contextual affordances also may have an earlier effect on self-efficacy. Consistent with this evidence, Lent et al. (2001) found that barriers and supports concerning math and science had direct, significant relations to mathematics self-efficacy among college students. Similarly, Lent, Paixão, da Silva, and Leitão (2010) found that the relations of barriers and supports operated indirectly through self-efficacy in a study of realistic, investigative, artistic, social, enterprising, and conventional interests and choices among Portuguese high school students. In this study, we use Lent et al.'s (2001) amended version of the SCCT choice model to examine how two barriers experienced by adults who are unemployed (financial strain and regional unemployment) interact to shape job search self-efficacy (JSSE) and more distal vocational outcomes, namely job search goals and job search outcome expectations (JSOE). *Search goals* refer to the level of aspiration that people set for securing employment that is rewarding and satisfying rather than merely settling for whatever employment might be available (Rich & Delgado, 2010). *JSOE* refer to the consequences that people expect to attain as a function of their search behaviors (Saks & Ashforth, 1999).

Financial Strain and JSSE

Financial strain refers to the perception that one's financial resources are diminished and threatened (Creed & Macintyre, 2001). Previous research has documented that financial strain mediates the relationships between the experience of unemployment and critical detrimental outcomes, such as depression (Price, Choi, & Vinokur, 2002). Some limited research also suggests that financial strain detracts from JSSE, a person's sense of confidence that he or she can successfully find and acquire employment (Ellis & Taylor, 1983). For example, Trougakos, Bull, Green, MacDer-

mid, and Weiss (2007) found that the family financial condition perceived by military spouses was positively related to their JSSE. Prior research with job seekers who were unemployed has also demonstrated that financial hardship was negatively associated with job search efficacy (Wanberg, Kanfer, & Rotundo, 1999).

Although financial strain has not yet been explicitly integrated into SCCT, SCCT may provide a theoretical basis for the observed relationship between financial strain and JSSE. Trougakos et al. (2007) suggested that financial strain serves as a form of detrimental feedback that suggests poor performance proficiency in the employment domain. Consistent with social cognitive mechanisms, unemployed adults presented with these strains may internalize their hardship as evidence of a history of failure that detracts from employment-related self-efficacies. Financial strain also serves as a barrier to the extent that it creates a pressure and necessity to find employment (Wanberg et al., 1999). This increased pressure, in turn, may inhibit job seekers from investing time in developing job search competencies and carefully engaging in the job search process (Vinokur & Schul, 2002). Consequently, unemployed adults with high levels of perceived financial strain may have the greatest need to find employment with the least time to prepare and develop the confidence that they can effectively perform job search behaviors. On the basis of SCCT and this past evidence, we offer the following hypothesis:

Hypothesis 1: Financial strain among adults who are unemployed will be negatively related to JSSE.

Indirect Relations of Financial Strain With Search Outcome Expectations and Search Goals

Consistent with the amended choice model of SCCT (Lent et al., 2001), contextual affordances, like financial strain, should have indirect effects on other variables via self-efficacy. Specifically,

self-efficacy is theorized to influence outcome expectations and goals as a consequence of one's level of confidence; when self-efficacy in a domain is high, people tend to expect favorable outcomes and to set higher goals in that domain (e.g., Bandura, 1986). In this study, we focused on the relation of JSSE to two variables relevant to the job search domain: JSOE and search goals. According to the triadic interaction posited by social cognitive theory and SCCT (Bandura, 1986; Lent et al., 1994), JSSE should be positively related to both JSOE and search goals. Given the direct, negative relationship between financial strain and JSSE that we posed in Hypothesis 1, we expect that financial strain will have negative, indirect relations with both JSOE and search goals via lower JSSE. More specifically:

Hypothesis 2a: JSSE will mediate the relationship between financial strain and JSOE.

Hypothesis 2b: JSSE will mediate the relationship between financial strain and search goals.

Moderating Role of Unemployment Rates

We examined the extent to which the relationships among financial strain and JSSE, JSOE, and search goals are moderated by the job seeker's regional unemployment rate. Although financial strain is a highly individual, perceptual barrier to job search success, the unemployment rate reflects an objective, macroeconomic factor that may facilitate or inhibit job search efforts (e.g., Cook et al., 2006). We hypothesize financial strain to have a weaker relationship with JSSE where unemployment rates are low because jobs are more prevalent and the job search process is less difficult (Vinokur & Schul, 2002; Wanberg et al., 1999). In contrast, where unemployment rates are high, financially strained job seekers are in competition for scarce jobs and may struggle to develop confidence in their abilities to perform job search behaviors.

Hypothesis 3a: Regional unemployment rates will moderate the relationship between financial strain and JSSE. Specifically, the relationship will be stronger when unemployment rates are high and weaker when unemployment rates are low.

Collectively, Hypotheses 2a–3a imply a pattern of moderated mediation (Preacher, Rucker, & Hayes, 2007). Given that unemployment rates are expected to moderate the direct relationship between financial strain and JSSE, unemployment rates should also qualify the indirect relationships between financial strain and distal criteria (i.e., JSOE and search goals). Put differently, because the direct path from financial strain to JSSE is contingent on unemployment rates, the indirect paths from financial strain to these criteria via JSSE should also be contingent on unemployment rates. Accordingly, we pose these hypotheses concerning the conditional indirect effects:

Hypothesis 3b and 3c: Regional unemployment rates will moderate the indirect relationship between financial strain and search outcome expectations (3b) and between financial strain and search goals (3c), yielding a pattern of moderated mediation. Specifically, the indirect relationships will be stronger when unemployment rates are high and weaker when unemployment rates are low.

Relation of JSOE and Search Goals

Lastly, we anticipated a positive relationship between JSOE and search goals. SCCT posits that goals in a particular domain are shaped by both self-efficacy and outcome expectations in that domain (Lent et al., 1994, 2000). People who feel confident and who expect to attain success in the job search process should also report high goals for their job search. For example, Lent et al. (2003) found that outcome expectations were positively related to academic major goals among college students enrolled in an introductory engineering class. We expect to replicate this relationship with respect to the job search domain.

Hypothesis 4: JSOE will be positively related to search goals.

Method

Pilot Study

We administered a pilot survey to a sample of 90 undergraduates at a mid-Atlantic college to collect additional evidence of reliability and validity for our measures. The sample was 84.4% women and 7.8% Hispanic or Latino/a, and the mean age of respondents was 19.49 years ($SD = 1.26$). With respect to race, the sample was 82.2% Caucasian, 14.4% Asian American, and 3.4% members of other groups. Further details about this pilot study are available upon request from the first author. The pilot findings referenced below refer to data collected from this sample.

Focal Study Participants

Participants were 221 unemployed adults residing in 42 of the 50 U.S. states, with California (13.2%) and Florida (8.1%) being the most commonly reported states. No single zip code was shared by more than two participants. The sample reported a mean duration of unemployment of 1.41 years ($SD = 1.73$) and a mean job search duration of 0.95 years ($SD = 0.99$). When asked to indicate why they were unemployed, participants cited reasons including an inability to find work (69.2%), conflicts with education (9.0%), family care responsibilities (9.0%), medical problems/disabilities (7.2%), and other circumstances (5.4%). All participants indicated that they were currently searching for new employment. The mean age in the sample was 33.12 years ($SD = 10.88$), and women comprised 56.1% of the sample. With respect to ethnicity, 8.6% of the sample identified as Hispanic or Latino/a. With respect to race, the sample was 74.2% Caucasian, 10.9% African American, 8.2% Asian American, 3.2% American Indian or Native Alaskan, and 2.7% members of other groups (0.9% of participants did not report). The most commonly reported census industries for participants' last employment were retail trade (14.9%), manufacturing (9.5%), and educational services (8.6%).

Measures

Financial strain. The four-item Financial Strain Scale (FSS; Ullah, 1990; Warr & Jackson, 1987) was used to measure participants' overall level of financial strain. Respondents indicated the extent to which they experienced financial difficulties on a 4-point scale (1 = *never*, 4 = *all the time*). A sample question is, "Are you often not able to do the things you need to do because of shortages

of money?" Previous studies (e.g., Creed & Macintyre, 2001; Ullah, 1990) have reported internal consistencies ranging from .77 to .91 and found that the measure was a valid predictor of outcomes such as psychological well-being and commitment to finding a job among unemployed adults. In our pilot study, we found that FSS scores were positively related to scores on Creed, Conlon, and Zimmer-Gembeck's (2007) measure of perceived career barriers, and negatively related to scores on Diener, Emmons, Larsen, and Griffin's (1985) Satisfaction with Life Scale, a measure of subjective well-being. In both the pilot and focal studies, $\alpha = .80$.

JSSE. JSSE was assessed with a six-item scale originally developed by Caplan, Vinokur, Price, and van Ryn (1989). Participants read a list of activities and indicated their confidence in performing them on a 5-point scale (1 = *not at all confident*, 5 = *extremely confident*). A sample item is: "Contacting and persuading potential employers to consider you for a job." This measure has been used widely in past research (e.g., Vinokur & Schul, 1997) and is a valid predictor of criteria such as job search intentions and intensity (Zikic & Saks, 2009). In the pilot data, JSSE scores were positively related to ratings of subjective well-being (Diener et al., 1985) and of perceived control over the job search process (Saks & Ashforth, 1999), and negatively related to ratings of perceived career barriers (Creed et al., 2007). The reliability for the measure was $\alpha = .88$ in the pilot study and .87 in the focal study.

JSOE. In the absence of an existing, valid scale of JSOE, we followed Lent and Brown's (2006) recommendations to develop our own measure of search outcome expectations specific to this study. This is a common and necessary practice in SCCT research focused on specific, understudied domains (e.g., Lent et al., 2001). We created a two-item measure with slider-type response scales so that participants could indicate their expectations on a 0- to 100-point range. Participants were instructed to "move the slider along the range from 0 to 100 to indicate your expectations in response to each question. Your response can fall anywhere along the response range." The first question read, "I expect that the quality of my next job will be . . ." and responses along the slider were anchored at 0 = *terrible* and 100 = *outstanding*. The second question read, "With respect to time, I expect that I will find another job . . ." and responses were anchored at 0 = *never* and 100 = *any day now*. In our pilot, JSOE scores were positively related to JSSE (Caplan et al., 1989), subjective well-being (Diener et al., 1985), and perceived control over the job search (Saks & Ashforth, 1999), and negatively related to perceived career barriers (Creed et al., 2007). For the two-item index, $\alpha = .74$ in the pilot study and .69 in the focal study.

Search goals. Rich and Delgado (2010) developed a 13-item scale consisting of four subscales measuring vocational and educational aspirations. We used the three-item Work Aspirations subscale to measure goals to improve one's career situation through the job search. Responses were made on a 4-point scale (1 = *strongly disagree*, 4 = *strongly agree*). A sample item reads, "I will work hard to improve my work situation." Rich and Delgado validated the subscale on a sample of community service clients and found that it was predictive of developing a work recovery plan with a counselor and of participants' expressed desire for occupational advancement. In our pilot data, search goals were positively related to JSSE (Caplan et al., 1989) and

subjective well-being (Diener et al., 1985). We found that $\alpha = .73$ in the pilot sample and .74 in the focal sample.

Regional unemployment rate. Participants provided their residential zip code as part of the demographic section of the survey. We then accessed public unemployment data from the U.S. Bureau of Labor Statistics (<http://www.bls.gov>) for the month in which our data were collected (October 2011) to draw the unemployment rate in the county of residence for each participant. The unemployment rates experienced by participants in the sample ranged from a low of 3.4% (Sanbornville, NH and Lincoln, NE) to a high of 16.2% (Fernley, NV). The mean county unemployment rate in the sample (8.7%) closely approximates the national unemployment rate at the same time (8.9%), suggesting that our sample was representative.

Procedure

Participants were recruited through Amazon Mechanical Turk (MTurk; <http://www.mturk.com>). MTurk was developed in 2005 as a system to pair up volunteer "workers" with employing "requesters" who require large groups of people to complete short, computer-based tasks for business or scholarly purposes. Participants in this study received 65 cents for a complete survey response. Several recent studies (e.g., Buhrmester, Kwang, & Gosling, 2011; Mason & Suri, 2012; Paolacci, Chandler, & Ipeirotis, 2010) have evaluated the demographic composition of the MTurk worker pool and the quality of the data. Results have consistently demonstrated that measurements collected through MTurk show good reliability and factorial stability over time and that the results of studies on MTurk very closely parallel the results found with matched samples recruited in person.

To ensure that we collected high-quality data, we embedded several quality-control items in longer questionnaires to confirm that participants were attending to the survey (e.g., "Select 'disagree' as the answer to this question"). We also blocked repeat Internet Protocol addresses and MTurk worker identification numbers to prevent duplicate responses. Lastly, we screened participants on the basis of their self-rated comfort with the English language to remove data for any participants who may have misinterpreted the survey items. On the basis of these checks, we excluded data from 19 participants with incomplete responses, 15 participants who missed one or more of the quality-control questions, 13 ineligible participants who were either not unemployed or who were not seeking work, seven participants who did not provide valid zip codes to identify their local unemployment rate, and one participant who reported low comfort with English. Thus, we had a final sample of 221 responses for hypothesis testing (80.1% of the original sample of 276).

Results

We first ran a confirmatory factor analysis (CFA) using Mplus (Muthén & Muthén, 1998–2012) to ensure that all items from the self-report scales (i.e., financial strain, JSSE, search outcome expectations, and search goals) loaded on their appropriate factors. Results of the CFA indicated that the hypothesized four-factor structure fit the data well, $\chi^2(83) = 158.92, p < .001$; comparative fit index = .95; Tucker-Lewis Index = .93; root-mean-square error of approximation = .06; standardized root-mean-square

error = .06, and that all items loaded strongly on their hypothesized factors (for all items, $p < .001$). Descriptive statistics and correlations for all observed demographic variables and scale scores are reported in Table 1. Although no gender differences were evident in the sample, age was significantly related to several variables. However, including age as a control variable in the analyses that follow did not change the pattern of support for any of our hypotheses; therefore, we do not comment further on these relationships with demographic variables.

Table 1 shows that Hypotheses 1 and 4 were supported. Consistent with Hypothesis 1, financial strain was negatively related to JSSE ($r = -.15, p < .05$). JSSE was also positively related to both JSOE and search goals, a necessary prerequisite for our mediation hypotheses (see Table 1). Consistent with Hypothesis 4, JSOE and search goals also had a positive relationship ($r = .26, p < .01$) as anticipated, based on SCCT and previous research.

Hypotheses 2a and 2b stated that JSSE would mediate the relationship between financial strain and JSOE, and between financial strain and search goals, respectively. The hypotheses were tested with INDIRECT, a SPSS macro developed by Preacher and Hayes (2008) to test the significance of indirect effects using bootstrapping. Bootstrapping is the most appropriate method for significance testing in mediation analyses because it does not assume that the distribution of indirect effects is normal, a commonly violated assumption of the traditional Sobel test (Shrout & Bolger, 2002). Table 2 summarizes the results of the mediation analysis using 5,000 bootstrapped samples for each significance test; note that the coefficients reported are unstandardized. Paths in Table 2 are labeled using the nomenclature described by Baron and Kenny (1986), where "path a" is the link from the predictor to the mediator, "path b" is the link from the mediator to the criterion, and "path c" is the direct link from the predictor to the criterion without accounting for the mediator. As shown in the table, the upper and lower values of the 95% confidence interval around each indirect effect do not include zero, demonstrating that both effects are significant. Hypotheses 2a and 2b were supported; financial strain has indirect, negative effects on both JSOE and search goals via lower JSSE.

Hypothesis 3a stated that regional unemployment rate would moderate the relationship between financial strain and JSSE. We followed procedures recommended by Aiken and West (1991) to test this hypothesis with stepwise regression by first centering unemployment rate and financial strain, and then creating the

interaction term by multiplying these centered measurements. We subsequently regressed JSSE on both centered predictors in Step 1 and added the interaction term in Step 2. As predicted, results indicated that the interaction was statistically significant ($\beta = -.13, p < .05, \Delta R^2 = .02$). Following Aiken and West, we plotted the interaction in Figure 2 at high and low levels of both financial strain and unemployment rate (+1 *SD* and -1 *SD*, respectively, which corresponds to unemployment rates of 11.19% and 6.27%); the relationship between financial strain and JSSE is negative and significant when unemployment rates are high (simple slope $t = -2.80, SE = .13, p < .01$) but nonsignificant when unemployment rates are low ($t = -0.30, SE = .11, p = .76$). Thus, Hypothesis 3a was supported.

Hypotheses 3b and 3c concerned the conditional indirect effects of financial strain on JSOE and search goals, respectively, as moderated by regional unemployment rate. We tested these hypotheses with moderated mediation using MODMED, a SPSS macro developed by Preacher et al. (2007), using 5,000 bootstrapped samples for each significance test. In support of Hypothesis 3b, we found that the indirect effect of financial strain on JSOE was moderated by unemployment rate. The indirect path was statistically significant when the unemployment rate was high (+1 *SD*; boot estimate = -0.06; 95% confidence interval from -0.11 to -0.01) or at the mean (boot estimate = -0.03; 95% confidence interval from -0.07 to -0.01), but not when the unemployment rate was low (-1 *SD*; boot estimate = -0.01; 95% confidence interval from -0.05 to 0.02). Similarly, for Hypothesis 3c, we found that the indirect effect of financial strain on search goals was statistically significant when the unemployment rate was high (+1 *SD*; boot estimate = -1.61; 95% confidence interval from -3.80 to -0.36) or at the mean (boot estimate = -0.88; 95% confidence interval from -2.26 to -0.14), but not when the unemployment rate was low (-1 *SD*; boot estimate = -0.17; 95% confidence interval from -1.30 to 0.63). Thus, Hypotheses 3b and 3c were supported; the local unemployment rate moderated both of the indirect paths between financial strain on JSOE and financial strain on search goals.

Discussion

The results from this study extend research on SCCT's theorized pathways by demonstrating that the individual-level, perceptual affordance of financial strain interacts with the objective, societal

Table 1
Correlations and Descriptive Statistics

| Variable | <i>M</i> | <i>SD</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------------------------|----------|-----------|------|--------|--------|--------|-------|-------|-------|---|
| 1. Gender | — | — | — | | | | | | | |
| 2. Age | 33.12 | 10.89 | .04 | — | | | | | | |
| 3. Years unemployed | 1.41 | 1.73 | .02 | .19** | — | | | | | |
| 4. Financial strain | 3.19 | 0.68 | .09 | .22** | .09 | (.80) | | | | |
| 5. JSSE | 3.61 | 0.76 | .01 | -.01 | -.05 | -.15* | (.85) | | | |
| 6. Outcome expectations | 52.18 | 19.72 | -.04 | -.26** | -.19** | -.28** | .23** | (.69) | | |
| 7. Search goals | 3.54 | 0.47 | .09 | -.16* | -.03 | -.04 | .31** | .26** | (.75) | |
| 8. Local unemployment rate (%) | 8.73 | 2.46 | -.06 | .07 | .07 | .01 | -.06 | .09 | .15* | — |

Note. For gender, 1 = male, 2 = female. JSSE = job search self-efficacy. Coefficient alpha is reported in parentheses along the diagonal for each measurement scale.

* $p < .05$. ** $p < .01$.

Table 2
Tests of Mediation (Hypotheses 2a and 2b)

| Relationship | DV: Search outcome expectations (Hypothesis 2a) | | | |
|--|---|------------------|------------------|------------------|
| | <i>b</i> | <i>SE</i> | <i>t</i> | <i>p</i> |
| Search outcome expectations regressed on financial strain (path c; Predictor → Criterion) | -8.24 | 1.89 | -4.35 | <.01 |
| Job search self-efficacy regressed on financial strain (path a; Predictor → Mediator) | -0.19 | 0.08 | -2.16 | <.05 |
| Search outcome expectations regressed on job search self-efficacy (path b; Mediator → Criterion) | 4.27 | 1.46 | 2.93 | <.01 |
| | <u><i>M</i></u> | <u><i>SE</i></u> | <u>LL 95% CI</u> | <u>UL 95% CI</u> |
| Bootstrap results for significance of indirect effect (<i>N</i> = 5,000) | -0.79 | .46 | -2.08 | -.10 |

| Relationship | DV: Search goals (Hypothesis 2b) | | | |
|---|----------------------------------|------------------|------------------|------------------|
| | <i>b</i> | <i>SE</i> | <i>t</i> | <i>p</i> |
| Search goals regressed on financial strain (path c; Predictor → Criterion) | -.02 | .05 | -0.52 | .60 |
| Job search self-efficacy regressed on financial strain (path a; Predictor → Mediator) | -.19 | .08 | -2.16 | <.05 |
| Search goals regressed on job search self-efficacy (path b; Mediator → Criterion) | .17 | .03 | 4.73 | <.01 |
| | <u><i>M</i></u> | <u><i>SE</i></u> | <u>LL 95% CI</u> | <u>UL 95% CI</u> |
| Bootstrap results for significance of indirect effect (<i>N</i> = 5,000) | -.03 | .02 | -.07 | -.01 |

Note. DV = dependent variable; LL = lower limit; UL = upper limit; CI = confidence interval.

affordance of regional unemployment rate in relation to JSSE, JSOE, and job search goals. Consistent with expectations, perceptions of financial strain among adults who were unemployed had a negative relationship with JSSE. Financial strain also had significant indirect relations with JSOE and search goals via JSSE. Results from moderation analyses, however, indicated that the direct and indirect effects of financial strain were contingent on the regional unemployment rate such that these relationships were only statistically significant among participants residing in U.S. counties with high unemployment. JSOE was also positively related to search goals, consistent with previous research (e.g., Lent et al., 2003).

This study supports the inclusion of an objective, nonperceptual social indicator as a contextual affordance in SCCT and points to

the importance of taking community-level and macroeconomic situational variables into account in vocational research. Specifically, our findings support the propositions of the choice model of SCCT when examining both perceptual, individualized affordances and objective, societal affordances. Whereas past research has documented the importance of individualized affordances (e.g., Flores & O'Brien, 2002; Kenny et al., 2003), this study demonstrates that objective macroeconomic conditions have relationships with social cognitive processes that are consistent with SCCT. Interestingly, perceived financial strain was unrelated to objective local unemployment rate (see Table 1). This finding is consistent with past research, which demonstrates that people's subjective perceptions of related, objective conditions are variable (e.g., the majority of Americans consider themselves to be middle

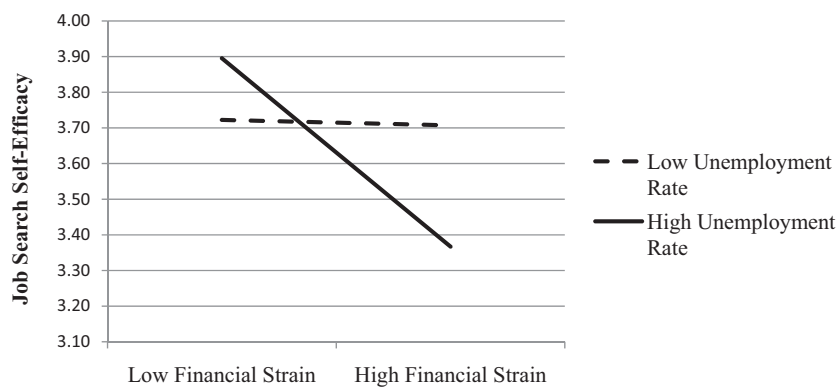


Figure 2. The interaction of financial strain and regional unemployment rate on job search self-efficacy levels among unemployed adults (Hypothesis 3a).

class regardless of objective indices of income; Nesbit, 2006). As such, this research highlights the importance of considering both subjective and objective measures of affordances in SCCT in future research. For example, future studies could extend our research by measuring both objective unemployment rates and participants' subjective perceptions of unemployment to examine whether beliefs about unemployment have a complementary moderating effect on JSSE.

Future research that examines how other macroeconomic affordances shape and constrain vocational interests and choices appears warranted. For example, individuals' interests and vocational choices may be strongly influenced by the dominance of certain industries or types of work in a particular area (e.g., agriculture or industrial manufacturing). Research exploring these paths in SCCT would particularly benefit from following Kahn's (2011) recent suggestion that vocational psychology research should use multilevel modeling (MLM) to a greater extent. For example, future MLM research could be used to draw distinctions among groups of participants who are nested within different communities that experience these types of objective, shared contextual affordances.

Our results echo other findings (e.g., Dahling & Thompson, 2010) that have highlighted the need for career counselors to assess for job market perceptions when working with clients. Specifically, we encourage vocational counselors to consider the impact of employment availability on the social cognitive processes among job seekers. Unemployed clients who reside in areas where jobs are scarce may respond to financial strain with lower self-efficacy and outcome expectations, and with compromised search goals, when compared with unemployed clients who reside in geographic regions with lower rates of unemployment.

Furthermore, these results fit within a larger body of SCCT research (e.g., Lent et al., 2001, 2010) that has highlighted the role of self-efficacy; JSSE mediated our observed relations. We reiterate calls from others (e.g., Vinokur, Price, & Schul, 1995; Wanberg et al., 1999) for career interventions with unemployed clients to focus on activities intended to improve self-efficacy for job search competencies according to Bandura's (1986) four sources of self-efficacy. For example, increasing self-regulatory skill in sustaining motivation and persistence, building coping efficacy to prepare for setbacks in the job search process, and practicing cognitive rehearsal to manage negative emotions that may otherwise surface during the job search may be useful points of intervention.

Limitations

These findings must be considered in light of several limitations. First, with the exception of the unemployment rate variable, our data were self-reported and cross-sectional. Although our measures were all perceptual in nature and therefore best reported by the focal participant, future research could strengthen and replicate these results with predictive or longitudinal designs. Second, although our sample was diverse with respect to gender, age, and U.S. region, European American individuals were overrepresented. Given that underrepresented racial and ethnic group members experience contextual barriers and supports not faced or perceived by majority group members

(e.g., Flores & O'Brien, 2002), future research should attempt to replicate our findings on a more inclusive sample. Furthermore, although recent research documents that samples recruited from MTurk are more diverse than samples collected through comparable Internet sources (Buhrmester et al., 2011), our use of an online participant pool restricted our ability to sample participants in particularly dire economic circumstances without access to computer technology. Inclusion of participants from low socioeconomic status and households with incomes that fall below the poverty line is a critical next step to unemployment research.

We also identified several potential issues with our measures. We developed our own measure of JSOE based on a lack of alternatives (Lent & Brown, 2006), but this measure exhibited lower reliability in the focal study with unemployed adults than in our pilot study with undergraduates. Furthermore, we focused the measure on expectations concerning the expected quality of future jobs and the expected immediacy with which that job would be acquired. This measure may not have captured the full range of important, possible outcomes associated with job searches, which might include expectations about employment-related benefits to the self or to family members. Future research involving alternative, validated measures of search outcome expectations is, therefore, needed. Although more validity evidence was available for the measure of search goals that we used (Rich & Delgado, 2010), the items are somewhat broad (e.g., "I will work hard to improve my work situation") and may not correspond precisely with search intentions that spring from JSSE. Future research with different measures that are more narrowly tailored to job search intentions may, therefore, yield stronger relationships than those that we observed in this study.

Conclusion

In summary, this study makes an important contribution to the literature on contextual affordances in SCCT by demonstrating that objective unemployment rates shape social cognitive relationships among adults who are unemployed. Our findings point to the importance of considering a broader scope of contextual affordances in future research on the choice model of SCCT and offer practical insights to managing search self-efficacy, outcome expectations, and goals among unemployed clients working in areas of high unemployment.

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