

The Effects of Socioeconomic Status and Proactive Personality on Career Decision Self-Efficacy

Hui-Hsien Hsieh and Jie-Tsuen Huang

This study investigated the relationship of family socioeconomic status and proactive personality to career decision self-efficacy in a sample of 336 Taiwanese college students. The results of the partial least squares path modeling analysis showed that both socioeconomic status and proactive personality were positively associated with career decision self-efficacy. These findings support person input variables as being predictive of career decision self-efficacy and provide career counselors with insight into how to design career interventions for improving college students' career decision self-efficacy. Implications for career counseling and suggestions for future research are discussed.

Keywords: socioeconomic status, proactive personality, career decision self-efficacy

Career decision self-efficacy (CDSE) has become a popular topic of research in the career development literature because of its significant impact on the career decision-making process of young adults. CDSE is defined as an individual's belief that he or she can successfully complete tasks necessary to career decision making (Taylor & Betz, 1983). Research on CDSE has been linked empirically to several areas of the career development process, including career indecision (Gianakos, 2001), career planning and exploration (Gushue, Clarke, Pantzer, & Scanlan, 2006; Rogers, Creed, & Glendon, 2008), and career choice commitment (Jin, Watkins, & Yuen, 2009; Wang, Jome, Haase, & Bruch, 2006). However, the precursors of CDSE have hardly been addressed in the career development literature. Shedding light on the causes of CDSE has both theoretical and practical implications. Theoretically, the study of the causes of CDSE can extend the career development literature by investigating a rarely researched domain, which may provide researchers with some insight into what factors can affect young adults' CDSE. Practically, CDSE has been acknowledged as a critical factor in influencing the career development process of young adults. Therefore, understanding the causes of CDSE may also be useful in helping career counselors better design career interventions to fit the demands of college students from different backgrounds.

Drawing on social cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994, 2000), our research focused on the role of two person

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input variables as predictors of CDSE. More specifically, we intended to examine whether family socioeconomic status (SES) affects an individual's CDSE positively. Research has shown SES to be positively related to educational expectations (Trusty, 1998), educational choices (Trusty, Ng, & Plata, 2000), and career aspirations (Ali & Saunders, 2009). As specified by Ali, McWhirter, and Chronister (2005), however, there is still a paucity of research investigating the influences that SES has on an individual's career decision-making process. In addressing this void in the literature, our study examined the relationship between SES and college students' CDSE.

In addition to familial and parental influences, we were interested in investigating whether individual personality traits play an important role in determining an individual's CDSE. Unlike most recent studies (Bullock-Yowell, Andrews, & Buzzetta, 2011; Hartman & Betz, 2007; Jin et al., 2009; Rogers et al., 2008; Wang et al., 2006), which focus on the role of the Five-Factor Model (FFM) of personality traits, we focused on proactive personality—an individual's disposition toward proactive behavior—because, in contrast to the FFM traits, it is specifically related to one's career and has been proven to be a beneficial complement to the personality theories (Major, Turner, & Fletcher, 2006). Given this, we decided to make proactive personality our focal variable and empirically examine its effects on college students' CDSE.

SES and CDSE

SCCT (Lent et al., 1994, 2000) provides a useful theoretical framework for understanding the relationship between family SES and the CDSE of young adults. SCCT proposes that SES, as a person input variable, may affect the development of an individual's self-efficacy beliefs through shaping his or her learning experiences. Family SES is associated with the opportunities for the learning and achievement of individuals. Individuals from a higher level of SES, for example, are more likely to have higher educational resources and expectations, more occupational role models, and greater access to parental support (Blustein et al., 2002; McWhirter, Hackett, & Bandalos, 1998; Turner & Lapan, 2003), and such efficaciousness may help facilitate higher career self-efficacy beliefs. In contrast, individuals from a lower level of SES are inclined to have poorer quality schooling, fewer career role models, and less financial support (C. Brown, Darden, Shelton, & Dipoto, 1999), which is likely to suppress the development of career self-efficacy beliefs.

Although the aforementioned statement appears to imply that SES can predict CDSE, empirical studies examining the relationship of SES with career-related self-efficacy beliefs have found inconsistent results. Tang, Fouad, and Smith (1999) found that family SES had no significant impact on Asian American college students' self-efficacy. Ali et al. (2005) also did not find a significant relationship between SES and vocational/educational self-efficacy with a sample of ninth-grade students from lower SES backgrounds. Yet, Thompson and Subich (2006) found support for the positive relationship of social status with college students' CDSE. Scholars argue that these inconsistent results might be due to inconsistencies in measuring SES (Liu, Soleck, Hopps, Dunston, & Pickett, 2004). Indeed, SES has been operationalized in different

ways in the literature. For example, McWhirter et al. (1998) assessed SES using the Duncan's Socioeconomic Index (Stevens & Cho, 1985), which is a measure of occupational status corresponding to the average educational level and salary for each occupation based on 1980 census data. Ferry, Fouad, and Smith (2000) and Tang et al. operationalized SES through parental educational level and occupational status. Lorant et al.'s (2003) meta-analysis argued that SES is commonly composed of one's income, education, and occupation, whereas Ali et al. measured SES according to the Hollingshead Four-Factor Index of Social Status (Hollingshead, 1975), which uses an individual's gender, marital status, education, and occupation to compute an SES score. Thompson and Subich measured social status using the Differential Status Identity Scale (DSIS; M. T. Brown et al., 2002), which conceptualizes social status as a psychological construct comprising three dimensions: economic resources, social power, and social prestige. The aforementioned review of the literature shows that there is no consensus on how SES should be operationalized. We thus decided to operationalize it as a latent construct consisting of four indicators: father's education, father's occupation, mother's education, and mother's occupation. Also, following previous studies and scholarship (Bollen, 2007; MacKenzie, Podsakoff, & Jarvis, 2005; MacKenzie, Podsakoff, & Podsakoff, 2011) regarding the measurement model specification of SES, we specified it as a formative-indicator construct and hypothesized that it would be positively associated with CDSE.

Hypothesis 1: SES is positively associated with CDSE.

Proactive Personality and CDSE

Proactive personality refers to a relatively stable disposition to effect environmental change and differentiates people based on the extent to which they take action to influence their environments (Bateman & Crant, 1993). More proactive individuals are relatively unconstrained by situational forces (Bateman & Crant, 1993) and are more likely to "identify opportunities and act on them, show initiative, take action, and persevere until they bring about meaningful change" (Crant, 2000, p. 439). In contrast, less proactive individuals are passive and reactive; they tend to adapt to environments rather than change them. Research has linked proactive personality to career variables such as career success (Fuller & Marler, 2009; Seibert, Crant, & Kraimer, 1999) and career initiative (Fuller & Marler, 2009; Seibert, Kraimer, & Crant, 2001).

In our view, both theoretical and practical perspectives suggest that proactive personality could predict CDSE. Theoretically, according to SCCT (Lent et al., 1994, 2000), personality traits are considered as a precursor that may affect the formation of self-efficacy beliefs. As stated previously, individuals with high proactive personality are relatively unconstrained by situational forces and thus should have a greater sense of self-determination and self-efficacy in their career lives. Practically, research has shown that CDSE can be predicted by a variety of personality constructs, including the healthy personality (Borgen & Betz, 2008), core self-evaluations (Koumoundourou, Kounenou, & Siavara, 2012), and the FFM traits (Bullock-Yowell et al., 2011; Hartman & Betz, 2007; Jin

et al., 2009; Rogers et al., 2008; Wang et al., 2006). Specifically, for the FFM traits–CDSE linkages, Wang et al. (2006) found that extraversion affected CDSE positively for both White college students and college students of color, whereas neuroticism affected CDSE negatively for college students of color but not for White college students. Hartman and Betz (2007) indicated that extraversion and conscientiousness had positive impacts on CDSE, whereas neuroticism had a negative impact on CDSE among U.S. college students. Rogers et al. (2008) reported that extraversion, openness, and conscientiousness were positively associated with CDSE for Australian high school students. Jin et al. (2009) found that CDSE was positively related to conscientiousness and agreeableness and negatively related to neuroticism with a sample of Chinese graduate students. Bullock-Yowell et al. (2011) demonstrated that openness, conscientiousness, and extraversion explained a significant amount of variance in CDSE in a sample of African American and Caucasian college students. Together, the aforementioned research findings coincide with Hartman and Betz’s (2007) conclusion that “neuroticism was a consistent predictor of inefficacy, whereas conscientiousness and extraversion were the most robust positive predictors of career-related self-efficacy” (p. 156).

In addition, previous research (e.g., Bateman & Crant, 1993; Crant, 1995) has shown that proactive personality is consistently and positively associated with two of the FFM traits: conscientiousness and extraversion. In their study, Major et al. (2006) found that proactive personality was positively correlated with conscientiousness, extraversion, and openness, and negatively correlated with neuroticism. Fuller and Marler’s (2009) meta-analysis also showed that proactive personality was strongly and positively related to conscientiousness, extraversion, and openness and negatively related to neuroticism. As mentioned earlier, three of the FFM traits (i.e., conscientiousness, extraversion, and neuroticism) have been found to be consistent predictors of CDSE (Hartman & Betz, 2007). Because empirical evidence has shown that proactive personality is positively associated with conscientiousness and extraversion, and negatively related to neuroticism (Fuller & Marler, 2009; Major et al., 2006), it is plausible to expect that proactive personality would be positively related to CDSE. On the basis of this reasoning, we proposed the following:

Hypothesis 2: Proactive personality is positively associated with CDSE.

Method

Participants and Procedure

The participants were college students enrolled in six general education courses from three colleges located in Kaohsiung city in southern Taiwan. We contacted the course instructors and requested their permission for their students’ participation. Upon the instructors’ approval, we arrived at the classes on the agreed date, distributed informed consent forms to the students in the class, and asked for their consent to participate in this survey. Those who agreed to participate received one questionnaire and a cover letter that explained the purpose of the study and assured them of the confidentiality and anonymity of their responses. The participants

were asked to complete the questionnaires during class time and return them directly to us.

A total of 600 questionnaires were distributed and 336 valid ones were returned, yielding a valid response rate of 56%. There were 154 male and 182 female college students who participated in our study. The mean age of the participants was 21.03 years ($SD = 1.06$), with a range of 18 to 26 years old. Of the 336 participants, 12.5% ($n = 42$) were freshmen, 19.64% ($n = 66$) were sophomores, 23.51% ($n = 79$) were juniors, and 44.35% ($n = 149$) were seniors. Moreover, 48.51% ($n = 163$) of the participants had a major in the College of Business and Management, 29.17% ($n = 98$) had a major in the College of Humanities and Social Sciences, and 22.32% ($n = 75$) had a major in the College of Science and Engineering.

Measures

SES. Because of the privacy considerations and limitations in obtaining the precise income level of the parents, the SES of college students in our study was measured through four indicators: father's education, father's occupation, mother's education, and mother's occupation. Parental educational level and occupation information were obtained indirectly from the participants. In accordance with Taiwan's education system, we classified parental education into five levels (1 = *junior high school*; 2 = *high school*; 3 = *partial college or specialized training*; 4 = *college*; 5 = *graduate*). The response options of parental occupational status were based on Hollingshead's (1975) classification of occupations into five categories (1 = *unskilled laborers, menial service*; 2 = *machine operators, semiskilled workers*; 3 = *skilled craftsmen, clerical, sales worker*; 4 = *medium business, minor professional, technical*; 5 = *major business and professional*).

Proactive personality. Proactive personality was measured using a shortened version of Bateman and Crant's (1993) original Proactive Personality Scale (PPS), which has 10 items (Seibert et al., 1999). In our study, to reduce the number of parameters to be estimated and to improve the reliability of the measurement indicators when modeling the latent construct of proactive personality, we conducted a factor analysis on the shortened version of the 10-item PPS and selected the five items with the highest factor loadings as the measurement indicators of the proactive personality construct. A sample item is "No matter what the odds, if I believe in something I will make it happen." Respondents indicated the extent of their agreement with each statement on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Previous research (Baba, Tourigny, Wang, & Liu, 2009) has demonstrated the adequate reliability and cross-cultural validity of the PPS when used with a sample in a Chinese cultural context. The Cronbach's alpha was .76 in our study.

Career Decision Self-Efficacy Scale-Short Form (CDSE-SF). Betz, Klein, and Taylor's (1996) 25-item CDSE-SF was used to assess the college students' self-efficacy in making career-related decisions. The CDSE-SF contains five items for each of the five subscales: Self-Appraisal (e.g., "Determine what your ideal job would be"), Gathering Occupational Information (e.g., "Use the Internet to find information about occupa-

tions that interest you”), Goal Selection (e.g., “Choose a major or career that will fit your interests”), Planning (e.g., “Determine the steps you need to successfully complete your chosen major”), and Problem Solving (e.g., “Persistently work at your major or career goal even when you get frustrated”). Responses were obtained using a 5-point Likert-type scale ranging from 1 (*no confidence at all*) to 5 (*complete confidence*), with higher scores indicating a higher degree of CDSE. Mau’s (2000) cross-cultural study reported that the Cronbach’s alpha for the total CDSE-SF was .92 and the test–retest reliability was .83, suggesting that it is a reliable instrument when used with Taiwanese college students. Hampton (2006) also found support for the adequate reliability and cross-cultural validity of the CDSE-SF in a sample of Chinese students. In our study, the Cronbach’s alpha values were .79, .70, .74, .78, and .69 for Self-Appraisal, Gathering Occupational Information, Goal Selection, Planning, and Problem Solving, respectively. The Cronbach’s alpha for the 25-item total CDSE-SF was .91.

Translation of measures. Because the scales of the variables initially appeared in English, a back-translation procedure (Brislin, 1986) was used to ensure the accuracy and semantic equivalence of the translation from English into Chinese. We first translated the English version of the scales into Chinese. The Chinese versions of the scales were then independently back translated into English by two bilingual experts. Discrepancies between the original and the back-translated versions were discussed by us and the two experts, and further rounds of translation and back translation were undertaken until a consensus concerning the accuracy and semantic equivalence of the translation was reached.

Formative specification of SES. Scholars (MacKenzie et al., 2005, 2011) have argued that one of the criteria to differentiate between a reflective and a formative specification depends on the causal priority between the measurement indicators and the latent construct. Specifically, for reflective specification, the direction of causality stems from the latent construct to the indicators, and changes in the latent construct are hypothesized to cause changes in the indicators. Conversely, the causality direction of formative specification flows from the indicators to the latent construct, and changes in the indicators can lead to changes in the latent construct.

SES might be operationalized from the objective (sociological) and/or the subjective (psychological) perspective and should be more precisely referred to as objective SES and/or subjective SES. Bollen (2007) argued that objective and subjective SES are different constructs, possibly with different causes and consequences. The former obtains an individual’s standing through variables that are more objective, such as a person’s education, occupation, and income level (e.g., Duncan’s Socioeconomic Index, Hollingshead Four-Factor Index of Social Status), whereas the latter taps an individual’s perceptions about his or her level of social status, such as perceived economic resources, perceived social power, and perceived social prestige (e.g., DSIS; M. T. Brown et al., 2002). In other words, if SES was operationalized objectively, it would best be specified as a formative-indicator construct with objective indicators because it would increase as any of the indicators increase. Conversely, if one’s SES increases, it would not necessarily bring changes to all of the indicators (MacKenzie et al., 2005, 2011). In contrast, if SES was operationalized

subjectively, it would best be specified as a reflective-indicator construct with subjective measures because the direction of causality flows from the underlying SES construct to the measures, and changes in the underlying SES construct are hypothesized to bring changes in the measures (MacKenzie et al., 2005, 2011). On the basis of this reasoning, SES in our study would best be specified as a formative-indicator construct because we operationalize it objectively.

Data Analysis

Chin (1998) argued that partial least squares (PLS) path modeling adopts a component-based structural equation modeling (SEM) analysis for estimation purposes and can handle formative- and reflective-indicator constructs concurrently in one model. Because SES was a formative-indicator construct and proactive personality and CDSE were reflective-indicator constructs in our study, PLS was preferred to other covariance-based SEM analysis methods (e.g., LISREL, AMOS) for examining the causal relationship. We conducted a PLS path modeling analysis using the software of VisualPLS 1.04b1, developed by Fu (2007), to test our hypotheses. Furthermore, Chin (1998, 2010) noted that the existing overall model fit indices used in covariance-based SEM analysis, such as the goodness-of-fit index, the comparative fit index, and the root mean square error of approximation, would not be given in component-based SEM analysis (e.g., PLS) because these fit indices are suitable only for explaining covariation among constructs that are modeled as reflective, and cannot be used to gauge the quality of a formative-indicator construct. Chin argued that the key approach for assessing the adequacy of the PLS model was to demonstrate strong loadings, significant weights, significant structural paths, and high *R*-squares. Therefore, we adopted the bootstrap resampling method (Efron & Tibshirani, 1993) with 1,000 resamples to test the statistical significance of the loadings, weights, and path coefficients between the constructs.

Results

Table 1 presents the descriptive statistics, reliabilities, average variance extracted (AVE), and correlations of the study variables. As shown in Table 1, two reflective-indicator constructs (i.e., proactive personality and CDSE) had composite reliability exceeding the required minimum

TABLE 1

Means, Standard Deviations, Reliabilities, Average Variance Extracted (AVE), and Correlations Among Variables

Variable	<i>M</i>	<i>SD</i>	α	CR	AVE	1	2	3
1. Socioeconomic status	1.85	0.34				—		
2. Proactive personality	3.37	0.56	.76	.84	.52	.35*	(.72)	
3. CDSE	3.49	0.47	.91	.91	.68	.39*	.54*	(.82)

Note. *N* = 336. Values on the diagonal in parentheses are the square root of AVE estimates. CR = composite reliability; CDSE = career decision self-efficacy.

**p* < .01.

of .60 and had AVE values greater than the required minimum of .50, providing evidence for the attainment of satisfactory convergent validity (Fornell & Larcker, 1981). Furthermore, discriminant validity was assessed by comparing the square root of the AVE values with the correlations between the latent constructs (Fornell & Larcker, 1981). The square root of the AVE values was larger than all other cross correlations (see Table 1), providing evidence for the attainment of satisfactory discriminant validity. The results suggest that the psychometric properties of the measures used in our study are statistically adequate.

Figure 1 depicts the PLS results for the hypothesized model. As shown, for the formative-indicator construct of SES, the weights of

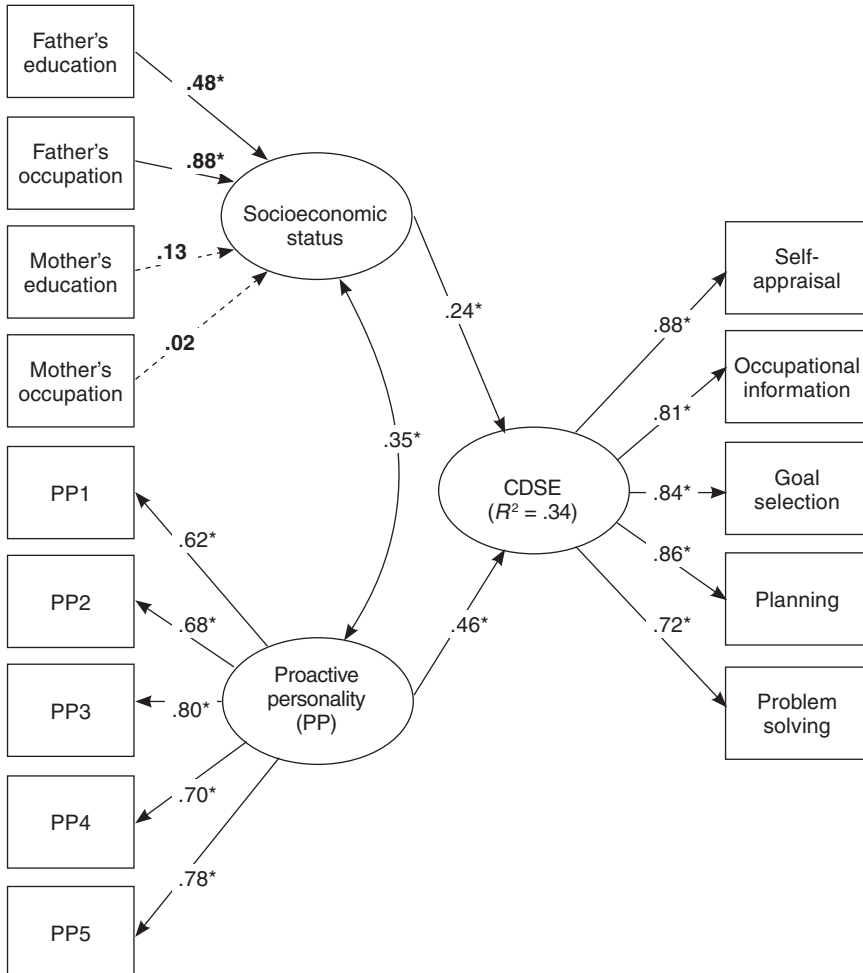


FIGURE 1

Partial Least Square Results for the Hypothesized Model

Note. The weights of formative indicators are shown in bold. The dotted lines indicate nonsignificant paths. CDSE = career decision self-efficacy.
* $p < .01$.

father's education and occupation on SES were significant ($p < .01$), but the weights of mother's education and occupation on SES were not statistically significant. Additionally, the factor loadings for the reflective-indicator constructs of proactive personality and CDSE were all greater than .60 and reached statistical significance ($p < .01$). The results showed that both SES and proactive personality were positively associated with CDSE ($\beta = .24$, $R^2 = .05$, $p < .01$, and $\beta = .46$, $R^2 = .29$, $p < .01$, respectively), accounting for 34% of the variance in CDSE. Thus, Hypotheses 1 and 2 were supported.

Discussion

Following previous studies and scholarship (Bollen, 2007; MacKenzie et al., 2005, 2011), our study specified SES as a formative-indicator construct and examined its effects on college students' CDSE by using a PLS path modeling analysis. Our results showed that father's education and occupation significantly contributed to SES but mother's education and occupation did not, suggesting that fathers played a more salient role in determining household SES backgrounds than did mothers. This finding may partially reflect the phenomenon that men in a traditionally male-dominated Chinese society would have more opportunities and resources than women would to acquire higher education and occupational prestige, which in turn contribute more to a family's SES.

Our results found family SES to be positively associated with college students' CDSE, suggesting that college students who reported higher levels of SES also reported greater confidence in their ability to successfully complete career decision-making tasks. This coincides with the SCCT hypotheses (Lent et al., 1994, 2000) that person input variables may have a profound impact upon one's self-efficacy, but contrasts with earlier findings (Ali et al., 2005; Tang et al., 1999). A possible explanation for these dissimilar findings might be the difference in operationalizing SES. Ali et al. (2005) operationalized SES as an observed variable and calculated an SES score using the Hollingshead index, whereas Tang et al. (1999) modeled SES as a reflective-indicator latent variable with parental education and occupation. In contrast to the failures of obtaining a significant relationship between SES and self-efficacy beliefs in previous studies using either a computed SES score (Ali et al., 2005) or a reflective specification of SES (Tang et al., 1999), our study contributes to the career development literature by lending support to the significant and positive relationship between SES and CDSE through a valid alternative SES specification (i.e., a formative specification of SES) and an applicable analytical method (i.e., PLS).

Our results also confirmed that there is a significant and positive relationship between proactive personality and CDSE. This suggested that college students, who tend to have a highly proactive personality and therefore are more willing to show initiative, to confront and solve problems, and to take advantage of opportunities to improve their current situation, appear to feel more efficacious in terms of making career decisions. This finding is consistent with both SCCT (Lent et al., 1994, 2000) and previous research findings (Bullock-Yowell et al., 2011; Hartman & Betz, 2007; Jin et al., 2009; Rogers et al., 2008; Wang et al., 2006), which posit that personality traits affect the formation of

self-efficacy beliefs. The present study could advance the understanding of the relationship between personality traits and young adults' career development by introducing an alternative personality construct (i.e., proactive personality), which influences the career formation process of college students.

The estimation on the explanatory power in our study showed that SES accounted for 5% of the variance in CDSE, and proactive personality accounted for 29% of the variance in CDSE. Although our results supported the proposed hypotheses, it must be recognized that the results presented in our study should be interpreted with caution because the effect sizes were not large. The practical significance of both family SES and proactive personality in predicting CDSE suggests that career interventions for improving college students' CDSE should focus not only on the individual student but also on their family members.

Implications

The findings of our study have several practical implications. First, the results show that family SES is positively related to college students' CDSE, highlighting the importance of familial and parental influences on college students' career decision making. SES has pervasive influences on parenting and child development (Bornstein & Bradley, 2003). Low SES families often exhibit lower levels of parenting practices, parental support, and parental involvement in children's career development. Moreover, the educational and occupational backgrounds of parents may shape the way in which they treat their children. Because of parents' distinct life experiences (whether job- or education-related), Flanagan (1993) indicated that high SES parents tend to value self-direction and intellectual curiosity in their children, whereas low SES parents emphasize conformity rather than independent thinking. As a result, college students from low SES backgrounds are more likely than their high SES counterparts to feel constraints on their opportunities and to struggle to balance the competing demands of familial conditions and intrinsic self-interest when making career decisions, which may result in a lower level of CDSE. It is suggested that career counseling interventions should not only focus on the individual student but also consider how the inculcation of parents from different SES backgrounds may influence the career decision-making process of young adults. More family involvement in career counseling practices is suggested, especially for students from low SES families. For example, career interventions focusing on parental involvement can adopt formats such as organizing career workshops or groups for low SES parents to help them (a) transform their values and beliefs regarding their children's career development into everyday parenting practices, (b) be career role models for their children, and (c) assist their children in planning for their future careers.

Second, the findings of the significant and positive association between proactive personality and CDSE suggest that career counselors can facilitate college students' CDSE by encouraging their personal dispositions toward proactive behaviors. In their work, Kirby, Kirby, and Lewis (2002) demonstrated that a person's proactivity is not stable over time, but can be increased through the use of training interventions. This offers ideas to career counselors of developing career interventions to

improve college students' levels of proactivity, regardless of their personal dispositions. Specifically, career counselors could implement interventions, such as proactive thinking training programs (Kirby et al., 2002), to facilitate college students' ability to recognize and seize opportunities, defend themselves against threats, and convert core competencies into competitive advantages, with a special focus on encouraging them to think proactively.

Limitations and Future Research

A few limitations of our study should be noted. First, the cross-sectional nature of our study precludes the extent to which cause-effect relationships can be inferred from the findings; thus, explanation of the results should be made with caution. Also, the present study uses the self-report approach to obtain measures of proactive personality and CDSE from the same source. As a consequence, the association between proactive personality and CDSE might have suffered from the problem of common method bias. However, the relationship between SES and CDSE stands a low chance of being contaminated by common method bias because SES is composed of objective data (i.e., parental education and occupation), which is conceptually in temporal asymmetry with CDSE and thus is not subject to common method variance. It is recommended that future research expand the findings of this cross-sectional study by replicating the present model through longitudinal research designs to rule out common method bias and allow for more definitive causal conclusions.

The second limitation is that the sample collection is restricted to Taiwan; therefore, the cross-cultural generalizability of the results may be a concern. To broaden the applicability of our findings, future research could replicate the present model with samples from Western societies, which may provide direct evidence of and increased confidence in the generalizability of the findings across cultures.

The third limitation is that we follow the objective (sociological) perspective to operationalize SES through some objective indices (i.e., parental education and occupation). This may raise a question pertaining to whether these objective indices are adequate to reflect the psychological effect on the individual of being a member of a particular class (Fouad & Brown, 2000; Liu, Ali, et al., 2004). Diemer and Ali (2009) argued that the most comprehensive approach for operationalizing social class is to capitalize on the strengths of both sociological and psychological perspectives, even though the subjective (psychological) conceptualization of the construct of social class has much potential for expanding the understanding of the psychological impact of social class on one's self-efficacy beliefs and career-related variables. Therefore, we encourage future research on this topic to specify objective SES as a formative-indicator construct composed of objective indicators (e.g., income, education, occupation, neighborhood characteristics) and subjective SES as a reflective-indicator construct with subjective measures (e.g., the DSIS; M. T. Brown et al., 2002), and then simultaneously examine their effects on CDSE and career-related outcomes.

To expand on the current findings, we propose some directions for future research. First, M. T. Brown, Fukunaga, Umamoto, and Wicker (1996) called for attention to the issue of social class and advocated

investigating the relationship between social class and a wider range of career choice behaviors. Likewise, several scholars (e.g., Jin et al., 2009; Koumoundourou et al., 2012; Rogers et al., 2008) have extended SCCT hypotheses by showing that person input variables could affect the career development process not only directly but also indirectly via self-efficacy beliefs. Therefore, we encourage future researchers to extend this area of research to explore the relationships between SES or proactive personality and other career outcomes to further clarify how person input variables function in young adults' career decision-making process, and to verify the mediating role of CDSE. Second, Lent et al. (2000) pointed out that person input variables interacting with other contextual factors can influence an individual's career goals and career choice behaviors. Future research may aim at exploring the potential interaction effects between SES or proactive personality and social support or career barriers on career goals and career choice behaviors. This may also help researchers better understand the role person input variables play in the career development of young adults.

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