

Development and construct validation of a career entrenchment measure

Kerry D. Carson* and Paula Phillips Carson

Department of Management, University of Southwestern Louisiana, Lafayette, LA 70504-3570, USA

Arthur G. Bedeian

Department of Management, Louisiana State University, Baton Rouge, LA 70803-6312, USA

The development and construct validation of a 12-item career entrenchment measure is reported. Taking a theory-driven approach, three dimensions comprising career entrenchment were defined: a *career investments* dimension reflecting accumulated investments in one's career success that would be lost or deemed worthless if one were to pursue a new career, an *emotional costs* dimension assessing the anticipated emotional costs associated with pursuing a new career, and a *limitedness of career alternatives* dimension gauging the perceived lack of available options for pursuing a new career. Using a combination of methodological procedures, these three dimensions were investigated in two pilot studies and a field test. Results support the intended measure's reliability and validity. Implications for individuals and their careers are discussed.

Fundamental economic changes occurring over the past decade are altering workers' traditional expectations of career advancement. Prior to the time when 'restructuring' and 'reorganization' became integral components of managers' vocabularies, professionals and less skilled workers alike saw their career unfold within the relative confines of a select few enterprises. For many, organizational progression was equated with career success. But now, the corporate ladder is becoming unstable—the rungs are weakening and beginning to break (Hirsch, 1987).

In reaction to continuing re-engineering and consolidation efforts, Hirsch (1987) posits that '[organizational] loyalty is no longer fashionable, nor even advised as an attitude meriting reward or advancement' (p.115). Consistent with this line of thinking, some organizations purposefully engage in actions that diminish employee attachment. For example, as traditional hierarchical designs are replaced with more flexible structures, a clear and unified chain-of-command is often abolished. The resulting absence of personal attachment to a supervisor erodes organizational loyalty. Decentralization and other techniques to encourage innovation and flexibility have similar effects (Kanter, 1989).

Some career researchers foresee the emergence of boundaryless organizations that employ individuals pursuing boundaryless careers. A 'boundaryless career' is defined by

*Requests for reprints.

Miner & Robinson (1994) as one that unfolds unconstrained by an attachment to any single organization. Boundaryless careerists develop 'meta-skills' rather than job-specific competencies that allow them to seek out and accept employment in a variety of settings (Hall, 1986). Thus, the focal point of individuals' work lives becomes their career—not their employing organization (Hansen, 1993).

To date, however, the boundaryless career is more of a vision than a reality. In fact, it can be argued that many productive organizations encourage 'boundedness'. Mechanisms that reduce boundaries, such as alternative scheduling options, portable pension plans, and support of formal education, are only occasionally provided (Mirvis, 1993). Organizational support mechanisms are geared towards securing the employment rather than the employability of workers. Hence, those who survive cutbacks and downsizing are typically relieved to retain their jobs. Even for survivors, however, there are often painful adjustments, such as increased workloads, fewer resources, feelings of frustration, and increasingly limited opportunities for advancement (Sherman, 1993). In many instances, productive employees are left on a plateau due to the unexpected disappearance of career paths.

The likelihood of premature plateauing is heightened by several factors, not limited to organizational restructuring and fewer positions at the top of a pyramidal hierarchy (Ornstein & Isabella, 1993). Other pressures, such as longer participation in the labour force, increased female and minority entrants in the labour force, and the large cohort of baby boomers who are becoming entrenched are also operative in the contemporary labour environment (Greenhaus & Callanan, 1994; Hall & Richter, 1990). And Mirvis & Hall (1994) predict that with increasingly shorter innovation lags and product life-cycles, career plateauing will occur earlier and earlier during career spans.

In response to these occupational obstructions, some employees have chosen to create new career paths. Those with sufficient resources have often started their own organizations, moved to entrepreneurial enterprises where responsibilities are pushed to lower level positions, or returned to school to pursue training in unrelated fields (Modic, 1987). Still others have completely withdrawn from the labour force. At the same time, though, many individuals may not have such flexibility. They are simply entrenched in their careers, unable or not wanting to pursue other options (Osherson, 1980).

Symptoms of entrenchment include the desire to avoid the social stigma associated with career withdrawal and fears that age and skill-specificity will limit employability. Another symptom is an unwillingness to relinquish the stature associated with employment in a given occupation. Occupational membership lends status to individuals, regardless of their personal talents or capabilities. When they withdraw from an occupation, they leave that assumed station behind (Kanter, 1990). Finally, scepticism about future earning potential may be symptomatic of entrenchment. In fact, empirical evidence does suggest that those who change careers have lower overall lifetime earnings than those who follow a traditional linear path (Fisher, 1988).

Given that the motivation to become and remain entrenched may be strong, it becomes important to examine the practical implications of this form of career attachment on both individuals and organizations (Taylor & Giannantonio, 1993). If entrenched careerists are satisfied or reconciled to their situation, there may be no associated dysfunctional consequences for either individuals or their organizations. With no alternative but to stay put, such employees may make peace with their own entrenched career. Others may express a

willingness to make a lateral move to another role that might help them to continue to develop personally and professionally. Alternatively, those whose prospects and progress are undesirably eroded by career entrenchment may turn out to be organizational liabilities. It is because of these potential consequences that the notion of career entrenchment is worthy of development. This, however, is a form of work attachment that has not previously been examined.

Extant career research has largely focused on affective theoretical constructs such as career motivation, career commitment, career satisfaction and promotion satisfaction. London's (1983) career motivation is a large, encompassing construct which has been reported to be positively related to affective work outcomes (London, 1993; Noe, Noe & Bachhuber, 1990). Career commitment has been more narrowly defined than London's construct (Carson & Bedeian, 1994), but similarly captures psychological attachment to one's chosen occupation (Blau, 1985). Both career satisfaction and promotion satisfaction are affective constructs dealing with contentment, enjoyment and fulfilment within their respective domains (Greenhaus & Callanan, 1994). In contrast, career entrenchment, as construct, is not defined purely along psychological dimensions, but rather approaches attachment from a continuance perspective in which individuals remain in an occupation because of extrinsic rewards associated with a career and losses incurred when giving it up.

Career entrenchment is conceptualized here as a multidimensional construct composed of three components: (a) *career investments*, accumulated investments in one's career success that would be lost or deemed worthless if one were to pursue a new career (Meyer & Allen, 1984); (b) *emotional costs*, anticipated emotional costs associated with pursuing a new career (Hirsch, 1987); and (c) *limitedness of career alternatives*, perceived lack of available options for pursuing a new career (Teger, 1980).

Career investments

The notion of career investments as a dimension of career entrenchment has its basis in Becker's (1960) 'Inside-bet theory'. Side-bets are identifiable factors that compel individuals to continue in a course of action because cessation would result in the loss of accrued investments (Rusbult & Farrell, 1983). As applied in the present context, side-bets include expenditures in time, money and effort associated with obtaining educational credentials and career-specific skills, as well as income and hierarchical position (Lawrence, 1990).

Professionally trained employees are especially vulnerable to career entrenchment due to career investments (Benveniste, 1987). Generally required to have advanced schooling or some form of certification to enter their chosen career, professionals typically must maintain their career competence through attendance at continuing education programmes and participation in professional associations. This investment in first acquiring and then maintaining career-specific expertise generally reduces the likelihood of career change (Carroll, Haveman & Swaminathan, 1992).

Emotional costs

In addition to the loss of specific investments in one's career, there are also certain emotional costs that are likely to be associated with career change and, thus, further con-

tribute to career entrenchment. Most visibly, perhaps, these costs involve social–psychological stakes associated with the disruption of interpersonal relations. The loss of co-worker friendships from moving to a new position, the severance of professional ties, and the dissolution of ‘connections’ in one’s present career field can all exact an emotional toll (Becker, 1960).

Beyond the suffering associated with the disruption of interpersonal relations, there may be other emotional costs associated with career change. A career choice represents a public commitment to pursue success in a chosen field or line of work (Hollenbeck, Williams & Klein, 1989). Because society values consistency, thoughts of career change may be negatively arousing (Brockner & Rubin, 1985). To mitigate such adverse feelings, individuals frequently engage in face-saving or self-presentational behaviours, including increased involvement in their work and heightened career commitment. The emotional costs of switching careers, however, are likely to vary by field of endeavour. For example, given the intrinsic nature of their work and the societal recognition afforded their positions, professionally trained employees are likely to incur greater emotional costs as the result of a career change than their less professionally trained counterparts (Dienesch & Liden, 1986; Hirsch, 1987).

Thus, two forms of investments exist: (a) investments in resources for preparation and achievement in a career, and (b) investments of a social–psychological nature that elevate emotional stakes. Research indicates that during the active process of investing, individuals periodically evaluate the fit between their significant needs/goals and the opportunity their chosen career offers for need/goal fulfilment (Greenhaus & Callanan, 1994; Holland, 1985). If a match exists, the process of investing is likely to continue. Conversely, however, if individuals fail to achieve such congruence, then attempts at career change may be initiated. But the passage of time may delimit both perceived and objective career options (Riley & Bond, 1983).

Limitedness of career alternatives

Efforts to both maintain career investments and minimize emotional costs divert individual energies from scanning the surrounding environment for viable career alternatives (Teger, 1980). As external stimuli are ignored, career opportunities pass unnoticed. Individuals experience a constriction in their perception of career options. Such ‘tunnel vision’ obfuscates opportunities until, with time, alternatives diminish (Brockner & Rubin, 1985; Teger, 1980).

Both common experience and empirical research suggest that career entrenchment increases over time (Cleveland & Shore, 1992). With increasing career tenure, skills not only become more firm-specific, but also career-specific, thereby limiting available career alternatives. Moreover, age further delimits available career opportunities (Wegmann, 1991). For example, entry into prerequisite training programmes also may be open only to individuals aged 35 or younger (Tolbert, 1982). Age discrimination and negative stereotyping may also be obstacles to older employees contemplating a career change (Riley & Bond, 1983).

Decades of research have been devoted to understanding careers. Much of this research has been concerned with career selection and career development. Despite this extensive research, there is virtually no theory or literature on the quandary faced by employees bound in unpromising careers. Such career entrenchment is the focus of the present paper,

which reports on the development and construct validation of a career entrenchment measure. The availability of a psychometrically sound instrument should facilitate future research on the career entrenchment phenomenon. Such research would seem particularly desirable in a world in which the 'reorganization of work' is part of what some consider 'a social transformation as massive and wrenching as the industrial revolution' (Sherman, 1993, p. 50).

To investigate the construction of the new entrenchment measure, the following hypotheses were advanced. Hypotheses 1A, 1B and 1C relate to the measure's career investments dimension.

Hypothesis 1A: Career investments will be positively correlated with career tenure.

Hypothesis 1B: Career investments will be negatively correlated with career withdrawal cognitions.

Hypothesis 1C: Employees who are professionally trained will report higher career investments than those less professionally trained.

The following hypotheses pertain to the proposed measure's emotional costs dimension.

Hypothesis 2A: Emotional costs will be positively correlated with career tenure, job involvement and career commitment.

Hypothesis 2B: Emotional costs will be negatively correlated with career withdrawal cognitions.

Hypothesis 2C: Employees who are professionally trained will report higher emotional costs than those less professionally trained.

A third set of hypotheses deals with the proposed measure's limitedness of career alternatives dimension.

Hypothesis 3A: Limitedness of career alternatives will be positively correlated with age and career tenure.

Hypothesis 3B: Limitedness of career alternatives will be negatively correlated with career withdrawal cognitions.

Hypotheses 1, 2, and 3 make consistent predictions about the relationship between the various dimensions of career entrenchment and selected constructs. To investigate how the varying dimensions of career entrenchment are distinct, they were examined in conjunction with the components of career commitment. Career commitment, defined as one's motivation to work in a chosen field, can be conceptualized as a multidimensional construct composed of three dimensions: *career identity*, establishing a close emotional association with one's career; *career planning*, determining one's developmental needs and setting career goals; and *career resilience*, resisting career disruption in the face of adversity (Carson & Bedeian, 1994).

Career identity, the emotional component of career commitment, should be strongly correlated with emotional costs, the social-psychological component of career entrenchment. Those high on career identity, however, are likely to remain in their present field and, therefore, should report a lack of career alternatives resulting from a lack of search efforts (Blau, 1985). Those with greater career investments should display more career-specific knowledge acquisition behaviours and engage in more career planning (Grover,

1992). At the same time, individuals who use their energy to focus on career planning within their career fields should lack awareness of other career field alternatives (Gould, 1979). Similarly, because career resilience deals with resistance to career disruption, it should be negatively associated with limitedness of career alternatives (Lydon & Zanna, 1990).

Hypothesis 4A: Emotional costs will be positively correlated with career identity, but negatively correlated with career resilience.

Hypothesis 4B: Career investments will be positively correlated with career planning, but negatively correlated with career resilience.

Hypothesis 4C: Limitedness of career alternatives will be negatively correlated with career resilience.

Evidence supporting the construct validity of the proposed career entrenchment measure was provided by assessing its degree of shared variance with the two views of organizational commitment that are dominant in the literature (Cohen & Gattiker, 1992). The first sees organizational commitment resulting from accumulated investments that would be lost if an employee were to voluntarily leave an organization (Meyer & Allen, 1984), and has been named 'calculative commitment'. Calculative commitment results from accumulated investments that would be lost if an individual voluntarily terminates enterprise membership (Rusbult & Farrell, 1983). Such investments include financial relinquishment of invested pensions contributions, loss of seniority and accompanying benefits, and sacrificing of prospective salary increases (Becker, 1960). The second views employees as psychologically involved with an organization and committed to maintaining membership so as to realize their own goals (Mowday, Porter & Steers, 1982). This positive attitudinal commitment, reflecting an identification with an organization's values and objectives, is called 'affective commitment'.

Though the proposed career entrenchment construct and calculative organizational commitment represent different domains, they both incorporate the notion of accumulated investments. Therefore, a significant correspondence is expected between the measures. At the same time, the intended tridimensional career entrenchment construct and the unidimensional affective organizational commitment construct should reflect identifiably distinct domains given their supposed uniqueness (cf. Wallace, 1993). Further, as job involvement is also a form of affective commitment, this unidimensional construct should also be distinct from career entrenchment (Mathieu & Farr, 1991). Job involvement taps a person's psychological identification with the dual values that work is both important and good (Kanungo, 1982; Lodahl & Kejner, 1965).

Hypothesis 5A: Career entrenchment will be moderately to strongly correlated with calculative organizational commitment.

Hypothesis 5B: The tridimensional career entrenchment, unidimensional affective organizational commitment, and unidimensional job involvement constructs should yield a five-factor solution.

Introduction to the studies

Development and construct validation of the intended career entrenchment measure occurred in three studies. Two pilot studies (A and B) were conducted to purify the

measure and to assess the reliability of the suggested dimensions. A field study was undertaken to examine the intended measure's construct validity (Churchill, 1979; Dawis, 1987).

Before beginning the first pilot study, 84 negatively and positively worded items were generated by the authors to represent the full range of the three proposed entrenchment dimensions. Care was taken to clearly delineate the focal content domain by explicitly defining each suggested career entrenchment dimension. Additionally, overlap between dimensions as well as redundancy with other work-related constructs was avoided. Four knowledgeable judges evaluated the items for content clarity and meaningfulness. Initially, two of the judges, acting alone, sorted the items into the three intended theoretical career commitment dimensions. The second set of judges, after defining each dimension based on three exemplary items, were asked to assign the remaining items to the hypothesized dimension (cf. Dawis, 1987; Smith & Kendall, 1963). A total of 24 career entrenchment items were retained on the basis that all of these items were correctly classified by both sets of judges.

PILOT STUDY A

Method

Sample

Given that the character of the score distribution generated by a measure is, in part, a function of respondent sample, subjects used in the first pilot study were selected to represent what Evetts (1992) refers to as differing 'action frames of reference'. Thus, care was taken in selecting pre-test subjects to 'include adverse and favorable as well as typical respondents'. As Brown & Beik (1969, p. 312) reason, if a measure can 'pass muster' with the extremes of a sample (i.e. intellectual, emotional and attitudinal), it should be more satisfactory for 'typical' respondents.

To ensure the likelihood of sufficient score variation, surveys in the first pilot study were administered to 304 respondents including 17 employees from a loan office, a chemical plant and a law firm, as well as employed MBA ($N = 35$) and employed undergraduate students ($N = 252$) enrolled at three southeastern universities. Approximately 11.7 percent of the MBAs were employed on a full-time basis compared with 20.3 per cent of the undergraduate students. The sample represented a variety of occupations (clerical = 24.0 per cent; professional/kindred = 15.8 per cent; managers/supervisors = 15.1 per cent; service = 12.9 per cent; sales = 12.7 per cent; other = 19.5 per cent). Average number of hours worked per week by respondents in the first pilot study was 25.4.

Procedures

The following prefatory instructions introduced the first section of the survey: 'This survey begins with statements about your LINE OF WORK or CAREER FIELD in which you are currently employed. You may consider line of work/career field as having the same meaning as *occupation, profession or vocation*'. A five-point rating scale was used to measure career entrenchment responses (1 = strongly disagree to 5 = strongly agree). In addition to the career entrenchment items, Crowne & Marlowe's (1964) 33-item (true/false) measure of social desirability (Kuder-Richardson formula 21 reliability = .74) was administered in Pilot Study A. The final section of the pilot study surveys requested position title and hours employed.

Results

The pool of 24 career entrenchment items was examined using principal-axes factor analysis. To aid in interpreting extracted factors, an orthogonal rotation to a varimax cri-

terion procedure was used. This analysis revealed five eigenvalues greater than 1.0 (9.64, 2.03, 1.20, 1.10, 1.03; percentages of variance explained 40.2 per cent, 8.5 per cent, 5.0 per cent, 4.6 per cent and 4.3 per cent, respectively). Recognizing that the eigenvalues-greater-than-one rule overestimates the number of factors to be extracted (Zwick & Velicer, 1986), additional criteria were considered. In the end, only three factors were extracted. The fourth factor was dropped because of its comparatively low reliability ($\alpha = .58$), and the fifth dropped because it contained only one item. Additionally, both the scree plot and our previously explicated theoretical frame suggested three dimensions.

The first dimension was identified as *emotional costs*, the second as *career investments*, and the third as *limitedness of career alternatives*. Only items cleanly loading on their intended factors at $\geq .40$ were retained in the item pool. Loadings for the 14 items defining these dimensions, as well as their reliabilities, are shown in Table 1. Correlations between Crowne & Marlowe's (1964) social desirability measure and individual career entrenchment items were low, ranging from .05 to $-.13$. Given that correlations in the range of $\pm .10$ to $\pm .40$ have been used to demonstrate the absence of biasing due to social desirability, such contamination did not appear to be a problem (Morrow & Goetz, 1988).

Discussion

The purpose of the first pilot study was to begin the process of developing and validating a measure of career entrenchment. Towards this end, items tapping the content domain of three proposed career entrenchment dimensions were generated and evaluated such that an initial pool of 84 potential items was reduced to 14 items.

PILOT STUDY B

Method

Sample

To ensure sufficient score variation in Pilot Study B, surveys were administered to 263 respondents representing a wide range of employees. Of this sample, 26 respondents were employed in a public sector human resource department, a public high school, a financial institution, and a fast food restaurant. Sixty-three were employed MBA students and 174 were employed undergraduate students from three southeastern universities. Approximately 55.6 per cent of the surveyed MBA students were employed on a full-time basis compared to 25.3 per cent of the undergraduate students. Respondents represented various occupations (managers/supervisors = 26.2 per cent, clerical = 24.3 per cent; professional/kindred = 22.1 per cent; service = 10.6 per cent; other = 16.8 per cent). Average number of hours worked per week by respondents in the second pilot study was 30.7.

Procedure

The same procedure was used in the second pilot study as was used in the first. Crowne & Marlowe's (1964) social desirability measure, however, was not readministered.

Table 1. Rotated factor solutions for Pilot Study A, Pilot Study B and Field Test

Items ^{a,b}	Pilot Study A			Pilot Study B			Field Test		
	Factor 1: Emotional costs	Factor 2: Career invest- ments	Factor 3: Career alterna- tives	Factor 1: Emotional costs	Factor 2: Career alterna- tives	Factor 3: Career invest- ments	Factor 1: Emotional costs	Factor 2: Career alterna- tives	Factor 3: Career invest- ments
1. I have too much time invested in my line of work/career field to change	27	<u>73</u>	23	27	18	<u>78</u>	08	22	<u>74</u>
2. It would be very costly for me to switch my line of work/career field	36	<u>52</u>	18	24	30	<u>74</u>	27	24	<u>66</u>
3. I have too much money invested in my line of work/career field to change at this time	20	<u>76</u>	12	17	19	<u>79</u>	19	09	<u>81</u>
4. For me to enter another line of work/career field would mean giving up a substantial investment in training	24	<u>65</u>	08	29	16	<u>70</u>	19	20	<u>67</u>
5. I would enjoy changing my line of work/career field since I have so little invested	39	<u>67</u>	17	<u>47</u>	04	<u>57</u>			
6. There would be a great emotional price involved in changing my line of work/career field	<u>62</u>	35	09	<u>80</u>	03	39	<u>78</u>	14	34
7. Changing my line of work/career field would be easy from an emotional standpoint	<u>70</u>	32	16	<u>86</u>	15	21	<u>84</u>	16	07
8. It would be emotionally difficult to change my line of work/career field	<u>68</u>	35	14	<u>84</u>	14	31	<u>80</u>	11	32
9. Leaving my line of work/career field would cause little emotional trauma in my life	<u>76</u>	33	16	<u>79</u>	08	12	<u>87</u>	04	11

Table 1 (continued)

Items ^{a,b}	Pilot Study A			Pilot Study B			Field Test		
	Factor 1: Emotional costs	Factor 2: Career investments	Factor 3: Career alternatives	Factor 1: Emotional costs	Factor 2: Career alternatives	Factor 3: Career investments	Factor 1: Emotional costs	Factor 2: Career alternatives	Factor 3: Career investments
10. A line of work/career field change would require an emotional cost that I am not willing to make	57	36	27	60	19	45			
11. Given my experience and background, there are attractive alternatives available to me in other lines of work/career fields ^c	05	16	72	13	72	20	10	84	15
12. I would have many options if I decided to change my line of work/career fields ^c	19	03	77	03	85	18	08	84	18
13. I am pleased that I have many alternatives available for changing my line of work/career field ^c	21	26	67	07	82	15	12	86	15
14. If I left this line of work/career field, I would feel like I had no reasonable options available for changing my line of work/career field ^c	19	29	49	12	75	17	15	63	41
Alpha coefficient for items loading above ±.40 on defined dimensions	.88	.85	.76	.90	.85	.85	.88	.85	.77
Eigenvalues	9.64	2.03	1.20	6.51	2.49	1.14	5.06	1.97	1.21
Percentage of item variance explained	40.2	8.5	5.0	43.4	16.6	7.6	42.1	16.4	10.0

Note. Pilot A, N = 304; Pilot B, N = 263; Field Test, N = 476. Decimals omitted for factor loadings.

^a Loadings of ±.40 or larger served to define factors and are underlined.

^b Order of item presentation is based on source factors. Items were presented in a different order in all applications (Pilot Study A: 23, 17, 24, 21, 18, 20, 2, 10, 5, 13, 19, 7, 4, 1; Pilot Study B: 1, 7, 13, 6, 9, 2, 4, 5, 8, 10, 3, 14, 11, 12; Field Study: 1, 7, 12, 10, —, 3, 5, 11, 8, —, 4, 6, 9, 2).

^c Reverse scored.

Results

The second pilot study was conducted to assess the psychometric properties of the reduced pool of 14 remaining career entrenchment items. Three factors were again extracted using principal-axes factor analysis. An orthogonal rotation to a varimax criterion procedure was used for interpretation. Items loading on the first factor represented the *emotional costs* dimension, second-factor items represented the *limitedness of career alternatives* dimension, and third-factor items represented the *career investments* dimension. Twelve items loaded cleanly, four on each of the hypothesized dimensions. The two items with split loadings were dropped from further analyses. Item loadings and reliabilities for each dimension are reported in Table 1.

Discussion

The second pilot study was conducted to purify the reliability of the proposed three dimensions. Fourteen items retained from Pilot Study A were reduced to 12 with four items representing each career entrenchment dimension. Dimension reliabilities were at .85 or higher.

FIELD STUDY

Method

Sample

In selecting respondents for the field study, an effort was made to include occupational groups varying in professional characteristics such as technical training, advanced education, formal testing and control of admission, professional associations, codes of conduct, and sense of calling (Benveniste, 1987). Of the 1292 surveys distributed in the field study, 476 were returned for a response rate of 36.8 per cent, which exceeds the traditional return rate of 20–30 per cent (Peterson, 1982). Over 85 per cent of the respondents were college graduates, 66 per cent were married, and 61 per cent were women. Average respondent age was 43 years old; average tenure in career, 182 months; in organization 119 months; in present position 80 months; and with supervisor 47 months.

The final sample was composed of 141 employees at a small southern teaching university (response rate = 23.8 per cent; example vocational types being teaching faculty and counsellor); 129 employees at a large southeastern research university, including 21 employees of food service departments (response rate = 14.5 per cent; example vocational types being dietician and supervisor), 14 employees of engineering services (response rate = 60.9 per cent; example vocational types being computer analyst and clerk), and 94 doctors of veterinary medicine (response rate = 55.0 per cent; example vocational types being lecturing faculty and clinician); 22 employees from a nursing home (response rate = 44.0 per cent; example vocational types being practical nurse and nursing assistant); six employees from a packaging plant (response rate = 26.1 per cent; example vocational types being truck loader and driver); eight employees from a public school system computer service (response rate = 66.7 per cent; example vocational types being data entry operator and clerk); 137 members of a state library association, academic section (response rate = 66.5 per cent; example vocational types being reference librarian and circulation librarian); and 33 members of an area personnel association (response rate = 47.8 per cent; example vocational types being personnel manager and human resource specialist).

Procedure

Surveys in the field study were accompanied by a covering letter encouraging participation and assuring confidentiality. Line of work/career field was described as in the pilot studies, and the same rating scale was

again used to assess career entrenchment items. In addition, surveys included items assessing the respondents' feelings about other aspects of their careers, as well as their jobs and organizations. The final section of the field study surveys requested demographic information, including career tenure, organization tenure, marital status, chronological age, gender and educational level.

The following measures were used in the field study to assess the construct validity of the proposed career entrenchment measure.

Career commitment. Career commitment, meaning one's motivation to work in a chosen vocation, was gauged using the 12-item Career Commitment Measure ($\alpha = .81$). This measure, developed by Carson & Bedeian (1994), has been reported to have adequate construct validity, as does its three dimensions: (a) career identity ($\alpha = .79$), i.e. tapping career involvement; (b) planning ($\alpha = .79$), i.e. tapping career goal-setting and strategy development; and (c) career resilience ($\alpha = .85$), i.e. tapping resistance to career disruption in the face of adversity. Items were presented with a five-point scale ranging from 1 = strongly disagree to 5 = strongly agree.

Job involvement. Kanungo's (1982) job involvement measure ($\alpha = .87$) was used to assess daily absorption with one's work. Based on an instrument developed by Lodahl & Kejner (1965), Kanungo's (1982) measure is reported to be valid (Blau, 1985). However, one item gauging job detachment has been shown to be unreliable (Paterson & O'Driscoll, 1990) and, therefore, was excluded from the survey. The remaining nine items were presented using a five-point scale with responses ranging from 1 = strongly disagree to 5 = strongly agree.

Calculative organizational commitment. Calculative organizational commitment ($\alpha = .80$) was gauged using an eight-item instrument developed by Meyer & Allen (1984). Designed to assess accumulated investments that would be lost if an employee were to voluntarily leave an organization, this measure has been analysed by McGee & Ford (1987). These researchers report that this calculative commitment scale has adequate reliability. Further, they suggest that the measure may gauge two aspects of continuance commitment: (a) existence of few employment alternatives and (b) personal sacrifice associated with leaving an organization. The instrument was anchored on a five-point scale with responses ranging from 1 = strongly disagree to 5 = strongly agree.

Affective organizational commitment. Affective organizational commitment ($\alpha = .89$), an eight-item measure developed by Meyer & Allen (1984), was used to assess identification with an organization. McGee & Ford (1987) found this measure to be reliable and offer support for its construct validity. A strongly disagree (1) to strongly agree (5) response format anchored the measure.

Withdrawal cognitions. Career withdrawal cognitions is a three-item measure that can be linearly summed ($\alpha = .82$). This measure gauges individuals' thoughts of quitting their present line of work/career, intentions to search for another line of work/career, and intentions to quit their present line of work/career. Job withdrawal cognitions is an identical three-item measure with the word 'job' replacing 'line of work/career field' ($\alpha = .79$). Both measures have displayed adequate psychometric properties (Blau, 1985; Michaels & Spector, 1982). The items were anchored with a strongly disagree (1) to strongly agree (5) response format.

Results

The principal-axes factor analysis and rotation performed in Pilot Study B was conducted once again on the retained items. As expected, three factors were extracted. Eleven of the 12 items loaded cleanly on their respective dimensions. One item tapping limitedness of career alternatives was slightly split on the career investments factor. Item loadings and reliabilities for each dimension are reported in Table 1. Correlations between each dimension as well as among all study variables are presented in Table 2. Also shown are the mean score, standard deviation and estimated reliability for each focal measure. The overall alpha coefficient for the 12-item career entrenchment measure was .88.

Table 2. Descriptive statistics and intercorrelations for Field Test variables

Variables	r																			
	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1. Career entrapment	2.95	.72	(88)																	
2. Career investments	3.12	.92	84	(77)																
3. Emotional costs	3.17	.96	78	48	(88)															
4. Limitedness of career alternatives	2.56	.83	75	50	34	(85)														
5. Career commitment	3.79	.55	03	02	26	-24	(88)													
6. Career identity	4.10	.74	27	17	50	-06	73	(79)												
7. Career planning	3.85	.68	-01	09	12	-24	71	44	(79)											
8. Career resilience	3.41	.87	-15	-16	-01	-20	70	20	17	(85)										
9. Job involvement	2.90	.76	35	48	47	06	41	53	30	11	(87)									
10. Calculative organizational commitment	3.04	.75	48	42	27	48	-22	-09	-20	-18	05	(80)								
11. Affective organizational commitment	3.45	.80	16	26	33	-04	45	40	18	37	-49	-03	(89)							
12. Career withdrawal cognitions	2.04	.82	-26	-21	-39	01	-54	-47	-31	-38	-03	05	-43	(82)						
13. Job withdrawal cognitions	2.19	.83	-15	-11	-27	03	-44	-31	-16	-42	-35	-03	-60	63	(79)					
14. Career tenure (months)	182.19	119.58	23	25	13	16	20	15	06	20	21	-02	23	-19	-22	(—) ^a				
15. Chronological age (years)	43.25	10.52	18	20	07	17	15	10	-02	21	16	05	26	-22	-30	74	(—) ^a			
16. Gender (female = 0; male = 1)	.40	.49	04	12	01	-01	-03	-01	01	-06	07	-03	-05	-03	-04	18	18	(—) ^a		
17. Marital status (not married = 0; married = 1)	.66	.47	06	08	03	04	08	09	01	08	03	07	09	-06	-11	16	15	20	(—) ^a	

Note. N = 476. Decimals omitted from correlations. For $r > .09, p < .05$; for $r > 11, p < .01$, both one-tailed. Reliability estimates are in parentheses.
^a Not applicable.

Because the three career entrenchment dimensions were positively correlated, the 12 underlying items were further examined using principal-axes factor analysis with an oblique rotation. Four items loading on the first factor represented the *career investments* dimension (.61, .55, .77, .53), four items loading on the second factor represented the *emotional costs* dimension (-.78, -.84, -.70, -.73), and four items loading on the third factor represented the *limitedness of career alternatives* dimension (-.76, -.80, -.82, -.49). All items loaded on their proposed dimensions.

Confirmatory factor analysis

Confirmatory factor analysis was conducted using LISREL VII (Jöreskog & Sorbom, 1988). Three goodness-of-fit indices were used for this assessment: Goodness-of-Fit Index (GFI); the Normed Fit Index (NFI; Bentler & Bonett, 1980); and the Tucker-Lewis Index (TLI; Tucker & Lewis, 1973). These indices are optimal when their values are above 0.9 (McDonald & Marsh, 1990).

Whereas LISREL VII results for a unidimensional model displayed a poor fit to the data ($\chi^2(54) = 1088.63$, GFI = .640, NFI = .606 and TLI = .574), results for the proposed three-dimensional career entrenchment measure indicated a relatively good fit to the data ($\chi^2(51) = 204.89$). The GFI = .933, NFI = .926 and TLI = .933. Maximum likelihood estimates ranged from .631 to .847. As a further precaution, to rule out a possible methodological confound between item wording and item content (Kelloway & Barling, 1990), a two-factor model (negatively worded items and positively worded items) was analyzed using LISREL VII (Jöreskog & Sorbom, 1988). This model provided a relatively poor fit to the underlying data ($\chi^2(53) = 944.31$, GFI = .705, NFI = .657 and TLI = .814).

Construct validity

To proceed in locating the career entrenchment concept within a theoretical framework (i.e. nomological net), the inter-construct linkages advanced in hypotheses 1 through 3 were examined (Table 2). As predicted in hypotheses 1A and 1B, career investments was positively correlated with career tenure ($r = .25, p < .01$), but negatively correlated with career withdrawal cognitions ($r = -.21, p < .01$).

As anticipated in hypotheses 2A and 2B, emotional costs was positively correlated with career tenure ($r = .13, p < .05$), job involvement ($r = .47, p < .01$), and career commitment ($r = .26, p < .01$), while being negatively correlated with career withdrawal cognitions ($r = -.39, p < .01$).

Hypotheses 3A and 3B predicted that limitedness of career alternatives would be positively correlated with age and career tenure and negatively correlated with career withdrawal cognitions. Consistent with this prediction, limitedness of career alternatives was positively correlated with age ($r = .17, p < .01$) and career tenure ($r = .16, p < .01$). Limitedness of career alternatives and career withdrawal cognitions, however, were virtually unrelated ($r = .01, n.s.$), thus failing to support hypothesis 3B.

Hypothesis 4A was partially supported as emotional costs was positively correlated with career identity ($r = .50, p < .01$) but was not negatively correlated with career resilience at a significant level ($r = -.01, n.s.$). Hypothesis 4B was supported in that

career investments was positively correlated with career planning ($r = .09, p < .05$) and negatively correlated with career resilience ($r = -.16, p < .01$). Not predicted was the positive relationship between career investments and career identity ($r = .17, p < .01$). Hypothesis 4C suggested that limitedness of career alternatives would be negatively correlated with career resilience. This was supported ($r = -.20, p < .01$). Limitedness of career alternatives was also negatively correlated with career planning ($r = -.24, p < .01$). Hypotheses 1C and 2C predicted that employees who are professionally trained would report both higher career investments and emotional costs than those less professionally trained. Analysis of covariance (ANCOVA) was used to test this prediction for four occupational groups chosen to represent varying levels of professional training. To determine how the four groups differed, Duncan's multiple range test was conducted as a follow-up procedure. Because simple demographic attributes may vary by occupation and thus bias the hypothesized effects, age, gender and marital status were treated as covariates.

Group 1 included assistant, associate and full professors (DVM/PhD) of veterinary medicine at a research university ($N = 60$); Group 2 included assistant, associate and full professors at a small teaching university ($N = 55$); Group 3 included librarians in non-supervisory positions ($N = 74$); and Group 4 included secretaries and clerical workers ($N = 35$). As predicted, mean scores across groups on both career investments and emotional costs were significantly different ($F(3,220) = 9.88$, and $F(3,220) = 6.00$, respectively, both $p < .01$). Professors (Groups 1 and 2) scored higher on both career investments ($M = 3.43, SD = 0.87$; $M = 3.31, SD = 0.92$) and emotional costs ($M = 3.40, SD = 0.85$; $M = 3.56, SD = 0.97$) than librarians ($M = 3.02, SD = 0.91$; $M = 3.03, SD = 0.95$, respectively), a group with less professional training. Further, the group with the least professional training, secretaries and clerical workers, scored lowest on both dimensions ($M = 2.47, SD = 0.79$; $M = 2.83, SD = 1.08$, respectively). The Duncan procedure regarding the career investments dimension indicated Group 1 was significantly different than Groups 3 and 4, and Groups 2 and 3 were significantly different than Group 4. With regards to the emotional costs dimension, Groups 1 and 2 were significantly different than Groups 3 and 4. Hypotheses 1C and 2C were thus supported.

With respect to hypothesis 5A, because both the career entrenchment construct and calculative organizational commitment incorporate the notion of accumulated investments, a moderate to strong degree of association (despite their different domains, i.e. career vs. organization) was expected. As indicated in Table 2, the bivariate correlation between career entrenchment and calculative organizational commitment was .48 (career investments, .42; emotional costs, .27; limitedness of career alternatives, .48). This correspondence thus offers a measure of support for hypothesis 5A.

To test hypothesis 5B, two confirmatory factor analyses were conducted using LISREL VII. The first analysis was based on the prediction that all items comprising the career entrenchment measure, the affective organizational commitment measure, and the job involvement measure would represent a single underlying factor. The second analysis was based on a prediction that all items in question would represent their proposed underlying dimensions (cf. Brooke, Russell & Price, 1988; Mathieu & Farr, 1991). Because the affective organizational commitment measure and job involvement measure are presumed to be unidimensional in construction, the second analysis was conducted to examine if the

three dimensions of career entrenchment, the focal affective organizational commitment measure, and the focal job involvement measure yield a five-factor solution. Because there were several items in each of the three measures, items for each theoretical factor were reduced to two indicators using the procedure described by Mathieu & Farr (1991).

Results of the one-factor model provided a relatively poor fit to the data. GFI = .606, NFI = .441 and TLI = .513 ($\chi^2(34) = 1536.29$). With a five-factor solution, GFI = .974, NFI = .977 and TLI = .976 ($\chi^2(20) = 64.30$), thus indicating an improvement in fit. These results suggest that the dimensions of the career entrenchment measure are indeed novel and do in fact tap domains different than affective organizational commitment and job involvement. Hypothesis 5B is thus supported.

Discussion

In the third study, the proposed career entrenchment measure's construct validity was examined. Field Test results supported the measure's: (a) intended three-factor solution; (b) location within a specified theoretical framework or nomological net; and (c) construct validity with respect to calculative organizational commitment and affective organizational commitment. These results thus suggest that the proposed measure may be an appropriate instrument for investigating the antecedents and consequences of career entrenchment.

Implications

By advancing specific theory-driven hypotheses concerning the pattern of relations between career entrenchment and other constructs, the present study has given the career entrenchment concept concrete definition. In doing so, however, it has only begun delimiting the concept's nomothetic span (Embretson, 1983). Further research and construct validation need to be conducted to assess the implications of career entrenchment for individuals and their careers (Tenopyr, 1993).

In choosing careers, individuals typically select vocations that match their personal interests. Perhaps the most influential person-fit approach to career choice was developed by Holland (1985). His congruence theory suggests that when personality-vocational fit is good, individuals will be more satisfied with their career choice, have fewer career changes, and achieve greater occupational success than those who choose a career incongruent with their interests (Tracey & Rounds, 1993). As previously noted, during the process of investing, Holland (1985) proposes that individuals evaluate the fit between their significant needs/goals and the opportunity their chosen career offers for need/goal fulfilment. If congruence is not achieved, career dissatisfaction will occur.

When an individual experiences career dissatisfaction, negative stress reactions may occur (Motowidlo, Packard & Manning, 1986). Career entrenchment can create distress because of the boredom and monotony associated with overlearning an occupation (Fisher, 1993; Quick & Quick, 1984). Social isolation may also add to experienced stress, as individuals withdraw from colleagues because of feelings of inferiority (Bardwick, 1986). In the absence of constructive ways to deal with their isolation, employees experiencing career entrenchment may grow resentful. The resulting depression, with accompanying pessimism and rumination, can induce dysfunctional consequences (Beehr & Newman, 1978).

Disaffected individuals have a number of ways to deal with their situations. One choice they have is to assert themselves in the workplace. They can be encouraged to actively and constructively try to improve conditions by verbalizing concerns (Rusbult, Farrell, Rogers & Mainous, 1988). Another option is to refocus their energies towards non-career or leisure activities, a major source of psychological satisfaction (Super, 1986). Of course, leaving a dead-end career can also be a rational coping response (Elsass & Ralston, 1989; Rusbult *et al.*, 1988).

Though the career entrenchment measure appears to be a sound instrument for pursuing these avenues relevant to individuals and their careers, certain potential limitations need to be considered. Common method variance is frequently identified as a problem associated with the survey data collection method (Crampton & Wagner, 1994; Williams & Brown, 1994). This concern, however, is minimized in the present study as: (a) correlations between career entrenchment items and social desirability were low; (b) both positive and negative item statements were included in the proposed measure; (c) survey completion contexts were varied in the field study as some respondents received their surveys at work whereas others received their surveys at home; and (d) a different format was used in the final section of the field study survey instrument. Finally, the generalizability of the reported findings may be expanded by assessing the career entrenchment of employees who are non-professional, less educated, situated in other settings, and differing in age and degrees of participation in the labour force.

Acknowledgement

The helpful comments of Robert Folger and Christopher Martin on an earlier manuscript are gratefully acknowledged.

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Received 20 April 1994; revised version received 18 November 1994