The cognitive/affective distinction of job insecurity: Validation and differential relations

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ABSTRACT

Job insecurity as a work-related stressor is well established through three decades of research. It has been related to outcomes such as decreased job satisfaction, organisational commitment and performance as well as increased ill-health and organisational turnover. However, some important conceptual and theoretical issues are still under discussion, with implications for the measurement of the construct. We administered a short version of the measure of job insecurity originally devised by De Witte (2000), which distinguishes between cognitive and affective job insecurity. Data on job satisfaction, commitment, psychological ill-health and emotional exhaustion were also gathered from employees in a variety of South African organisations (*N*=1925) by means of anonymous surveys. Exploratory and confirmatory factor analyses revealed that the cognitive and affective dimensions of job insecurity could be distinguished in this sample of South African employees, and the two dimensions evidenced adequate reliability. Equivalence analyses showed that the measurement properties of the scale were invariant across various demographic groups. The relationships with outcome variables were investigated by means of correlations and regression analyses. Cognitive job insecurity was predictive of all outcome variables, whereas affective job insecurity primarily played a role for emotional exhaustion. Norm data concerning levels of cognitive and affective job insecurity are presented to guide future South African studies.

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Introduction

The concept of job insecurity has been studied for over 30 years. Enough international research evidence now exists to prove that it is a global phenomenon and likely to remain a characteristic of contemporary working life (De Witte 2005; Greenhalgh & Rosenblatt 2010; Probst 2008; Sverke, De Witte, Näswall & Hellgren 2010). However, some important outstanding conceptual and theoretical issues also still exist that need to be resolved in order for research on job insecurity to progress (Greenhalgh & Rosenblatt 2010; Probst 2008).

The academic interest in job insecurity research probably started with the seminal article of Greenhalgh and Rosenblatt (1984), in which they discussed the conceptualisation, antecedents and consequences of job insecurity. In subsequent research, the construct was described as part of a process of loss and regaining of employment, as suggested by Hartley and Cooper (in Jacobson 1987). It has emerged as an important phenomenon to consider in the stress–health relation, especially in the industrialised Western world where major economic transformation has taken place over the past three decades. Some special issues on job insecurity have deepened the literature in this field (e.g. Klandermans & Van Vuuren 1999; Reisel & Probst 2010; Sverke et al. 2010). It is now well established that job insecurity is negatively related to work-related outcomes such as job satisfaction (Davy, Kinicki & Scheck 1997; Hellgren, Sverke & Isaksson 1999), organisational commitment (McFarlane Shore & Tetrick 1991), individual level variables such as psychological and physical health (Ashford, Lee & Bobko 1989; Kinnunen, Mauno, Nätti & Happonen 2000), and associated with turnover intentions (Hartley, Jacobson, Klandermans & Van Vuuren 1991; Hellgren et al. 1999). This is illustrated by the results of two meta-analyses, in which the meta-correlations with job satisfaction, psychological well-being and physical health, as well as organisational attitudes (such as organisational commitment, job involvement and trust) and behaviours (e.g. turnover and performance) are documented (Cheng & Chan 2008; Sverke, Hellgren & Näswall 2002). Some authors (Anderson & Pontusson 2007; Erlinghagen 2007) have also related job insecurity to important economic indicators in both a micro- and macro-economic perspective. In the literature, however, the measurement of the construct still remains an important issue.

Measurement issues

The measurement of job insecurity started off rather simply with single items investigating respondents' beliefs about retaining their current job in an unforeseeable future (for an overview, see Sverke, Hellgren, Näswall, Chirumbolo, De Witte & Goslinga 2004). Single-item measures of job insecurity appeared as early as the late 1970s in the works of Caplan, Cobb, French, Van Harrison and Pinneau (1975), and Karasek (1979), typically, however, in its opposite form (job insecurity). As interest in the phenomenon grew, and the focus shifted from job security to job insecurity, multi-dimensional conceptualisations emerged. Greenhalgh and Rosenblatt (1984) were the first authors to put forward a multi-dimensional conceptualisation of job insecurity by proposing that both concern for the job itself and the anticipated impact of the event would be relevant to be considered. Another important initial distinction refers to what is termed 'objective and subjective insecurity', and differentiates between that which is in the environment or context (such as economic policies or industrial action), and that which is in the heart and mind of the individual experiencing job insecurity (e.g. De Witte & Näswall 2003). In line with the increased focus on subjectivity, research has drawn a distinction between a cognitive and an affective component of job insecurity (Borg 1992). This conceptualisation distinguishes between the ideas and thoughts with regard to losing one's job, on the one hand, and the feelings and fears associated with that cognition, on the other. Recently, Staufenbiel and König (2011) concluded from their analysis of Borg's (1992) scale that its measurement properties may be a function of item wording, with the affective dimension reflecting the *imagined* loss of one's job (i.e. a dimension of *affectivity* and *anxiety*). They concluded that the affective component of Borg's (1992) measure might not only reflect affective experiences arising from actual threats to the job, but also anxiety associated with imagined loss of one's job (Staufenbiel & König 2011).

Jacobson (1991: 32) also considered dimensions of job insecurity as being objective as opposed to subjective, as having cognitive and affective qualities, and being related to the job as such or to aspects of the job. Hellgren et al. (1999) further developed the latter distinction in terms of job insecurity, by expanding on ideas initially proposed by Greenhalgh and Rosenblatt (1984). The latter distinguished between a quantitative dimension (dealing with the risk of losing the job in its totality) and a qualitative dimension (the risk of losing important qualitative dimensions of the job, such as pay increases or career progression). The focus of this paper is, however, on the cognitive/affective distinction, within the quantitative conceptualisation of job insecurity. Thus the hypothesis put forward is that where threats to the job as such are concerned, individual employees are likely to experience the phenomenon

at both the cognitive (*thinking about* job insecurity) and affective (*feelings about* job insecurity) levels.

Cognitive/a□ective distinction: Theoretical reasoning

The cognitive/affective distinction makes intuitive sense and has already been introduced by Greenhalgh and Rosenblatt (1984). These two dimensions were soon applied in the works of Jacobson (1987, 1991), Ashford et al. (1989) and Borg (1992), and have remained influential in subsequent job insecurity research. For instance, De Witte (2000) developed a measure of cognitive and affective job insecurity and validated it in a sample of Belgian employees. Ito and Brotheridge (2007) acknowledged the importance noted by Hartley et al. (1991) of understanding job insecurity in a theoretical framework in which the relationship between cognitive and affective insecurity is also considered. Huang and colleagues (Huang, Lee, Ashford, Chen & Ren 2010; Huang, Niu, Lee & Ashford 2012) also advanced the cognitive/affective distinction by drawing parallels with the psychological contract and work stress literatures.

Jacobson (1987) hypothesised that the anticipation of job loss (i.e. job insecurity) evokes a cognitive process entailing an estimation of probability, timing and content, but also an evaluation of the affected individual's ability to respond to the threat. According to this hypothesis, the cognitive component of job insecurity most likely emerges following primary threat appraisal, as suggested by Lazarus and Folkman (1984). In line with appraisal theory, Jacobson (1991) conceptualised the reaction to job insecurity as evaluations regarding the likelihood of job loss, and whether this likelihood is perceived as irrelevant, positive or stressful. Jacobson also suggested an affective component to the construct, in stating that individuals may ponder their own ability to survive the experience and look for a party to blame (see Jacobson 1987: 144). Following Lazarus and Folkman's (1984) line of reasoning, affective job insecurity could be the result of secondary threat appraisal, in which one reappraises a potentially stressful event in the light of one's available resources to deal with the potential threat. Anderson and Pontusson (2007: 214) succinctly distinguished between the cognitive and affective dimensions of job insecurity in describing affective insecurity as being "determined" by cognitive insecurity.

Probst (2003: 452) defined job insecurity as "the perceived stability and continuance of one's job as one knows it", and noted that this definition, as well as her measure (the Job Security Index [JSI]), was limited to the cognitive dimension of job insecurity. She argued that separate measures were needed for the cognitive and affective dimensions, and developed the Job Security Satisfaction (JSS) scale

to capture the affective or attitudinal dimension of insecurity. Whereas the JSI was designed to assess *perceptions* of job security, the JSS was designed to capture an individual's *attitudes* regarding that level of job security (Probst 2003: 452). The distinction between cognitive and affective insecurity is also supported in the work of Mauno and Kinnunen (2002). They suggested that, even though job insecurity may be related to employees' perceptions of the organisation as such (cognitive insecurity), individual-level appraisal of the situation will determine affective insecurity. However, both dimensions are important to consider (Jacobson 1991; Probst 2008), since they are interrelated and mutually influence each other. Perceptions of, and reactions to, insecurity are related, but independent, and with unique antecedents and consequences (Huang et al. 2012; Kinnunen, Mauno, Nätti & Happonen 1999; Mauno & Kinnunen 2002; Probst 2003).

Evidence for different outcomes of the cognitive and affective dimensions of job insecurity is limited. Despite the large number of studies concerning the outcomes of overall job insecurity, several authors (e.g. Huang et al. 2010; Huang et al. 2012; Ito & Brotheridge 2007) note the lack of research focusing on these two separate components. Moreover, the studies that have focused on the cognitive and affective dimensions have reported contradictory findings. For instance, some studies (Huang et al. 2010; Huang et al. 2012; Ito & Brotheridge 2007) have concluded that affective job insecurity is more strongly associated with psychological strain, while cognitive insecurity relates more strongly to work-related aspects such as commitment and satisfaction. In line with this, Probst (2003) reported that the affective dimension was negatively related to physical and mental health and job stress, whereas the cognitive dimension was unrelated to these outcomes. In the study by Mauno and Kinnunen (2002), both dimensions were associated with communication problems, while only affective insecurity was predictive of impaired self-esteem. In contrast, De Witte (2000) found both dimensions to be negatively correlated with all outcome variables in his study (e.g. global dimensions of job satisfaction and performance), but that these associations were stronger for the cognitive dimension. Similar findings were reported by Hartley et al. (1991), who found the cognitive dimension to be a stronger predictor of work-related outcomes than the affective dimension. The results of Staufenbiel and König (2011) even indicate that the cognitive dimension was negatively related to job satisfaction and organisational commitment, whereas the affective dimension was positively related to these outcomes. In a longitudinal study, Huang et al. (2012) found that both cognitive and affective job insecurity related significantly to impaired individual well-being over a six-month period.

Validation of a cognitive/a□ective job insecurity measure in South Africa

Operationalisation of the construct of job insecurity matters, because it determines the relationship job insecurity has with other variables (Mauno & Kinnunen 2002; Sverke & Hellgren 2002) concluded from their meta-analysis that investigation into properties of measurement instruments remains an important issue for job insecurity research *per se*. They also called for more research on the purported differential effects of different dimensions of the construct. Mauno and Kinnunen (2002) specifically called for the development of a multi-dimensional scale of job insecurity that would also give rightful consideration to both the cognitive and the affective aspects of job insecurity.

It has been noted that at least some of the meaning of job insecurity might be contextually defined in terms of the specific culture or social milieu (Jacobson 1984). Some evidence of these ideas of culturally defined job insecurity has also emerged (see for example the works of Anderson & Pontusson 2007; Erlinghagen 2007). The Job Insecurity Scale (De Witte 2000) has been used extensively in international (e.g. De Cuyper & De Witte 2006; Kinnunen, Mauno & Siltaloppi 2010) as well as South African research (for an overview, see Van Wyk & Pienaar 2008). However, a thorough analysis of the reliability and validity of the measure has not been undertaken. The validation of the scale in a non-European context could add to the understanding of the distinction between the cognitive and affective dimensions, and expand research on the topic by aiding further investigations into antecedents, moderators and consequences of job insecurity. Probst (2008) especially noted that the conceptual distinction of various sub-dimensions remains to be proven. In truly understanding the different dimensions of job insecurity, it would be important to establish whether they relate differently to different outcome variables in an organisational context, for instance employee psychological health and work-related job attitudes such as organisational commitment and job satisfaction.

The present study therefore sets out to validate the Job Insecurity Scale (De Witte 2000) in a South African context. More specifically, we evaluate the dimensionality of the scale using both exploratory and confirmatory factor analyses; examine measurement properties across demographic groups; and establish the reliability of the dimensions of cognitive and affective job insecurity. In addition, we investigate how the two dimensions relate to attitudinal and health-related outcomes. By using data from a variety of organisational surveys conducted in South Africa, the ambition is also to develop norm data regarding levels of job insecurity to guide future South African studies.

Method

Design/Approach

Data were gathered by means of anonymous surveys and as part of various postgraduate-level studies at the Vaal Triangle Campus of the North-West University (refer to Van Wyk & Pienaar 2008, for a list). These studies formed part of a larger research project with the aim of investigating job insecurity and its consequences in various organisational settings in South Africa. Various versions of a composed paper-and-pencil survey were administered across a number of organisations, typically during work hours, but all versions contained the Job Insecurity Scale (De Witte 2000). Participants were not compensated for taking part in the survey. All studies were cross-sectional, and the data were collapsed into a single overall data set to answer the current research questions. In all cases, survey booklets were provided to participants at their workplace, and the questionnaires were completed in their own time. Data were collected between 2003 and 2006. Ultimately, the data presented here represent a convenience sample of employees willing to participate.

Participants

Participants were employees in a variety of South African organisations (N=1925). The sample included groups of employed individuals from the petro-chemical industry (n=66; n=114; n=499), financial institutions (n=146; n=73, n=47), a mining organisation (n=120), a supermarket (n=66), a packaging organisation (n=99), a tertiary education institution (n=82), service workers (n=48), airline pilots (n=92), government (n=295) and a parastatal organisation[1] (n=178).

The biographical characteristics of the combined sample are reported in Table 1. Since we aggregate data from a variety of surveys, each with their specific questions on biographical characteristics, data for some biographical characteristics are missing in some surveys and are presented as missing data. In other cases, we had to collapse data into broader categories (e.g. race). Men comprised 64.5% of the participants. Most of the participants were over 35 years of age (54.2%). Of the 83.3% of the sample for whom data were available, 48.7% had a tertiary level of formal education. For those individuals for whom data were available (68.9% of the sample), most (43.8%) had up to 10 years or less of tenure. This total sample comprised more Black (34.2%) than White (29.4%) employees (36.4% missing data).

Table 1: Biographical characteristics of the participants (N=1925)

		Frequency	Percentage
Gender	Male	1241	64.5
	Female	639	33.2
	Total	1880	97.7
	Missing	45	2.3
Age group	Up to 35 years of age	832	43.2
	Over 35 years of age	1044	54.2
	Total	1876	97.5
	Missing	49	2.5
Level of education	High school	666	34.6
	Tertiary level	938	48.7
	Total	1604	83.3
	Missing	321	16.7
Tenure in years	Up to 10 years	844	43.8
	More than 10 years	482	25.0
	Total	1326	68.9
	Missing	599	31.1
Race	White	566	29.4
	Black*	658	34.2
	Total	1224	63.6
	Missing	701	36.4
	Total	1925	100.0

* Here, 'Black' represents employees of African, Indian and mixed race ethnicity.

Measuring instruments

Job insecurity. A shortened version of the measure of job insecurity originally devised by De Witte (2000) was administered. The original version has 11 items, and after considering the translation and application in the South African context, we dropped 3 items. This short-form scale distinguishes between cognitive (4 items: "I am very sure that I will be able to keep my job"; "I am certain/sure of my job environment"; "I think that I will be able to continue working here"; "There is only a small chance that I will become unemployed"; all items reverse coded) and affective job insecurity (4 items: "I fear that I might get fired"; "I worry about the continuation of my career"; "I fear that I might lose my job"; "I feel uncertain about the future of my job"). These

items are rated on a 5-point scale ranging from 1 (Disagree strongly) to 5 (Agree strongly). Items are recoded so that a high score indicates a high level of insecurity.

Work-related attitudes. A 20-item version of the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England & Lofquist 1967) was used to measure job satisfaction. This scale was subjected to factor analysis, and 2 factors were extracted labelled 'extrinsic' and 'intrinsic' job satisfaction. The extrinsic job satisfaction scale comprised 7 items ("The way my boss handles his/her workers", "The competence of my supervisor in making decisions", "The way company policies are put into practice", "My pay and the amount of the work I do", "The chances for advancement on this job", "The working conditions", "The praise I get for doing a good job"). The intrinsic scale comprised 7 items ("The chance to work alone on the job", "The chance to do different things from time to time", "The chance to be 'somebody' in the community", "The chance to do things for other people", "The chance to tell people what to do", "The chance to do something that makes use of my abilities", "The chance to try my own methods of doing the job"). The two dimensions showed acceptable reliability, for both extrinsic job satisfaction ($\alpha = 0.83$) and intrinsic job satisfaction ($\alpha = 0.82$). Six of the items evidenced poor loadings and were discarded from the analysis ("Being able to keep busy all the time", "Being able to do things that don't go against my conscience", "The way my job provides for steady employment", "The freedom to use my own judgement", "The way my co-workers get along with each other", "The feeling of accomplishment I get from my job").

Organisational commitment was assessed using 6 items from the Affective Commitment scale (Allen & Meyer 1990). ("I would be very happy to spend the rest of my career in this organisation", "I really feel as if this organisation's problems are my own", "I do not feel like 'part of the family' at my organisation", "I do not feel 'emotionally attached' to this organisation", "This organisation has a great deal of personal meaning for me", "I do not feel a strong sense of belonging to my organisation"). This scale proved reliable with $\alpha = 0.77$.

Well-being. Psychological ill-health was indicated by 6 items from the General Health Questionnaire (GHQ12) (Goldberg 1979). Participants were requested to rate themselves on a 4-point scale, ranging from "Not at all" to "Much more than usual" on the following 6 items: Have you recently: 1) Lost much sleep over worry? 2) Felt constantly under strain? 3) Been thinking of yourself as a worthless person? 4) Felt that you are playing a useful part in things? 5) Been able to enjoy your normal day-to-day activities? 6) Felt capable of making decisions about things? Positively worded items are reverse-coded so that a high score indicates poor psychological health. This short-form version demonstrated satisfactory reliability ($\alpha = 0.89$).

Emotional exhaustion was assessed by means of the 5 items of the MBI-GS (Maslach & Jackson 1986). The items ("I feel emotionally drained from my work", "I feel used up at the end of the workday", "I feel tired when I get up in the morning and have to face another day on the job", "Working all day is really a strain for me", "I feel burned out at the end of the workday") were rated on a 7-point scale ranging from "Never", to "Every day". A high score indicates greater experience of emotional exhaustion. The scale proved reliable with $\alpha = 0.92$.

Statistical analyses

Maximum likelihood exploratory and confirmatory factor analyses (using SPSS and AMOS respectively) were employed to establish the measurement properties of the variables. We randomly assigned the participants into two sub-samples for the investigation into the factor structure of the measure. The first half of the sample (n=963) was used for the exploratory factor analysis, since we were evaluating a short-form version of the De Witte (2000) scale in a new cultural context. The second half of the sample (n=962) was used for the confirmatory analysis.

We also investigated factorial invariance using both exploratory and confirmatory approaches. In the exploratory sample, construct (structural) equivalence was computed to compare the factor structure for the different biographical groups included in this study. Exploratory factor analysis with a Procrustean target rotation was used to determine the construct equivalence of the job insecurity subscales for the different groups (Van de Vijver & Leung 1997). Target rotation is conducted prior to comparing the factor solutions of different groups by rotating the factor loading matrices in relation to one another in order to maximise the agreement between the factors. During the process, one group is arbitrarily assigned to the target group, and the factor loadings of the other groups are rotated towards the target group to form a common factor matrix. Factorial agreement between the two groups is then estimated with Tucker's coefficient of agreement (Tucker's *phi*). This index does not have a known sampling distribution, but it is possible to establish confidence intervals. Values higher than 0.95 are deemed to be evidence of factorial similarity or equivalence across different groups (Van de Vijver & Leung 1997), whereas values lower than 0.90 (Van de Vijver & Poortinga 1994) or even 0.85 (Ten Berge 1986) should be viewed as an indication of sufficient existing differences.

In terms of the confirmatory analysis, the two-factor model was compared with a uni-factor model and a structural null-model, using data from the confirmatory sample. Using multi-group procedures, measurement equivalence across various biographical groups was tested following the procedures described by Brown (2006).

In a first step, we tested for weak factorial invariance by comparing a model in which the factor loadings were specified to be invariant across groups, with the baseline model in which the loadings were freely estimated. In a second step, the intercepts were also specified to be invariant. According to Cheung and Rensvold (2002), differences in the Comparative Fit Index (CFI) (Bentler 1990) of 0.01 or smaller are acceptable to indicate invariance.

The total sample was used in establishing the reliability of the job insecurity scales. The total sample was also used to establish how cognitive and affective job insecurity relate to their outcomes. In a preliminary step, we evaluated the bivariate correlations. To examine this in a multivariate context, we applied multiple regression procedures.

Results

Dimensionality of the Job Insecurity Scale

The results of the factor analyses are reported in Table 2. In terms of the exploratory factor analysis based on the exploratory sample, two factors with eigenvalues larger than 1 were extracted using the maximum likelihood estimation with oblimin rotation. The rotated factor solution clearly indicates a well-defined two-factor solution. The four cognitive job insecurity items loaded strongly on Factor 2, while the four affective job insecurity items loaded distinctly on Factor 1; there were no indications of double loadings for any item, and the two factors correlated highly (r=0.59).

Table 2 also reports the factor loadings from the confirmatory factor analysis based on the replication sample. All the hypothesised loadings were significant and fairly strong. The weakest factor loading was for the item 'There is only a small chance that I will become unemployed', which evidenced a moderately strong loading in both the CFA and the EFA (0.51 in both cases).

Table 3 provides the fit statistics for the confirmatory factor analyses. The fit statistics provide good evidence of fit for the hypothesised cognitive/affective distinction, and also act to confirm the results of the exploratory results. The one-factor model provided substantially poorer fit than the two-factor model, and the item loadings were generally weaker (range of loadings: 0.46–0.81). The one-factor model, in turn, provided a markedly better fit than the null model, which specifies that all items are orthogonal.

Table 2: Results of exploratory (EFA) and confirmatory (CFA) factor analysis of affective (Aff) and cognitive (Cogn) Job Insecurity items

	EFA Factor		CFA Dimension	
	1	2	A□	Cogn
I think that I will be able to continue working here	0.07	0.70	–	0.77
There is only a small chance that I will become unemployed	-0.05	0.51	–	0.51
I am certain/sure of my job environment	0.06	0.74	–	0.80
I am very sure that I will be able to keep my job	0.00	0.81	–	0.83
I feel uncertain about the future of my job	0.67	0.05	0.69	–
I worry about the continuation of my career	0.74	-0.06	0.90	–
I fear that I might lose my job	0.89	-0.00	0.74	–
I fear that I might get fired	0.66	0.05	0.69	–
Eigenvalues	4.29	1.36	–	–
% variance explained	47.67	15.14	–	–
Factor correlation	0.59		0.62	

Note: For the CFA, all estimates were significant. – Not applicable.

Table 3: Fit statistics for the confirmatory factor analyses

						Model comparisons		
Model	χ^2	**df**	**TLI**	**CFI**	**RMSEA**	**Models**	**Δdf**	**Δχ^2**
0. Null model	3238.01*	28	0.00	0.00	0.36	–	–	–
1. Uni-factor	811.03*	20	0.68	0.77	0.20	1 vs 0	8	2426.98*
2. Two-factor	131.01*	19	0.95	0.97	0.08	2 vs 1	1	680.02*

* $p<0.05$. – Not applicable.

Measurement properties across groups

In the exploratory sample, the target rotations that were conducted to estimate measurement equivalence for this population were concerned with race, gender, age, education and tenure. These tests were all well above the cut-off limit of 0.95 to indicate a similar factor structure across groups. More specifically, the test of equivalence indicated the cognitive and affective dimensions to be equivalent for different categories of race (White: $\chi^2=0.99$; Black: $\chi^2=0.99$), gender (male: $\chi^2=1.00$; female: $\chi^2=0.99$), age (up to 35: $\chi^2=1.00$; over 35: $\chi^2=1.00$), level of education (high

school: χ^2=1.00 : tertiary level: χ^2=1.00) and length of tenure (up to 10 years: χ^2=1.00; more than 10 years: χ^2=1.00).

In the confirmatory sample, we established the baseline models with unconstrained parameters across biographical groups. These models showed good fit; that is, close to or above 0.97, for race (CFI=0.969), gender (CFI=0.974), age (CFI=0.973) and level of education (CFI=0.962), and an almost acceptable fit for tenure (CFI=0.957). When the factor loadings were constrained across groups, we found support for weak factorial invariance for all group comparisons in that there was only a marginal decline in terms of CFI for race (ΔCFI=0.007), gender (ΔCFI=0.001), age (ΔCFI=0.002), level of education (ΔCFI=0.008) and tenure (ΔCFI=0.002). When the intercepts were also constrained across groups, the comparisons against the unconstrained model revealed support for strong factorial invariance in terms of gender (ΔCFI=0.001) and age (ΔCFI=0.004), while the total changes in CFI were slightly above the cut-off value of 0.01 for race (ΔCFI=0.017), education (ΔCFI=0.011) and tenure (ΔCFI=0.024).

Reliability of the job insecurity dimensions

Table 4 reports the reliability estimates. Both cognitive and affective job insecurity evidenced Cronbach's alpha values of over 0.80, which was deemed satisfactory.

Associations with outcome variables

Having confirmed the structure, equivalence and reliability of the Job Insecurity variable, Table 4 also reports correlations and descriptive statistics for the variables in the study. (Note that not all measures were applied in all samples, and therefore the number of respondents differs.)

There was a strong correlation between cognitive and affective job insecurity, sharing about 25% of the variance. Negative relations existed between the dimensions of job insecurity and job satisfaction. Cognitive job insecurity related negatively to organisational commitment, and positively to emotional exhaustion and psychological ill-health. Affective job insecurity showed a similar pattern. Considering the size of the correlations, it is interesting that cognitive job insecurity showed somewhat stronger relations to work-related variables than to affective job insecurity. Regarding the variables that may be described as being of a more psychological nature (emotional exhaustion and psychological ill-health), the gap between cognitive and affective job insecurity was much less pronounced.

Table 4: Descriptive statistics and bivariate correlations between variables

	N	Mean	*SD*	α	1	2	3	4	5	6
1. Cognitive job insecurity	1923	2.73	0.98	0.80	—					
2. Affective job insecurity	1907	2.81	1.05	0.84	0.52**	–				
3. Extrinsic job satisfaction	1418	3.26	0.84	0.83	-0.28**	-0.11**	–			
4. Intrinsic job satisfaction	1419	3.77	0.73	0.82	-0.27**	-0.06*	0.56**	–		
5. Organisational commitment	1473	3.42	0.79	0.77	-0.27**	-0.11**	0.46**	0.37**	–	
6. Emotional exhaustion	787	2.32	1.56	0.92	0.36**	0.31**	-0.29**	-0.23**	-0.41**	–
7. Psychological ill-health	486	1.84	0.59	0.85	0.42**	0.36**	-0.39**	-0.32**	-0.47**	0.64**

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
Note: Not all participants completed all measures. The data represent aggregated data from different data sets.

To investigate the differential potential of cognitive and affective job insecurity, a series of regressions was calculated, as reported in Table 5.

Firstly, it can be seen that cognitive job insecurity was significantly related to all the outcome variables. More specifically, cognitive job insecurity was negatively associated with extrinsic and intrinsic job satisfaction, and organisational commitment, and positively associated with emotional exhaustion and psychological ill-health. Secondly, the coefficients for affective job insecurity were generally lower, and were even unrelated to extrinsic job satisfaction, organisational commitment and psychological ill-health. The affective job insecurity dimension primarily played a role in predicting emotional exhaustion, where it showed a positive and significant relation. Whereas the bivariate correlation between affective job insecurity and intrinsic job satisfaction was negative (r=–0.06), this relation became positive (β=0.06) when both dimensions of insecurity were considered in the regression. This suppressor-effect, probably due to the large correlation between the dimensions of job insecurity, should thus be interpreted with caution. Thirdly, job insecurity generally explained more of the variance in the health-related outcomes (where the explained variance ranged between 0.15 and 0.18) than in the work-related outcomes (where the explained variance ranged between 0.07 and 0.08).

Table 5: Regression analyses with different outcome variables and cognitive and affective job insecurity as predictors

	Unstandardised coe cients		Standardised coe cients			*R*	Adj R^2
	B	Std. error	Beta	t	Sig.		
Extrinsic job satisfaction							
(Constant)	3.94	0.07		54.03	0.00	0.29[a]	0.08
Cognitive JI	-0.29	0.03	-0.29	-10.47	0.00*		
Affective JI	0.01	0.02	0.01	0.34	0.74		
Intrinsic job satisfaction							
(Constant)	4.27	0.06		66.93	0.00	0.27	0.07
Cognitive JI	-0.24	0.02	-0.29	-10.41	0.00*		
Affective JI	0.04	0.02	0.06	2.03	0.04*		
Organisational commitment							
(Constant)	3.96	0.06		62.17	0.00	0.27	0.07
Cognitive JI	-0.23	0.02	-0.29	-9.77	0.00*		
Affective JI	0.02	0.02	0.03	1.07	0.29		
Emotional exhaustion							
(Constant)	0.38	0.18		2.15	0.03	0.39	0.15
Cognitive JI	0.47	0.07	0.27	6.92	0.00*		
Affective JI	0.30	0.07	0.17	4.48	0.00*		
Psychological ill-health							
(Constant)	1.22	0.07		18.11	0.00	0.43	0.18
Cognitive JI	0.20	0.04	0.39	5.56	0.00*		
Affective JI	0.03	0.04	0.05	0.69	0.49		

* $p \leq 0.05$ level

Discussion

The results reported here illustrate that, using the measure of De Witte (2000), cognitive and affective dimensions of job insecurity could be distinguished in this sample of South African working employees, from a variety of occupations, including service and manufacturing as well as highly skilled individuals. Both the exploratory and confirmatory factor analyses provided support for the two-dimensional representation of the measure, with all the items loading on the expected factors and with satisfactory magnitudes of factor loadings.

We also found the factor structure and measurement properties to generalise across groups of different race, age, gender, education and tenure. The sub-dimensions of job insecurity were also found to have satisfactory reliability. These finding thus present researchers interested in job insecurity in South African organisations with a robust measure to investigate the phenomenon in a reliable manner across different groups of employees. Our results also allow for the development of a norm table, based on this relatively large sample of employees (refer to Appendix A). The percentiles regarding the levels of cognitive and affective job insecurity could guide future South African researchers in determining whether the levels of job insecurity in their samples are to be considered high or low.

In terms of the outcomes, our results suggest that the cognitive job insecurity dimension was a stronger predictor of both organisational and health-related outcomes. This is in line with previous research (e.g. De Witte 2000; Hartley et al. 1991; Mauno & Kinnunen 2002). The affective job insecurity dimension primarily played a role in predicting emotional exhaustion. While this is partly in line with some previous findings (e.g. Probst 2003), we also illustrate that both dimensions are important for health-related outcomes. While some studies suggest that affective job insecurity is most important for health outcomes, and cognitive job insecurity is most important for work-related outcomes (Huang et al. 2010; Ito & Brotheridge 2007), our findings suggest that the cognitive dimension is most important in predicting both types of outcomes (cf. De Witte 2000; Staufenbiel & König 2011). Given that different measures of cognitive and affective job insecurity exist, it may also be interesting to establish whether our pattern of relations with outcome variables can be replicated with other measures, for example those of Ashford et al. (1989), Borg (1992) or Probst (2003).

It needs to be acknowledged that the wording of the items in the De Witte (2000) scale presents potential limitations in that items in the cognitive dimension are positively phrased, while those in the affective dimension are negatively phrased. Hence, although the results of the exploratory and confirmatory factor analyses favoured the two-factor solution, this may partly reflect a function of item wording rather than item content. Similar and even worse problems with item wording have been identified in other job insecurity measures (for example, the Borg 1992 scale; see Staufenbiel & König 2011). Developing both positively and negatively worded items for both dimensions, and still illustrating the two-dimensional structure, would sustain the theoretical distinction between cognitive and affective job insecurity.

The fact that items from the cognitive and affective job insecurity dimensions are positively and negatively phrased respectively may also influence their relation with outcomes. This may partly explain why the positively worded cognitive job insecurity

dimension relates to the positively worded work-related outcomes (job satisfaction and organisational commitment), and the negatively worded affective job insecurity scale relates to the negatively worded individual-level outcome of emotional exhaustion. Another potential explanation for the fact that cognitive job insecurity was found to be more important than affective job insecurity in predicting outcomes is that the two dimensions, rather than being parallel, may be sequential. Such arguments have also been put forward in previous research (Andersson & Pontusson 2007; Huang et al. 2010, 2012). This mirrors the sequential process of primary and secondary appraisal suggested by Lazarus and Folkman (1984). Cognitive appraisal normally follows from the perception of an external reality, whereas the affective response represents an internal, psychological and individual reaction to such cognitive appraisal. This argument has received support from cross-sectional research (Huang et al. 2010), which found a mediating effect of affective job insecurity between cognitive job insecurity and outcomes (job satisfaction and organisational commitment). In addition, the longitudinal results from Huang et al. (2012) lend credence to their argument that affective insecurity may act as a mediator between cognitive insecurity and outcomes. A fruitful avenue for future research would be to investigate whether the two dimensions are parallel or sequentially ordered.

We are of the opinion that our results provide evidence for the distinction between cognitive and affective dimensions of job insecurity, and that the short version of the De Witte (2000) job insecurity scale used in the present study holds great promise for application in diverse South African organisational settings. Despite this, there are some potential limitations in our study that need to be addressed. Firstly, we acknowledge that the convenience sample available and reported on here may not be fully representative of the South African population, and especially in the application of the norms, some caution needs to be exercised. However, due to the fact that the data come from many different environments and types of operation, the present study is a good starting point for future South African research on cognitive and affective job insecurity. Secondly, the results are of course limited by the cross-sectional nature of the data. In particular, the potentially different relations of cognitive and affective job insecurity to work- and psychological health-related outcomes respectively need further clarification and confirmation in longitudinal data. Thirdly, we were somewhat limited in terms of the outcome variables for which we had meaningful amounts of data (i.e. extrinsic and intrinsic job satisfaction, organisational commitment, emotional exhaustion and psychological ill-health), and there are of course other variables that would also be of interest. Specific to the South African economy, variables such as safety and absenteeism appear to be pertinent.

Despite the potential limitations of this study, we would advance the position here that cognitive job insecurity appears to be consistently important in understanding individual-level work-related health and work attitudes, except perhaps for employees' psychological health, where both cognitive and affective job insecurity appear to be important.

Recommendations

Substantial evidence now exists that perceptions of job insecurity are harmful, not only for the individual, but also for the organisation (Cheng & Chan 2008; Sverke & Hellgren 2002). This illustrates that job insecurity represents an important work-environment problem in contemporary work life. We have evaluated a measure of cognitive and affective job insecurity (De Witte 2000), which is one of the most frequently used job insecurity measures in South Africa (Van Wyk & Pienaar 2008). The results suggest that the version of the measure reported on here has good measurement properties and can be used to reflect cognitive and affective job insecurity. We have also illustrated that these dimensions have important implications for organisational and individual outcomes. The validated measure can be used to reliably assess the extent of job insecurity in organisations. Moreover, the application of the norms reported here allows for benchmarking.

There is consensus in the literature that controllability and predictability present the core experience of job insecurity. Any attempt at reducing employees' levels of job insecurity therefore need to address the perception and feeling associated with these experiences. Based on this, previous research has also suggested different routes of prevention and intervention aimed at enhancing controllability and predictability (De Witte 2005; Vander Elst, Baillien, De Cuyper & De Witte 2010). In the South African context, these recommendations present exciting opportunities for organisational development, intervention research and other attempts at improving the work environment.

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End notes

1. The Oxford Dictionary defines a parastatal as an "organization or industry, especially in some African countries, having some political authority and serving the state indirectly" (http://oxforddictionaries.com/definition/english/parastatal).

Appendix A

Based on the findings from this large group of South African employees, we are also in a position to provide future researchers with a norm table to refer to in judging measured levels of job insecurity, in future samples, as 'high' or 'low'.

Norm table

		Cognitive job insecurity	A□ective job insecurity
Percentiles	10	1.50	1.50
	20	2.00	2.00
	30	2.00	2.00
	40	2.25	2.50
	50	2.50	2.75
	60	3.00	3.00
	70	3.25	3.50
	80	3.75	3.75
	90	4.00	4.25

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