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Does Job Embeddedness Predict Turnover Intentions in SMEs?

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Does Job Embeddedness Predict Turnover Intentions in SMEs?

Abstract

Purpose:

There is an absence of research examining job embeddedness in SMEs. Results of job embeddedness studies may not apply to SMEs, because the process of managing a SME differs from that of the large firm. The purpose of this study was to examine relationships between (a) on-the-job embeddedness, as well as each of its sub-dimensions, and turnover intentions; and (b) group cohesion, on-the-job embeddedness and turnover intentions.

Design/methodology/approach:

Data were collected from 147 employees in SMEs located in Perth, Western Australia and 350 employees from SMEs operating in four business centres in South Africa. After invariance testing, data from the two countries were combined to increase statistical power of the analysis.

Findings:

On-the-job embeddedness and each sub-dimension were negatively related to turnover intentions. Group cohesion was positively related to composite on-the-job embeddedness. Findings suggest that while group cohesion on its own does not reduce turnover intentions, it does contribute to development of on-the-job embeddedness that, in turn, reduces turnover intentions.

Research limitations/implications:

Future research should control for the effects of external influences on turnover intentions. Findings imply that managerial actions related to antecedents of group cohesion could foster the on-the-job embeddedness of employees.

Originality/value:

This study is perhaps the first that tests the operation of on-the-job embeddedness in SMEs located in two countries. The conceptual arguments for links between each of the subdimensions of on-the-job embeddedness and turnover intentions are based on distinctive characteristics of SMEs and can serve as a theoretical foundation for future research on embeddedness in SMEs.

Key words: job embeddedness, small and medium-sized enterprise, group cohesion

1. Introduction

Consistent with resource-based theory (Barney, 1991), the performance of SMEs is often linked to the quality of its employees who contribute resources such as knowledge, skills, experience, judgement, risk taking propensity and creativity to the organisation (e.g., Lai *et al.*, 2017; Sels *et al.*, 2006; Schlosser, 2015; Sheehan, 2014; Way, 2002). Such human resource contributions improve the organisation's capacity to secure its economic viability, achieve a

position of competitive advantage and respond appropriately to rapid and continuous change in the external environment (Heneman *et al.*, 2000; Tocher and Rutherford, 2009). Despite the statistical dominance and economic importance of SMEs in national economies (Muller *et al.*, 2015) and the contributions that employees make to their performance, limited research has addressed how SMEs can minimise dysfunctional voluntary turnover and improve retention of high-performing employees or those with skills that are in short supply (Baron and Hannan, 2002; Cardon and Stevens, 2004; Wagar and Rondeau, 2006).

SMEs have limited internal resources, including personnel and financial resources (Josefy *et al.*, 2015; Lai *et al.*, 2016). Turnover of high performing employees can be costly to organisations (Allen *et al.*, 2010). When strategically valuable employees exit, substantial direct costs (e.g. recruitment, newcomer induction and training, general administration) and indirect costs (e.g. loss of tacit knowledge, decreased labour productivity) are incurred. Furthermore, as Wagar and Rondeau (2006, p. 1) have argued, "If a high-quality employee leaves the organization, a smaller firm may be less likely to have a suitable internal candidate or lack resources to selectively recruit on the external market." Attracting and retaining high performing employees is challenging for SMEs because most SMEs lacks labour market power and legitimacy as an employer-of-choice compared to large organisations (Williamson, 2000). Job seekers and SME employees often view smaller enterprises as less desirable employers because SMEs typically offer relatively fewer opportunities for career advancement and limited access to formal training and development (Arnold *et al.*, 2002). The preceding arguments emphasise the importance of retaining employees in SMEs, particularly those that are high performing and strategically valuable.

To explain the phenomenon of employee turnover, researchers have traditionally focused on reasons why employees leave. However, Mitchell *et al.* (2001) advanced a construct, job embeddedness (JE), that focusses on the web of organisation-related and community-related forces that embed people to their organisations. Thus JE theory explains why people choose to stay in their work organisations and the construct has three dimensions: links, fit and sacrifice. In brief, links include the formal and informal connections that employees have to other people in their organisations and to their family and friends in the communities where they live. Fit includes employees' perceived compatibility with their work organisations and the communities in which they reside. Sacrifice includes employees' perceived psychological, social or material costs associated with leaving their organisations or communities. Narrative

and quantitative reviews have concluded that JE predicts staying across a variety of contexts (Jiang *et al.*, 2012; Lee *et al.*, 2014). However, there is an absence of research that examines JE specifically within the context of SMEs.

There are reasons to assume that the results of JE studies may not necessarily be applicable to SMEs because smaller enterprises are fundamentally different to their larger counterparts (Coetzer *et al.*, 2017; Josefy *et al.*, 2015; Tansky and Heneman, 2003; Welsh and White, 1981) and the process of managing a SME differs from that of the large firm (Storey *et al.*, 2010). These differences relate to factors such as the closer social and spatial proximity of employees and employers in SMEs (Marlow *et al.*, 2010) and differences in the extent of formality of HRM practices in SMEs and large firms. Specifically, SMEs typically adopt a narrow range of informal, non-documented HRM practices (Kotey and Slade, 2005; Storey *et al.*, 2010).

This study addresses the aforementioned research gap and makes three contributions to the JE and SME literatures. First, we use literature on the distinctive characteristics of SMEs to lay a conceptual foundation for examining associations between each of the three sub-dimensions of on-the-job embeddedness and turnover intentions. Future research on associations between on-the-job embeddedness and turnover can build on this conceptual foundation. Second, we advance empirical knowledge on JE and turnover by providing possibly the first empirical evidence of a relationship between on-the-job embeddedness and turnover intentions (2003), have noted, many existing theories in human resource management may not apply to SMEs and have to be tested in the field. Finally, given the potentially important contribution that a group culture based on cohesion can make to retention and labour productivity in SMEs (Patel and Conklin, 2012; Patel and Cardon, 2010), we examine associative relationships between group cohesion, on-the-job embeddedness and turnover intentions.

2. Theoretical framework and hypotheses

Much of the prior research on voluntary turnover in SMEs has focussed on the effects of HR practices on work-related attitudes (i.e. job satisfaction, affective organisational commitment) which are important antecedents of turnover (Allen *et al.*, 2010; Holtom et al., 2008). There are two main strands of research within this research trajectory. One strand of research has examined the effects of a single or small number of HR practices on employee work-related attitudes and thence voluntary turnover (see, for example, Kickul, 2001; Pajo *et al.*, 2010;

Cegarra-Leiva *et al.*, 2012). However, several HRM scholars contend that 'bundles' of interrelated HR practices, rather than individual practices, are the appropriate unit of analysis for studying the link to performance outcomes such a turnover (e.g., Delery and Gupta, 2016; MacDuffie, 1995). This is because it is systems of practices that create the mutually reinforcing conditions that shape employee attitudes and behaviours (Bowen and Ostroff, 2004). As Macduffie (1995, p.200) has noted, "research that focuses on the impact of individual HR practices on performance may produce misleading results, with a single practice capturing the effect of the entire HR system."

A second strand of research has adopted macro view of HRM with a focus on the entire HR system rather than single HR practices (see, for example, Way, 2002; Sels *et al.*, 2006; Sheehan, 2014). Limitations of this strand of research include lack of agreement among scholars on which HR practices are 'best' and therefore different researchers include different bundles of practices in their studies (De Winne and Sels, 2012). Additionally, while a HR practice may be reported as being formally in place, it may not actually be delivered, or it may not be consistently applied to all employees (Guest and Conway, 2011). Furthermore, surveys are not likely to capture the use and effectiveness of informal HRM practices that are prevalent within SMEs (Marlow *et al.*, 2010). Given the difficulties involved in studying HRM practices in smaller firms, JE theory offers the potential to improve our ability to explain the phenomenon of employee turnover in SMEs and better understand why some employees choose stay. This is because JE theory does not focus on HRM practices in use.

To the best of our knowledge, there are no previous studies that have examined the operation of JE theory in SMEs. There is only one known study that has examined the JE-turnover relationship in small firms (Coetzer, Inma and Poisat, 2017). The aims of this study was to: (1) examine the relationship between organisation embeddedness and turnover intentions in both large firms (200+ employees) and small firms (<50 employees); (2) investigate how employee perceptions of the three sub-dimensions of organisation embeddedness ('links', 'fit' and 'sacrifice') may differ in small and large firms; and (3) determine if group cohesion moderates the relationship between organisation embeddedness and turnover intentions. This study found that JE was negatively associated with turnover intentions in large firms, but not in small firms. Regarding the three sub-dimensions of organisation embeddedness of organisation embeddedness, significant differences in large and small firm employees' perceptions were found in relation to just

'organisation sacrifice'. Finally, group cohesion did not moderate the relationship between JE and turnover intentions at the conventional cut-off value of p<0.05. Given these tentative results, research which examines the operation of JE theory in SMEs (defined here as businesses with fewer than 250 staff) is warranted.

As noted, the study of voluntary employee turnover has tended to focus on why people leave organisations (Lee *et al.*, 2004 Mitchell *et al.*, 2001) and much of the research has examined job satisfaction, affective commitment and job alternatives as predictors of turnover intentions and actual turnover (Felps *et al.*, 2009; Jiang *et al.*, 2012). While these key work-related attitudes and perceived alternatives are important, they have had modest success in predicting turnover (Zhang *et al.*, 2012). As a general attachment construct, JE does not seek to explain why employees choose to leave their work organisations, but considers the broad set of influences that makes them want to stay (Holtom *et al.*, 2008; Mitchell *et al.*, 2001). Measures of JE assess an individual's affective and cognitive evaluations of the job arising from their work experiences (on-the-job embeddedness) as well as from their social, psychological and economic embeddedness in their residential community (off-the-job embeddedness) (Jiang *et al.*, 2012). Much JE research separates the overall construct into its two major dimensions (e.g., Robinson *et al.*, 2014; Tian *et al.*, 2016). In the present study, on-the-job embeddedness is the focal variable, because our aim is to examine how distinctive characteristics of SMEs might affect the operation of JE theory.

Forces that embed employees in their jobs include 'links', 'fit' and 'sacrifice' (Mitchell *et al.*, 2001). To formulate hypotheses on relationships between these three sub-dimensions of JE and turnover intentions in SMEs, we draw upon Conservation of Resources theory (Hobfoll, 1988, 2011). COR theory proposes that individuals are motivated to obtain and protect resources they personally value (Hobfoll, 1988, 2011; Halbesleben et al., 2014). Resources are "objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies include money, peer esteem, time for learning, job challenge, job autonomy, task variety and social support (Hobfoll, 1989; Halbesleben, Neveu, Paustian-Underdahl and Westman, 2014). Thus, a resource may have a tangible or intangible value and it ties a person to an organisation (Mosakowski, 1993; Greene, Brush and Brown, 1997).

COR theory is frequently used in JE research (e.g., Kiazad, Seibert and Kraimer, 2014; Kiazad, Holtom, Hom and Newman, 2015; Harris, Wheeler and Kacmar, 2011), because employees' motivation to acquire and protect resources helps to explain why they become embedded and how they behave once embedded. A key principle of COR theory is primacy of resource loss, which means that resource loss is disproportionately more significant than resource gain (Hobfoll, 2011; Halbesleben et al., 2014; Wheeler, Harris and Sablynski, 2012). Therefore, individuals strive to prevent resource loss more than they endeavour to secure resource gain (Hobfoll & Lilly, 1993). JE has been conceptualised as a state of abundant resources (e.g., Mitchell et al., 2001; Gorgievski and Hobfoll, 2008; Wheeler, Harris and Sablynski, 2012). According to Halbesleben and Wheeler (2008), *links* represents relational resources, *fit* represents a sense of belonging resource, and *sacrifice* denotes the primacy-of-loss principle of COR theory.

Organisational links include an employee's interpersonal ties to individuals and groups within the organisation (Mitchell et al., 2001). Individuals value strong and accumulated interpersonal ties with peers and supervisors, such that these ties keep individuals embedded in their jobs (Mitchell et al., 2001). SMEs favour 'word-of-mouth' recruitment and this method of recruitment has the potential to foster strong ties among employees (Cardon and Stevens, 2004; Williamson, 2000), because new hires are likely to be from current employees' networks of family and friends. Thus, close social ties among employees are potentially generated through 'word-of-mouth' recruitment practices. Additionally, the development of strong social ties among employees may be fostered by close spatial and social proximity, which are size-related characteristics of SME workplaces (Marlow et al., 2010). When work group members have regular personal interaction with each other they tend to be more socially cohesive (Friedkin, 2004). Regular social interaction is likely to take place when members of a workgroup are in close working proximity, as in SMEs (Marlow et al., 2010). Furthermore, the managerial informality that characterises SMEs (Storey et al., 2010) fosters personal and satisfying working relationships with managers and helps to create a 'familial' workplace culture that encourages informal accommodation and flexibility (Lai et al., 2016; Tsai et al., 2007; Saridakis et al., 2013).

Because individuals take steps to protect their current resources (Hobfoll, 2001), SME employees will find it difficult to leave the organisation, because changing jobs will result

in loss of accumulated, strong interpersonal connections with co-workers and ownermanagers. Wilkinson (1999) contended that SMEs foster positive social environments and egalitarian structures. The small number of SME employees foster frequent and close relationships to the extent that owner-managers are able to successfully communicate the firm's vision and inspiration for continuous existence and growth (Gilbert & Jones, 2000). Given that the social environment in SMEs may be highly conducive to fulfilling employees' affiliation needs, leaving the organisation may jeopardise an employee's relationship with his or her owner-manager and/or peers who may include friends and family (Lewis and Coetzer, 2009). As suggested by Mitchell and colleagues (2001), the larger the quantity of links and the stronger the social ties, the more employees become embedded in their jobs. Furthermore, because links within an organisation may be hard to re-establish outside the organisation (Halbesleben and Wheeler, 2008), SME employees may be inclined to stay in their jobs in order to protect their valued relational resources in the organisation. Consistent with the forgoing arguments, we propose that:

Hypothesis 1: On-the-job links will be negatively related to turnover intentions in SMEs.

On-the-job fit refers to an individual's perceptions of compatibility with the organisation and JE theory proposes that job embeddedness is increased when characteristics of the individual and the organisation fit together (Mitchell *et al.*, 2001). Perceptions of fit exist at multiple levels (e.g., person-job, person-group, person-organisation) (Kristof-Brown *et al.*, 2005). Employees tend to exhibit favourable attitudes towards the organisation and consequently stay with the organisation when there is strong congruence between employees' personal values and widely shared values within the organisation (Arthur, Bell, Villado & Doverspike 2006). That is, individuals will be more attracted to, and less likely to leave, organisations where they perceive a close match between their personal values and organisational values (Elfenbein and O'Reilly 2007).

SMEs offer newcomers an important resource in the form of training through socialisation (Rollag and Cardon, 2003). SMEs, through socialisation practices, quickly incorporate newcomers into meetings and social events, give newcomers projects that are meaningful to work on and provide them with coaching and direction necessary to perform tasks (Rollag and Cardon, 2003). Thus, this quick and extensive inclusion of

newcomers in SMEs is likely to increase their perceptions of fit with the organisation, thereby keeping them from leaving. Furthermore, the informal, 'word-of-mouth' recruitment practices which are widely used in SMEs are likely to positively shape newcomers' perceptions of fit. According to the similarity-attraction effect (Byrne et al., 1971), job candidates who are employed in SMEs are likely to share characteristics of the employees who recommended them and the newcomers are thus likely to 'fit in' with the existing workforce and organisational culture. Notions of `fitting in' and hiring 'known quantities' through employees' networks of family and friends are recurring themes in literature on recruitment practices in SMEs (Carroll et al., 1999; Nadin and Cassell, 2007). Additionally, SME employees often do not perform specific job roles, but rather they are shifted between roles (May, 1997), which provides them with resources such as flexibility, opportunities to enhance skills and abilities, and task variety (Arnold et al., 2002; Wilkinson, 1999). Because knowledge and skills could degrade if not utilized (Bickerton, Miner, Dowson and Griffin, 2015), SME employees are less likely to leave because staying promotes effective utilisation of their skills. As employees develop various job skills through participation in varied and diverse roles, they may find it difficult to leave their job because leaving will be associated with giving up these job-related resources (Gialuisi and Coetzer, 2013; Storey, 1994; De Lange et al., 2008). Drawing on these arguments we propose that:

Hypothesis 2: On-the-job fit will be negatively related to turnover intentions in SMEs.

On-the-job sacrifice refers to the financial, social or psychological losses associated with leaving a job, which could include pay, benefits, close social ties and status (Mitchell *et al.*, 2001). Job embeddedness is increased if the perceived costs of material and intangible benefits to be sacrificed on leaving are high (Mitchell *et al.*, 2001). As indicated above, COR theory proposes that individuals are motivated to acquire and protect resources that they personally value (Hobfoll, 1988, 2011; Halbesleben et al., 2014). Because they value these resources, they attempt to protect them, and/or use them to acquire more resources, but not to lose them (Hobfoll, 2001). Changing jobs involves risking accumulated resources, because an individual who would sacrifice a lot by leaving their current organisation has to find a significantly better alternative organisation that is worth the sacrifices associated with leaving their current employer (Halbesleben and

Wheeler, 2008). Thus, the many resources employees are likely to forfeit by giving up their jobs would only be worthwhile if they find another organisation that is capable and willing to provide more abundant resources. Accordingly, Kiazad et al. (2014) describe 'sacrifice' as a resource that intrinsically motivates individuals to stay in their jobs. Employees in SMEs who quit potentially forfeit significant non-material benefits because SMEs offer an array of job-related benefits (e.g. relatively high levels of job variety, job autonomy and overall job quality) and social benefits (e.g. close social ties with co-workers, personal and satisfying relationships with managers, and a 'family-like' workplace culture) (Tsai *et al.*, 2007; Saridakis *et al.*, 2013; Storey *et al.*, 2010). These non-material benefits are primarily attributed to the informality that characterises management practices in SMEs (Storey *et al.*, 2010). Primarily because of the potentially high social and psychological costs associated with leaving we propose that:

Hypothesis 3: On-the-job sacrifice will be negatively related to turnover intentions in SMEs.

Given that on-the-job embeddedness is comprised of on-the-job links, fit and sacrifice, we also propose the following:

Hypothesis 4: On-the-job embeddedness will be negatively related to turnover intentions in SMEs.

Prior research suggests that a group culture based on cohesion can make an important contribution to retention and labour productivity in SMEs (Patel and Cardon, 2010; Patel and Conklin, 2012). Group cohesion is generally described as "group members' inclinations to forge social bonds, resulting in members sticking together and remaining united" (Casey-Campbell and Martens, 2009, p.223). Accordingly, individuals in high cohesive groups have stronger interpersonal attachments (i.e. links) with other group members than individuals in low cohesive groups. Furthermore, individuals in high cohesive groups are more likely to perceive a good person-group fit (i.e. oneness with the group) than individuals in low cohesive groups is likely to sacrifice relatively more social and psychological benefits if he or she were to severe ties with the group. For example, in high cohesive groups the members

provide each other with social support in stressful situations (Steinhardt *et al.*, 2003). Membership of a high cohesive group also helps to fulfil the basic human drive to form social bonds and develop mutual caring commitments with others (Lawrence and Nohria, 2003). Therefore, members of a high cohesive group will wish to remain in the group to retain such non-material benefits (Casey-Campbell and Martens, 2009 Friedkin, 2004). Consistent with the above arguments, we propose the following:

Hypothesis 5: Work group cohesion will be positively related to on-the-job embeddedness.

Hypothesis 6: Work group cohesion will be negatively related to turnover intentions.

3. Methods

3.1 Sample and data collection

Data were collected using non-probabilistic methods from a sample of employees in SMEs located in the Perth metropolitan region of Western Australia. Firms with fewer than 250 employees were targeted. We recruited participants using primarily two approaches. First, we used a Dunn and Bradstreet database to identify a key contact (e.g. owner/manager) and contacted the person by telephone to request access to employees. If access was granted a link to the online questionnaire was sent to the key contact to distribute to employees. Second, members of the research team recruited participants from among employed students enrolled in courses at a Perth-based university. These participants could complete the questionnaire online or they could complete a paper copy of the questionnaire. These two approaches resulted in 147 usable responses.

We also collected data in South Africa. Ninety professionals enrolled in a part-time executive MBA programme at the Nelson Mandela University were approached about their voluntary participation in the present study. These professionals were employed in the fields of Engineering, Finance, Information Technology, Accounting, and Management in organisations across a wide range of industry sectors. Following a snowball sampling approach (Hair *et al.*, 2007) each of the 90 professionals were asked to recruit at least five participants from their respective organisations. Potential participants were informed that participation in the online

survey was voluntary and that responses were anonymous. This resulted in 350 participants drawn from SME organisations operating in four major business centres in South Africa.

Of the 497 respondents, 64.40% were employed in businesses with fewer than 49 employees. The remaining 35.6% of the respondents were spilt as follows: 25.2% were employed in businesses with 50-199 employees, and 10.4% were employed in businesses with 200-249 employees. These size categories align with the European Union definition of the SME (Muller et al., 2015) and this should promote comparability of our results with the results of other studies.

3.2 Measures

On-the-job embeddedness: Holtom *et al.* (2006) developed and validated a 21-item short form of the original 40-item measure published in the seminal article by Mitchell *et al.* (2001). In their measure development study Holtom and colleagues found a strong product-moment correlation (r = .92) between the original long form and the revised short form. Furthermore, they found no difference in the amount of variance in turnover explained by the long and short form of the instrument. Subsequently, the short form of the original JE scale has been successfully used by other researchers (e.g., Felps *et al.*, 2009; Robinson *et al.*, 2014). When using the short form of the JE scale respondents indicate on a five-point scale the extent to which they agree with the items. Within the nine items used to assess on-the-job embeddedness, links, fit and sacrifice are each represented by three items. Sample items and the Cronbach's alpha for each sub-dimension in the present study are: "on the job, I interact frequently with my work group members" (links) (r = .74); "I feel like I am a good match for my organization" (fit) (r = .81); and "I would sacrifice a lot if I left this job" (sacrifice) (r=.81).

Work group cohesion: Respondents' perceptions of the cohesiveness of their immediate work group was measured using 5 items from a scale that was used to assess 'close knit, cohesive, interdependent work groups'. This scale was one of several scales within the Substitutes for Leadership Scale developed and validated by Podsakof et al. (1993). The Cronbach's alpha for the five items used in the present study was r = .89. Sample items are: "there is a great deal of trust among members of my workgroup; my work group members know that they can depend on each other; and the members of my work group regard each other as friends".

Intention to quit: This was measured with five items used by Crossley et al. (2007). The Cronbach's alpha reliability for this scale was 0.89 in their study and 0.90 in the present study. Behavioural intention is a good predictor of future behaviour (Armitage and Connor, 2001) and turnover intention is a strong predictor of actual turnover (Allen et al., 2010; Griffeth et al., 2000). Furthermore, from a practical perspective, organisations should identify interventions that impact turnover intentions with a view to breaking the causal chain before employees embark on job search behaviours that might lead to actual turnover (Bambacas and Kulik, 2013; Griffeth et al., 2000).

Control variables: After considering results of the correlation analysis, we controlled for two sample attributes that might affect linkages between JE and turnover, namely age and tenure in the organisation. Meta-analyses of relationships with turnover indicate that both age and tenure have a moderate negative relationship with turnover (Allen *et al.*, 2010).

4. Data analysis

4.1 Descriptive statistics

Descriptive statistics were used to determine the demographic profile of the sample. SMEs with fewer than 250 employees based in Australia and South Africa were surveyed generating a total sample size of 497 (n=497). Seventy percent (n = 350) of the sample were from South Africa and 30 percent (n= 147) of the respondents were from Australia. Male and female respondents were almost equally split: 234 were male and 263 were female. Table 1 reports means, standard deviations, scale reliability estimates (Cronbach's alpha) correlations and t-test statistics for all variables in this study. As can be seen from data in Table 1, fit, links, sacrifice and cohesion were significantly correlated to each other and to turnover.

{Insert Table 1 about here.}

4.2 Statistical assumptions

Data were analysed using IBM SPSS Statistics version 22 and IBM AMOS statistics version 23 (Armonk, New York: IBM Corp). Multiple regression analysis was conducted using the maximum likelihood estimation method and AMOS statistics to test Hypotheses 1, 2 and 3.

Structural Equation Modelling (SEM), using a two-stage model building process, was employed to test Hypotheses 4, 5 and 6 (Hair, 2010).

For SEM, goodness-of-fit indices were used to determine an overall fit of each measurement model and the subsequent structural models. Evidence for the overall fit was provided by a statistically non-significant Chi Square (χ 2) and goodness-of-fit measures from several classifications. This study used seven fit statistics from three classification indices to assess the overall fit of the models. Model fit was primarily evaluated by the traditional Chi Square test (χ 2). However, the χ 2 test may provide an inaccurate measure of model fit under assumptions of sample size sensitivity or a violation of multivariate normality (Jöreskog and Sörbom 1993). The normed Chi Square index (χ 2/df) was therefore used to supplement the result of the χ 2 test (Bentler, 1990).

Sample adequacy and univariate and multivariate assumptions in factor analysis were justified prior to conducting the confirmatory technique (Tabachnick and Fidell 2001). The assumption of univariate normality was assessed through variable Skewness and Kurtosis. One variable, the tenure in an organisation (ten_or) was found to be non-normally distributed with Skewness of 1.97 (SE = 0.11) and Kurtosis of 4.22 (SE = 0.22) and was subsequently transformed to meet the normality assumption using the two-step approach (Templeton, 2001). All other measures in this study were found to be within a reasonable limit of normality. The assumption of multivariate linearity (Berry and Feldman 1985) and multicolinearity (O'Brien, 2007) were tested and met. Multivariate outliers were examined using the Mahalanobis Distance statistics provided in AMOS version 23 (Hair *et al.*, 2009). Fifteen cases of extreme outliers in the CFA model were detected and removed from the analysis dropping the sample size to 482. Thus, the assumptions of confirmatory factor analysis were satisfied to proceed with the analysis.

4.3 Confirmatory factor analysis

Confirmatory factor analysis (CFA) was conducted using a two-step procedure to enhance the soundness of the analyses. First, a one-factor congeneric measurement model was performed on each measure and second, a confirmatory factor model was investigated based on the one-factor congeneric models. Models with good fit are deemed to adequately present the data and to enable confident generalisation to the whole population (Rigdon, 1998). The measurements confirmed in CFA were later used in the subsequent structural models.

Each measurement construct was subjected to one-factor, congeneric measurement model analysis. Turnover intentions consists of 5 items and loaded well as a single factor with good fit statistics ($X^2 = 6.57$, d.f. = 5, p= 0.26; RMSEA = 0.03; SRMR = 0.01; PCLOSE = 0.76; CFI = 0.99 and TLI = 0.99). Cohesion consists of five items and displayed good fit statistics after the error terms were allowed to correlate ($X^2 = 5.70$, d.f. = 2, p= 0.06; RMSEA = 0.07; SRMR = 0.01; PCLOSE = 0.29; CFI = 0.99 and TLI = 0.99). On-the-job embeddedness is considered to be a multi-dimensional construct made up of 9 items and three dimensions, namely fit, links and sacrifice. Therefore, a second-order factor analysis was conducted to demonstrate that the three dimensions could be modelled as reflecting a higher-order structure. The error terms of two items in fit and two items in links were allowed to correlate. The results suggest a good fit of the second-order specification for the measure of on-the-job embeddedness ($X^2 = 59.49$, d.f. = 22, p= 0.00; RMSEA = 0.06; SRMR = 0.04; PCLOSE = 0.18; CFI = 0.98 and TLI = 0.97). Although the Chi Square tests for cohesion and on-the-job embeddedness were significantly different from zero, the normed Chi Square index (χ^2/df) was at an acceptable threshold of below 3 (2.85 and 2.70 respectively). Table 2 displays the results of the second-order confirmatory factor analysis: on-the-job embeddedness, turnover intentions and cohesion.

{Insert Table 2 about here}

4.4 Reliability and validity

The parameter estimates demonstrate that the second-order CFA Model fits the data sufficiently after removing one sacrifice (SACR1) item from the model due to its high shared variance with other variables in the model ($X^2 = 314.41$, d.f. = 124, p= 0.00; RMSEA = 0.06; SRMR = 0.08, PCLOSE = 0.07; CFI = 0.97 and TLI = 0.96). The estimates suggested that the observed variables were substantially associated with the latent factors, with the loadings ranging from 0.40 to 0.95. The shared variances of the three latent variables were between 0.20 and 0.56, indicating that these variables, although correlated, were conceptually distinct. To assess the scale reliability of the three-factor model, three calculations were performed: the construct reliability (CR) (Bagozzi *et al.*, 1991); the average variance extracted (AVE) (Fornell and Larker, 1981); and the maximum shared variance (MSV) (Anderson and Gerbing, 1988). The construct reliability criterion requires values above 0.70 to ensure that individual indicators are all consistent with their measurement (Hair *et al.*, 2010). The construct reliabilities of on-

the-job embeddedness (CR = 0.89), cohesion (CR = 0.89) and turnover intentions (CR = 0.91) were high. The convergent validity was high with AVEs of 0.72 for on-the-job embeddedness, 0.63 for cohesion and 0.68 for turnover intentions. The MSVs of on-the-job embeddedness (MSV = 0.69) and cohesion (MSV = 0.23) were smaller than their AVEs which established the discriminant validity. However, turnover intentions were found to have marginally higher MSV (0.69) than the AVE (0.67). (See Table 2).

The CFA model was subsequently subjected to the common method bias test using the common latent factor CFA maker technique (Williams et al., 2010). The "innovation" variable was used as a marker variable. "Innovation" is one of the variables in the main study that showed no or low correlations with other variables tested in the regression model. The common latent factor CFA model produced the common variance of 4.97 per cent. However, the result showed a significant drop in the common variance (3.60%) when the marker variable "innovation" was added into the common latent CFA model ($\Delta X^2 = 292$, $\Delta d.f. = 120$, p < 0.000). Thus, common method bias was not apparent. The invariance test was used to determine whether the CFA factor structure and loadings were sufficiently equivalent across groups (Bollen, 1989). The present study used the combined sample of the surveyed responses from two countries, Australia and South Africa. The model was found to achieve a good fit when both countries groups were tested together, freely achieving the configural invariance of the CFA model. The Chi Square difference test on the two country groups found a nonsignificant statistic, indicating that the overall model fits well across both groups ($\Delta X^2 =$ 22.10, $\Delta d.f. = 18$, p = 0.23). Therefore, the invariance between the two country groups was unlikely, thus supporting the use of the combined data to test the research hypotheses.

5. Hypothesis testing and results

Multiple regression analysis was conducted to investigate the relationships between links, fit, sacrifice and turnover intentions, thereby testing Hypotheses 1, 2 and 3. The composite mean scores of links, fit and sacrifice were used to estimate the regression model. The findings indicated that links (B = -0.17, p< 0.01), fit (B = -0.26, p < 0.001), and sacrifice (B = -0.56, p < 0.001) were negatively and significantly related to turnover intentions. The squared multiple correlation (\mathbb{R}^2) of the model was 0.523. This indicates that the model explains 52.3 per cent of the variance in turnover intentions. Thus H1, H2 and H3 were supported.

Structural equation modelling was used to test Hypotheses 4, 5 and 6. The first model estimated three latent variables, cohesion, on-the-job embeddedness and turnover intentions, with two control variables, age and tenure in an organisation. The control variables were directed at the endogenous variables, on-the-job embeddedness and turnover intentions. The results showed a satisfactory model fit ($X^2 = 384.45$, d.f. = 154, p = 0.00; RMSEA = 0.06; SRMR = 0.07; PCLOSE = 0.08; CFI = 0.96 and TLI = 0.95). However, the paths between the control variable (tenure in an organisation) and the endogenous variables (on-the-job embeddedness and turnover intentions) were insignificant. Tenure in an organisation was removed to further improve the model fit. An alternative model testing the relationships of the three latent variables, with age as the control variable, displayed a good fit ($X^2 = 358.59$, d.f. =139, p = 0.00; RMSEA = 0.06; SRMR = 0.07; PCLOSE = 0.05; CFI = 0.96 and TLI = 0.95) and was found to have an improvement over the first model ($\Delta X^2 = 25.86$, $\Delta d.f. = 15$, p = 0.04). The squared multiple correlations of the model showed that 24.60 per cent of the variance in onthe-job embeddedness and 70.30 per cent of the variance in turnover intentions is explained by the model. The alternative model (see Figure 1) was accepted as a plausible representation of the data and used to evaluate the research hypotheses.

{Insert Figure 1 about here.}

The results indicated that the negative relationship between on-the-job embeddedness and turnover intentions (H4), and the positive relationship between work group cohesion and on-the-job embeddedness (H5), were significant with the standardised path coefficient of -0.85 (p < 0.001) and 0.47 (p < 0.001) respectively. These results support H4 and H5. However, the hypothesised negative relationship between work group cohesion and turnover intentions was not found (standardised path coefficient of 0.02, p = n.s.). Thus, H6 was not supported. Age was found to be negatively related to turnover intentions with a standardised path coefficient of -0.09 (p < 0.01), and positively related to on-the-job embeddedness with a standardised path coefficient of 0.16 (p < 0.001). Table 3 provides a summary of hypotheses testing.

{Insert Table 3 about here.}

6. Discussion

This study is novel in that it is perhaps the first which tests the operation of the on-the-job embeddedness component of JE theory in SMEs located in two countries. Testing JE theory specifically in SMEs is important, because SMEs are fundamentally different to large organisations (d'Amboise and Muldowney, 1988; Josefy *et al.*, 2015; Paolillo, 1984; Welsh and White, 1981). From a HRM perspective, SMEs tend to employ informal, non-documented HRM practices, while large organisations tend to adopt a relatively wider array of sophisticated, formal HRM practices (Kotey and Slade, 2005; Marlow *et al.*, 2010). Given that JE theory does not focus on HRM practices in use, we contend that the theory provides an appropriate lens for examining retention in SMEs.

6.1 Theoretical and empirical contributions

The present study makes primarily three contributions to the JE and SME literatures. First, we develop conceptual arguments for links between each of the three sub-dimensions of on-thejob embeddedness (i.e. links, fit and sacrifice) and turnover intentions. The conceptual arguments are based on distinctive characteristics of SMEs and can serve as a theoretical foundation for future research on embeddedness in SMEs. Researchers can build on this foundation and develop more comprehensive and fine-grained conceptual arguments for links between each of the three sub-dimensions and turnover or intention to stay. Such conceptual arguments should draw on literatures relating to JE, SMEs and COR theory.

Second, we advance empirical knowledge on JE and turnover outcomes by providing possibly the first statistical findings of negative relationships between composite on-the-job embeddedness as well as each of its sub-dimensions and turnover intentions in SMEs (i.e., H1-H4). A prior study that examined associations between composite on-the-job embeddedness and turnover intentions in small firms (<50 staff) did not find a significant relationship between the focal variables (Coetzer et al., 2017). The authors theorised that the informal nature of HRM practices that such small firms tend to employ may not be effective in embedding employees in their jobs. Given that HRM formality increases with firm size (Storey et al., 2010), results of the present study, which was located in SMEs, suggests that on-the-job embeddedness is enhanced by HRM formality. Thus firm size and HRM formality may explain the different results between the prior and present study. As suggested by COR theory, employees are motivated to protect their current resources (Hobfoll, 1989, 2001). Employees who have accumulated many resources in an organisation will be reluctant to leave their employer, since leaving will be associated with resource loss (Mitchell et al., 2001). Leaving a job will be especially risky for individuals with abundant resources because they may fail to acquire equal or more resources in another organisation. Consistent with COR theory, the SME employees in our samples who were highly embedded in their jobs reported relatively lower levels of quit intentions, presumably because they were motivated to protect the strong *links* they have with their owner-managers and co-workers (Wilkinson, 1999; Storey et al., 2010). The strength of social bonds in SMEs makes leaving costly for employees, because their relational resources may be difficult to replace in a new work environment. Additionally, because owner-managers depend on the skills of a small number of employees to achieve competitive advantage, employees quickly develop their skills and knowledge through multi-tasking (De Lange et al., 2008; Gialuisi and Coetzer, 2013), which helps to increase their sense of *fit* with the organisation and belongingness in the firm. This is consistent with the assertion that people become more attracted to and report lower turnover intentions when their personal values, knowledge, and skills are compatible with the organisation (Zhang, Ryan, Prybutok & Kappelman, 2012; Allen, 2006).

The finding that on-the-job *sacrifice* was negatively related to turnover intentions is somewhat surprising. It is well established in the literature that SME employees generally sacrifice fewer tangible benefits when leaving their employer (e.g., Cardon and Stevens, 2004; Dawe and Nguyen, 2007; Forth *et al.*, 2006; Pedace, 2010). However, the finding of this study in relation to on-the-job sacrifice is congruent with the findings of several other studies that focus on employees' experiences of working in smaller firms. Findings of these studies suggest that SME employees can gain significant social and psychological benefits from the more informal employment structures that characterise these organisations (e.g., Forth *et al.*, 2006; Storey *et al.*, 2010; Tsai *et al.*, 2007). As theorised by Mitchell et al. (2001), the more benefits an employee will give up when leaving, the more difficult it will be for him or her to leave the organisation. Thus, because individuals seek to protect their valued resources (Hobfoll, 2011), the many non-material benefits that SME employees gain will make it difficult for them to leave their jobs.

Third, our results also reveal that group cohesion is positively related to composite on-the-job embeddedness (H5). This is an important finding because an empirical association between group cohesion and on-the-job embeddedness has not yet been demonstrated in the literature. The result is not surprising, because the basic idea of JE theory is that people become 'stuck' in a group (e.g., work organisation) as a result of their links, perceptions of personenvironment fit and the sacrifices associated with terminating their employment with the work organisation (Mitchell et al., 2001). Therefore, group cohesion and on-the-job embeddedness seem to share common features. SMEs offer several relational benefits, such as close and satisfying working relationships with co-workers and owners, and a 'familial' environment, that are conducive to the formation of group cohesion and onthe-job embeddedness (Coetzer, Kock and Wallo, 2017; Saridakis, Torres & Johnstone, 2013; Tsai et al., 2007). Scholars have argued that a group or 'clan' culture can contribute to retaining employees in SMEs (e.g., Patel and Cardon, 2010; Patel and Conklin, 2012). However, our results suggest that while group cohesion on its own does not reduce turnover intentions (H6), it does contribute to development of on-the-job embeddedness which, in turn, reduces turnover intentions. It is important to note that on-the-job links differs from group cohesion in at least two important ways. First, JE theory and the measure as originally conceptualised by Mitchell et al. (2001) emphasises the quantity of links as opposed to the quality of links (Feldman et al., 2012; Zhang et al., 2012). Second, group cohesion has two major dimensions, namely a task dimension based on a shared commitment to achieving the group's goals and a social dimension based on relationships within the group (Casey-Campbell and Martens, 2009; Salas et al., 2015). The group cohesion items that were used in our study assessed both of these dimensions.

6.2 Practical implications

As noted, our analysis of the data suggests that group cohesion contributes to development of on-the-job embeddedness through strengthening the links, fit and sacrifice dimensions which, in turn, reduces turnover intentions in SMEs. These results have important managerial implications relating to both newcomers and existing staff. Regarding newcomers, owners/managers should carefully screen job candidates to ensure that the personal characteristics of the successful candidate matches both the job requirements and organisational characteristics. In particular, the results are suggestive that when newcomers' personal values are congruent with a clan (family-like) culture (Cameron and Quinn, 2011) this will promote staying and help to build and maintain the existing culture. Cohesion permeates

the clan culture (Cameron and Quinn, 2011) and this culture type has been identified in the literature as being a common feature of smaller enterprises (Tsai *et al.*, 2007; Saridakis *et al.*, 2013). Furthermore, SMEs could increase organisation fit and minimise turnover intentions by employing realistic job previews, which is an approach that ensures job applicants receive all the important information they need to know prior to hiring (Kickul, 2001). With this approach, newcomers will have a better understanding of the nature of the job, employment relationships and their work group (Kickul, 2001; Baker and Aldrich 1999). Research shows that employees who were given realistic job information prior to hiring were less likely to withdraw from the selection process than those who were not given such previews, and were less likely to leave the organisation once hired (Phillips, 1998). Recruiting employees from the local community may also foster staying, because of the potential material, social and psychological benefits that may be sacrificed when leaving, especially if geographical relocation is necessary to take up a new employment opportunity.

As regards existing staff, several managerial actions that are related to antecedents of cohesion (Casey-Campbell and Martens, 2009) could serve to foster group cohesion and develop the onthe-job embeddedness of staff. These actions include: reviewing the physical design of workspaces to enable group interaction; organising group social functions to strengthen interpersonal ties; fostering a shared commitment to achieving the group's goals; and arranging group training opportunities to enhance identification with the group. SMEs have several distinctive characteristics that are well-suited to development of work group cohesion. These characteristics include flat, simple organisational structures, lack of functional silos, spatial and social proximity of employees, and personal and frequent employer–employee interaction (Josefy *et al.*, 2015; Marlow *et al.*, 2010).

6.3 Limitations of the study

The results should be considered in relation to the study's methodological limitations. Similar to several other JE studies (see Lee *et al.*, 2014 for a qualitative review) we used non-random sampling, cross-sectional rather than longitudinal data, and turnover intensions as opposed to actual turnover. Furthermore, the present study combined data sets from two countries to increase statistical power of the analysis. The supporting invariance test between the two data sets confirmed the robustness of the final model. However, it was not practicable to

control for the potential effects of external influences on turnover intentions (Lee *et al.,* 2017), such as labour market conditions in the two countries.

6.4 Directions for future research

As noted, literature that discusses group cohesion distinguishes between task and social cohesion (Casey-Campbell and Martens, 2009; Salas *et al.*, 2015). In the present study, our scale included items that assessed both the social and task dimensions of cohesion. Therefore, future research should use separate scales to assess each type of cohesion and examine the separate effects of each type on both on-the-job embeddedness and turnover. Furthermore, our research assessed individuals' perceptions of their work groups' cohesion. In future research, cohesion should be considered as a group level construct and group member responses aggregated to the group level (Salas *et al.*, 2015). However, this approach to data collection would be challenging, because it requires the participation of several members of each work group in multiple SMEs. Another potentially worthwhile line of inquiry would involve exploring the potential mediating effects of organisation embeddedness in the relationship between group cohesion and turnover (Allen, Bryant and Vardaman, 2010).

Future research should disaggregate SMEs into small (e.g. 10-49 employees) and mediumsized organisations (e.g. 50 - 249 employees) and test the hypothesised relationships in each context. Further research should also adopt a more multidimensional, fine-grained approach to determining firm size (e.g. value of assets, annual sales revenue) (d'Amboise and Muldowney 1988). Given that HR formality increases with organisation size (Storey *et al.*, 2010) the separate effects of firm size and HR formality on the hypothesised relationships should be examined. Considering the heterogeneous nature of the SME sector (Lai *et al.*, 2016), studies should examine whether the hypothesised relationships are influenced by sector and occupation. For example, the theorised relationships could be examined using separate samples comprised of knowledge workers and less skilled employees. Finally, future research should examine the effects of national culture on the embeddedness-turnover relationship. For example, SMEs in collectivist countries such as China may experience lower levels of turnover since loyalty to the organisation (a facet of on-the-job links) is considered a valuable trait (Yao and Wang, 2006).

Conclusion

This study is perhaps the first that examines associations between composite on-the-job embeddedness as well as each of its sub-dimensions and turnover intentions among SME employees located in two countries. Although SMEs and large firms are fundamentally different and the process of managing a SME differs from that of the large firm, the results of our study confirm the predictive validity of the JE theory in SMEs. We hope that our study will encourage further research that examines how firm size and other related variables such as HRM formality affect JE and thence employ retention.

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Note: Model with standardised path coefficient. Fit indices: $X^2 = 358.59$, d.f. = 139, p = 0.000, $X^2/d.f=2.58$, RMSEA = 0.06, SRMR = 0.07, PCLOSE = 0.05, CFI = 0.96 and TLI = 0.95. Statistics in figure are reported using three digits after the decimal point for precision.

	Fit	Links	Sacrifice	Cohesion	Turnover	Age	Tenure	Gender
Fit	(0.81)							
Links	.497**	(0.74)						
Sacrifice	.678***	.418**	(0.81)					
Cohesion	.347***	.552**	.408**	(0.89)				
Turnover	575**	385**	691**	338**	(0.90)			
Age	130**	.039	.142**	009	204**	NA		
Tenure	.080	.028	.116**	.050	132**	.502**	NA	
Gender	111*	042	088	075	.084	026	038	NA
Total Mean (n=497)	3.635	3.979	3.345	3.575	2.553		5.650	
Total S.D. (n=497)	0.832	0.661	0.889	0.746	1.051		5.356	
Male Mean (n=234)	3.734	4.009	3.247	3.634	2.460		5.97	
Male S.D. (n=234)	0.803	0.653	0.873	0.697	1.026		5.84	
Female Mean (n=263)	3.548	3.953	3.271	3.522	2.636		5.46	
Female S.D (n=263)	0.850	0.668	0.897	0.784	1.068		4.492	
T-test statistics	2.493*	0.933	1.965*	1.670	-1.876		0.854	

Table1: Means, Standard Deviations, Reliability Estimates, Correlations and T-test Statistics

Note: *p < 0.05, **p <0.01, reliability level is reported in parenthesis

Item Description Indicator Loading t-value Reliability Validity Validity (SCR) (AVE) (MSV) **On-the-job embeddedness ONJOB** 0.895 0.724 0.691 _a FIT .892 Fit 1. My job utilises my skills and talents well. _a FIT1 .686 2. I feel like I am a good match for my organisation. FIT2 16.535 .715 3. If I stay with my organization, I will be able to achieve most of my goals. FIT3 .812 14.341 Links LINKS .683 11.390 1. I am a member of an effective work group LINKS1 .923 _a 2. I work closely with my co-workers. LINKS2 9.453 .577 3. On the job, I interact frequently with my work group members. LINKS3 .397 7.222 Sacrifice SACRIFICE .954 11.517 1. I have a lot of freedom on this job to pursue my goals. (Deleted item.) SACR1 Na 2. I would sacrifice a lot if I left this job. _a SACR2 .688 3. The prospects for continuing employment with this organisation are excellent. SACR3 .849 15.434 COHESION 0.226 Cohesion 0.894 0.634 1. There is a great deal of trust among members of my work group. COHES1 .734 _a 2. Members of my group work together as a team. COHES2 .884 20.612 3. Members of my work group co-operate with one another. COHES3 .897 18.730 4. My work group members know they can depend on each other. COHES4 .836 17.744 5. Members of my work group regard each other as friends. COHES5 .587 13.099 TURNOVER Turnover 0.910 0.675 0.691 1. I intend to leave this organisation soon. OUIT1 .940 _a 2. I plan to leave this organisation in the next six months. QUIT2 .901 33.703 26.802 3. I will quit this organisation as soon as possible. QUIT3 .824 4. I do not plan on leaving this organisation soon. (Reversed score item.) OUIT4 .800 25.052 5. I may leave this organisation before too long. OUIT5 15.342 .600

Table 2: Second-order confirmatory factor analysis and scale reliability and validity

Note: All the items were measured on a 5-point Likert scale. ^a Values were not calculated because loading was set to 1.0 (fixed parameter). All t-values significant, p < 0.001. Statistics in table reported using three digits after decimal point for precision.

Table 3: Hypotheses testing

Structural path	Hypotheses	Estimate		p-value	Support				
		Parameter	t-value						
		Β (β)							
Links \rightarrow Turnover	-H1	165 (101)	-2.780	.005	Yes				
$Fit \rightarrow Turnover$	-H2	258 (204)	-4.674	.000	Yes				
Sacrifice → Turnover	-H3	560 (523)	-12.664	.000	Yes				
Multiple Regression Model ($R^2 = 0.523$)									
On-the-job embeddedness \rightarrow Turnover	-H4	-1.649(850)	-12.362	.000	Yes				
Cohesion \rightarrow On-the-job embeddedness	H5	.383(.474)	8.046	.000	Yes				
Cohesion \rightarrow Turnover	-H6	.111(.071)	1.710	.087	No				
Age \rightarrow Turnover		107 (090)	-2.674	.008					
Age \rightarrow On-the-job embeddedness		.100 (.162)	3.502	.000					

Structural Equation Model (Fit indices $X^2 = 319.949$, d.f. =125, p=.000; X^2 /d.f. = 2.564, RMSEA = .057; RMR = .061; PCLOSE = .068; CFI = .964 and TLI = .956). Statistics in table reported using three digits after decimal point for precision.