Voluntary Employee Turnover, Job Embeddedness & Organizational Tacit Knowledge in Small and Medium Enterprises

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ABSTRACT

Purpose: The study was justified, given the abundance of research evidence on the negative impacts of voluntary turnover on SMEs as well as the paucity of studies that are related to the consequences of turnover in the SME domain.
Aims: This paper was aimed at examining the potential for a negative relationship between voluntary employee turnover and organizational tacit knowledge within small and medium enterprises. It also examined the possibility for level of investment in human capital to moderate the relationship between voluntary employee turnover and organizational tacit knowledge.
Design/Methodology/Approach: This study was designed as a quantitative study—Likert-based data were collected electronically, and analyzed, using regression and correlation models. Further, a job embeddedness scale was employed to measure turnover intention; turnover rates were employed to measure actual turnover and a tacit knowledge scale was employed to measure organizational tacit knowledge.
Findings: A significant and negative relationship was found between voluntary employee turnover rates and organizational tacit knowledge. However, only one of the six sub-dimensions of job embeddedness was negatively related to voluntary employee turnover rates. With the aid of a regression model, level of investment in human capital was found capable of moderating the relationship between organizational tacit knowledge and voluntary employee turnover rates in one of the years examined. These findings provide partial support for three of four hypotheses.
Limitations: This study was limited by lack of job embeddedness and tacit knowledge theories and measurement scales that are built on data collected from small and medium enterprises—suggesting the need for these theories to be developed in future studies.
Practical Implications: The need for more practical investments in human capital to reduce turnover, while increasing organizational tacit knowledge is strongly reinforced.
Originality/Value: The potential negative relationship between voluntary turnover and organizational tacit knowledge would deepen the knowledge and insights of human resource managers, knowledge managers and scholars in these domains.

Keywords: Voluntary Employee Turnover, Organizational Tacit Knowledge, Job Embeddedness, Human Capital Investment, SMEs

JEL Code: J63, D80

INTRODUCTION

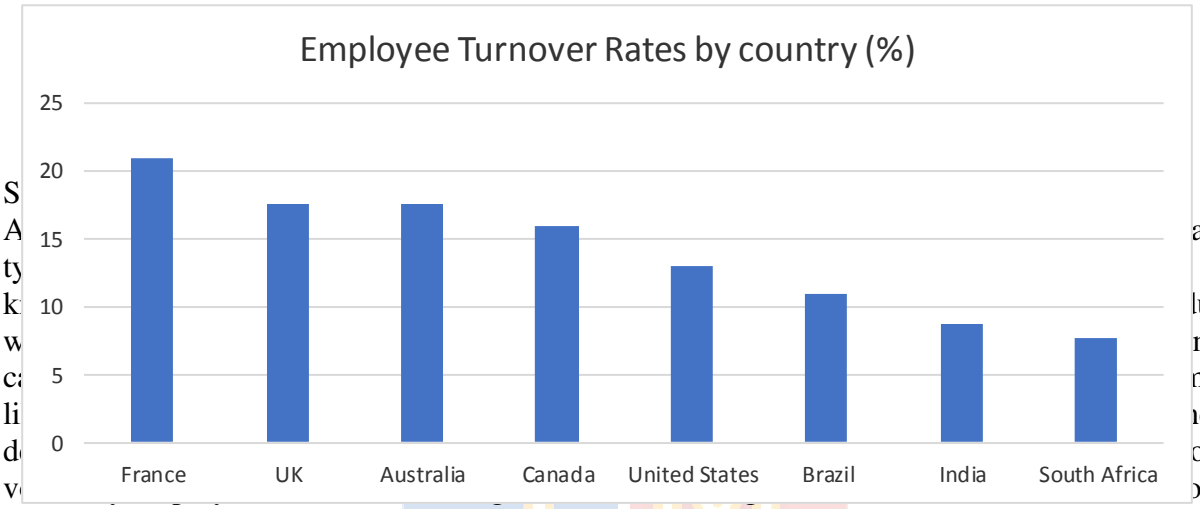
For close to one hundred years, researchers have been attempting to understand, predict and prevent voluntary employee turnover in organizations (Hom et al., 2017). While some scholars suggest that the bulk of theory-based studies on employee turnover started in the 1970s, it was around 1913 at the General Electric Company that the first attempt at investigating and publishing the costs associated with turnover was flagged off (Haines et al., 2010). Despite these debates on the history of turnover studies, it has been argued that more than 1,500 published articles on employee turnover have been generated by scholars in the USA and in Europe alone (Aiello, 2018). The research into the dynamics of turnover has yielded many findings, including the classification of turnovers into voluntary and involuntary employee turnovers (Latukha, 2018; Batt and Colvin, 2011); functional and dysfunctional turnovers (Wallace and Gaylor, 2012); and labor turnover (Basterretxea and Storey, 2018). For the purpose of this study, voluntary employee turnover was chosen as the main research focus. According to Dess and Shaw (2001, p.446), voluntary employee turnover is, "*an employee's decision to terminate the employment relationship with an employer"*, while voluntary employee turnover rate refers to "*the proportion of employee departure initiated by employees"* (Park and Shaw, 2013, p. 270). In practice, Morell (2002) argues that voluntary employee turnover rates can be calculated using the following formula:

$$\text{Voluntary employee turnover rate} = \frac{\text{Leavers in a year}}{\text{Average number of staffs in post during year}} * 100$$

Voluntary employee turnover seems to be dominating the interests of scholars around the world, given its high likelihood to add significant costs to organizations (De Winne et al., 2018). Globally, it remains an issue of concern to organizations and human resource managers as evidenced by the current turnover trends in figure 1. Some of the typical costs associated with voluntary employee turnover include training costs of new employees; lost sales and lost revenue; dampened morale of remaining employees (Park and Shaw, 2013; Babatunde and Laoye, 2011, p. 269); loss of competitive advantage (Latukha, 2018); and loss of valuable tacit knowledge (Ma et al., 2018). However, some studies have also indicated that voluntary turnover isn't all about negative consequences as it's possible in the case of functional turnover, for organizations to benefit from the replacement of poor performing employees, who voluntarily quit their jobs, with better performing employees (De Winne et al., 2019). In particular, the loss of tacit knowledge as a potential consequence of voluntary employee turnover represents a dominant aim of this study, given that the human capital literature has noted a possible negative relationship between both concepts (Goldin, 2016). Further, Goldin (2016, p.6) views human capital as, *"the stock of skills the labor possesses"*. At the root of the human capital literature are Solow (1957) and Mincer (1958), two researchers whose works have contributed to the present scope of knowledge in the domains of human capital and human capital investment (Bailey et al., 2013). Aside from their contributions, many other studies have, over the years, affirmed a form of relationship between turnover and human capital (Wei, 2015; Campbell, 2012a), and between human capital and tacit knowledge (Mahoney and Kor, 2015). Tacit knowledge is a concept deeply rooted in the knowledge management literature (Herschbach, 2017; Moleski, 2017), and is regarded as the main alternative to explicit knowledge (Garrick, 2018). Given its more recent history, tacit knowledge is widely regarded as a category of knowledge that is difficult to

measure, codify and transfer (Barley et al., 2018), while explicit knowledge seems more codifiable and transmittable (Schoenherr et al., 2014). However, despite these broad classifications of knowledge into tacit and explicit types, the tacit knowledge concept in particular has also been categorized into individual tacit knowledge and organizational tacit knowledge.

Figure 1: Employee Turnover Rates by Country

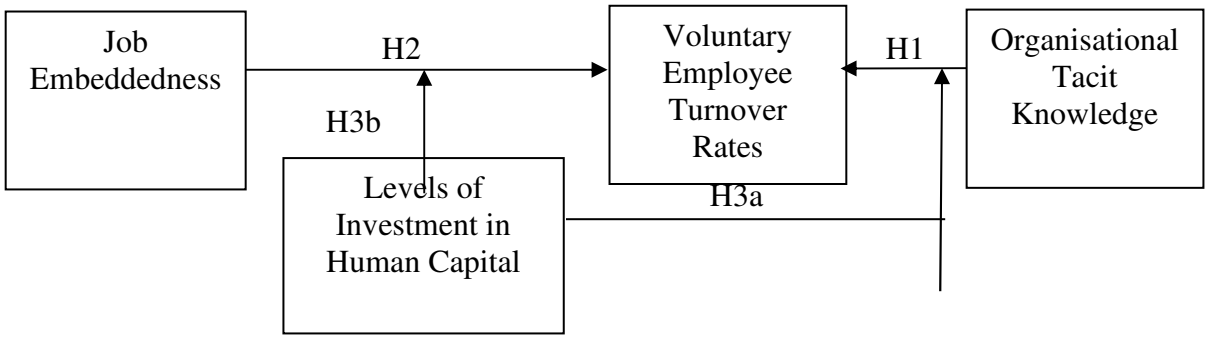


researchers' efforts has been focused on its antecedents and causes, rather than on its consequences, such as the loss of organizational tacit knowledge (Maltarich et al., 2010), a major research gap that this paper seeks to address (Jones et al., 2010).

In the past, many studies that were built on the traditional models of turnover have identified antecedents of voluntary employee turnover as job satisfaction (Kacmar et al., 2006); job availability (Maertz and Kmitta, 2012); and alternatives (Lee, 2008). More recently, other studies, categorized as contemporary, have identified the job embeddedness theory as a more effective means of understanding the dynamics of voluntary employee turnover (Mitchel et al., 2001). According to Yao et al. (2004, p.155), *"job embeddedness is the combined forces that keep a person from leaving his or her job"*. The job embeddedness theory is built on the concepts of links, fits and sacrifices and is ultimately underpinned by six operational variables—*"link to organization, fit to organization, sacrifice to organization, link to community, fit to community and sacrifice to community"* (Michelle et al., 2001, p.1108). In a previous study, Mitchell et al. (2001) noted that job embeddedness was successful at predicting, not just turnover intention, but actual turnover rates. However, research has also noted that very limited studies have attempted to apply the job embeddedness theory within the small and medium size organizational context, given its very recent history (Ampofo et al., 2017, p.2). Most especially, small and medium enterprises are traditionally noted for being averse to voluntary employee turnover due to their limited resources (Morgan, 2019). Given this gap, this study also seeks to examine the possibility for a negative relationship between voluntary employee turnover rates and job embeddedness within a small and medium size organizational context. Finally, it also seems likely for levels of investment in human capital to be a moderator in the perceived negative relationship between voluntary employee turnover rates and organizational tacit knowledge and the perceived negative relationship between job embeddedness and voluntary employee turnover rates within a small and medium size organizational context. Against this

background, this study proposes the following conceptual model as the underlying model for the current study.

FIGURE 2: PROPOSED CONCEPTUAL MODEL



Further, by employing empirical data gathered from 150 small and medium size enterprises in the Greater Toronto Area of Ontario, Canada to test the validity of a proposed conceptual model, this study contributes to academic research in three different ways. First, the negative relationship between organizational tacit knowledge and voluntary employee turnover rates is tested using correlation methods (H1). Secondly, the negative relationship between job embeddedness and voluntary employee turnover rates is tested using correlation methods (H2). Finally, with the aid of linear regression, the moderating roles of level of investment in human capital in the relationship between organizational tacit knowledge and voluntary employee turnover rates and in the relationship between job embeddedness voluntary employee turnover rates are examined (H3a & H3b). By doing this, four hypotheses will be tested, and the results will be presented and discussed as a means of bridging the above identified gaps in the tacit voluntary employee turnover research.

THEORY AND HYPOTHESES

Tacit Knowledge Theories

The difficulties associated with measuring and operationalizing tacit knowledge seem to be the bane of the lack of a widely acceptable theory for understanding the dynamics of tacit knowledge (Chynoweth, 2012). Given the widespread understanding that tacit knowledge can be individual or organizational (Wang et al., 2018), two main theories underpin the tacit knowledge conversion process. First, Nonaka and Takeuchi (1995) as shown in figure 3 discussed the "BA Theory", which is a theory for understanding tacit knowledge conversion processes. According to Clarke (2010), the original creator of this model was a Japanese philosopher by the name Kitaro Nishida in the 1950s. This model supports the idea that, while it is generally difficult and challenging to transfer tacit knowledge from one person to another, it is still relatively possible to develop new ideas and trainings in organizations that facilitate the conversion and transfer of tacit knowledge to explicit knowledge.

FIGURE 3: THE BA MODEL FOR TACIT KNOWLEDGE CONVERSION

ORIGINATING BA (Tacit to Tacit)	INTERACTING BA (Tacit to Explicit)
EXERCISING BA (Explicit to Tacit)	CYBER BA (Explicit to Explicit)

Source: Clarke (2010, p. 44)

FIGURE 4: THE SECI MODEL

SOCIALISATION (Tacit to Tacit)	EXTERNALISATION (Tacit to Explicit)
INTERNALISING (Explicit to Tacit)	COMBINATION (Explicit to Explicit)

Source: Clarke (2010, p. 47)

Secondly, Nonaka et al. (2000) discuss the "SECI Model" in figure 4 as another approach for understanding how tacit knowledge can be shared and transferred. The SECI model according to Clarke (2010), is an acronym for Socialization; Externalization; Combination; and Internalization, and one that enhances the process of understanding the activities that occur while attempting to convert tacit knowledge into another tacit knowledge or into explicit knowledge. Interestingly, the BA and SECI models seem to support the possibility that organizational tacit knowledge can be measured and quantified, a development that is the central focus of this paper. Over the years, many attempts have been made at operationalizing and measuring individual and organizational tacit knowledge. For example, Sternberg et al. (1993, 1995 & 2000) developed an individual tacit knowledge measurement scale which was adopted by Insch et al. (2008) in an empirical study and which has also been adopted in many other studies. However, because this scale only focused on the measurement of tacit knowledge at an individual level, this scale seems not appropriate for the present study. Further, some other methods for measuring organizational tacit knowledge have been developed, some of which include the use of proxy variables (Berman et al., 2002; Edmondson et al., 2003); repertory grid (Ryan and O'Connor, 2009); formal concept analysis; pathfinder network scaling (Rose et al., 2007); Yale's SJT's method that was developed by Sternberg (1993, 1995 & 2000) and the Subramaniam and Venkatramann's (2001) scale. Given the possibility that organizational tacit knowledge can be operationalized and measured as shown above and that one of the potential consequences of voluntary employee turnover is the loss of organizational tacit knowledge (Akerele, 2019; Mohr et al., 2012), it also seems likely that both concepts may be negatively related. For example, Park and Shaw (2013) argue that voluntary employee turnover may result into the loss of organizational tacit knowledge; while Guidice et al. (2009, p. 146) also argue that voluntary turnover may depress organizational tacit knowledge. Against this theoretical background, this study proposes the following hypothesis that is mapped to the proposed conceptual model in figure 2:

H1: Organizational tacit knowledge is negatively related to voluntary employee turnover rates

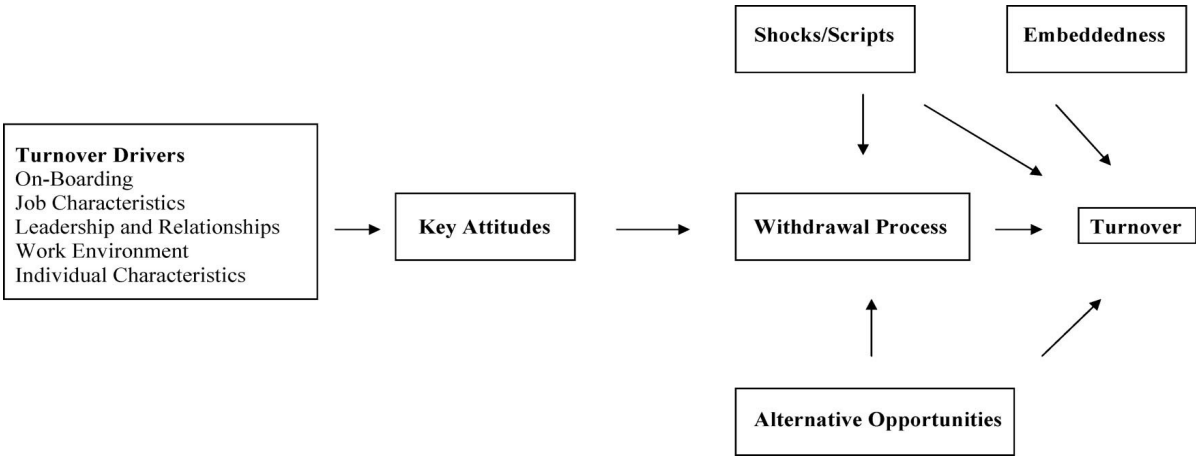
This relationship can also be represented as;

OTK= f (VET rate), where organizational tacit knowledge is the dependent variable (DV) and voluntary employee turnover rate is the independent variable (IV).

Voluntary Employee Turnover Theories

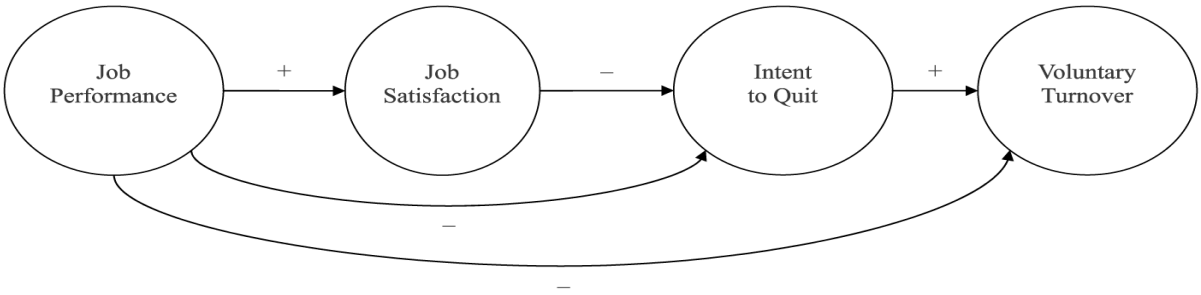
For many years, the theories that underlie voluntary employee turnover have been classified into "traditional turnover theories" and "contemporary turnover theories" (Hussain and Deery, 2018; Mitchell et al., 2001; Lee and Mitchell, 1994). The traditional domain of these turnover theories emerged from the seminal works of March and Simon (1958) who developed a "theory of organizational commitment" and argued that the two strongest predictors of employee commitment to organizations are *"perceived desirability of movement"* and *"perceived ease of movement"* (Mayer and Schoorman, 1998). Following this period, more studies were carried out on the March and Simon's (1958) theory and the two concepts of "perceived desirability of movement" and "perceived ease of movement" were replaced with "job availability", "job dissatisfaction" and "job alternatives" as the critical predictors of turnover intentions (Maertz and Kmitta, 2012). However, research has also shown that some other scholars have made enormous contributions to much of what has been understood as the traditional theories of turnover, including for example, people like Mobley (1977), Hulin et al. (1985); Steers and Mowday (1981) and Price (1977). Notably, these traditional models have been flawed for being successful at predicting only 40% of quit decisions (Lee, 2008) and for lacking the ability to take into account the inter and intra organizational factors that influence employees' decisions to quit their jobs (Griffeth et al., 2000 cited in Lee et al., 2004). In fact, other studies also show that the variables of job satisfaction, job alternatives and job availability have only been successful at explaining 10% of variance in employees' turnover decisions (Lee et al., 2004). Due to the numerous flaws, gaps and inconsistencies in the traditional models of understanding and predicting voluntary turnover in organization, the contemporary versions were developed by scholars like Mitchel et al. (2001) who developed the job embeddedness theory; Lee and Mitchell (1994) who developed the unfolding model; Allen (2008) who developed a "contemporary model" of turnover in figure 5 and Zimmerman and Darnold (2009) who developed a simplified model of turnover in figure 6.

FIGURE 5: A CONTEMPORARY MODEL FO EMPLOYEE TURNOVER



Source: Allen (2008 cited in Allen et al., 2010, p. 53)

FIGURE 6: A SIMPLIFIED MODEL OF VOLUNTARY EMPLOYEE TURNOVER



Source: Zimmerman and Darnold (2009)

However, of all these contemporary versions, the job embeddedness theory still seems the most comprehensive for understanding the inter and intra organizational factors for predicting turnover intentions (Allen et al., 2010), which is the very reason for its adoption in this study. Developed by Mitchel et al. (2001), the job embeddedness theory *"provides a solid theoretical framework for explaining why employees stay with an organization by incorporating a wide array of on-the-job and off-the-job forces that influence employee retention"* (Martdianty et al., 2016, p. 87-88). It is a concept that has been found to not just predict intention, but actual turnover rates (Mitchell et al., 2001, p. 1112). The central thrust of the job embeddedness theory is the perception that the decision by employees in an organization to quit their jobs is not just going to be influenced by on the job factors, but by off the job factors, both of which may be working together each time an employee is considering leaving an employer (Allen et al., 2010; Afsar and Rehman, 2017). These on the job factors are generally referred as *"on-the-job embeddedness"* variables, while the off the job factors are referred *"off the job embeddedness"* variables (Kaifeng et al., 2012; Crossley et al., 2007). Allen et al. (2010) argue that the job embeddedness theory is driven by the concepts of links, fits and sacrifices, and that employees considering leaving their jobs would be influenced by six variables referred to as; links to organizations; links to communities; fits to organizations; fits to communities; sacrifices to organizations and sacrifices to communities.

In a much more detailed attempt at conceptualizing the job embeddedness theory, Allen et al. (2010, p.55) argue that "*links are connections with other people, groups, or organizations, such as co-workers, work groups, mentors, friends, and relatives; fit represents the extent to which an employee sees himself as compatible with his job, organization, and community;* and *"sacrifice represents what would be given up by leaving a job, and could include financial rewards based on tenure, a positive work environment, promotional opportunities, and community status"*. Thus, while most of the other traditional and contemporary theories for understanding turnover still offer some benefits to the turnover domain of research, the job embeddedness theory seems the most comprehensive and appropriate for adoption in this study, given its unique way of focusing on the internal and external factors surrounding an employee prior to making voluntary quit decisions. However, the job embeddedness theory has also been flawed on many grounds. For example, some studies have shown that it's still quite recent in history and given this, changes might still be made on the theory (Zhang et al., 2012). Further, some other studies have shown that "*off-the-job embeddedness was significantly predictive of subsequent voluntary turnover and volitional absences, whereas, on-the-job embeddedness was not*" (Lee et al., 2004, p. 717). Another major criticism against the use of the job embeddedness theory relates to findings from Coetzer et al. (2017), who noted that the application of the theory may be influenced by organizational size, given that in a previous empirical study, it only

predicted turnover intentions in a large organization and not in a small organization. In fact, Coetzer et al. (2019) in a recent study, found a negative relationship between *"on-the-job embeddedness"* and each of its sub-dimension and turnover intention. However, despite its flaws and inconsistent results, the job embeddedness theory was found to be more relevant for the current study, because of its ability to consider multiple inter and intra organizational factors that the other models do not presently consider. Against this background, this study proposes the following hypothesis that is mapped to the propositional model of figure 2

H2: Job embeddedness is negatively related to voluntary employee turnover rates
This relationship can be represented as follows

VET rate =f (JE), where job embeddedness is the independent variable (IV) and voluntary employee turnover rate is the dependent variable (DV).

HUMAN CAPITAL INVESTMENT

According to the human capital theory, "the accumulation of firm-specific human capital embodied in a workforce determines workforce performance" (Strober 1990, cited in Shaw et al., 2005, p. 51). Many past studies have linked organizational tacit knowledge to human capital investment (Mahoney and Kor, 2015; Smith, 2003; Allen et al., 2010). Human capital investment has been defined as the "expenses that a firm incurs to attract, develop, and motivate employees with expectations of future returns" (Bhattacharya and Wright, 2005 cited in Bhattacharya et al., 2014, p. 88). In this study, human capital investment is seen as a potential moderator of the relationship between organizational tacit knowledge and voluntary employee turnover rates and the relationship between voluntary employee turnover rates and job embeddedness. Theoretically, the most pervasive form of investments in human capital are investments in training, education, medicals, selection and incentive-based pays (Kwon and Rupp, 2013; Bailey et al., 2013; Goldin, 2016). However, of all these forms of human capital investments, investment in training seems to be the most pervasive among small firms (Hofheinz, 2009; Ganotakis, 2012). The human capital literature provides some evidence that there are two levels of human capital, namely, the firm and individual levels (Fulmer and Ployhart, 2014). According to Coff and Raffiee (2015), the focus on attitudinal and performance issues is dominant at the individual level of human capital studies, while the focus on employee retention is dominant at the firm level of human capital studies.

However, other studies have also stretched the description of human capital to capture the macro and micro aspects of human capital. For example, Campbell (2012a cited in Coff and Raffiee, 2015, p. 326) argue that the micro level of human capital focuses on understanding variations in individual or group performances, while the macro level focuses on understanding employee retention issues. In summary, there seems to be a relationship between human capital and turnover given that turnover seems capable of diminishing human capital (Dess and Shaw, 2001). Therefore, it seems likely for level of investment to moderate the relationship between organizational tacit knowledge and voluntary employee turnover rates. Further, research has shown that investment in training and in medicals are part of the components of *"on-the-job-sacrifices"* that employees would have to give up if they voluntarily quit their jobs (Allen et al., 2010). Notably, *"on-the-job sacrifice"* is a key component of the job embeddedness construct (Mitchell et al., 2001). Since investment in training is one of the dominant types of human

capital investment in organizations (McGuirk et al., 2015), it seems likely for level of investment in human capital to moderate the relationship between job embeddedness and voluntary employee turnover rates. Against this above theoretical background, this study seeks to propose the following hypotheses that are mapped to the propositional model in figure 2.

H3a: Levels of investment in human capital will increase the scale of the negative relationship between organizational tacit knowledge and voluntary employee turnover rates.

H3b: Levels of investment in human capital will increase the scale of the negative relationship between job embeddedness and voluntary employee turnover rates.

Both hypotheses can also be represented as follows:

OTK = f (LHC*VET rates); VET rates= f(JE*LHC) where LHC in both cases refers to Level of Investment in Human Capital, the moderating variable.

METHODOLOGY

Sample Attributes

In the Greater Toronto Area (GTA) of Ontario, Canada, there are a total of 150 small and medium size education and training businesses. These organizations were included in the sample size for this study and were electronically administered a 44 item, 7-point Likert-based questionnaires over a period of six months. This sample selection strategy seems consistent with the purposive sampling method which focuses on the selection of samples based on *"certain units or cases for a specific purpose rather than randomly"* (Tashakkori and Teddlie, 2003, p 713). These 150 respondents were categorized as executives or non-executives who have sufficient knowledge and information about their organizations in terms of organizational tacit knowledge, job embeddedness, voluntary employee turnover and level of investment in human capital. The email addresses of each of these organizations were retrieved from their websites and compared with those registered on manta.com for verification purposes. Manta.com is the Canadian government approved online database for small and medium size enterprises. Of this sample size, 93 useable responses were received, representing 62% response rate. However, of the 93 responses received for voluntary employee turnover rates, 11 were removed as they were found to be responses that do not represent voluntary employee turnover rates. Historically, the typical response rate in the Canadian SME sector is between 23.4% and 52.2% per region (Industry Canada, 2018). Due to the need to examine the lagged effects of turnover and training expenses on other variables, data for voluntary employee turnover rates and training expenses were collected for the year 2015 and 2016 to examine the possibility for turnover and training expenses at different periods to have differential impacts (or would be impacted differently). Previous studies have shown that lagged effects do consider the relationship between the data collected for a dependent variable in the past and those collected for an independent variable in the present (Guo et al., 2004).

Measures

The propositional model in figure 2 was designed to address the following sets of conceptual relationships. In this first conceptual relationship, organizational tacit knowledge was set as the dependent variable (DV), while voluntary employee turnover rate was set as the independent variable (IV). In the second conceptual relationship, job embeddedness was set as the independent variable (IV), while voluntary employee turnover rate was set as the dependent variable (DV). For both relationships, level of investment in human capital was set as the moderating variable. For voluntary employee turnover rates, the formula developed by Morell (2002) for calculating actual voluntary employee rates was adopted for this study, while the 26-item scale developed by Mitchel et al. (2001) was adopted for measuring job embeddedness. Originally, Mitchell et al. (2001) compiled a list of 42 items that are mapped to *"on-the-job embeddedness"* and *"off-the-job embeddedness"*, but in subsequent studies, the questionnaire was found to contain too many items, many of which were more specific to the setting in which Mitchell et al. (2001) study was based. Against this background, researchers such as Li et al. (2016) and Nafei (2014) reduced the items in the scale to 20 and 18 respectively, without compromising the validity of the scale.

Further, in another similar study, Lee et al. (2004) reviewed this scale and reduced the items from 42 to 34; Holtom et al. (2006) reduced the items from 42 to 21, while Cunningham et al. (2005) also removed many of the items in the scale in a manner more fitting to the setting of the sample being studied. This is against the background that it is possible to adjust the items in the job embeddedness scale to a specific research setting (Wang and Ye, 2013). Finally, it was observed that Mitchell et al. (2001) developed the job embeddedness measurement scale with data that were collected at an individual level of turnover measurement. A close observation of the scale shows that there were many items that related to personal information about individual employees at a grocery store and in a hospital, which none of the executives that would complete the questionnaire would be able to answer. For example, there were questions like, "how many of my close friends live nearby"? and "how many of my close family members live nearby"?, which were found irrelevant at an organizational level of measuring "off-the-job" or "on-the-job" embeddedness. Consequently, such items were taken out of the scale. Thus, for this study, the items in the Mitchell et al. (2001) were reduced from 42 to 26 without compromising the validity of the scale. Further, the final list of 26 items was compared to those that were used by Li et al. (2016); Nafei (2014) and Holtom et al. (2006) and were found to have consistently covered all critical items that focused on "off-the-job" and "on-the-job" embeddedness. Further, for organizational tacit knowledge, the 6-item scale developed by Subramaniam and Venkatramann's (2001) was adopted for this study. This scale has been adopted in past studies for capturing organizational tacit knowledge, including for example, a recent empirical study by Perez-Luno et al. (2016) to model the relationship between tacit knowledge and firm's entrepreneurial market orientation. while for levels of investment in human capital, the 3-item scale developed by Bae and Lawler (2000) and Snell and Dean (1992) for categorizing levels of investment in human capital into high or low levels was adopted in this study. Finally, the 2-item scale developed by Kor and Leblebici (2005) for measuring training expenses was adopted for this study. To ensure internal consistency among all items in the above scales, reliability tests were conducted for each instrument and as shown in table 1, all had alphas between 0.799 and 0.928. Notably, Dwivedi et al. (2006) argue that high Cronbach values signify high reliability of the items that have been selected in an instrument.

TABLE 1: SUMMARY OF SCALES

Variables	Construct	No. of items	Operational Variables	Research Instrument	References
Voluntary Employee Turnover (intention)	Job Embedded-ness	26	Links to organization, fits to organisation, sacrifice to organization, link to community, fits to community and sacrifice to community	26-item Likert scale questionnaire with Cronbach alpha =0.865	Mitchel et al. (2001); Holtom and Inderrieden, (2006); Crossley et al. (2007) and Regts and Moleman (2012)
Voluntary Employee Turnover (actual turnover)	Voluntary Employee Turnover Rates	2	Leavers in a year; & average number of staffs in post during year	2-item survey questionnaire. Cronbach's Alpha =0.858	Morrell et al. (2001); Morrell (2002); Park and Shaw (2013)
Organizational Tacit Knowledge	Levels of organization-al tacit knowledge	6	Simplicity of information; ease of documentation of information; ease of understanding of information; ease of communication of information; ease of transparency of information to competitor; ease of identification of information without personal experience	6-item Likert scale questionnaire with Cronbach's Alpha =0.853	Subramaniam and Venkatramann's (2001)
Investment in Human Capital	Level of investment in training (high/low)	3	Level of funds invested in training; level of varieties of training; and types of training	3-item Likert scale questionnaire with Cronbach's Alpha =0.799	Kwon and Rupp (2013); McGuirk et al. (2015); Bae and Lawler (2000), and Snell and Dean (1992)
Training Expenses	Total annual expenditure on employee training	2	Total yearly ($) expenditures on training of employees	2-item survey question with Cronbach's Alpha =0.928	Kor and Leblebici (2005) and Hofheinz (2009)

Source: Akerele (2019)

For this study, job embeddedness comprises of on-the-job embeddedness and off-the-job embeddedness. Conceptually, on-the-job embeddedness includes three sub-dimensions which are fit to organization, links to organization and sacrifice to organization, while off-the-job embeddedness also includes three sub-dimensions which are fit to community, links to community and sacrifice to community. Each of these six sub-dimensions represent job embeddedness and were all used in the analysis of the collected data. The rationale behind this is that *"employing all six sub-dimensions of job embeddedness will help to predict the relationship between turnover intentions and actual turnover rates better than using job embeddedness as a block"* (Halvorsen et al., 2015).

TABLE 2: RELIABILTY OF INSTRUMENTS

Variables	Cronbach Alpha's result	No of Items
Job Embeddedness	0.865	26
Organizational Tacit Knowledge (OTK)	0.853	6
Voluntary Employee Turnover Rates	0.858	2
Levels of Investment in Human Capital (LHC)	0.799	3
Training Expenses	0.928	2

CONTROL VARIABLES

For this study, a total of four control variables were included in the analysis and these include "type of organization", "business location", "size of organization", and the "number of years since the organization was formed". These four variables have been identified in past studies as capable of influencing turnover rates (Min, 2007). Further, some studies have shown a link between organizational size and turnover (Coetzer et al., 2017), while location, a component of off-the-job embeddedness has been found to be related to turnover intention (Coetzer et al., 2019; Allen et al., 2010).

DATA ANALYSIS AND HYPOTHESIS TESTING

The data collected in this study were analyzed with the aid of correlation and linear regression methods. Further, the findings from the correlation outputs in figures 7 and 8 and the findings from the regression outputs in figures 9, 10, 11 and 12 were the basis for analyzing hypotheses H1, H2, H3a and H3b. In particular, linear regression was found suitable given its potential to predict the values of a dependent variable with respect to a set of explanatory variables (Tranmer and Elliot, 2008, p.3). A p-value of 0.05 was selected as the basis for examining the level of significance of the relationship between organizational tacit knowledge and voluntary employee turnover rates as well as the relationship between job embeddedness and voluntary employee turnover rates. To conduct the linear regression, four relevant model assumptions were identified and tested in SPSS. These included tests for linearity; multi-collinearity; normality and homoscedasticity. Li et al. (2012) argues that these four approaches would provide support for the adoption of a linear regression as a method for analyzing data. Thus, multi-collinearity was tested be ensuring that the VIF (variance inflation factor) was less than 10; linearity test was conducted by using the Shapiro-Wilk option on SPSS, which in this

case showed that p<0.05; normality test was conducted and verified with the aid of the histogram and box plots that are shown in the appendix; and the assumption for homoscedasticity was checked using the scatterplot diagrams in the appendix. Further, the data on voluntary employee turnover were transformed to ensure normality using the Log10 transformation option on SPSS. Finally, the regression model was only fitted for the data obtained for voluntary employee turnover rates in 2015 because there was no significant relationship between the data obtained for voluntary employee turnover rates in 2016 and all other variables.

RESEARCH RESULTS

Figure 7 shows that voluntary employee turnover rates in 2015 and organizational tacit knowledge (TK) are negatively related with a statistically significant relationship (r= -0.277; p <0.05). However, while organizational tacit knowledge was found to be negatively related to voluntary employee turnover rates in 2016, this relationship was statistically insignificant (r=-0.161; P>0.05), a situation that suggests that differential effects of turnover rates could be experienced at different times (lagged effect). Together, these results provide partial support for hypothesis, H1. Further, as shown in figure 7, level of investment in human capital (LHC) was found to be positively related to organizational tacit knowledge (r=0.638; p<0.05), and with a statistically significant relationship. Similarly, the output in figure 8 shows that FittoCom (Fit to Community), one of the sub-dimensions of *"off-the-job embeddedness"* is negatively related to voluntary employee turnover rates in 2015 with a statistically significant relationship (r=-0.262; p<0.05). However, none of the remaining five sub-dimensions of job embeddedness (two sub-dimensions from off-the-job variables and three sub-dimensions from on-the-job variables) were found to be of any statistically significant relationship with voluntary employee turnover rates in 2015 and 2016. Taken together, these results also provide partial support for hypothesis, H2. Incidentally, a previous study showed that "off the job embeddedness" was more predictive of voluntary employee turnover than *"on the job embeddedness"* (Lee et al., 2004, p.717). Finally, the output in figure 8 also shows that level of investment in human capital (LHC) is positively related to two sub-dimensions of *"on-the-job embeddedness"* which are Sacrorg (Sacrifice to organization) (r=0.622; p<0.05); and Fitorg (Fit to organization) (r=0.340; p<0.05) and to one sub-dimension of *"off-the-job embeddedness"* which is SactoComm (Sacrifice to community) (r=0.392; p<0.05). Notably, investment in training, a type of human capital investment, has been linked to *"on-the-job embeddedness"* (Allen et al., 2010).

FIGURE 7: CORRELATION OUTPUTS 1

Variable	1	2	3	4	5
1. LHC					
2. Total Training Expenses in 2015 ($)	0.216*				
3. Total Training Expenses in 2016 ($)	0.209*	0.872*			
4. TK	0.638**	0.133	0.107		
5. Voluntary Employee Turnover Rates in 2015 (%)	-0.052	-0.057	-0.064	-0.277*	
6. Voluntary Employee Turnover Rates in 2016 (%)	-0.018	-0.014	-0.021	-0.161	0.778**

Note: TK is Tacit Knowledge; LHC is the Level of Investment in Human capital
Correlation is significant (*) at P<0.05

For items 6-7 in figure 8, Fit to Community is abbreviated as FittoCom; Fit to Organisation is abbreviated as FitOrg; Link to Organisation is abbreviated as LinkOrg; Sacrifice to Organisation is abbreviated as SacrOrg; Link to Community is abbreviated as LintoCom and Sacrifice to Community is abbreviated as SacrtoCom.

FIGURE 8: CORRELATION OUTPUTS 2

Note: LHC is Level of Investment in Human Capital; Correlation is significant (*) at P<0.05

Variable	1	2	3	4	5	6	7	8	9	10
1. LHC										
2. Total Training Expenses in 2015 ($)	0.216*									
3. Total Training Expenses in 2016 ($)	0.209*	0.872*								
4. Voluntary Employee Turnover Rates in 2015 (%)	-0.052	-0.057	-0.064							
5. Voluntary Employee Turnover Rates in 2016 (%)	0.018	0.014	0.021	0.778*						
6. FittoCom	0.165	0.018	0.071	-0.262*	-0.204					
7. FitOrg	0.340*	0.072	0.122	-0.166	-0.064	0.664*				
8. LinkOrg	-0.113	0.086	0.062	-0.164	-0.164	-0.067	-0.064			
9. SacrOrg	0.622*	0.170	0.167	-0.289	-0.068	0.353*	0.685*	-0.100		
10. LintoCom	-0.039	0.027	0.115	-0.173	-0.207	0.129	-0.017	-0.013	-0.063	
11. SacrtoCom	0.392**	0.095	0.173	-0.196	-0.106	0.572*	0.630*	-0.087	0.561*	0.172

Figure 9: Modelling Tacit Knowledge with Voluntary Employee Turnover Rates in 2015

Model 1

R	R-Square	Adjusted R-Square	Std Error of the Estimate
.277	.077	.061	1.00778

Coefficients

Independent Variable	B	Standard Error	Beta	t	P	VIF	R-Square
Constant	4.396	.410		10.72	.000		
Voluntary Employee Turnover Rates	-0.785	.357	-.277*	-2.198	0.032	1	.077

Note: Dependent variable=Organizational Tacit Knowledge; Independent variable=voluntary employee turnover rate

Note: *P<0.05

Figure 9 is the output from model 1. As shown above, 7.7% of the variation in the degree of organizational tacit knowledge can be explained by voluntary employee turnover rates in 2015. Further, the results in figure 9 shows that, a one-unit increase in the rate of voluntary

employee turnover seems capable of yielding a 27.7% decrease in the degree of organizational tacit knowledge (β=-0.277; p<0.05*)*. But, when the effects of size of organization, location, type of organization and number of years since organization was formed were controlled for in model 2 as shown in figure 10, only 24.9% of the variation in the degree of organizational tacit knowledge can be attributed to voluntary employee turnover rate in 2015, with *"number of years since your organization was formed"* being the only control variable of any statistical significance (*β* =-0.326; p<0.05). Further, this result shows that a one-unit increase in the number of years since a small and medium size enterprise was formed can decrease the degree of organizational tacit knowledge by 32.6%. However, when level of investment in human capital was introduced as the moderator in model 3 as shown in figure 10, voluntary employee turnover rate seems to be capable of explaining only 48.2% of the variation in the degree of organizational tacit knowledge. Further, "training expenses" and all the control variables seem to be of no statistical significance in model 3. Finally, the results in figure 10 show that the scale of the negative relationship between voluntary employee turnover rates and organizational tacit knowledge could be further increased by 86.3% with a one unit increase in levels of investment in human capital (*β=0.863; p<0.05)*. This provides support for hypothesis H3a.

Figure 10: Modelling Tacit Knowledge with Voluntary Employee Turnover Rates in 2015, Control Variables, Training Expenses and Moderating Variable

Model Summary

Model	R	R-Square	Adjusted R-Square	Std Error of the Estimate
2	.499	.249	.148	.96019
3	.695	.482	.401	.80471

Coefficients (Model 2)

Independent Variables	B	Standard Error	Beta	t	P	VIF
Constant	4.863	.766		6.347	.000	
Voluntary Employee Turnover Rates (2015)	-.0.501	.374	-.177	-1.339	.186	1.2
Size of Organization	-.001	.000	-.203	-1.617	.112	1.09
Location of your Company	.165	.281	.078	0.586	.561	1.2
Type of Organization	.072	.282	.034	.256	.799	1.2
Number of years	-.386	.155	-.326	-2.496	.016	1.1

Since organization Was formed						
Total Training Expenses In 2015	1.307E-6	.000	.179	.321	.749	21.424
Total Training Expenses In 2016	-8.164E-7	.000	-.106	.190	.850	21.325

Dependent variable is Organizational Tacit Knowledge
Note: *P<0.05

Coefficients (Model 3)

Independent Variables	B	Standard Error	Beta	t	P	VIF
Constant	5.596	.660		8.478	.000	
Voluntary Employee Turnover Rates (2015)	-2.523	.525	-.892*	-4.805	.000	3.3
Size of Organization	.000	.000	-.111	-1.038	.304	1.1
Location of your Company	-.023	.239	-.011	-.098	.922	1.2
Type of Organization	.077	.237	.036	.327	.745	1.2
Number of years Since organization Was formed	-.172	.137	-.146	-1.257	.214	1.3
Total Training Expenses In 2015	-3.454E-8	.000	.047	-.101	.920	21.642
LHCVETRATES 2015	.019	.004	.863*	4.799	.000	3.1

Note: *P<0.05
Note: Dependent variable is “Organizational Tacit Knowledge”
Moderating Variable is LHCVETRATES (Level of Investment in Human Capital x Voluntary Employee Turnover Rates)

Figure 11: Modelling Job Embeddedness with Voluntary Employee Turnover Rates in 2015

Model 1

R	R-Square	Adjusted R-Square	Std Error of the Estimate
.332	.110	.010	.36576

Coefficients

Independent Variables	B	Standard Error	Beta	t	P	VIF
Constant	1.802	.384		4.693	.000	
FitOrg	.001	.085	.003	.013	.990	2.9
LinkOrg	-.086	.086	-.132	-1.001	.321	1
SacrOrg	.028	.078	.060	.357	.723	1.6
FittoComm	-.128	.122	-.207	- 1.052	.298	2.3
LinktoComm	-.131	.152	-.120	-.859	.394	1.1
SactoComm	-.039	.086	-.080	-.452	.653	1.8

Note: *P<0.05
Dependent variable is "Voluntary Employee Turnover Rates in 2015"
Note: Fitorg is "Fit to Organization"; Linkorg is "Link to Organization"; Sacrorg is "Sacrifice to Organization"; FittoComm is "Fit to Community"; LinktoComm is "Link to Community"; and SactoComm is "Sacrifice to Community"

Although, the output of model 1 as shown in figure 11 shows that 11.10% in the variation in the degree of voluntary employee turnover rates in 2015 is explained by job embeddedness, none of these six sub-dimensions of job embeddedness are of any significance in explaining variations in the degree of voluntary employee turnover rates in model 1 (p>0.05). However, when the effects of size of organization, location, type of organization and number of years since organization was formed were controlled for in model 2 and model 3 as shown in figure 12, 22.5% of variation in the degree of voluntary employee turnover rates in 2015 seems to be explained by job embeddedness. Further, the results in figure 12 shows that, without the moderating variable, a one unit increase in the *"number of years since the organisation was*

formed" is capable of yielding a 30.6% increase in the rate of voluntary employee turnover (β=0.306; p<0.05). However, when the moderator, level of investment in human capital was introduced, none of the control variables are of any significance to the variation in the degree of voluntary employee turnover rate. Finally, level of investment in human capital was found to be of no statistical significance in moderating the relationship between job embeddedness and voluntary employee turnover rate (β=0.006; p>0.05), a result that fails to support hypothesis, H3b.

Figure 12: Modelling Job Embeddedness, Control Variables, Training Expenses, Moderating Variable and Voluntary Employee Turnover Rates in 2015

Model Summary

Model	R	R-Square	Adjusted R-Square	Std Error of the Estimate
2	.474	.225	.027	.36251
3	.474	.225	.006	.36643

Coefficients (Model 2)

Independent Variables	B	Standard Error	Beta	t	P	VIF
Constant	1.073	.563		1.905	.063	
FitOrg	-.056	.095	-.146	-.592	.556	3.6
LinkOrg	-.039	.095	-.060	-.407	.686	1.2
SacrOrg	.040	.088	.086	.454	.652	2.1
FittoComm	-.067	.124	-.108	-.538	.593	2.4
LinktoComm	-.130	.153	-.120	-.850	.400	1.2
SactoComm	.010	.089	.021	.113	.910	2
Size of Organization	-6.170E-5	.000	-.047	-.325	.746	1.2
Location of your Company	.139	.114	.186	1.217	.230	1.4

Type of Organization	-.042	.113	-.056	- .371	.713	1.3
Number of years Since organization Was formed	.128	.061	.306*	2.088	.042	1.3
Total Training Expenses In 2015	1.469E-8	.000	-.057	.089	.929	24.687
Total Training Expenses In 2016	-2.266E-8	.000	-.083	-.132	.896	24.120

Dependent variable is Voluntary Employee Turnover Rates (2015)
Note: *P<0.05

Coefficients (Model 3)

Independent Variables	B	Standard Error	Beta	t	P	VIF
Constant	1.074	.571		1.880	.066	
FitOrg	-.056	.096	-.147	-.586	.560	3.7
LinkOrg	-.039	.096	-.059	-.401	.691	1.3
SacrOrg	.038	.110	.083	.346	.731	3.3
FittoComm	-.066	.125	-.108	-.532	.597	2.4
LinktoComm	-.130	.157	-.120	-.829	.411	1.2
SactoComm	.009	.095	.019	.099	.922	2.2
Size of Organization	-5.991E-5	.000	-.045	-.292	.772	1.4
Location of your Company	.139	.118	.185	1.176	.246	1.4
Type of Organization	-.042	.115	-.056	- .367	.715	1.3
Number of years Since organization Was formed	.128	.064	.307*	2.000	.051	1.3

Total Training Expenses In 2015	1.468E-8	.000	-.057	.088	.930	24.687
Total Training Expenses In 2016	-2.263E-8	.000	-.083	-.130	.897	24.121
LHCJE	.001	.021	.006	.024	.981	3.5

Dependent variable is Voluntary Employee Turnover Rates (2015)
Moderating Variable is LHCJE (Level of Investment in Human Capital x Job Embeddedness)
Note: *P<0.05

DISCUSSIONS

The findings from this study are mixed in nature, demonstrating partial support for the propositional model of figure 2. First, a negative relationship between organizational tacit knowledge (DV) and voluntary employee turnover rate (IV) was proposed in hypothesis, H1. Based on the result obtained, this relationship was supported for voluntary employee turnover rates for the year 2015, but not for the year 2016. This partial support seems consistent with previous theoretical arguments that suggest that the loss of organizational tacit knowledge is one of the consequences of voluntary employee turnover (Dess and Shaw, 2001; Shaw et al., 2005; Guidice et al., 2009 p. 146; Massingham, 2018). Secondly, this finding offers some contributions to the tacit knowledge theory, given that many scholars have repeatedly viewed tacit knowledge as a difficult concept to measure or operationalize. For example, scholars like Berman et al. (2002); Cornell et al. (2013); and Schoenherr et al. (2014) have repeatedly argued that tacit knowledge is the alternative to explicit knowledge, and by implication, is difficult to codify, transfer and operationalize. Thus, by employing the Subramaniam and Venkatraman's (2001) organizational tacit knowledge scale in this study to measure and operationalize tacit knowledge at the organizational level, and particularly within a small and medium enterprise context, further attempts at measuring the concept in any future SME based research would be supported and strengthened. Lastly, most tacit knowledge studies seem to be prevalent among United States scholars. Given the relatively scarce nature of tacit knowledge intensive studies in the Canadian cultural context, findings from this study seem capable of bridging some of the current gaps in the Canadian research environment. In the past, scholars like Boiral (2002) and Harlow (2008) have conducted some tacit knowledge related studies, but not within the small and medium size organizational context. Against this background, findings from this study seem capable of deepening the knowledge of owners and managers of small and medium enterprises on the benefits and consequences associated with varied degrees of tacit knowledge in their organizations.

Further, this study proposed in hypothesis, H2 that job embeddedness (IV) seems to be negatively related to voluntary employee turnover rates (DV). Job embeddedness was operationalized by six sub-dimensions mapped to *"on-the-job embeddedness"* and *"off-the-job embeddedness"*. Based on this, only a sub-dimension of "off-the-job embeddedness" was found

to be negatively related to voluntary employee turnover rates, a situation that provides very limited and partial support for hypothesis H2. This seems not surprising as it's been noted earlier in this study that the job embeddedness theory, though, the most comprehensive at understanding the inter and intra organizational factors influencing turnover intentions, is still fraught with a lot of weaknesses and inconsistent results (Martdianty et al., 2016). In particular, it was discussed in this study that scholars have found "off the job embeddedness" to be more predictive of turnover than "on the job embeddedness" (Lee et al., 2004), and that the job embeddedness theory seems more successful at predicting turnover intentions in large organizations than in smaller ones (Coetzer, et al., 2017). It was also mentioned in this study that the research into the use of the job embeddedness theory within small organizations is quite thin (Ampofo et al., 2017) But, despite these flaws, and the partial results obtained in this study, my findings still provide some contributions to theory and practice. First, the application of the job embeddedness theory within a small and medium size organizational context in this study is an attempt to further prove the relevance and applicability of the theory within smaller organizations, thus expanding and reinforcing the scope of the theory, given the strategic role of employee retention to the survival of small businesses (Rozsa et al., 2019). Secondly, these findings would deepen the knowledge of turnover researchers on the potential aspects of the theory that need adjustments for much better applicability within smaller organizational contexts.

Lastly, this study proposed in hypothesis H3a that levels of investment in human capital seem capable of moderating the relationship between organizational tacit knowledge (DV) and voluntary employee turnover rates (IV) in H3a and the relationship between job embeddedness (IV) and voluntary employee turnover rates (DV) in H3b. Findings from this study seem to support hypothesis H3a, that levels of investment in human capital is capable of moderating the relationship between organizational tacit knowledge (DV) and voluntary employee turnover rates. However, these findings failed to support hypothesis, H3b. Given that investment in training is one of the most pervasive forms of investments in human capital (Ganotakis, 2012; Goldin, 2016), the findings in this study seem to align with many previous studies that have found a link between organizational tacit knowledge and human capital. For example, Mahoney and Kor (2015) noted that firm-level human capital is closely related to tacit knowledge. It is therefore likely for levels of investment in training to be an important factor of consideration to owners of SMEs in any future effort aimed at sustaining valuable organizational tacit knowledge which is regarded as a critical source of competitive advantage to SMEs. This result also offers some contributions to theory and practice. First, it seems to support the theoretical argument that investment in training is a type of benefit that employees may be unwilling to sacrifice, a situation that might ultimately be a predictor of turnover intention (Ng and Feldman, 2007). Secondly, findings from this study would also be of immense benefit to the human capital literature by strengthening the focus of researchers on studies related to "investment in training" as a tool for strengthening human capital investment initiatives in SMEs for maximizing productivity and profitability. Finally, these findings would also provide motivation for owners of SMEs to leverage on investment in training as a strategy for minimizing voluntary employee turnover in their organizations. For hypothesis H3b that was not supported, despite the theoretical linkages between investment in training and *"on the job embeddedness"* (Allen et al., 2010), it seems likely that organizational size was responsible for this result. Consequently, a much better result may be obtained in a larger organizational setting or even within an SME context with larger sample size.

CONCLUSION

Finally, this study has shown that organizational tacit knowledge and voluntary employee turnover are negatively related, and the strength of this relationship can be influenced by level of investment in human capital. Further, this study has also shown that a sub-dimension of job embeddedness and voluntary employee turnover rates are negatively related. In summary, these findings demonstrate partial and mixed supports for the proposed conceptual model, given some of the limitations experienced in this study. For example, the strength of linear regression models has been linked to sample size (Knofczynski and Mundfrom, 2008). While, some studies recommend that *"a minimum sample size of 300 or more is necessary to generate a close approximation of estimates with the parameters in the population"* (Bujang et al., 2017), others suggest that sample sizes need to be calculated using methods like pear methods, statistical power methods and cross validity methods (Brooks and Barcikowski, 2012). But in this study, all available SMEs in the education and training sector of the (GTA) Greater Toronto Area part of Ontario, Canada were included in the sample size, out of which only 93 organizations provided their responses. Of the 93 responses received for voluntary employee turnover rates in 2015 and 2016, 11 of them were found unusable because the values reported as rates in the questionnaire did not represent the required percentages for turnover rates. Thus, the limitation due to the availability of executives in SMEs to complete the administered surveys impacted the sample size that was used for the study. It appears like a much larger sample size would have provided a much large dataset that would have strengthened the results of this study.

Further, the paucity of turnover studies in Canada with focus on small and medium size enterprises made it quite challenging to find papers of Canadian origin that focus on the dynamics and challenges of voluntary employee turnover and tacit knowledge within small and medium size enterprises as well as the theories and models that underlie them. Finally, the theories on which the job embeddedness scale; the tacit knowledge scale and level of investment in human capital scale were built seemed to have been based on data obtained from traditionally large organizations. Measurement scales that are built on data obtained from small and medium size organizations may likely provide more reliable and representative measurements for job embeddedness; organizational tacit knowledge and level of investment in human capital.

Aside from the classifications discussed in this paper, some studies have further classified turnover into functional turnover (the replacement of a poorly performing employee with a better performing employee and dysfunctional turnover (the loss of a performing employee) (Wallace and Gaylor, 2012). Given this classification, it seems likely for some incidences of voluntary employee turnover to be functional in nature, a possibility that was not taken into account in the current study. First, a future study that seeks to examine the relationship between organizational tacit knowledge and "functional voluntary employee turnover" or the relationship between organizational tacit knowledge and "dysfunctional voluntary employee turnover" at the organizational level might help to void this gap. Secondly, a future study that seeks to examine the moderating effect of level of investment in human capital on the relationship between organizational tacit knowledge and "functional or dysfunctional voluntary employee turnover" at the organizational level might help scholars to understand the differences between the degree of variation in the level of organizational tacit knowledge that can be explained by functional or dysfunctional voluntary employee turnover rates. Thirdly, a future study that also considers the moderating effect of level of investment in human capital on the relationship between job embeddedness and "functional or dysfunctional turnover" will also make enormous contribution

to the turnover theory, particularly within the job embeddedness theoretical context. Such a study might be successful at predicting an inverse relationship between all or some of the sub-dimensions of job embeddedness and functional or dysfunctional turnover rates. Another important aspect of the turnover literature that should dominate turnover scholars relate to the formula for calculating turnover rates. Traditionally, Morell (2002) argues that turnover rates are calculated using the following formula:

$$\text{Voluntary employee turnover rate} = \frac{\text{Leavers in a year}}{\text{Average number of staffs in post during year}} * 100$$

Given the classification of turnover to functional and dysfunctional dimensions, it seems like the above formula considers all employees that voluntarily leave an organization as a homogenous entity. The above formula does not seem to capture the differences between turnover rates that are functional and those that are dysfunctional. Therefore, a future study that seeks to develop specific formulas for calculating turnover rates for dysfunctional and functional turnovers would be of immense benefits to the turnover literature. According to In the job embeddedness literature, Halvorsen et al. (2015) argue that the use of "fits", "links" and "sacrifices in a "block approach" may fail to yield the expected results, while a much better approach should be the use of the entire six sub-dimensions of job embeddedness. Given that the job embeddedness theory is still undergoing a lot of developments, chances are that the understanding of scholars in this domain might be further deepened if each of the six sub-dimensions are individually regressed against voluntary employee turnover rates.

Further, the need for more work to be done in the tacit knowledge domain cannot be overemphasized. Many of the current instruments for measuring organizational tacit knowledge are not exclusive to smaller organizations. It would be of immense benefit to the tacit knowledge discipline if more tacit knowledge measurement theories and scales that are more relevant to SMEs are developed. Aside from these, it is important to mention here that all units of analyses in this study are at the organizational level, given that the research instrument was administered to executives in each of the responding organizations. A future study that considers the relationship between individual tacit knowledge and voluntary employee turnover would certainly strengthen the turnover literature and contribute towards the understanding of the individual factors that shape turnover intention as well as tacit knowledge measurement and operationalization. Finally, the current study was conducted from a Canadian cultural environment, and thus the findings may not be generalizable across all cultural contexts. It is imperative for future empirical studies to be conducted in places like the EU, the UK and even in Africa on the relationship between voluntary employee turnover and organizational tacit knowledge within small and medium size enterprises. Such an effort may also strengthen the current theoretical developmental efforts in the job embeddedness domain if the theory is applied to other cultural contexts, given that some "off-the-job" and "on-the-job" variables that are relevant to a Canadian cultural environment may not be relevant to other cultures.

REFERENCES

Afsar, B. & Rehman, Z.U. (2017). Relationship between work-family conflict, job embeddedness, workplace flexibility, and turnover intentions. Makara Hubs-Asia, 21(2), 92-104.

Aiello, A.J. (2018). The relationship of national culture and turnover: An examination of differences employees give for quitting in three countries, Doctoral dissertation, St Ambrose University.

Akerele, A.I. (2019). Job Embeddedness, Voluntary Employee Turnover and Organizational Tacit Knowledge in Small and Medium Size Enterprises, Doctor of Business Administration Degree, Heriot-Watt University, Edinburgh, 1-255

Allen, D. G. (2008). Re-training talent: A guide to analyzing and managing employee turnover, SHRM Foundation Effective Practice Guidelines Series, 1–43.

Allen, D.B.P., Bryant, P.C., & Vardaman, J. (2010). Retaining Talent: Replacing Misconceptions with Evidence-Based Strategies, Academy of Management Perspectives, Business Source Premier, 24 (2), 48-64.

Ampofo, E.T., Coetzer, A., Susomrith, P., & Rermlawan, S. (2017). The job embeddedness-turnover intentions relationship: Evidence from Thailand, 2-21.

Babatunde, M. & Laoye, O.M. (2011). Assessing the effects of employee turnover on the performance of small and medium-scale enterprises in Nigeria, Journal of African Business, 12 (2), 268-286.

Bae, J., & Lawler, J. J. (2000). Organizational and HRM strategies in Korea: Impact on firm performance in an emerging economy, Academy of Management Journal, 43, 502-517.

Bailey, R., Hillman, C., Arent, S., & Petitpas, A. (2013). Physical activity: An underestimated investment in human capital?, Journal of physical activity and health, 10 (3), 289-308.

Barley, W.C., Treem, J.W., & Kuhn, T. (2018). Valuing multiple trajectories of knowledge: A critical review and agenda for knowledge management research, Academy of Management Annals, 12 (1), 278-317.

Batt, R., & Colvin, A. (2011). An Employment System and Approach to Turnover: Human Resources Practices, Quits, Dismissals, and Performance, Business Source Premier, Academy of Management Journal, 54 (4), 695-717.

Bhattacharya, M., Harold, D.D., & Garavan, T. (2014). The organizational context and performance implications of human capital investment variability, Human Resource Development Quarterly, 25(1), 87-113.

Bhattacharya, M., & Wright, P.M. (2005). Managing human assets in an uncertain world: Applying Real Option Theory to HRM, International Journal of Human Resource Management, 16 (6), 933–952.

Basterretxea, I., & Storey, J. (2018). Do Employee-Owned Firms Produce More Positive Employee Behavioural Outcomes? If Not Why Not? A British-Spanish Comparative Analysis. British Journal of Industrial Relations, 56 (2), 292-319.

Berman, S.L., Down, J., & Hill, C.W. L. (2002). Tacit Knowledge as a Source of Competitive Advantage in the National Basketball Association, The Academy of Management Journal, 45 (1), 13-31.

Boiral, O. (2002). Tacit knowledge and environmental management. Long Range Planning, 35 (3), 291-317.

Brooks, G.P., & Barcikowski, R.S. (2012). The PEAR method for sample sizes in multiple linear regression. *Multiple Linear Regression Viewpoints*, *38*(2), 1-16.

Bujang, M.A., Sa'at, N., & Bakar, T.M.I.T.A. (2017). Determination of minimum sample size requirement for multiple linear regression and analysis of covariance based on experimental and non-experimental studies. *Epidemiology, Biostatistics and Public Health*, *14*(3).

Cornell, S., Berkhout, F., Tuinstra, W., & David, T.J. (2013). Opening up knowledge systems for better responses to global environmental change, Environmental Science and Policy, 28, 60–70.

Campbell, B., Coff, R.W., & Kryscynski, D. (2012a). Rethinking competitive advantage from human capital, Academy of Management Review, 37(3), 376–395.

Chynoweth, P. (2012). The harvesting of professional knowledge: methodological perspectives on the legitimization of tacit and mode 2 knowledge in the professional doctorate thesis, Third International Conference on Professional Doctorates (ICPD-3), The European Universities Institute, Florence, Italy.

Clarke, T. (2010). The Development of a Tacit Knowledge Spectrum based on the Interrelationships between Tacit and Explicit Knowledge". PhD Thesis, University of Wales,1-246. Retrieved April 18, 2020 from https://repository.cardiffmet.ac.uk/bitstream/handle/10369/909/T%20Clarke.pdf?sequence=1&isAllowed=y

Coff, R., & Raffiee, J. (2015). Toward a theory of perceived firm-specific human capital, The Academy of Management Perspectives, 29 (3), 326-341.

Coetzer, A., Inma, C., & Poisat, P. (2017). The job embeddedness-turnover relationship: Effects of organisation size and work group cohesion, Personnel Review, 46 (6), 1070-1088.

Coetzer, A., Inma, C., Poisat, P., Redmond, J. & Standing, C. (2019). Does job embeddedness predict turnover intentions in SMEs?. International Journal of Productivity and Performance Management.

Cunningham, G.B., Fink, J.S., & Sagas, M. (2005). Extensions and further examination of the job embeddedness construct, Journal of Sport Management, 19(3), 319-335.

Crossley, C.D., Bennett, R.J., Jex, S.M., & Burnfield, J.L. (2007). Development of a global measure of job embeddedness and integration into a traditional model of voluntary turnover, Journal of Applied Psychology 92 (4), 1031-1042.

Dess, G.G., & Shaw, J.D. (2001). Voluntary Turnover, Social Capital, and Organizational Performance, The Academy of Management Review, 26 (3) 446-456.

De Winne, S., Marescaux, E., Sels, L., Van., B.I., & Vanormelingen, S. (2018). The impact of employee turnover and turnover volatility on labor productivity: a flexible non-linear approach, The International Journal of Human Resource Management, 1-31.

De Winne, S., Marescaux, E., Sels, L., Van Beveren, I. & Vanormelingen, S. (2019). The impact of employee turnover and turnover volatility on labor productivity: a flexible non-linear approach. *The International Journal of Human Resource Management*, *30*(21), 3049-3079.

Dwivedi, Y., Papazafeiropoulou, A., & Gharavi, H. (2006) Socio-Economic Determinants of Adoption of the Government Gateway Initiative in the UK Electronic Government, 3 (4) 404-419.

Edmondson, A.C., Winslow, A.B., Bohmer, R.M.J., & Pisano, G.P. (2003). Learning how and learning what: effects of tacit and codified knowledge on performance improvement following technology adoption, Decision Sciences, 34 (2), 197-223.

Fulmer, I.S., & Ployhart, R.E. (2014). Our Most Important Asset: A Multidisciplinary/Multilevel Review of Human Capital Valuation for Research and Practice, Journal of Management, 40 (1), 161-192.

Ganotakis, P. (2012). Founders' human capital and the performance of UK new technology-based firms, Small Business Economics 39, 495–515.

Garrick, J. (2018). A critical discourse on tacit knowledge management and the performative agenda: Implications for industry training and development, European Journal of Training and Development, 42(3/4), 210-225.

Goldin, C. (2016). Human capital. Handbook of cliometrics, 55-86.

Gourlay, S. (2006). Towards conceptual clarity for tacit knowledge: a review of empirical studies, Knowlege Management Resource Practice, 4 (1), 60-69.

Griffeth, R.W., Horn, P.W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the millennium, Journal of Management, 26 (3), 463-488.

Guidice, R.M., Heames, J.T., & Wang, S. (2009). The indirect relationship between organizational-level knowledge worker turnover and innovation: An integrated application of related literature, The Learning Organization, 16 (2), 143-167.

Guo, C., Kumar, A., & Jiraporn, P. (2004). Customer satisfaction and profitability: is there a lagged effect?, Journal of strategic marketing, 12 (3), 129-144.

Haines, I., Jalette, P., & Larose, K. (2010). The Influence of Human Resource Management Practices on Employee Voluntary Turnover rates in the Canadian Non-Governmental Sector, Industrial & Labor Relations Review, Business Source Premier, 63 (2), 228-246.

Halvorsen, B., Treuren, G., & Kulik, C.T. (2015). Job embeddedness among migrants: Fit and links without sacrifice, The International Journal of Human Resource Management, 26 (10), 1298-1317.

Herschbach, D.R. (2017). Michael Polanyi: Patriarch of Chemical Dynamics and Tacit Knowing, Angewandte Chemie International Edition, 56(13), 3434-3444.

Hofheinz, P. (2009). EU 2020: why skills are key for Europe's future, Policy Brief IV (1), 1–23.

Holtom, B.C., Mitchell, T.R., Lee, T.W., & Tidd, S. (2006). Less is more: Validation of a short form of the job embeddedness measure and theoretical extensions. In annual meeting of the Academy of Management, Atlanta, GA.

Holtom, B.C. & Inderrieden, E.J. (2006). Integrating the Unfolding Model and Job Embeddedness Model to Better Understand Voluntary Turnover, Journal of Managerial Issues, 18 (4), 435-452.

Hom, P. W., Lee, T. W., Shaw, J. D., & Hausknecht, J. P. (2017). One hundred years of employee turnover theory and research. *Journal of applied psychology*, *102*(3), 530.

Hulin, C. L., Roznowski, M., & Hachiya, D. (1985). Alternative opportunities and withdrawal decisions: Empirical and theoretical discrepancies and an integration, Psychological Bulletin, 97 (2), 233-250.

Hussain, T., & Deery, S. (2018) Why do self-initiated expatriates quit their jobs: The role of job embeddedness and shocks in explaining turnover intentions., International Business Review, 27(1), 281-288.

HR Reporter (2018). Retrieved April 17, 2020, from https://www.hrreporter.com/culture-and-engagement/36271-canada-ranks-4th-globally-for-highest-employee-turnover/

Industry Canada Report on Education Sector (2018). Retrieved April 18, 2020, from http://www.ic.gc.ca/eic/site/061.nsf/eng/rd02445.html

Insch, G., McIntyre, N., & Dawley, D. (2008). Tacit Knowledge: A Refinement and Empirical Test of the Academic Tacit Knowledge Scale, Journal of Psychology, Business Source Premier, 142 (6), 561-580.

Jones, S.M., Andrew, R., & Sertyesilisik, B. (2010). Testing the unfolding model of voluntary turnover on construction professionals, Construction Management and Economics, 28 (3), 271-285.

Kacmar, K., Michele, M.C., Andrews, D.L., Van, R.R., Steilberg, C., & Cerrone, S. (2006). Sure Everyone can be Replaced. But at What Cost? Turnover as a Predictor of Unit-Level Performance, Academy of Management Journal, 49 (1), 133–144.

Kaifeng, J., Dong, L., McKay, P., Lee, T.W., & Mitchell, T.R. (2012). When and how is job embeddedness predictive of turnover? A meta-analytic investigation, Journal of Applied Psychology, 97 (5), 1077-1096.

Kitaro, N. (1989). Translating Nishida Maraldo, John C. Philosophy East and West, Philosophy East and West, 39 (4), 465-496.

Knofczynski, G.T., & Mundfrom, D. (2008). Sample sizes when using multiple linear regression for prediction. *Educational and psychological measurement*, *68*(3), 431-442

Kor, Y.Y., & Leblebici, H. (2005). How do interdependencies among human-capital deployment, development, and diversification strategies affect firms' financial performance? Strategic Management Journal, 26 (10), 967–985.

Kwon, K., & Rupp, D.E. (2013). High-performer turnover and firm performance: The moderating role of human capital investment and firm reputation, Journal of Organizational Behavior, 34(1), 129-150.

Latukha, M.O. (2018). Can Talent Management Practices Be Considered as a Basis for Sustainable Competitive Advantages in Emerging-Market Firms? Evidence from Russia, Thunderbird International Business Review, 60 (1), 69-87.

Lee, W.J. (2008). A Pilot Survey of Turnover Intention and Its Determinants among Adult Probation Line Officers in Texas, Funded Research by the Agency of Research Enhancement Grant of Texas State.

Lee, T.W., & Mitchell, T.R. (1994). An Alternative Approach: The Unfolding Model of Voluntary Employee Turnover, The Academy of Management Review, 19 (1), 51-89.

Lee, T.W., Mitchell, T.R., Sablynski, C., Burton, J., & Holtom, B. (2004). The Effect of Job Embeddedness on Organizational Citizenship, Job Performance, Volitional Absences and Voluntary Turnover, Academy of Management Journal, 47 (5), 711–722.

Li, J.J., Lee, T.W., Mitchell, T.R., Hom, P.W., & Griffeth, R.W. (2016). The effects of proximal withdrawal states on job attitudes, job searching, intent to leave, and employee turnover, Journal of Applied Psychology, 101(10), 1436-1456.

Ma, Q.K., Mayfield, M., & Mayfield, J. (2018). Keep them on-board! How organizations can develop employee embeddedness to increase employee retention, Development and Learning in Organizations: An International Journal, 32(4), 5-9.

March, J. G., & Simon, H. (1958). Organizations, New York: Wile.

Mahoney, J.T., & Kor, Y.Y. (2015). Advancing the human capital perspective on value creation by joining capabilities and governance approaches, The Academy of Management Perspectives, 29(3), 296-308.

Maertz, C.P., & Kmitta, K.R. (2012). Integrating turnover reasons and shocks with turnover decision processes, Journal of Vocational Behavior, 81 (1), 26–38.

Maltarich, M., Nyberg, A., & Reilly, G. (2010). A conceptual and empirical analysis of the cognitive ability–voluntary turnover relationship, Journal of Applied Psychology, 95 (6), 1058-1070.

Martdianty, F., Coetzer, A., & Susomrith, P. (2016). The Job Embeddedness of Employees in Manufacturing SMES in Central Java, Indonesia. In ECU Business Doctoral and Emerging Scholars Colloquium, 86.

Massingham, P.R. (2018). Measuring the impact of knowledge loss: a longitudinal study, Journal of Knowledge Management, 22 (4), 721-758.

McGuirk, H., Lenihan, H., & Hart, M. (2015). Measuring the impact of innovative human capital on small firms' propensity to innovate, Research Policy, 44(4), 965-976.

Mobley, W.H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover, Journal of Applied Psychology, 62 (2), 237– 240.

Mohr, D.C., Young, G.J., & Burgess, J.F. Jr (2012). Employee turnover and operational performance: the moderating effect of group-oriented organisational culture, Human Resource Management Journal, 22 (2), 216–233.

Moleski, M.X. (2017). Illative Sense and Tacit Knowledge: A Comparison of the Epistemologies of John Henry Newman and Michael Polanyi, In John Henry Newman, Routledge, 189-224.

Morrell, K.M., Loan-Clarke, J., & Wilkinson, A.J. (2001). Unweaving Leaving: the use of models in the management of employee turnover, International Journal of Management Reviews, 3 (3), 219-244.

Morrell, K.M. (2002). Modelling Employee Turnover, A Doctoral Thesis Submitted in fulfilment of the requirements for the award of Doctor of Philosophy of Loughborough University, 1-359-Held in Loughborough University's Institutional Repository. Retrieved April 17, 2020, from https://dspace.lboro.ac.uk/ through http://www.ethos.bl.uk/

Morgan, D.B. (2019). Management Strategies for Reducing Voluntary Employee Turnover in Small Professional Service Firms.

Mincer, J. (1958). Investment in Human Capital and Personal Income Distribution, Journal of Political Economy, 66(4), 281-302.

Min, H. (2007). Examining sources of warehouse employee turnover, International Journal of Physical Distribution & Logistics Management, 37 (5), 375-388.

Mitchell, T.R., Holtom, B.C., Lee, T.W., Sablynski, C.J., & Miriam, E. (2001). Why People Stay: Using Job Embeddedness to Predict Voluntary Turnover, The Academy of Management Journal, 44 (6), 1102-1121.

Nafei, W. (2014). Knowledge Management and Organizational Learning from the Employee Perspectives: A Study from Saudi Arabia Context, Journal of Management and Strategy, 5 (1), 73-78.

Ng, T.W., & Feldman, D.C. (2007). Organizational embeddedness and occupational embeddedness across career stages. Journal of Vocational Behavior, 70(2), 336-351.

Nonaka, I., & Takeuchi, H. (1995). The knowledge creating company, Oxford, England: Oxford University Press.
Park, T.Y., & Shaw, J.D. (2013). Turnover rates and organizational performance: A meta-analysis, Journal of applied psychology, 98(2), 268-309.

Pérez-Luño, A., Saparito, P., & Gopalakrishnan, S. (2016). Small and Medium-Sized Enterprise's Entrepreneurial versus Market Orientation and the Creation of Tacit Knowledge, Journal of Small Business Management, Business Source Premier, 54 (1), 262-278.

Price, J. L. (1977). The Study of Turnover, Iowa: Iowa State University Press.

Regts, G., & Molleman, E. (2012). To leave or not to leave: When receiving interpersonal citizenship behavior influences an employee's turnover intention, Human Relations Journal, 66 (193), 1-27.

Rose, J.M., Rose, A.M., & McKay, B. (2007). Measurement of knowledge structures acquired through instruction, experience, and decision aid use, International Journal of Accounting Information Systems, 8 (2), 117-137.

Rozsa, Z., Formánek, I. & Maňák, R. (2019). Determining the Factors of the Employees' Intention to Stay or Leave in the Slovak's SMEs. International Journal of Entrepreneurial Knowledge, 7(2), 63-72.

Ryan, S., & O'Connor, R.V. (2009). Development of a team measure for tacit knowledge in software development teams, The Journal of Systems and Software, 82 (2), 229-240.

Schoenherr, T., Griffith, D.A., & Chandra, A. (2014). Knowledge management in supply chains: The role of explicit and tacit knowledge, Journal of Business Logistics, 35(2), 121-135.

Shaw, J. D., Gupta, N., & Delery, J.E. (2005). Alternative conceptualizations of the relationship between voluntary turnover and organisational performance, Academy of Management Journal, 48 (1), 50–68.

Solow, R. (1957). Technical Change and the Aggregate Production Function, Review of Economics and Statistics 39, 312-20.

Smith, A. (2003). An inquiry into the nature and causes of the wealth of nations, Book 2, New York: Bantam Classic.

Snell, S., & Dean, J.W. Jr (1992). Integrated Manufacturing and Human Resource Management: A Human Capital Perspective, Academy of Management Journal, 35, 467-504.

Sternberg, R.J., Forsythe, G.B.A., & Hedlund, J. (2000). Practical intelligence in everyday life, New York: Cambridge University Press.

Sternberg, R.J., Wagner, R.K., & Okagaki, L. (1993). Practical intelligence: The nature and role of tacit knowledge in work and at school, In H. Reese & J. Puckett (Eds.), Advances in lifespan development, Hillsdale, NJ: Erlbaum, 205–227.

Sternberg, R.J., Wagner, R.K., Williams, W.M., & Horvath, J.A. (1995). Testing common sense, American Psychologist, 50 (11), 912–927.

Steers, R.M., & Mowday, R.T. (1981). Employee turnover and post-decision accommodation processes, In: Cummings L.L., Staw B.M., Research in Organizational Behaviour, 3, 235-281.

Strober, M.H. (1990). Human capital theory: Implications for HR managers, Industrial Relations, 29 (2), 214-239.

Subramaniam, M., & Venkatraman, N. (2001). Determinants of transnational new product development capability: testing of the influence of transferring and deploying tacit overseas knowledge, Strategic Management Journal, 22 (4), 359–378.

Tashakkori, A., & Teddlie, C. (2003). The handbook of mixed methods in social and behavioral research, Thousand Oaks, CA: Sage Publications.

Tranmer, M., & Elliot, M. (2008). Multiple linear regression. The Cathie Marsh Centre for Census and Survey Research (CCSR), 5, 30-35.

Wallace, J., & Gaylor, K.P. (2012). A Study of the Dysfunctional and Functional Aspects of Voluntary Employee Turnover, SAM Advanced Management Journal, 77 (3) 27-36.

Wang, Y., Huang, Q., Davison, R.M., & Yang, F. (2018). Effect of transactive memory systems on team performance mediated by knowledge transfer, International Journal of Information Management, 41, 65-79.

Wang, P., & Ye, X. (2013). October. A review of job embeddedness: Conceptual, Measurement, and relative study conclusions. In International Academic Workshop on Social Science. Atlantis Press, IAW-SC-13

Wei, Y.C. (2015). Do employees' high in general human capital tend to have higher turnover intention? The moderating role of high-performance HR practices and PO fit, Personnel Review, 44(5), pp. 739-756.

Yao, X., Lee, T.W., Mitchell, T.R., Burton, J.P., & Sablynski, C.J. (2004). Job embeddedness: Current research and future directions, In R. Griffeth, & P. Hom (Eds.), Innovative theory and empirical research on employee turnover, Greenwich, CT: Information Age Publishing, 153–187.

Zhang, M., Fried, D., & Griffeth, R. (2012). Job embeddedness: a review of conceptualization and measurement issues, Human Resource Management Review, 22(3), 220-231.

Zimmerman, R.D., & Darnold, T.C (2009). The impact of job performance on employee turnover intentions and the voluntary turnover process: A meta-analysis and path model, Personnel Review, 38 (2), 142–158.

APPENDIX 1

Questionnaire

Respondents Demographic Characteristics								
Level in Organisation	Executive or Non-Executive (with no detailed knowledge about the organisation) ☐ Executive or Non-Executive ☐ (with detailed knowledge about the organisation)							
(Please provide the following demographic details on behalf of your organisation)								
Number of years since your organization was formed	☐ 0-5 years ☐ 6-10 years ☐ 11-15 years ☐ >15 years							
Type of Organisation	☐ Education Consulting ☐ Training Consulting							
Location (your city)								
Size of Organisation								
Part A	Tacit Knowledge Questionnaire (7-point Likert scale responses). (Tacit knowledge is the knowledge common to all employees in your organization for carrying out specific organizational tasks)							
	(Please indicate your level of agreement or disagreement on each of the following items)	Strongly Agree	Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Disagree	Strongly Disagree
1	Our consulting knowledge in this organisation is simple	1	2	3	4	5	6	7
2	Our consulting knowledge in this organisation is easy to identify without personal experience	1	2	3	4	5	6	7
3	Our consulting knowledge in this organization is obvious to all our competitors	1	2	3	4	5	6	7
4	Our consulting knowledge in this organisation is easy to precisely communicate through written documents	1	2	3	4	5	6	7
5	Our consulting knowledge is easy to comprehensively understand from written documents	1	2	3	4	5	6	7

6	Our consulting knowledge is easy to comprehensively document in manuals or reports	1 2 3 4 5 6 7
Part B	Level of investment in human capital (7-point Likert scale responses) (Human capital are your employees)	Strongly Agree Agree Somewhat Agree Neither Agree nor Disagree Somewhat Disagree Disagree Strongly Disagree
1	This organisation spends a lot of money on employee training	1 2 3 4 5 6 7
2	This organisation provides employees with a variety of training and development programs	1 2 3 4 5 6 7
3	This organisation provides employees with structured training and development programs	1 2 3 4 5 6 7
Part C	On and off the job embeddedness (7-point Likert scale responses) (Job embeddedness refers to the level of attachment employees have within and outside of your organization)	Strongly Agree \Agree Somewhat Agree Neither Agree nor Disagree Somewhat Disagree Disagree Strongly Disagree
1	Consulting work in this organisation utilizes consultants' skills well	1 2 3 4 5 6 7
2	Consultants feel like they are good matches for this organisation	1 2 3 4 5 6 7
3	If consultants stay in this organization, they can achieve most of their goals.	1 2 3 4 5 6 7
4	Consultants fit into our company's culture	1 2 3 4 5 6 7
5	Consultants like the authority they have in this organisation	1 2 3 4 5 6 7
	Note: Community refers to the city in which your business is located	
6	This community is a good match for our consultants	1 2 3 4 5 6 7
7	Our consultants think of the community they live as home	1 2 3 4 5 6 7
8	The areas our consultants live offer the leisure activities they like (sports, outdoors, cultural activities and arts)	1 2 3 4 5 6 7
9	Consultants really love the place they live	1 2 3 4 5 6 7
10	Are all consultants married?	Yes No
11	For those who are married, do their partners work	Yes No

	outside their homes	
12	Do all consultants own the homes they live in?	Yes No
13	How long on the average has each consultant worked for this organization? ☐ 1-2 years ☐ 3-4 years ☐ 5-6 years ☐ >6 years	
14	How long on the average has each consultant been in their present positions? ☐ 1-2 years ☐ 3-4 years ☐ 5-6 years ☐ >6 year	
15	How many co-workers do consultants interact with regularly? ☐ 1-2 ☐ 3-4 ☐ 5-6 >6	
16	How many co-workers are highly dependent on each consultant? ☐ 1-2 ☐ 3-4 ☐ 5-6 >5	
17	Leaving this community will be very hard for your consultants	1 2 3 4 5 6 7
18	People respect your consultants a lot in this community	1 2 3 4 5 6 7
19	This neighborhood is safe	1 2 3 4 5 6 7
20	Consultants have a lot of freedom on their jobs to decide to pursue their goals	1 2 3 4 5 6 7
21	Consultants are well compensated for their levels of performance in this organisation	1 2 3 4 5 6 7
22	Promotional opportunities in this organization are outstanding	1 2 3 4 5 6 7
23	The prospects for continuing employment in this organization are excellent.	1 2 3 4 5 6 7
24	The retirement benefits provided by this organization are excellent	1 2 3 4 5 6 7
25	The training and development benefits provided by	1 2 3 4 5 6 7

	this organization are excellent	
26	Consultants will sacrifice a lot if they leave this organisation	1 2 3 4 5 6 7

Part D

What are the annual rates of employee turnover (%) in this organization over the last 2 years? Please list them in this section. Note that, "Voluntary employee turnover rate is the proportion of employees that have voluntarily resigned from their jobs". It is calculated by using the following formula.

$$\text{Voluntary employee turnover rate} = \frac{\text{Leavers in a year}}{\text{Average number of staffs in post during year}} * 100$$

For example, if in a year, 2 staffs resigned their jobs out of a total of 10 staffs you had that year, voluntary employee turnover rate for that year=2/10*100=20%. Kindly use the following table as guide for these data.

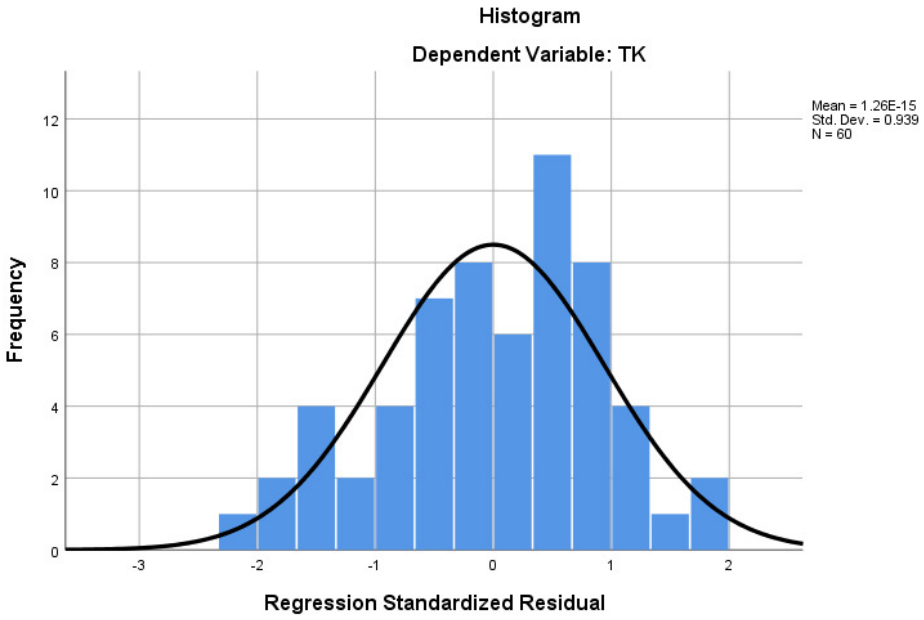
Year	Number of employees that resigned from their job in that year	Total number of employees in the company for the whole year	Voluntary employee turnover rate (%)
2015			
2016			

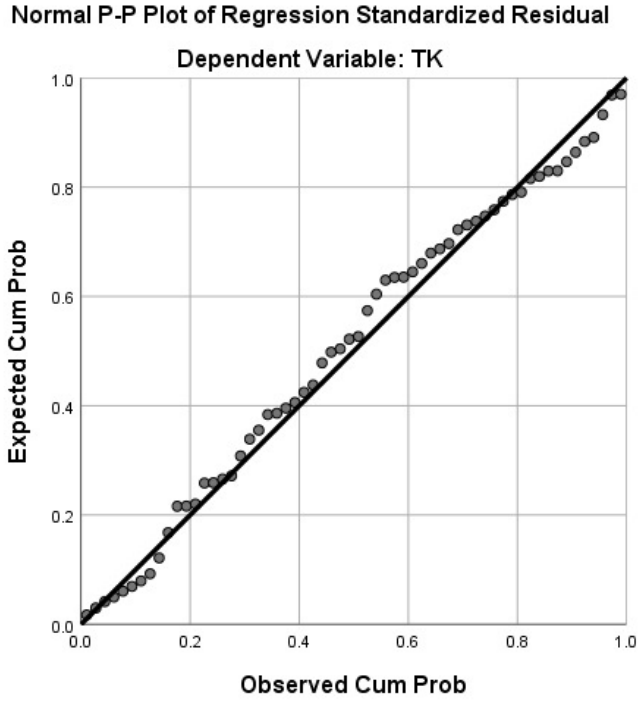
Part E

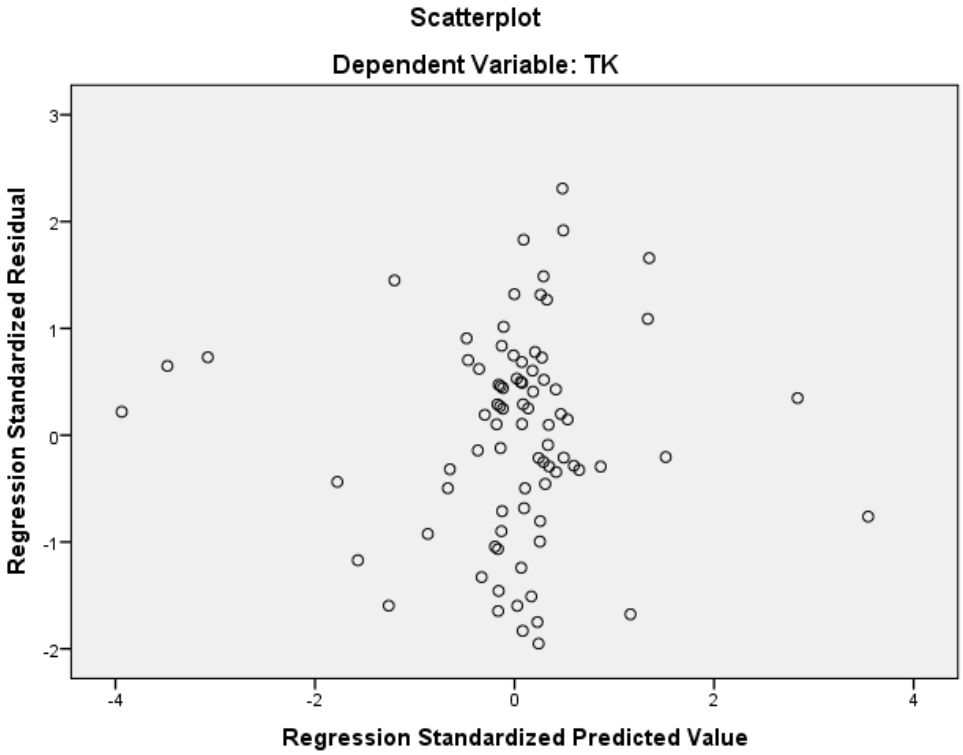
What are the total annual expenses on training ($) in this organization over the last 2 years? Please list them in table given below.

Year	Total Training Expense ($)
2015	
2016	

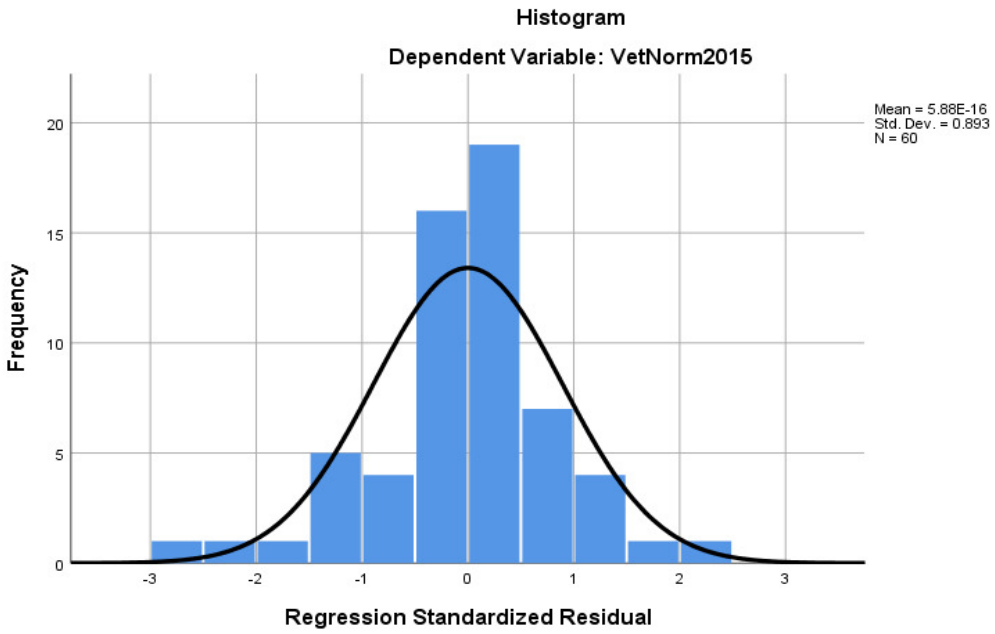
Appendix II: Where Organizational Tacit Knowledge is the dependent variable and voluntary employee turnover rate is the independent variable (H1)

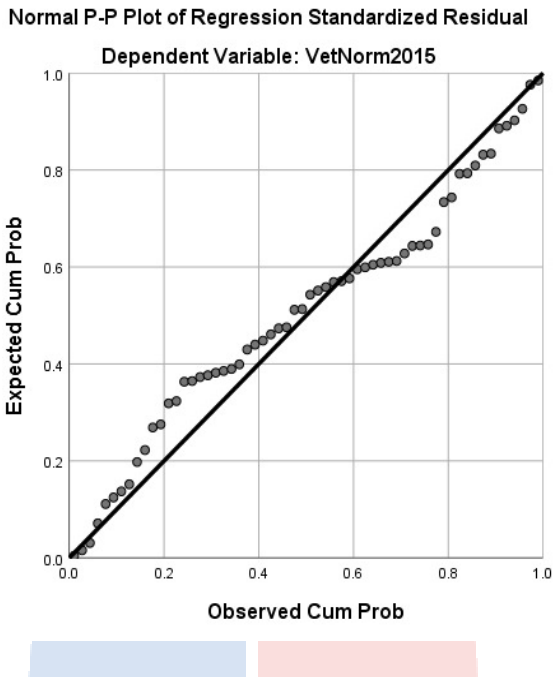


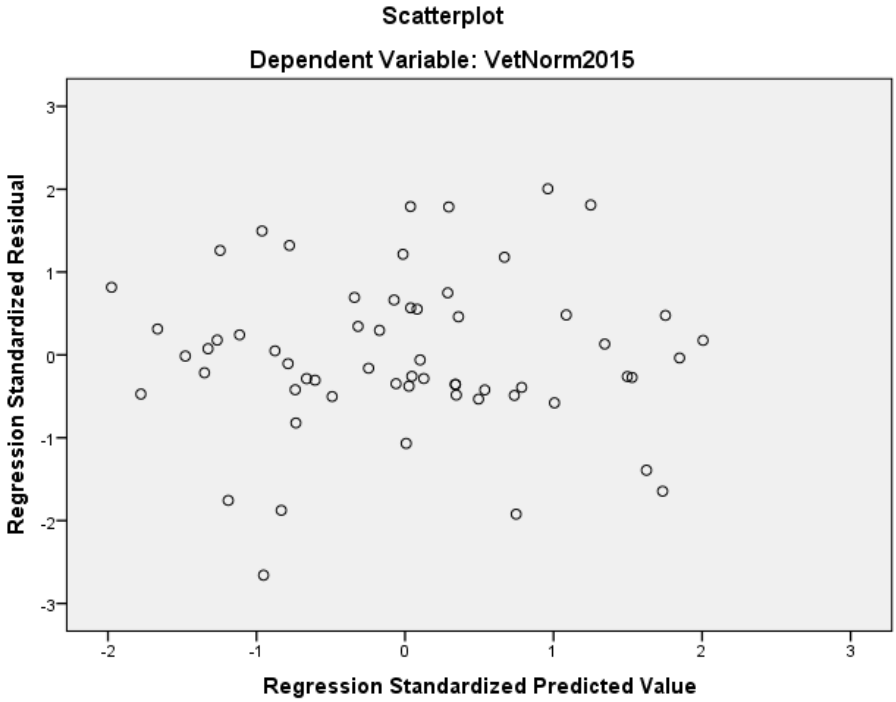




Appendix III: Where voluntary employee turnover rate is the dependent variable and job embeddedness is the independent variable (H2)




Normal P-P Plot of Regression Standardized Residual
Dependent Variable: VetNorm2015
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


Scatterplot
Dependent Variable: VetNorm2015
Regression Standardized Residual
Regression Standardized Predicted Value
-3
-2
-1
0
1
2
3