

THE INFLUENCE OF THE LEADER AND LED RELATIONSHIP ON THE INTRAPRENEURSHIP ENVIRONMENT IN UK SMES

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ABSTRACT

This study provides a contemporary insight into to the factors influencing the environment for intrapreneurship in the domain of UK Technology Small or Medium Size Enterprise (SME) as perceived by the company employees. We examine the barriers to intrapreneurship through a critical analysis of the extant literature leading to the identification of 5 hypotheses based on employee perception of the leader and led relationship in their company and the impact of such on the intrapreneurial environment. A conceptual model was developed to test this relationship. Data collection was conducted in 9 UK SMEs comprising 162 participants. A Multivariate linear regression was used to test the model. Our findings reveal that the Leader/led relationship significantly influences 5 dimensions of the intrapreneurial environment disseminated throughout the extant literature; organizational boundaries, work discretion/autonomy, time availability, management support and rewards/reinforcement.

Keywords: Intrapreneurship, Intrapreneur, CEAI, Leadership, SME.

INTRODUCTION

An ever-increasing consumer demand for improved products and services has called for a dramatic increase in the speed of innovation. A noteworthy outcome of this has, and will continue to be, an intense effect for the Small or Medium Size Enterprise (SME) in which the risk associated with innovative activities versus the assessment of the potential rewards becomes a critical consideration for an entrepreneur owner/manager. For perspective, the impact of the success/failure of SMEs can be substantial in that out of 5.5 million UK businesses, 99.3% were classified as such¹ and defined by fewer than 250 employees. This paper focuses upon intrapreneurship in SME businesses as employee contribution to innovative thinking can be critical to sustainability and competitiveness. Intrapreneurship can be influenced by many external and internal factors. The direction of the research confines to the internal factors which are all of within the control of the business leader. The aim of the study, therefore, becomes the exploration of the extent to which the relationship between the “*leader*” (the entrepreneur owner) impacts upon the organizational environment and the ensuing effect on the “*led*” (the intrapreneur employee). The term “*Intrapreneurship*” was coined by Pinchot & Pinchot (1978) as employee engagement in their workplace setting where they may or may not be encouraged to think and act innovatively. Furthermore, although a universally accepted definition is hard to find, it is generally accepted that they will be company employees often with the alternative title of corporate entrepreneurs (Ma et al., 2016). Of note, (Haase et al., 2015) apply the expression “*their involvement in the life of the firm is as if it was their own*”.

Intrapreneurs play a significant role as an integral part of the human capital within any company and there are two fundamental knowledge-intensive considerations that the extant literature proposes underpin the likelihood of intrapreneurship within an organization; human capital in terms of harnessing individual's knowledge, skills, abilities and ideas, and organizational support (Saks, 2006), in terms of providing the appropriate setting, conditions, resources and motivation, and, the potential output of a synergy between them. Rivera (2017) suggests that it is the business leader with a sustained commitment for transferring knowledge into organizational growth who will be skilled in the intrapreneurial concept. Within the SME environment we observed the leader referred to as Founder, Owner, Chairman, Managing Director or Director. For consistency and to avoid confusion, we have adopted an all-embracing title which we define in this research paper as the "*Leader*".

LITERATURE REVIEW

SME Leadership

In contrast to large organizations, the personal characteristics of the SME Leader generally considered a highly influential factor in the workplace (Irwin & Scott, 2010, Barringer et al., 2005). As such, this study confines entrepreneurial leadership in businesses led and managed by the founder/owner who is actively involved in the business on a day-to-day basis driving the conception, growth, current and future strategy.

We may posit that in the early years of trading, the SME business leader persona and the identity of the business may be indistinguishable. We propose the entrepreneurial leadership approach can materially influence employees to champion or ignore innovation. Kassa & Raju (2015) concur in that advocating or sponsoring new ideas positively influences intrapreneurial engagement. Furthermore, we should consider the findings of Scozzi et al. (2005) which concluded entrepreneurs felt that most innovative initiatives or original ideas came primarily from them, not the workforce or third party collaborations. Todd (2010) proposes that company owners often struggle with accepting new ideas that may threaten the foundations of the business models they invented. As Karol (2015) suggests, the challenge for the entrepreneurial leader are threefold; creating and aligning a vision which is non-threatening, establishing trust, and through sustained commitment, gaining employee buy-in.

Bagheri (2017) posits that it is essential that the SME leader adopts a stance of encouraging their employees to challenge, explore, generate and implement new ideas, a position shared by Fontana & Musa (2017); Leitch & Volery (2017) in respect of opportunity recognition through a structured process espoused by the business leader. Meng & Roberts (1996) propose many entrepreneurially-minded individuals leave large firms where new technologies were created, to set up SMEs to exploit the new technology they felt constrained from pursuing. Ates et al. (2013) cite a "*command & control*" culture between the leader and the led as indicative behavior, specifically in SMEs whilst Aygun et al. (2010) and Brown et al. (2010) confer that unless the control-oriented approach of the business leader is renounced it is extremely unlikely that any form of intrapreneurship can thrive indicating "*collaborative effort between the business entrepreneur and these intrapreneurs is potentially beset with problems, issues and conflicts*". As expressed by Heinonen & Toivonen (2008), the relationship between entrepreneur and intrapreneur, if symbiotic, generates an environment in which employees are empowered. Without empowerment the confident intrapreneur may appear to be little more than a problem in the entrepreneur business.

Contextually, we should bear in mind that it could be that the entrepreneur is focused on “*enterprise fulfillment*” whilst the intrapreneur could be focused on “*personal fulfillment*” (Carrier 1997). Rogers (1995) posits that since opinion leaders directly affect the outcome of an innovation, a powerful way for change agents to affect the diffusion of an innovation is to affect opinion leader attitudes. This is supported by the view that intrapreneurial employees must be prepared for conflict, politics, tenacity and impart considerable persuasiveness in order to be convincing (Prasad 1993) and, that in order to be successful, intrapreneurs must actively seek out a leader who is more likely to make innovation happen rather than block it (Pinchot & Pellman 1999).

Intrapreneurship in SMEs

The least explored aspect of intrapreneurship appears to be its evaluation within SMEs (Covin & Slevin 1991). What has become acknowledge as the first significant study was undertaken by Carrier (1997) whilst assessing the concept in Canada. Citing Carrier (1994) as the main contributor in the field, Bouchard and Basso (2011: 224) deduced from her work that “*SME leaders have a major impact on intrapreneurship, which they can readily encourage or inhibit depending on their assessment of the level of convergence of their employees’ initiatives and their personal attitude towards their employees*”. In 2011, Bouchard & Basso proposed there had been no further similar noteworthy research efforts, in 2013 Van der Sijde et al. reported knowledge of intrapreneurship in small organizations remained limited, in 2017, Ling et al viewed the subject as neglected. Throughout our exhaustive efforts to corroborate the information presented we concur².

It is reported that in 2016, total employment in UK SMEs was 15.7 million which accounted for 60% of all private sector employment; that the number of SME businesses had increased by 97,000 over the previous year and by 2 million since 2000³. Furthermore, that the combined annual turnover of SMEs was £1.8 trillion (47 percent of all private sector turnover in the UK)⁴ which emphasizes the importance of their competitiveness and sustainability both from an employee and economic perspective. Given the continued expansion of existing and new SME business ventures has proved a vital source of both revenue and employment, we find the ability to innovate is often considered crucial to their continuation (Binnui & Cowling 2016, Poutziouris, 2003) and, that intrapreneurship could play a very effective and integral role to their furtherance, and potentially, survival (Rivera, 2017; Karol, 2015; Brown et al., 2010). Finally, Carrier (1994) adds that it is within the SME rather than large corporation environment that intrapreneurs can be more easily identified.

In summary, the above highlights why intrapreneurship is a valuable concept worthy of further research study due to a necessary expansion and survival of the UK SME sector and the juxtaposition of business births versus business deaths (Source: ONS Business Demography 2016). Indeed, Rivera (2017) reports that the even the most resilient companies are not immune to a “*gradual erosion of their positions*”. For employees, “*lifetime employment*” has become a thing of the past; it may well be the intrapreneur that secures their future by repeatedly creating and adding value within the business.

Internal Organizational Factors Influencing Intrapreneurship

An analysis of extant literature offered numerous internal organizational factors influencing intrapreneurship in the workplace. For example, Amabile (1998) provided an

exploration titled “KEYS” comprising 78 questions used to assess the potential for creativity in the working environment. Six constructs emerged, Challenge, Freedom, Resources, Supervisory Encouragement, Work-Group Features and Organizational Support. A further example of a well cited research contribution can be found in the Corporate Entrepreneurship Assessment Instrument (CEAI) originally created in 1990 by Kuratko et al. and reassessed by Hornsby et al., 2002. The authors offer 5 constructs, Organizational Boundaries, Work Discretion/Autonomy, Time availability, Management support and Rewards/Reinforcement. Of note these 5 constructs were positively evaluated in studies by Alpkan et al. (2010) exploring organizational support for intrapreneurship, by Rutherford & Holt (2007) assessing how individuals are encouraged to engage in entrepreneurial activities in an organization and by Mar ban et al. (2013) reviewing the effective factors in organizational entrepreneurship climate. Additionally, Hayton (2005) submits that the categories identified and used within the instrument were subject to studies confirming the empirical significance of these five dimensions of organizational environments for promoting corporate entrepreneurship.

For a study titled Fostering Intrapreneurship, Dortmund University created a measurement tool to assess a Measurement of Organizational Preparedness for Corporate Entrepreneurship. The survey evolved into more than 120 questions (including the CEAI in its entirety) and was completed on-line by random participants through a media group site. Its scope was sufficiently general in terms of work related factors and broad in terms of demographic factors that it did not merit replication for assessing the defined design of our research objectives. Sayeed & Gazdar (2003) took a different approach with an intrapreneurship scale for assessing and defining the attributes of intrapreneurs to evaluate appropriate organizational factors. It comprised 7 conceptually defined dimensions in what could be considered a dissection of individual characteristics; adventurer, innovator, designer, leader, entrepreneur, change agent and animateur. This was also deemed unsuitable for replication as it placed scant focus on the relationship between the leader and the led. We are reminded that it is the level of commitment and understanding between these two parties which has a significant impact upon intrapreneurial behavior (Farrukh et al., 2017).

The Leader and the Led

As discussed, this dimension is pivotal to all aspects of organizational factors influencing intrapreneurship. An objective of this research paper is to discover how leaders not only view, but interact with their employees. Within the SME workplace this is likely to be highly visible as in contrast to large organizations, the personal characteristics of the leader are generally considered the most influencing factor. For example, Bagheri (2017); Ates et al. (2013) and Irwin & Scott (2010) indicate a direct association between innovative activities in SMEs and the personality of the business leader and his/her ethos and principles. Key to our understanding is an examination of the business leader’s attitude and behaviors, their degree of involvement with individuals and teams as perceived by the employees, the understanding and synergy between the two parties in terms of communication, respect, approachability, support, engagement, and employee wellbeing are considerations proposed by Bassett-Jones & Lloyd (2005). Related characteristics associated with or inextricably linked as having a positive or negative impact on intrapreneurialism are described as diversity, temperament and talent (Milne 2007). Karol (2015) adds leader support by agility, communication underpinned by openness and mutual trust, whilst reinforcing the value of employee wellbeing by suggesting the leader shows that they “truly care” about the

success of their workforce not solely the success of the business. Park et al. (2017) maintain the concept of employee enablement as an outcome of empowering leadership.

Reflecting upon the extant literature, the owner led business will necessarily include attitude, behavior, choices and decisions that are bespoke to their SME work environment; secondly, given the company size, the leader and led involvement may be more personal in terms of the proximity of both, which can lead to accessibility for employees to have a greater degree of direct contact with the decision maker leading to the exposure of intrapreneurial intent by both parties. Alpan et al. (2010) suggest the extent to which support for intrapreneurship embraces a tolerance for trial and error or failures is a significant factor in the relationship between leader and the led. This is succinctly captured by Manimala et al. (2006), Dewett (2004) and Davenport et al. (2003) proposing that leaders need to separate the treatment of creative efforts from creative outcomes.

HYPOTHESES IDENTIFICATION

Organizational Boundaries

Within any business there are potentially difficult issues for managing and motivating creative thinking employees creating challenges for a leader who supports employee innovative thoughts and actions. Maier & Zenovia (2011) suggest organizational hierarchies compel employees to ask permission for actions that fall outside their daily duties. Hough & Bloom (2008: 56) propose a requirement for what they term “*fluid*” boundaries; Menzel et al. (2007) & Vargas-Halabi et al. (2017) recommend flatter or more flexible organizational structures; Bassett-Jones & Lloyd (2005) suggest evaluating the degree of dependence upon internal policy and procedural constraints. It becomes clear that organizational boundaries encompass many facets which may positively or detrimentally impact upon intrapreneurial potential. Firstly, we have to consider the character traits of the intrapreneurial employee, their expectations and drivers; secondly, we have to consider the impact of workplace structure; thirdly, we have to combine both into what can reasonable be achieved in the SME sector and the conscious organizational boundary decisions or internal processes defined or influenced by the business leader. Such boundaries may be deemed necessary from a controlling perspective, from a risk awareness perspective and from a measured product or service process development perspective. Of interest, Chan et al. (2017) note that the risk-adverse employee may avoid entrepreneurial endeavors in favor of more relatively protected intrapreneurial pursuits. Key to the impact within the business is the extent to which they are employed, reviewed and revised over time. Organizational boundaries encompass several aspects of operational strategy; it is the rigidity to which they exist and are applied that is relevant. We posit fewer working practice boundaries will positively influence intrapreneurial opportunity identification.

H₁: The leader and led relationship positively influences the intrapreneurial environment through employee perception of the rigidity of organizational boundaries.

Work Discretion/Autonomy

Altinay (2004) & Davis (1999) suggest that recent thinking in management philosophy has created a demand for internal entrepreneurship, not only from the business leader but from all employees. Autonomy, decision making, a positive environment and experimentation are all

key tenets of work discretion which enthruse and motivate innovation-orientated employees; when employees are passionate about their work, their organization thrives (Cardon 2008), specifically if it is not considered the sole domain of the entrepreneur leader (Pinchot & Pellman 1999). Bystead (2013) found a positive correlation between job autonomy and innovative work behavior, but this had a negative impact on efficiency due to the problems of effectively and accurately monitoring performance associated with high job autonomy tasks. A further adverse viewpoint is presented by Jansen & Wees (1994) in what they identified as a danger inherent in some intrapreneurial traits. Work discretion which is very fluid can overwhelm decisions based on business acumen fueled by an overabundance of self-confidence and a serious lack of critical capabilities. So, we accept the theory of work discretion does have a role to play in the perceived intrapreneurial environment, but not in an unbounded way. It can be expressed as the perceived extent to which individuals feel they have control over their tasks; the perceived extent to which they have freedom to prioritize assignments; the perceived extent to which they are allowed to make decisions without constant upward referral. Employee characteristics such as responsible, dedicated, committed, confident, challenging, experimental, explorative, problem-solvers and project owners by nature can be brought to the fore through the vehicle of work discretion. We posit the amount of work discretion attainable can positively influence perceived intrapreneurial opportunity identification.

H₂: The leader and led relationship positively influences the intrapreneurial environment through employee perception of levels of work discretion/autonomy.

Time Availability

The context of time availability could involve a potential provision of additional resources or making sufficient time available to existing resources to incubate their ideas. It is considered a significant factor throughout the extant literature (Christensen 2005; Davenport et al., 2003) and may necessarily include a tolerance that time expended does not always equate to success. We have identified the rigidity of organizational boundaries and work discretion as requiring review and interpretation processes but both will have a less positive impact on creative endeavors if the necessary time made to progress them is not provided. This encompasses time for errors of judgment to occur or, for an experimental idea not to come to fruition. Apart from the desire for investigation there is also the issue of problem-solving which is a further accepted tenet of intrapreneurship (Desouza 2011). The availability of time becomes a cornerstone for imagination and inventiveness from a business strategy perspective, but in respect of the creative employee, it is also fundamental how they perceive the intrapreneurial environment in their workplace. As Kanter (1990) advocated, an organization which purports itself to be entrepreneurial will treat seriously the time required to be allocated for innovative experimentation.

H₃: The leader and led relationship positively influences the intrapreneurial environment through employee perception of levels of time availability.

Management Support

Van der Sijde et al. (2013: 29) suggest there is a “*significant difference between organizations in which the management shows an interest in intrapreneurship and those who do*

not”. In contrast to large organizations, the personal characteristics of the business leader are generally considered the most influencing factor in SMEs (Poutziouris 2003). The approach adopted can be assessed as engaging employees intellectually; ensuring employees take responsibility for championing creativity in such a way as is delegated to them; creating a company-wide acceptance of innovative initiatives; focusing employees towards a working environment which delivers sustainable internal motivation (Jain et al., 2015, Bystead 2013, Bassett-Jones & Lloyd, 2005; Davenport et al., 2003). A second grouping, indicatively Chen et al. (2017), De Villiers-Scheepers (2011); Desouza (2011) and Markova & Ford (2011), propose lasting intrapreneurial impetus will be achieved through a combination of the contribution the employee can make and the acknowledgement they receive for it. It could be ventured that high levels of acknowledgement are more easily achieved in the SME environment where there is greater visibility of individual employee contribution and intrapreneurial reinforcement can be achieved through various tactical approaches. Amar (2004) posits the entrepreneur leader must endeavor to understand the mind of the employee, not rely on historical or traditional concepts. Promotion for example, is cited by Goffee & Jones (2007) as likely to be viewed negatively by innovators as they are indifferent to the use of job titles but highly motivated by their status within the organization. We suggest there is an alternative view; that promotion can reflect an opportunity for the employee to be heard by the leader (Bassett-Jones & Lloyd, 2005). Davenport et al. (2003) highlight the importance of management recognition, but critically in the case of intrapreneurs, recognition is not solely a matter of acknowledging success but acknowledging effort, commitment and learning, even if the outcome was not as planned or expected. A benefit of this approach is it demonstrates the company is alert, actively seeking success stories, creative thinking or personal advancement from its employees. An entrepreneurial leader’s sponsorship of intrapreneurship will necessarily incorporate visible support and recognition of employees through extrinsic and intrinsic reinforcement for their contributing actions, and, the extent to which the leader is personally accessible to the intrapreneurial employee. As Deprez & Euwema (2017) posit, the focus needs to be an open relationship with no false expectations from either party and strong co-operation between the two; from Afework et al. (2015), that innovative engagement results from this mutual dialogue and from Saka (2006: 603) that obligations are generated through “*a series of interactions between parties who are in a state of reciprocal dependence*”.

H4: The leader and led relationship positively influences the intrapreneurial environment through employee perception of the degree of management support received.

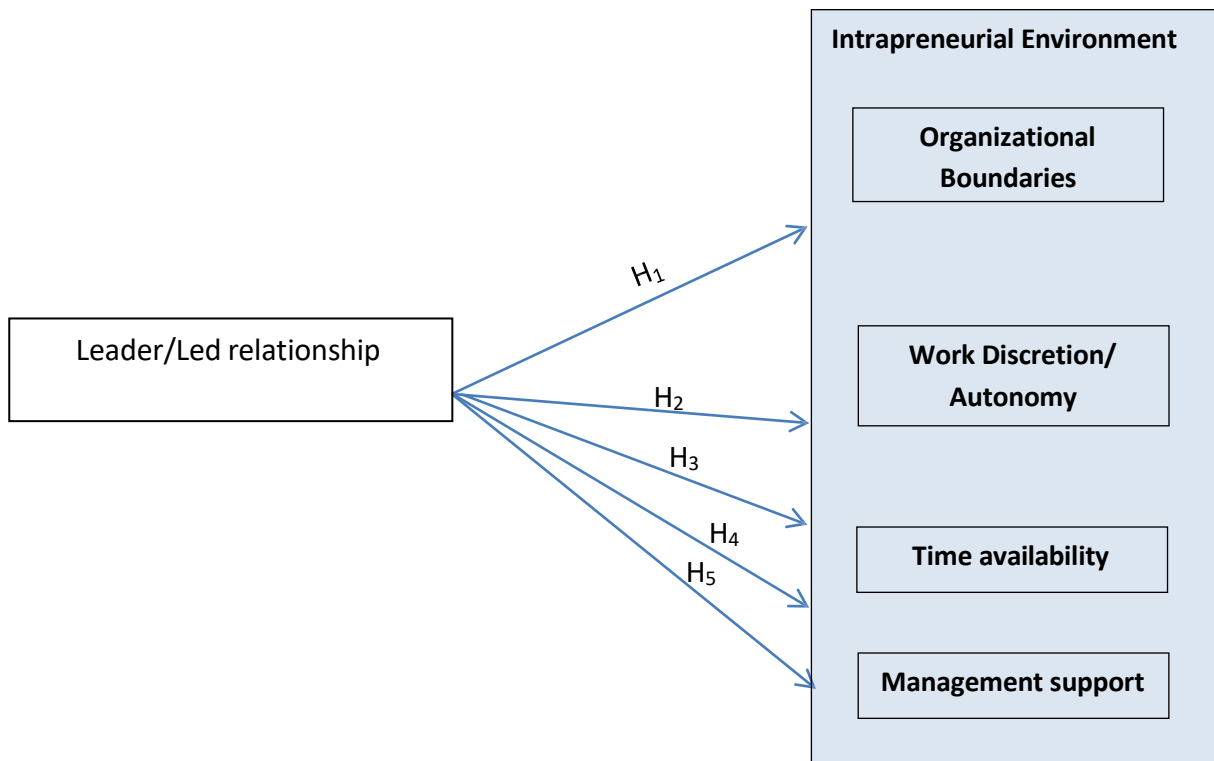
Rewards/Reinforcement

It is generally considered that, in common with employee motivation, employee rewards fall into the same two distinctive categories, extrinsic and intrinsic (Kanter, 1983; de Villiers-Scheepers, 2011). Extrinsic rewards are received in the form of remuneration packages and incentive schemes. Intrinsic rewards result from the work itself, particularly its meaningfulness to the employee (Amabile, 1998; Pullins et al., 2000). Li & Zhang (2010) argue that to be effective, the policy for compensation and benefits may need to be modified in companies that are serious about intrapreneurship. Goffee & Jones (2007) expand by proposing “*you must make sure your culture celebrates clever ideas*” and from Kuratko et al. (1990), highlight significant achievements, and encourage the pursuit of challenging work, a view considered current through the work of Razavi & Ab Aziz (2017). Markova & Ford (2011) cite the negative influence

created by extrinsic rewards which are task or goal oriented objectives and rules which are not compatible with innovation through experimentation. Ireland et al. (2009: 32) concur that organizational systems can have a direct and immediate effect on the occurrence of entrepreneurial behavior whilst Menzel et al. (2006) advocate a culture that supports and rewards intrapreneurship will also accept the value in longer time horizons. Indeed, it may be a ground-breaking idea from an employee that becomes instrumental in the continued success of the business (Malewicki & Sivakumar; 2004).

H₅: The leader and led relationship positively influences the intrapreneurial environment through employee perception of the current practice of rewards/reinforcement.

In summary, our purpose was to operationalize our conceptual model (Figure 1) following the journey of the leader and the led towards a goal of a perceived conducive intrapreneurial environment through the foremost considerations observed in extant literature; those of organizational boundaries, work discretion, time availability, management support and rewards/reinforcement.



**FIGURE 1
CONCEPTUAL MODEL**

METHODOLOGY

A post-positivist worldview (Creswell, 2014) was appropriate for this study, using quantitative methods to test our conceptual model. The participating companies were random samples taken from the population of SMEs operating in a technology-innovative sector in the

UK and had demonstrated entrepreneurial spirit through a trading history of, for example, “*first-to-market*” products or services and/or patents awarded, verified by the authors. At the time of research, none of the collaborating businesses had adopted the concept of intrapreneurship or identified prospective intrapreneurs. This became an outcome of the study. Site selection was not opportunistic or based on convenience and followed the guidelines of Eisenhardt & Graebner (2007) in that for our chosen epistemology, a sample size of 4 to 10 participating companies is acceptable.

Procedure

In order to measure the 2 main dimensions of our model, we selected well accepted, tested and validated instruments chosen for their alignment to our research objectives. A survey questionnaire shared by Bassett-Jones & Lloyd (2005) based on Herzberg’s motivation theory was used to measure the proposition that “*motivation is influenced by the nature of the relationship between leader and led*”. In order to measure the intrapreneurial environment, the statement survey questionnaire presented by Hornsby et al. (2002), the “*Corporate Entrepreneur Assessment Instrument*” (CEAI), was utilised. The combined list of statements can be found at Appendix 1. There are great similarities in the constructs offered by Amabile (1998) and Hornsby et al. (2002). However, we decided the latter provided a more parsimonious approach. The researchers are aware of a further re-assessment of the CEAI by Hornsby et al. (2013) reducing the measurement tool to 18 statements, again for the purpose of greater parsimony and psychometrics but after much contemplation and deliberation, we chose to use the original instrument. The primary reason for this was the lack of evidence to demonstrate that the latter version had been extensively tried, tested and re-evaluated (78 citations) as had the earlier version (1000 citations). As such, it would have been unacceptable to us to action what would amount to re-testing the instrument ourselves through a limited number of case study businesses and presenting a high degree of confidence in our findings. Furthermore, the validation of a survey instrument was not the goal of this research study and the lengthy and longitudinal work required to do so would be better served as a separate research project either by the researcher at some point in the future or by others with an equally invested interest in the field of intrapreneurship.

We used a Likert scale comprising six ratings to remove the option of a mid-range number which could be considered as “*don’t know*”. The completed survey instrument comprised 56 statements, 6 from Bassett-Jones & Lloyd (2005) and 48 from Hornsby et al. (2002). We have previously discussed alternative survey options which were considered but not employed.

The data collection phase was conducted using an on-line survey instrument, available to every employee through an internet link controlled by the researcher. They were completed anonymously and on a voluntary basis although time was made available within working hours to do so. In all cases the instrument was modified to ensure it was understood that the “*leader*” was substituted by the title used daily by the business owner. To maximize completion potential, we did not seek the age, position or education of the respondents. Equally, to maximize independent employee input the time limit for completion was set within 24 to 48 h dependent upon company size. The questionnaire was piloted at SME 1 and no further amendments were found necessary.

Data analysis

Table 1 presents selected general demographics of the 9 SMEs and 162 participants sampled for this study.

	SME Sector	Founded	Location	Employees Excluding Directors	Employee Surveys Completed	Response Rate
SME 1	Petroleum	1932	Urban	17	17	100%
SME 2	Electric	2004	Urban	21	21	100%
SME 3	Oil & Gas	2010	Urban	6	4	66%
SME 4	Construction	2004	Urban	13	12	93%
SME 5	Software	2013	Urban	15	12	73%
SME 6	Automotive	2005	Urban	10	10	100%
SME 7	Communications	2002	Urban	9	9	100%
SME 8	Composite Materials	2001	Urban	15	12	73%
SME 9	Specialist Automotive	2012	Urban	132	65	49%
	Total			238	162	84%

Validity and Reliability of the Survey Instrument

A Cronbachs' Alpha test was used measure reliability and consistency. In the data presented below, we are seeking a result of 0.7 deemed satisfactory by Nunnally (1978) as a conventional interpretation.

Factors	Cronbachs' α	Number of items
Leader-Led Relationship	$\alpha=0.898$	6
Work Discretion	$\alpha=0.836$	10
Time availability	$\alpha=0.705$	6
Organizational Boundaries	$\alpha=0.772$	7
Management Support	$\alpha=0.927$	19
Rewards reinforcement	$\alpha=0.831$	6

The extant literature advises that content validity is a fundamental prerequisite to criterion validity in assessing if an instrument measures what it has been constructed to measure. Huch & Cormier (1996) propose that subjective opinions obtained from experts in the field of the research study are a suitable measurement tool. As such, the test for face and content validity was undertaken by two experts in the field of intrapreneurship and gained positive feedback.

Model Testing

In order to test our conceptual model, a Multivariate linear regression test was completed in SPSS. The results of the test are presented in Table 3 and Figure 2. The correlation matrix is displayed at Table 4. Considering the relatively high number of respondents captured at

Company 9, they were excluded from the data set to avoid potential bias and analyzed separately. As no dissimilarities emerged the data was re-introduced.

Table 3
MULTIVARIATE LINEAR REGRESSION RESULTS

Dependent Variable	Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Reward/Reinforcement	Intercept	1.024	0.248	4.132	0.000	0.535	1.514
	Support	0.667	0.053	12.645	0.000	0.563	0.771
Work Discretion	Intercept	2.295	0.273	8.402	0.000	1.755	2.834
	Support	0.391	0.058	6.731	0.000	0.277	0.506
Org Boundaries	Intercept	1.232	0.293	4.206	0.000	0.653	1.810
	Support	0.492	0.062	7.892	0.000	0.369	0.615
Mgmt Support	Intercept	1.204	0.270	4.460	0.000	0.671	1.737
	Support	0.454	0.057	7.905	0.000	0.341	0.568
Time Availability	Intercept	2.081	0.280	7.443	0.000	1.529	2.633
	Support	0.223	0.060	3.754	0.000	0.106	0.341

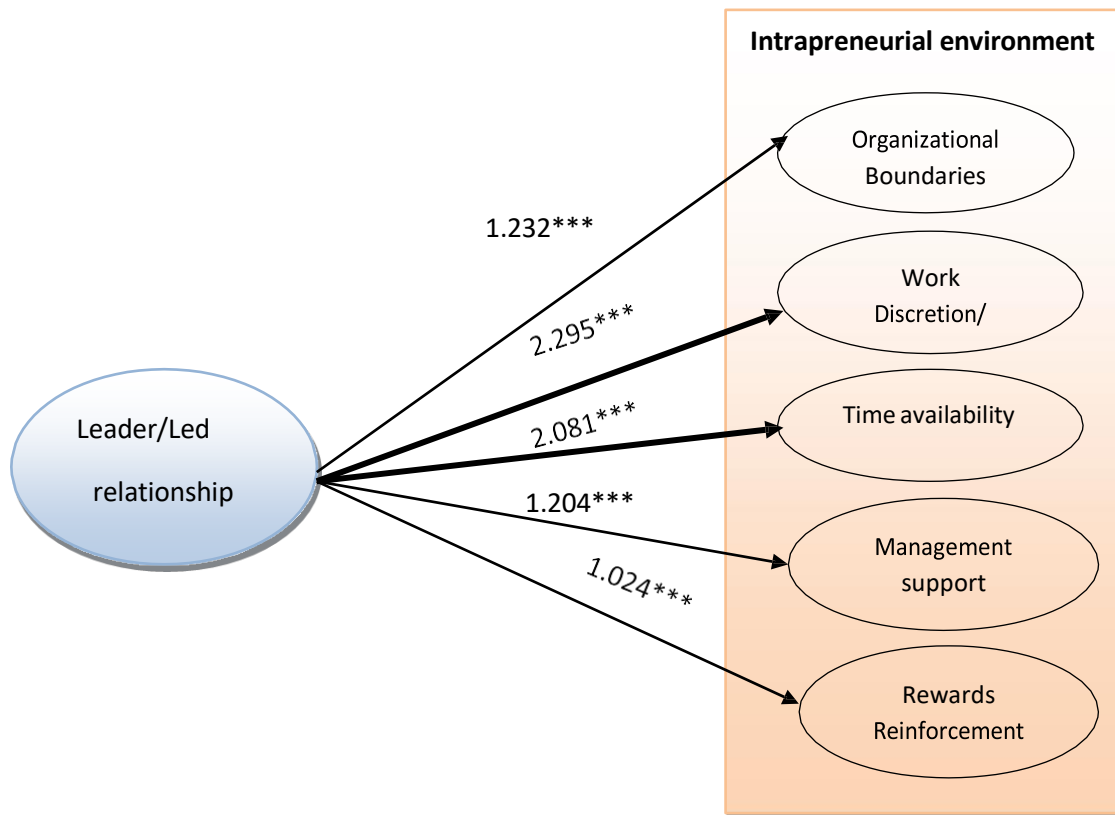


FIGURE 2
MODEL TESTING RESULTS (n=162)

	Mgmt Support	Org Bound	Work Disc	Reward	Time
Mgmt Support Pearson Correlation	1	.528**	.469**	.620**	.284**
Sig. (2-tailed)		.000	.000	.000	.000
N	162	162	162	162	162
Org Bound Pearson Correlation	.528**	1	.355**	.562**	.424**
Sig. (2-tailed)	.000		.000	.000	.000
N	162	162	162	162	162
Work Disc Pearson Correlation	.469**	.355**	1	.537**	.204**
Sig. (2-tailed)	.000	.000		.000	.009
N	162	162	162	162	162
Reward Pearson Correlation	.620**	.562**	.537**	1	.499**
Sig. (2-tailed)	.000	.000	.000		.000
N	162	162	162	162	162
Time Pearson Correlation	.284**	.424**	.204**	.499**	1
Sig. (2-tailed)	.000	.000	.009	.000	
N	162	162	162	162	162

** . Correlation is significant at the 0.01 level (2-tailed).

Data Interpretation

H₁: The extent to which the leader and led relationship positively influence the intrapreneurial environment through employee perception of the rigidity of organizational boundaries presented a significant outcome, $\beta=1.232$ ($p \leq .001$). As leadership characteristics directly and indirectly influence organizational boundaries and we propose that whilst the characteristics of the business leader can expose intrapreneurship within individuals, its furtherance will be subject to the impact of certain constraints. From the perspective of organizational boundaries these will encompass the existence of tiers of decision makers, and what are commonly generalized as “obstacles”, both of which have an effect on the enabling of greater freedom of the thought processes and actions constituting intrapreneurialism. As such, we found the data findings for hypothesis 1 supported through the extant literature.

H₂: The extent to which the leader and led relationship positively influence the intrapreneurial environment through employee perception of levels of work discretion/autonomy presented a positive outcome, $\beta=2.295$ ($p \leq .001$). Within the extant literature there are direct observations as to the constraining factors associated with levels of discretion and the value of greater flexibility for intrapreneurial opportunities to exist. These encompassed a culture which embraces employee initiative and autonomy, the separation of creative efforts from creative outcomes, recognition for effort and commitment whether a success or failure, opportunities for flexibility of work design and experimentation. As such, we found the data findings for hypothesis 2 supported through the extant literature.

H₃: The extent to which the leader and led relationship positively influence the intrapreneurial environment through employee perception of levels of time availability presented a positive outcome, $\beta=2.081$ ($p \leq .001$). Within the extant literature, employee time availability is considered a significant factor for intrapreneurial opportunities to exist as it touches upon many aspects of this dynamic being achievable and intrapreneur needs being met. For example, we are seeking opportunities for employees to introduce creativity into their work tasks; to enjoy a degree of freedom from excessive operating procedures; to encompass problem solving with a progressive degree of frequency; to have optimism that time spent generating new

ideas will be endorsed wherever or whenever practicable. None of these facets of working life can be embraced without the availability of time in which to do so. As such, we found the data findings for hypothesis 3 supported through the extant literature.

H4: The extent to which the leader and led relationship positively influence the intrapreneurial environment through employee perception of the degree of management support received presented a positive outcome of $\beta=1.204$ ($p \leq .001$). This hypothesis can be considered as the building blocks or the foundation which under-pins the whole concept of intrapreneurship in SMEs. It is advocated the leadership approach adopted or exhibited by successful contemporary entrepreneurs is associated with an innovation-related culture and the leader becomes the key driver of how this is shaped and formulated. We applied the theories from the analysis of literature to the bespoke SME environment which indicated a direct association between innovative opportunities in SMEs and the choices made by the leader. We found the data findings for hypothesis 4 supported within the extant literature.

H5: The extent to which the leader and led relationship positively influence the intrapreneurial environment through employee perception of the current practice of rewards/reinforcement presented a positive outcome of $\beta=1.024$ ($p \leq .001$). Within the extant literature a system of relevant personal and/or team rewards and reinforcement are proposed for sustaining intrapreneurial motivation through a combination of employee contribution and the acknowledgement received. Acknowledgement is in itself a broad field, but of relevance to this hypothesis we may look to empowerment, recognition of effort, commitment and learning, social incentives and further intrinsic drivers which may be gained through increasing challenging work and problem solving activities. We found the data findings for hypothesis 5 supported within the extant literature.

DISCUSSION AND PRACTICAL RECOMMENDATIONS

The originality of our investigative study was targeting SMEs operating in a highly competitive technology-innovative discipline consistent with innovation being a critical success factor within their business metrics. Furthermore, the study extended to companies regardless of their current status of intrapreneurial awareness so was essentially viewing the entire workforce as potential intrapreneurs. Whilst it is highly unlikely that every employee can be directly involved in the development and progression of substantive innovative advancements, they can contribute to intrapreneurship in the sense of heightened awareness, incremental change or improvement in whatever role they have been employed to undertake. We may suggest thinking in terms of what have I learnt today or this week rather than solely, what I have achieved. This again connects with the significance of the leader and led relationship with employee enablement as an outcome of leader devolved empowerment through openness, trust, mentoring and support. Additionally, by viewing the relationship as symbiotic, we believe that leaders can show appreciation and respect not just through what they say, but through what they do to materially influence and drive innovation momentum.

We are satisfied that our investigation provided a positive outcome for each hypothesis and that we have provided sufficient information to demonstrate the conceptual model is theoretically grounded and delivers an original and valuable contribution towards addressing the literature gap expressed at the start of this paper whilst creating a platform for further research. As far as we are aware, it is the first study of its type to be carried out in the UK, within a

specific sector and company size. An interpretative or interacting approach could provide a richer perspective than relying solely on statistical data. The latter method can be justly criticised for presenting a “*snap-shot in time.*”

It was inevitable we would reflect upon the creation of practical initiatives for intrapreneurial opportunities in SMEs whilst reviewing our research outcomes. Firstly, we propose that the leader elects to review the policies that govern organizational boundaries, work discretion and time availability. Within which, a positive step would be to elicit the views of the workforce. Cause them to think about what they could do rather than what they are doing; to reflect upon any changes, however incremental, which could advance the area they work in and to feel their ideas are valued and welcome. Secondly, we recommend that in SMEs, additional feedback and creative activities could result from reassessment of the value and purpose of the commonly utilised employee annual appraisal, such as targeting and measuring individual creative awareness, idea generation and activity. Employees, regardless of their function could be set a goal to put forward a given number of ideas each year of a quantifiable benefit to the efficiency or functionality of their department, or a product development, or a customer service enhancement. Bearing in mind that financial constraints can be considered detrimental to SME progression, these almost cost-free workplace adjustments could also be considered developmental to the SME leader in sponsoring a culture which generates intrapreneurship whilst increasing their aptitude and skill as a leader. Such skills no longer confine to knowledge, understanding, and capitalizing on the journey of the past, but scrutinizing, seizing, connecting and acting. Acting for change, acting for novelty, acting for differentiation and acting for business sustainability and survival.

Finally, we trust through our research efforts our vision “*when you hire a pair of hands you get a free brain*” can be operationalized. When presented with the outcome of the data analysis, the business leaders commented that the insight we provided into employee perception was invaluable in aiding them to reassess priorities within their businesses. As such, we are gratified to have added value to the businesses who gave up their time to help us, and their trust in enabling us to access the views of their workforce.

Directions for Further Research

In considering the research outcomes it would be beneficial to follow one or more complementary routes of further study to continue to progress what is known about the contributing factors for intrapreneurship to not only exist, but become sustainable in the SME environment. A longitudinal study could be conducted; an alternative methodology could be applied; the measurement tools could be further modified as reflected by Hornsby et al. (2013). Equally, by reducing the number of questions asked to a more manageable quantity in respect of the time required to complete the survey exercise, one could adopt a need satisfaction instrument approach (Porter 1961) whereby each questions comprises three score ratings: (a) how much of the characteristic is there now; (b) how much of the characteristic should there be; and (c) how important the characteristic was to them. This would add greater depth and meaningfulness to the data findings.

APPENDIX 1-EMPLOYEE SURVEY QUESTIONS

Leader-Led Relationship

1. My manager is approachable and easy to get on with.
2. My manager treats people with dignity and respect.
3. My manager supports and helps me to do the best job I can.
4. My manager does a good job of explaining decisions that affect me and my department.
5. People here are treated as adults.
6. My manager seems to genuinely care about the welfare of employees.

(Bassett-Jones & Lloyd; 2005)

Organizational Boundaries

1. In the past three months, I have always followed standard operating procedures or practices to do my major tasks.
2. There are many written rules and procedures that exist for doing my major tasks.
3. In my job I have no doubt of what is expected of me.
4. There is little uncertainty in my job tasks.
5. During the past year, my manager* discussed my work performance with me frequently.
6. My job description clearly specifies the standards of performance on which my job is evaluated.
7. I clearly know what level of work performance is expected from me in terms of amount, quality, and timeliness of output.

(Hornsby et al., 2002)

Work Discretion

1. I feel that I am my own boss and do not have to double check all of my decisions.
2. Harsh criticism and punishment result from mistakes made on the job.
3. This company provides the chance to be creative and try my own methods of doing the job.
4. This company provides freedom to use my own judgment.
5. This company provides the chance to do something that makes use of my abilities.
6. I have the freedom to decide what I do on my job.
7. It is basically my own responsibility to decide how my job gets done.
8. I almost always get to decide what I do on my job.
9. I have much autonomy on my job and am left on my own to do my own work.
10. I seldom have to follow the same work methods or steps for doing my major tasks from day to day.

(Hornsby et al., 2002)

Time Availability

1. During the past three months, my work load was too heavy to spend time on developing new ideas.
2. I always seem to have plenty of time to get everything done.
3. I have just the right amount of time and work load to do everything well.
4. My job is structured so that I have very little time to think about wider company problems.
5. I feel that I am always working with time constraints on my job.
6. My co-workers and I always find time for long-term problem solving.

(Hornsby et al., 2002)

Management Support

1. My company is quick to use improved work methods.
2. My company is quick to use improved work methods that are developed by workers.
3. In my company, developing one's own ideas is encouraged for the improvement of the corporation.
4. My manager is aware and very receptive to my ideas and suggestions.
5. Promotion usually follows the development of new and innovative ideas.
6. Employees who come up with innovative ideas on their own often receive management encouragement for their activities.
7. The "doers" are allowed to make decisions on projects without going through elaborate justification and approval procedures.
8. My manager encourages innovators to bend rules and rigid procedures in order to keep promising ideas on track.
9. Many people here have been known for their experience with the innovation process.
10. Money is often available to get new project ideas off the ground.
11. Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system.
12. There are several options within the company for individuals to get financial support for their innovative projects and ideas.
13. Individual risk takers are often recognised for their willingness to champion new projects, whether eventually successful or not.
14. People are often encouraged to take calculated risks with new ideas.
15. The term "risk taker" is considered a positive attribute for people in my work area.
16. This company supports many small and experimental projects realising that some will undoubtedly fail.
17. An employee with a good idea is often given free time to develop that idea.
18. There is considerable desire among people in the company for generating new ideas without regard to crossing departmental or functional boundaries.
19. Employees are encouraged to talk to staff in other departments of this company about ideas for new projects.

(Hornsby et al., 2002)

Rewards/Reinforcement

1. My manager helps me get my work done by removing obstacles.
2. The rewards I receive are dependent upon my work on the job.
3. My manager will increase my job responsibilities if I am performing well in my job.
4. My manager will give me special recognition if my work performance is especially good.
5. My manager would tell me if my work was outstanding.
6. There is a lot of challenge in my job.

(Hornsby et al., 2002)

*NOTE: The word "manager" was changed for each company to reflect the title used by the business leader.

END NOTES

1. House of Commons, Briefing Paper No. 06152, 23 November 2016.
2. In the top 8 ranked entrepreneurship journals less than 60 articles mention intrapreneur (ship), or corporate entrepreneur (ship). Current at Jan. 2017.
3. UK Small Business Statistics Business Population Estimates for the UK and Regions in 2016.
4. Department for Business Innovation and Skills;
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/467443/bpe_2015_statistical_release.pdf

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