Cultivating an Entrepreneurial Mind-Set through Transformational Leadership: A Focus on the Corporate Context

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Corporate leaders are increasingly embracing entrepreneurial activity as a potential source of achieving a competitive advantage. Leaders adopting an entrepreneurial orientation (EO) at the firm level must foster an entrepreneurial mind-set employees. This article aims to expand understanding on how an entrepreneurial mind-set as well as transformational leadership impact levels of EO at firms in an emerging market context, South Africa. Following a survey, partial least squares structural equation modelling (PLS-SEM) analysis is used to test the study hypotheses. Findings reveal positive and significant interrelationships between the study variables, where path analysis supports the study model and where both transformational leadership and an entrepreneurial mind-set amongst share a reciprocal causal relationship with higher levels of EO.

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Introduction

Firms in developed and emerging economies has evolved substantially in the new millennium and been disrupted by continuous change, which has added complexity to the commercial landscape. The global business environment is laden with hyper-competition, which requires businesses to navigate through uncertainty and complexity to survive (McGrath and MacMillian 2000).

Based on such a rapidly evolving business landscape, firms need to infuse and attract 'new forms of managerial thinking,' enabling them to deal with the constant flux of transformation, and competently navigate un-

certainty and ambiguity in the business environment (Urban 2016). Firms in the 21st century need to constantly evolve and embrace entrepreneurship to become robust and dynamic to keep abreast with technological innovation and hyper-competition, to ensure organisational survival and relevance (Hitt 2001; Phan et al. 2009).

Entrepreneurship pivots around a different paradigm of thinking and behaviour, which transform the internal workings of an organization to become forward thinking, innovative and competitively resilient (Brown, Davidsson, and Wiklund 2001). Moreover, entrepreneurship within organizations is a fundamental posture, instrumentally important to strategic innovation, particularly under shifting external environmental conditions (Hitt 2001). Research demonstrates that entrepreneurial behaviour by management and employees has been linked to a firm's competitive advantage and sustainability across different industries and contexts (Ireland, Hitt, and Sirmon 2003; Ireland, Covin, and Kuratko 2009).

Leaders are increasingly embracing entrepreneurial activity as a potential source of achieving a competitive advantage (Covin and Lumpkin 2011), where the concept of entrepreneurial orientation (EO) incorporates firm-level processes, practices and decision-making styles ensuring entrepreneurial behavioural patterns are recurring (Dess and Lumpkin 2005). Scholarly interest in EO has grown exponentially in the past decade (Covin and Lumpkin 2011), as organizations with a prevalence of EO possess the ability to discover and exploit new market opportunities, and tend to respond to potential threats effectively and prosper despite the demands of a competitive and dynamic environment (Dess and Lumpkin 2005).

However, a critical review of the literature indicates a gap in the literature insofar the role of the entrepreneurial mind-set as well as the impact that leadership may have on EO have not yet been fully accounted for in prior studies (Phan et al. 2009; Urban 2016). Although research indicates that EO includes cognitive and behavioural components (McGrath and MacMillan 2000), EO requires employees to act innovatively and adopt an entrepreneurial mind-set (Kuratko, Morris, and Covin 2011), and furthermore the alignment of the entrepreneurial strategy with EO must be decided upon by the organization's leaders (Ireland, Covin, and Kuratko 2009). Recognising the limited explanations of exactly how EO may be influenced by the role of such an entrepreneurial mind-set and leadership, this article aims to expand understanding of the impact that transformational leadership (TL) as well as an entrepreneurial mind-set (EM)

have on EO. Equally important, the study aims to bridge the knowledge gap with regard to the interrelationship between TL and the EM, which Boerner, Eisenbeiss, and Griesser (2007) maintain is an important area of research that has not been adequately addressed in the management literature. Subsequently the research question of the article becomes – 'What influence does TL have on the EM as well as on the relationship between the EM and EO?'

It is anticipated that this study will contribute to the theoretically enrichment of the leadership and entrepreneurship domains, by ascertaining the potential bidirectional properties of TL on EM and EO. Additionally, by localizing the impact that TL plays in influencing EO, an important theoretical and empirical context for the nexus between TL and the EM is analysed. Furthermore, the empirical findings from this study can assist business leaders and policy makers who need to reflect on leadership styles when trying to enact an EM in a corporate setting.

A further contribution of this study is that it takes place in an under-researched context, South Africa (SA). Most studies on entrepreneurship are predominantly western in nature, with very few if any reflecting on Africa (Urban and Hwindingwi 2016). This is surprising when considering that in SA, one of the primary goals of a firm is growth and this can be achieved by continuously innovating in the face of growing global challenges (Urban 2013). Consequently, by assessing the adequacy of the model variables in this different non-western setting, researchers may undertake replication and comparative studies.

The study starts by briefly reviewing past research on TL and the EM from an EO perspective. The research methodology is then delineated and the hypotheses statistically tested. The results are then discussed, managerial implications are drawn, and recommendations for future research are made.

Literature Review

ENTREPRENEURIAL ORIENTATION (EO)

A vast literature points to EO as an important element in organizational development where EO has been used extensively to describe organizations exhibiting an entrepreneurial strategic vision and entrepreneurial behaviour and processes (Covin and Slevin 1991). The theoretical basis of the EO construct lies in the assumption that all firms have an EO, even if levels of EO are very low (Dess and Lumpkin 2005). According

to Covin and Lumpkin (2011), EO is best operationalized as the concurrent exhibition of behaviours reflecting risk taking, innovativeness and pro-activeness. Innovativeness is the fundamental posture of an entrepreneurial organization in terms of developing new products or inventing new processes; risk taking is associated with the willingness to commit significant resources to opportunities and to take calculated business risks; and pro-activeness is perseverance in ensuring initiatives are implemented, and is concerned with adaptability and tolerance of failure.

The true value of EO as a concept lies in the extent to which it helps organizations create a sustainable competitive advantage. Leaders can enhance an organization's chance of remaining adaptive and innovative by increasing the number of entrepreneurship champions, encouraging innovation amongst employees and removing obstacles for innovations to take place. Most importantly, leaders help increase the perception that exploitation of opportunities is highly desirable (Phan et al. 2009).

However, adopting a firm level EO is difficult as a successful strategy goes beyond a simple decision and requires the alignment of the entrepreneurial strategy with the entrepreneurial actions of employees throughout the organisation (Ireland, Corvin, and Kuratko 2009). Researchers note that firms supportive of entrepreneurship must provide appropriate reward systems, top management support, explicit goals and appropriate organizational culture which signal to employees that entrepreneurial behaviour action is desirable (Ireland, Hiit, and Sirmon 2003; Ireland, Corvin, and Kuratko 2009).

ENTREPRENEURIAL MIND-SET

According to McGrath and MacMillian (2000, 4), the thinking framework required to unlock high business potential is an EM, which requires applying a set of 'finely honed skills that allows for the forging of opportunity from uncertainty to adaptive business execution.' The theoretical origins of the model for an EM lie within the broader cognitive science domain and more specifically within metacognitive theory (Haynie et al. 2010).

The EM has been conceptualized as 'metacognitive processing or thinking patterns, where the underpinnings of an EM are deep-seated in higher-order mental processing that enable the entrepreneur to think beyond or reorganize existing knowledge structures and heuristics, promoting adaptable cognitions in the face of novel and uncertain decision contexts' Haynie et al. (2010, 217). In relation to the working mechanisms of the

metacognitions influencing the EM, the underlying latent constructs are: (a) goal orientation, (b) metacognitive knowledge, (c) metacognitive experience, and (d) metacognitive choice, and (e) monitoring (Haynie and Shepherd 2009).

Although research theorizes that an EM as a higher-order cognitive process serves to organize what individuals know and recognize about themselves, tasks, situations, and their environments, little is known of how an EM promotes effective and adaptable cognitive functioning in a complex and dynamic corporate environment exemplified by an EO (Urban 2016). Such contextualization is important considering that calls have been made for corporates to re-orientate their values and behaviour towards EO (Covin and Lumpkin 2011; Kuratko, Morris, and Covin 2011). Consequently, it is expected that an individual level EM is collectively aggregated into organisational level, entrepreneurial thinking (Shepherd, Patzelt, and Haynie 2010), which will be positively related with higher levels of EO:

H1 *The prevalence of an entrepreneurial mind-set amongst individuals in a corporate context will be positively associated with higher levels of entrepreneurial orientation.*

TRANSFORMATIONAL LEADERSHIP

Transformational leaders help to build and shape the culture of a company, by creating empowering opportunities for employees, enabling in-house collaboration, encouraging shared values and allowing followers themselves to be leaders (Bass 1995; Sashkin 2004). TL are naturally entrepreneurial and are viewed in this light because they are able to transform organizations and followers to achieve ambitious goals, thus cementing themselves as change agents within an organization (Eyal and Kark 2004). The change readiness that is trickled through the organization enables employees to anticipate market trends, adapt to changes in the environment and to respond innovatively to opportunities, which collectively enriches a firms EO (Ling et al. 2008).

Research indicates that TL enhances innovation levels in an organization (Gumusluoğlu and Ilsev 2009), and is a predictor of firm performance through: (a) articulating a vision statement that calls to action innovative benefit, (b) encouraging the discovery of new opportunities, achieved through disruptive thinking, (c) supporting long-term benefit over short-term goals, (d) promoting innovative exploration, and (e) allocating resources, budget and time to the incubation of ideas within a

company (De Jong and Hartog 2007; Jung, Chow, and Wu 2003). Research indicates that TL dimensions can then be summarized as inspirational motivation, intellectual stimulation, and individualized consideration (Gumusluoğlu and Ilsev 2009).

Furthermore, Sarros, Cooper, and Santora (2008) find that TL indirectly influences EO by the role that transformational leaders play in framing the innovative culture of the company. However, Avolio, Bass, and Jung (1991) developed an additional leadership theory to add to the existing suite of 'new leadership' theories, which they terms as the full-range leadership theory (FRLT). The FRLT comprises of three types of leadership behavioural typologies, (a) transactional, (b) transformational, and (c) non-transactional or 'laissez-faire' leadership, which is reflected by the nine discrete constructs that underpin the FRLT. According to Bass et al. (2003), TL is a necessary organisational requirement, to manoeuvre ever-changing, uncertain business environments and enables firms to respond to challenges as a workforce collective. Based on the growing empirical evidence on TL, the second hypothesis is framed as:

H2 *The prevalence of transformational leadership in a corporate context will be positively associated with higher levels of entrepreneurial orientation.*

TRANSFORMATIONAL LEADERSHIP AND THE ENTREPRENEURIAL MIND-SET

Research has found that transformational leaders do not only impact levels of innovativeness and creativity of their followers but equally they influence the psychological empowerment of their followers, which serves as an alternative source of creativity (Gumusluoğlu and Ilsev 2009), hence influencing their EM. Transformational leaders, through their individualized consideration behaviour, build the self-confidence levels of their followers, which is then reinforced by developing follower strengthens and ultimately leads to employee empowerment. Employees that are empowered tend to exhibit increased creative qualities, as empowerment is symbolic of personal autonomy, which is a key trait of creative individuals with an EM (Gumusluoğlu and Ilsev 2009).

Transformational leaders are visionary and serve as inspirational motivators within organizations (Wang, Courtright, and Colbert 2011; Zhang and Peterson 2011). Consequently these leaders are able to derive higher levels of motivation, empowerment, shared commitment and perfor-

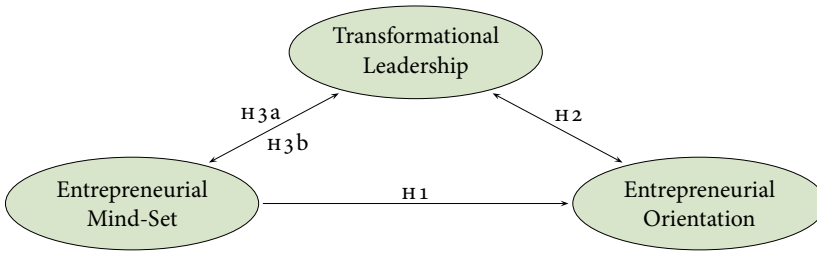

FIGURE 1 Model Formulated for Study

mance from employees (Mitchell et al. 2000), where TL is an important antecedent to employee motivation and towards fostering an EM. Consequently, a combination of both a TL and an EM is required for EO to be realized within an organization.

Considering the direct and indirect effects of TL on the EM, these two constructs could be mutually reinforcing and hence operate in a bidirectional, causal relationship. Just as the transformational traits of a manager shape an employee's mind-set to behave entrepreneurially, similarly, when followers are entrepreneurially minded, the role of the transformational leaders is made easier, hence enabling them to be more effective. Ireland, Hitt, and Sirmon (2003) advance a relationship of reciprocal causality between an EM and TL in a corporate context to substantiate the theoretical argument for a predicted bidirectional causal relationship between an EM and TL, which leads to the third hypothesis:

H3 *(a) There is a positive relationship between transformational leadership and an entrepreneurial mind-set; and (b) the prevalence of an entrepreneurial mind-set positively influences the prevalence of transformational leadership in a corporate context.*

Methodology

The research design was a cross-sectional, empirical analysis, utilizing primary data collected via structured questionnaires. The context of the study was the South African baking sector. SA, despite its developing market status, has a sophisticated financial banking sector, and compares favourably with those of industrialized countries (Schwab 2014). The rationale for selecting this sector is that the financial and services sector contributes 21.1 percent to the Gross Domestic Product (GDP) in SA (Young 2013), and is evolving at a rapid pace where change has become the norm (PWC 2015). The need for the banking sector to innovate and

inject entrepreneurship into its strategy has become prevalent, particularly with the move to technology enabled banking solutions and value added services that drive innovations (Thulo 2015). Consequently, this sector is relevant and an apt context to investigate EO.

Moreover, by focusing on a single industry sector, a greater homogeneity of context is achieved which addresses the concerns of broad applicability versus perfect suitability for narrower groups. Studies across industries often produce results that apply to all while they at the same time apply to none (Davidsson 2004), since they only capture a tiny fraction of each firm's manifestation of EO. Subsequently the focus is on a single industry. Moreover, the important issue about sampling, in general, is not statistical but theoretical representativeness, i.e., the elements in the sample represents the type of phenomenon that the theory makes statements about (Davidsson 2004).

Sampling and Data Collection

The population of the study was the South African banking sector, which consists of 19 registered banks, two old mutual banks, 13 local branches of foreign banks and 43 foreign banks with approved representative offices operating in SA (see http://www.sacci.org.za). Sampling frames were obtained from the Human Resource Department within each banking organization, where permission was sought to conduct a survey at the branch levels. To ensure sufficient variability and a high organisational representativeness, data was drawn from branches in each major South African region and province using random sampling. Respondents included junior, middle, senior and top management employees, as Kuratko, Morris, and Covin (2011) confirm that all levels of management influence EO, in varying degrees.

Two data collection mechanisms were utilized based on the physical location of the respondents, namely paper surveys and on-line surveys. Paper surveys were utilized for head-office employees based in Johannesburg, South Africa and on-line surveys were utilized for employees based at any of the other South African geographical locations of the respective bank. The respondent's rights and protections were preserved during the research process by firstly ensuring that the research participation was purely voluntary and no use of positional power was exercised during the process. At a minimum, the number of respondents selected to participate in the survey, was derived based on the '10 times rule' or heuristic used to determine minimum sampling sizes for partial

least squares structural equation modelling (PLS-SEM) analysis (Lowry and Gaskin 2014, 132). This procedure is based on achieving a fair representative sample, big enough to conduct, rigorous PLS-SEM.

The data collection phase was preceded by a pilot phase, during which 35 respondents were requested to comment on the questionnaire, allowing refinement of the instrument. The first mailing resulted in a response of 97 questionnaires and was followed by a second and third email request for filling out the on-line questionnaire, one week and three weeks later respectively. These efforts resulted in several additional responses. No patterns among undelivered surveys were noticed as undelivered surveys were distributed approximately evenly among different regions, resulting in 173 final questionnaires, serving as study sample. *T*-tests found no significant differences between early and late respondents in managerial level or and region. Due to the different role that each layer of management plays in shaping EO, and the degree of influence that each level exhibits at both individual level and organisational levels (Kuratko, Morris, and Covin 2011), a control variable relating to managerial seniority was surveyed. The respondent's characteristics revealed that 62 percent were junior management, while 26 percent were middle management, and 12 percent were senior or top management of the bank.

Instrument

The research instrument employed was a structured questionnaire, based on leveraging scales from past literature. Table 1 shows the constructs as independent and dependent variables (IV and DV), scale dimensions, literature sources and comments relating to reliability and validity issues addressed in previous studies.

DATA ANALYSIS TECHNIQUES

PLS-SEM is a statistical technique that can be used both for confirmatory and exploratory theory building, as opposed to covariance-based structural equation modelling (CB-SEM), which is recommended for confirmatory studies only (Lowry and Gaskin 2014). However, the choice of PLS-SEM over CB-SEM does pose some challenges to the integrated analysis of the study model. One of the distinctive disadvantages is that 'the requirement of recursivity in standard PLS-SEM inhibits investigating bidirectional effects' (Henseler and Fassott 2010, 2). This challenge was overcome by using linear regression analytics, to test the relationship, whereby TL was treated as the exogenous variable and EM as the

DV. A path model within the PLS-SEM domain consists of two models, namely the structural model, often referred to as the inner model, and the measurement model often referred to as the outer model (Henseler and Fassott 2010). PLS-SEM equally adopts two types of measurement models, a reflective model and a formative model. According to Gefen, Straub, and Boudreau (2000), a reflective measurement model, comprises latent variables that are all reflective and thus representative of unidimensional constructs that are correlated. Consequently, the empirical model as delineated in figure 1 is characterised as a reflective measurement model. In order to establish the consistency of the measurement model, a series of two battery tests were conducted, evaluating both the reliability and validity of the model (Hair, Ringle, and Sarstedt 2011).

MODEL RELIABILITY

The reliability of the model was measured using a bi-modal approach, thus both the internal consistency reliability and the indicator reliability of the model were tested (Hair, Ringle, and Sarstedt 2011). A series of two tests were used to test the internal reliability of the model, the Cronbach alpha test and the composite reliability test. The aim of the indicator reliability test was to determine whether the underlying manifest variables of transformational leadership (TL), EO and EM could be aggregated into singular latent variables respectively. The following Cronbach alpha scores and composite reliability scores were obtained respectively for each construct: EO = 0.890 and 0.915; TL = 0.901 and 0.938; EM = 0.886 and 0.9110. Both the Cronbach alpha scores and the composite reliability scores of the inner model variables, were all above > 0.80 (Nunnally 1978), indicating that the measurement model has internal consistency reliability.

MODEL VALIDITY

Exploratory factor analysis was conducted where the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test for sphericity, measuring sampling adequacy for significance, revealed the following: EO = 0.852 ($p < 0.000$); TL = 0.876 ($p < 0.000$); EM = 0.946 ($p < 0.000$). All latent variables, demonstrated KMO scores of greater than 0.60 with significant values, thus indicating data adequacy and significance to conduct factor analysis. Factor loadings showed that the indicator variables (apart from EO = 0.67) showed item loadings greater than 0.7 (Hair, Ringle, and Sarstedt 2011). A decision was taken to retain EO consid-

TABLE 1 Study Research Instruments

Construct	Literature sources	Dimensions	Scale	Comment on Instrument
Entrepreneurial mind-set (IV)	Haynie and Shepherd (2009); Urban (2016).	(1) Goal orientation (2) Metacognitive knowledge (3) Metacognitive experience (4) Metacognitive choice (5) Monitoring	Seven-point Likert scale – 'Not very much like me' to 'Very much like me'	Exploratory factor analysis (EFA) was used to test validity, resulting in five factors (Urban 2016). Cronbach alpha of 0.885 across all five dimensions (Haynie and Shepherd 2009).
Entrepreneurial orientation (DV)	Covin and Slevin (1991); Miller and Friesen (1982); Zahra (1991); Zahra and Covin (1995).	(1) Innovation (2) Risk-taking (3) Proactiveness	Seven-point Likert scale – 'Very untrue' to 'Very true'	Widely used scale with established validity and reliability (Zahra 1991; Zahra and Covin 1995). Cronbach alpha of 0.75 (Zahra and Covin 1995).
Entrepreneurial leadership (IV)	Bass (1995); Jung, Chow, and Wu (2003)	(1) Inspirational motivation (2) Intellectual stimulation (3) Individualized consideration	Seven-point Likert scale – 'Never' to 'Every time'	Validated with three dimensions (Avolio, Bass, and Jung 1991). Cronbach alpha of 0.81 (Jung, Chow, and Wu 2003).

ering the remainder of the indicator variables in the measurement model demonstrated indicator reliability and validity.

The convergent validity of model was evaluated using criteria from Fornell and Larcker (1981) insofar the model attains convergent validity when the latent construct explains more than 50 percent of its indicators' variance (Afthanorhan 2013, 200). Similarly, Fornell and Larcker (1981) criteria was used to assess the discriminant validity of the model, by evaluating whether the value of the correlation of each construct is lower than the square root of the average variance extracted (AVE) value, and here the

results were: EO = 0.607; TL = 0.834; EM = 0.688, confirmed that they were above the suggested value of 0.50 (Afthanorhan 2013), and statistically significant ($p < 0.001$). Additionally, t-statistic values were greater than 2.58 thus demonstrating that the measurement model had satisfied the convergent validity test (Hair, Ringle, and Sarstedt 2011).

The cross-loading approach was used to determine whether the measurement model displayed discriminant validity and was unidimensional, and hence whether the scale manifest variables that were empirically observed had an acceptable factor loading on the respective first or second generation latent construct. Table 2 shows these results where the factor loaded significantly on the intended construct it was intended to measure. Factor loadings for all the variables were greater than 0.60, in line with the threshold for established scales (Afthanorhan 2013), thus the measurement model was deemed unidimensional. Equally, the cross loading with any of the other latent variables was significantly less than 0.10 of the factor loading on the intended latent variable (Lowry and Gaskin 2014). Therefore, discriminant validity was achieved in the measurement model using the cross-loading methodology.

Lastly, the heterotrait-monotrait (HTMT) ratio of correlations methodology was utilized to assess the discriminant validity of the measurement model over and above the Fornell and Larcker (1981) criteria and the cross-loading approach. Results obtained (EO = 0.074; TL = 0.330; EM = 0.287) indicated that the HTMT criterion value was well below the desired threshold of 0.9 (Gold, Malhorta, and Segars 2001) thus demonstrating that the measurement model has discriminant validity.

Results

DESCRIPTIVES AND CORRELATIONS

Descriptive statistics (means and standard deviations) revealed overall high mean scores for the main variables under study, where the means for all variables were above the midpoint average (3, 5) on the 1–7 Likert scales. No large standard deviation values were detected on any of the variables. Table 3 shows the Pearson correlations coefficients, which were all positively correlated. Moderate associations between the latent variables within the inner model, were detected which were statistically significant. Conversely, the first generation latent variables were very strongly correlated towards their respective second-generation latent variables, for instance the TL sub-dimensions.

TABLE 2 Factor Cross-Loadings of the Measures

Variables per dimension	EO	TL	EM
Entrepreneurial Orientation 1	0.638	0.103	0.280
Entrepreneurial Orientation 2	0.811	0.189	0.283
Entrepreneurial Orientation 3	0.829	0.188	0.218
Entrepreneurial Orientation 4	0.741	0.136	0.292
Entrepreneurial Orientation 5	0.860	0.273	0.207
Entrepreneurial Orientation 6	0.824	0.274	0.209
Entrepreneurial Orientation 7	0.725	0.246	0.107
Entrepreneurial mind-set 1	0.215	0.165	0.807
Entrepreneurial mind-set 2	0.268	0.074	0.829
Entrepreneurial mind-set 3	0.247	0.146	0.783
Entrepreneurial mind-set 4	0.263	0.135	0.860
Entrepreneurial mind-set 5	0.234	0.103	0.865
Transformational leadership 1	0.251	0.926	0.148
Transformational leadership 2	0.246	0.919	0.168
Transformational leadership 3	0.209	0.894	0.085

HYPOTHESIS TESTING

Following the PLS-SEM results, refer to figure 1, the hypotheses were interpreted in terms of this empirical evidence. The hypothesized path relationships between the EM and higher levels of EO (H1) was supported with a positive, moderate to weak linear association between an EM and EO, that was statistically significant ($p < 0.01$). In summary, a positive unit increase of the EM resulted in an equivalent 0.27 increase in EO levels. The outer loading of the EM dimensions of goal orientation (0.81), metacognitive knowledge (0.83), metacognitive experience (0.78), metacognitive choice (0.86), and monitoring (0.87), shows that these factors are strong predictors for the EM construct. These results are aligned with the theoretical assumptions of the EM as an antecedent and predictor of EO. Research is mounting which indicates that entrepreneurs utilize their cognitive frameworks that they have acquired through experience and prior knowledge to perceive and understand connections and to identify and create entrepreneurial opportunities (Haynie et al. 2010). A metacognitive aware individual will recognize and engage in the process of identifying alternative EO strategies that maximize the likelihood of achieving his/her goal (Urban 2016).

Similarly, a path relationship between TL and EO (H2) was supported in terms of the path modelling coefficients, revealing a positive, moderate to weak linear association (0.22) between TL and EO, which was statistically significant ($p < 0.01$). The outer loadings of the TL dimensions reveal that inspirational motivation (0.93), intellectual stimulation (0.92), and individualized consideration (0.89), are all strong predictors for the TL construct.

Integrating the results with past EO studies, highlights the importance of TL in supporting an entrepreneurial strategy and assisting in fostering entrepreneurial behaviour required of employees (Ireland, Kovin, and Kuratko 2009). The leadership traits of a transformational leader are interwoven with the entrepreneurial traits of an entrepreneur (Eyal and Kark 2004) and as such transformational leaders enrich a firms EO (Ling et al. 2008). Equally, TL positively enhances the EO of a firm by influencing levels of innovation, infusing a proactive disposition and encouraging the propensity for risk-taking within the firm (Ling et al. 2008).

For H3a and H3b to determine whether TL explains the statistical variance in the EM, and whether explains the EM explains statistical variance in TL, path modelling coefficients showed that there were positive, weak linear associations statistically significant between TL and EM (0.14; $p < 0.001$) as well as for EM and TL (0.15; $p < 0.05$). These results resonate with literature where TL has been theoretically linked to positively influence an individual's willingness (Zhang and Peterson 2011), their purpose (Bass 1985) and their cognitive ability (Mumford et al. 2002), thus positively influencing their overall EM. Additionally, the theoretical constructs of TL and the EM may be considered mutually reinforcing constructs (Ireland, Hitt, and Sirmon 2003). Both TL and an EM share a reciprocal causal relationship, where the employee's EM and management's TL capability work together within an organization. Hence, the effectiveness of TL within an organization increases with the presence of entrepreneurially minded employees and similarly, the effectiveness of entrepreneurially minded employees increases with the presence of TL within the organization (Mumford et al. 2002). A summary of the PLS-SEM statistically analysis is depicted in figure 1.

Study Implications

Several implications and practical insight arise from the study results. One crucial implication relates to management understanding and leveraging TL in a manner that influences employee's metacognitions in terms

TABLE 3 Correlation Matrix for Study Variables

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	EO aggregate	1													
2	EO: Innovation	0.967***	1												
3	EO: Risk taking	0.921***	0.974***	1											
4	EO: Pro-activeness	0.903***	0.910***	0.923***	1										
5	Transformational leadership	0.267**	0.255**	0.284**	0.317**	1									
6	TL: Inspirational motivation	0.259**	0.221**	0.253**	0.289**	0.968***	1								
7	TL: Intellectual stimulation	0.250**	0.265**	0.301**	0.271**	0.867***	0.759***	1							
8	TL: Individual consideration	0.219**	0.218**	0.266**	0.213**	0.875***	0.764***	0.734***	1						
9	Entrepreneurial mind-set	0.293**	0.225**	0.252**	0.221**	0.141*	0.145*	0.162**	0.078	1					
10	EM: Goal orientation	0.208**	0.197*	0.199*	0.142*	0.154**	0.135**	0.182**	0.129*	0.786***	1				
11	EM: Metacognitive knowledge	0.263**	0.213**	0.226**	0.248**	0.073*	0.079*	0.094**	0.019	0.862**	0.557*	1			
12	EM: Metacognitive experience	0.245**	0.227**	0.297**	0.286**	0.148**	0.156**	0.139**	0.097*	0.770***	0.530*	0.541*	1		
13	EM: Metacognitive choice	0.261**	0.213**	0.273**	0.215**	0.145**	0.166*	0.136*	0.051*	0.847***	0.608***	0.657***	0.587***	1	
14	EM: Monitoring	0.225**	0.224**	0.227**	0.257**	0.090*	0.070*	0.145*	0.058*	0.871***	0.667***	0.685***	0.566***	0.689***	1

NOTES $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

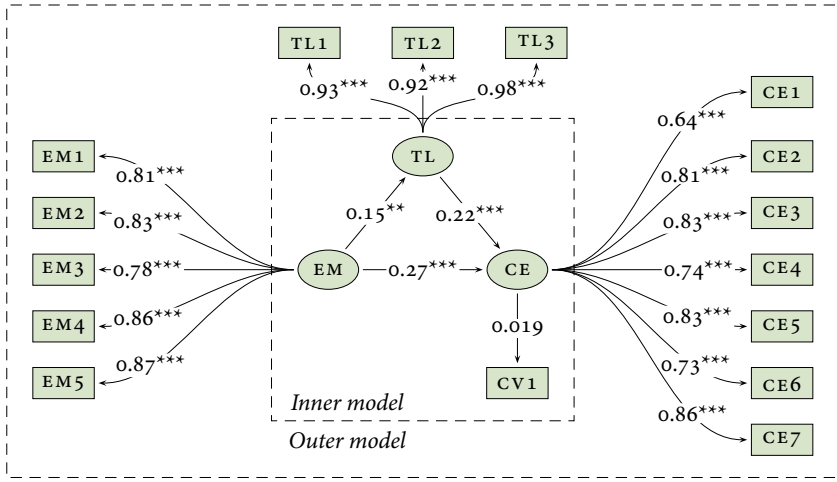

FIGURE 2 PLS-SEM Results for the Study Model (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, EM – entrepreneurial mind-set, TL – transformational leadership, CE – entrepreneurial orientation; CV – control variable)

of an EM. Fostering EO through TL and employee metacognitive thinking could take place through focused training programs that would allow employees to fully understand what stimulates an EM and ultimately how these metacognitions relate to the identification and exploitation of entrepreneurial opportunities to enhance overall levels of EO. Additionally, senior management must ensure that organisational environments are supportive of entrepreneurship and must provide appropriate TL which signal to employees that entrepreneurial behaviour action is desirably. Research is pervasive that leadership enacted through organisational cultural values and norms encourage entrepreneurial behaviour, specifically where there is incentive design allowing for mistakes and failure to occur at the workplace (Kuratko, Morris, and Covin 2011).

Limitations and Future Research

The study has limitations typical of a cross-sectional study, which precludes any conclusions to be drawn about a possible causal relationship between the variables under study and EO. A longitudinal study is required to provide further insights and causal inferences into the relationship between these factors. Moreover, the study is susceptible to common method bias which is problematic in behavioural research where measurement error and is attributable to the measurement method rather

than to the construct of interest (Podsakoff et al. 2003). In order to minimise common method bias the questionnaire featured a 'counterbalanced' question order, and the respondents were requested to be honest in their responses while assuring completely anonymous. Moreover, a consistent scale format was used, where scale items that have been tried and tested were incorporated into the survey and the scale included negative and positive statements. Additionally, signs of common method bias were evaluated by determining whether the measurement model attained construct validity (Bagozzi, Yi, and Phillips 1991), which it did. Furthermore, the study relies on perceptual data where responses may have been influenced by perceptual biases and social desirability. In order to reduce social desirability in reporting high levels across questions the survey instruction emphasized honesty for self-assessment. Notwithstanding these limitations, the findings provide a meaningful understanding of the nature of the relationships between TL, EM and EO. Researchers can apply the study findings in different contexts in the future and broaden the spectrum of antecedent factors influencing EO.

Conclusion

The study has made an important contribution to the management literature when considering the positive and significant results obtained for the study model highlighting interrelationships between TL, EM and EO. What these findings demonstrate is that entrepreneurship is not confined to the initial stages of an organizational set-up, in terms of only start-ups; rather, it is a dynamic process, where both TL and an EM both play a crucial part in affecting the development of EO in established organizations.

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