

Transformational Leadership and Employee Creativity in an Information Technology (IT) Enterprises: Moderating Role of Openness to Experience

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Abstract

The creativity and innovation in an Information Technology (IT) industry are essential for sustainable success, gaining competitive advantages, as well as is vital for the survival of small and medium enterprises (SMEs). An employee is the primary source of creativity in any organisation. Although employees are involved in the daily operating task, the style of leadership can influence the generation and execution of creative ideas. Furthermore, an employee's own inclination towards creativity and openness to experience play a role in enhancing the creative environment. However, the role of transformational leadership dimensions in employee creativity as well as the role employees' traits of openness to experience, had not been studied abundantly. The lack of study of the relationship of four dimensions of transformational leadership individually with employee creativity will be fulfilled through this study. The focus of this research is on examining the relationship between transformational leadership and employee creativity through quantitative research of four dimensions of transformational leadership. Furthermore, studying how the employee's openness to experience moderate the relation between transformational leadership and employee creativity is examined in this study.

The research design is cross-sectional quantitative research where data will be collected from a survey questionnaire. The survey questionnaire will be sent by using survey monkey to the employee and manager of Sydney based IT SMEs. The data will be collected on the response based on four constructs of transformational leadership. The collected data will be tested through regression analysis using SPSS version 27, and the hypothesis will be tested. The test result will be interpreted to check whether the transformational leadership has a positive relationship with employee creativity and whether the relationship is moderated by employee's openness to experience.

Introduction

In this current rapidly changing dynamic business environment, an organisation needs changes and innovation for its survival, effectiveness, and to gain competitive advantages [1]. The changes in the competitive market have been forcing business to be creative and innovative with the up-surge trends of a knowledge-based economy, globalisation and development in technology [2]. In the process of innovation, one of the crucial jobs of managers as well as employees had been idea generation [3]. An employee is considered a fundamental source of idea generation as innovation is usually rooted in the creative ideas of employees [4]. The evidence from growing researches in the field of creativity had recognised employee creativity as critical support for the growth and success of the organisation [5]. Creativity—the creation of novel and useful ideas [1] has been valued to the organisation as it impacts job performance [6]. This impact of creativity had led to the further studies in this field to explore the potential internal as well as external factors such as leadership styles, and workplace climate, which is considered to facilitate the employee creativity in an organisation [5,7]. Furthermore, researchers and managers are keen on understanding the ways to facilitate creativity in an organisation [8]. So, creativity in an organisation through their employee can be considered as essential for any organisation. The means of enhancing creativity has been a prime concern for a creative based organisation such as IT.

As leadership plays a dominant role in an organisation [9] there is the substantial impact of leadership on creativity [10,11]. Among all the

leadership approaches, transformational leadership has been studied extensively by researchers as an essential factor for enhancing employees' creativity. Transformational leadership is considered a leadership style where followers are influenced by the leader and are inspired to perform beyond the expectations [12]. The leader tends to boost the confidence of the followers and elevate their goals. The encouraging and motivating behaviours exerted by transformational leader seems to play an essential role in organisational effectiveness. The effectiveness of transformational leadership on creative outcome has been verified by various recent studies [13,14]. The studies have been focusing on exploring the underlying mechanism by which transformational leadership influence employee creativity [15]. Studies are more focused on the mediating as well as moderating factors [16]. In the relationships such as intrinsic motivation [17], creative self-efficacy, work engagement and knowledge sharing [18]. Furthermore, personality variables of employees are also included in the studies. However, the understanding of which behaviour of the transformational leader is more influential in enhancing employee creativity is called for further investigation. The transformational leader's behaviours act as a stimulating factor for creativity in an organisation. This study aims to investigate the transformational leader behaviours influence the creativity of an employee.

In a meta-analysis conducted by Fiest [19] with the samples of artists and scientists, it was found that among the Five-Factor personality traits openness to experience and conscientiousness have the strongest relationship with creativity. Openness to experience is a personality trait which shows to the extent an individual is an imaginative, curious, independent thinker and open to new latest ideas experiences [20]. Previous studies have suggested that openness to experience is one of the traits that are more relevant for understanding creativity [19,20]. An employee who is more curious for a new idea and seems to look forward for an alternative solution will be further motivated from the encouragement of leader above them. Exploring the role of these personalities in the relationship between transformational leadership and employee creativity is tested in this study. The amount of research being carried out in this field shows the importance of the research and how there are further areas to be explored.

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The context of this study is within the Australian IT SMEs, which currently more than ever are focused on bringing creativity within employees and are searching for ways to enhance creativity [21]. This study will be carried out in the of SMEs IT sector in Sydney region of Australia as SME's occupy 99.9% of Australian business [22]. Australian Bureau of Statistics which provide the vast resource for the research. The report published by Department of Industry, Innovation, Science, Research and Tertiary Education in 2012, The importance of employee and their creative attributes in an IT industry said that the significant barrier in the innovation in Australian SMEs are the lack of skilled, creative workforce. Although SME's contribution to Australia's GDP is 57 percent [23] the availability of creative employee is limited. The possibility of attracting a high number of creative employees through the effective leadership style can lead to a sustainable and effective organization.

Overall, this study seeks out to contribute to the literature by exploring how transformational leadership is related to creativity. Firstly, the relationship between transformational leadership and employee creativity will be investigated. Secondly, the moderating role of openness to experience will be tested.

The Rationale for the Study

This study will examine the role of transformational leadership with employee creativity in the context of Australian SME IT industry. The study further explores how the personal trait of openness to experience plays a moderating role in the relation. The meta-analysis by Rosing et al. [24] shows relatively weak to moderate relation between transformational leadership and creative behaviour of an employee. The emphasis on the leadership behaviours in the study to influence the creativity will add to the missing literature. The contrasting result in the link of transformational leadership and employee creativity needs to be further cleared. Studies by Fiest and George [4,19] had shown that openness to experience tends to encourage creativity in an employee when they can display the influence of the trait. So, this study will further test the relationship if transformational leadership acts as a nurturer of employees' creativity. Jaussi [25] by testing the hypothesis. Openness to experience has been found as positively and significantly related to employee creativity as decision anxiety moderates the relationship [26]. However, the moderating role of openness to experience in the relationship between employee creativity and transformational leadership still needs to be explored. A report by the Department of Industry, Innovation, Science, Research and Tertiary Education in 2012 about the SMEs in Australia shows that lack of skilled person is a major barrier in the innovation of the industry. As suggested by literature, organisation tends to hire individuals with individual uniqueness which makes them more towards the production of creative outputs [27]. So, this study will investigate how openness to experience having a positive relationship with creativity, moderates the relationship between transformational leadership and employee creativity. The study by Stojic et al. [28] finds that creative skills had an impact on generating novel and innovative ideas which influence investment in the research and development sector of an organisation. In that sense, an IT organization needs to have an employee with creative skills and who exhibit the traits of openness. So, this study is based on the SMEs of Australia so that it tends to provide practical and theoretical significance in the selection of creative employee in this specific sector.

Literature Review

Transformational Leadership

Transformational leadership is one of the most researched leadership styles in the leadership literature. Judge and Piccolo [29] as well as one of the most influential leadership theories [30]. Transformational leadership was first developed by Bass (1985) as the phenomena where leaders and followers assist each other in lifting themselves in the higher state of motivation and morality. More recently, Lussier and Achua [32] defined transformational leadership as a process through which a leader attempts

to change the status quo through identifying the problems in the present system and presenting a new vision of the organisation's future. Furthermore, Bass and Riggio [33] described transformational leadership as a process of changing and transforming an individual. The development of the concept of transformational leadership has been found rooted in the vision and leader's ability to transcend follower to the superior level of themselves.

Transformational leadership is found to be effective in improving human and knowledge capital [34] and performance of management in an organisational context [35]. The transformational leader tends to influence the followers to perform more than their expectation by connecting self-concept with the organisational goals as well as addressing and adjusting follower's values and self-esteem [36]. This will result in followers being more expressive and their greater willingness to contribute to the organizational objectives. Transformational leaders are considered to transform follower's focus from their instant self-interest to a collective interest and vision which inspire followers to perform beyond their duties [37]. Thus, transformational leadership can be more of transforming a follower's thoughts and approach towards any problem or situation in an organization as well as visualising the bright future. A transformational leader can be considered as an influencer, a motivator as well as a stimulator for followers.

Researchers recently had conceptualised transformational leadership as a set of relatively constant behaviours which primarily differ among the individuals [38]. The widely accepted concept of transformational leadership conceptualised by Bass and Avolio [39] consists of four behaviours exerted by the leader. These four dimensions of transformational leadership are idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration. The interaction of these four dimensions together results in the motivation of followers' professional characteristics [39]. Thus, these four dimensions of transformational leadership or behaviour of transformational leaders are the constructs in this study, which represents transformational leadership.

Idealised influence is the ability to influence followers through the leader's loyalty, devotion, and values. The leader can act as a role model which followers admire, respect and trust. This behaviour of the leader is characterised by the leader's consistency in decision making and the ability to take personal risks [40].

Inspirational motivation relates to the ability of the leader to motivate followers through the creation of vision and expressing essential purposes. Followers gain belief on their ability to perform beyond their expectation through the encouragement and optimism displayed by the leader. Leaders tend to create an attractive, motivating, convincing and inspiring future vision [41].

Intellectual stimulation involves a leader's ability to encourage rationality, creativity, and intelligence while problem-solving. It flourishes in an innovation and creativity supportive environment. Followers are stimulated to think about the problem in novel ways and take a calculated risk [40].

Individualised consideration is an attribute where the leader gives individual attention, train, and coach followers as a mentor and pay attention to the various needs of every individual. Leaders personally listen to individual problems of followers and provide support as required. The leader gives feedback to the followers individually, which helps in their personal growth and self-actualisation [41].

From the literature, it can be presumed that transformational leadership does have positive effects on followers. However, the process and mechanism of exerting those effects are relatively less understood [42]. The impact of each of those transformational leadership behaviours might be different on followers. Avolio and Walumbwa [43] suggests the effect of each transformational leadership behaviours on followers, rather than grouping different dimensions together to form a higher-order construct. Furthermore, the study in one context, organisational setting, and culture cannot be generalised to the overall influence [44]. This claim is backed up by previous studies by Cho & Dansereau [45] in the Korean context with different impact of idealised consideration and idealised influence on

followers. This shows the need for study in different organizational culture as well as different behaviours. So, this study intends to explore the influence of transformational leadership's four dimensions as individual independent constructs, in the context of Australian SME IT organisations.

Employee Creativity

Creativity is creating something new, which can be an idea, product or any piece of art or performance [46]. It is the production of novel ideas and thinking out of the box. The generation of new and unique idea will challenge the status quo and traditional ways of doing things. Studies had found that organisation need to enhance the creativity among their employee to sustain their growth in this competitive market and to be successful [47].

Similarly, Herrmann and Felfe [16] in their research, found employee creativity as a foundation for the innovative and creative organisation as well as crucial for business performance. Creativity has been found with great significance for the sustainable development of any organisation and found the employees' job performance influence by it [48]. However, the generation of creative ideas and innovation in an employee automatically is not easy. Encouragement and supportive leadership are needed, who encourage an employee to be creative [49]. The importance of employee creativity can be seen in all those studies so to foster creativity in the workplace, the role of leadership plays an important role. A key role on a leader seems to have a close relation to the factors that help in building a creative workplace. In this study, the relationship between transformational leadership and employee creativity will be investigated, where employee creativity is a dependent variable.

Transformational Leadership and Employee Creativity

The elite processes of inspiring followers and promoting creativity have made transformational leadership popular among organisational researchers [50]. Transformational leadership has been found closely related to the factors relating to building creative working place, including vision, autonomy, challenges, encouragement [51]. According to Barsade [52] leaders encourage followers to be creative by using their resources, expertise and skills which create a ripple effect. Furthermore, the intellectual stimulation behaviour of transformational leadership stimulates employee to think out of the box and create a new way to solve the problems [31]. Rosing et al. [24] found a weak relation between transformational leadership and creativity in their meta-analysis. However, Herrmann and Felfe [41] in their study, found that transformational leadership enhance employee creativity. This study is in line with the study done by Khattak [48] which shows a positive and significant relationship between employee creativity and transformational leadership style. The study of the influence of transformational leadership has been found positive on innovative work behaviours [53] as well as a significant impact on the employee's creative process engagement [54]. So, this study will further add to the literature on employee creativity with the moderating role of employee's traits.

Moderating Role of Openness to Experience

Openness to experience is related to one's curiosity, intellect about the environment and the desire to explore new things [55]. It describes the extent an individual is open to new latest ideas, innovative, curious, as well as a unique experience and new perspectives [48]. In the study of the big five personality test by Feist [19] openness to experience was found the personality trait strongly related to creativity. Creativity related personality is not found in everyone, and those who tend to have those related creative personalities tend to exhibit creativity [56]. So, the task is more likely to perform more creatively by an employee with higher openness to experience [57]. The study by Nęcka and Hlawacz [58] consisting of the artist found that openness to experience acts as a catalyst to enhance creativity on the artist. These studies show the moderating role openness to experience can play in improving the imagination with the appropriate creative environment which can be provided by transformational leadership. Baer and Oldham [59] in their study, found that openness to experience relationship with employee creativity is associated with the organisational setting.

Similarly, researchers George, Zhou and Oldham, Cummings [4,60] suggest that the followers' characteristics need to be studied to understand the relationship. Thus, openness to experience can play a role in enhancing employee creativity as they are more open to new ways and challenge the status quo.

Theoretical Framework

In the current environment, transformational leadership has been the most popular contemporary theory of leadership. Burns and Bass [61,62] introduce transformational leadership as an attempt to describe the process used by leaders to create a connection with followers, focus on their individual needs, and helping them to reach their potential. So, transformational leadership can be considered as a process of transformation of followers to perform above expectation and challenge the current system through the influence and behaviours of leaders. The leadership concept has been conceptualized in terms of traits, behaviours, influence, and situation.

Similarly, in the context of transformational leadership, four different behaviours are conceptualized by Bass and Avolio [39] which are further validated by various studies in this field of transformational leadership. In transformational leadership, leaders seek to raise individuals and groups above their self-interest, motivate followers to work ahead of self-actualization, and stimulate positive changes. Transformational leaders tend to transmit vision, creativity, reinforce an emotional relationship with the followers as well as make conscious and believe in attaining higher goals [63]. These transformations are obtained through four different behaviours of leaders: idealized influence, intellectual stimulation, inspirational motivation, and individualized consideration. These four behavioural patterns are considered as consistent, trustworthy, and dependable in tackling the organisational challenges. All four of the dimensions of the transformational leadership will act as a construct in this study. Leader's exerting these behaviours in combined or individually will be considered as a measurement of transformational leadership. There will be 20 items under the four constructs as developed by Bass and Avolio [64] in the Multifactor Leadership Questionnaire (MLQ, Form 5X).

In any organisation, creativity plays a vital role in its innovative and sustainable future. Creativity can be defined as the creation of a valuable and useful idea, product, service, or process by any individual [1]. Employee creativity refers to an employee using a variety of their different knowledge, skills, capabilities, views, and experience in the process of generation of ideas required for the solving a problem or decision making efficiently. In this study, employee creativity is considered as a dependent variable.

A transformational leader tends to encourage followers to deliver the result above their expectation by raising employees' beliefs and values at a higher level [65]. The recent study by Pradhan and Jena [66] mention that transformational leaders motivate their employee to reconsider their job by enhancing the condition of the job to something meaningful and important and this leads to influence innovation in work.

Through intellectual stimulation, a leader encourages to challenge the status quo and traditional ways of solving problems. In that process, followers tend to use their imagination and play with innovative ideas which enhance creativity [67]. In the process, leaders provoke the followers by precise questions, re-explaining problems. Leaders motivate followers to take their own decision and creatively rethink the traditional practices as well as challenge old assumptions, traditions, beliefs [68]. As claimed by Nusair, Ababneh, and Bae [69] stimulating employees intellectually to challenge the existing vibrant environment will motivate them to be more creative.

Likewise, through individualised consideration, employees get more individual focus, resources, and information from the leader for their development [67]. Consequently, employees are encouraged to try new and different approaches in the workplace which make them more competent and result in high creativity [70]. Similarly, leaders acting as role models and projecting a compelling vision tends to empower employees to outperform through

focus and intrinsic motivation through inspirational motivation. Thus, the high energy, intrinsic motivation and focus will enhance the level of creativity [71]. As claimed by Nusair [69] conveying a shared vision exhibited by top managers will enhance the initiation and implementation of current ideas. This latest ideasthegeneration of latest ideas and enlatestideasemployee's creativity.In the context of idealised influence, the lofty standards for moral behaviours determined by the leaders tend to gain respect and trust from the follower [72]. Followers tend to imitate their leader in the matter of their morals, values and sharing risk while emphasizing on a sense of collectiveness in generating current ideas.

These four behaviours are considered as dependable, reliable, and truthfulin an organisationto resolve the problems and overcome the challenges [73]. These behavioural characteristics in a transformational leader are responsible for enhancing creativity in an employee and acts as a source for promoting employees' creativity. Therefore, to test the relationship between transformational leadership and employee creativity, the following hypothesis is proposed:

H1: Transformational leadership is positively related to employee creativity.

In a workplace environment where innovative and practical ideas are stimulated, employee creativity is often produced [5]. In such a context, openness toexperience of an employee would provide an enhancing role for improving creativity in an employee. Furthermore, employees with high openness to experience tend to search for a different condition to acquire new knowledge and information [74]. Therefore, employees with high openness to experience tend to perform their task more creatively (Figure 1).

Hence, openness to experience is considered an independent construct in this study to investigate the role of openness to experience in the relationship between transformational leadership and employee creativity. Thus, we propose the following two hypotheses:

H2: Openness to experience is positively related to employee creativity.

H3: The relationship between transformational leadership and employee creativity is moderated by openness to experience such that relationship is stronger with high openness to experience.

Statement of the Problem

Studiesof leadership had found that transformational leadership as influentialin enhancing the creative outcomes of employees [13,14,18]. Furthermore, it enhances employee'sperformance [75] and creativity [13]. As suggested byRosing et al. [24] leadership research should be more focus on leadership behaviours exerted by the leaders in the process of influencing the followers. The four transformational behaviours conceptualising byBass and Avolio [39] Individualised consideration, Intellectual stimulation, Inspirational motivation, Idealised influence, should be investigated as they might impact differently in the influence of leadership. As mentioned byEisenbeiß and Boerner [76] intellectual stimulation is more important in fostering creativity. So, this study intends to add further detail in the literature of transformational leadership behaviours with their relation to employee creativity and the role of openness to experience in the relation.

The opportunity of study of an individual factor on creativity in moderating the relationship is found from the previous study. The recent study by Zhang [26] on the relationship between openness to experience and employee creativity with moderating role of decision autonomy and task interdependence, found a strong relation of openness to experience with employee creativity. They further suggest examining the contextual factors in leadership. Few focuses have been studied on how personality traits impact individual employee creativity in the context of specific leadership style, which shows the opportunity of the study in how openness can play as a moderator in the relationship between transformational leadership and employee creativity. The study conducted is mostly based on the non-Australian context [15,18,42,48] and organisational culture; however, the difference in organisational culture might impact the contextual factor in leadership and employee creativity.Jung and Avolio [77] found thatthe impact of transformational leadershiponperformance is strongerin Asian American than Caucasian American followers.Furthermore, the relationship between transformational leadership andeffectiveness was found stronger in Korea than in the US.A meta-analysis by Crede [44] on transformationalleadership across different culture in 34countriesfound that the relation between subordinate performance and transformational leadership was not as strong as assumed. Moreover, the relationship cannot be generalised across diverse cultures and codiverseculturesstudy will focus on the organisational environment in the context of Australia as there has been relatively less study in Australia.

Purpose and Objectives

The purpose of the research is to develop a better understanding of how transformational leadership can affect employee creativity and the role of the personal trait in the relationship. This study accessing the leadership behaviour exhibited by the transformational leadership tends to give more insight into the behaviouraleffect in employee creativity. Transformational leadership has been considered more influential in fostering creativity through the intellectual stimulation behaviour of the leader [31]. Furthermore, the role openness to experience plays on an employee's creative outcome and perception of leadership, with the leadership being more motivating and supportive of the creativity in the workplace.

The objectives of the research can be listed as follows:

- To identify the relationship between transformational leadershipand employee creativity through the examination of four dimensions of transformational leadership.
- To examine whether openness in experience has a positive relationship with creativity.
- To test the relationship between transformational leadership and employee creativity with openness to experience as a moderator in the relationship.

The result of this study will be valuable for SMEs IT organisation as well as leaders in exhibiting the behaviourfostering creativity in employee and hiring the employee who is more open for creativity.

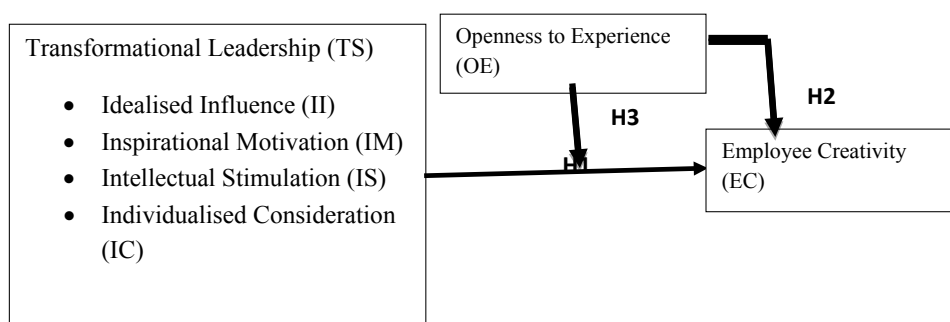


Figure 1. Research Framework.

Table 1. Key terms and definitions.

| | |
|------------------------------|--|
| Transformational Leadership | Burns (1979) explained transformational leadership as leadership where followers are affected by leaders through increment in conventional goals as well as by helping them to uplift their self-confidence in the workplace. Similarly, Rubin et al. (2005) emphasised on transformational leaders, transforming followers focus from instant self-interest to collective goals and visions and inspiring them to outperform above their duties. Thus, transformational leadership is the process of influencing followers by elevating and enlarging their goals as well as providing confidence to outperform their expectation with collective interest. |
| Idealised Influence | It is a degree to which a leader is attached to the follower's psychological state, their identification by charismatic ways (Bass, 1985). It is the moral and standard shown by the leader, which influence the followers to respect and follow the leader. |
| Intellectual Stimulation | A degree to which a leader stimulates new innovative ideas and ways to solve the problem, challenging existing approaches (Bass & Avolio, 1994). The leader can challenge followers to take the risk and stimulate creativity in them to obtain novel ideas or solutions. |
| Inspirational Motivation | A degree to which a leader shows a clear view of the future state which is optimistic and motivate followers beyond their expectations (Bass & Avolio, 1994). Leader's ability to project an optimistic vision and showing the belief in followers to achieve that. |
| Individualised Consideration | A degree to which a leader considers individual problems and listens to them as well as provide support individually to fulfil followers' requirements (Bass & Avolio, 1994). It is the behaviour of the leader considering every individual as a part of the team, valued them, showed support to them. |
| Employee Creativity | Amabile (1988) refers to creativity as an ability to generate new and constructive thoughts and solution to the problem. In the case of employees, it is the employees' innate creative potential to generate creative ideas. So, employee creativity is considered as the employee's ability to generate novel ideas and solutions to the problem challenging the traditional methods. |
| Openness to experience | (George & Zhou, 2001) consider openness to experience an extent to which an individual is imaginative, curious, open to new idea and experiences. So, it is the curiosity and eagerness to have new experience and knowledge. |

Research Questions

The research question that will be addressed in this research study is listed below.

1. How is transformational leadership related to employee creativity?
2. How is an openness to experience related to employee creativity?
3. How is the relationship between transformational leadership and employee creativity moderated by openness to experience?

Methodology

This study of the relationship consists of the constructs, which are four dimensions of transformational leadership, employee creativity and openness to experience. In this study, we will study the relationship phenomenon, what is the relationship between transformational leadership and creativity? Furthermore, the phenomenon by which openness to experience influence the relationship. The occurrence of the phenomenon and the reasons behind it is studied through explanatory research [78]. Explanatory research provides fresh insight into the research for building, extending, testing a theory [79]. This research is characterised by testing of hypothesis and explaining the phenomenon, so it is explanatory research. The key variables of the study are defined, and the test of hypothesis stating the relationship is to be carried out. The positivism worldview of the study is the paradigm of the objectives of study and questions have testing variables to prove the relation and predetermined. Structured data collection techniques will be used [80]. In this study, the factor affecting outcomes will be known, and the best predictor is to be understood as well as the hypothesis needs to be tested. So, the quantitative method will be used for the collection and analysis of data as this method eliminates the bias of individuals' emotions or feeling of a researcher as well as environmental [79]. Furthermore, in the quantitative method, we achieve research objectives in controlled and designed studies, and this method is suitable for justification [80,81]. In the current situation of Covid-19 pandemic, the scenario for the data collection for the qualitative study is more problematic as it is hard to interview people or do a focus group.

As a part of the research strategy used for the quantitative method, a survey

with a questionnaire will be used to collect data from the employee and direct supervisor or manager of the SME IT organisation in Sydney, Australia. As per Saunders [80] research strategy is guided by the philosophical link of objectives, time, and resources available, research approach and purpose as well as access to the participants and sources of data. In the current context of Covid-19 pandemic, the data collection method primarily needs to be contactless. So, for the ease of both researcher and participant as well as the availability of the participation, data collection through the online would be perfect. By using the survey with a questionnaire as a data collecting instrument, the standardised data can be collected from a large population economically, and comparison among data can be made quickly. Furthermore, the questionnaire is seen as one of the most effective ways of data collection in case researcher had an idea about what exactly needs to be asked, and the way factors can be measured [82]. The survey will be cross-sectional due to limitation of time and resources for the survey.

The invitation for the participants will be sent through the mail to the participation by using an online survey company. The survey will consist of demographic question and question related to leadership, creativity, and openness to experience variables. The demographic variables will be controlled variables as they might conflict with the creativity performance as related to demography [83]. The data for leadership, which is an independent variable, will be collected from the employee and the data for employee creativity will be taken from the manager or supervisor, which is a dependent variable. It will help in avoiding the common method bias in the survey [84]. The analysis of data acquired will be done with the use of SPSS version 27 and the reliability test will be conducted to confirm the reliability of the question with the variables. In the process of data analysis reliability test through Cronbach alpha and convergent test will be performed to check the reliability of data obtained.

Data Sources and Collection Methods

The population of the study consists of all the SME's of Australia. According to the Australian Bureau of Statistics (ABS), Counts of Australian Businesses cat. No. 8165 for February 2019, there are 2,259,098 small size business and 50,338 medium-size business. So, total population size would be 2,309,436 of SMEs. ABS defines a small business as a business with employees' number less than 20 according to employment numbers, whereas medium business

compromise of employees from 20-199. Although it seems a smaller number of employees, SMEs occupy 99.9% of Australian business, which shows the scale of the study. So, with the study in the sample of SME, we could find the characteristics of the substantial portion of Australian business, which further increase the significance of the population of the study. In a survey conducted by National Australia Bank (2017) found that SMEs contributes 57% of Australia's GDP as well as provides 7 million jobs. The SME sector of Australia is more focused on innovation and growth. In a report by the Department of Industry, Innovation, Science, Research and Tertiary Education in 2012, mentions that the lack of skilled person is a predominant barrier to innovation.

The selection of the correct sample size is a big challenge in the research as the size of the sample affects the statistical techniques [85]. Since our population size is huge and the location is scattered across the country, need to have a sample in the Sydney region of New South Wales. Random sampling technique will be used to avoid biases. As per Hair [85] the recommended sample should have at least 100 observations and the sample size should be at least 5 to 20 times the number of parameters that are being measured. Although, normality of data and estimation method used by researchers will affect the desired sample size, it is agreed that 10 participants is considered reliable source of data for result for every free parameters. Furthermore, Hair [85] suggested for minimum five observations for each parameter being measured. In this study, there are altogether forty five items so the acceptable sample of study will be two hundred and twenty five.

As the research method, the quantitative method will be used so we will contact the participants with their email. Initially, HR managers of the SMEs will be contacted, and the study and its significance, as well as managerial implications, will be presented through online medium. An email invitation will be sent to complete a web-based questionnaire via a professional survey company based in Sydney. It will have a description of the aim and objective of the study, data collection and the implication of the study. Moreover, information regarding how confidentiality will be maintained regarding the participants and their privacy protection. The participants consist of the full-time employee who is working under the supervisor, and the manager or supervisor. Part-time and Casual employee will be excluded from the study, as they might have different perceptions and attitudes about the study variables.

The data collection instrument will be a survey questionnaire. The survey questionnaire is best for conducting research when the data of research is based on quantitative methods, an instrument used in the method is predefined, and the research is to analyse the sample to represent the entire population of the study [86]. Further, Rowley [86] stated questionnaire is used in the case where the study is used to get the data on the frequency of opinions, beliefs, process, behaviours, and experience.

The survey questionnaire is divided into two parts. First one is demographic information such as age, gender, employment. These are controlled variables because they might conflict the inter-relationship, which might lead to task knowledge and could influence creative performance [83]. The second part consists of the scale items of different construct linked with research questions. The questions will be closed-ended, which will eliminate the researcher's bias and reduce the amount of thinking and effort required by respondents [87]. Study 3 reliable established scale for all constructs will be used, which has been validated in previous studies.

Transformational Leadership: A 20 item multifactor leadership questionnaire (MLQ, Form 5X) as for the calculation of transformational leadership Bass and Avolio [64] will be adapted for the leadership. It will be measured on five-point Likert-type scale, ranging from 1 being strongly disagree to 5 being strongly agree.

Employee Creativity: The scale for measurement of employee creativity by Zhou and George [88] will be used to measure employee creativity. It consists of 13 items. It will be measured on a five-point scale from 1 being strongly disagreed to 5 strongly agreeing. One of the examples of question is employee searches for new product ideas/ techniques/process.

Openness to Experience: Openness to experience will be measured by a scale developed by Costa and McCrae [20] using 12 items. Five-point Likert scale will be used, ranging from 1 (strongly disagree) to 5 (strongly agree). These items on the scale had been found with the board approach about openness to experience.

Ethical Considerations

Any type of social research, either qualitative or quantitative, involving people, is subjected to ethical consideration. In this survey research considering the concern of the participants about the disclosure of their identification may arise so they will be informed with the consent form that their name and identification will not be attached with their answer. Similarly, they will be informed about the research objectives, implications, purpose of study, how data will be published and how the confidentiality of the participants will be maintained. The elimination of demographic data in the analysis of variables will eliminate the issues related to biases in interpretation. The consent form for ethical consideration is attached in the appendix.

Research Contribution

There result, the study will add to the existing literature in the study of the relationship between transformational leaders four behaviours on employee creativity. The impact of each behaviour exhibited by the transformational leader on employee creativity will provide a better overview of which behaviour can enhance creativity in the workplace. Furthermore, the study of the moderating effect of employee's openness to experience will act as an assistant in analysing the level of creative output that can be expected from an employee. It further can have a managerial implication on hiring or managing the employee to gain more creative output as well as enhance job performance.

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