Predicting innovative work behaviors through transformational leadership: The moderating role of corporate social responsibility

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ABSTRACT

To stay competitive and viable in today’s rapidly evolving and highly hostile market climate, companies need to concentrate more on innovation. In this regard, the specific quality of transformational leadership has been strongly linked to organizational innovativeness. However, the purpose of this study is to examine the relationship between transformational leadership and the innovation behavior of employees. The literature review developed in the current study is fundamentally centered on how transformational leaders value innovation by facilitating organizational learning to foster innovative behavior among employees. Corporate social responsibilities as an organizational level factor that can drive employee attitudes were also examined as a moderating effect in this relationship. The rationale of the relationship of the variables is supported by both transformational leadership theory (TFL) and social exchange theory (SET). Data were collected from corporate social responsibility engaged SMEs operating in Rwanda. Using Cronbach’s alpha reliability and validity were tested while structural equation modeling (SEM) was used in analyzing data. The findings of this study intend to fill some gaps in the current literature such as the introduction of CSR in the relationship between top managerial level leadership, organizational learning, and innovation behavior of employees, also introducing SET to explain such important relationship.

Introduction

The current market climate has forced organizations to push old products and services again to satisfy consumer expectations and desires that are rapidly changing (Khalili, 2016). In order to survive, Jaiswal & Dhar, (2015) suggested that companies need new ideas, products, and services to meet customer demands, be competitive, and also get more business opportunities. In this regard, for Organizations to survive and succeed, they need to overcome innovative competitors and promote creativity (Müçeldili, Turan, & Erdil, 2013). However, considerable attention must be paid to driving factors of such needed innovation. As mentioned by Shanker, Bhanugopan, van der Heijden, & Farrell,(2017) individual creativity and innovativeness are crucial key drivers for organizational innovativeness and success. Afsar, Badir, & Khan, (2015), added that employees whose esteem and identity match with the organizational values are probably going to show better levels of innovative work behavior. Hence, leadership is the key determinant of organizational effectiveness through its influences on followers’ behaviors in achieving goals (Yukl, 1999).

To meet overall organizational goals, including product and service innovation, leadership behaviors are needed to shape the dyadic relationship amongst leaders and individuals and further influence individuals’ behavior (Zhang, Huai, & Xie, 2015). While ideas themselves might be radical and can change structures and institutions, individuals need charismatic leaders to influence the implementation of those ideas (Epley, 2015). In another word, the motivational, inspirational, and visionary behavior of organizational leaders, play a great role in designing an appropriate organizational context in which innovation behavior is strong. Adegoke, Munshi, & Walumbwa, (2009), argued that organizations need those leaders who are more inclusive, ethical, empowering, and clear vision to increase the innovative ability of employees. However, it is evidenced that leadership is an important factor for...
organizational innovativeness. In this study, TFL will be examined as it has been widely considered to play a pivotal role in driving followers towards innovative behavior.

The role of organizational learning in the relationship between TFL and innovation behavior of employees is still unknown while it is expected to play a crucial role in such a relationship. In this regard, the current study examined the mediation effect of organizational learning in the relationship between TFL and the innovation behavior of employees. This study also examined the moderating role of CSR in this relationship. We introduce CSR in this relationship due to its strength in influencing people’s attitudes. In another word, TFL theory has been an essential mechanism that fulfills the innate human needs (Gary Yukl, 1989; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008; Odumere & Feanyi, 2013), but TFL theory alone does not explain the continuity of employee towards innovative behavior. However, within the context of both TFL theory and SET theory, it stands to the reason that four dimensions of TFL create an innovation culture and learning within an organizational setting (Cropanzano & Mitchell, 2005a; Cropanzano & Mitchell, 2005b; Holthausen, 2013) while CSR makes reciprocation (Ailawadi, Neslin, Luan, & Taylor, 2014; Roudaki & Arslan, 2017; Kim, Rhou, Uysal, & Kwon, 2017) of organizational engagement such as innovation behavior of employees.

Using reciprocity rules of social exchange theory (SET) (Russell Cropanzano & Mitchell, 2005a), we propose Social exchange theory (SET) as one of the most influential conceptual models that deal with workplace behavior. According to (Cropanzano & Mitchell, 2005b); Taştan & Davoudi, (2015), Social Exchange Theory (SET) explains the interaction of leaders and employees. However, we believe that when an employee perceives CSR as good practices of their organizations, they will reciprocate CSR actions by exhibiting innovation behavior to comply with organizational goals and culture, because employees fundamentally believe in reciprocity (Agarwal, 2014; Cropanzano & Rupp, 2003). Although, when transformational leadership qualities driven by innovation (Azka, Tahir, M, & Syed, 2011; Yammarino & Bass, 1990) are linked to CSR practices, it is reasonable to expect high innovative behavior.

**Literature Review**

**Conceptual framework and hypothesis development**

An extensive variety of elements has been found to influence organizational innovativeness; managers’ leadership style has been distinguished as being a standout amongst the most, if not the most important (Jung, Chow, & Wu, 2003).

**Transformational leadership and innovative work behavior**

To stay focused and maintainable in the present quick paced changing and exceptionally aggressive business condition, organizations need to invest more efforts in innovativeness. Several authors have linked TFL and organizational innovativeness. For example (Leban & Zulauf, 2004), leaders engaging in transformational behaviors have been appeared to deliver a variety of positive results in organizational settings, TFL components generate higher levels of effort (Walumbwa, Lawler, Avolio, Peng Wang, & Kan Shi, 2005). TFL challenges workers to look for new opportunities and create new programs, services, and processes (Lee, Lee, & Kim, 2007), TFL foster employees creativity and build up an innovative workplace (Suifan & Al-Janini, 2017; Michaelis, Stegmaier, & Sonntag, 2009), transformational leaders with Charismatic leadership behavior transform followers’ needs, values, preferences, and aspirations.

TFL impact employee risk-taking (Neves & Eisenberger, 2014). Basing on TFL theory, by Bass, (1990), many authors provided several reasons that link TFL and innovation behavior of employees, here, are some arguments Mccleskey, (2014), transformational leaders inspire followers through their behaviors and Followers attribute the leader with specific qualities that followers wish to imitate. Jaiswal & Dhar, (2015), TFL can encourage an atmosphere that advances worker innovation behavior. Jung et al., (1995), intellectually stimulating leaders develop followers to handle issues utilizing their own remarkable and innovative viewpoints. Akram, Lei, & Haider, (2016), leaders who are more comprehensive, moral, enabling, and mindful can build innovative work behavior among employees. Peterson, Walumbwa, Byron, & Myrowitz, (2009) added that Intellectual incitement involves invigorating employees to address suspicions, reframe issues, and approach old circumstances in totally new ways.

In the same vein, Bass & Avolio, (1990) added that transformational leaders animate their followers' endeavors to be innovative. In promoting innovativeness, transformational leaders create self-confidence for employees (Contreras, Espinosa, Dornberger, Angel, & Acosta, 2017). However, with such extensive evidence, TFL always attempt to raise followers needs and promote dramatic changes, articulates a realistic vision of the future (Jung et al., 1995). Transformational leaders crave out challenging opportunities that test their capabilities then expertise for innovative methods (Bass, Avolio, Jung, & Berson, 2003; Jyoti Aggarwal & Venkat Krishnan, 2015), transformational leaders guarantee that followers have their support for risk-taking behavior (Jyoti & Bhau, 2016), transformational leaders use its fundamental behaviors to shape and cause employee’s inspirational states of mind (Chang, 2016; Chang & Teng, 2017), leaders increase optimism and enthusiasm (Bass et al., 2003). Thus, the study states the hypothesis as follows:

**Hypothesis 1:** Transformational leadership is directly and positively influences the innovation behavior of employees

**Transformational leadership and organization learning**
According to Alsabbagh, Hamid, & Khalil, (2015),” Organizational learning is a complex process that allows companies to adapt efficiently to changes that lead to the advancement of action and new capabilities, which is the primary way of working knowledge and improving the productivity of the enterprise.” Janežič, Dimovski, & Hodošček, (2017), argued that a learning organization is a learning atmosphere, learning climate, and learning culture where the beliefs, values, and norms of employees are brought to bear in support of sustained learning. In the same vein, Ali, (2013) added that the transformational leader is a channel, a counselor, a catalyst in organizational learning. According to Ince, Keskin, Karakose, Gouzukara, & Imamoglu, (2015), Transformational leaders create organizational change processes, eliminate old beliefs and mental models within the organization, also creating a learning-based culture, developing learning mechanisms. Margir, Kamalepur, Sargolzaie, Suriezahie, & Azad, (2014) Added that “transformational leadership style has a direct impact on learning culture; also, learning culture has a direct impact on organizational learning and organizational intelligence”. In the same context, (Sheng & Chien, 2016) argued that organizational learning orientation identifies with organization-wide activities related to the creation and use of knowledge for the enhancement of innovation culture. As argued by Mutahar, Rasli, & Al-ghazali, (2015), a Transformational leader is a catalytic agent, an advisor, a coordinator, and a coach in organizational learning.

In another hand, Organizational learning is a procedure that empowers joint effort between organizational actors to improve the organization’s overall performance. However, Transformational leadership act in the mandate of making changes and impact process individually and encourage organizational learning (Saeed, Nazari & Mashali, 2016). In the same view, Veiseh, Mohammadi, Pirzadian, & Sharafi, (2014) added that TFL has a remarkable influence on the development of organizational learning culture. In the same vein, Ayman H. Metwally & Salma El Zarka, (2017) explained that TFL provides awareness and input to followers and causes them to determine their own learning goals.

Several studies connect TFL with different innovation and learning behavior within the organization. For examples, TFL create learning organizational culture that best supports business transformation and innovativeness (Hugo Zagošček, Vlado Dimovski, 2009), TFL through organizational learning influence firms to develop and implement organizational innovation (Aragón-Correa, García-Morales, & Cerdón-Pozo, 2007), TFL behavior predicts knowledge sharing and organizational learning (Metwally & El Zarka, 2017), TFL creates organizational structure and shapes the organizational culture that influences organizational learning (Alsabbagh et al., 2015), TFL cause employee aspiration and interest in innovation which thus, prompt a culture inside the organization that grasps the idea and significance of continuous learning (Waddell & Pio, 2015). However, within these different arguments from previous studies, we assume that transformational leadership variables are evidenced to create an organizational culture that encourages learning. Thus, another hypothesis is:

**H2. Transformational leadership facilitate organizational learning**

The mediating role of organizational learning between TFL and innovation behavior of employees

Organizational learning processes strengthen collaboration at different stages of the organization and the innovation process is shaped (Smirnova, Rebizaina, & Khomich, 2017). According to Janežič et al., (2017). A learning organization has a system that strengthens itself by making it possible for its workers to learn. Learning As a vital process that underlies organizational innovation and outcomes (Carmeli & Dothan, 2017), influence Interpersonal competencies which focusing on effective relationships with other employees in the organization which also result in the transformation of knowledge into new products, services, or business processes (Liao, Fei, & Liu, 2008). In the same review, Liu, (2017), see organizational learning as the antecedent of innovation behavior. According to Cesar et al., (2016), Learning is very crucial in enhancing organizational innovation that responds to environmental needs.

“The learning atmosphere stimulates new employee innovations, encourages an inspiring work environment, and professionalizes workers to deal with their ongoing job challenges”(Eldor, 2017). According to Sutanto, (2017), Organizational learning causes the change required by the system and stimulates organizational innovation. Kabaday, Yener, & Gürbüz, (2015) added that a Learning organization creates an atmosphere, where new and expansive patterns of thinking are nurtured and collective aspiration is set free. However, such a climate builds innovation attitudes in the mind of organizational actors. Here Kragulj, (2017) added that organizational learning causes organizational change by utilizing new knowledge. Although, such combination of learning and innovation culture increase organizational performance (Cesar et al., 2016), where High-performance organization build Individuals’ innovative behaviors in the workplace (Carmeli & Dothan, 2017). In this view, giving chances to employees to collaborate in beating challenges, getting feedback, share learning, and acquire more coaching may build their work experience and innovation behavior (Eldor, 2017). The promotion of an organizational culture that values social interactions, knowledge sharing, and continuous learning creates innovative behavior of employees (Park, Song, Yoon, & Kim, 2014). However, with such literature evidence, we thus propose the following hypothesis:

**H3: Organizational learning mediates the relationship between TFL and innovation behavior of employees**

Transformational leadership and corporate social responsibility

In current business circumstances, CSR has turned into a continuously huge issue. Business execution, for example, improvement in benefits and notoriety could be a positive effect credited by CSR practices (Lam Chew & Nasruddin, 2015). According to Rangan, Chase, & Karim, (2012). Some corporate leaders feel an incentive to serve their group or society throughout their business practices, while others support CSR projects to express and bolster their employees' esteems. However, these arguments can explain why...
transformational leaders engage more efforts in CSR initiatives for the sake of their organizations. Several authors developed literature on why transformational leaders put more efforts into CSR initiatives, for examples, using data from 129 leaders and 582 of their direct reports, the study’s results by Groves, (2014), demonstrated that transformational leader value CSR initiatives and use CSR actions in their strategies.

According to Du, Swaen, Lindgreen, & Sen, (2013), Transformational leaders motivate the plan and usage of a company's institutional CSR. Through organizational leadership and stakeholder partnerships, the Organization’s CSR initiatives can interface with endeavors at enhancing its competitiveness (Amos, 2017). In the study by Rasool & Rajput, (2017), employee view of organizational CSR announces how many business leaders think about them. In this regard, corporations with transformational leaders need to engage in CSR for driving employees towards organizational changes. In addition to this, Allen, Attoh, & Gong, (2017) indicated that, As CSR practices provide competitive differentiation within organizations, TFL need to contribute positively to firm responsiveness to stakeholder demands for CSR. Transformational leaders use their understanding and their ideas to encourage the thinking of followers on how socially responsible (CSR) can be accomplished while achieving sufficient shareholder returns at the same time (Waldman, Siegel, & Javidan, 2006). Within this regard, we hope that transformational leaders will use their fundamental qualities to influence their organizational culture towards CSR initiatives.

The moderating role of CSR in the relation between TFL and employee engagement in innovative behavior

In the present period of expanded partner activism, organizations are under the scrutiny of environmental groups, the media, and government regulators for fulfilling their responsibilities as a good corporate citizen (Mathew & Krishnatray, 2011). In this review, Waldman et al., (2006) argued that mentally invigorating leaders understand that accomplishment in this condition requires solid associations with an assortment of key partners, and also a viewpoint that incorporates CSR. Several studies also provided general views on how transformational leaders enhance CSR engagement in their organizations. According to Peterson et al., (2009), the lack of standards in Corporate Social Responsibility can increase pressure for business leaders to act in a socially responsible manner. Leaders are charged with the obligation of figuring corporate strategy and are frequently profoundly engaged with an advancing reputation of their firms through social obligation. Although perceived corporate social responsibility has a positive and noteworthy impact on the staff-level emotional commitment to the organization, Transformational leaders evoke stronger organizational commitment to social initiatives and strategically upgrade existing CSR projects and approaches to construct perceived social responsibility for the sake of the organization (McEleskey, 2014).

CSR strategies provide a competitive advantage and add long-term organizational survival and achievement (Mehralian, Nazari, Zarei, & Reza, 2016). Organizational CSR constitutes a benefit through the fulfillment of social activities, by seeing potential social benefits through fulfilling a social CSR contract in the workplace; employees may focus and engage in their organizational goals. Since CSR is one source of knowledge that workers may use to determine corporate morality, Corporate Compliance with legal and ethical standards fosters perceptions of corporate morality and incorruptibility which in turn leads to employee engagement in organizational objectives (Bauman & Skitka, 2012). According to Santhosh & Baral, (2015), when employees perceive their organization as exhibiting social responsibility, they develop a positive state of mind which consequently leads them towards organizational orientation. In the same vein, Rasool & Rajput, (2017), argued that Employee perceptions of CSR have great significance importance in their engagement with the organization. In the context of SET, according to Blau, (1964), the theory conceptualizes social relations in terms of exchange processes where Shared bonds upraise social collaboration as people who bring about commitments respond. Several studies used SET in explaining employee behavior as reciprocation to organization treatment. According to Kim et al., (2017), employee psychological confidence about the organization is likely boosted when observing that their companies take social obligations and good voluntary citizenship in society. We thus propose the following hypothesis:

H4: CSR moderates the relationship between TFL and employee engagement in innovative behavior, such that, leader’s influence on innovation behavior Vary with employee’s perception of CSR

![Figure 1: Research model](image-url)
Historical Context of social exchange theory

According to Russell Cropanzano & Mitchell,(2005a), social exchange as a theory has been used by scholars and practitioners over the past 50 years to explain the phenomena of exchange between at least two individuals, regardless of whether it be substantial or immaterial which could also compensate and expensive for those included. Understanding work environment behavior Cropanzano & Mitchell, (2005b), suggested the use of social exchange theory (SET) as a model and the most influential conceptual paradigm. In explaining this theory Avey, Reichard & Luthans, (2011) argued that, In social exchange, if one treats another with some help, the other will respond the one's support, which is known as restricted reciprocity. Besides, Khar Kheng, June, & Mahmood, (2013), explain that Employees will build their faithfulness, engagement, and work performance since they are obliged to return the act of kindness that they have gotten. However, in this study, we hope that SET will play a pivotal role in explaining why the employee responds to CSR.

Choosing SET in this relationship is due to its strength in explaining reciprocal interaction between organizations and employees. Several studies used SET in explaining reciprocal relationship at the workplace, for instance, linking CSR and organizational citizenship behavior (Abdullah & Abdul Rashid, 2012), SET offers a more grounded hypothetical basis for clarifying worker engagement in the organization (Agarwal, 2014a; Azim, Diyab, & Al-Sabaan, 2014; Khar Kheng et al., 2013). SET is also used to explain how the employee responds to their leader’s efforts in the workplace (Groves & LaRocca, 2012; Holthausen, 2013). Employees that perceive that the organization thinks about their prosperity reciprocate and build up a passionate bond with the organization (Cropanzano & Rupp, 2003). Utilization of SET in models of organizational behavior is confined on the premise of the exchange rule or principle (Cropanzano & Mitchell, 2005b) added that social exchange theory predicts that, in response to positive starting activities, targets will tend to answer in kind by taking part in more positive responding reactions and additionally less negative reciprocating reactions. However, the reciprocal interaction model in SET will explain why and how CSR can affect the relationship between transformational leadership and innovation behavior of employees.

Basic review of related studies

The literature review developed in the current study is fundamentally centered on the relationship between transformational leadership and innovative behavior of employees, using a mechanism of CSR as Moderating effect and innovation culture and organizational learning as mediating effect on this relationship. The rationale of the relationship of the variables is supported by both transformational leadership theory (TFL) and social exchange theory (SET). Numerous researchers, proficient bodies and affiliations, and different authors have given various investigations on the relationship between transformational leadership and innovation behavior of employees using complex mechanisms. However, it is noteworthy that each study is unique in its objective; this study examines how transformational leaders give value to innovation by creating an organizational culture and facilitating organizational learning and how such mechanisms influence the innovation behavior of employees. This study also intended to examine how CSR motives affect the above relationship basing on the reciprocal interaction rule from SET, which we hope can add more strength to the relationship between organizational leadership and the positive behave or of employees.

We propose this model after reviewing several studies by scholars and authors that examined transformational leadership and innovation behavior of employees using different perspectives. For example, Khalili, (2016), studied the moderating effect of workers’ perceptions of a supportive environment for innovation on TFL - employees’ innovation relationships. Akram et al., (2016), used different stages of employee innovative work behavior to examine the impact of relational leadership on employee innovative work behavior in its industry of china. In the same view, using Self-efficacy and innovation climate, Jisuwal & Dhar, (2015), argued that, Transformational leaders can foster a climate for innovation that promotes employee creativity. Using empowerment and organizational climate, Jung et al., (2003), found a positive link between Transformational and organizational innovation.

A study by ADEGOKE et al., (2009) in comparison of transformational leadership and transactional leadership, the findings found that Transformational leadership style will be more appropriate to foster the creative innovation process. in the same vein, De Jong & Den Hartog, (2010), Identified 13 leader behavior constructs that are proposed to influence either idea generation or application behavior or both. In the study of Effects of Transformational Leadership and Self-leadership on Innovative Behaviors, Lee et al., (2007) used the Empowerment mechanism and found a positive relationship between TFL and innovation behavior. Gu, Duverger, & Yu, (2017) added that Supervisors can influence organizational commitment which directly affects innovative behavior. However, the linkage of innovative behavior and transformational leadership has been evidenced in the literature in different mechanisms, but the previous studies paid less attention to the most valuable driving forces of innovation behavior of employees, such as the role of CSR in this relationship. As explained in past studies, CSR initiatives increase employee commitment (Santoso, 2014), CSR lead to higher employee engagement in creativity and innovativeness (Ikhianizadeh & Karatepe, 2017; Chughtai, 2013; Agarwal, 2014b). And also psychological influential factors like innovation culture and organizational learning, while have been evidenced in the literature as valuable driving forces of employee behavior at the workplace.

Study contribution to exiting literature

Our model of presenting an integrative approach of transformational leadership theory (TLF) and SET in clarifying the relationship between transformational leadership and innovation behavior of employees makes three noteworthy contributions to existing literature. First, most of the previous research has overlooked the impact of transformational leadership on employee behavior.
perspectives, such as work engagement, innovation behavior, and citizenship behavior (Choi, Kim, Ullah, & Kang, 2016; Jung et al., 2003; Pourbarkhordari, Zhou, & Pourkarimi, 2016; Azka et al., 2011; Park et al., 2014b; Tahsildari, Hashim, & Wan, 2014; Eberle, Berens, & Li, 2013). However, the theoretical rationale that explains why such a relationship is still ambiguous and needs deeper examination. Within this framework, based on integrative examination of TFL & SET, this study will add more theoretical understanding by deeply examine why and how transformational leadership influences the work innovation behavior of employees.

Second, while several studies have examined the relationship between transformational leadership and employee innovation behavior, the findings on how top leaders create organizational learning to foster innovation behavior at the workplace still need more analysis. The link of transformational leadership, organizational learning with employee’s innovation behavior is still missing in the literature. Therefore, increasing further knowledge insights on the mediation of organizational learning in the relationship between transformational leadership and innovative work behavior would help to fill in the current gap in the literature. Third, high engagement in CSR has been connected with impressive employee positive attitudes since it influences corporate reputation, (Eberle et al., 2013); CSR can also cause work engagement, (Santhosh & Baral, 2015; Obeidat, 2016). CSR is also connected to citizenship behavior (Rasool & Rajput, 2017b; Gao & He, 2016; Hakimy & Ramli, 2012); CSR can influence job performance and job satisfaction (Bauman & Skitka, 2012; Azim et al., 2014). In the same vein, CSR leads to behavioral royalty (Inoue, Funk, & McDonald, 2017; Ailawadi et al., 2014). However, despite the recognized adequacy of CSR in producing positive work attitudes, the exploration explicitly investigating the strength of CSR in engaging employees towards innovation is still unknown. The role of CSR on individual work behavior still needs more analysis. Introduction of CSR in this study will add more knowledge on CSR- individual innovation relationship literature which has been less developed but seem to be highly valuable.

Research and Methodology
This section presents the basic processes and procedures used to process and interpret the data under review, allowing the authors to determine the validity and reliability of this report. This research methodology is also employed to test the hypotheses developed in this study. This chapter presents; research design, population, and Sampling Procedure.

Research design
This empirical study investigates the connection between CEO TFL, organizational learning, and innovative work behavior; we used a cross-sectional study method focused on data obtained from 24 randomly selected companies registered in the RDB database.

Sample and procedure of data collection
In the current research, a cross-sectional design was performed with the sample size of 434 employees from 24 registered companies operating in Rwanda to test the hypotheses proposed in this study. (Accessed online from RDB website). The criteria selection of companies was based on their size where this study considered only the size of employees. In this regard, we selected an organization that has at least 100 employees. Another selection criterion was Geographical scope where this study selected companies based in three main cities of Rwanda namely; Kigali, Rubavu, and Musanze as the main eligibility of participation. Before the distribution of the questionnaire, respondents were assured of confidentiality and anonymity.

Data Collection
We distributed survey questionnaires in two phases to preserve potential common method bias at a minimum stage. At the beginning of the process, 464 survey questionnaires were distributed in the first phase to respondents rating the TFL quality of their leaders and organizational learning. 60 days later, the author distributed another round of 464 survey questionnaires to the same sample, rating their innovation behavior. After matching the time lag of all phases in data collection, 443 of the total questionnaires were returned. During the data cleaning process, some questionnaires were found inaccurate due to missing complete information and rating the same scores. In this regard, 21 questionnaires were dropped which resulted in a total of 422 responses with a rate of 91%

Measurement
This research adopted multi-item scales adopted from previous studies to assess the relationship between hypothesized variables. All other items were measured using a five-point Likert-type scale, aside from the general identification of the respondents, where (1) strongly disagree to (5) strongly agree.

Transformational leadership: We adopted a short measure of transformational leadership, the Global transformational leadership scale (GTL) developed by Carless, Wearing, & Mann, (2000). This scale was preferred rather than a widely adapted Multifactor Leadership Questionnaire -Form 5 X (MLQ-5X) due to its evidenced internal consistency and a high degree of convergent validity in relation to other scales. A sample item was “My supervisor/manager gives encouragement and recognition to staff.” Innovative behavior. This study adopted a six-item scale originally developed by Scott & Bruce, (1994). A sample item was “Employee generates creative ideas.” CSR. We used measurement items adopted by Fai, Thai, & Diew, (2017); Du et al., (2013). We adopted this measurement as suggested and validated in the relevant literature and we modified them for the objectives of the current study. In this study, we used only 12 items adopted by Khan et al., (2014) measuring CSR activities targeting employees and society. A sample item was “Our Company emphasizes the importance of its social responsibilities to the society”. Organizational learning. We used ten items adopted by Dobni, (2008). A sample item was “Everyone in our organization is involved in learning (training)”. 74
Control variables. In line with Wojtczuk-Turek & Dariusz, (2015); Janssen, 2004), age, gender, education, and tenure of respondents were controlled to rule out the alternative effects of these variables on outcomes.

Common Method Variance

The data used in this research has been obtained from the same sources in terms of institutions and sample; it is however within this context that the common method was tested to avoid its possible effects on the results. In this regard, this study used two widely adopted approaches to test Common Method bias in the findings. Harman’s one-factor recommended by Organ & Kovovsky, (1989) and variance inflation factor suggested by Kock & Lynn, (2012); O’Brien, (2007). These two approaches have been gaining growing interest due to their potential to measure common method bias for the data collected from the same respondents. Hence, the results of Harman’s one-factor revealed that the first factor explained 21.13% which is below 50% suggested by Organ & Kovovsky, (1989). In another hand, in line with O’Brien, (2007); the results of the variance inflation factor tested indicated that all variables used in this study were below 3.3 VIF recommended.

Reliability and validity

To test the reliability of measurement scales in this study, we used Amos version 24 to examine factor loadings of all items in the study suggested by Khalili, (2016). Based on the recommendations of Eliza, Wong, Chan, & Lam, (2013), the items with standardized factor loadings below 0.4 were deleted from the model. According to Wieland et al., (2017), failure to remove bad items in the model may cause inadequacy in measuring latent variables. However, in consistence with Afsar & Bin Saeed, (2014), the model was re-specified by deleting two items measuring organizational learning (1) and transformational leadership (1). After completion of this process, Cronbach alpha (Cronbach, 1951), Composite reliability (CR) (Fornell & Larcker, 1981), and average variance extracted (AVE) (Bagozzi & Youjae Yi, 1988) were also tested to ensure the suitability or meaningfulness of the measurement (validity) and measurement accuracy or stability (reliability). In the same vein, this study also conducted the Kaiser-Meyer-Olkin (KMO) (Anderson & West, 1998) to measure Sampling Adequacy. However, as presented in the table below, the overall results of these tests are within the recommended ranges.

Table 1: Reliability and validity test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variable items</th>
<th>α</th>
<th>KMO</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>6 items</td>
<td>.870</td>
<td>.820</td>
<td>.850</td>
<td>.610</td>
</tr>
<tr>
<td>Innovative work behaviour</td>
<td>6 items</td>
<td>.830</td>
<td>.870</td>
<td>.817</td>
<td>.590</td>
</tr>
<tr>
<td>Organizational learning</td>
<td>9 items</td>
<td>.890</td>
<td>.900</td>
<td>.810</td>
<td>.630</td>
</tr>
<tr>
<td>Corporate social responsibility</td>
<td>12 items</td>
<td>.810</td>
<td>.830</td>
<td>.870</td>
<td>.660</td>
</tr>
</tbody>
</table>

Findings

In consistence with Anderson & Gerbing, (1988), we performed confirmatory factor analysis (CFA) in two-step modeling approaches: namely; measurement model and the structural path to assess the validity and reliability of the constructs using Amos version 24. In this study, we used also the bootstrapping technique developed by Hayes, (2009), this particular approach were adopted due to its ability to analyze direct and indirect effects in the model. As recommended by Hu & Bentler, (1998), we adopted two commonly used indices: absolute fit indices and incremental fit indices to determine the consistency of the model fit. (i.e., χ²/df, RMSEA, CFI, TLI, SRMR). Where, the value below 3.00 indicates a good fit for χ²/df (Joseph F Hair, Black, Babin, & Anderson, 2010), while the value was at least equal or below 0.08 for RMSEA and SRMR show good fit (Hu & Bentler, 1998). For CFI and TLI, Hair, Sarstedt, Ringle, & Mena, (2012) suggested the equal value or above 0.90 as a cut-off. However, as indicated in the table below, the results of CFA for the measurement model suggest a good fit for all constructs.

Table 2: CFA for the measurement model

<table>
<thead>
<tr>
<th>Constructs</th>
<th>χ²/df</th>
<th>SRMR</th>
<th>RMSEA</th>
<th>CFI</th>
<th>TLI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>1.903</td>
<td>0.02</td>
<td>0.05</td>
<td>.97</td>
<td>.96</td>
</tr>
<tr>
<td>Organizational learning</td>
<td>2.011</td>
<td>0.02</td>
<td>0.04</td>
<td>.98</td>
<td>.98</td>
</tr>
<tr>
<td>Corporate social responsibility</td>
<td>2.101</td>
<td>0.02</td>
<td>0.03</td>
<td>.94</td>
<td>.97</td>
</tr>
<tr>
<td>Innovative work behaviour</td>
<td>1.871</td>
<td>0.01</td>
<td>0.04</td>
<td>.95</td>
<td>.99</td>
</tr>
</tbody>
</table>
For measuring the structural model, we conducted CFA for our baseline model. In line with Peterson et al., (2009), we performed CFA for three other alternative models and figured out which model matches the data appropriately. The results suggest that, relative to other alternative models, our baseline model shows an acceptable fit in the data.

**Table 3: Model comparison**

<table>
<thead>
<tr>
<th>Models</th>
<th>χ²/df</th>
<th>TLI</th>
<th>CFI</th>
<th>SRMR</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline model</td>
<td>2.381</td>
<td>.97</td>
<td>.98</td>
<td>0.04</td>
<td>0.02</td>
</tr>
<tr>
<td>3 Factor model</td>
<td>3.919</td>
<td>.88</td>
<td>.848</td>
<td>0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>1 Factor model</td>
<td>4.711</td>
<td>.811</td>
<td>.821</td>
<td>0.08</td>
<td>0.08</td>
</tr>
</tbody>
</table>

3-factor model, TFL, CSR, and organizational learning were merged while in the 1-factor model all factors were merged.

**Hypotheses testing**

Alongside these CFA results, we have also used descriptive and inferential statistical tools using SPSS version 24 to examine more in-depth the correlations among the hypothesized variables. As indicated in the table below, the findings showed that the hypothesis in this study correlated significantly with each other. The results show the significant relationship between TFL and innovation behaviour (r=0.47; p <0.01), organizational learning (r=0.54; p <0.01) and CSR (r=0.57; p <0.01). Hence hypotheses 1, 2 &3 are supported. The results also suggest a positive influence of organizational learning on innovative work behavior (r=0.49; p <0.01). Thus, hypothesis 4 is supported. In the same view, the results support the influence of CSR on innovative work behavior (r=0.52; p <0.01). However, the moderating effect of CSR in the relationship between CEO transformational leadership and innovative work behavior is supported in the findings.

**Table 4: Descriptive statistics and inter-correlations**

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>3.05</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1.39</td>
<td>0.6</td>
<td>.33**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure</td>
<td>3.21</td>
<td>0.9</td>
<td>-.21**</td>
<td>-.35**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>4.80</td>
<td>0.4</td>
<td>.02</td>
<td>-.20**</td>
<td>-.18**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovative work behaviour</td>
<td>24.0</td>
<td>9.2</td>
<td>-.06</td>
<td>-.05</td>
<td>.21**</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transformational leadership</td>
<td>31.9</td>
<td>15.4</td>
<td>-.16**</td>
<td>-.16**</td>
<td>.24**</td>
<td>-.02</td>
<td>.47**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational learning</td>
<td>27.0</td>
<td>12.7</td>
<td>-.14**</td>
<td>-.12**</td>
<td>.25**</td>
<td>.11**</td>
<td>.49**</td>
<td>.54**</td>
<td>.42**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSR</td>
<td>32.5</td>
<td>18.1</td>
<td>-.14**</td>
<td>-.27**</td>
<td>.05</td>
<td>-.03</td>
<td>.52**</td>
<td>.57**</td>
<td>.50**</td>
<td>.39**</td>
<td></td>
</tr>
</tbody>
</table>

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

**. Correlation is significant at the 0.05 level (2-tailed).**

**Mediation analysis**

To examine the mediating effects in this model more in-depth, we adopted bootstrapping techniques using Haye’s Process Macro developed by Hayes, (2009). We adopted this emerging approach due to its efficacy in measuring direct and indirect effects in the structural model (Fairchild & MacKinnon, 2009). This approach offers sufficient and all necessary information for mediation and moderation analysis (Hayes, 2009). Within this respect, this study used Haye’s Process Macro in SPSS 24, to conduct a bootstrapping procedure with 5000 resample. As recommended by Hayes, (2009), we examined three main paths in the structural model (i.e., path-a, X→M, βmx, path-b, M→Y, βym and path-c, X→Y, βyx), to confirm whether there is mediation or non-mediation in the hypothesized model. The evidence from this approach indicates that leaders with TFL qualities stimulate workers to improve innovative work behavior through organizational learning and CSR. As indicated in the table below, the results revealed that all paths are positively significant. As revealed in the findings, in path-a, TFL predict organisational learning (β=0.429; p <0.01). In path-c, TFL predict innovative work behaviour (β=0.428; p <0.01). In path-b, organizational learning predicts innovative work behavior (β=0.427; p <0.01). In path-c', TFL is lessened predicting innovative work behavior (β=0.112; p <0.05). However, in line with Mathieu & Taylor, (2006), since path-a & b are both significant and also based on the fact that the relationship between TFL and innovative work behavior (path-c') is weakened by the introduction of mediation, these results offer vital evidence for mediation effect in the model. In another word, concerning Hayes’s Process Macro results, we found much higher values for mediation than the direct effect of IV to DV. Thus, the full mediation of organizational learning is supported.
Table 5: A path analysis of TFL, organizational learning, and innovative work behavior

<table>
<thead>
<tr>
<th>Paths</th>
<th>Predictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 X predict Y-path C</td>
<td>a. F (1,221) =89.2, p &lt;0.01, R^2=.171</td>
</tr>
<tr>
<td></td>
<td>b. b=.341, t (428) =8.9, p &lt;0.01</td>
</tr>
<tr>
<td>2 X predict M-path A</td>
<td>a. F (1,322) =169.7, p &lt;0.01, R^2=.2891</td>
</tr>
<tr>
<td></td>
<td>b. b=.459, t (429) = 12.9, p &lt;0.01</td>
</tr>
<tr>
<td>3 X and M together predict Y</td>
<td>a. F (3,370) =69.01, p &lt;0.01, R^2=.31.7</td>
</tr>
<tr>
<td></td>
<td>b. M predict Y -path B</td>
</tr>
<tr>
<td></td>
<td>i. b=.269, t (427) =5.8, p &lt;0.01</td>
</tr>
<tr>
<td></td>
<td>c. X no longer predicts Y or the prediction of Y-path C is diminished.’</td>
</tr>
<tr>
<td></td>
<td>i. b=.112, t (428) =2.65, p &lt;0.05</td>
</tr>
</tbody>
</table>

Table 6: Outcomes variable of innovative work behavior (Predictions of DV)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Coeff.</th>
<th>SE</th>
<th>t</th>
<th>LLCI/95%</th>
<th>ULCI/95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>.3220 (***)</td>
<td>.0430</td>
<td>5.0891</td>
<td>.1792</td>
<td>.3388</td>
</tr>
<tr>
<td>Organizational learning</td>
<td>.2894 (***)</td>
<td>.0432</td>
<td>6.2051</td>
<td>.1582</td>
<td>.3422</td>
</tr>
</tbody>
</table>

***=p<0.001

Moderation analysis

Inconsistent with Gashema & Gao, (2018) we adopted a multiple regression analysis based on Hayes’s Process Macro (Hayes, 2009) to assess more specifically whether CSR moderates the relationship between TFL and innovative work behavior. The summary findings indicate that the moderation effect of CSR in the relationship between TFL and innovative work behavior is positively significant (i.e., R=.56, R^2=.3, MSE=79.9, F=181.4, p<0.001). In the same view, Hayes, (2009) revealed that, when zero does not lie in between the bias-corrected bootstrap confidence intervals (CI), the moderating effect is significant. However, within this regard, Hayes’s Process Macro findings suggest that zero does not exist in bias-corrected bootstrap confidence intervals (CI) in this study (see table below). In the same vein, drawing the plot for the conditional effect of the focal predictor as recommended by Hayes, (2009), we conducted the plot indicating the interaction effect of CSR in the relationship between TFL and innovative work behavior. Hence, the results indicate that CSR significantly and positively moderates the influence of TFL on innovative work behavior, such that employees display more innovative work behaviour when they have high rather than low perceptions of CSR initiatives within their organizations. The findings, however, has further reinforced our confidence in the model developed in this research.

Table 7: Model summary outcomes/innovative work behavior

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Coeff.</th>
<th>SE</th>
<th>t</th>
<th>LLCI/95%</th>
<th>ULCI/95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>.12 (ns)</td>
<td>.05</td>
<td>2.4</td>
<td>.021</td>
<td>.16</td>
</tr>
<tr>
<td>Organizational learning</td>
<td>.22 (***)</td>
<td>.042</td>
<td>5.1</td>
<td>.13</td>
<td>.32</td>
</tr>
<tr>
<td>CSR</td>
<td>.22 (***)</td>
<td>.039</td>
<td>5.1</td>
<td>.14</td>
<td>.31</td>
</tr>
<tr>
<td>Int.1</td>
<td>.014 (***)</td>
<td>.004</td>
<td>3.5</td>
<td>.005</td>
<td>.03</td>
</tr>
</tbody>
</table>

***=p<0.001
Discussion, theoretical contributions, and managerial implications

The specific aim of this study was to find out how to improve innovative work behavior within an organizational setting through transformational leadership qualities at the top organizational level. To underline the rationale for the model hypothesized in the current study, we used both transformational leadership theory (TFL) and social exchange theory (SET). This study examined the mediating effect of organizational learning on the relationship between TFL and employees’ IWB. This study also examined the moderating role of CSR in the relationship between TFL and innovative work behavior. To adequately examine the relationship of the hypothesized variables, we used prior adopted methods in data analysis namely; structural equation modeling to measure CFA for both measurement and structural path, bootstrapping techniques to examine mediation and moderation effects in the model, and Pearson correlation analysis to evaluate the mean, standard deviation, and correlation among the variables in the model. Although, the overall results suggest the adequate fit of our hypothesized model into the data.

This study is consistent with several studies in the literature that linked the variables hypothesized in our model with other organizational performance. Using some instances, Makri & Scandura, (2010) found a positive influence of leaders with transformational leadership behavior on the firm innovation. In the same view, Sattayaraksa & Boon-itt, (2016) findings revealed the potential influence of TFL on new product development. Peterson et al., (2009) highlighted the power of leaders' quality leadership in organizational performance. However, the potential mechanisms that link leadership at the top level of organizational management and subordinate psychological performance still need deep analysis. In this respect, consistent with such previous studies in the literature, this study extends the current understanding of the potential of leadership at the top managerial level in shaping the organizational learning environment and enhancing organizational social responsibility that boosts innovative work behavior within an organizational setting.

The present findings have major implications for addressing the issue of counter-productive behaviors and employee’s resistance to change within organizations. In the same vein, we conclude that our research can be useful in designing effective management approaches, procedures, and activities that foster creativity in the workplace. Another surmountable contribution of this study lies in the introduction of the moderation effect of CSR in the relationship between TFL, and IWB within the organizational setting. As explained in the study by Roudaki and Arslan, (2017) perception of CSR initiatives foster employee commitment to work and behavior loyalty (Inoue et al., 2017). Today, trends in consumer taste are pushing companies to adapt. Although, innovative work behavior would be an engine for organizational change. Within this respect, the current study sheds new light on the potentiality of CSR to influence employee’s innovative work behavior. Although organizational learning is a structural basis for creativity in organizations, previous studies have paid less attention to the pivotal role of organizational learning to make the changing process effective. In this regard, we believe that our model explaining the ability of organizational learning to boost innovation behavior could be useful in corporate practices.

Conclusions

Examining the role of organizational learning and CSR in the relationship between CEO TFL and innovative work behavior of employees, Examining the role of CSR and organizational learning in the relationship between TFL and employee innovative behavior, our study findings have led us to conclude that, leaders transformational leadership qualities play a central role in advancing innovative work behavior within an organizational setting. Given the organization's leaders' institutional power account, it stands to the reason that leaders with transformational leadership qualities would value organizational innovativeness, create a pleasant learning environment, and support employee’s risk-taking behavior within the organizational structure. In this study, the results also support the potential role of corporate social responsibility to employees' innovation behavior such that, employees would display more innovative behavior when perceiving organizational commitment to social responsibility initiatives. In conclusion, our study results indicate that it is critical for leaders as policymakers to inspire workers to participate in creative activities, develop a solid organizational learning atmosphere to activate employee's innovative work behavior within the organizational structure. Given that our data are based on a small number of respondents and within a limited time, there might be certain drawbacks. Fact that the data
used in this report was obtained from Rwanda, where the majority of SMEs suffer from financial vulnerabilities to invest enough funds in social support initiatives, we suggest comparable research across countries in diverse economies to prevent the risk of generalizability in the findings. In data collection, the current study used a cross-sectional research design which may be susceptible to bias due to limited responses. In this respect, we suggest the longitudinal approach to allow the examination of data collection with a greater degree of confidence.

References


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