

## **Transformational Leadership and Pro-Environmental Behavior of Employees': Mediating Role of Intrinsic Motivation**

Maria Saleem<sup>1</sup>  
Faisal Mahmood<sup>2</sup>  
Fatima Ahmed<sup>3</sup>

### **ABSTRACT**

*Current research study attempts to investigate the impact of transformational leadership on pro-environmental behaviours along with the mediation of intrinsic motivation. This model is tested on 150 professionals that include lecturers from four different universities of Pakistan. We find that transformational leader enhances the intrinsic motivation, which consecutively related to pro-environmental behaviours positively. Further, there is also a direct positive relationship of transformational leadership with pro-environmental behaviours. Precisely, our findings advocate that transformational leadership and intrinsic motivation is important in prompting pro-environmental behaviours of employees.*

**Keywords:** transformational leadership, pro-environmental behaviours, intrinsic motivation, Pakistan.

### **1. Introduction**

Environmental sustainability is a major concern for organizations, and it is becomes challenging for organizations to survive in today's globalized world. Research scholars and managers are continuously striving to achieve environmental sustainability in management disciplines. But still no final consensus has been established so far, and the debate is continuing. This existing research has adopted environmental sustainability issues in numerous ways. For instance, there is a growing need to understand how to effectively influence individuals to reduce the harmful effects on the environment created due to wastage of energy and resources (Boiral, 2008; Daily, Bishop, & Govindarajulu, 2009).

Therefore, now, organizations are taking initiatives by implementing environmental management systems, eco-design, recycling and energy conservation. Although for the success of these

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<sup>1</sup> Lahore Business School, The University of Lahore, Pakistan;

<sup>2</sup> Lahore Business School, The University of Lahore, Pakistan;

<sup>3</sup> Lahore Business School, The University of Lahore, Pakistan.

Correspondence concerning this article should be addressed to Faisal Mahmood, Lahore Business School, The University of Lahore, Pakistan. E-mail: faisalch62@gmail.com

initiatives, new processes and technologies are necessary, the readiness of the individual to adopt these environmental behaviours and sustain them is also of great importance. When employees are willing to take initiatives to protect the environment they tend to learn about the environment, develop and apply ideas for reducing the company's environmental impact, develop green process and products, recycle more and question practices that hurt the environment and these all behaviours are conceptualized as employees' pro-environmental behaviour (Graves, Sarkis, & Zhu, 2013; Robertson & Carleton, 2018).

Further, these behaviours performed by the employees will lead to an overall positive impact on the environment as well as on the organization's reputation (Niu, Wang, & Xiao, 2017). Since People tend to get influenced at perform a behaviour that they see others performing, pro-environmental behaviours (PEBs') can be encouraged in employees through a transformational leader because a transformational leader is seen as someone who expands and lifts the interest of their followers and persuade them to achieve more than initially anticipated (Anderson, Shivarajan, & Blau, 2005; Boiral, 2008; Daily, Bishop, & Govindarajulu, 2009; Graves, Sarkis, & Zhu, 2013). The characteristics associated with a transformational leader, idealized influence, inspirational motivation, intellectual stimulation and individual consideration is vital for the achievement of organizations goals. A transformational leader having these abilities is more likely to encourage followers by explaining them the importance of protecting the environment and by taking actions take would encourage the followers to adopt as well. Followers consider transformational leader as their role model; they are likely to listen more to him/her (Whitmarsh & Neill, 2010).

Transformational leadership is value-base inspirational leadership as such kinds of leaders not only surpass conveying tasks and administrative rewards but also tries their level best to inculcate the higher sense of purpose in employees by focusing on long term goals. Transformational leadership is a matter of subject for four decades and it is said to be the most dominant leadership style till date (Lord et al, 2017) because of its consistent link with organizational behaviours and performance. Most of all it is particularly associated with the environmental goals, as achieving of such goals depicts values like i.e. taking care of employees for future generations and inspiring employees (Graves & Sarkis, 2018). In transformational leadership with environmental concerns managers convey environmental ideas for their divisions, and they portray themselves as role model by giving much emphasis on environmental values and by taking necessary actions

accordingly. (Robertson & Barling, 2017). Transformational leaders encourage employees by elaborating prospective environmentally supportable working practices.

When leaders inspire followers, they begin to dream of a better future, invest time and effort in learning more do more for their organization and along the way become leaders themselves. A leader who takes care of their people and stays focused on the well-being of the organization can never fail (Afsar, Badir, Saeed, & Hafeez, 2016). In this way, the followers are highly motivated from the leader and the organization they tend to be intrinsically motivated which means they are likely to perform PEBs' voluntarily rather than considering it as a task that has to perform for the sake of being told to do so (Albino, Balice, & Dangelico, 2009).

Accordingly, this research aims to investigate do transformational leaders derive pro-environment behaviours in employees' through the mediating role of intrinsic motivation? This research makes use of self-determination theory (SDT) as a theoretical lens to investigate this relationship. As the existing literature on transformational leadership and SDT recommends that the relationship of employee motivation and environmental transformational leadership can be vital to develop pro-environmental behavior of employees (Bono & Judge, 2003; Broeck, Vansteenkiste, & Witte, 2008). Although similar questions have been widely discussed in existing literature in developed countries, yet it is increasingly essential to investigate in emerging and developing nations. Since the changes in the environment has led to serious issues around the world. For this purpose, this research is conducted in Pakistan and data has been collected from Lahore as it has been considered as one of the most polluted cities of Pakistan now. Rest of the study comprises of following sections. Section 2 enlightens literature review and theoretical model. Research design and methodology are discussed in Section 3. Section 4 put lights on the empirical result and discussions, and finally, Section 5 concludes the study.

## **2. Literature Review and Hypotheses Development**

### **2.1. Transformational Leadership**

Transformational leaders can nurture their employees and can develop a high sense of morality and motivation in them so that long term goals can be achieved. (Graves, Sarkis, & Zhu, 2013; Robertson & Barling, 2013). A transformational leader gets people to look beyond their self-interest and inspire them to reach for the improbable. Also, they provide support and recognition and in return have a high expectation (Lee, Almanza, Jang, Nelson, & Ghiselli, 2013; Rainis, Kader Ali, Tang,

Bakar, & Shafii, 2016). There are four dimensions associated with transformational leadership that transforms the followers in such a way that they can reach their full potential and generate the highest level of performance (Bono & Judge, 2003; Dvir, Eden, Avolio, & Shamir, 2002). The first characteristic is an idealized influence; second is inspirational motivation, thirdly intellectual stimulation and lastly individual consideration (Graves, Sarkis, & Zhu, 2013). Idealized influence allows the leader to play a role of strong model for high ethical behaviour, gain respect and trust from the follower (Banks, McCauley, Gardner, & Guler, 2016). Inspirational motivation is the extent to which the leader provides a vision to his followers that is inspiring and appealing, and in return, their motivational level is increased beyond expectation. In intellectual stimulation, leaders teach their followers to take a risk by changing the old way of thinking about problems by transforming them to think in new ways. Lastly, individual consideration involves the process in which the leader plays a vital role in the career development of the follower by acting as a mentor or coach. Also, transformational leader listens and supports the individual needs (Lee et al., 2013).

Transformational leaders tend to change the creative perspective by such means that the followers begin to strive for more challenging and difficult goals this helps to build risk-taking behaviour in the followers and results into them trying new ways of working by changing the current processes and system that will benefit them in the long run to explore and avail opportunities (Avolio, 2015; Khan, Rao, Usman, & Afzal, 2017; Saleem & Mahmood, 2019). This strong level of motivation can indulge PEBs' in followers (Afsar et al., 2016).

Role of transformational leadership in environmental issues, transformational leaders are expected to present themselves as good role models by providing a clear vision to the followers regarding the importance of environmental issues. Also, a transformational leader would need to involve its followers in the process and ask for their help in reducing environmental problems. Consideration from the followers to resolve the environmental issues can be taken into account, and their new ideas can be encouraged to increase their intrinsic motivation (Graves et al., 2013). When followers experience supportive and non-controlling work environment, they desire to work creatively and take more interest for the welfare of the organization by being committed towards long-term goals and mission regarding environmental behaviour (Afsar et al., 2016; Kelly, 1998). To sum up, it is observed transformational leaders followers are probable to be more effective, optimistic resulting in employees implementing pro-environmental

behaviours which is advantageous for the organization and everyone working in it (Boiral, 2008; Khan et al., 2017).

## **2.2. Intrinsic Motivation**

Motivating employees has always been one of the main problems for leaders and managers, as employees having low level of motivation will give very little effort in their jobs and avoid their work place as much as possible. They have strong intention to leave the organization whenever they will find any opportunity, ultimately producing a very low quality of work. Whereby motivated employees tend to be persistent towards their work, work creatively and put in effort to produce quality work (Amabile, 1993; Prabhu, Sutton, & Sauser, 2008).

Existing literature categorized human motivation into two distinct types: intrinsic motivation which is when a person performs an activity for their own sake and for which the satisfaction is considered as a reward that is associated with that particular activity and extrinsic motivation which means engaging in an activity to obtain an outcome that is separable from the activity itself (Vansteenkiste, Lens, & Deci, 2006; Washakowski, 2015). Intrinsic motivation arises when a person receives pleasure or takes an interest in doing something that they believe is fun. When an employee is intrinsically motivated, they tend to repeat the positive behaviour without being told to do so (Deci & Ryan, 2000; Ryan & Deci, 2000). People who are intrinsically motivated tend to experience interest, enjoyment, feel competent and self-determined in activities they are involved in (Graves, Sarkis, & Zhu, 2013). Some people might be intrinsically motivated due to activity, and some may not. Authors define intrinsic motivation in two ways, one in which a person finds the task interesting and the other in terms of the satisfaction gained from and intrinsically motivated task. These two definitions were derived from the two behavioural theories. Accordingly, to operant theory (Skinner, 1953), all behaviour was motivated by reward. Hence the activity with the rewards within them was said to be intrinsically motivated activities. Therefore, the researcher started looking for a characteristic that makes an activity interesting. On the other hand, the learning theory suggested that intrinsically motivated activities are the ones that provide satisfaction (Ryan & Deci, 2000).

Deci and Ryan (2000) explain two types of intrinsic motivation exist within a person. One is performing behaviour intrinsic motivation, which is doing an enjoyment based activity example would be leisure activities. Whereas other is obligation based intrinsic motivation which is like a personal norm (Werff, Steg, & Keizer, 2013). An intrinsically motivated employee in an organization will perform the activities that

are environmentally friendly. Further, employee will show positive desire towards pro-environmental behaviour because it makes them feel good about themselves (Cerasoli & Ford, 2014). Such behaviours last over time as they arise from within the person performing activities such as recycling, learning about issue regarding environment protection, reusing and buying environmentally friendly products.

Therefore, an intrinsically motivated person is the one who is determined to protect the environment by spending more effort in implementing the environmental protection goals and overcome all the obstacles. To conclude it can be said that “no single phenomena reflect the positive potential of human nature as much as intrinsic motivation” because of the way human seek out challenges themselves and strive to lean on their own (Washakowski, 2015).

### **2.3. Pro-Environmental Behaviour (PEBs)**

Nowadays there is an increasing pressure on organization to act in accordance with the new environmental regulations and try their level best to reduce the negative environmental impact, organizations following this are not only able to achieve sustainability achievements rather have also achieved higher firm performance and increased reputation, this has led to more organizations integrate the concept of environmental friendly behaviour within their organization and promote it among their employees as well because organizations should consider the role of employees to come over the organizations environmental issues. (Temminck, Mearns, & Fruhen, 2015).

If Organizations wish to achieve the goal of protecting the environment, they must be reformed, redesigned and restricted to reduce their environmental effects (Shrivastava., 1995). So the organizations initiated to identify the importance to protect the environment for their efficacy and sustainability (Gkorezis & Petridou, 2017; Springett, 2003). To deal with the environmental issue, policymakers often try to promote pro-environmental behaviour in people through external rewards to increase the behaviour and reduce unfriendly behaviour (Bansal, 2003). However according to research, some people act in an environmental behaviour in spite of it being costly or effortful and then there are those who will act in an environmentally friendly manner even if an extrinsic reward is not associated with it (Boiral, 2008; Werff, Steg, & Keizer, 2013).

Nowadays organization have started to step in a take initiatives on environmental issues by implementing environmental management systems such initiatives include, green purchasing, eco-design, recycling and energy conservation however the vital role is played by the individual as their readiness to actively practice in environmental

friendly is also of great importance to be successful (Eltayeb, Zailani, & Ramayah, 2011; Graves, Sarkis, & Zhu, 2013). Such effective development of green products is very helpful to create effective environmental policies as well as to achieve environmental sustainability (Albino et al., 2009). A broad set of environmentally responsible activities can be stated as employee pro-environmental behaviour. There is five key green behaviours, which include: conserving, working sustainably, avoiding harm, encouraging others and taking the initiative (Gkorezis & Petridou, 2017). A transformational leader, in general, appears to be more relevant in producing pro-environmental behaviour in their followers (Niu et al., 2017).

The behaviour of a transformational leader influences environmental sustainability within the organization because they choose to do what is right and act in such a manner that will benefit the natural environment (Whitmarsh & Neill, 2010). In doing so, they serve as a role model for their follower, who is likely to repeat the same environmentally friendly behaviour. Therefore when a transformational leader has a close relationship with their subordinates they can encourage and inspire their dependents to participate in workplace pro-environmental behaviours because followers are more intrinsic motivation means that would find it interesting and fun to participate in environmentally friendly activity rather than feeling obliged to do so (Robertson & Barling, 2013). Hence an intrinsically motivated follower of a transformational leader would act in a pro-environmental manner by recycling and reusing products, developing sustainable products, preventing pollution, encourage others to participate in green behaviour and would take part in initiating practices and policies (Gkorezis & Petridou, 2017).

#### **2.4. Self-Determination Theory**

The philosophy of Self-determination theory (SDT) posits that an individual can be self-determined or self-motivated according to some aspect of self-determination theory there are some external factors behind the motivated person that can force them to do the things that they do, it is not because they internally want it (Washakowski, 2015). The normal differentiation discussed in SDT is between intrinsic motivation which results from doing something that gives a feeling of pleasure and extrinsic motivation that is performing a task or activity for the sake of saving one 'self from guilt or punishment (Deci, 2005; Ryan & Deci, 2000). SDT is based on maximising human capital and motivational level (Graves, Sarkis, & Zhu, 2013). SDT posits that an important determinant of behaviour is the type of motivation an

individual possesses. SDT can be explained by making use of controlled and autonomous motivation (Taylor et al., 2014). In autonomous motivation, an individual performs activities that are with a full sense of volition and choice (Oostlander, Güntert, Schie, & Wehner, 2013). It involves identified motivation, which is that an employee would perform an activity that matches their values and goals and intrinsic motivation that is performing an activity that seems interesting and fun. On the other hand, action that results due to the belief that it must or should be done is the result of controlled motivation this includes external motivation which results in performing of an activity due to some pressure such as warning of punishment and introjected motivation which involves maintaining one's ego by performing an activity (Graves, Sarkis, & Zhu, 2013).

Autonomously motivated employees tend to be highly satisfied with their job because they perform activities based on personal value or because they are fun and interesting for them, however volunteering is negatively affected when individual act based on controlled motivation because such activities tend to be performed under guilt and pressure or to avoid punishment (Oostlander et al., 2013). When an employee tends to be intrinsically motivated he or she is likely to act more pro-environmentally they will indulge themselves in activities for instance, preserving resources, reprocessing, buying ecologically responsive products. And also employees with stronger intrinsic motivation are likely to perform pro-environmental behaviours which might be perceived to be difficult whereby employees who are extrinsically motivated are less likely to perform difficult pro-environmental behaviours such as obtaining environmentally good products, because of intrinsic motivation they might just perform low-cost PEB such as recycling (Groot & Steg, 2010).

According to SDT literature, quality of experience and performance would vary between an intrinsically motivated employee versus an extrinsically employee (Ryan & Deci, 2000). An employee's performance is increased due to self-consistent and self-expressive nature of autonomous motivation whereby the performance is negatively affected when there is controlled motivation as it ones the act of being told to do something hence free will is not included (Graves, Sarkis, & Zhu, 2013). We focus on intrinsic motivation component of autonomous motivation to examine employee motivation to engage in PEB's.

## **2.5. Hypothesis Development and Theoretical Model**

We put forward as the fact that environmental transformational leadership plays an important role in enhancing PEB's in employees. As



discussed earlier, transformational leaders know how to meet the needs of the followers, the four characteristics associated with transformational leadership such as idealised influence inspirational motivation, intellectual stimulation and individual consideration is fruitful for a good leader-follower relationship (Banks et al., 2016). Moreover, these characteristics associated with the transformational leader are essential because individuals learn by observing and imitating the behaviour of others which is why a leader will have to behave as a role model to transfer the pro-environmental behaviours in his/her followers (Wesselink, Blok, & Ringersma, 2017).

This research is using self-determination theory (SDT) to explain the relationship of transformational leadership and pro-environmental behavior of employees mediated by intrinsic motivation. SDT is a well deep-rooted motivation theory to explain employee motivation. SDT contends that behavior of employees is dependent on the type of motivation not only the amount of motivation (Koestner & Losier, 2002). Accordingly, this research is considering the internal motivation of employees. Internal motivation includes introjected, identified, and intrinsic motivation and it arises within the employees. Employees having introjected motivation partially internalized external messages. They will feel guilty by not performing PEBs. They also believe they should perform PEBs and feel embarrassed if they do not. Further, employees engage in PEBs to fulfil their values in identified motivation. Finally, employees' which are intrinsically motivated involve in PEBs. Even though, all the internal motives to perform PEBs are hypothetically divergent, yet they share likenesses and are greatly interlinked as their collective origins inside the person so can be considered as a single internal motivator (Sheldon et al., 2016).

Transformational leaders develop close contact with their employees to encourage PEB's in their employees since PEBs' is considered as a voluntary behaviour employees are not and cannot be obliged to perform such behaviours this is where the transformational leader has to play his/her part in such a way that encourages employees to engage in PEB's (Wesselink et al., 2017). By doing so they show environmental leadership as they share their environmental values, also by discussing the importance of sustainability and taking actions that show their commitment towards the environmental protection, this process will not only motivates the followers to adopt pro-environmental behaviour but they might also include this as part of their value (Graves et al., 2013).

Hypothesis 1: *“Transformational leadership and Pro-Environmental behaviours of employees are positively linked.”*

Without motivation firms cannot work effectively and efficiently according to studies organizations with lower motivated employees tend to have higher turnover rates, lower commitment and lower productivity due to which it is important for leaders to focus on improving employee motivation (Washakowski, 2015). For this purpose, a transformational leader can be the best person to build intrinsic motivation in employees due to the characteristic they have in them (Avolio, 2015; Tremblay, Blanchard, Taylor, Pelletier & Villeneuve, 2009).

Intrinsic motivation is found in employees who find their work and activities interesting and enjoy doing it even though no external reward is given for it, such individuals have a very positive attitude towards their task and get satisfied internally after accomplishing it (Yidong & Xinxin, 2012). When employees are intrinsically motivated, they are more likely to take an interest in activities that will benefit the environment and will stay consistent in performing them. Employees who are strongly intrinsically motivated tend to engage in pro-environmental activities that might even be expensive, such as purchasing environmentally friendly products. Therefore pro-environmental behaviours are likely to occur when motivators are more self-determined (Groot & Steg, 2010; Osbaldiston & Sheldon, 2003).

Hence according to research, employee participation appears to have a dramatic effect on the reduction in activities that are environmentally unfriendly (F, 1996). Therefore an autonomously motivated employee in an organization will voluntarily participate in green activities because it is consistent with their values, goals, and interest, this voluntary behaviour will boost up their performance as well as their persistence (Graves, Sarkis, & Zhu, 2013).

Hypothesis 2: *“Transformational leadership enhances the intrinsic motivation of employees.”*

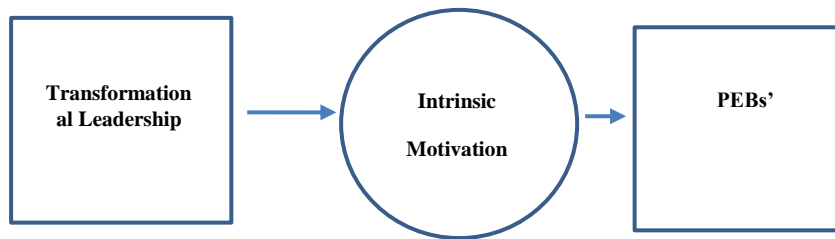
In order to stop the damage towards the environment human will need to alter their habits, that doesn't mean merely doing the right thing now and then rather they must be willing to be consistent and persistent towards putting efforts to eliminate the wastage damage and move towards environmentally friendly behaviour, these changes in behaviour will take motivation of a very special kind (Osbaldiston & Sheldon, 2003).

According to the SDT, most of the time people involve themselves in a behaviour that brings motivation within them rather than due to an external factor, an external motivation won't last for long (Legault, 2017). Transformational leadership aims to communicate a vision that captures the attention of the followers in such a way that they take an interest by engaging in the organization process and systems to achieve the goals. Followers of a transformational leader are intrinsically motivated because they experience a supportive and non-controlled work environment this increases followers interest in the organizations activities, their commitment level resulting in boosted performance also such intrinsically motivated individuals tend to align the personal and organizational goals due to which they get satisfied and find their work fun and interesting (Afsar et al., 2016).

Transformational leaders tend to talk to the followers regarding the importance of environmental protection issues in such a way that followers are encouraged to participate in the environmental protection process due to this feeling of self-expression is increased in the followers, to develop PEBs' in followers transformational leaders talk keenly and assertively regarding requirements to be accomplished and how it can be accomplished for this they act a role model and perform environmentally friendly actions such as recycling , printing double-sided , use scrape paper instead of new paper for notes and turn off lights when room not in use these activities can encourage the followers to take green initiatives too (Graves, Sarkis, & Zhu, 2013).

Accordingly, to research, when an organization attempt to adopt environmentally friendly practices, they tend to face increased profits and improvement in environmental performance (Theyel, 2000). Hence when followers see such commitment by the transformational leader towards PEBs' they show a positive behaviour and are likely to adopt green behaviour because individuals learn more by observing and then tend to show similar patterns of behaviour (Blok, Wesselink, Studynka, & Kemp, 2015).

*Hypothesis 3: "The relationship of transformational leadership with pro-environmental behaviour of employees' is mediated by intrinsic motivation."*



**Figure 1:** Theoretical Framework

Figure 1 explains the theoretical framework of this research, where, transformational leadership is an explanatory variable, PEBs' is the outcome variable and intrinsic motivation is incorporated as a mediator.

### 3. RESEARCH DESIGN AND METHODOLOGY

This research has used quantitative research design. The nature of research is explanatory and employees were the unit of analysis. The sample selection for this research was done by following the convenient sampling guidelines and cross-sectional data was collected from 150 employees working in four universities located in Lahore, Pakistan. In total 300 questionnaires were distributed to employees randomly and in return 150 valid questionnaires were received at the response rate of 50%. The demographic details of respondents are as follows: 52% males and 48% females. Moreover, 60% respondents are in the age of 30 to 39 years. Further, 76% respondents have earned a master's degree and 66% respondents have total job experience above five years. This research makes use of the survey method for data collection.

The instrument used in this research is used by Graves, Sarkis and Zhu (2013) and it consists of 24 items which are divided into four parts at seven points Likert type scale [1 strongly disagree to 7 strongly agree]. First part is related to the *demographics* like respondents' age, education, gender etc. The second part is related to the *transformational leadership* that is measured by using five items. The sample items are, "My leader displays confidence about environmental issues," "Provides teaching and coaching on environmental issues." The third part consists of six items on *intrinsic motivation*. The sample items are, "I would engage in green behaviours at work because it allows me to achieve goals, I consider it important", "Of the pleasure, I get from doing it." Lastly, fourth part is related to the *pro-environmental behaviours* consisting of thirteen items. The sample items are, "At work, I offer ideas for reducing our impact on the environment", "Join in environmental activities that are not required by my job. Confirmatory factor analysis was done by using AMOS and model fitness was

assessed by Chi squared test, comparative fit index (CFI), root mean square error of approximation (RMSEA) that are widely recommended in the literature and the acceptable cut-off values used in this research was less than 2 for Chi squared test, 0.90 for CFI and 0.08 for RMSEA (Hu & Bentler, 1999; Kline, 2011). Moreover, KMO and Bartlett's test was performed to test sample adequacy and internal consistency was measured by using Cronbach's Alpha test. The relationship between variables can be effected by personnel differences and demographics of respondents. To control for these biases gender, age, experience and education are used as control variables in this research. Gender was measured as dichotomous variable male or female and age on categorical scale. Further education and experience was measured in years.

#### 4. EMPIRICAL RESULTS AND DISCUSSIONS

To begin our analysis, first of all, the data is tested for demographic details of respondents. Then the reliability analysis is performed. All the items vales are significant and above require a level to conduct analysis.

*Table 1: Demographic Details*

Gender		Age		Education		Experience	
Male	79	20-29	23.6%	Bachelor's	2.7%	Less than five years	20.7%
Female	71	30-39	60%	Master's	76.7%	5-10	34.7%
		40-51	16.7%	Above Master's	20%	10-15	32%
						15-20	10%
						More than 20	2%

Notes: Table 1 represents the demographics of our total sample, which was 150.

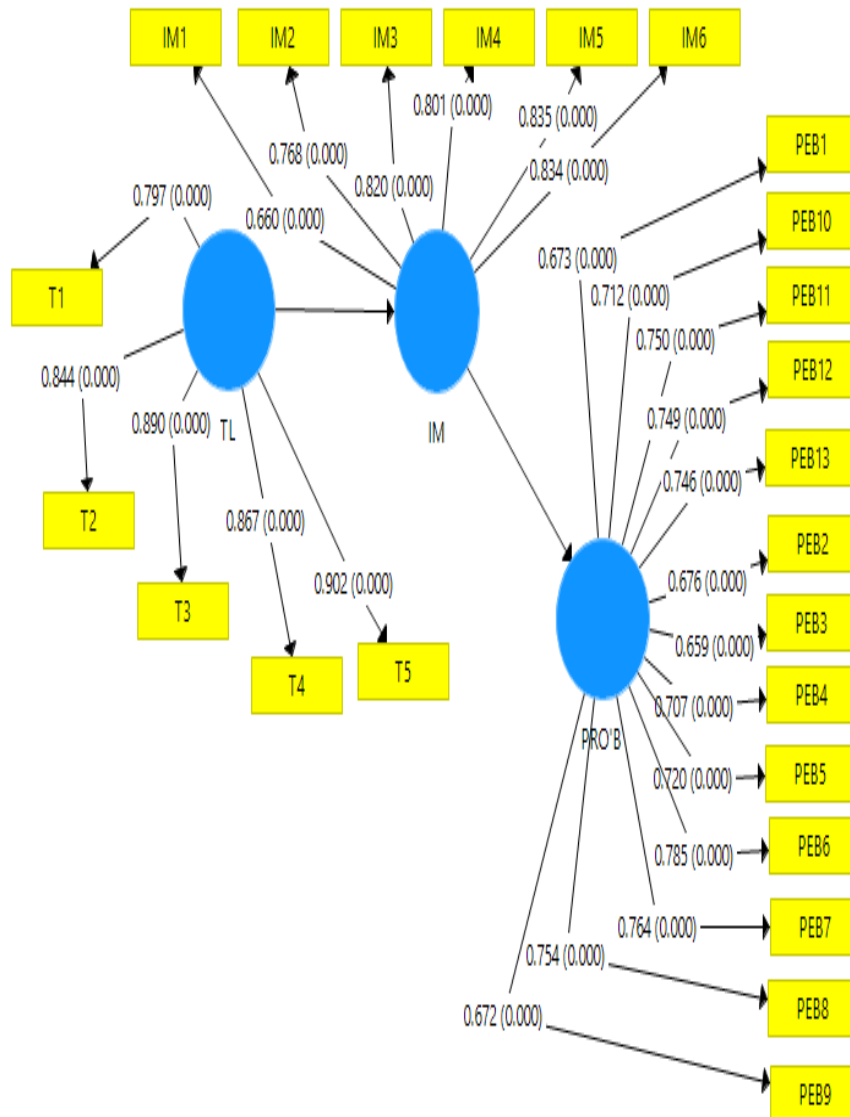
Source: self-calculation

*Table 2: Reliability Analysis*

	Cronbach's Alpha	Items
Transformational leadership	0.917	5
Intrinsic motivation	0.877	6
PEBs	0.923	13

Notes: Table 2 explains the reliability of our questionnaire since the Cronbach's Alpha values for all the variables are above .6 it means that our questionnaire is reliable. All of the scales have a value of Alpha in the range from 0.917 to 0.923. Mostly in social sciences, researchers consider values greater than 0.60 acceptable. The results above show that all measuring instruments have values greater than 0.60.

*Source: Self calculation*



**Figure 2:** Factor loadings and p-values of all the items

**Table 3:** *Impact of transformational leadership on intrinsic motivation*

	<b>Coefficient</b>	<b>P-value</b>
Constant	4.80 (.27)	0.000
Transformational leadership	0.13* (.05)	.014
R <sup>2</sup>	39.5%	

Notes: Table 3: Explains that an increase of 1% in the transformational leadership will bring an increase of 13% in intrinsic motivation. The value (.27) and (.05) are the standard errors, and R<sup>2</sup> represents how much change is caused by independent variable in the dependent variable, which means transformational leadership will bring 39.5% change in PEBs.

Source: self-calculation

Table 3 shows the impact of transformational leadership on the intrinsic motivation of employees. A transformational leader having qualities such as idealized influence, second inspirational motivation, intellectual stimulation and lastly individual consideration significantly helps to enhance the intrinsic motivation of employees. Transformational leadership has a statistical and economically significant role in the development and enhancement of intrinsic motivation in employees at a 1% significance level. Thus, one unit increase in transformational leadership leads to 0.13 units increase in employee's intrinsic motivation. Where the value of R<sup>2</sup> represents that variations caused by independent variable in the dependent variable. It means transformational leadership is explaining 39.5% of intrinsic motivation.

**Table 4:** *Impact of transformational leadership on pro-environmental behaviour with mediating effects of intrinsic motivation.*

	<b>Coefficient</b>	<b>P-value</b>
Constant	2.75* (.42)	0.000
Intrinsic motivation	0.13* (.07)	0.000
Transformational leadership	0.21* (.04)	0.000
R <sup>2</sup>	24.5%	

Notes: Table 4 shows that a 1% increase in the transformational leadership changes 21% change in PEBs and a 1% increase in the intrinsic motivation can bring about 13% of change in the PEBs.

*Source: Self-calculated*

Table 4 shows the association of transformational leadership with employee's pro-environmental behaviour through the mediating effects of intrinsic motivation. Intrinsic motivation has a highly significant effect on the relationship between transformational leadership and employees PEBs'. Transformational leadership has a statistical and economically significant positive impact on employees PEBs' at 5% significance level. Hence one unit increase in transformational leadership leads to 0.21 units increase in employees PEBs. The value of  $R^2$  explains that transformational leadership and intrinsic motivation are explaining the pro-environmental behavior of employees by 24.5%. Therefore, we accept our hypothesis 1: Transformational leadership will be positively related to Employee's PEB's at 5% significance level. Intrinsic motivation has a statistical and economically significant positive impact on employees PEBs at 5% Significance level. Hence one unit increase in intrinsic motivation leads to 0.13 units increase in employees PEBs. Thus, we accept our Hypothesis 2. The results of this research shows the partial mediation of intrinsic motivation to explain the relationship of transformational leadership and employees' pro-environmental behavior. So our Hypothesis 3 is also accepted.

**Table 5:** *Effect of transformational leadership on employees PEBs*

	Effect of X on Y	Total Effect
Direct effect	0.218	
Indirect effect	0.042	
Total effect	0.218+0.043	0.267
Portion of mediating variable	0.043/0.267	0.163

Notes: Table 5 represents relationship between predictor and criterion variable. Where 0.163 shows that the mediators explain 16% of the total effect.

Source: Self calculation

#### 4.1. Discussion

Objectives of this research are to contribute in the existing stream of literature by analysing the relationship of transformational leadership with pro-environmental behaviours at workplace through the mediation of employees' intrinsic motivation. Currently there exist very limited piece of research that have explored the antecedents of employees' pro-environmental behaviours. Few noticeable studies have been done in the westerner context. The scope of this research is also widened by investigating a mechanism that has not been tested so far. Empirical findings of present research provide ample support to the model of this



research. As transformational leadership is positively linked with pro-environmental behaviours. Further this research also finds the positive association of transformational with intrinsic motivation. Finally, we finds the partial mediation of intrinsic motivation to explain the relationship of transformational leadership and pro-environmental behaviours. Specifically, these findings spotlights on how transformational leadership is linked with pro-environmental behaviours.

The transformational leadership is positively linked with employees pro-environmental behaviours which is consistent with existing literature on transformation leadership such as (Graves, Sarkis, & Zhu, 2013; Ng, 2017). Moreover, our findings on the relationship of internal motivation with employees pro-environmental behaviours is consistent with self-determination theory and according to existing researches as well (Aitken et al., 2016; Deci et al., 2016; Graves et al., 2013). Thus, present research recommended that internally motivating employees' might accelerate pro-environmental behaviours.

This research has primarily contributed in the literature by focusing on interplaying with the environmental perspective of transformational leadership and employees' motivation in promoting green behaviours at the workplace within the context of Pakistan. To date, there is a limited piece of studies on the determinants of employees' environmentally responsible behavior. Moreover how internally motivated employees can facilitate PEBs at workplace also remains untapped. Our results strongly support the model of study that employees who are internally motivated are more inclined towards performing such behaviours, because such behaviours are usually voluntarily accomplished by the employees of the organization. That is why intrinsic motivation is of much importance. Furthermore this research is consistent with the self-determination theory as well, as it explains how leaders can motivate their employees for the execution of desired behaviours (Gagné & Deci, 2005). Leaders having environmental transformational leadership displays more concern for higher environmental values and expresses the same in their vision and goals (Egri & Herman, 2000). Employees then accepted the vision of their leaders and internalize these values and goals that ultimately lead to increased degree of environmental activities at the workplace. Employees personally feel these activities meaningful because their behaviours are being transformed and shaped by their leaders. Transformational leaders continuously engaged themselves in coaching and mentoring their employees in order to promote PEBs at work place. Because of this continuous coaching employee feel themselves

competent enough to address any environmental issue confronted by them at organization (Graves, Sarkis, & Zhu, 2013). Intrinsic motivation is positively linked with the employees PEB and this finding is consistent with the evidence present in existing stream of knowledge i.e. intrinsic motivation has more beneficial in promoting PEBs in organization (Graves et al., 2013).

As its been already addressed that environmental issues are taking much attention in the organizations, so it's a very applicable model that can used in the organizations of Pakistan to promote workplace PEBs. This research suggests that immediate leaders' environmentally responsible transformational leadership along with internally motivated employees could be the important predictors of PEBs at workplace. And this is according to the existing researches on PEBs and this research also demonstrates its applicability in Asian context (Chirkov, Ryan, Kim, & Kaplan, 2003; Walumbwa & Lawler, 2003). Furthermore, organizations must recognize the importance of environmental leadership throughout the organization not only in specific sustainability divisions. Further environmental concerned transformational leadership provided to the employees by their instant leader is likely to be essential for environmental behaviours and initiatives. Moreover organizations should also emphasis on employees' environmentally friendly behaviours.

## 5. CONCLUSION

This research aims to investigate the impact of transformational leadership on employees on environmentally responsible behaviours' with the mediation of intrinsic motivation. We find a positive relationship. The transformational leader plays an important role in enhancing environmental values in their followers which appears to facilitate employees' intrinsic motivation which in return increases the PEBs. When transformation leaders act as a role model and act in a pro-environmental manner, then their follower tends to perform such behaviour as well. Since past few decades climate changes have been drastically increased, and its effects, which are largely caused by human beings, are likely irreversible. Organizations are considered as essential contributors to climate change, which is why it becomes essential for organization to work for environmental protection from any further damage. This research suggests that transformational leaders can positively encourage employees to participate in green activities that will protect the environment. Transformational leaders tend to have qualities that attract their followers in such a way that they feel inspired by them this inspiration, which later on converts into a passion. The behaviour of a transformational leader and their active participation in

protecting the environment motivates employees intrinsically, which mean those employees enjoy taking part in green activities and that it becomes more of moral value for them. The active participation of transformational leaders and employees would benefit the organization in the form of increased reputation for its customers, would make the employees' to feel proud of being part of an organization who is concerned about the environment leading to increased productivity and performance in the organization as well as in its profits and a reduction in turnover rate since more employees would want to be a part of such an organization. Future research can be done to confirm our findings. Further, since this research has been done in a cross-sectional setting and data was collected from the same level, longitudinal research can be conducted to collect data from multiples levels of organization. This research can be expanded by considering more indirect factors i.e., institutional environment.

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