

The Effect of Green Leadership and Employee Pro-environmental Behavior: The Role of Followers' Green Moral Obligation and Islamic Work Ethic

Sherish Khalid

Department of Management Sciences, University of Gujrat, Gujrat, Pakistan
Email: sehrish.khalid26@gmail.com

Muhammad Anwar ul Haq (Corresponding author)

Department of Management Sciences, University of Gujrat, Gujrat, Pakistan
Email: anwar.haq@uog.edu.pk

Mirza Ashfaq Ahmed

Department of Management Sciences, University of Gujrat, Gujrat, Pakistan
Email: ashfaq.ahmed@uog.edu.pk

Article History

Received: 13 Dec 2023 Revised: 20 Mar 2024 Accepted: 24 Mar 2024 Published: 31 Mar 2024

Abstract

The purpose of this study is to examine the effect of green leadership (GL) on employee pro-environmental behavior (EPEB). The underlying mechanism of followers' green moral obligation (FGMO) was also investigated. The Islamic work ethic (IWE) was studied as a boundary condition. The study grounds upon value belief norm (VBN) theory. Data was collected from Islamic banking sector, Pakistan. Cross-sectional design was followed to collect the data from employees working in the Islamic banking industry. The final usable sample size was 365 observations. Partial Least Square Structural Equations Modelling (PLS-SEM) using Smart-PLS software was conducted to test the hypotheses. The results of this study proved that GL has significant positive effect on EPEB. FGMO partially mediated between GL and EPEB. IWE positively moderated the effect of GL on FGMO and of FGMO on EPEB. This study empirically provides that in order to promote the environmentally conscious behaviors amongst employees in the workplace, it is imperative that the leadership should be environmentally cautious. The underlying effect of FGMO, also proves that the behavior of leaders would obligate the followers. Furthermore, IWE strengthens EPEB. This study is unique to add to the body of literature by integrating FGMO as mediator and IWE as moderator to explain the relationship between GL and EPEB.

Keywords: Value belief norm theory, green leadership, followers' green moral obligation, Islamic work ethics, green followers, employee's pro-environmental behavior.

1. Introduction

Environmental degradation is a grave global issue which seems to be accelerating at an alarming rate. Dynamic market changes and the demand to meet those changes by industries has worsened the environmental conditions. This includes excessive use of paper causing degradation of natural resources and excessive use of plastic causing damage to wildlife, leaving us vulnerable to disasters and scarcity of resources (Peng & Lee, 2019). Scientists around the world have also claimed that our resources will soon exhaust causing devastating climate changes (Dubois & Dubois, 2012; NASA, 2011). Various industries are causing damage to the environment, Banking is regarded as one the major contributors, because of the heavy usage of paper, and the electricity in its operations, data centres, and back-end servers. However, lesser attention has been paid by the academic research towards the study of the prevalence of green practices in the banking sector.

The implementation of green banking can be greatly assisted by workers' knowledge about the environment. employees whose awareness of how their work affects the environment are more inclined to act in ways that support the environment, which may motivate financial institutions to establish and implement strong green practices (Burhanudin et al., 2021). Being cautious about the environment fosters sustainable development, it enhances job effectiveness, and increases employee and leader spirit. Since their opinions have an immense effect on their followers' feelings and behavior, leaders have an enormous duty to encourage their followers to be more vocal about environmental protection. By witnessing this, leaders have capacity to motivate their followers to take an active role in environmental responsibility, which will have advantageous effect across the entire organization (Saleem et al., 2020).

Studies exploring interplay between green leadership and employees' pro-environmental behavior are limited. Not only that the literature is limited, but also the context is Western. It indicates a gap. Evidence from Non-Western cultures is highly needed as they are also a major contributor to the environment (Derue et al., 2011; Egri & Herman, 2000; Lamm et al., 2015). Suliman et al. (2023) also highlighted an earnest need for examining the green behaviors, both at the level of the leader and the followers. Ismail and Hilal (2022) have cautioned that linkage between green leadership and followers' environmentally cautious behavior might not be a simple relationship. There could be multiple factors into play such as employees' values, culture, and organizational context to mention the least. Therefore, to better understand the effect of green leadership practices on the pro-environmental behavior of followers, the underlying mechanisms and the boundary conditions should also be counted into. In essence, it demands a broader scope and a cross-cultural lens to illuminate the underlying mechanism and boundary conditions.

Promoting pro-environmental behavior can be effectively facilitated through interventions targeting green moral obligation, which refers to a sense of duty and responsibility towards environmental protection. Research indicates that individuals with strong morals exhibit

interest in recycling, reduced energy consumption, and decreased reliance on transportation (Khan et al., 2023). As such, morals are powerful motivators that can drive people to act, especially when they feel their values are being threatened and act in manner that is more aligned to their morals (Abbasi et al., 2022). FGMO emerges through the convergence of shared values, fortified convictions, and instituted norms, all under the steerage of the leader's influence. This cultivates a united dedication towards environmental preservation within both leaders and adherents. As a result, choosing FGMO will broaden the horizons of VBN theory's application within the realm of HR (Guiyao et al., 2023). Islam, amongst other religions, is regarded as most ecological religion since for Muslims, the teachings of Quran and Sunnah are the main element of Shariah laws and Shariah laws guide Muslims to exhibit actions that will ensure the environmental safety and sustainability (Parveen, 2020).

The Holy Quran:

“O children of Adam! ... eat and drink: but waste not by excess, for Allah loves not the wasters.” (Quran, Surah 7:31)

The Holy Prophet (P.B.U.H):

“The world is sweet and green, and verily Allah is going to install you as vicegerents in it in order to see how you act”. (Sahih Muslim 2742, Book 49, Hadith 12)

The banking sector of Pakistan is actively promoting the use of eco-friendly goods and services by investing in renewable energy projects and financing sustainable initiatives as ways to encourage pro-environmental behavior. But despite everything they do, the banking industry finds it difficult to keep up its ethical duty of protecting the environment. The employees' sense of personal responsibility and motivation to engage in pro-environmental behavior is restricted in Pakistan with the lack of a comprehensive and strongly embedded pro-environmental culture, as well as a weak organizational culture and less leadership commitment (Qureshi & Hussain, 2020). The impact of leadership and the importance of ethics can encourage in implementing more ecofriendly behaviors. Now majority studies are concentrating on task associated antecedents for the purpose to improve EPEB in organizations (Lamm et al., 2015; Olson et al., 2013 ; Ramus & Steger, 2000).

It is very essential to conduct further studies to examine the numerous factors that influence people's pro-environmental behaviors, including what encourages, shapes, strengthens, and promote such behavior. Furthermore, an analysis of leadership styles that supports the sustainability goals can improve our understanding of how pro-environmental behaviors are influenced by a leader and help close the research gap for future researchers (Afridi et al., 2023; Saleem et al., 2020). More researches are required to completely understand how an environmental responsive leader affects employee conduct and environmental protection. This study will examine the leader's dedication to protecting the environment, how they inform followers about the dangers of environmental deterioration, and how this influences employees' actions that are supportive for the environment (Hu et al., 2022).

In Pakistan, large number of consumers is attracted towards Islamic banks due to its Riba free quality products and services. Due to the demand, Islamic banks in Pakistan are rapidly increasing and because of that the carbon foot printing of Islamic banks is also increasing (Awan & Azhar, 2014), Green behavior in Islamic banking sector distinctly remains unexplored to a great extent (Parveen, 2020). Literature has made evident the significance of the impact of a leader on his employees. Significance of a leader is even more crucial in the service sectors of Pakistan as compared to other sectors (Asrar-ul-Haq & Kuchinke, 2016). The lack of study of the significance of GL for EPEB in Pakistan represents a research gap. Following this, there is a lack of understanding of how green leadership can be effectively shape environmental behaviors in different contexts, such as developing countries and the service sector. This study aims to investigate and indicate the consequences of green leader, Islamic work ethics and felt green moral obligation on employee pro environmental behavior.

The paper has been organized into five sections. The second section presents literature review and hypotheses. The main constructs have been discussed tracing their origin in the literature. The hypotheses have been formulated grounding upon the VBN framework. The third section provides methodology outlining the details of population, sampling technique, and size. In the fourth section, results of analysis have been given including measurement model assessment and hypotheses testing. The fifth section provides theoretical implications, practical implications, limitations and suggestions for future research.

2. Literature and Hypotheses

2.1 Green Leadership and Employee Pro-Environmental Behavior

The capacity to motivate and encourage others to take actions that save the environment and improve justice in both the economy and society is known as "green leadership." Green leaders are able to create a shared vision for a better future and build relationships with others to achieve their goals (Suliman et al., 2023). Green leaders inspire followers through actions and improve green creativity among employees (Jamshed et al., 2022). Green leadership determines, how to make an organization ecologically sustainable, environmentally responsible, economically competitive, and how to response to environmental changes that benefit the company and the environment (Fahmi, 2020; Foster et al., 2022). In spite of the wealth of literature surrounding GL approaches, its associations span various fields. As a result, a specific and definitive definition of green leadership remains elusive. Moreover, there is lack of evidence relating green leadership with innovation, and performance. Guinot et al. (2022) opine that the lack of understanding of the phenomenon of green leadership practices has hampered us to develop environmentally sustainable actions in the organizations.

EPEB encompasses those behaviors and practices that the employees involve in for the benefit of the environment. These practices entail participation in green initiatives and

environmental campaigns (Elshaer et al., 2023). Green behaviors of employees are exhibited in two ways; voluntary behaviors, and mandatory green behaviors. In voluntary behaviors, employees engage in green behavior based on their own feelings for the environment. No external impetus is needed as such. In mandatory green behaviors, external stimulus is needed, such as company policy. Norton (2015) argues that since voluntary green behavior is based on personal preferences, it is might be more beneficial. On the other end, Kormos and Gifford (2014) observe that barriers such as cognitive, psychological, and ideological may contain employees to engage in organizationally preferred actions. In this scenario, various cognitive theoretical perspectives, for instance, value behavior norm framework, may help understand the effect of external stimulants on EPEBs (Unsworth et al., 2013; Zhang, 2020).

The underlying theory of this study is value belief norm (VBN) theory which is a subset of social-cognitive theory, that explains the ways human behavior can be influenced by their particular beliefs, values, and norms. Under the purview of VBN theory, employees who own environmental values, realize that their actions can have a lasting effect, and consider it as the societal norm to do so, are more motivated to take part in EPEB. (Guiyao et al., 2023). GL establishes the policies, rules and regulations within an organization that favors the environment. Establishing practices that have a long-term vision for the organization, driven by motivation to protect the environment, prioritizes the wellbeing of others, is ethically woke and pursues environment goals (Dubey et al., 2014; Fahmi, 2020). Employees that are ecologically aware of their environmental issues and bring about positive change through their actions, are most likely to exhibit behavior for the solution of these issues (Saleem et al., 2020). The extended social norm theory within the VBN framework indicates that individuals' environmentally conscious behaviors are intricately tied to the influence of role models they admire or those they regularly engage with. This is especially evident in the significant impact that leaders exert in motivating their followers' behaviors. The backing of both the organization and managers becomes imperative in fostering voluntary pro-environmental actions (Stern et al., 1999). Thus, the following hypothesis is developed:

- *H1: Green leadership has a positive effect on employee pro-environmental behavior.*

2.2 Role of Followers' Green Moral Obligation

The one's belief to act in beneficial way for environment regardless of the outcomes is known as "green moral obligation (GMO)". It is a sort of societal norm that depend on the notion, that specific behaviors have proper or improper implications for the environment. Green moral obligation can be a strong motivator for people to engage in green behavior, as they may feel a sense of guilt or shame if they do not behave in a way that they believe is right (Yeow & Loo, 2022). Green behaviors are usually viewed as an individual's mixture of personal interest and intentions that promote moral obligation and the alignment of personal interests with ecological safety (Bamberg & Möser, 2007; Chena & Tung,

2014). Previous studies have analyzed the relationship between moral obligation and Pro-Environmental Behavior (PEB). There was evidence of positive relationship between Moral obligation and PEB (Lam & Chen, 2006; Saphores, 2012). Previous studies also stated that smaller actions of PEB leaders to bigger commitments that foster environmental conservation behavior (Werner, 1995). Bandura (1997) suggested that one is encouraged by others for his specific actions then it will be more effective in carrying out actions that require more effort. Both the VBN theory and moral obligation are closely intertwined with values, beliefs, and norms, underscoring the pivotal role of FGMO in shaping individuals' intent to adopt eco-friendly practices (Fauzi et al., 2022).

FGMO is the key factor in driving the employee towards green behavior. Ability to judge actions of oneself, feeling sense of responsibility to exhibit actions that benefit the environment is FGMO (Zhang, 2020). A green morally obligated employee designs the organizational policies and practices in the favor of the environmental safety while keeping in the view of organizational objective (Saleem et al., 2020). VBN theory states that personal values, psychological aspects, emotions and involvement in work is more likely to promote environmental behaviors among individuals. Pro-environmental behavior can be considered a way to fulfil their moral intentions (Han, 2014). Certain employees exhibit eco-friendly behavior in order to fulfil their moral objectives for protecting and preserving the environment (Han, 2014). The essence of the value belief norm theory lies in its assertion that an individual's actions are steered by their core principles, values, sense of duty, and the subtle impact of influential figures, particularly senior role models. Within this theoretical framework, the concept of GL emerges as a catalyst with the potential to yield positive outcomes, particularly in terms of fostering a sense of environmentally responsible moral duty. Empirical investigations conducted so far reveal a promising connection between GL and the cultivation of a heightened FGMO (Al Halbusi et al., 2023). Therefore, it is proposed that:

- *H2: Green leader has positive effect on followers' green moral obligation.*

According to VBN theory, behaviors are influenced by attitude which helps to know the reason why conservation behavior mostly rely on one's standards (Saphores, 2012). Researches has shown that attitudes considered to be very reliable factors when assessing environmental behaviors. Moral obligation is also known as personal responsibility. People who possess a strong sense of obligation for their actions and the effects they have on society are more inclined to participate in pro-environmental activities by Lamm et al. (2015). Research has proven that FGMO has significant impact on EPEB. There is need of more studies in this field with the view of VBN theory. By examining the connection between FGMO and pro-environmental activities in different context, scholars can reveal an advanced understanding. Furthermore, knowing the variations of this relationship completely requires taking into account other elements of EPEB that go beyond the standard scope. Thus, it is proposed that:

- *H3: Felt green moral obligation has positive effect on employee pro-environmental behavior.*

According to the VBN theory, moral obligations and other personal values play significant role in encouraging environmental behavior. It has been demonstrated that FGMO is a construct that mediates the link between GL and EPEB. VBN also suggest that behaviors are significantly shaped by one's own norm and values. Employee values are shaped by green leader's environmentally responsible acts, which encourages a sense of commitment for sustainable actions (Wang et al., 2023). FGMO, therefore, might mediate between the relationship of GL and EPEB. The present research on FGMO and EPEB is limited. The majority of researches on major behavioral issues is still not clear what extended mechanisms FGMO and EPEB use to mediate their relationship (Yeow & Loo, 2022). Furthermore, understanding the investigation of this relationship in all its facets needs taking into consideration GL and EPEB's several aspects outside of the traditional purview. Thus, it is proposed that:

- *H4: Felt green moral obligation mediates between the relationship of green leadership and employee pro-environmental behavior.*

2.3 Role of Islamic Work Ethic

Islamic work ethic is defined as the set of principles, moral values, guidance of noble actions, Quranic teachings and the teachings of Prophet Muhammad (PBUH) who emphasized Muslims on working hard and implying Islamic teachings and Quranic laws in everyday life (Ali & Weir, 2005; Quoquab & Mohammad, 2013). Islamic work ethic teachings promote employees' behavior to be transparent, honest and beneficial for everyone around. Islamic ethical values are quite different from western concept of ethics in terms of belief, values and how they are perceived (Aziz et al., 2018). Islamic teachings elaborate the importance of protecting the environment as it is an essential part of Islamic values and beliefs. One should not waste water making ablution (wudu) (Sahih Bukhari: Chapter 4, Hadith No: 198). One of the major objectives of Islamic teachings is not to abuse the environmental resources and reducing harmful actions (Aziz et al., 2018). Insufficient research has been conducted in studying the promotion of EPEB through implementation of IWE in organizational work settings (Aziz et al., 2018).

Recent studies highlight the usefulness of the Value-Belief-Norm (VBN) theory in understanding how Islamic work ethic shapes behavior. The VBN theory, when applied to IWE, establishes a meaningful connection by illustrating how an individual's values and beliefs within the Islamic framework influence the cultivation of pro-environmental behavior. This relationship holds substantial importance as it paves the way for the creation of innovative frameworks that amalgamate ethical principles from both the VBN theory and IWE, fostering a more comprehensive understanding of environmental behavior and potentially yielding novel strategies for sustainable practices (Trautwein et al., 2023). In Holy Qur'an ALLAH (Subhanahu Wa Ta'ala) says:

“Eat and drink: But waste not by excess, for Allah loveth not the wasters“. (Quran: Surat Al-A’raf 7: 31).

Prophet Muhammad (PBUH) on environmental sustainability states:

“The world is beautiful and verdant, and verily God, be He exalted, has made you His stewards in it, and He sees how you acquit yourselves.” (Sahih Muslim, hadith no. 2742).

This shows the emphasis of Islamic teaching on sustainable cultivation and forbids overexploitation of resources. IWE teaches us to not take more than you need which is applicable to also promoting not to heavily abuse natural resources, thus, promoting environmental behavior (Ali & Al-Owaihian, 2008).

Leadership holds a pivotal responsibility in championing ethical conduct within an organization. In this regard, IWE offer invaluable cultural insights that enable enterprises to comprehend the diverse beliefs held by their followers. It's noteworthy that prior research on PEB predominantly stems from a Western standpoint, thus confining its scope and introducing an inherent bias. Now it is very important to include a large range of ethnic backgrounds, values and belief systems in the study in order to ensure an adequate and impartial understanding of PEB (Ghazali et al., 2019). Under the frame of VBN theory it seems that investigating the relation of IWE as a moderator between GL and EPEB is valuable. Islamic work ethics (IWE) which have solid foundation in religious and cultural values, provides the potential to reconcile GL and EPEB by introducing ethical values and beliefs (Fauzi et al., 2022). Based on the above discussion, it is proposed that:

- *H5: Islamic work ethic strengthens the effect of green leadership on employee pro-environmental behavior.*

There is significant connection between moral obligations and ethics as they both rely on identifying moral challenges and fostering moral behavior to deal with them. Research findings reveal a close relation between ethics and leaders in the organizations. By using VBN theory, it appears that IWE plays role as a moderator between the relation of GL and FGMO. Therefore, this argument gives strong foundations to theoretical implications by indicating that the IWE's relationship with moral values and environmental factors could improve the impact of EL and FGMO. However, the current research remains relatively underexplored in this dimension (Al Halbusi et al., 2023). Thus, investigating the interplay between IWE, GL, and FGMO holds immense promise for future research endeavors, offering insights into novel pathways for sustainable and ethically-driven organizational practices in Islamic context. Hence:

- *H6: Islamic work ethics strengthens the relationship between green leadership and followers' green moral obligation.*

Researchers have also suggested to employ Islamic work ethic as an important extension of the management theory and that it can equally contribute in promoting green behaviors among employees (Aziz et al., 2018). Difference in values and ethical teachings will have different impact on the behaviors of employees (Fontaine & Richardson, 2005). Employees who exhibited IWE are more aware of the environmental issues, try to reduce their harmful actions, are morally responsible and show signs of PEB (Aziz et al., 2018). Within the framework of the VBN theory, it is proposed that IWE operates as interaction between moral obligation and green behavior. Thus, highlighting the potential for IWE to bolster the relationship between environmentally conscious organizational practices and employees' pro-environmental actions (Latif et al., 2023). However, the existing body of research in this domain remains relatively constrained. Current studies are primarily centered around IWE's role in cultivating honesty, often overlooking its broader aspect encompassing values and morals (Khan et al., 2023). Therefore, it is proposed that:

- *H7: IWE positively moderates the relationship between followers' green moral obligation and employee pro-environmental behavior.*

The conceptual model of our research is presented below in Figure 1:

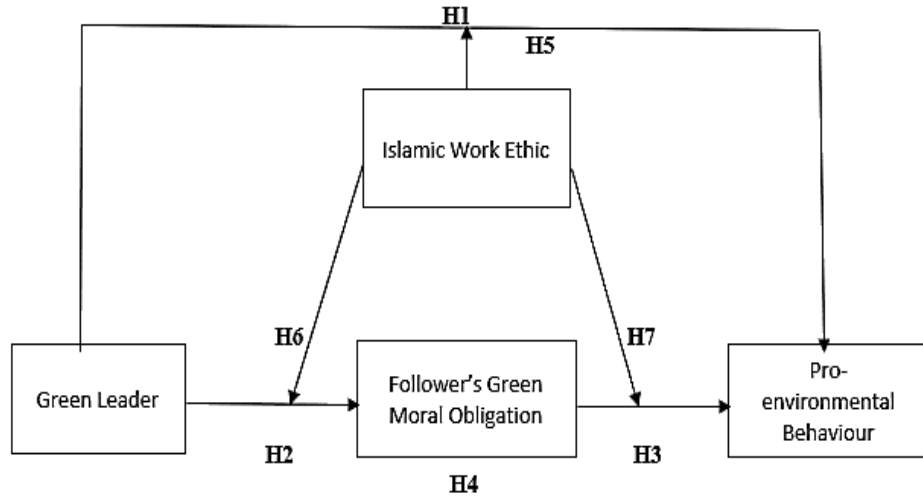


Figure 1: Conceptual Model

3. Methodology

3.1 Participants and Procedures

The sample of this study was the employees working in Islamic banks following Shariah law guidelines. Islamic banks are major part of Pakistan’s banking sector since majority of Muslims prefer Islamic banks over conventional banks (State Bank of Pakistan, 2020). There are 5 major Islamic banks, having a total of 1,582 branches working throughout

Pakistan (State Bank of Pakistan, 2020). In the year end of 2022, the calculated Islamic banks' branches have increased up to 1,794 in total (State Bank of Pakistan, 2020). The data was collected from employees about their manager/supervisor who exhibited GL. The follower related constructs were FGMO, IWE and EPEB. The survey was kept completely anonymous and proper guideline in English were provided to avoid CMB.

The study employed multistage employed multistage sampling technique. In the first stage, geographic locations were selected randomly where the Islamic banks have their branches. In the second stage, branches were accessed randomly. In the third stage, the questionnaires were distributed randomly amongst the prospective respondents. The sample size (n) of 385 was determined using Fisher's Formula (Jung, 2014). Questionnaires were filled by either personal visitation and some were emailed to the targeted respondents. A total of 400 questionnaires were distributed among the selected participants, out of which 365 were received back. After screening, 25 were considered defected and therefore, excluded. Majority of the respondents were male. Average age of the respondents was 27 years. A total of 55% of the employees were graduates, and 45% employees had master's degree or were in the process of post graduate degrees.

3.2 Measures

GL was measured using instrument developed by Kim (2017). It is a 6-item measure. Six-point Likert scale (Never = 1 to Always = 6) is used. The reliability of this scale was 0.79.

EPEB was measured using 12 items by Rice (2006). This is second-order construct having three dimensions; Public Behavior (reliability 0.70), Activist Behavior (reliability 0.71) and Private Behavior (reliability 0.55) targeted.

FGMO was measured by a 4-item moral obligation scale developed by Onwezen (2013). The reliability of this scale was 0.842.

IWE was measured by a 17-item scale developed by Ali (1992). Five-point Likert scale is used from strongly disagree =1 to strongly agree =5. The reported reliability was 0.85.

3.3 Data Analysis

PLS 3.0 was used for analysis. Partial Least Squares Structural Equation Modeling (PLS-SEM) is a powerful tool with clear advantages over traditional Covariance-Based Structural Equation Modeling (CB-SEM). PLS-SEM is a great option for scholars of different fields as it is enormously flexible. Even with the small sample size and unconventional data, it performs exceptionally well by handling complex models and result assessments. In contrast with CB-SEM, PLS-SEM does not require restrictive data distribution which is important for real world data. Especially it is useful for evaluating cause and effect linkage of variables and is applicable with a wide range of measurement methodologies. With different levels of statistic proficiencies, it is very appropriate and easy to use for researchers. To sum up, PLS-SEM is a great tool for empirical studies

because of its adaptability, flexibility and estimation abilities of dealing the real-world data (Hair, 2019). Factor analysis, structural equational modeling (SEM) and moderated mediation analysis were measured and hypotheses were tested by using SmartPLS. For data screening, outliers and reliability test were performed by using SPSS. Cronbach alpha was used to check reliability of measures.

4. Results

4.1 Correlations

Table below (see Table 1) shows the correlations among variables of the study. Variables have significant correlation with each other. There is significant correlation of age with education and experience, also the correlation exists between education and experience but does not have significant relation with other variables. This represents that change in age will also cause similar change in education and experience. Whereas, change in demographic will not have any impact on the variables understudy. Similarly, variables have significant correlation with each other. This will cause change in all the variables due to change in any other variables.

Table 1: Correlations

	Age	Education	Experience	GL	IWE	FGMO	EPEB
Age	-						
Education	.381	-					
Experience	.680	.121	-				
GL	-.016	-.033	-.033	-			
IWE	-.008	-.049	-.021	.681	-		
FGMO	.005	-.067	-.022	.729	.610	-	
EPEB	.005	-.019	-.104	.320	.363	.482	-

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

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

Variance inflation factor (VIF) is a statistical measure employed in regression analysis to assess the presence of strong correlations (multicollinearity) between predictor variables within the model. In the context of common method bias in the dataset, it's important to note that the existence of common method bias can potentially introduce correlations between variables in the regression model, which, in turn, may result in an inflation of VIF values. In other words, the elevated VIF values may indirectly signal the presence of common method bias in the data. This suggests that a closer examination of high VIF values could be a starting point for investigating and addressing potential common method bias. Variance inflation factor (VIF) can be used to check collinearity and indirectly check CMB. There should be no collinearity or multicollinearity between predictors and VIF value should smaller than 5 (VIF < 5) then the results will be considered significant and there will be no Common Method Biasness and analysis can be performed (Kock, 2015).

As shown in the table 2, all values are between 1 to 3 (VIF < 5). Therefore, there are no issues of multicollinearity or CMB.

Table 2: Inner Variance Inflation Factor

Construct	EPEB	FGMO	GL	IWE
EPEB				
FGMO	2.697			
GL	3.157	1.851		1.000
IWE	1.899	1.851		

Note: GL= Green Leadership; EPEB= Employee’s Pro-Environmental Behavior; IWE= Islamic Work Ethics; FGMO= Follower’s Green Moral Obligation.

Furthermore, CMV for the variables were also tested and all the values of CMV are below 50%, and are below the suggested threshold suggesting that the data can be used for further analysis (Chang, 2010).

4.2 Measurement Model

PLS-SEM helps to determine underlying relationship between dependent and its latent variables. In the first instance to assess the measurement model, factor loadings were examined. To best fit the data for analysis, weak items of lower loadings were removed from the construct for desired results (Fornell & Larcker, 1981; Henseler, 2021). From green leadership, Item number GL1 and GL2 were removed. From Islamic work ethics, items IWE7, IWE8, IWE15, IWE16 AND IWE17 were removed. From follower’s green moral obligation, item FGMO4 was removed. From employee’s pro-environmental behavior, Item EPEB1, EPEB3, EPEB9 and EPEB10 were removed in order to improve Fornell-Larcker Criterion for discriminant validity (Hair, 2019). The following sections discuss the model, reliability and discriminant validity.

4.2.1 Model Fit

Model Fit tells us how well the data fits the model. Standardized Root Mean Square Residual (SRMR) defines a correlation matrix that is derived from the difference between observed correlations and expected correlation matrices and is also known as Mean absolute value of covariance residuals. SRMR (Standardized Root Mean Square Residual) value equal or smaller than 0.08 is considered a good fit. Exact Model Fit which is collection of d_ULS also called Squared Euclidean and d_G also known as Geodesic Distance should be greater than significance value ($d_ULS > 0.05 < d_G$) in order for a good fit. Normed Fix Index also known as Bentler and Bonett Index value should lie within 0 to 1 and the closer the value to 1 the better the model fit is considered. SRMR value is 0.078 which is less than 0.8. Exact Model Fit values are greater than 0 and are closer to 1.

The value of NFI of the table is greater than 0.5 ($NFI > 0.5$) which proves that our model has a good fit (Henseler et al., 2016).

Table 3: Model Fit Statistics

Model Fits	Saturated Model	Estimated Model
SRMR	0.078	0.078
d_ULS	2.295	2.295
d_G	0.847	0.847
Chi-Square	1554.795	1554.795
NFI	0.669	0.669

4.2.2 Construct Reliability and Validity

Composite reliability of all the variables is higher than 0.7 ($\rho_C > 0.7$). AVE shows that variance in our construct exists in FGMO, GL and IWE ($AVE > 0.5$) but the value of EPEB is slightly below 0.5 ($AVE < 0.5$). This is caused by the uncontrollable factor during the data collection procedure. Therefore, even if our AVE is slightly less than 0.5 while the CR values are higher than 0.7 then our convergent validity of construct is still valid as explain by Fornell and Larcker (1981). The content validity will be intact as long as the Cronbach's alpha falls under the required parameters (McCrae et al., 2011).

Composite reliability (CR) ρ_C also measures the internal consistency of the measures. The only difference between Cronbach's alpha and composite reliability is that Cronbach's alpha reliability increases as number of items increases. On the other hand, composite reliability assesses the reliability of each item in a construct. Composite Reliability of all the variables is higher than 0.7 ($\rho_C > 0.7$) indicating that internal consistency exists. Average variance extracted measures the average variance of its items from a construct. AVE value greater than 0.5 exists for GL and FGMO. In certain cases, AVE value grater the 0.4 ($AVE < 0.4$) is also acceptable due to uncontrollable factors, as argued by Pervan et al. (2018). Exploring Constructs with Lower AVE Values," we address the complex and context-specific nature of the "EPEB" and "IWE" constructs. While acknowledging that the average variance extracted (AVE) values fall below the conventional threshold of 0.5, we establish the strong theoretical foundation of these constructs, drawing from extensive literature in environmental psychology and ethical conduct within Islamic organizations. Recognizing the multifaceted aspects of these constructs, which may contribute to lower AVE values. Importantly, we emphasize the influence of contextual factors on the manifestation of these constructs. Our study underscores their practical significance and the profound implications they hold for organizations and society at large. By highlighting the constructs' theoretical grounding, complexity, and practical relevance, we justify that lower AVE values do not undermine their validity but rather offer an opportunity for in-

depth exploration, enriching our understanding of these critical dimensions in organizational behavior and ethics. Therefore, AVE exists among all variables.

Table 4: Construct Reliability and Validity

Construct	Cronbach's alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
EPEB	0.816	0.836	0.861	0.443
FGMO	0.703	0.71	0.834	0.626
GL	0.705	0.737	0.816	0.531
IWE	0.902	0.908	0.918	0.486

4.2.3 Discriminant Validity

Heterotrait-Monotrait ratio is key tool for analyzing discriminant validity. It shows the average ratio of correlation of indicator with different construct and the average ratio of correlation of indicator with similar construct and HTMT is considered to have adequate Discriminant Validity if the value is below the threshold of 0.85 or 0.90 (Henseler, 2021). The lower the values in HTMT, the higher the discriminant validity. In some cases due to uncontrollable cultural context, value greater than 0.9 can also be consider valid (Pervan et al., 2018) . Ratio between GL and FGMO is equal to 1 (see Table 5) which is due to the impact of uncontrollable variable or some other cultural context, whereas, values for all the other variables is below 0.85. Therefore, the analysis shows that discriminant validity exists among the variables.

Table 5: Heterotrait-Monotrait Ratio (HTMT) of Discriminant Validity

Construct	EPEB	FGMO	GL	IWE
EPEB	-			
FGMO	0.643	-		
GL	0.443	1.066	-	
IWE	0.334	0.743	0.825	-

4.3 Hypotheses Testing

4.3.1 Direct effects

The first hypothesis proposed that there is a positive effect of green leadership on employee pro-environmental behavior. The results (see Table 6) show that hypothesis is supported ($\beta = 0.329$, $t = 6.078$, $p = 0.048$). Leaders play their role in influencing the desired behaviors in the followers. The results of this study coincide with a similar study in the Malaysian Hospitality context (Thabet et al., 2023).

The second hypothesis proposed the positive effect of green leadership on follower’s green moral obligation. H2 was also supported (see Table 6) as the results show ($\beta = 0.67$, $t = 13.387$, $p = 0.00$). Haines et al. (2008) in their study theorized that the perceived ethical

importance of an issue is instrumental to establish the moral obligation amongst the people. In the current scenario, the practice of the green leadership by the leaders ignited the moral obligation amongst the follower to act in the similar way.

The third hypothesis proposed the positive effect of FGMO on EPEB. The results demonstrated (see Table 6) that the hypothesis was supported ($\beta = 0.612$, $t = 9.453$, $p = 0.00$). Wu et al. (2020), in a Chinese context, found that moral obligation is related to different levels to pro-environmental behavior. This study has concluded the similar findings. Those having developed a moral obligation were found to have engaged in pro-environmental behaviors.

The fourth hypothesis was about the underlying mechanism of FGMO between GL and EPEB. The indirect effect of GL on EPEB was also supported ($\beta = 0.410$, $t = 8.155$, $p = 0.00$). The results established (see Table 6) that FGMO is significant mechanism to translate the effect of leadership on followers' behavior. Recently, Asante (2023) provided that linkage between green leadership and employee pro-environmental behavior is established through the mechanism of moral consciousness. The result of the present study coincides with the same.

Table 6: Direct Effects

Paths	β	Mean	SD	t-statistic	P-values
H1: GL→EPEB	0.329	0.335	0.054	6.078	0.048
H2: FGMO→EPEB	0.612	0.614	0.065	9.435	0.000
H3: GL→FGMO	0.670	0.668	0.050	13.387	0.000
H4: GL→FGMO→EPEB	0.410	0.414	0.05	8.155	0.000

***p < 0.001, **p < 0.01, *p < 0.05

4.3.2 Interaction effects

The fifth hypothesis was about the positive moderating effect of IWE on the relationship between GL and EPEB. Though the direction (see Table 7) of the effect is as hypothesized, but, insignificant ($\beta = 0.023$, $t = 0.441$, $P = 0.660$). The results are contrary to as hypothesized and could be attributed to various reasons such as difference in ethnicity, minority working in Islamic banks or lack of understanding of IWE among the respondents which may have caused change in the expected result of the analysis of H5 (Pervan et al., 2018).

The sixth hypothesis proposed that IWE enhances the strength of the effect of GL on FGMO. The results (see Table 7) show that the hypothesis was accepted ($\beta = 0.099$, $t = 3.098$, $p = 0.002$). Likewise, the last hypothesis proposed that IWE strengthens the effect of FGMO on EPEB. The results (see Table 7) provide that the hypothesis was accepted ($\beta = 0.08$, $t = 2.892$, $p = 0.004$). IWE has also been proved a moderator in previous studies as well (e.g. Asha'ari et al., 2023).

Table 7: Interaction Effects

Hypotheses	β	Mean	SD	t-statistic	P-values
H5: GL*IWE \rightarrow EPEB	0.023	0.026	0.052	0.441	0.660
H6: GL*IWE \rightarrow FGMO	0.099	0.101	0.032	3.098	0.002
H7: IWE *FGMO \rightarrow EPEB	0.089	0.091	0.031	2.892	0.004

***p < 0.001, **p < 0.01, *p < 0.05

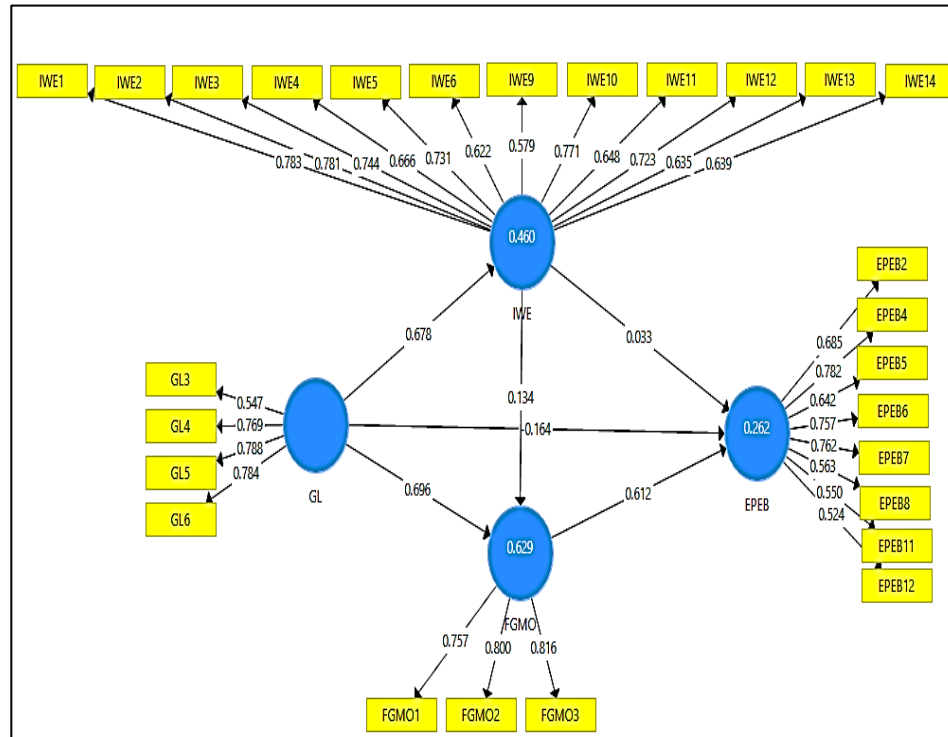


Figure 2: Moderating Effects

5. Discussion

The objective of this study was to find out the effect of GL on EPEB in the context of Banking sector, Pakistan. Hypotheses were proposed to determine that GL has a direct positive relationship with EPEB. Due to the psychological and behavioral impact of a leader, employees that are influenced by their supervisors will also follow similar behavior patterns. When leaders have strong ethics, moral compass and strong sense of purpose that can bring positive meaning to their followers, leaders will then have a significant impact on their followers’ daily decision making. This is supported by Afshari (2022) who states

that, leaders that provide positive meaning to their followers, raising their ethics and moral commitment, tend to be highly influenced by their managers, leaders and supervisors. The main cause for EPEB to develop is due to the strong influence of their respective leaders so if the leader does exhibit green behavior, it will have a positive effect on the employees (Han et al., 2014; Saleem et al., 2020). In the pursuit of a sustainable future, the connection between GL and employees plays a pivotal role. The VBN theory was employed to ground upon the hypotheses. Through the application of VBN principles to synchronize values, beliefs, and norms, green leaders can establish a united and inspired team committed to propelling sustainability endeavors. As a result, organizations are in better position to make significant improvements in environmental conservation and generation of progressive changes (Mehrajunnisa et al., 2022). The statistical evidence shows the significant impact of GL on EPEB. Leaders are responsible for the welfare of employees, they have an ethical need to model behavior that are persistent with their current positions (Egri & Herman, 2000; Fahmi, 2020). In it purview of VBN framework, it can be explained that green leaders promote values, beliefs and norms among their followers. It morally obligates the followers to reciprocate with desired behaviors.

Green leaders make their organizations environmentally conscious and fulfill their moral duty by protecting earth for next generations (Sachdeva & Singh, 2024). In this study, it is statistically proved that there is positive relation between GL and FGMO. Individual's open choice of green behavior is strongly connected with their sense of moral obligation (Wu, 2019). The idea that FGMO can be used as a psychological tool to inspire EPEB is supported by the greater level of commitment and responsibility shared by all. Ismail and Hilal (2022) suggest individuals' self-perceived understanding, cognitive attachment, and commitment are indicative of their inherent drive to preserve, leading to the manifestation of positive environmentally friendly actions. When green employees feel that their values and beliefs are aligned with those of the organization, they are more likely to be engaged and motivated to participate in green initiatives. This can lead to a workplace culture that champions environmental responsibility and ethical conduct (Fauzi et al., 2022). Results of the hypothesis empirically proves the significant relationship between FGMO and EPEB. The results also show that FGMO mediates between green leadership and EPEB (H4). Leaders while engage themselves in green environmental practices urge their followers to do the same. Since employees model their behavior based on their leaders', they also feel obligated to do environmentally beneficial practices. These practices can range from responsible consumption, to the development of green commitment (Wu, 2019).

Contrarily, the results show that there is no significant moderating effect of IWE on the relationship between GL and EPEB. It might be because various other factors which are complex in nature including priorities of the banking sector and cultural issues. While environmental awareness is growing, the banking industry's regulatory focus on financial stability, coupled with a potential lack of environmental education among employees, may diminish the impact of IWE. Additionally, GL's emphasis on sustainability may compete

with financial performance in the eyes of employees, and traditional cultural values favoring economic stability could overshadow IWE related to the environment. Islamic work ethics compared to western ethics are often perceived skeptically due to its reference to Quran in terms of acceptance at global level (Aziz et al., 2018). Difference in the values and belief of the top management and employees or lack of communication may also cause in the failure of environmental behavior development (Arslan, 2001). IWE positively moderates relationship between GL and FGMO. Green leader has strong moral conscious and strong ethics, they feel obligated to exhibit upright pro-environmental behavior (Purwanto, 2020). The VBN framework emphasizes the crucial role of shared values in building strong and cohesive relationships. When IWE aligns with the environmental values advocated by GL, it generates a potent synergy. Effective communication and nurturing of IWE by GL can profoundly resonate with employees, serving as a reinforcement. Statistically, there is a positive relation between IWE and FGMO. Empirical analysis shows that IWE positively moderates the relationship between FGMO and EPEB. Ethics has a rooted linkage with environmental safety and moral obligation. IWE connotes for strong commitment towards transparent righteous behavior. Meaning, one has to reduce their harmful actions and work for the safety of the environment and society. Viewed through the framework of the VBN, it becomes clear that IWE assumes a significant moderating role. IWE not only aligns with but also reinforces the established sustainable norms within an organization, functioning as a fortifying element. This convergence of values strengthens the dedication to environmental responsibility, fostering a favorable moderating impact between moral obligation and pro-environmental behavior (Ogiemwonyi & Jan, 2023). Therefore, IWE strengthens the relationship between moral obligation and environmental behavior (Uddin & Ahmmed, 2018).

5.1 Theoretical Implication

This research provides valuable theoretical implications. In Pakistan's service sector, the idea of environmental responsibility and EPEB is relatively limited and understudied. The theoretical implication of this study comes with capacity to offer a novel understanding of "green leadership". The study recognizes that as the socioeconomic and cultural factors vary, the relationship of GL and its impact on EPEB could be different in developing economies. This study explains the importance of adapting leader techniques to the particular opportunities and challenges faced in developing nations, adding a critical layer of context-specific knowledge to the literature on GL. The theoretical framework of leadership and environmental sustainability increases understanding with the empirical evidence of the significant effect of green leadership on EPEB. The study is consistent with VBN theory, which explains that leaders who behave ethically have a substantial impact on the attitudes and behaviors of their followers. It underpins that leaders are valuable in encouraging environmentally conscious behavior in their organizations. Also, this study presents a novel framework that incorporates Islamic work ethics as a boundary condition

(Aracil, 2019). This framework offers a more comprehensive understanding of the essential factors that are needed for the effective implementation of pro-environmental practices in banking and service industry, also contributing in expanding discussion on EPEB.

5.2 Practical Implication

This study shows how leader who have environmentally friendly attitude can enhance EPEB. Additionally, the study explains that leaders who have ethical motivation to set high standards also behave in environmentally dedicated manner. With this understanding, organizations must choose leaders having high moral values and who are genuinely committed to organization's well-being, positive connections with employees and acting as strong motivating role models. By aligning leaders' support with employees' personal environmental beliefs, it becomes possible to address pressing concerns like environmental safety and reduce carbon footprints within the banking sector, particularly in a developing country such as Pakistan (Peng & Lee, 2019; Saleem et al., 2020). The insignificant outcomes of IWE indicate that there is variation in Islamic banks and that, not all banks hold the same set of values, multiple perspectives of Islamic values, regional differences, insufficient environmental knowledge, different leadership styles, limitation of resources, lack of implementation and communication barriers can all make it tough to foster environmentally friendly behavior within Islamic culture as suggested by IWE moderation. These factors can make it harder for leaders and employees to set high standard of sustainability, demonstrating the importance of taking valuable steps to cover these gaps and motivate environmentally friendly behaviors that are consistent to the Islamic rules. Islamic work ethics are built on a flexible framework that can be interpreted in various ways. In Islamic culture, it is an accepted notion that leaders are responsible to set good example for their followers and the followers must try to behave like their leaders. So, in view of this, the lack of leader's involvement and interaction gap between leader and followers may have resulted the insignificant result of IWE. This is inarguable evidence that some leaders support environmentally sustainable behaviors and some do not, indicating the important impact that leaders have on their followers by their own behaviors. Leaders who effectively practice green policies and reflect environmentally sustainable behaviors provides an outstanding example to their followers to accompany. It is imperative for leaders to become more immersed in their team members' work lives and bridge the communication gap. This should serve as a valuable lesson for other service sectors, encouraging them to seek influential leaders who actively engage with their followers. Other industries can draw upon this research to gain deeper insights into the subjective and practical factors that trigger green behavior among both leaders and employees. By leveraging these insights, organizations can formulate policies that empower them to develop strategies for promoting green behavior among leaders and motivating employees to emulate their environmentally responsible role models.

EPEB research is significantly low in Pakistan. There is still large amount of carbon foot print and extreme consumption of other resources in Pakistan service sectors as compared

to other developing countries such as Indonesia and Singapore (Jamshed et al., 2022). Integrating this framework into the operations of Pakistan's banking sector can yield substantial advantages. Encouraging a pro-environmental ethos among employees can position banks as responsible corporate citizens, resonating with the growing segment of environmentally conscious consumers. This dedication to sustainability not only serves as a magnet for new customers but also cultivates lasting loyalty among the existing clientele, ultimately bolstering the bank's competitiveness and long-term financial viability.

5.3 Limitation and Future Study

Limitations of this study suggest that for generalizability of model, data from diverse population should be collected to identify the contrast between different industries and places. Results may also vary if the research is conducted in a different developed country compared to the developing country of Pakistan. The results between green leadership and employee's pro-environmental behavior and moderating effect of Islamic work ethics have rendered insignificant which suggests to look for other factors to be used as boundary condition. Further research should be conducted to refine IWE scale based on current phenomenon in belief system among Islamic groups. This will help mitigate existing limitation of scale and new avenues for further research will open.

In order to further enhance explanatory potential of the model, using other theories such as behavioral management theory and theory of planned behavior to further explore the relationship by identifying more suited moderators such as individual green values, communication competency and mediators such as green initiative, mutual beliefs, values and personal interests should be considered. Future research should also consider a multilevel study using similar model and personality trait as mediator since most decisions made by employees are based on their personality traits and it will expand the limited literature available on the impact of green leadership on green behaviors.

Research Funding

The authors received no research grant or funds for this research study.

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