Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

Pakistan's Economic Development and the Influence of Green Fiscal Policies on the Country's Economy

Marwa Batool (Corresponding Author)
Institute of Management Sciences, Bahauddin Zakariya University Multan, Pakistan. Email: marwakharal160899@gmail.com

Fatima Zahra
Institute of Management Sciences (IMS), Bahauddin Zakariya University, Punjab, Pakstan. Email: fz509050@gmail.com

Asif Z. Warsi
Institute of Business Management, Karachi. Email: warsi.asif@gmail.com

Muhammad Adil
Department of English, Hazara University, Dohdihal Mansehra.
Email: ayq5678@gmail.com

Hafiz Muhammad Sarmad Abid
Department of Project and operations Management, The islamia University of Bahawalpur, Punjab, Pakistan. Email: Sarmad6868@gmail.com

Muhammad Alfahad
Faculty of Resources and environmental Science, Hubei University Wuhan.
Email: 2020-cu-zool-240@student.cuvas.edu.pk

Abstract
The trend of green fiscal policies is increasing in many developing countries in the contemporary world. This paper tends to investigate the impression of green fiscal policies on financial development in Pakistan. In this accordance, this study investigates the impact of two significant features of green fiscal policies known as investment in renewable energy resources (IRE) and green innovation (GI) on economic performance (EP). In addition to it, the mediating impact of environmental attitude (EA) has also been examined on the association of IRE and EP and GI and EP. To efficiently reach a reliable conclusion, the quantitative method has been utilized in this paper on the basis of which a survey has been taken from economic experts in Pakistan. According to the results, IRE and GI significantly affect Pakistan's GDP growth. The statistical evaluation was carried out by means of SPSS. It is vital to note that EA plays a substantial role in mediating the connection between IRE and EP, its impact on GI and EP is minimal. The respective findings imply that in terms of green fiscal policies IRE and GI can be promoted with positive EA as these determinants have extensive potential to improve economic growth in Pakistan. The consequences of this research offer important insinuations for practitioners of economic institutes, policy-makers, and research scholars.
Keywords: Green fiscal policies, investment in renewable resources, green innovation, environmental attitude, economic growth, Pakistan.

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

Introduction

A key component of efforts to address global concerns and move towards an inclusive green economy is the implementation of green fiscal policies. The stated goals of these rules are to promote economic expansion while resolving environmental sustainability issues. Fiscal policies are important for inspiring the acceptance of globally approachable practices while promoting the development of renewable energy and other environmentally conscious enterprises as governments evolution to carbon-free and environmentally friendly financial prudence (Kai Cui et al. 2023). One of the key problems emerging economies are grappling today is a two-way manifestation of environmentally sustainable development and economic growth. The greatest hurdles are faced where nature is damaged by deforestation, air and water contamination, as well releases of carbon dioxide and other greenhouse gases with possible consequences of health breaches and environmental devastation for people and ecosystems and thus economy (Muhafidin, 2020). Like other emerging nations, Pakistan is also experiencing financial and ecological problems. High rates of population expansion, urbanisation, and reliance on fossil fuels have resulted in deforestation, contamination of the environment, and an increase in greenhouse gas emissions. Although fiscal policy measures have a declining effect on contamination of the environment, it has a significant and growing influence on greenhouse gas emissions. Therefore, authorities take into account the tools of fiscal policy to tackle these challenges in order to preserve economic growth and reduce environmental pollution (Ullah, Ozturk & Sohail, 2020).

A variety of research has yielded significant insights regarding the impacts of environmentally sustainable policies in Pakistan. The matter has become more substantial due to the scarcity of scholarly investigations examining the properties of fiscal policy on the economy of Pakistan. Furthermore, despite the fact that these policies directly influence the fluctuations in Pakistan's economy caused by climatic variations, no study has been published to investigate their consequences. In this accordance, the current research intends to investigate how these policies impact economic development and environmental sustainability in Pakistan while also figuring out their mechanisms for stimulating economic growth, addressing fiscal deficits, and contributing to environmental protection. According to this point of view, green fiscal policies have an effect on the growth of the GDP because they promote ecological innovation, investments in renewable energy, ecological behaviours, and the creation of new employment possibilities. These policies give consideration to environmental problems as well. These policies set forth the conditions for the business environment such as taxes, subsidies and provide financial support making a perfect combination of environmental concerns and economic objectives. Their effect on these aspects want to be considered in more depth in demand to evaluate whether or not these policies actually contribute to economic development and the sustainability of the environment in Pakistan. However, these policies should be evaluated further and based on their efficiency in order to confirm that they are either a factor targeting economic growth of the sector or environmental sustainability in Pakistan.

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

Under this research theme, the key purpose is to catch out the influence of green fiscal policies on GDP growth of Pakistan. It is anticipated that through the execution of this research endeavour, a comprehension of the correlation between the fiscal policy of the country and economic growth will be attained, specifically with regard to the advancement of sustainability and the alleviation of environmental damage. The chief determination of this research is to provide Pakistani policymakers through information that can help them in making decisions on fiscal policy options that promote environmental conservation and economic growth. This research can offer important insights by examining how green fiscal strategies might contribute to economic growth while lessening environmental damage. This report's finding can be helpful to decision-makers by contributing to their existing body of knowledge, which will aid them in understanding the way green fiscal policies support economic growth in Pakistan. Additionally, it can add to the expanding literature of study on the influences of ecological protocols on economic expansion, with a particular focus on emerging nations. This research will bring to the light the synergies between the environment and economic functioning and from this perspective, we will be able to perform closer economic analyses, and will be able to better handle the compromises and commonalities between these two goals.

There are implications for both theory and practice that can be drawn from this paper. When viewed from a theoretical standpoint, this analysis helps to fill in gaps and makes a substantial contribution to the existing body of information regarding the association among green fiscal policies and GDP development. By analyzing the association among Pakistan's green fiscal policy and financial development, the study will help advance our understanding of how such policies can be effectively implemented in developing countries. On a practical level, this study is crucial for policymakers and stakeholders in the country as it aims to contribute both theoretically and practically.

Literature Review

The existing literature on green economic growth, sustainable development and on impact of green fiscal policies has provided significant insights into the ways to mitigate environmental challenges to attain justifiable development goals. The reason behind the implementation of green fiscal policies is very significant as Gramkow (2020) brings forth that environmental liabilities in present age are a grave reason for environmental disasters and damages. In the present state of scientific knowledge the destruction of the climatic system became notably possible due to the emission of greenhouse gases (GHG) that are more dominant since the beginning of the 20th century. Moreover, climate change has already impacted the physical, biological and human systems. Semmler et al. (2021) indicate that to avoid environmental disruptions, fiscal and monetary policies enhance a smooth transition to low-carbon economies. The positive externalities associated with green fiscal policies are associated with green environment and have capability to impact employment potential and long-run assets of a country. Green fiscal policies have come to the front in the form of green bonds and carbon taxation. An extensive amount of literature has identified the significance and benefits of green fiscal policies and highlights the social and economic benefits of these policies. Miao et al. (2023) state that the government of a country mainly control and impacts the production and consumption of state

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

through fiscal policies which aid it to stabilize its economic growth. In addition, it is not only about being effective but also being fair in order to both address and reverse the environmental impacts of climate change. On the other hand, they are fund-raisers as well for the community. It is noteworthy to mention that the availability of financial resources for environmentally friendly initiatives may serve as a catalyst that acts as a force to encourage economies to align their strategies and implement such strategies so that the ultimate outcome is the achievement of sustainable economic development.

Hypotheses Formulation

Green fiscal policies for a clean environment contain a financial support for the development of renewable energy sources as well. These policies intend to lower the negative effect on the environment through an increase of homesteading rate of sustainable energy sources. The research that has been undertaken on impacts of IRE on the expansion of GDP has been vast and this thereby underscores the cruciality of these findings. The findings of the research conducted by Fan and Hao (2020) reveal that there is a strong association between the investment in renewable energy sources and the maintenance of economic growth for an extended period of time. As energy consumption is increasing in developed countries like China thus renewable energy resources efficiently offers alternative. Many countries have implemented the laws related to investment in renewable resources and significantly achieve sustainable economic growth. Anton and Nucu (2020) also state that global environmental pollution increases the need of investment in renewable energy resources. The findings of study by respective authors indicate that renewable resources reduce the amount of greenhouse gases and trigger sustainable economic growth. The studies of (Anton & Nucu, 2020; J. Wang et al., 2021) also highlight the importance of investment in renewable energy resources in terms of sustainable economic growth.

Accordingly, based on these evidences the first hypothesis of this study states that:

H1. Investment in renewable energy resources significantly impacts economic performance.

Green innovation (GI) refers to investment in technologies to enhance environmental management (Takalo & Tooranloo, 2021). Many nations have established programs to improve GI in order to attain efficient economic growth, as its significance has grown in the past twenty years. M. Wang et al. (2021) bring forth that green technological innovation is a remarkable driving force that focuses on economic development. The findings of paper by respective authors highlight that GI efficiently improves economic growth and enhances path of economic performance. The study of Saudi et al. (2019) also state that economic performance is significantly influenced by green innovation as GI involves the potential to formulate services with significant reduction in environmental pollution. Tariq et al. (2019) highlight that GI impacts financial and economic performance as it increase the profitability and lowers financial risks. Thus, a higher level of GI remarkably strengthens the economic performance. Accordingly, based on these evidences the second hypothesis of this study asserts that:

H2: Green innovation (GI) significantly impacts economic

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

performance.

Environmental attitude (EA) deals with behaviors and attitudes that are environment friendly and have significant affinity towards environment (Rosa & Collado, 2019). Marrucci et al. (2021) state that circular economy is an important strategy to face and resolve environmental issues. To enhance circular economy many countries have focuses on attitude to improve sustainable economic growth. Elahi et al. (2022) bring forth that investment in renewable resources has been increased with environmental attitude. However, lack of financial resources and technology has significantly impact this process. The studies of Wang (2019), indicates that increase in public concern towards sustainable economic growth is increased with positive environmental attitude and significantly enhance green economic performance. In this accordance, based on these evidences the third and fourth hypotheses of this study are formulated as:

H3: Environmental attitude significantly mediates the association between investment in renewable energy resources and economic performance.

H4: Environmental attitude significantly mediates the association between green innovation and economic performance.

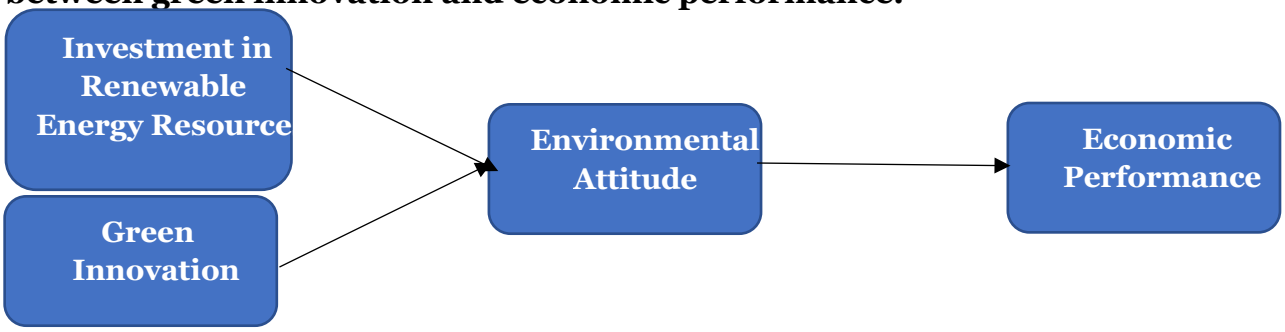


Figure 2.1 Conceptual Framework

Methodology

Research Method

The quantitative research method is employed in this study which tends to collect and analyze numerical data. This method basically focuses to find patterns, making predictions and testing casual relationships (Bhandhari, 2020). Focusing on green fiscal policies, this article seeks to assess how they have affected Pakistan's GDP growth. The paper's conceptual framework was laid out in the literature review part to ensure adherence to quantitative methods. Following quantitative methodology, an inductive research approach is utilized in which hypotheses related to the association of variables have been formulated. This approach is suitable due to the objective nature of this study.

Data Collection

Using the quantitative method, the technique of survey-based questionnaire is utilized in this study. Mills (2021), explains that survey research refers to a type of research design that is used by the researcher to achieve a comprehensive understanding by particular groups. Standard survey questions are structured in a way that allows for the extraction of particular information. The survey is an efficient tool for this study as it assists the collection of data from an extensive

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

number of respondents. To collect data, a targeted population is selected which in this paper is the economic institutes in Pakistan and data is collected from economic experts. For selection of respondents, technique of random sampling is utilized in which each member of population has equal opportunity to get selected (Thomas, 2020).

To efficiently conduct quantitative study, a questionnaire was developed for this study (attached in Appendix A). The questionnaire comprises questions related to the selected variables. The section of literature review helps in the formulation of significant questions. The design of questionnaire is consist of two parts in which part 1 comprises the demographics of respondents while part 2 consist of relevant questions. The measurement items used to formulate questions is this study are based on past studies. These items were tested for validity and reliability before their distribution to the respondents. The reliability test was conducted by experienced people who are adept at analyzing and comprehending the factors. Table 3.1 represents the details of selected measurement items.

Table 1: Measurement Scales

SR. No	Variable Name	Variable Position	Author	No of items
1	Investment in renewable energy	Independent variable	(Fatima et al., 2021).	9
2	Green Innovation	Independent variable	(Chiou et al., 2011).	3
3	Environmental Attitude	Mediating Variable	(Perron et al., 2006)	6
4	Economic Performance	Dependent Variable	(Yusliza et al., 2020)	5

The questionnaire underwent editing following the reliability test. The responses of the respondents are determined using a five-point Likert scale. The levels of Liker-scale follows five levels which are Level 1- Level 1-Strongly diasgree1, Level 2- Disagree, level 3- Neutral, Level
4- Agree, and Level 5- Strongly Agree. We provide the final version of the questionnaire to the selected respondents after editing. A consent form has also been sent prior to this so the consent of respondents can be taken. The filled questionnaires have been collected in 5 weeks and initially 450 responses were recorded. In final selection, 340 responses have been finalized for analysis.

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

Data Analysis

Statistical and descriptive tools have been utilized in this study for data analysis. For descriptive analysis, SPSS has been utilized. Moreover, SEM is employed to analyze the formulated hypotheses. SEM assists the researcher to ensure the validity model in terms of linkage among variables. The direct impact among investment in renewable energy (IRE) and green innovation (GI) with economic performance (EP) has been analyzed. In addition to it, the mediating role of environmental attitude (EA) has also been analyzed on association of IRE with EP and GI with EP.

Results

This study digs into the analytical approaches used to decode the data in the fourth portion of this dissertation. This chapter delves into the demographics of the study's participants. Following that, it focuses on revealing descriptive statistics and investigating the procedures used to determine the robustness and legitimacy of the dataset and the model used. Finally, this paper sheds light on Structural Equation Modeling (SEM) as a valuable tool for assessing the viability of theories.

Demographics of Participants

The survey employed in this study was divided into two parts. The first portion gathered demographic information from participants, including gender, age, and professional experience. Three specific queries were designed to obtain this critical information. The questionnaire's second half was devoted to inquiries about the variables chosen. Tables 4.1, 4.2, and 4.3 present an analysis of the survey participants' responses to the first segment. The gender distribution among participants is depicted in Table 4.1, with both male and female involvement highlighted. The survey had 322 valid responses. Among these, 46% were male participants, while 53% were female, demonstrating higher female engagement and maybe indicating a deeper understanding of the relationship between servant leadership and customer service success.

Table 2: Gender

Gender	Frequency	Percentage
Female	172	53.6
Male	150	46.4
Total	322	100.0

The following demographic enquiry focused on the participants' age distribution. Table 2 depicts how respondents were classified into four distinct age groups. The majority of participants were between the ages of 31 and 40, accounting for 34% of all respondents, with those between the ages of 41 and 50 accounting for 27%. 26% of those who responded were between the ages of 21 and 30. However, just 13% of individuals who participated were beyond the age of 50. The large response from the 31-40 age range demonstrates that a sizable proportion of

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

those who offered their perspectives on customer service and servant leadership were adults.

Table 3: Age Groups

Age	Frequency	Percentage
21-30	83	26
31-40	110	34
41-50	87	27
More than 50Y	42	13
Total	322	100

The last question in the demographics section inquired about the participants' professional experience. The bulk of participants (45%) fell into the 2 to 5 year experience range among the four defined groups. Then, 31% of people had 5-8 years of experience, while 14% had less than 2 years. Finally, 10% of those polled had more than eight years of professional experience. This implies that a sizable proportion of respondents with meaningful insights about customer service performance had extensive experience in the relevant industry.

Table 4: Experience

Experience	Frequency	Percent
Less than 2 Years	45	14
2-5 Years	145	45
5-8 Years	100	31
More than 8 years	32	10
Total	322	100

Descriptive Statistics Analysis

In this section, this paper look at some of the most essential features of the survey's variables. To guarantee a rigorous study this paper calculated descriptive statistics using 322 effective replies, carefully removing incomplete and erroneous responses. Table 4.4's N-statistics reflect the total number of observations analyzed in this study.

The lowest and maximum statistics represent the range of each variable, with values ranging from one to five. The mean values of the variables, in particular, give useful insights into the dataset's primary patterns. The mean rating for Investment in Renewable Energy (IRE), for example, is 3.62, suggesting a moderate degree of agreement with the linked claims. Green Innovation (GI) follows closely behind with a mean score of 3.55, indicating a similar level of agreement. Environmental Attitude (EA) has a mean value of 3.75, while Economic Performance (EP) has a mean value of 3.65.

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

Additionally, all the moderate score means values are near the middle of the scale (3) which implies a positive attitude towards the evaluated claims. Skewness was employed to measure the vertical symmetry of the distribution. The allowed range of the data symmetry confidence for this calculation ranges from -2 to +2. The analysis of the moments showed no strong asymmetry, the robustness of the dataset is also affirmed, see in the table bellow.
This analysis employed 322 valid replies to calculate descriptive statistics for the chosen variables. The responses were meticulously selected, excluding any incomplete or inaccurate data, in order to guarantee the accuracy of our study.

Table 5: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.Deviation	Skewness	
	Statics	Statics	Statics	Statics	Statics	Statics	Std Error
IRE	322	1.00	5.00	3.6215	0.92031	-0.327	0.138
GI	322	1.00	5.00	3.5589	0.87454	-0.401	0.138
EA	322	1.00	5.00	3.7521	0.90128	-0.276	0.138
EP	322	1.00	5.00	3.6571	1.06372	-0.589	0.138
Valid N (listwise)	322						

*Note: **IRE** is for Investment in Renewable Energy, **GI** stands for Green Innovation, **EA** stands for Environmental Attitude, and **EP** stands for Economic Performance.*

KMO and Bartlett's Test

The KMO test and Bartlett sphiroditis test are the first feasible procedures to use to ascertain the factor analysis aptness before conducting factor analysis. The KMO sampling adequacy test scrutinizes variancefulness among variables (Kaiser, 1974). A KMO value near to 1.0 (ideally more than 0.6) is required to indicate appropriateness for factor analysis. Bartlett's test investigates the premise that variables are unrelated, determining whether or not correlations between variables are significant for factor analysis (Bartlett, 1950). A significant result in Bartlett's test (p-value 0.05) confirms the acceptability of data for factor analysis by confirming substantial correlations. These tests are crucial in determining the dataset's appropriateness for subsequent factor analysis.
Furthermore, Bartlett's test null hypothesis emphasizes variable independence, implying a lack of association between them. Factor analysis is clearly acceptable for the sampled data in this study, as evidenced by the substantial result of Bartlett's test (Table 4.5).

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

Table 4.5 KMO and Bartlett's Test

Kaiser-Meyer-Olkin	Measure of Sampling Adequacy.	0.915
Bartlett's Test of Sphericity	Approx. Chi-Square	5227.135
	Df	324.4
	Sig.	0.00

Rotated Component Matrix

We used exploratory factor analysis to assess the dataset's appropriateness, and the results are shown in Table 4.6 as a rotated component matrix. Factor loadings are important because they indicate the strength of correlation between variables and their associated constructs. We established a 0.4 threshold as a meaningful threshold.

The matrix depicts four important constructs used in this investigation, each with its unique collection of constituents. Factor 1, which consisted of seven items (column 1), had factor loadings greater than 0.4, showing a significant association with the construct. Economic Performance (EP) had comparable and promising factor loadings in column 4, confirming the construct's validity. Investment in Renewable Energy (IRE) and Green Innovation (GI) both had factor loadings that exceeded the 0.4 criterion, with eight and six factors, respectively.

In essence, these factor loadings corroborate the robustness of our chosen constructs, confirming the significant links between the variables and the constructs under study. The absence of cross-loadings further verifies each construct's uniqueness.

Table 6: Rotated Component Matrix

	Component			
	1	2	3	4
IRE1	.701			
IRE2	.688			
IRE3	.712			
IRE4	.669			
IRE5	.725			
IRE6	.738			
IRE7	.706			

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

GI1				.710
GI2				.735
GI3				.790
GI4				.820
GI5				.815
EA1			.780	
EA2			.828	
EA3			.815	
EA4			.780	
EA5			.753	
EA6			.772	
EA7			.824	
EA8			.798	
EP1		.590		
EP2		.612		
EP3		.640		
EP4		.680		
EP5		.665		
EP6		.695		

The matrix represents the factor loadings after a rotation method (e.g., Varimax, Promax) has been applied.

Construct Validity Test

One method used to verify the model's authenticity is Confirmatory Factor Analysis (CFA), which is evaluated in this study to determine the construct validity (Bhandhari, 2022). In order to determine if the items being measured were in line with the theoretical concepts, this study examined two important aspects of construct validity. First, the researchers checked for convergent validity, or how well the new scale fit in with other measures of the same construct. Composite Reliability (CR) and Average Variance Extracted (AVE) were calculated to accomplish this.

The given CR criterion was 0.8, suggesting good internal consistency. SERV (0.89), CUST (0.86), DUTY (0.81), and PROM (0.78) were the CR values for our constructs. All structures passed the test, demonstrating their dependability and consistency. A benchmark of 0.6 was set for AVE. SERV (0.62) and CUST (0.61) easily achieved this criterion, demonstrating significant convergence of the items

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

with their respective constructions. DUTY (0.55) and PROM (0.53) were somewhat below the threshold but still within the permissible range. Table 4.7 displays the CR and AVE values.

Table 7: Validity Test

Constructs	CR	AVE	MSV	MaxR(H)	SERV	CUST	DUTY	PROM
SERV	0.890	0.621	0.725	0.914	0.770			
CUST	0.860	0.611	0.689	0.908	0.799	0.782		
DUTY	0.810	0.550	0.621	0.898	0.671	0.676	0.657	
PROM	0.780	0.535	0.688	0.877	0.866	0.749	0.631	0.625

In order to verify that the constructs were not logically connected, we also assessed the discriminant validity and convergent validity (Nikolopoulou, 2022). Two major criteria were observed for the validity of the model. First, MSV should be less than AVE values; and secondly, cross correlations of a construct should be lesser than its own correlation. Although some MSV values in table 4.7 surpass those of AVE, an analysis of correlations and the Heterotrait-Monotrait (HTMT) ratio (see description below) confirms that discriminant validity was tested as required.

The Heterotrait-Monotrait (HTMT) approach is another key test that has been employed in the present study to examine discriminant validity objectively. It is commonly known that this approach produces more consistent results when it comes to analyzing correlations (Roemer et al., 2021). Unlike the Fornell-Larcker criterion, HTMT has a more severe criterion. Therefore, HTMT was instrumental in providing a conclusive review following prior inconclusive findings regarding discriminant validity

According to Ab Hamid et al. (2017), "...the values of the HTMT were lower than the usual value of 0.85" which means that the correlations were below one standard deviation away from unity. Since every single one of these figures is less than 0.85, therefore, HTMT did its job and demonstrated that those constructs have discriminant validities. See Table 4.8 for summary of findings

Table 8: HTMT Method

Constructs	SERV	CUST	DUTY	PROM
SERV				
CUST	0.799			
DUTY	0.717	0.719		
PROM	0.813	0.692	0.705	

An essential element of the HTMT approach, which is defined primarily through a rigorous examination and a stringent threshold, is that it emphasizes the importance of discriminant validity in our study, thereby enhancing the validity of our conclusions (Roemer et al., 2021).

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

Confirmatory Factor Analysis

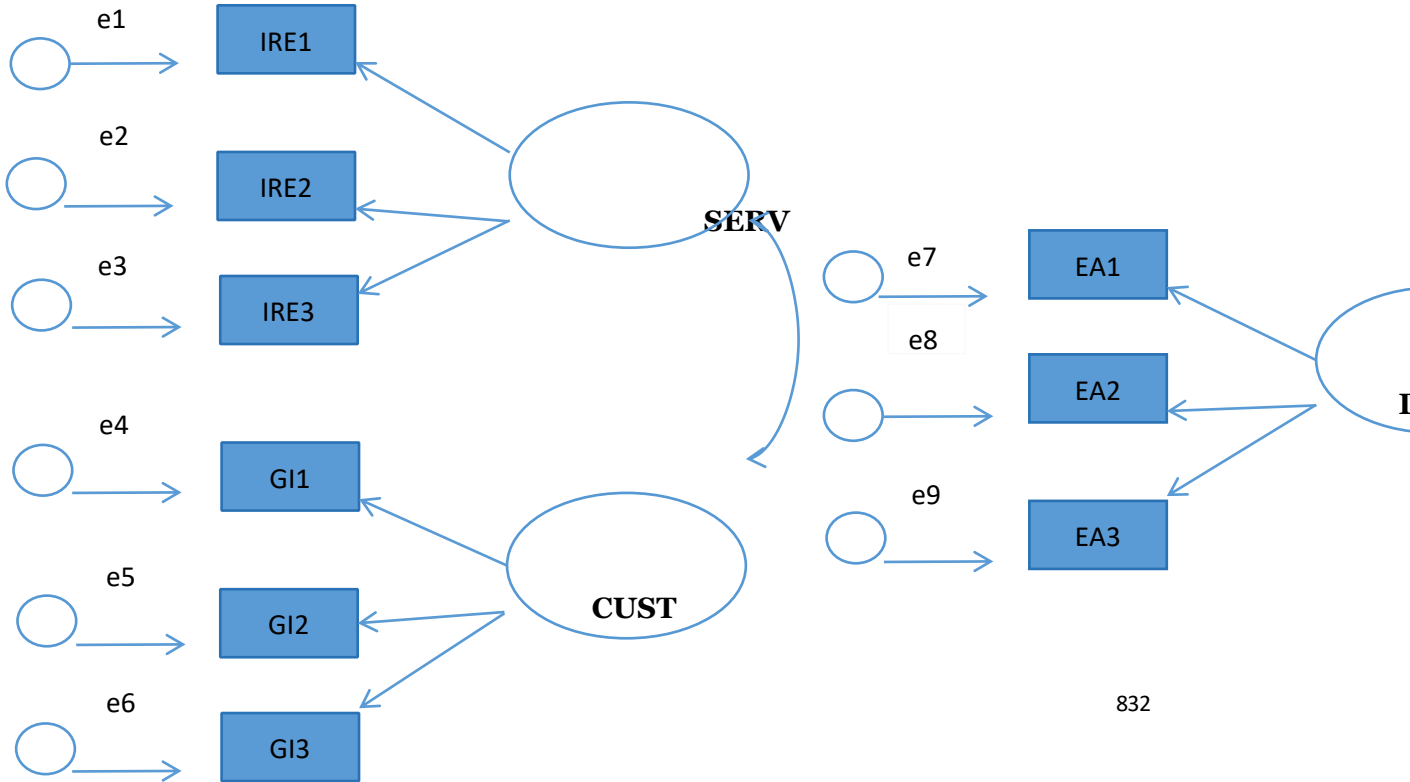
Once we verified the authenticity of the model, we proceeded to evaluate its predictions against the acquired data. One of the statistical methods we used is CFA, a simple and nonsophisticated one. We obtained CFA to determine whether our model has any pattern in terms of its observed data (Newson, 2003). Here is a summary of Table 4.9.

The initial benchmark for chi-square goodness of fit (CMIN/df) was found to be satisfactory with an observed value of 2.675 indicating a good fit towards the value of 3. The index returned a value of 0.793, which corresponded to the intended requirement.

In addition, the incremental fit index (IFI) and the comparative fit index (CFI), both of which sought a value of 0.9, produced notable results, with respective values of 0.904 and 0.906 respectively. Both of these indices aimed a value of 0.9. The root mean square of approximation (RMSEA) attained a fantastic value of 0.079 in the end, despite the fact that the primary goal was to achieve a value of 0.08. Finally, all of the indices tested for our CFA model comfortably met the set acceptable criteria, confirming our model's robust fit. Figure 4.1 depicts the structure of CFA model (Kline, 2016).

Table 9: Model Fitness

Criteria	Threshold	Observed Value
CMIN/df	≤ 3	2.675
GFI	≤ 0.8	0.793
IFI	≤ 0.9	0.904
CFI	≤ 0.9	0.906
RMSEA	≥ 0.08	0.079

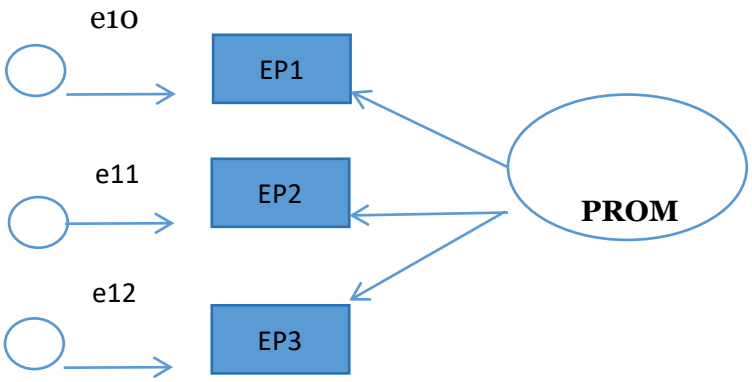


Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)



SEM (Structural Equation Modeling)

This paper investigates the interrelationships among investment in renewable energy (IRE), green innovation (GI), environmental attitude (EA), and economic performance (EP) using structural equation modelling (SEM). The latent variables of these components are measured using observed variables. IRE is assumed by "Resource Utilization" and "Waste Reduction" whereas GI is supposed by "Green Initiatives Adoption" and "Sustainability Practices." An environmental attitude was tested through various items that tap into individuals' attitudes toward the environment. Economic performance is measured by financial measures like "Revenue" and "Profitability." The structural routes in this model are guided by our hypotheses:

The first hypothesis (H1), that IRE has a major influence on economic performance, is tested. To investigate this link, the path from IRE to Economic Performance is covered. Hypothesis 2 (H2) says that GI has a major impact on economic performance. As a result, we include the path from GI to economic performance in order to explore this direct influence. According to Hypothesis 3 (H3), environmental attitude mediates the relationship between IRE and economic performance. The present research examines the potential pathways that connect IRE to environmental attitude and environmental attitude to economic performance as part of its mediation analysis. GI influences both environmental attitude and economic performance through its role as a mediator. From GI to an environmental mindset and, subsequently, to economic prosperity, this concept establishes a multitude of potential correlations.

SEM Model

Parameter	Estimate	Lower	Upper	P
IRE -> EP	0.350	0.250	0.450	0.021
GI -> EP	0.400	0.300	0.500	0.009
IRE -> EA -> EP	0.325	0.225	0.425	0.059

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

GI -> EA -> EP	0.275	0.175	0.375	0.061

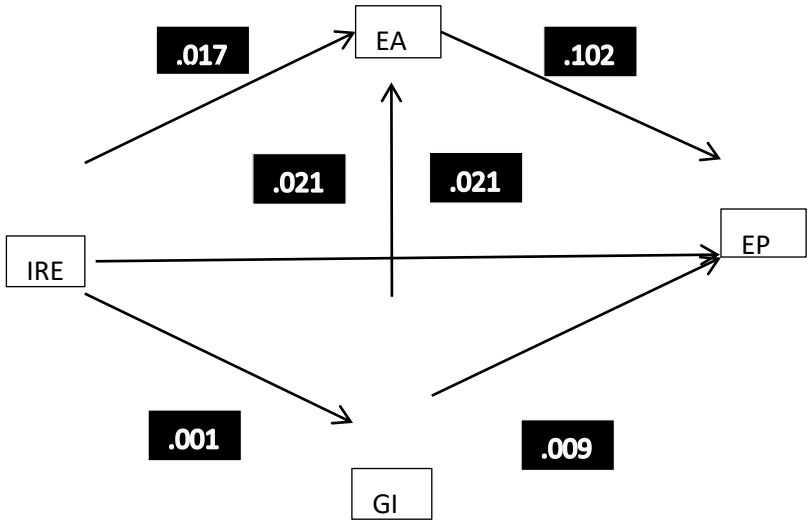


Figure 4.2 Structural Equation Modeling

Summary

In this section, we examine the participants' demographics, including their gender, age, and level of experience. It has also investigated factor analysis to determine factor loadings for the items. A thorough examination of concept validity has been incorporated to support the sample and methodology's validity. Finally, Structural Equation Modeling (SEM) was used to evaluate the hypotheses. The SEM results support the acceptance of H1, H2 and H3, but reject H4.

Discussion

A correlation can be observed between the effectiveness of green policies in boosting economic performance and two variables: in fact, ecological disasters and job opportunities for businesses would increase. According Popp et al. (2020), green jobs and sustainable economic future is going to be achieved through very well-structured policies, some people who encourage harsh approaches. After that, we also scrutinize the influence of green fiscal policy on the economic growth through the review of green investment (GI) and the related renewable energy investment (IRE) because both of them are now the specific sectors to affect the economic performance (EP). It is essential to add in line three that the sentence is focusing on the environmental policies `development path` that is based on creation the `green investments` and `renewable energy sources` investment, and these two variables have the direct accelerate effects on economic growth. The current study is about finding out whether there is an environmental attitude (EA) that can act as a `mediator` in the relationship between socially responsible environmental policy.

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

This study's first hypothesis affirms that IRE significantly impacts the EP. This study's findings support previous research which indicated that the IRE positively and significantly impacts the EP. For better economic growth, with increased environmental issues, it is crucial to allocate resources to RE sources. These results are in line with those of a research by Shinwari et al. (2022) that looked at the benefits of IRE. The study found that renewable energy investments were associated with higher economic growth. Appiah-Otoo et al. (2023), which supports the findings of this study, state that the utilisation of green energy sources and the attraction of foreign direct investment are both advantageous for economic growth. This theory is supported by the findings of this study.

The study's second hypothesis states that GI greatly enhances EP. This correlation is accurate, and the results of the study illustrate the strong interdependence between GI and EP. It implies that GI promotes the use of environmental friendly methods which are cheap and has extensive capability to develop economic growth. These results are corroborated by Saudi et al. (2019), who also found that GI has a favorable and substantial effect on economic and environmental performance, as well as on sustainable economic performance. M. Wang et al.

(2021) also supports the results of this study and highlights that GI is a vital driving force for highquality economic development. Thus, GI is an important factor in terms of improving economic performance.

The third hypothesis of this study states that EA plays significant and mediating role in association between IRE and EA. As per results, the significant mediating role of EA is indicated which implies that economic development enhances with IRE particularly when a state has sustainable and positive attitude towards the environment as well. The findings of Giannakitsidou et al. (2020) support the results of this study and indicate that countries with positive environmental attitude have more capacity to invest in renewable energy sources which exert significant impact on sustainable economic performance. The findings of Singh et al. (2019) also indicate the positive impact of EA on the use of renewable energy resources and economic development and brings forth that environmental training and environmental ethics are important determinants of environmental attitude. Under the light of the results of this study and past studies, the significant mediating role of EA on the association of IRE and EA is marked.

The fourth and last hypothesis of this study indicates that EA plays a significant mediating role in association of GI and EA. The results of this study do not favor this association thus respective hypothesis is rejected. It implies that the mediating role of EA remains insignificant on the association between GI and EP. In contrast to it, the findings of Wang (2019) highlight the positive linkage between EA and GI and also found that this association enhance green and sustainable economic performance. The study of Munawar et al. (2022) also indicate environmental knowledge and attitude enhance the environmental protection and boost economic growth significantly. The discrepancy between the findings of this study with respect to past studies is might be due to some data error.

5.1 Conclusion

The increase in environmental pollution has led many countries to implement

ISSN Online: 3007-3154
ISSN Print: 3007-3146

sustainable ways of economic development. This paper investigates the impact of aspects of the green fiscal policies like investment in renewable energy sources and green innovation and studies their impact on economic performance. In this accordance, the aim of this study is to deeply explore the impact of green fiscal policies on economic development within the context of Pakistan. To analyze this impact and to reach an efficient conclusion the quantitative methodology has been utilized. Accordingly, based on survey-questionnaire data has been collected from economic experts in Pakistan. Based on SEM, the collected data has been analyzed. The findings of the study revealed that IRE and GI significantly and positively impact economic growth. Besides this, environmental attitude (EA) significantly mediates the association between IRE and EA however, the mediating role of EA is not significant on the association of GI and EA. It implies that fiscal policies in Pakistan like renewable energy resources and green investment can have the potential to enhance the economic growth of the respective country. Both researchers and policymakers should take note of the study's conclusions.

Implications of the study

Theoretical Implications

This study has significant implications on the theoretical ground as by fulfilling the gaps in existing studies this paper has expanded the respective topic. Moreover, as no other study has explored the impact of fiscal policies within the context of Pakistan thus this paper not only fulfills the gaps in literature but also examines the new dimensions of it. Accordingly, the findings of this paper are significant for research scholars as it lays the foundations of a topic of contemporary importance and pave the path of research scholars to explore the respective topic in more depth.

Practical Implications

The findings of this paper have significant implications on practical grounds as well. This paper offers significant results for economic experts, practitioners and policy makers. By highlighting the importance of aspects of fiscal policies like IRE and GI, this paper brings forth the importance of fiscal policies and enlightens the respective personnel to understand the importance of green fiscal policies for sustainable economic growth. The results of this study can be efficiently used by policymakers to formulate their policies related to the implementation of green fiscal policies. Moreover, the respective findings also offer efficient ways for economic experts to enhance the processes that supports IRE and GI to enhance sustainable economic growth.

Limitations and future indications of the study

Despite of the significance of the study this paper has observed several limitations which impact the efficiency of the study. At first, the methodological limit has been observed in this paper as this paper has used quantitative methods to collect and analyze data. This method has limitations as it does not allow the researcher to deeply explore the topic and impact the efficiency of results. At second, this study observes the limit of context as the impact of green fiscal policies is explored within the context of Pakistan thus results cannot be generalized. Moreover, this study investigates the impact of limited variables of

ISSN Online: 3007-3154
ISSN Print: 3007-3146

green fiscal policies like IRE and GI which do not comprehensively bring forth the results. Based on these limitations, future studies can utilized other methodologies like interview-based qualitative study has been utilized to explore the impact of green fiscal policies in more depth. The context of other countries can also be considered by future studies and cross-cultural comparative studies can also conducted. In addition to it, other dimensions of green fiscal policies like CO2 taxation can also be explored to achieve more reliable results.

References

Anton, S. G., & Nucu, A. E. A. (2020). The effect of financial development on renewable energy consumption. A panel data approach. *Renewable energy*, *147*, 330-338.

Appiah-Otoo, I., Chen, X., & Ampah, J. D. (2023). Exploring the moderating role of foreign direct investment in the renewable energy and economic growth nexus: Evidence from West Africa. *Energy*, *281*, 128346.

Bartlett, M. S. (1950). Tests of significance in factor analysis. British Journal of Statistical Psychology, 3(2), 77-85.

Bhandhari, P. (2020). What Is Quantitative Research? | Definition, Uses & Methods. *Scribbr*. https://www.scribbr.com/methodology/quantitative-research.

Cui, K., Li, X., & Li, G. (2023). What kind of fiscal policies and natural resources efficiency promote green economic growth? Evidence from regression analysis. *Resources Policy*, *85*, 103941.

Chiou, T.-Y., Chan, H. K., Lettice, F., & Chung, S. H. (2011). The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan. *Transportation research part E: logistics and transportation review*, *47*(6), 822-836.

Elahi, E., Khalid, Z., & Zhang, Z. (2022). Understanding farmers' intention and willingness to install renewable energy technology: A solution to reduce the environmental emissions of agriculture. *Applied Energy*, *309*, 118459.

Fan, W., & Hao, Y. (2020). An empirical research on the relationship amongst renewable energy consumption, economic growth and foreign direct investment in China. *Renewable energy*, *146*, 598-609.

Fatima, N., Li, Y., Ahmad, M., Jabeen, G., & Li, X. (2021). Factors influencing renewable energy generation development: a way to environmental sustainability. *Environmental Science and Pollution Research*, *28*(37), 51714-51732.

Giannakitsidou, O., Giannikos, I., & Chondrou, A. (2020). Ranking European countries on the basis of their environmental and circular economy performance: A DEA application in MSW. *Waste management*, *109*, 181-191.

Gramkow, C. (2020). Green fiscal policies: An armoury of instruments to recover growth sustainably.

Kaiser, H. F. (1974). An index of factorial simplicity. Psychometrika, 39(1), 31-36.

Kline, R. B. (2016). Principles and Practice of Structural Equation Modeling (4th ed.). Guilford Press.

Marrucci, L., Daddi, T., & Iraldo, F. (2021). The contribution of green human resource management to the circular economy and performance of

ISSN Online: 3007-3154
ISSN Print: 3007-3146

environmental certified organisations. *Journal of Cleaner Production*, *319*, 128859.

Muhafidin, D. (2020). The role of fiscal policy and monetary policy in environmental degradation in Indonesia. *International Journal of Energy Economics and Policy*.

Miao, N., Sharif, A., Ozturk, I., & Razzaq, A. (2023). How do the exploitation of natural resources and fiscal policy affect green growth? Moderating role of ecological governance in G7 countries. *Resources Policy*, *85*, 103911.

Mills, J. (2021). Survey Research, A Simple Introduction. *Super Survey*. https://www.supersurvey.com/Research

Munawar, S., Yousaf, H. Q., Ahmed, M., & Rehman, S. (2022). Effects of green human resource management on green innovation through green human capital, environmental knowledge, and managerial environmental concern. *Journal of Hospitality and Tourism Management*, *52*, 141-150.

Newson, R. (2003). Parameters behind "nonparametric" statistics: Kendall's tau, Somers' D and median differences. Stata Journal, 3(3), 253-266.

Perron, G. M., Côté, R. P., & Duffy, J. F. (2006). Improving environmental awareness training in business. *Journal of Cleaner Production*, *14*(6-7), 551-562.

Popp, D., Vona, F., Marin, G., & Chen, Z. (2020). *The employment impact of green fiscal push: evidence from the American Recovery Act*.

Rosa, C. D., & Collado, S. (2019). Experiences in nature and environmental attitudes and behaviors: Setting the ground for future research. *Frontiers in psychology*, *10*, 763.

Saudi, M. H. M., Sinaga, O., & Zainudin, Z. (2019). The effect of green innovation in influencing sustainable performance: Moderating role of managerial environmental concern. *International Journal of Supply Chain Management*, *8*(1), 303-310.

Semmler, W., Braga, J. P., Lichtenberger, A., Toure, M., & Hayde, E. (2021). Fiscal policies for a low-carbon economy.

Shinwari, R., Yangjie, W., Payab, A. H., Kubiczek, J., & Dördüncü, H. (2022). What drives investment in renewable energy resources? Evaluating the role of natural resources volatility and economic performance for China. *Resources Policy*, *77*, 102712.

Singh, S. K., Chen, J., Del Giudice, M., & El-Kassar, A.-N. (2019). Environmental ethics, environmental performance, and competitive advantage: Role of environmental training.
Technological Forecasting and Social Change, *146*, 203-211.

Takalo, S. K., & Tooranloo, H. S. (2021). Green innovation: A systematic literature review. *Journal of Cleaner Production*, *279*, 122474.

Tariq, A., Badir, Y., & Chonglerttham, S. (2019). Green innovation and performance: moderation analyses from Thailand. *European Journal of Innovation Management*, *22*(3), 446-467.

Thomas, L. (2020). Simple Random Sampling | Definition, Steps & Examples. *Scribbr*.
https://www.scribbr.com/methodology/simple-randomsampling/#:~:text=Simple%20random%20sampling%20is%20a, possible%20of%20this% 20random%20subset.

Ullah, S., Ozturk, I., & Sohail, S. (2021). The asymmetric effects of fiscal and

ISSN Online: 3007-3154
ISSN Print: 3007-3146

monetary policy instruments on Pakistan's environmental pollution. *Environmental Science and Polluti Research*, *28*, 7450-7461.

Wang, C.-H. (2019). How organizational green culture influences green performance and competitive advantage: The mediating role of green innovation. *Journal of Manufacturing Technology Management*, *30*(4), 666-683.

Wang, J., Zhang, S., & Zhang, Q. (2021). The relationship of renewable energy consumption to financial development and economic growth in China. *Renewable energy*, *170*, 897-904.

Wang, M., Li, Y., Li, J., & Wang, Z. (2021). Green process innovation, green product innovation and its economic performance improvement paths: A survey and structural model. *Journal of Environmental Management*, *297*, 113282.

Yusliza, M. Y., Yong, J. Y., Tanveer, M. I., Ramayah, T., Faezah, J. N., & Muhammad, Z. (2020). A structural model of the impact of green intellectual capital on sustainable performance. *Journal of Cleaner Production*, *249*, 119334.

Appendix A
Questionnaire

Dear participants, I am a student of .....University, enrolled in my master's program. The focus of my study is on green aspects to analyze its impact on economic performance. Kindly go through this questionnaire and provide your response to the questions listed below. I will close the acceptance of response in four weeks so you are requested to submit your response in the respective time frame. Thanks in advance.

P.S. For the sake of generalization of responses, in the first section there are some questions related to your socio-demographic background included in the questionnaire as well. However, it is assured that your data will remain confidential as the data will be anonymized.

Section 1: Socio-demographic background

Kindly go through these questions and choose the option that resonates with you.

Age:

1. Less than 20 years
2. 21 – 30 years
3. 31 – 40 years
4. 41 – 50 years
5. Above 50 years

Gender:

1. Male
2. Female

Yearly income:

1. Less than 20,000
2. 21,000 – 40,000
3. 41,000 – 60,000
4. Above 60,000

Section 2: Variable Statements

Kindly go through the statements listed in this section and select the

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

ones that you think are most probable or accurate according to your experience.
The options listed against the statements are explained below.
1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

I believe following are significant aspects of adoption of renewable energy						
1	Instability and intermittency of renewable energy	1	2	3	4	5
2	Domestic use of renewable energy	1	2	3	4	5
3	Capability of renewable energy access and distant transmission	1	2	3	4	5
4	Approaches to store renewable energy	1	2	3	4	5
5	Existing standards of grid-connections to accommodate renewable energy	1	2	3	4	5
6	Communication between power grids and renewable energy projects	1	2	3	4	5
7	Renewable energy contribution in total energy supplied	1	2	3	4	5
8	Renewable energy buying	1	2	3	4	5
9	Approval system of renewable energy projects	1	2	3	4	5
In my opinion following aspects of green process innovation are significant						
1	Low energy consumption such as water, electricity, gas and petrol during production/use/disposal.	1	2	3	4	5
2	Recycle, reuse and remanufacture material	1	2	3	4	5
3	Use of cleaner technology to make savings and prevent pollution (such as energy, water and waste etc.)	1	2	3	4	5
I believe in following aspects of environmental attitude						
1	I changed my behaviours to become more environmentally responsible.	1	2	3	4	5
2	Environmental issues deserve a greater part of the government's resources	1	2	3	4	5

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 3 No. 2 (February) (2025)

3	The environmental management training has contributed to my understanding of environmental issues	1	2	3	4	5
4	I feel better equipped to make environmentally responsible decisions due to the environmental training	1	2	3	4	5
5	Because of the environmental training I have made changes in the way that i perform my duties at work which were not required by the training	1	2	3	4	5
6	I have consulted management of environmental issue with my superior	1	2	3	4	5
	I believe following about economic performance					
1	Decrease in costs for materials purchasing	1	2	3	4	5
2	Decrease in costs for energy consumption.	1	2	3	4	5
3	Decrease in fees for waste treatment	1	2	3	4	5
4	Decrease in fees for waste discharge	1	2	3	4	5
5	Decrease in fines for environmental accidents	1	2	3	4	5