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The Role of Environmental Governance, Practices and Stakeholder Engagement for a Sustainable Development

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ABSTRACT: Can we build trust with help of Environmental governance, practices (Political ecology and Environmental policy) and stakeholder engagement? This research explores the current the role of Environmental governance indicators such as political ecology and environmental policy in building trust as rational and relational in the context of Pakistan with an empirical lens. Data were collected via an online survey distributed to Pakistani citizens through social media platforms and analyzed using quantitative statistical methods. Dave Trust equation is used for stakeholder engagement and building trust. This study offers practical recommendations for enhancing building trust in developing countries like Pakistan, providing valuable insights for policymakers and future researchers interested in the dynamics of public trust within the context of environmental governance.

KEYWORDS: Environmental Governance, Citizens' Trust, Political Ecology, Environmental Policy, Sustainable Development, Stakeholder Engagement

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Introduction

'For a genuine democracy and a well-organized state, the trust of the people in the government is central notion. Kim (2005) highlights trust in government by describing that with peoples' trust government can perform for people's benefits. This means the citizens are prepared to give the government the liberty of wider activities. Excessive trust in the government reduces the notion of accountability to the government (Blind, 2007).

The levels of people's trust on government are analyzed in three steps. The macro level is where citizens trust that they are on track with respect to the government's working and democracy in that country. The meso level is where citizens trust that the strategies of government on social and economic aspects of a country will bear a positive effect. Moreover, on a micro level, trust is referred to as the effect of government on citizens. All these levels are connected, and legging of any one level can seriously affect any level of trusts and policy formulation. As discussed by Cheema & Popovski (2010), trust in government and government institutions in recent years has been gradually diminishing. If a country lacks trust in government, it negatively affects a country in terms of development (Diamond, 2007). Any county can achieve citizens' trust by implementing environmental governance practices and can enhance the state's economic proficiency through social wellbeing programs which leads to sustainability.

Environmental management is a notion referred to from the field of political ecology and environmental management which emphasize sustainability as a key element in the management of all human activities (Brandes & Brooks, 2005).

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Stakeholder engagement is guidance of Environmental governance practices. Effective governance is essential for sustainable growth of every state of the world whether it is a developed state or still developing. A systematic framework of strategies and collaboration of economists with policymakers is needed to ensure effective governance. At the foundation level of implementation for the Indian context, the reform of the civil services, at the middle level of implementation, the enhancement of the capabilities of the institutions for the making of policies and at the last level, the development/monitoring of the reforms of the policies. (Asghar, 2013; Khan et al., 2021). The role of environmental governance in sustainable development providing the strategic framework necessary for long-term self-government commitment embedded in strategic objectives, strategies for vertical and horizontal political integration coordination, transparent public consultation and participatory and participatory processes to make the safety approach accessible; to municipalities and people. One of problems in Pakistan is that the recruitment process in the FPSC and PSC is outdated. The efficient working of a country depends on the good recruitment process. The impact of unqualified officials in government and other officials of a state negatively affects system efficiency (Asghar, 2013).

For Pakistan, three important aspects of governance are identified by Ismail et al., (2010) as, first, decentralization of governance functions to the level of local governments, second, the identification of corruption as grounds of failure of the institutional system and inadvisability of institutional structures of Environmental governance, and third, the economic and social costs of poor governance. The important aspects of governance include, first, public sector integrity, second, evidence-based policy-making system, third, coordination of policies, as well as programs, and fourth, fiscal sustainability (Asghar, 2013). Bukhari, et al., (2014) emphasize the Environmental policy aspects, which act as obstacles to Environmental governance in the country. Politicians get involved in official matters of academia, which hinders Environmental governance (Ahmad et al., 2025, Ahmad, 2024) .

The pursuit of environmental sustainability and social change has become a central concern for policymakers, researchers, and practitioners worldwide. As societies grapple with complex challenges the need for innovative governance models that foster collaboration and public value creation has never been more urgent (Ahmad & Esposito, 2025). Collaborative governance offers a promising approach to address these multifaceted issues by leveraging diverse perspectives and resources (Ahmad et al., 2025).

Moreover, violations of the rule of law and governance failures further complicate efforts to achieve sustainable development, as seen in the economic and environmental quagmires faced by countries like Pakistan (Ali et al., 2025).

Pakistan suffers from poor environmental governance for a long time. This research investigates the link between the practice of environmental governance and people's involvement or engagement and its effect on the people's trust of Pakistan. The people's trust concept will be discussed by examining the political trust definition, that is, Rational trust and Relational trust. The researcher believed that the Pakistani government can better perform its functions and achieve people's trusts by doing better regarding the aforementioned factors.

This research explores whether it is possible to develop trust through the means of practices of Environmental governance (Political ecology & Environmental policy) & stakeholder engagement.

The research emphasizes that greater trust among citizens in government is crucial for greater legitimacy in government. The results generated by this study add on to the knowledge bank created by various studies on environmental governance in a developing nation, which in this case is Pakistan.

The remaining sections of the research are arranged in the following sequence. Firstly, after this, a detailed literature review is presented to explain Environmental governance and its association with citizens' trust to develop research hypotheses. In the third section of this article, study design, target participants, and research questionnaire composition and Trusted equation is presented. Results for questionnaire data analysis are shown in the fourth section. Finally, the article conclusion, study limitations, and future research recommendations, and practical implications of this study are discussed in section five.

Literature Review

Environmental Governance

Both the terms “governance” and “Environmental governance” are widely utilized in the the available research. Governance is described as the activities and processes involved in making decisions and implementing or not implementing them (UNESCAP, 2009). Governance is described as customs, principles, and institutions that assist a nation in preserving their control. As explained by Kaufmann et al. (2010) and Yousaf et al., (2016), A state is also guided by the governance pertaining to the implementation of policies, the selection of the state’s representative, the provision of accountability, and the provision of citizens’ rights. Governance is a vast concept and can be applied at every level; it helps states answer effectively to citizens' problems and meet their expectations. However, there is no common universally accepted definition of Environmental governance that is used in all types of situations; instead, Environmental governance can be applied through multiple models in multiple conditions. Environmental governance is not only a process that helps in building political, social, and economic relationships, but it is also a structure of various indicators such as accountability, participation, transparency, Environmental policy, the rule of law, Political ecology, and responsiveness.

Environmental governance and stakeholder engagement is key for sustainability and improve citizens’ trust. In order to promote accountability, public interest and increase citizens’ trust, donors should encourage environmental policy and stakeholder engagement at all stages of the policy process and policy cycle, including ensuring access to open information and data and responding promptly to requests for information (OECD, 2017)

Governance can also be defined as people’s will to come up with a solution to the problem collectively, as well as making decisions about the responses collectively. The shared political ecology and decision-making result in why shared social norms and institutions emerge. In governance, a systematic way is applied in assigning tasks to specific individuals, such as procedures of electing state actors or politicians, as well as assigning duties within public/corporate positions (Compagnon et al., 2011). "Environmental governance practices also ensure that there is accountability as well as efficiency within all levels of the state, including within its political institutions, for the administrative body, as well as for economic, educational, or corporate sectors." In democratic nations, where Environmental governance is preferred, their citizens are skilled to give their constructive input to decision-making, and this affects people's life in both direct and indirect ways (Beshi & Kaur, 2020). Moreover, this process gives people a chance to express their views; lastly, the most

important part of Environmental governance is upholding the rule of law in that nation (Compagnon et al., 2011). As discussed by Khan (2020) Pakistan is facing various issues with governance, that is, less good accountability, less appropriate check and balance, a disaster at the institution level, less law and order, and finally less stable political system.

World Bank has identified sound governance principles based on a citizen-centric approach. The principles included in Environmental governance are voice and accountability, regulatory quality, and the rule of law (Yousaf et al., 2016). But these principles may differ in accordance with each state. Yousaf et al., (2016) define governance as the set of processes that involve choosing, holding to account, and replacing the government through institutional channels, and they point out that how citizens view governance is connected with better overall management of public service systems.

Robertson (2015) highlighted that participation, and Political ecology is the most crucial component of Environmental and good governance according to the World Bank and the IMF. This concept is also supported by Yousaf et al., 2016 who emphasizes that rule should be same for everyone. Another component of Environmental and good governance is accountability and that is identified as the basic block element of environmental governance. The authors Shafritz et al. (2017) argue that state makes sure that every administrator is accountable to the common man for their actions."This consensus achieves the five foundations of effective governance. Clear, applicable and enforceable environmental laws; Meaningful social participation: access to information on the environment, the right of participation in decision making in relation to the environment, as well as the right of access to justice; The roles of responsibility and integrity: integrity ranging from the personal to the institutional; Effective institutional frameworks: institutional frameworks in government bodies linked to the environment; Together with the roles of Environmental Dispute Resolution Mechanisms. According to Eccleston (2010) – Political Ecology is: "The study of the relationships between political, economic, social factors and the environment. EG involves pollution control, ecosystem and biodiversity conservation, sustainable resource use, and the protection of wildlife and endangered species.

Stakeholders can support or oppose decisions, influence the organization or community in which they operate, engage in appropriate public service activities, or participate in the long term. To achieving CSR and the triple bottom line stakeholder engagement is the key. Companies involve their stakeholders in discussions to find out which are the most important social and environmental issues for them and involve stakeholders in the decision-making process.

Trust

The notion of trust is explained in the fields of social sciences, politics, psychology, as well as economics (OECD, 2017). Trust can also be divided into types, including an affective attitude, human nature perspective, relation, decision, as well as action (Nannestad, 2008; Newton et al., 2018). Generally, there is no consensus on what trust is meant to be. Trust can also be placed under a cognitive type, along with knowledge and belief (Coleman & Stern, 2018; Hardin, 2004). The key notion for a trust has been pointed out by Uslaner (2008), that "trust is faith that most people share your ethical values." The only case that trusts presents an issue to the individuals is presented by the fact that the individual trusted has the capability to influence the interest of the trustee in some way (OECD, 2017).

It can be categorized into two types of Rational Trust and Relational Trust (Frederiksen, 2014; Rompf, 2014). The difference among the two types of theories is that trust should be described as an attitude towards others' trustworthiness, which is known as Rational Trust or as a norm concerning how far an individual can trust others, which is known as Relational Trust (OECD, 2017). In addition, Job (2005) described Rational Trust as Calculus Trust. A person knows a lot about the other person and decides if the other person acts according to him. Rational Trust is described as the trust that the citizens of the nation believe in the Performance of the Government (Punyaratabandhu, 2007). In addition, Job (2005) described Relational Trust as the Ethical Roots in which an individual believes in other person's positivity and uses the word trust for him. Relational Trust is described as the trust the citizens of the nation hold in the Officials and the Government (Punyaratabandhu, 2007).

Recently, the term "network" has become one of the most important terms in ideological thinking, understanding and coordination of "production, so "trust" is generally considered the main coordination device of the organizational form (Tobias-Miersch, 2016).

Environmental Governance and Citizens' Trust

Although a generally accepted definition on trust does not exist, nevertheless, the need to establish trust among a nation's citizens towards their government and institutions exists to ensure that the legality of state activities is upheld. Citizens who trust their government tend to conform to rules and regulations established by the state to a greater extent compared to those who trust their government less (Caillier, 2010; Rose-Ackerman, 2001). Trust is significant for public officials (Fard & Rostamy, 2007). Public officials who are perceived to be trusted persons have a higher degree of sovereignty than persons who are perceived to be distrusted. One can therefore presume that trust is an objective assessment procedure that is subject to assessments by people. The level of trust between the citizens and the government, therefore, can be improved by higher levels of transparency (Alessandro et al., 2021). Moreover, citizen trust in the functioning of the government implies that the functioning of the government satisfies the preference of the citizens (Bouckaert & Van de Walle, 2003). It is proved that citizen trust in the government or institutions results in efficient implementation of policies (Mangi et al., 2019). Environmental policy can be more effective as a system of trust for institutions accessible by direct governmental and political oversight, such as regulators.

Political ecology is the correct approach and the approach to sustainable development. If communities are involved in the development that is to be undertaken, the results of such projects will be geared more towards helping local needs and will be sustainable (UNDP, 2014).

Tysang (2009) discusses how trust is a factor in environmental governance, as it contributes to collective action by facilitating public participation in environmental policy-making.

Moreover, Kunthea (2020) also explores the contribution of Environmental governance towards increasing the trust among the citizens. If the government is concerned to provide Environmental and good governance quality to the citizens, then it needs public trust (Ahmad & Esposito, 2022; Gozgor, 2021)

In every nation, public trust has two functions since it increases social cohesion in the state, which finally shapes the governance of the country. Also, Spiteri & Briguglio (2018b) argued that good governance is another pivotal basis for citizens' trust in governments. Another literature review by Kunthea (2020) further

examines the importance of Environmental governance in increasing citizens' public trust. Moreover, if any country's government is eager to deliver Environmental and good governance to the public, it can only be done by public trust (Gozgor, 2021).

Practices in environmental governance are closely associated with the levels of citizens' trust in the system (Tysang, 2009). Diamond (2007) argues that for citizens' trust-building, there is a need for improved governance on the part of the government, greater transparency, more responsibility, accountability, and effectiveness, greater respect for rules and laws, greater interaction and engagement, and finally, greater respect for the common public good. "The foundation in the rule of law, declares environmental information as the 'primary language' of environment protection, guarantees the participation of all affected parties in decisions involving the environment, provides real accountability for government and industrial action, dispenses with institutional efficiency confusion, and brings timely and meaningful truth in complaints and disputes in the environment" (Fulton & Wolfson, 2012).

In order to prove the thesis statement for the given topic, the following hypothesis has been developed in the current study:

The author assumed that "Environmental governance practices positively impact on citizens' trust." Thus, there is a hypothesis that:

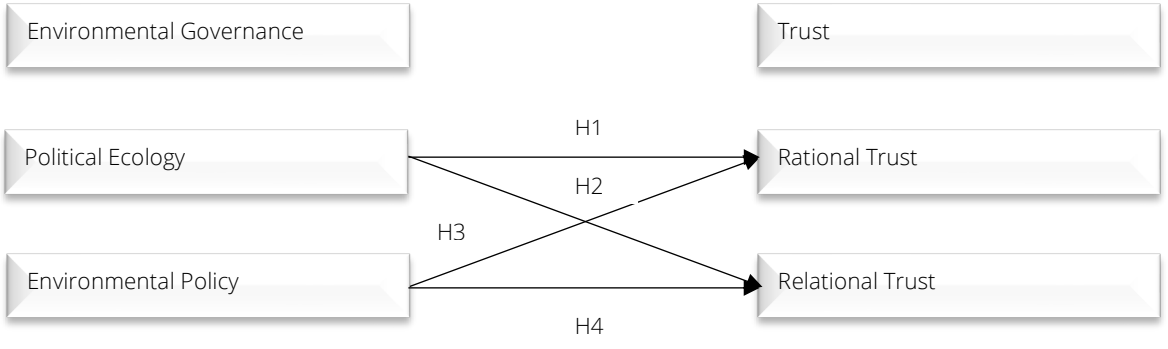
H1: Environmental governance practice (political ecology) positively influences rational trust.
H2: Environmental governance practice (Political ecology) positively influences relational trust.
H3: Environmental governance practice (Environmental policy) positively influences rational trust.
H4: Environmental governance practice (Environmental policy) positively influences relational trust.

Conceptual Model

The hypotheses are clarified in accordance with the following conceptual model. In this respect, the current study has considered environmental governance as an independent variable, studied through its two sub-dimensions, named: (1) Political ecology; and (2) Environmental policy; while citizens' trust is studied as the dependent variable, further conceptualized as rational trust and relational trust.

Figure 1

Conceptual Model



Source: Researcher's own work

Methodology

Data and Method

This research seeks to explore the connection between the practices of Environmental governance and public trust in the political environment of Pakistan. This study uses quantitative and survey approach. The research aimed to focus on citizens of Peshawar. This research used convenience sampling approach. A sample size of 155 is selected for research which was suggested in the work of Hair et al. (1995) and Kline (2016). To ensure that only those fill the questionnaire, who have some views about politics, have information about government functioning, and understand the questionnaire, the minimum age range for participants was 20 years old (Voting age in Pakistan is 18 years as per 18th amendment). The questionnaire (close-ended)for conducting research on this topic was dispatched in an online survey, and people were approached via social media platforms irrespective of their professions. The collected data is analyzed by using SPSS and AMOS. For measuring the stakeholder engagement and trust researcher used Dave Trust equation. Descriptive statistics, Confirmatory factor analysis, multiple regression analysis and correlation analysis are used to study the proposed relationship between Environmental governance and citizens' trust.

Research Measures

The research questionnaire employed has two parts. The first part of the research survey includes questions on gender, level of education, and age. The second part of the research survey contains close-ended questions on Environmental governance and trust.

"Trust Equation" as:

Trustworthiness = (Credibility + Reliability + Intimacy) / Self-Orientation

Measure for Environmental Governance

The scale for Environmental governance was adopted from Punyaratabandhu (2017) work who developed a combined scale for Environmental governance, but the scales for the sub-dimensions of Environmental governance were given separately. In this research, the two sub-dimensions of Environmental governance are examined separately regarding the trusts of the citizens. The Political ecology scale has six statements, and the Cronbach alpha value of the scale was found to be 0.701. The Environmental policy dimension has four statements, and the Cronbach alpha value of the scale was found to be 0.855 (Punyaratabandhu, 2017). For Political ecology and Environmental policy, the statements were worded on the four-point scale of the Likert scale.

Measure for Citizens' Trust

Trust by citizens can be defined as a combination of two aspects: rational trust and relational trust. This aspect, rational trust, pertains to people's level of satisfaction with their government's performance in dealing with societal issues. This construct can be measured using a three-item proxy proposed by Punyaratabandhu (2017), with good internal consistency reliability (Cronbach's alpha = 0.837). The logic here is quite simple: as citizens believe that their government has been dealing with issues efficiently, they would be more confident in their performance. All questions show levels using a Likert scale, expressing people's level of satisfaction and lack of satisfaction.

Relational trust, however, examines the degree to which citizens trust a government or its representatives. This is measured using a five-scale measurement tool with a Cronbach's alpha of 0.867, which is again taken from Punyaratabandhu (2017). This too is measured using a Likert scale, measuring levels of satisfaction or discontent with a particular statement or question. The scales here seek to measure the broader view of how trust between parties develops with time.

Results

Data Management

It is useful in obtaining accurate and verified outcomes. It also helps in identifying the gaps in data and data biases. Data was collected through questionnaire method; from 120 participants. It was recorded in an excel document. A SPSS data sheet was created since SPSS is considered an analysis method in this study. The first analysis has been done to identify either it has some gaps in data or some discrepancies in data; and there were no gaps in data, so no treatment process has been required (Hair et al., 1995). Second analysis has been done to figure out whether some wrong entries were made in coding responses; it is ensured that every entry is right and no information is missed out. Further analysis has two different aspects in detail. The first has descriptive analysis, model fit analysis, reliability analysis, and validation analysis. The other has hypothesis testing analysis. The first descriptive analysis has been done for participants as well as for responses also.

Demographic Details of Participants

To identify the participants, discrete data has been used, and the frequency/percentage of their data has been collected.

Table 1

Frequencies and Percentages

Variable	Scale	F	%
Gender	Male	55	46
	Female	65	54
Education	Graduation	30	25
	Masters	38	31.7
	M Phil	30	25
	Doctoral level	04	3.3
	Others	18	15
Age Group	20-30	55	45.8
	31-40	30	25
	41-50	20	16.7
	51-60	10	8.3
	Above 60	5	4.2

Table no. 1 shows that 55 participants are males and 65 are females. Moreover,M. Phil is in largest percentage in respondents by obtaining 31.7.But in terms of age category, most are from 20 to 50 years old.

Descriptive of the Variables

The demographic analysis enables the study to carry out the descriptive analysis of the variables. Through gathering information on all aspects, first, all the items associated with one variable are converted to the

summed value. This process occurs through the SPSS transformation of value. Based on the mean method, all the variables are summed up. All the above-mentioned variables are stored in SPSS and used in the future study process. The process of descriptive analysis enables the explanation of how respondents usually reacted to each of the variables in general, as per the given option. The standard deviation, also included in this study, enables the explanation of the existing deviation in the data in relation to the mean value.

This survey employs an interval level with varying ranges for each question. For Environmental Policy and Political Ecology, it utilizes a 1-4 Likert Scale, ranging from agree to disagree, respectively. Environmental Policy has a mean of 1.493 with an equally low standard deviation of 0.40, which indicates a strong level of agreement and lack of variation in responses. Political Ecology, on the other hand, records a mean of 2.954, which indicates a slight level of disagreement and low responses variation with a SD of 0.09.

The scale for the value of rational trust had a range of 1-5, and a code of 1 for strongly satisfied, with five being strongly dissatisfied. The mean for the value for rational trust was set to 3.7, which indicated that a vast majority respondents are a little dissatisfied with the statements being sought. The SD for this was 1.388. For the fourth variable of study, a 1-5 scale was employed. 1 was utilized for not trusted, and 5 for testing. The mean for it was 2.32. This indicates that most of them are actually neither satisfied nor dissatisfied. The SD for this variable was 0.92; overall deviations are low.

Table 2

Descriptive values of Variables

Variables	Mean	Standard deviation
Environmental policy	1.493	0.424
Political ecology	2.954	0.974
Knowledge Sharing	3.747	1.389
Organizational Trust	2.310	0.917

Reliability of Research tool

After descriptive analysis, the reliability of the questionnaire is verified which determines the authenticity of the results.The concept of reliability refers to the consistency of the data. There are four variables in the current research. Reliability is tested in two steps; first of all, overall questionnaire items are tested as collective. Later one reliability of each variable is tested. It helps to understand / estimate if there is some reliability issue related to a specific variable.

The total responses collected from this survey are 121. The reliability test is calculated by estimating the value of Cronbach's alpha. If the result is scored with a value of alpha above 0.7, then it is found to be efficiently reliable. This is the minimum pass rate that should be scored by the result. The higher and/or nearest to 1 is taken to be the best. If alpha is > 0.8, then it is excellent, and for a value greater than 0.9 indicates a research report with a highly excellent value for reliability and can only be achieved when answers are provided by respondents with zero bias and with utmost honesty.

The following table shows the overall consistency score of the data of this research which is close to 0.7 with a score of 0.688, which indicates that the overall reliability of the data is fair. It could be improved by taking more data and more time in data gathering. It's still in the acceptable range.

Table 3

Reliability

Cronbach's Alpha value	Total Questions
0.689	17

Scores for all the variables are given below in table.

Table 4

Variable vise reliability

Variable's Name	Cronbach's Alpha	No. Of. Items
Environmental policy	0.732	4
Political ecology	0.727	6
Rational Trust	0.896	3
Relational Trust	0.793	5

*value of Alpha > 0.7

For environmental policy and political ecology, the value of α is above the lowest requirement of 0.7. It means that all the two variables have an excellent consistency of data. They are ready further for analysis too. There is the score of 0.896 value of reliability for the rational trust, and it is close to 0.9, and it is an excellent value altogether. In the relational trust, there are five items, and the score of α is 0.793. In the values of all variables, all the variables of the provided framework have been considered highly reliable.

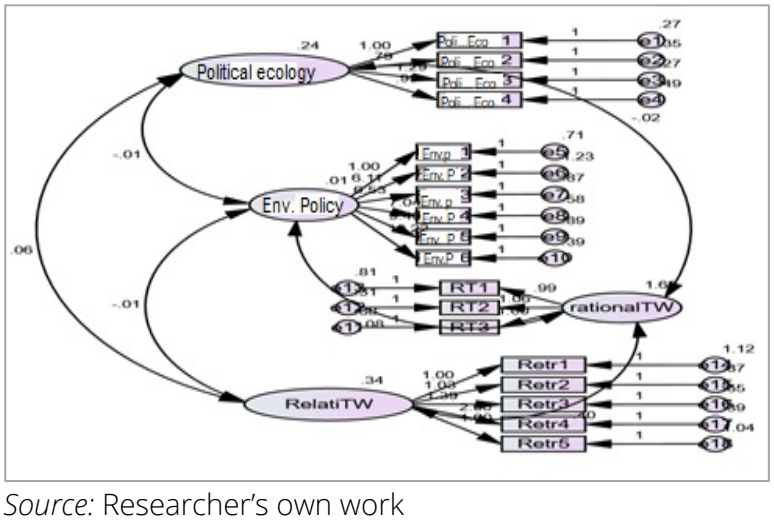
The reliability analysis shows in the graph the reliability of the data and the questionnaire used in the research is very high, and there is no requirement to remove any items/variables.

Confirmatory Factor Analysis

For further confirmation of data reliability, model fitness is also checked on the basis of latent variables. All the items are adopted, not developed. That's why validity and model fitness is measured through CFA. It helps to see whether the research model is suitable for analysis or not by drawing a measurement model, and estimates are calculated. This is given below in figure number 2.

Figure 2

Measurement Model



Source: Researcher's own work

Table 5

Second-Order Confirmatory Factor Analysis: Model Fitness Comparisons

Model		χ^2	$\Delta\chi^2$	Df	GFI	TLI	CFI	RMSEA	CMIN/DF
Alternative Measurement Models	One Factor	324.776	-	128	0.777	0.741	0.782	0.114	2.517

Based on Table, the indices for goodness of fit exceed 0.7. Values of CFI, TLI, and GFI surpass the 0.7 threshold. However, the indices that show poor fit values are RMR and RMSEA. These values nonetheless show that the model is fit for testing hypotheses. CMIN/DF is 2.517, and the value is placed between 2 and near 5. The value also shows that the test is significant as the P-value is 0.000.

Validity Analysis

Before proceeding with the test of the first set of hypotheses, the conventional procedure of validity evaluation, CFA, model fitness evaluation, and bootstrapping was followed. Based on Table 6 above, the maximum shared variance and the average shared squared variance are both less than the average variance extracted for the three variables. This confirms the discriminant validity of the model (Hair et al., 2010). The average shared squared variance for the three variables is above 0.5. This confirms the convergent validity of the three variables since the threshold is 0.5 (J. Hair et al., 2010).

Table 6

Validity Analysis

Variables	AVE	MSV	ASV
Environmental policy	0.562	0.492	0.462
Political ecology	0.573	0.492	0.468
Rational Trust	0.635	0.445	0.437
Relational Trust	0.527	0.483	0.468

Correlation Analysis

The Pearson correlation on the fitness model is calculated after analyzing the model. The result of this calculation is given by the value of r. It assists in the interpretation of how well two variables are related to each other or not. This kind of test of relationship is used in situations with interdependent variables, that is, there are no independent/dependent variables. The value of "r" is checked at the level of 0.05 or 0.01.

It gives information about the link of the trend, whether upward or downward, and if the relationship is positive or inversely correlated . It also helps assess discriminant validity: values farther away from 1 suggest that these items are tapping into different underlying constructs with little overlap in items.

Table 7

Correlation Matrix

Names of Variables	*1*	*2*	*3*	*4*
1. Environmental policy	1			
2. Political ecology	.094**	1		
3. Rational Trust	.244**	.551**	1	
4. Relational Trust	-0.078	-0.070	-.0471**	1

** P value is significant = 0.01

The r-value for Environmental policy and Political ecology is 0.094, which is significant on a 0.01 significance level. It indicates that both variables are positively related to each other and are significant. The significance of Rational trust in Environmental policy with a value of "r" is 0.244, which is also a significant positive correlation on a 0.01 significance level. It indicates that with the increase in the values of Environmental policy, there would be a rise in the units of Rational trust. The significance of the value of Rational trust has a score of 0.551 in correlation with Political ecology. It is a significant positive correlation. The significance of relational trust has a significant relationship with Rational trust. It has a negatively related factor. It indicates that with the increase in values of Rational trust, relational trust would be declining. The score of "r" has a significance of -0.0471. The significance of "r" for relational trust, Political ecology, and Environmental policy is not significantly related to each other. It indicates that they do not possess a strong relationship with each other. The significance of all the values is significantly defined on a P-value of 0.01.

Regression Analysis

It is the most common linear technique that helps to check the relationship between dependent and independent variables. This shows the positive or negative impact of variables (Seber & Lee, 2012). In the current research, there are two IVs and two dependent variables. First, multiple regression analysis is used to test model 1, which has rational trust as the dependent variable and 2nd model has relational trust as the dependent variable.

In this research, the initial model yielded an R-squared value of 0.342.It gives an indication that there is a 34.2 percent change in rational trust because of Environmental policy and Political ecology. There could be other variables as well, which can be used to increase the R-square value of the model. The value of Durbin Watson ratio is 1.157, and it falls within the range 1.5 to 2.5. This shows that there are no issues of multicollinearity in the model applied in the study. The F value is also 29, which exceeds 5, and its value of 0.000 exceeds the significance level of .05. All these are indicated below.

Table 8

Multi-co-linearity

R-square	Durbin-Watson	P-value	F-value
0.342	1.157	0.000	29.007

It can be noted from table that the unstandardized beta value for Environmental policy is 0.157. It indicates that if there is a change in Environmental policy, then 1.57% change in relational trust with respect to one unit change in it. The beta value is not significant as it has T-value =-0.78, which is less than 1.96, and P-value = 0.43, which is greater than 0.05.

This implies the existence of negative relationship between Environmental policy and relational trust. However, for the second variable, with a beta value of -0.079, there is the existence of 0.79 percent units of change for relational trust with regard to this variable.

However, the beta value is significant as it has T-value = 0.672, which is less than 1.96, and P-value = 0.496, which is less than 0.5. It indicates the presence of significant negative relationships between Political ecology and relational trust.

Table 9

Coefficients

Model 1	Beta	Std. Error	T-value	Significance
Environmental policy	0.642	0.247	2.601	0.09
Political ecology	0.999	0.142	7.057	0.000

Dependent variable: Rational trust

The R-squared of the 2nd model is not too large, implying the addition of more variables would be beneficial in creating even higher predictability of the data. To perform the diagnostics check of the model, the result returned from the Durbin-Watson test statistic is 1.167 which indicates that there are no problems of multicollinearity in the model of research. The F-value is also 0.587, and it is non-significant at the significance level of 0.05 with the value of 0.553. It indicates that relational trust also has some problems of interdependence.

Table 10

Multi-co-linearity

R-square	Durbin-Watson	P-value	F-value
0.010	1.167	0.553	0.587

After validating multicollinearity and R-square, hypothesis tests are carried out by using the values of coefficients for 2nd model. It can be noted from table that if there is a change in Environmental policy, then 1.57 percent units of change in relational trust with respect to one unit change in it.

The beta value is not significant. It indicates the presence of an insignificant negative relationship between Environmental policy and relational trust. However, in the second variable, the beta value is -0.078, indicating the presence of 0.78 percent units of variance in relational trust with respect to it. However, the beta value is significant as it has T-value = 0.672, which is less than 1.96, and P-value = 0.495, which is less than 0.5.It indicates the presence of significant negative relationships between Political ecology and relational trust.

Table 11

Coefficients

Model 2	Beta	Std. Error	T-value	Significance
Environmental policy	-0.156	0.220	-0.782	0.435
Political ecology	-0.078	0.115	-0.672	0.495

Dependent variable: Relational trust

1H1 and H3 are accepted, while H2 and H4 are rejected.

Discussion

The proposed hypotheses about the positive influence of Political ecology and Environmental policy on rational trust are accepted. In contrast, hypotheses about the positive impact of Political ecology and Environmental policy on relational trust are rejected. The regression analysis results of hypothesis testing about Political ecology and rational trust show a significant and positive relationship, i.e. (β =0.999, $p<0.05$). Further, Environmental policy and rational trust relationship are also significant with β =0.642 and $p<0.05$.

These findings are in line with the study of Brandes et al. (2005), who concluded that Environmental governance practices work as the central pillar for improving citizens' trust. Citizens' trust is a root to develop cohesion among society which eventually improves governance ability of government. The same results are also found by Spiteri & Briguglio (2018a) that Environmental governance is the significant determining factor of citizens' trust in government. However, regression analysis results from Political ecology and relational trust indicate a negative association between them, i.e. (β =-0.079, $p<0.05$). Also, Environmental policy and relational trust have a negative relationship between them with β =-0.156 and $p<0.05$. Till now, no previous research is found indicating the negative association between citizens' trust and Environmental governance practices. Hence, the findings of relational trust and Environmental governance practices association are unique.

In the Dave Trust equation, Credibility is what you know and how you say it. Reliability means exactly how it sounds and you have to do what you say. Intimacy means a lot that is open on a personal level and vulnerable enough to make the other seem trustworthy. Eventually, we achieve self-orientation by focusing on our own needs or wants, and not on others.

This study examined the relationship between trust, stakeholder engagement and environmental governance in Pakistan. Government works in many ways when citizens consider this authority to be legitimate. According to Tyler (2003), legitimacy is based on the competence and honesty of the jurisdiction (personal legitimacy) and on the professionalism that strengthens the decision-making process, which must be postponed and respected (institutional legitimacy). this study concludes that in Pakistan, citizens' trust in government performance (rational trust) about common people's health, education, and poverty is significantly influenced by two important Environmental governance practices: Political ecology and Environmental policy. Citizens, when allowed to participate in decision-making and government work as per citizens' demand for the betterment of citizens it automatically spread the positive message about the government. Further, transparent functioning of government activities is also a root to improve the trust of Pakistani citizens. When citizens are well aware of how government works and how every operation is carried out, it ultimately enhances citizens' trust in government performance. Moreover, relational trusts, i.e., trust of common citizens in government officials, are not influenced by Environmental governance practices and are negatively associated.

Theoretical Contribution

This study represents an original contribution to knowledge and explores issues pertaining to the relationship between environmental governance and citizen trust in developing countries, creating new avenues for research scholars to work with. This study adds to existing research as it investigates the two most important dimensions of Environmental governance separately with different dimensions of citizens' trust. The theoretical significance of this study is that it provides insight into issues which hamper the governance capabilities of developing countries and their citizens.

Practical Contribution

This study suggested some essential practical solutions for improving citizens' trust in Pakistan. For increasing trust, government should carry out its activities as per Environmental governance rules. Insufficient

Environmental governance practices adversely influence common good causes of civil and social institutes. Therefore, it is suggested that government develop strategies for the long term. Lack of Citizens' trust, whether it is rational or relational, adversely influences government expenses, as distrust among common people leads them to a situation where they deny following rules and regulations. Hence, the government has to spend extra costs to ensure law enforcement in the country. While on the other hand, higher trust of citizens in government performance and government officials positively influence economic development. Therefore, it is suggested for the Pakistani government to be vigilant toward citizens' demands. The key to effective change in the country is the implementation of well-developed strategies in concerned societies. Additionally, the government of Pakistan needs to improve its corporate, civil, and social functioning, which is only possible by implementing Environmental and good governance practices. The only key to win citizens' trust and accelerating effects of Environmental governance practices is that the government of Pakistan must ensure that fundamental rights of citizens such as health, education, and justice should have prevailed without any discrimination. Clear, enforceable and enforceable environmental laws , public participation is important across the board, ranging from individuals to institutions. This covers the availability of information relating to the environment, opportunities for participation in environmental decision-making, as well as access, justice, accountability, and integrity. Effective arrangements, both internally as well as between institutions, need to be in place in order to deal with environmental issues. Another important factor is the availability of fair, prompt, and responsive conflict resolution concerning the environment, particularly through litigation. Focus on the other side, cooperation, take a medium and long term perspective, get used to being transparent are the core principle to build trust.

Limitations and Future Research Recommendations

Despite much significance, this study is not free from limitations. First, this research only examines the link between the independent variable and dependent variable, that is, Environmental governance and trust among citizens. It would be very helpful if future researchers examine models with moderator variables to detect possible buffer effects due to factors like corruption or unethical practices by public officials. Researchers could also explore the role of ethics and culture in between environmental governance and public trust. Future researchers could add other techniques such as accountability, the rule of law, and responsiveness. Another beneficial research will investigate the influence of all governance practices separately in relation to two dimensions of trust, i.e., rational trust and relational trust. Third, this research quantitatively explores the relationship between variables; the researcher believes that qualitative studies of the same variables should be conducted to confirm quantitative results. Forth, the current study provides its conclusion based on confirmatory factor analysis, correlation analysis, and regression analysis through SPSS and AMOS. Future research could be conducted through other useful statistical tools and other data analysis techniques. Fifth, this study is conducted only in one developing country, i.e., Pakistan. It will be beneficial if future researchers target two developing countries or two different countries, such as one developed country and another developing country, and compare results for better results generalizability. Lastly, it will also be beneficial to compare the effects of different regions in the same country. It will provide insight into how Environmental governance practices perception found differently influence citizens' trust even in the same country.

References

Ahmad, Z. (2024). Critical appraisal of solid waste management in developing countries: Myths and challenges. *International Journal of Advanced Research*, *12*(10), 622-636. https://doi.org/10.21474/ijar01/19680

Ahmad, Z., & Esposito, P. (2022, September). GOOD GOVERNANCE AND CITIZENS'TRUST IN DEVELOPING COUNTRIES: A RESEARCH NOTE FROM PAKISTAN. In *15th Annual Conference of the Euro Med Academy of Business*.

Ahmad, Z., & Esposito, P. (2025). Collaborative Governance for Social Change and Environmental Sustainability: A Case Study of Campania Region. *Administrative Sciences*, *15*(6), 217–217. https://doi.org/10.3390/admsci15060217

Ahmad, Z., Esposito, P., & Ali, M. (2025). The risk factors and problems of waste management in developing countries as hurdles. *Qlantic Journal of Social Sciences*, *6*(1), 130-144. https://doi.org/10.55737/qjss.vi-i.25298

Ahmad, Z., Esposito, P., & Ali, M. (2025). Unpacking public value destruction through solid waste management: A case study of Pakistan. *Qlantic Journal of Social Sciences and Humanities*, *6*(1), 145-162. https://doi.org/10.55737/qjssh.vi-i.25309

Alessandro, M., Cardinale Lagomarsino, B., Scartascini, C., Streb, J., & Torrealday, J. (2021). Transparency and trust in government. Evidence from a survey experiment. *World Development*, *138*, 105223. https://doi.org/10.1016/j.worlddev.2020.105223

Ali, M., Ameer, W., & Ahmad, Z. (2025). Unraveling the Economic Quagmire: A Comprehensive Analysis of Rule of Law Violations in Pakistan. *Research Journal of Social Sciences and Economics Review*, *6*(1), 1-12. https://rjsser.org.pk/ojs/index.php/rjsser/article/view/735

Asghar, M. U. (2013). Governance issues in Pakistan: Suggested action strategy. *ISSRA PAPERS*, *113*(1), 1-202.

Beshi, T. D., & Kaur, R. (2020). The mediating role of citizens' satisfaction on the relationship between good governance practices and public trust in ethiopian local government. *Bandung*, *7*(1), 80-106. https://doi.org/10.1163/21983534-00701005

Blind, P. K. (2007). *Building trust in government in the twenty-first century: Review of literature and emerging issues*. United Nations Publications, 26–29.

Bouckaert, G., & Van de Walle, S. (2003). Comparing measures of citizen trust and user satisfaction as indicators of 'Good governance': Difficulties in linking trust and satisfaction indicators. *International Review of Administrative Sciences*, *69*(3), 329-343. https://doi.org/10.1177/0020852303693003

Brandes, O., & Brooks, D. (2005). *The soft path in a nutshell*. University of Victoria.

Bukhari, I. S., Jabeen, N., & Jadoon, Z. I. (2014). Governance of third sector organizations in Pakistan: The role of advisory board. *South Asian Studies*, *29*(02), 579-592. https://sasj.pu.edu.pk/9/article/view/836

CAILLIER, J. (2010). Citizen trust, political corruption, and voting behavior: Connecting the dots. *Politics & Policy*, *38*(5), 1015-1035. https://doi.org/10.1111/j.1747-1346.2010.00267.x

Cheema, G. S., & Popovski, V. (2010). *Building trust in government: Innovations in governance reform in Asia*. United Nations University Press.

Coleman, K., & Stern, M. J. (2018). Exploring the functions of different forms of trust in collaborative natural resource management. *Society & Natural Resources*, *31*(1), 21-38. https://doi.org/10.1080/08941920.2017.1364452

Compagnon, D., Floremont, F., & Lamaud, I. (2011). Sub-Saharan Africa: fragmented environmental governance without regional integration. In *Comparative environmental regionalism* (pp. 92-112). Routledge.

Diamond, L. (2007, June). Building trust in government by improving governance. In *7th Global Forum on Reinventing Government:"Building Trust in Government" Sponsored by the United Nations Session V: Elections, Parliament, and Citizen Trust Vienna*.

Eccleston, C. H. (2010). *Global environmental policy: Concepts, principles, and practice*. CRC Press.

Fard, H. D., & Anvary Rostamy, A. A. (2007). Promoting public trust in public organizations: Explaining the role of public accountability. *Public Organization Review*, *7*(4), 331-344. https://doi.org/10.1007/s11115-007-0041-4

Frederiksen, M. (2014). Relational trust: Outline of a Bourdieusian theory of interpersonal trust. *Journal of Trust Research*, *4*(2), 167-192. https://doi.org/10.1080/21515581.2014.966829

Fulton, S., & Wolfson, S. (2012). *Improving environmental governance*. World Justice Project.

Gozgor, G. (2021). Global Evidence on the Determinants of Public Trust in Governments during the COVID-19. *Applied Research in Quality of Life*, *17*. https://doi.org/10.1007/s11482-020-09902-6

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate data analysis (4th ed.)*. Prentice Hall.

Hair, J. F., Black, W. C., Babin, B. J. et al. (2010). *Multivariate Data Analysis (7th ed.)*. Upper Saddle River, NJ: Pearson Prentice Hall.

Hardin, R. (2004). *Trust and trustworthiness*. Russell Sage Foundation.

Ismail, Z. H., & Rizvi, S. (2010). Some issues of governance in Pakistan. *Retrieved on May 17*.

Job, J. (2005). How is trust in government created? It begins at home but ends in the parliament. *Australian review of public affairs*, *6*(1), 1-23. https://ctsi.au/publications/nontaxpubs/Job_ARPA05.pdf

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). The worldwide governance indicators: A summary of methodology, data and analytical issues. World Bank Policy Research Working Paper No. 5430. *World Bank: Washington, DC*.

Khan, M. M. A., & Alam, I. (2020). Environmental governance in Pakistan: Parameters, Causes and Measures. *Pakistan Vision, 21*(1), 319. https://pu.edu.pk/images/journal/studies/PDF-FILES/23_v21_1_20.pdf

Khan, M. S., Ahmad, Z., & Khan, F. (2021). The effects of green human resource management practices on sustainable performance: the mediating role of green climat and green employee empowerment. *Turkish Online Journal of Qualitative Inquiry*, *12*(10).

Kim, S. (2005). The role of trust in the modern administrative state. *Administration & Society*, *37*(5), 611-635. https://doi.org/10.1177/0095399705278596

Kline, R. B. (2016). *Principles and practice of structural equation modeling (4th ed.)*. Guilford Press.

Kunthea, C. (2020). The Influences of Environmental governance on Trust in Government: Case of Cambodia. Public Policy and Administration Research. https://doi.org/10.7176/PPAR/10-11-08

Mangi, S. N., Chachar, A. A., & Shah, N. (2019). Quality of governance in Pakistan: An investigation through public trust in national institutions. *International Research Journal of Arts and Humanities*, *47*(47), 73. https://sujo-old.usindh.edu.pk/index.php/IRJAH/article/view/5125

Nannestad, P. (2008). What have we learned about generalized trust, if anything? *Annual Review of Political Science*, *11*(1), 413-436. https://doi.org/10.1146/annurev.polisci.11.060606.135412

Newton, K., Stolle, D., & Zmerli, S. (2018). Social and political trust. *Oxford Handbooks Online*. https://doi.org/10.1093/oxfordhb/9780190274801.013.20

OECD. (2017). *OECD Guidelines on Measuring Trust*. OECD. https://doi.org/10.1787/9789264278219-en

OECD. (2017). OECD recommendation of the council on public integrity. OECD, Paris, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0435

Punyaratabandhu, S. (2007). Corruption and government trust: A survey of urban and rural inhabitants in the north and Northeast of Thailand. *Research in Public Policy Analysis and Management*, 179-199. https://doi.org/10.1016/s0732-1317(08)17010-5

Punyaratabandhu, S. (2017). Citizens' Information and Good Governance Attitudes: A Survey of Thailand's Regional Inhabitants. *NIDA Development Journal*, *57*(3), 212-241. https://so04.tci-thaijo.org/index.php/NDJ/article/view/104676

Robertson, M. (2015). Environmental governance: Political ecology and the state. In *The Routledge handbook of political ecology* (pp. 457-466). Routledge.

Rompf, S. A. (2014). *Trust and rationality: an integrative framework for trust research*. Springer.

Rose-Ackerman, S. (2001). Trust, Honesty, and Corruption: Reflection on the State-Building Process. John M. Olin Center for Studies in Law, Economics, and Public Policy Working Papers. https://digitalcommons.law.yale.edu/lepp_papers/255

Seber, G. A. & Lee, A. J. (2012) *Linear Regression Analysis.* Vol. 936, John Wiley & Sons, Hoboken.

Shafritz, J. M., Russell, E. W., Borick, C. P., & Hyde, A. C. (2017). *Introducing Public Administration* (9th ed.). Routledge. https://doi.org/10.4324/9781315619439

Spiteri, J., & Briguglio, M. (2018). Does Good Governance Foster Trust in Government? An Empirical Analysis. *Governance and Regulations' Contemporary Issues*, 121–137. https://doi.org/10.1108/s1569-375920180000099006

Tobias-Miersch, Y. (2016). Beyond trust: Towards a practice-based understanding of governing 'network organizations'. *Journal of Management & Governance*, *21*(2), 473-498. https://doi.org/10.1007/s10997-016-9351-7

Tsang, S., Burnett, M., Hills, P., & Welford, R. (2009). Trust, public participation and environmental governance in Hong Kong. *Environmental Policy and Governance*, *19*(2), 99-114.

Tyler, T. R. (2003). Legitimacy and criminal justice: The benefits of self-regulation. *Ohio St. J. Crim. L.*, *7*, 307.

UNDP. (2014). *Governance for sustainable development: Integrating governance in the post-2015 development framework*. UNDP.

UNESCAP. (2009). What is environmental governance? https://www.unescap.org/resources/what-good-governance

Uslaner, E. M. (2008). Trust as a moral value. *The handbook of social capital*, 101-121.

Yousaf, M., Ihsan, F., & Ellahi, A. (2016). Exploring the impact of good governance on citizens' trust in Pakistan. *Government Information Quarterly*, *33*(1), 200–209. https://doi.org/10.1016/j.giq.2015.06.001