

**The Role of Governance in Climate Change Adaptation: A Quantitative Assessment in Afghanistan**

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**Abstract**

This study examines the relationship between governance factors and climate change adaptation outcomes in a community setting. Specifically, it investigates how corruption, accountability, and transparency, alongside socio-demographic characteristics, influence community-level adaptive capacity. Data were collected from 300 respondents using a structured questionnaire, which measured perceptions of climate change adaptation, governance and corruption, governance transparency, and accountability. Descriptive statistics revealed moderate levels of adaptive capacity, while reliability analysis confirmed that all measurement scales were internally consistent, with Cronbach's alpha values ranging from 0.730 to 1.000. Correlation analysis indicated that climate change adaptation outcomes are strongly and positively associated with governance variables, highlighting the interconnectedness of accountability, transparency, and corruption perceptions. Multiple linear regression analysis further showed that Governance and Corruption (IndexGG) is the only statistically significant predictor of climate change adaptation outcomes, emphasizing that lower levels of corruption are strongly linked to higher community resilience. Other factors, including accountability and demographic characteristics, did not show significant direct effects, suggesting that governance quality, particularly anti-corruption measures, plays a more decisive role in shaping adaptation outcomes. The findings underscore the importance of strengthening governance mechanisms to enhance climate change adaptation, with practical implications for policy design, resource allocation, and community engagement. This study contributes to the literature by highlighting the critical influence of corruption on adaptation success and by providing evidence-based recommendations for improving governance in climate resilience initiatives.

**Keywords:** Climate Change Adaptation, Governance, Corruption, Accountability, Transparency, Community Resilience, Policy Implementation

**Introduction**

This chapter outlines the research context, problem statement, objectives and significance of the study which aims to assess the role of governance in climate change adaptation in Afghanistan. It provides a comprehensive overview of the existing literature and establishment the conceptual framework for the research.

**Background of the Study**

Climate change represents one of the most pressing challenges of the 21<sup>st</sup> century, particularly for vulnerable nations with limited resources and institutional capacity. Afghanistan a country already grappling with decades of conflict, political instability and socioeconomic fragility is among the most

susceptible to the impacts of climate change. The country's economy is heavily reliant on agriculture which is highly sensitive to climate variability including prolonged droughts, erratic rainfall and flash floods. These climatic shocks exacerbate food insecurity, displace populations and further entrench cycles of poverty and conflict (Matin et., 2018). The inability to effectively manage these climate related risks is often linked to weak institutional frameworks and governance systems.

Governance which encompasses the processes of decision-making, accountability and transparency in public life is a critical determinant of a country's ability to adapt to climate change (OECD,2015). Effective governance ensures that climate policies are well-formulated, resources are efficiently allocated and adaptation projects are implemented in a fair and equitable manner. Conversely, poor governance characterized by high levels of corruption, lack of transparency and weak accountability can undermine adaptation efforts and lead to maladaptation, where climate interventions either fail to achieve their goals or cause unintended negative consequences (Khan & Khan,2016).

In the context of Afghanistan where governance structures are fragile and often influenced by informal power dynamics, understanding the interplay between governance and climate change adaptation is paramount. The country has received significant international aid for development and more recently for climate resilience projects. However, the effectiveness of these interventions remains a subject of concern due to reports of systemic corruption and lack of oversight (Sigdel & Karki, 2021). The present study seeks to provide a quantitative assessment of this relationship, focusing specifically on how different dimensions of governance, corruption, transparency and accountability, influence climate change adaptation outcomes at the community level.

### **Problem Statement**

Despite the recognized link between governance and climate adaptation, there is a significant gap in the literature regarding a systematic, quantitative analysis of this relationship in the Afghan context. Existing studies often provide qualitative insights or broad scale assessments, lacking the micro-level data necessary to understand community-level and experiences. The fundamental problem is that we lack empirical evidence on how specific governance failures, such as corruption and a lack of transparency and accountability, directly impede the effectiveness of climate change adaptation initiatives in Afghanistan. Without this understanding, it is difficult to design and implement effective, resilient and equitable climate policies. The persistent vulnerability of Afghan communities to climatic shocks, despite ongoing adaptation efforts, suggests that a key factor is being overlooked: the role of governance in the implementation and success of these initiatives. This study aims to fill this critical research gap by providing a data-driven analysis of the problem.

### **Research Questions and Objectives**

**This study is guided by the following primary questions:**

1. what is the perceived level of climate change adaptation outcomes in local communities in Afghanistan?
2. What is the perceived level of corruption, transparency and accountability in the governance of climate change adaptation projects in these communities?
3. Is there a statistically significant relation between governance indicators (corruption, transparency, accountability) and climate change adaptation outcomes?

**Based on these questions, the study's main objectives are:**

1. To quantify the perceptions of climate change adaptation outcomes at the community level in different regions of Afghanistan.
2. To measure the perceived influence of corruption, transparency and accountability on the success of adaptation projects.
3. To econometrically model the relationship between governance indicators and adaptation outcomes, controlling for socio-demographic factors.

4. To provide evidence-based recommendations for policymakers and development organizations to improve the governance of climate change adaptation efforts in Afghanistan.

### **Significance of the Study**

This research holds significance theoretical, practical and policy related value.

**Theoretical significance:** The study contributes to the academic discourse on climate change governance by providing a rare quantitative perspective from a highly fragile and conflict-affected state. It moves beyond theoretical discussions to empirically test the relationship between specific governance dimensions and on the ground adaptation outcomes, providing a nuanced understanding of these dynamics. It will also add to the body of literature on climate change adaptation in the Global South, where such empirical studies are often limited (Adger, 2006).

**Policy Implications:** The research will provide a solid evidence base for policymakers within Afghanistan and international partners to formulate and reform climate adaptation policies. The findings will highlight the need to prioritize institutional strengthening, anti-corruption measures and participatory governance models in all climate-related interventions. The study's recommendations can inform the development of national adaptation plans that are not only scientifically sound but also institutionally robust and socially equitable (IPCC, 2022).

**Practical Significance:** the findings will provide crucial insights for development organizations, specific donors and NGOs working on climate resilience projects in Afghanistan. By identifying the specific governance weakness that hinder adaptation, the study will help these actors re-evaluate their strategies and design more effective, transparent and accountable programs. This could lead to a more efficient use of resources and better results on the ground.

### **Literature Review**

#### **Governance and Climate Change Adaptation: Global Perspectives**

Governance plays a pivotal role in shaping the effectiveness of climate change adaptation strategies. Globally, scholars have emphasized that robust governance systems characterized by transparency, accountability and participatory decision-making, are essential for successful adaptation outcomes (Agarwal, 2008; Ostrom, 2009). Effective governance enables the equitable allocation of resources, fosters community engagement and ensures that adaptation measures are responsive to local needs and vulnerabilities.

The intergovernmental Panel on Climate Change (IPCC) underscores that governance is a cross-cutting theme in climate resilience, influencing policy into planning processes (IPCC, 2022). In contrast, weak governance often leads to maladaptation, where interventions fail to address root vulnerabilities or inadvertently exacerbate existing inequalities (Biermann et al., 2010).

#### **Corruption and Its Impact on Adaptation Outcomes**

Corruption is widely recognized as a major impediment to development and climate resilience. In the context of climate change, corruption can manifest through the misallocation of adaptation funds, nepotistic project selection and the construction of substandard infrastructure that fails to withstand climatic shocks (Transparency International, 2011). Empirical studies have demonstrated a strong negative correlation between corruption and a country's adaptive capacity, with higher corruption levels linked to reduced effectiveness of climate interventions (Lamb Dorff, 2007; De Jager et al., 2014).

In fragile states, corruption is often systemic and deeply embedded within institutional frameworks, making it particularly challenging to implement transparent and accountable climate policies. This

undermines public trust and reduces community participation, both of which are critical for sustainable adaptation.

### **Transparency and Accountability in Climate Governance**

Transparency and accountability are foundational pillars of good governance. Transparency ensures that information related to climate policies, budgets and project implementation is accessible to stakeholders, thereby enabling informed participation and oversight. Accountability mechanisms, such as audits, performance evaluations and grievances redress systems ensure that officials and institutions are held responsible for their actions and decisions (Biermann et al., 2010).

Studies have shown that countries with strong transparency and accountability framework tend to have more successful adaptation outcomes, as these mechanisms foster trust, reduce corruption and enhance the legitimacy of climate interventions (Fay et al., 2015). In fragile context, however, these mechanisms are often weak or absent, leading to governance failures that compromise the effectiveness of adaptation efforts.

### **Governance and Climate Adaptation in Afghanistan**

Afghanistan presents a unique case study in climate governance due to its prolonged conflict, political instability, and institutional fragility. Despite being one of the lowest emitters of greenhouse gases, Afghanistan ranks among the most vulnerable countries to climate change impacts, including droughts, floods, and extreme weather events [ACBAR](#). The country's reliance on agriculture further exacerbates its susceptibility to climate variability.

Several reports have highlighted the challenges facing climate governance in Afghanistan. The UNEP (2015) notes that while Afghanistan has made progress in developing climate policies and receiving international aid, the implementation of these initiatives is hindered by weak institutional capacity, lack of coordination, and pervasive corruption [UNEP - UN Environment Programme](#). The Middle East Institute (2024) emphasizes that the political economy of climate governance in Afghanistan is shaped by informal power structures, limited climate financing, and volatile regional dynamics [Middle East Institute](#).

Moreover, the National Adaptation Programme of Action (NAPA) identifies key sectors for climate resilience; such as agriculture, water and disaster management, but acknowledges that governance gaps remain a major barrier to effective implementation. These gaps include limited stakeholder engagement, inadequate monitoring and evaluation systems, and insufficient integration of climate considerations into broader development planning.

### **Research Gaps and Justification for the Study**

While the global literature provides robust evidence on the importance of governance in climate adaptation, there is a notable scarcity of quantitative studies focusing on Afghanistan. Most existing research offers qualitative insights or macro-level assessments, lacking the granularity needed to understand community-level experiences and outcomes. This gap is particularly critical given Afghanistan's unique socio-political context, where informal governance structures and external aid dynamics play a significant role in shaping adaptation efforts.

This study seeks to address this gap by providing a systematic, data-driven analysis of how governance indicators, specifically corruption, transparency, and accountability, affect climate change adaptation outcomes at the community level in Afghanistan. By doing so, it aims to contribute to both the academic discourse and practical policymaking in climate governance.

### **Methodology**

#### **Research Design**

This study adopts a quantitative, cross-sectional research design to empirically assess the relationship between governance indicators corruption, transparency, and accountability and climate change

adaptation outcomes at the community level in Afghanistan. The rationale for this design is to generate statistically valid insights that can inform policy and practice in a fragile and under-researched context. The study emphasizes objectivity, replicability, and generalizability of findings across diverse Afghan communities.

### **Study Area and Population**

The research focuses on climate-vulnerable provinces in Afghanistan, particularly those with a history of receiving international aid for climate adaptation projects. These include provinces such as Herat, Nangarhar, Balkh, and Kandahar, which are characterized by high exposure to climate risks and varying levels of institutional capacity.

The target population comprises:

Local community members directly affected by climate change

Beneficiaries of adaptation projects

Local leaders and civil society representatives

Officials involved in project implementation

### **Sampling Strategy**

A multi-stage sampling technique is employed:

Province Selection: Based on climate vulnerability indices and presence of adaptation interventions.

District and Community Selection: Random sampling of districts within selected provinces, followed by purposive sampling of communities with known adaptation projects.

Respondent Selection: Stratified random sampling within communities to ensure representation across gender, age, and socioeconomic status.

The study aims for a sample size of 300 respondents, which allows for robust statistical analysis and generalizability.

### **Data Collection Methods**

Primary data is collected using a structured questionnaire, administered through face-to-face interviews and digital platforms where feasible. The questionnaire is developed in English and translated into Dari and Pashto to ensure accessibility.

The instrument includes the following sections:

**Demographics:** Age, gender, education, income, occupation

**Perceptions of Adaptation Outcomes:** Effectiveness, inclusiveness, sustainability

**Governance Indicators:** Perceived corruption, transparency, and accountability

**Community Engagement:** Participation in planning, access to information, grievance mechanisms

The questionnaire is pre-tested in a pilot study to ensure clarity, reliability, and cultural appropriateness.

### **Operationalization of Variables**

In this study, adaptation outcomes are treated as the dependent variable and are measured using a composite index constructed from Likert-scale items capturing dimensions of effectiveness, equity, and sustainability. The key independent variables—corruption, transparency, and accountability—are operationalized through perception-based Likert-scale items adapted from established governance indices. Control variables include age, gender, education, income, and region, which are measured using a combination of categorical and continuous indicators. All Likert-scale responses are numerically coded on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The items are subsequently aggregated into indices using factor analysis to ensure construct validity and reduce dimensionality.

## Data Analysis Techniques

Data is analyzed using **SPSS** software. The following techniques are employed:

**Descriptive Statistics:** To summarize demographic characteristics and governance perceptions

**Reliability Analysis:** Cronbach's alpha to test internal consistency of governance and adaptation indices

**Correlation Analysis:** To explore bivariate relationships between governance indicators and adaptation outcomes

**Multiple Linear Regression:** To model the impact of governance variables on adaptation outcomes, controlling for socio-demographic factors

**Robustness Checks:** Including multicollinearity diagnostics and heteroskedasticity tests  
Statistical significance is assessed at the 95% confidence level ( $p < 0.05$ ).

## Ethical Considerations

This study adheres to international ethical standards for research involving human subjects:

**Informed Consent:** All participants are briefed on the study's purpose, risks, and their rights before participation.

**Confidentiality:** Data is anonymized and stored securely to protect respondent identities.

**Voluntary Participation:** Respondents are free to withdraw at any stage without penalty.

**Ethical Approval:** The research protocol is reviewed and approved by an institutional ethics committee.

Special care is taken to ensure cultural sensitivity and safety, particularly in conflict-affected areas.

## Data Analysis and Results

### Introduction

This chapter presents the results of the study based on data collected from 300 respondents. The analysis focuses on descriptive statistics, reliability, correlation, and regression results, highlighting how governance factors (corruption, accountability, transparency) and demographic variables influence climate change adaptation outcomes. Each section includes relevant tables followed by interpretations, ensuring clarity and direct alignment with the questionnaire.

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
gender of correspondents	300	1.00	2.00	1.4200	.49438
age of the correspondents	300	1.00	5.00	2.7233	1.28542
level of education of correspondents	300	1.00	6.00	2.7233	1.38317
occupation of correspondents	300	1.00	6.00	3.5000	1.71653
Primary source of livelihood	300	1.00	6.00	3.0633	1.48549
Valid N (listwise)	300				

The sample consists of 300 respondents. Gender distribution (Mean = 1.42, SD = 0.49) indicates a slight predominance of one gender. Respondents' ages (Mean = 2.72, SD = 1.29) show moderate variation, with most falling in the lower to middle age categories. The level of education (Mean = 2.72, SD = 1.38) suggests a low to moderate formal education level. Respondents' occupations (Mean = 3.50, SD = 1.72) and primary sources of livelihood (Mean = 3.06, SD = 1.49) indicate diversity across occupational and livelihood groups.

## Reliability Analysis

**Table 4.2: Reliability Statistics of the Measurement Scales**

Scale	No. of Items	Cronbach's Alpha
Climate Change Adaptation (IndexCCA)	5	0.730
Governance and Corruption (IndexGG)	5	1.000
Governance and Transparency (IndexIQ)	4	1.000
Governance and Accountability (IndexGA)	4	0.930

All scales demonstrate acceptable to excellent internal consistency, with Cronbach's Alpha values ranging from 0.730 to 1.000. The IndexCCA scale shows acceptable reliability ( $\alpha = 0.730$ ), while the governance indices (IndexGG, IndexIQ, IndexGA) show excellent reliability, indicating that the items consistently measure the intended constructs.

### Correlations

	IndexCCA	IndexGA	IndexIQ	IndexGG
Pearson Correlation	1	.884**	.896**	.896**
IndexCCA Sig. (2-tailed)		.000	.000	.000
N	299	299	299	299
Pearson Correlation	.884**	1	.990**	.988**
IndexGA Sig. (2-tailed)	.000		.000	.000
N	299	300	300	300
Pearson Correlation	.896**	.990**	1	1.000**
IndexIQ Sig. (2-tailed)	.000	.000		.000
N	299	300	300	300
Pearson Correlation	.896**	.988**	1.000**	1
IndexGG Sig. (2-tailed)	.000	.000	.000	
N	299	300	300	300

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

Pearson correlation analysis demonstrates a strong and positive Climate Change Adaptation (IndexCCA) relationship with Governance Accountability (IndexGA,  $r = 0.884$ ), Governance Transparency/Institutional Quality (IndexIQ,  $r = 0.896$ ), and Governance and Corruption (IndexGG,  $r = 0.896$ ). Still, the governance variables are almost perfectly correlated ( $r = 0.988$  to  $1.000$ ), which shows very strong interlinked perceptions of accountability, transparency, and corruption. All correlations are significant at the 1% level ( $p < 0.01$ ), hence, it is clearly shown that governance factors have a very strong connection with climate change adaptation outcomes and that the quality of governance is a major factor in promoting community resilience.

### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.897 <sup>a</sup>	.804	.800	.40108	.804	170.879	7	291	.000

a. Predictors: (Constant), IndexGG, occupation of correspondents, level of education of correspondents, Primary source of livelihood, gender of correspondents, age of the correspondents, IndexGA

b. Dependent Variable: IndexCCA

The model demonstrates a strong relationship between governance variables, demographic factors, and climate change adaptation. An  $R = 0.897$  and  $R^2 = 0.804$  indicate that 80.4% of the variation in IndexCCA is explained by the predictors. The Adjusted  $R^2 = 0.800$  confirms the robustness of the model, and the  $F\text{-change} = 170.879$  ( $p < 0.001$ ) indicates that the model is statistically significant.

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	192.417	7	27.488	170.879	.000 <sup>b</sup>
	Residual	46.811	291	.161		
	Total	239.228	298			

a. Dependent Variable: IndexCCA

b. Predictors: (Constant), IndexGG, occupation of correspondents, level of education of correspondents, Primary source of livelihood, gender of correspondents, age of the correspondents, IndexGA

The ANOVA confirms that the regression model is statistically significant in predicting climate change adaptation (IndexCCA). The Regression Sum of Squares (192.417) is much larger than the Residual (46.811), and the  $F = 170.879$  ( $p < 0.001$ ) indicates that the predictors jointly have a significant impact on climate change adaptation outcomes.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		
	B	Std. Error	Beta			Lower Bound	Upper Bound	
1	(Constant)	.851	.138		6.157	.000	.579	1.123
	gender of correspondents	-.003	.047	-.002	-.070	.944	-.090	.097
	age of the correspondents	.015	.018	.021	.794	.428	-.022	.051
	level of education of correspondents	.005	.017	.008	.301	.764	-.028	.038
	occupation of correspondents	-.001	.014	-.003	-.104	.917	-.028	.025
	Primary source of livelihood	.013	.016	.021	.797	.426	-.019	.044
	IndexGA	-.040	.132	-.049	-.300	.764	-.299	.220
	IndexGG	.342	.059	.947	5.757	.000	.225	.459

a. Dependent Variable: IndexCCA

The regression coefficients indicate the separate impacts of every predictor on the climate change adaptation outcomes (IndexCCA). Out of all the variables, the Governance and Corruption (IndexGG) is the only one that has a p-value lower than 0.001, which means that the association between the better governance and lower corruption is very strong in this case regarding the climate change adaptation. On the contrary, the Governance Accountability (IndexGA) and demographic variables like gender, age, education, occupation, and primary source of livelihood are not significant at all. This suggests that their direct effects on IndexCCA are minor within this model. The constant ( $B = 0.851$ ,  $p < 0.001$ ) indicates the lowest level of climate adaptation when all the predictors are at

zero. To sum up, the results indicate that corruption is the most important governance factor affecting the community-level climate adaptation outcomes in the present study.

### **Link to Discussion**

The next chapter will discuss these findings in the context of existing literature, exploring the implications of governance factors, particularly corruption, on climate change adaptation and policy recommendations.

## **Discussion, Conclusions, and Recommendations**

### **Introduction**

This section shows a thorough analysis of the findings from Chapter 4 while it connects the research outcomes with established academic studies. The study reaches its conclusions through the established research goals which lead to practical recommendations for enhancing climate change adaptation through better governance systems. The discussion follows the main research constructs which include climate change adaptation and governance, and corruption, and governance transparency, and accountability, and demographic factor influences.

### **Discussion of Key Findings**

#### **Climate Change Adaptation Outcomes:**

The study results pointed out that the community-level Climate Change Adaptation (IndexCCA) is heavily determined by governance factors, especially corruption. Descriptive statistics showed a somewhat low adaptive capacity, which was the consequence of the difficulties in resources, early warning systems, and disaster management. The correlation between adaptation outcomes and governance variables (IndexGA, IndexIQ, IndexGG) which was found to be significant and positive underlined that the quality of governance is the main factor that determines community resilience.

#### **Governance and Corruption:**

IndexGG (Governance and Corruption) was pinpointed through regression analysis as the prime indicator in predicting the climate change adaptation results ( $B = 0.342$ ,  $p < 0.001$ ). This means that there is a very strong linkage between the less perceived corruption in project conduct and the higher climate adaptation. Such evidence is in line with previous research reports which stated that corruption hinders the success of adaptation, wastes resources, and erodes trust among the community.

#### **Governance Accountability (IndexGA) and Transparency (IndexIQ):**

The IndexGA (Accountability) and IndexIQ (Transparency/Institutional Quality) indices, while strongly correlated with climate change adaptation, did not prove to be statistically significant predictors in the regression model. This indicates that, although transparency and accountability play a crucial role in governance, their impact on adaptation outcomes might be overshadowed by other factors, especially corruption, which reigns over the influence. Such findings are consistent with the literature that asserts the existing of accountability mechanisms alone does not suffice to assure better results unless corruption is tackled beforehand.

#### **Demographic Factors:**

In this research, the demographic variables such as gender, age, education, occupation, and primary livelihood did not emerge as significant predictors of the climate change adaptation outcomes. This indicates that the governance variables are more influential than the individual socio-demographic characteristics in determining the resilience of the community. It hints at the possibility that the policy reforms aimed at the governance of the change may have a larger impact on the entire population than expected.

### **Implications for Policy and Practice:**

The results call for the reinforcement of the governance mechanisms as a way to enhance the outcomes of the climate change adaptation process. More specifically: The measures against corruption should first be implemented in the adaptation projects, as they will guarantee the effective use of the resources. The transparency actions should be stepped up and made inclusive, thus allowing the public to access all the information related to project funding, objectives, and progress. The structures of accountability should be strengthened with the establishment of clearly defined reporting channels and imposition of penalties for project failures. Engagement and participation of the communities should be made an integral part of the process so that trust is built and the monitoring of the adaptation efforts is improved.

### **Conclusions:**

The study findings lead to the identification of the following conclusions:

Governance quality mainly with regard to corruption level is a deciding factor in the case of climate change adaptation projects being successful or not. Corruption is one of the most important factors preventing or facilitating good adaptation, thus the need for anti-corruption measures is emphasized even more. Socio-demographic factors are not really important for climate change adaptation outcomes; thus, it can be said that governance improvements can be beneficial for all the community. Governance variables have very strong interlinkages showing that it is simultaneous reforms addressing corruption, transparency, and accountability that are likely to be most effective.

### **Recommendations:**

In light of the results and discussion, the following recommendations are made: Strengthen Anti-Corruption Measures: Stricter monitoring, auditing, and accountability mechanisms should be applied in adaptation projects so that fund mismanagement is reduced and efficiency is increased. Enhance Transparency: Make sure project information is accessible to the public and it includes the sources of funding, objectives, and progress in order to foster trust and control by the community. Reinforce Accountability: Create performance indicators for public officials that are understandable and make it possible for the community to report when resources have been wasted or a project has failed. Community Engagement: Actively involve community members in planning, implementation, and monitoring to increase ownership, trust, and sustainability of adaptation initiatives. Policy Integration: Align climate change adaptation strategies with governance reforms, ensuring that efforts to improve transparency, accountability, and anti-corruption measures are integrated with project implementation.

### **Limitations of the Study**

The study has some limitations: -

The cross-sectional design made it impossible to link causality between the governance factors and the adaptation outcomes. - The data obtained were based on self-reports which, in turn, may have had some bias. The research concentrated on one particular community, thus restricting the generalization of the results in other areas.

### **Suggestions:**

For Future Research Using longitudinal designs, future research could study the causal relationships between governance reforms and climate change adaptation, among other things. It could also set up a comparison between objective and subjective measures of project success and resource allocation. Furthermore, researchers could investigate the roles of participation, social capital, and institutional capacity as possible mediators or moderators. Last but not least, a cross-regional study could be conducted to evaluate the governance-adaptation relationship in different areas.

**Summary:**

The fifth chapter reviewed the most important conclusions of the fourth chapter and pointed out the primary influence of governance, especially corruption, as a factor deciding the results of adaptation to climate changes. It also made conclusions, offered suggestions for policies, and specified trails of future research. The results indicate that it is necessary to reform the governance mechanisms in order to make the communities more resistant to the adverse effects of climate and natural disasters.

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