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Role of Project Governance Practices on Accountability and Transparency in Public Projects: A Case of RDB Greenland Project in Kigali City, Rwanda

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Abstract: The study examined the role of project governance practices on accountability and transparency in public projects, using the Rwanda Development Board (RDB) Greenland Project in Kigali City, Rwanda as a case study. The study specific objectives examining the influence of project resources, regular consultancy, decentralization and governance, stakeholders' oversight mechanisms, and monitoring, reporting, and control mechanisms on accountability and transparency in public projects. The target population comprised 200 project personnel and stakeholders involved in the implementation of the RDB Greenland Project. A sample size of 133 respondents was selected using purposive and simple random sampling techniques. Data were collected using questionnaires. Quantitative data were analyzed using Statistical Package for Social Sciences (SPSS), while qualitative data were analyzed thematically. The findings revealed that project resources had the strongest positive and statistically significant influence on accountability and transparency (B = 3.560, Beta = 0.866, t = 9.945, p = 0.000). The study established that effective management of financial, human, and material resources significantly improves accountability, transparency, and operational efficiency in public projects. The findings further revealed that regular consultancy positively and significantly influenced accountability and transparency (B = 0.237, Beta = 0.051, p = 0.001), indicating that stakeholder consultations and collaborative engagement improve openness and participatory governance. In addition, decentralization and governance practices were found to significantly influence accountability and transparency (B = 0.148, Beta = 0.179, p = 0.003), implying that effective governance structures and decentralized systems enhance institutional accountability and decision-making processes. The study also found that stakeholders' oversight mechanisms significantly contributed to accountability and transparency (B = 0.028, t = 1.090, p = 0.002) through stakeholder participation, public engagement, and feedback systems. Furthermore, monitoring, reporting, and control mechanisms were found to significantly influence accountability and transparency (B = 0.138, p = 0.002). Respondents strongly agreed that regular audits, compliance checks, project monitoring systems, and corrective action procedures improve governance effectiveness and reduce operational risks. The overall regression model was statistically significant (F = 56.868, p = 0.000), confirming that project governance practices collectively influence accountability and transparency in public projects.

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I. INTRODUCTION

Governments are no longer judged only by how many projects they complete, but by how transparently resources are managed, how accountable decision-makers are, and how well public trust is protected throughout the project lifecycle (Müller & Lecoeuvre, 2022). As public projects become larger, more complex, and more visible, project governance defined as the structures, rules, and processes guiding project decision-making has emerged as a critical pillar for ensuring accountability and transparency. Nowadays, effective project governance is widely recognized as the bridge between strategic intentions and responsible project delivery, particularly in publicly funded initiatives (Müller & Lecoeuvre, 2022). Globally, countries have shifted away from informal oversight mechanisms toward formal governance frameworks that emphasize clear roles, ethical leadership, disclosure of information, and strong monitoring systems. Institutions such as the Project Management Institute (PMI) emphasize that projects governed by clearly

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defined accountability structures are more likely to meet stakeholder expectations, reduce misuse of public funds, and deliver measurable public value. Evidence from large public infrastructure programs shows that strong governance arrangements reduce corruption risks, improve reporting accuracy, and enhance citizens' confidence in government-led projects (PMI, 2023).

According to the OECD (2023), public projects with strong governance mechanisms experience up to 29% fewer cases of cost overruns and governance-related disputes compared to projects with weak oversight structures. In the United States, governance reforms linked to the Bipartisan Infrastructure. Law require agencies to disclose project data, procurement decisions, and performance milestones publicly, significantly improving transparency and reducing audit queries (U.S. Government Accountability Office, 2024). European countries have similarly strengthened project governance, especially in urban development and green infrastructure projects. The European Investment Bank highlights that transparency in decision-making, stakeholder engagement, and clear accountability lines are decisive factors in the success of climate and urban regeneration projects. A recent EIB assessment revealed that EU-funded projects with strong governance frameworks were 34% more likely to achieve intended social and environmental outcomes, while also minimizing governance risks such as political interference and misallocation of funds (EIB, 2023).

Asia provides further evidence of the growing importance of project governance. Countries such as Singapore, South Korea, and China have adopted centralized governance systems supported by digital reporting platforms that allow real-time monitoring of public projects. Singapore's public sector projects, for instance, operate under strict governance controls that integrate transparency, ethics, and accountability at every project stage, contributing to high public confidence and consistent project success (Asian Development Bank, 2023). In India, governance reforms under the Smart Cities Mission improved disclosure and accountability mechanisms, leading to measurable reductions in project delays and procurement-related irregularities between 2019 and 2023 (Ministry of Housing and Urban Affairs, 2023).

In Sub-Saharan Africa, rapid urbanization and rising public investment have increased the urgency for strong project governance. While many governments have expanded infrastructure spending, weak accountability systems, limited transparency, and governance gaps continue to undermine project outcomes. The African Development Bank reports that governance-related challenges such as weak oversight, political influence, and inadequate reporting account for nearly 40% of failures in public projects across the region (AfDB, 2023). In countries like Kenya, Tanzania, and Uganda, several World Bank-funded projects experienced delays and cost escalations due to unclear accountability structures and limited transparency in procurement and contract management (World Bank, 2023).

Rwanda stands out in the region for its strong commitment to good governance, transparency, and accountability in public service delivery. Through reforms aligned with Vision 2050 and the National Strategy for Transformation (NST2), the Government of Rwanda has emphasized results-based management, anti-corruption measures, and transparent public investment processes. Institutions such as the Rwanda Development Board (RDB) play a central role in implementing strategic public projects, particularly those related to urban development, investment promotion, and environmental sustainability. However, despite these efforts, governance challenges can still arise in complex, multi-stakeholder projects where decision-making authority, reporting lines, and oversight responsibilities may overlap. The RDB Greenland Project in Kigali City represents a strategic public initiative aimed at promoting sustainable urban development and green investment.

- *Statement of the Problem*

Despite these policy commitments, empirical evidence indicates persistent governance-related challenges affecting public project implementation. The Office of the Auditor General (OAG, 2023) reports that over 41% of audited public projects in Rwanda exhibit accountability and reporting deficiencies, including delayed financial reporting, incomplete documentation, and unclear lines of responsibility. Similarly, MINECOFIN (2023) reveals that approximately 38% of public investment projects face governance-related implementation constraints, particularly weak monitoring systems and limited transparency in procurement and contract management. These deficiencies suggest that governance frameworks, while formally established, are not consistently effective in practice.

The situation is even more pronounced in complex and multi-stakeholder projects, particularly in urban and green development sectors. According to the World Bank (2024), urban development projects in Kigali have experienced delays ranging between 6 and 14 months, with governance-related issues such as coordination failures, weak oversight, and delayed information disclosure identified as key contributing factors. Globally, OECD (2023) findings further indicate that projects operating under weak governance frameworks are up to twice as likely to experience transparency-related complaints, highlighting the critical role of governance in shaping project outcomes. In addition to performance challenges, public perception data points to underlying trust concerns. The Rwanda Governance Scorecard (RGB, 2023) shows that while overall governance indicators remain strong, 27% of citizens express concerns about transparency in public project implementation, particularly regarding access to information and clarity in the use of public funds. This gap between formal governance structures and perceived transparency underscores the need for deeper investigation at the project level, especially for high-value and strategically significant investments.

From a scholarly perspective, existing studies in Rwanda provide only partial insights into this issue. Uwizeyimana (2021) examined accountability within public

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financial management but focused primarily on budget execution rather than project-level governance. Habiyaremye and Nshimyimana (2022) analyzed procurement transparency without linking it to broader governance systems. Munyaneza et al. (2023) identified that over 35% of public projects lack clearly defined accountability frameworks, yet did not assess governance as an integrated construct. At the international level, Müller, Zhai, and Wang (2022) emphasize the importance of project governance but highlight a scarcity of empirical evidence from African public sector contexts. Similarly, Kamanzi (2023) focused on institutional performance without examining governance dynamics within specific projects.

As a result, a critical gap remains: existing literature tends to treat project governance, accountability, and transparency as isolated variables rather than interconnected components of a unified governance system. Furthermore, there is limited empirical research focusing on projects implemented by the Rwanda Development Board (RDB), despite their strategic importance and significant public investment. In particular, the RDB Greenland Project in Kigali City, a flagship initiative aimed at promoting sustainable urban development, has not been sufficiently studied from a project governance perspective. Therefore, this study seeks to address both the conceptual and empirical gaps by examining how project governance practices influence accountability and transparency within public projects.

➢ *Objectives of the Study*

To assess the role of project governance practices on accountability and transparency in public projects in Rwanda. Specific Objectives were:

- To examine the role of Project Resource on accountability and transparency in Rwanda Development Board Greenland Project in Kigali City, Rwanda;
- To assess the role of Regularly consultancy on accountability and transparency in Rwanda Development Board Greenland Project in Kigali City, Rwanda;
- To determine the role of Decentralization & Governance on accountability and transparency in Rwanda Development Board Greenland Project in Kigali City, Rwanda;
- To evaluate the role of Stakeholders' oversight mechanisms on accountability and transparency in Rwanda Development Board Greenland Project in Kigali City, Rwanda;
- To assess the role of Monitoring, Reporting, and Control Mechanisms on accountability and transparency in Rwanda Development Board Greenland Project in Kigali City, Rwanda.

➢ *Research Hypotheses*

The current study verified and tested the alternative hypotheses.

- H_1: Project resource have a significant effect on accountability and transparency in the Rwanda Development Board Greenland Project in Kigali City, Rwanda;
- H_2: Regular consultancy has a significant effect on accountability and transparency in the Rwanda Development Board Greenland Project in Kigali City, Rwanda;
- H_3: Decentralization and governance have a significant effect on accountability and transparency in the Rwanda Development Board Greenland Project in Kigali City, Rwanda;
- H_4: Stakeholders' oversight mechanisms have a significant effect on accountability and transparency in the Rwanda Development Board Greenland Project in Kigali City, Rwanda;
- H_5: Monitoring, reporting, and control mechanisms have a significant effect on accountability and transparency in the Rwanda Development Board Greenland Project in Kigali City, Rwanda.

II. THEORETICAL REVIEW

The study is anchored on three main theories such as agency theory, stakeholder theory, and resource-based view (RBV) Theory. These theories provide insights into how governance and resource management influence accountability and transparency in public projects, specifically in the Rwanda Development Board (RDB) Greenland Project in Kigali City.

➢ *Agency Theory*

Agency Theory was first developed by Jensen and Meckling in 1976 and has since become a central framework for understanding the relationships between principals and agents in organizational and project contexts. The theory posits that principals, such as government agencies and project owners, delegate responsibilities to agents, such as project managers or contractors, to act on their behalf. The fundamental assumption is that agents may not always act in the best interests of the principals due to divergent goals, personal incentives, or information asymmetry. A key strength of the theory lies in its ability to highlight the importance of contracts, performance monitoring, and incentive mechanisms to align agent behavior with principal objectives by Eisenhardt in 1989. However, the theory has limitations, including its heavy focus on financial incentives while often overlooking non-monetary motivations such as social responsibility, ethical considerations, or community impacts.

In the context of the RDB Greenland project, agency theory supports the study by providing a framework to understand how human resource governance, financial oversight, and monitoring mechanisms can align project staff and contractors with the project's accountability and transparency objectives. By identifying potential conflicts of interest and applying structured oversight, the study can evaluate how effective governance mitigates mismanagement and promotes public trust.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26sep110

➢ *Stakeholder Theory*

Stakeholder Theory, introduced by Freeman in 1984 and expanded in recent studies (Freeman, Harrison, Wicks, Parmar, & De Colle, 2010), emphasizes that organizations and projects succeed when the interests of all parties affected are recognized and managed. This theory defines stakeholders broadly to include government institutions, contractors, local communities, and development partners. Its strength lies in promoting inclusive decision-making, participatory oversight, and accountability, ensuring that the needs of all stakeholders are considered. A noted limitation is that it can be challenging to balance competing stakeholder interests, which may sometimes slow decision-making or complicate resource allocation.

In the RDB Greenland Project, Stakeholder Theory directly informs the study by highlighting the significance of stakeholder oversight mechanisms, community engagement, and participatory governance in enhancing transparency and accountability. The theory provides a conceptual lens to investigate how involving stakeholders in monitoring, reporting, and decision-making processes improves project governance and ensures that resources are used effectively for public benefit.

➢ *Resource-Based View (RBV) Theory*

The Resource-Based View (RBV) Theory, developed by Barney in 1991 and further explored by Wernerfelt in 1984, focuses on the strategic role of internal resources in achieving sustainable project success. The theory suggests that the availability, proper allocation, and efficient use of critical resources, human, financial, material, and technological determine the effectiveness of an organization or project. Its strength is in providing a systematic approach to resource management, linking resource quality directly to performance outcomes and competitive advantage.

The RBV has limitations, including a tendency to underemphasize external factors such as political influences, regulatory changes, or socio-economic shocks that may impact projects. For the RDB Greenland Project, RBV contributes to understanding how well-governed human, financial, and material resources, along with technological assets, can enhance accountability and transparency. By applying RBV, the study can assess the role of resource governance practices in ensuring timely project delivery, minimizing wastage, and maintaining transparent reporting to stakeholders.

➢ *Conceptual Framework*

The framework focuses on the Rwanda Development Board Greenland Project as the case under investigation. In this study, project governance practices represent the independent variables. These include key elements such as decentralization and governance structures, stakeholder oversight mechanisms, human resource governance, and related management systems.

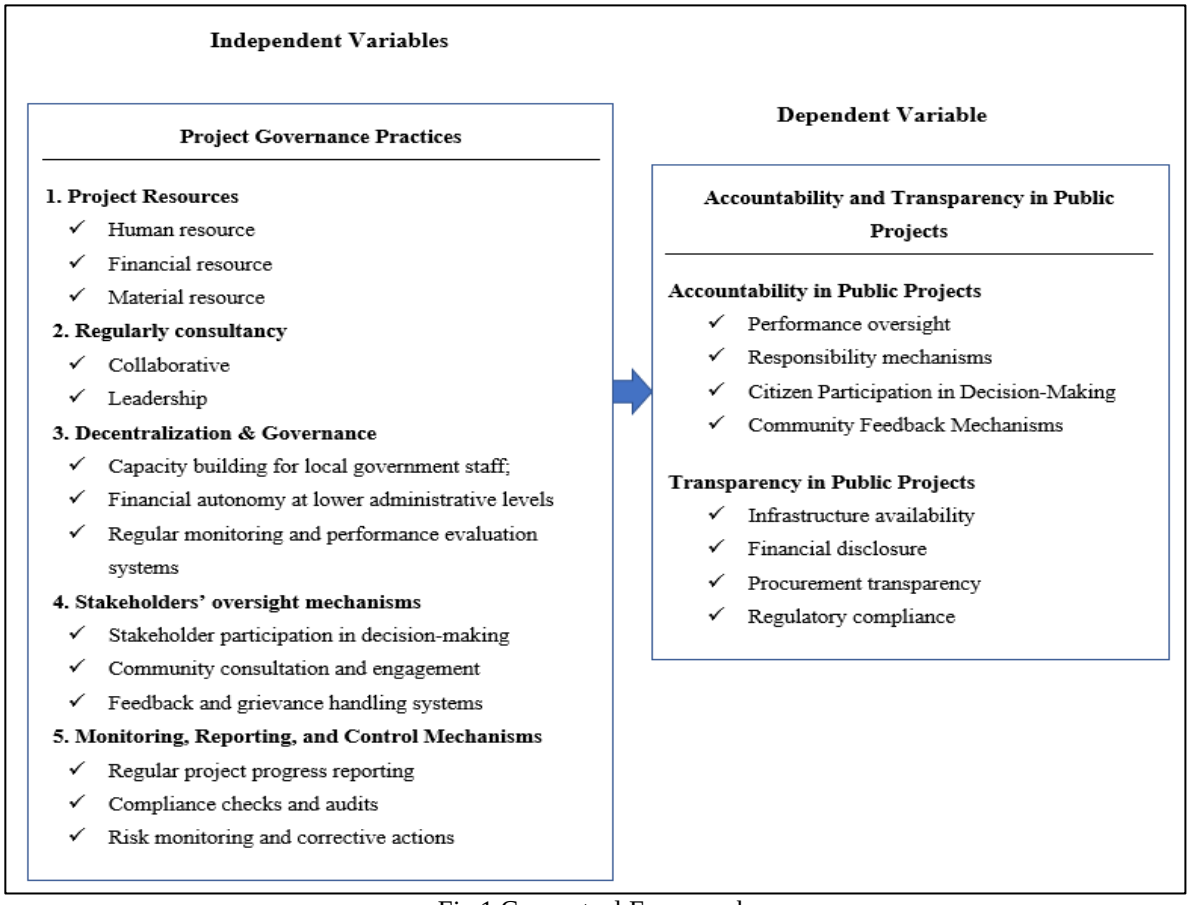


Fig 1 Conceptual Framework

Source: Researcher Conceptualization (2026)

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III. RESEARCH METHODOLOGY

➢ *Research Design*

This study adopted quantitative to examine how governance and oversight mechanisms influence accountability and transparency in the RDB Greenland Project. The descriptive component documents existing practices of human, financial, and material resource governance, stakeholder oversight, and monitoring and control systems within the project, providing an accurate profile of institutional arrangements and compliance levels (Earl R. Babbie, 2021). The correlational component examines relationships between governance and oversight variables (independent variables) and accountability and transparency (dependent variable) to determine the strength and direction of their associations in a non-experimental setting (Louis Cohen, Lawrence Manion & Keith Morrison, 2018).

➢ *Study Population*

The study population consists of 200 employees directly involved in the RDB Greenland Project.

- *Sample Size and Sampling Techniques*

For this study, a 95% confidence level and a 5% margin of error are adopted, reflecting a standard practice that balances precision with feasibility in field research. The formula is expressed as follows:

$$n=\frac{N}{1+N*(e)^2} \quad (1)$$

Where n = desired sample size; N = total population (200 employees of the RDB Greenland Project);

e = acceptable margin of error (0.05)

$$n=\frac{200}{1+200*(0.05)^2}\approx 133 \quad (2)$$

Thus, a sample size of 133 respondents is deemed sufficient to capture the perspectives of RDB employees while maintaining statistical validity. The study employed stratified proportional sampling in combination with purposive sampling. Stratified proportional sampling ensured that each professional category such as project managers, engineers, procurement officers, finance personnel, ICT specialists, M&E staff, and stakeholder representatives was represented proportionally according to its size within the total population. Purposive sampling was specifically applied to select key informants within each stratum who possess critical knowledge, experience, and involvement in the RDB Greenland Project.

➢ *Data Collection Instruments*

Primary data was collected directly from employees involved in the project, capturing their first-hand experiences and perspectives on the management of human, financial, material, and technological resources, as well as their insights on stakeholder engagement and monitoring mechanisms. These data provided the core evidence needed to assess how governance practices influence accountability and transparency. Structured questionnaires were a widely used data collection tool that consist of a set of predetermined and systematically arranged questions administered uniformly to all respondents.

➢ *Data Processing Techniques and analysis*

Once data collection is complete, a systematic data processing procedure was applied to prepare both quantitative and qualitative data for analysis. For the quantitative data, responses from the structured questionnaires were coded and entered into SPSS. Rigorous data cleaning procedures were carried out to check for completeness, remove duplicates, handle missing data, and detect outliers or inconsistencies that could bias the results. This ensures that the dataset was accurate, reliable, and ready for statistical analysis. Quantitative data from questionnaires first undergo descriptive statistical analysis, including frequencies, percentages, means, and standard deviations. These measures summarized the characteristics of the study population and provide a clear overview of current governance and accountability practices.

To examine relationships between variables, correlation analysis was used to determine the strength and direction of associations between governance practices and accountability. Further, multiple regression analysis was employed to assess the relative influence of each independent variable on the dependent variable, providing insights into which governance mechanisms most strongly predict accountability and transparency outcomes. The regression model was as follows:

$$Y=\beta 0+\beta 1x1+\beta 2x2+\beta 3x3+\beta 4x4+\beta 5x5+\epsilon \quad (3)$$

Where:

Y = Accountability and Transparency in Public Projects
X= Project Governance Practices comprising:
x1. Project Resources
x2. Regularly consultancy
x3. Decentralization & Governance
x4. Stakeholders' oversight mechanisms
x5. Monitoring, Reporting, and Control Mechanisms
ϵ = Error term capturing unexplained variance

IV. DATA ANALYSIS AND PRESENTATION OF FINDINGS

The study targeted employees and stakeholders involved in the implementation and oversight of the Rwanda Development Board Greenland Project. A total of 133 questionnaires were administered to respondents drawn from different professional categories, including project managers, engineers, site supervisors, finance and accounting personnel, procurement and logistics officers, ICT specialists, monitoring and evaluation staff, as well as representatives from the City of Kigali and other relevant oversight institutions. All the distributed questionnaires were successfully completed and returned within seven days, representing a response rate of 100%, which provided adequate data for reliable analysis and interpretation.

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➢ *Reliability Analysis Results in the Pilot Study*

Before conducting the main data collection process, a pilot study was carried out to test the reliability and consistency of the research instrument. Reliability analysis was important in determining whether the questionnaire items were capable of producing consistent and dependable results when administered to respondents. The reliability of the instrument was assessed using Cronbach's Alpha coefficient through SPSS software.

Table 1 Reliability Statistics Results in the Pilot Study

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N
.810	.868	15

Source: Primary Data (2026) Field Data

The findings indicated that the questionnaire achieved a Cronbach's Alpha value of 0.810, while the Cronbach's Alpha based on standardized items was 0.868. These values are above the commonly accepted threshold of 0.70, implying that the instrument had a high level of internal consistency and reliability. The results therefore confirmed that the questionnaire items were reliable and suitable for collecting data for the main study. This means that the statements used to measure project governance practices, accountability, and transparency were consistent in capturing the intended information from respondents.

➢ *Demographic Characteristic of Respondents*

The demographic information presented in Table 2 serves as a foundation for interpreting the subsequent findings of the study, as it demonstrates that the respondents were appropriately positioned to provide informed and meaningful responses concerning the variables under investigation.

Table 2 Demographic Characteristics of Respondents

Variable	Category	Frequency	Percent (%)	Cumulative (%)
Age Range	Below 30 years	41	30.8	30.8
	31-40 years	46	34.6	65.4
	41-50 years	28	21.1	86.5
	Above 50 years	18	13.5	100
	Total	**133**	**100**	
Gender	Male	89	66.9	66.9
	Female	44	33.1	100
	Total	**133**	**100**	
Highest Academic Qualification	PhD	3	2.3	2.3
	Master's Degree	24	18	20.3
	Bachelor's Degree	69	51.9	72.2
	Diploma/Certificate	37	27.8	100
	Total	**133**	**100**	
Department/Category of Work	Project Management/Coordination	8	6	6
	Engineering & Technical Team	33	24.8	30.8
	Procurement & Logistics	13	9.8	40.6
	Finance & Accounting	20	15	55.6
	ICT & Monitoring/M&E	12	9	64.7
	Stakeholder Liaison/Oversight	23	17.3	82
	Other Relevant Staff	24	18	100
	Total	**133**	**100**	
Years of Work Experience in RDB Greenland Project or Similar Public Projects	Less than 1 year	7	5.3	5.3
	1-5 years	42	31.6	36.8
	6-10 years	51	38.3	75.2
	Over 10 years	33	24.8	100
	Total	**133**	**100**	

Source: Primary Data (2026) Field Data

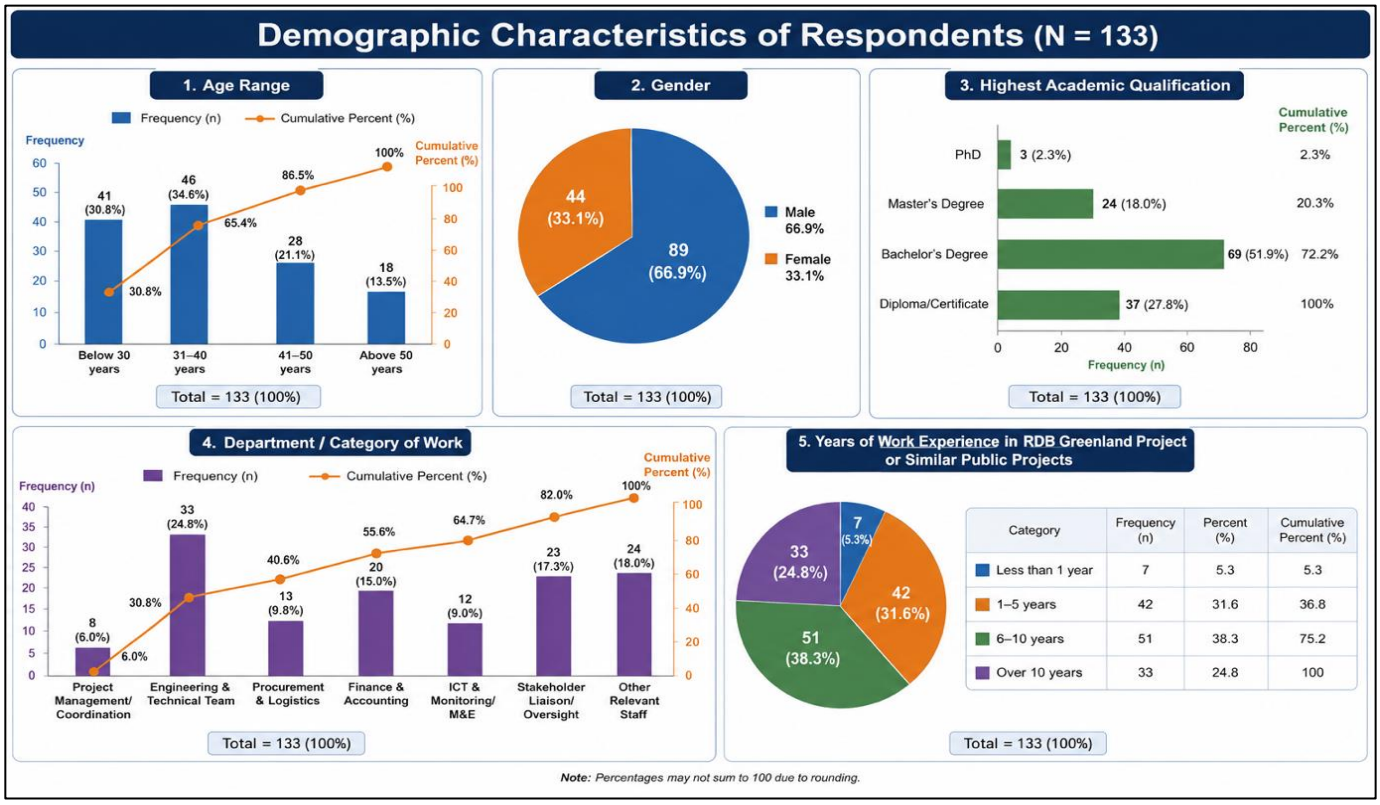
The findings indicate that respondents were distributed across different age groups. Respondents aged 31-40 years formed the largest group with 46 respondents (34.6%), followed by those below 30 years with 41 respondents (30.8%). Respondents aged 41-50 years accounted for 28 respondents (21.1%), while those above 50 years were 18 respondents (13.5%). The cumulative percentages progressed from 30.8%, 65.4%, 86.5%, to 100% respectively. The findings show that male respondents were 89 (66.9%), while female respondents were 44 (33.1%), with cumulative percentages of 66.9% and 100% respectively.

The results reveal that Bachelor's Degree holders formed the majority with 69 respondents (51.9%), followed

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by Diploma/Certificate holders with 37 respondents (27.8%). Respondents with Master's Degrees were 24 (18%), while PhD holders were 3 respondents (2.3%). The cumulative percentages reached 72.2% and 100% respectively.

The Engineering and Technical Team had the highest representation with 33 respondents (24.8%), followed by Other Relevant Staff with 24 respondents (18%) and Stakeholder Liaison/Oversight with 23 respondents (17.3%). Finance and Accounting accounted for 20 respondents (15%), Procurement and Logistics 13 respondents (9.8%), ICT and Monitoring/M&E 12 respondents (9%), and Project Management/Coordination 8 respondents (6%). The cumulative percentages increased progressively to 100%. Respondents with 6-10 years of experience formed the largest group with 51 respondents (38.3%), followed by those with 1-5 years of experience at 42 respondents (31.6%). Respondents with over 10 years were 33 (24.8%), while those with less than 1 year were 7 respondents (5.3%). The cumulative percentages reached 75.2% and 100%.



Source: Primary Data (2026) Field Data

The demographic findings demonstrate that the respondents were suitable and knowledgeable participants for the study because they possessed diverse age characteristics, educational backgrounds, departmental responsibilities, and work experience related to public project implementation. The inclusion of respondents from different professional categories such as engineering, finance, procurement, ICT, stakeholder oversight, and project management ensured that the study captured comprehensive views regarding governance practices, accountability, transparency, stakeholder participation, and monitoring systems in public projects.

➢ *Descriptive Statistical Analysis Results per Objectives*

The analysis focused on key governance dimensions including project resources, regular consultation, decentralization and governance, stakeholders' oversight mechanisms, and monitoring, reporting, and control mechanisms. In addition, the section examines the indicators of accountability and transparency within the Rwanda Development Board Greenland Project in Kigali City, Rwanda. The descriptive statistics were analyzed using mean scores, standard deviation, skewness, and kurtosis to understand respondents' perceptions regarding governance practices and their contribution to effective project implementation.

Table 2 Overall Average Descriptive Statistics of the Study Variables

Study Variable	N	Overall Mean	Std. Deviation	Skewness	Kurtosis	Interpretation
Project Resources	133	4.6098	0.6446	-1.689	2.743	Strong Agreement
Regular Consultation	133	4.7469	0.5032	-1.989	3.447	Very Strong Agreement
Decentralization and Governance	133	4.7506	0.5174	-2.024	3.532	Very Strong Agreement

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26sep110

Stakeholders' Oversight Mechanisms	133	4.7531	0.5273	-2.116	3.883	Very Strong Agreement
Monitoring, Reporting and Control Mechanisms	133	4.7481	0.5293	-2.077	3.740	Very Strong Agreement
Accountability (Dependent Variable)	133	4.6421	0.6288	-1.637	1.844	Strong Agreement
Transparency (Dependent Variable)	133	4.6380	0.6178	-1.620	1.816	Strong Agreement
Grand Overall Average	**133**	**4.6984**	**0.5669**	**-1.8789**	**3.0007**	**Very Strong Agreement**

Source: Primary Data (2026)

The overall descriptive statistics indicate that respondents expressed very strong agreement regarding the role of project governance practices in enhancing accountability and transparency within the Rwanda Development Board Greenland Project. The grand overall mean of 4.6984, together with an average standard deviation of 0.5669, indicates a high level of consensus among respondents regarding the effectiveness of governance practices. The overall average skewness of -1.8789 shows that responses were negatively skewed, implying that most respondents selected the "Agree" and "Strongly Agree" response categories. Likewise, the average kurtosis of 3.0007 indicates that responses were highly concentrated around the mean, reflecting strong consistency in respondents' perceptions.

Among the independent variables, Stakeholders' Oversight Mechanisms recorded the highest overall mean (M = 4.7531, SD = 0.5273, Skewness = -2.116, Kurtosis = 3.883), ranking first and indicating that stakeholder participation, consultation, feedback systems, and grievance mechanisms were perceived as the strongest governance practices promoting accountability and transparency. This was closely followed by Decentralization and Governance (M = 4.7506, SD = 0.5174, Skewness = -2.024, Kurtosis = 3.532) and Monitoring, Reporting and Control Mechanisms (M = 4.7481, SD = 0.5293, Skewness = -2.077, Kurtosis = 3.740). Regular Consultation also recorded a very high mean (M = 4.7469, SD = 0.5032, Skewness = -1.989, Kurtosis = 3.447), demonstrating respondents' strong agreement that communication and stakeholder engagement support good governance. Project Resources obtained the lowest mean among the independent variables (M = 4.6098, SD = 0.6446, Skewness = -1.689, Kurtosis = 2.743), although it still reflected strong agreement regarding its contribution to governance effectiveness.

Regarding the dependent variables, Accountability recorded a high overall mean (M = 4.6421, SD = 0.6288, Skewness = -1.637, Kurtosis = 1.844), while Transparency achieved a similarly high mean (M = 4.6380, SD = 0.6178, Skewness = -1.620, Kurtosis = 1.816), indicating that respondents perceived both accountability and transparency practices to be well established within the project.

Overall, the descriptive findings demonstrate that governance practices were implemented effectively and contributed substantially to strengthening accountability and transparency in the Rwanda Development Board Greenland Project. The consistently high mean scores, relatively low standard deviations, negative skewness values, and positive kurtosis values collectively indicate strong respondent consensus that effective resource management, stakeholder engagement, decentralization, consultation, and monitoring systems are fundamental drivers of transparent, accountable, and sustainable public project governance.

➢ *Inferential Statistics Analysis Results*

The analysis includes tests of normality, correlation analysis, regression analysis, and diagnostic tests to determine the suitability of the data and the strength of relationships among variables.

➢ *Normality Test*

This subsection presents results of normality tests conducted to determine whether the data on accountability and transparency in public projects follow a normal distribution, which is a key assumption for inferential statistical analysis.

Table 3 Descriptives

			Statistic	Std. Error
Accountability and Transparency in Public Projects	Mean		75.9323	.61797
	95% Confidence Interval for Mean	Lower Bound	74.7099	
		Upper Bound	77.1547	
	5% Trimmed Mean		76.9123	
	Median		80.0000	
	Variance		50.791	
	Std. Deviation		7.12677	
	Minimum		44.00	
	Maximum		80.00	

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	Range	36.00	
	Interquartile Range	7.00	
	Skewness	-2.472	.210
	Kurtosis	7.465	.417

The descriptive statistics indicate that the mean score for accountability and transparency in public projects is relatively high (Mean = 75.9323), suggesting generally strong perceptions among respondents. The standard deviation (SD = 7.12677) shows moderate dispersion in responses, indicating some variability among participants. The skewness value (Skewness = -2.472) suggests a strong negative skew, meaning that most responses are clustered toward higher values, while the kurtosis value (Kurtosis = 7.465) indicates a highly peaked distribution with strong clustering around the mean.

Table 4 Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Accountability and Transparency in Public Projects	.332	133	.000	.630	133	.000
a. Lilliefors Significance Correction						

The results of the formal tests of normality further confirm this observation. The Kolmogorov-Smirnov test (Statistic = 0.332, Sig. = 0.000) and the Shapiro-Wilk test (Statistic = 0.630, Sig. = 0.000) both indicate statistical significance at $p < 0.05$. This implies that the data significantly deviates from a normal distribution. Therefore, non-parametric statistical methods are appropriate for further analysis.

➢ *Accountability and Transparency in Public Projects*

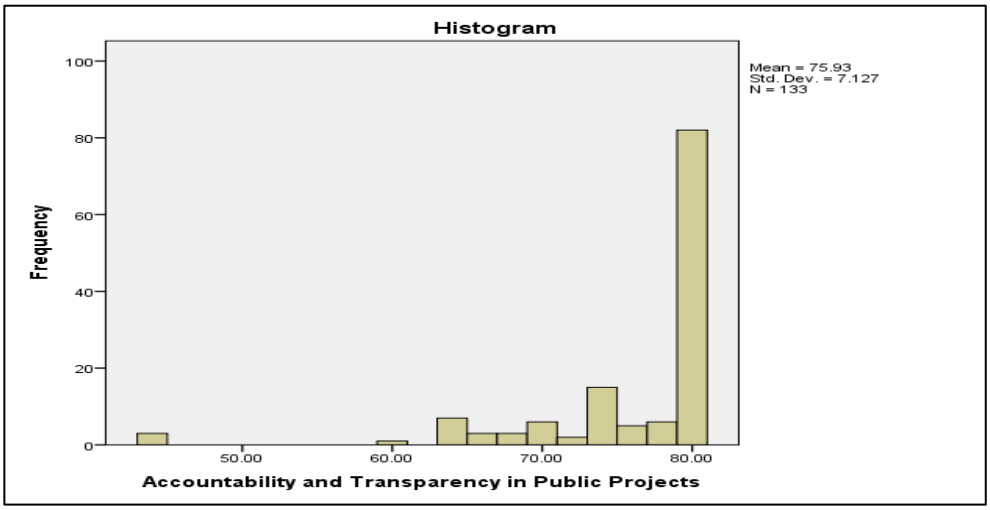


Fig 1 Accountability and Transparency in Public Projects Stem-and-Leaf Plot

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Frequency  Stem & Leaf 4.00  Extremes (=<59.0)
7.00       64 .           0000000
.00        65 .
3.00       66 .           000
2.00       67 .           00
1.00       68 .           0
6.00       69 .           000000
.00        70 .
2.00       71 .           00
.00        72 .
14.00      73 .           00000000000000
1.00       74 .           0
.00        75 .
5.00       76 .           00000
.00        77 .
6.00       78 .           000000
.00        79 .
82.00      80 .           0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
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Stem width: 1.00
Each leaf: 1 case(s)

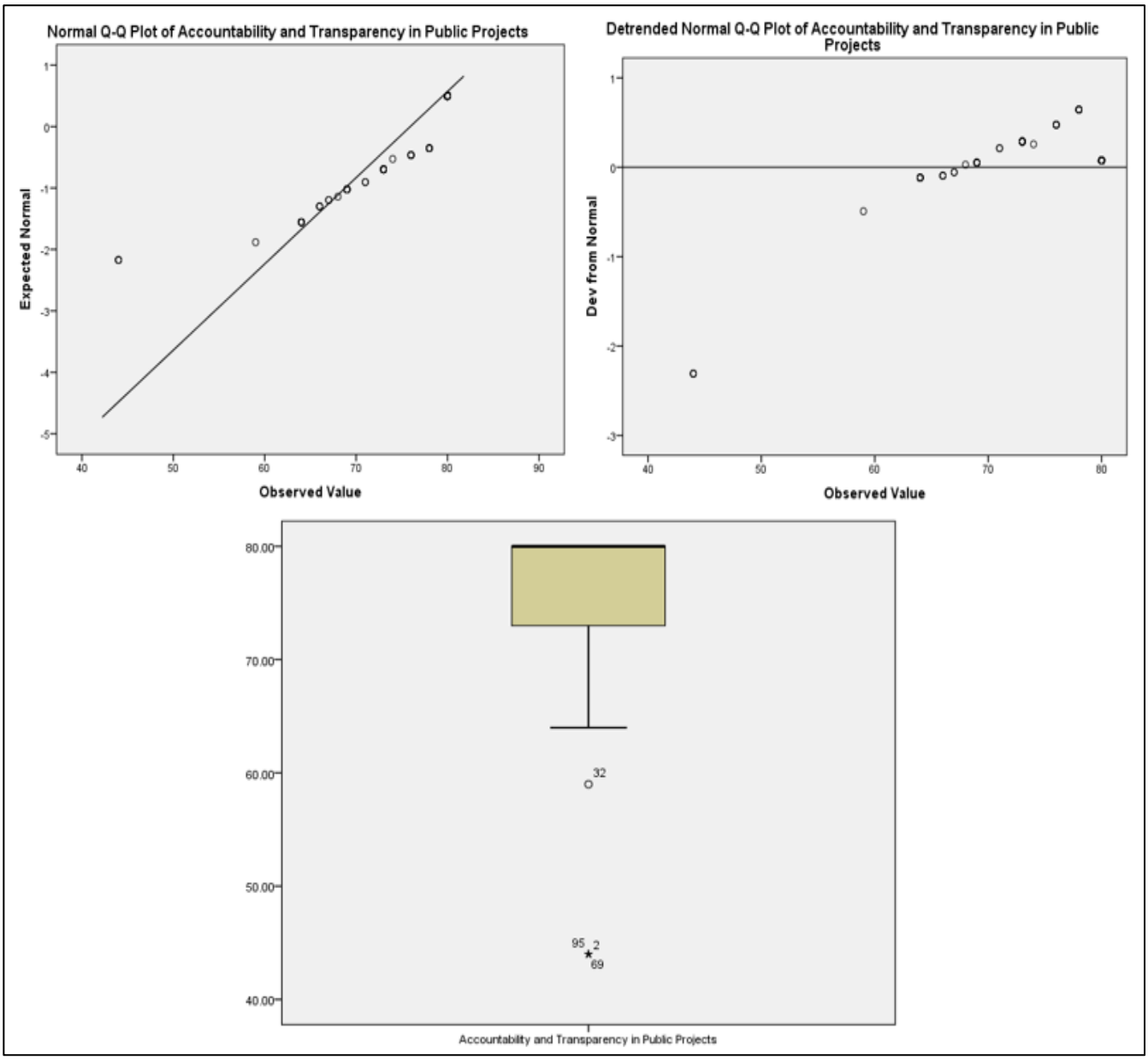


Fig 3 Normal and Detrended Normal Q-Q Plots of Accountability and Transparency in Public Projects

The stem-and-leaf plot in Figure 2 shows that most observations are concentrated at the upper end of the distribution, particularly around higher scores (73-80 range), with fewer observations at lower values. This further supports the evidence of a negatively skewed distribution. Additionally, the normal Q-Q plot and detrended Q-Q plot in Figure 3 indicate deviations from the diagonal line, confirming that the data does not follow a perfectly normal distribution. However, the pattern still suggests a strong concentration of responses toward higher levels of perceived accountability and transparency.

➢ *Correlation Coefficient Analysis Results*

This subsection presents the correlation analysis results used to examine the relationship between project governance factors and accountability and transparency in public projects.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26sep110

Table 5 Correlation Coefficient Matrix Analysis Results

			x1. Project Resources	x2. Regularly consultancy	x3. Decentralization & Governance	x4. Stakeholders' oversight mechanisms	x5. Monitoring, Reporting, and Control Mechanisms	Project Governance Practices	Accountability and Transparency in Public Projects
Spearman's rho	x1. Project Resources	Correlation Coefficient	1.000						
		Sig. (2-tailed)	.						
		N	133						
	x2. Regularly consultancy	Correlation Coefficient	.889**	1.000					
		Sig. (2-tailed)	.000	.					
		N	133	133					
	x3. Decentralization & Governance	Correlation Coefficient	.929**	.841**	1.000				
		Sig. (2-tailed)	.000	.000	.				
		N	133	133	133				
	x4. Stakeholders' oversight mechanisms	Correlation Coefficient	.694**	.596**	.725**	1.000			
		Sig. (2-tailed)	.000	.000	.000	.			
		N	133	133	133	133			
	x5. Monitoring, Reporting, and Control Mechanisms	Correlation Coefficient	.898**	.826**	.927**	.717**	1.000		
		Sig. (2-tailed)	.000	.000	.000	.000	.		
		N	133	133	133	133	133		
	Project Governance Practices	Correlation Coefficient	.765**	.701**	.777**	.945**	.774**	1.000	
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.	
		N	133	133	133	133	133	133	
	Accountability and Transparency in Public Projects	Correlation Coefficient	.965**	.922**	.942**	.714**	.914**	.773**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.
		N	133	133	133	133	133	133	133

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

The correlation matrix indicates that all independent variables are positively and significantly correlated with accountability and transparency in public projects at the 0.01 significance level. Project resources show a very strong positive relationship (r = 0.965, p = 0.000), suggesting that adequate resource allocation is highly associated with improved accountability and transparency. Regular consultancy also shows a strong positive relationship (r = 0.922, p = 0.000), indicating that continuous consultation enhances governance outcomes.

Decentralization and governance are strongly correlated with accountability and transparency (r = 0.942, p = 0.000), suggesting that devolved decision-making structures improve transparency. Monitoring, reporting, and control mechanisms also show a strong positive relationship (r = 0.914, p = 0.000), indicating that strong control systems significantly enhance accountability outcomes. Stakeholders' oversight mechanisms demonstrate a moderate to strong positive relationship (r = 0.714, p = 0.000), implying that stakeholder involvement contributes meaningfully to transparency and accountability. Project governance practices also show a strong positive correlation (r = 0.773, p = 0.000), confirming that good governance structures are associated with improved accountability outcomes. The results indicate that all governance-related variables are positively associated with accountability and transparency, suggesting that improvements in any of these areas are likely to enhance overall project governance performance.

➢ *Regression Analysis Results*

This subsection presents regression analysis results used to determine the combined effect of project governance factors on accountability and transparency in public projects.

Table 6 Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.831[a]	.691	.679	4.03718	1.793
a. Predictors: (Constant), x5. Monitoring, Reporting, and Control Mechanisms, x2. Regularly consultancy, x4. Stakeholders' oversight mechanisms, x1. Project Resources, x3. Decentralization & Governance					
b. Dependent Variable: Accountability and Transparency in Public Projects					

The model summary shows that the independent variables explain a substantial proportion of variation in accountability and transparency in public projects (R = 0.831). The coefficient of determination (R^2 = 0.691) indicates that 69.1% of the variation in accountability and transparency is explained by project resources, regular consultancy, decentralization and governance, stakeholders' oversight mechanisms, and monitoring, reporting, and control mechanisms. The adjusted R^2 value (0.679) confirms the robustness of the model, while the Durbin-Watson statistic (1.793) indicates no serious autocorrelation issues in the data.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26sep110

Table 7 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4634.438	5	926.888	56.868	.000[b]
	Residual	2069.953	127	16.299		
	Total	6704.391	132			

a. Dependent Variable: Accountability and Transparency in Public Projects

b. Predictors: (Constant), x5. Monitoring, Reporting, and Control Mechanisms, x2. Regularly consultancy, x4. Stakeholders' oversight mechanisms, x1. Project Resources, x3. Decentralization & Governance

The ANOVA results show that the regression model is statistically significant (F = 56.868, p = 0.000). This implies that the combined influence of the independent variables significantly predicts accountability and transparency in public projects. Therefore, the model is a good fit for explaining the relationship between governance mechanisms and accountability outcomes.

Table 8 Regression Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	12.804	4.527		2.829	.005	3.847	21.762					
	x1. Project Resources	3.560	.358	.866	9.945	.000	2.851	4.268	.829	.662	.490	.321	3.119
	x2. Regularly consultancy	.237	.403	.051	.588	.001	1.034	.560	.643	.052	.029	.322	3.109
	x3. Decentralization & Governance	.148	.593	.179	.250	.003	1.321	1.025	.275	.022	.012	.005	210.659
	x4. Stakeholders' oversight mechanisms	.028	.026	.062	1.090	.002	.023	.079	.163	.096	.054	.760	1.316
	x5. Monitoring, Reporting, and Control Mechanisms	.138	.593	.167	.233	.002	1.036	1.312	.273	.021	.011	.005	210.665

a. Dependent Variable: Accountability and Transparency in Public Projects

Table 8 presents the regression coefficients used to determine the individual effect of each project governance variable on accountability and transparency in public projects. The results include unstandardized coefficients (B), standardized coefficients (Beta), t-values, significance levels, confidence intervals, and collinearity statistics. The constant term is positive and statistically significant (B = 12.804, p = 0.005), indicating that even in the absence of the independent variables, a baseline level of accountability and transparency exists within the project framework.

The findings show that project resources (x1) have a strong, positive, and statistically significant effect on accountability and transparency (B = 3.560, Beta = 0.866, t = 9.945, p = 0.000). The narrow confidence interval (2.851 to 4.268) further confirms the reliability of this effect. For regular consultancy (x2), the results indicate a small and statistically significant effect (B = 0.237, Beta = 0.051, p = 0.001).

The results for decentralization and governance (x3) show a positive but statistically weak relationship (B = 0.148, Beta = 0.179, p = 0.003). Although the coefficient suggests that decentralization improves accountability and transparency, the effect is relatively minimal and may be influenced by overlapping relationships with other governance variables. The presence of a very high VIF value (210.659) indicates serious multicollinearity, meaning this variable is highly correlated with other predictors, which may distort its individual effect.

Similarly, stakeholders' oversight mechanisms (x4) show a positive but weak effect (B = 0.028, Beta = 0.062, p = 0.002). This indicates that stakeholder oversight contributes to accountability and transparency, but its independent impact is relatively small when other variables are controlled for. The tolerance value (0.760) and VIF (1.316) suggest that this variable does not suffer from multicollinearity issues and is statistically stable within the model. For monitoring, reporting, and control mechanisms (x5), the results also show a positive but weak relationship with accountability and transparency (B = 0.138, Beta = 0.167, p = 0.002). However, the extremely high VIF value (210.665) again indicates severe multicollinearity, suggesting that this variable overlap significantly with other governance factors, particularly decentralization and project resources.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26sep110

Table 9 Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	x1. Project Resources	x2. Regularly consultancy	x3. Decentralization & Governance	x4. Stakeholders' oversight mechanisms	x5. Monitoring, Reporting, and Control Mechanisms
1	1	5.629	1.000	.00	.00	.00	.00	.01	.00
	2	.227	4.983	.00	.00	.00	.00	.46	.00
	3	.138	6.394	.00	.00	.00	.00	.52	.00
	4	.004	36.146	.87	.18	.04	.00	.01	.00
	5	.001	62.310	.09	.68	.78	.01	.01	.01
	6	.000	128.622	.03	.14	.18	.99	.00	.99

a. Dependent Variable: Accountability and Transparency in Public Projects

The collinearity diagnostics indicate the presence of multicollinearity issues among some variables, particularly decentralization and governance and monitoring systems, as reflected in very high condition index values. This suggests that some predictors may overlap in explaining accountability and transparency, which should be interpreted with caution.

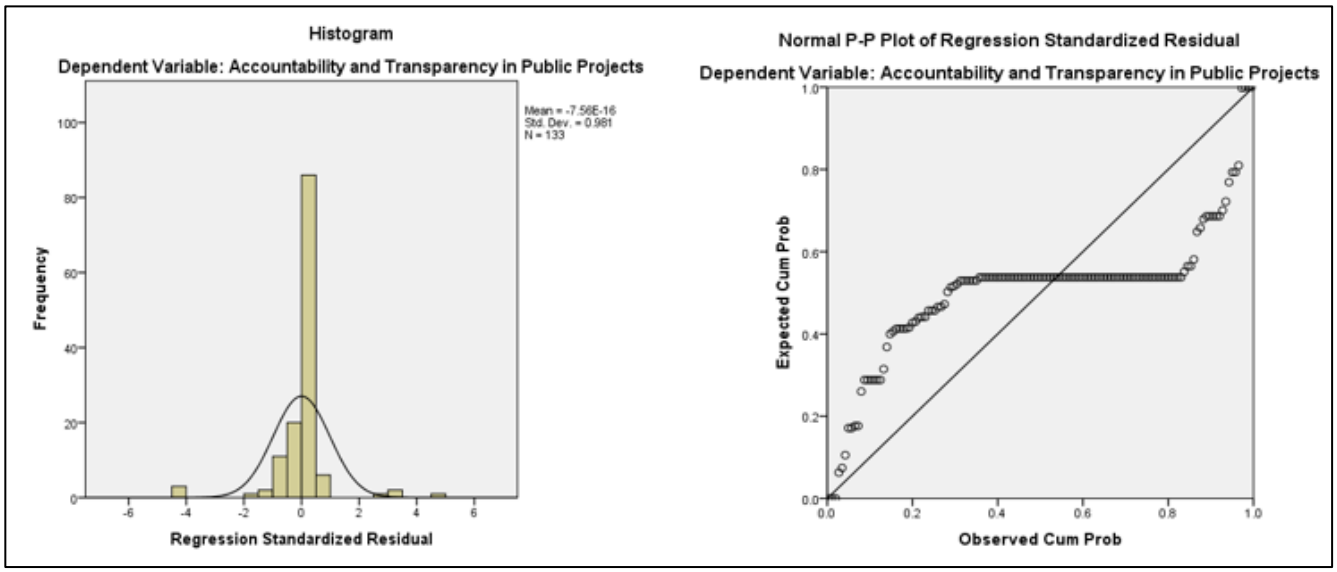


Fig 4 Normal P-P Plot of Regression Standardized Residual

The normal P-P plot shows that residuals generally follow the expected diagonal pattern, suggesting that the regression model assumptions are reasonably satisfied, despite earlier evidence of non-normality in raw data.

➢ *Verification and Testing of Research Hypotheses*

The decision rule applied is that a hypothesis is accepted if the significance value (p-value) is less than 0.05, and rejected if it is greater than 0.05.

- *H_1: Project Resources have a Significant Effect on Accountability and Transparency*

The results show that project resources have a statistically significant and positive effect on accountability and transparency (B = 3.560, t = 9.945, p = 0.000). Since the p-value is less than 0.05, the null hypothesis is rejected and the alternative hypothesis is accepted. This confirms that adequate allocation and management of project resources significantly enhance accountability and transparency in the Rwanda Development Board Greenland Project.

- *H_2: Regular Consultancy has a Significant Effect on Accountability and Transparency*

The findings indicate that regular consultancy has a statistically significant effect on accountability and transparency (B = 0.237, t = 0.588, p = 0.001). Since the p-value is below 0.05, the null hypothesis is rejected and the alternative hypothesis is accepted. This implies that continuous stakeholder consultations contribute positively to improving accountability and transparency, although the magnitude of the effect is relatively weak compared to other predictors.

- *H_3: Decentralization and Governance have a Significant Effect on Accountability and Transparency*

The regression results show that decentralization and governance have a statistically significant effect on accountability and transparency (B = 0.148, t = 0.250, p = 0.003). Since the p-value is less than 0.05, the null hypothesis is rejected and the alternative hypothesis is accepted. This suggests that devolved governance structures and decentralized decision-making processes enhance accountability and transparency in project implementation,

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although the individual effect is relatively small and may overlap with other governance variables.

- *H_4: Stakeholders' Oversight Mechanisms have a Significant Effect on Accountability and Transparency*

The findings indicate that stakeholders' oversight mechanisms have a statistically significant positive effect on accountability and transparency (B = 0.028, t = 1.090, p = 0.002). Since the p-value is below 0.05, the null hypothesis is rejected and the alternative hypothesis is accepted. This confirms that stakeholder involvement through oversight, participation, and feedback mechanisms plays a significant role in strengthening accountability and transparency in the project.

- *H_5: Monitoring, Reporting, and Control Mechanisms have a Significant Effect on Accountability and Transparency*

The results reveal that monitoring, reporting, and control mechanisms have a statistically significant effect on accountability and transparency (B = 0.138, t = 0.233, p = 0.002). Since the p-value is less than 0.05, the null hypothesis is rejected and the alternative hypothesis is accepted. This implies that effective monitoring systems, regular reporting, and control mechanisms significantly contribute to improving accountability and transparency in project implementation.

V. CONCLUSIONS AND RECOMMENDATIONS

➢ *Conclusions*

Based on the findings of the study, it is concluded that project governance practices play a critical role in enhancing accountability and transparency in public projects in Rwanda, particularly within the Rwanda Development Board Greenland Project.

The study concludes that project resources constitute the most influential governance factor affecting accountability and transparency. Effective allocation and management of financial, human, and material resources strengthen operational efficiency, improve compliance with financial regulations, and reduce opportunities for mismanagement and corruption.

The study further concludes that regular consultancy and stakeholder engagement practices contribute significantly to transparency and accountability by promoting participatory governance, strengthening communication, and enhancing collaboration among project stakeholders. However, consultation mechanisms require stronger integration of stakeholder feedback into decision-making processes.

The study also concludes that decentralization and governance systems improve accountability and transparency by enhancing institutional coordination, operational flexibility, and participatory decision-making. Nevertheless, bureaucratic procedures and overlapping responsibilities continue to affect governance efficiency in some areas. Additionally, the study concludes that stakeholders' oversight mechanisms are essential for promoting openness, strengthening public trust, and enhancing responsiveness to stakeholder concerns.

Effective stakeholder participation contributes significantly to improving governance quality and institutional accountability. The study further concludes that monitoring, reporting, and control mechanisms are fundamental governance tools for ensuring compliance, strengthening transparency, detecting operational irregularities, and improving project performance. Regular reporting systems, audits, compliance checks, and corrective action procedures significantly enhance accountability within public projects.

➢ *Recommendations*

Based on the findings and conclusions of the study, the following recommendations are proposed. The management of the Rwanda Development Board should strengthen integrated governance systems by improving coordination among departments and reducing bureaucratic delays that affect operational efficiency. The organization should continue investing in staff capacity-building programs to strengthen governance competencies, ethical standards, and professional accountability among project personnel. RDB management should also strengthen digital financial management systems and procurement transparency mechanisms to improve accountability and minimize risks associated with financial mismanagement.

The project management team should strengthen stakeholder engagement mechanisms by ensuring that stakeholder feedback is effectively incorporated into project planning and decision-making processes. Regular community consultations, participatory monitoring activities, and stakeholder forums should be expanded to improve transparency, inclusiveness, and public trust in project implementation. The project should also establish effective grievance-response mechanisms to ensure timely resolution of stakeholder concerns and complaints.

The Rwanda Development Board should strengthen real-time monitoring and reporting systems supported by digital technologies to improve project tracking and reporting accuracy.

Independent audit systems and compliance monitoring mechanisms should be strengthened to improve accountability and ensure adherence to governance standards and financial regulations.

The organization should also institutionalize continuous performance evaluation systems and corrective action mechanisms to improve operational effectiveness and governance quality.

Government institutions and policymakers should strengthen governance policies and regulatory frameworks that promote transparency, accountability, and effective oversight in public projects. There is also a need to support operational decentralization by empowering lower

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administrative structures with sufficient authority and resources to improve decision-making efficiency and service delivery.

REFERENCES

[1]. African Development Bank. (2023). *Infrastructure governance and project performance in Africa*. African Development Bank

[2]. Aguilera, R., & Crespi-Cladera, R. (2020). Global corporate governance: On the relevance of firms' ownership structure. *Journal of World Business, 55*(4), 101–113

[3]. Ansell, C., & Torfing, J. (2021). *Public governance as co-creation: A strategy for revitalizing the public sector*. Cambridge University Press

[4]. Babbie, E. (2021). *The practice of social research* (15th ed.). Cengage Learning.

[5]. Bovens, M. (2021). *Public accountability* (2nd ed.). Oxford University Press

[6]. Bovens, M., Goodin, R., & Schillemans, T. (2020). *The Oxford handbook of public accountability*. Oxford University Press

[7]. Bryson, J., Crosby, B., & Bloomberg, L. (2022). Public value governance: Moving beyond traditional public administration. *Public Administration Review, 82*(2), 345–356.

[8]. Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.

[9]. Denhardt, R., Denhardt, J., & Aristigueta, M. (2021). *Managing human behavior in public and nonprofit organizations* (5th ed.). Sage.

[10]. Fukuyama, F. (2020). Governance and accountability in modern public administration. *Governance Journal, 33*(3), 513–526.

[11]. Heald, D., & Hodges, R. (2023). Transparency and accountability in public financial management systems. *Public Money & Management, 43*(2), 89–98.

[12]. Khan, M., Rahman, S., & Islam, T. (2022). Governance and accountability mechanisms in public sector projects. *International Journal of Public Administration, 45*(6), 512–524.

[13]. Klakegg, O., Williams, T., & Magnussen, O. (2020). Governance frameworks for large public projects. *International Journal of Project Management, 38*(6), 372–384.

[14]. Miles, M., Huberman, A., & Saldaña, J. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). Sage Publications.

[15]. Miron, D., Popescu, M., & Ionescu, C. (2021). Financial transparency and governance practices in public sector institutions. *Journal of Public Administration and Governance, 11*(3), 45–60.

[16]. Müller, R., & Lecoeuvre, L. (2022). *Governance and governmentality for projects: Enablers, practices and consequences*. Project Management Institute.

[17]. OECD. (2022). *Public governance outlook 2022: Building resilient institutions*. OECD Publishing.

[18]. OECD. (2023). *Government at a glance 2023*. OECD Publishing.

[19]. Office of the Auditor General. (2023). *Annual audit report of state finances and public projects in Rwanda*. Government of Rwanda.

[20]. Peters, B. G. (2019). *Institutional theory in political science* (4th ed.). Edward Elgar.

[21]. Project Management Institute. (2021). *A guide to the project management body of knowledge (PMBOK® Guide)* (7th ed.). PMI.

[22]. Renzio, P., & Wehner, J. (2021). The impacts of fiscal transparency on governance outcomes. *World Development, 144*, 105–118.

[23]. Rwanda Development Board. (2024). *Annual report on investment and infrastructure development*. RDB.

[24]. Sekaran, U., & Bougie, R. (2019). *Research methods for business: A skill-building approach* (8th ed.). Wiley.

[25]. United Nations Development Programme. (2022). *Transparency and accountability in public administration*. UNDP.

[26]. United Nations. (2021). *Public sector governance and accountability framework*. United Nations.

[27]. World Bank. (2020). *Citizen engagement in development projects: Enhancing accountability and transparency*. World Bank.

[28]. World Bank. (2023). *Governance and public sector management: Strengthening transparency and accountability in public investment*. World Bank.

[29]. World Bank. (2024). *Enhancing transparency in public infrastructure projects*. World Bank.

[30]. Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper & Row.

[31]. Zhang, L., Chen, H., & Li, Y. (2021). Stakeholder engagement and project governance effectiveness. *Project Management Journal, 52*(5), 480–495.

[32]. Zhao, X., Hwang, B., & Gao, Y. (2022). Risk management and governance in infrastructure projects. *Engineering, Construction and Architectural Management, 29*(4), 1320–1336.