

Roads Projects in Kanduyi Sub-County: Strategic Formulation and Sustainability

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Abstract- Road construction projects can experience delays due to a variety of reasons, including: Weather conditions: Permitting and approvals: Unforeseen site conditions: Funding issues: Labor and equipment availability: Design changes: Strategic formulation is important for road construction sustainability because it helps to ensure that road construction projects are designed and constructed in a way that is efficient, environmentally sustainable, socially responsible, and planned for the long-term. The objective of this paper is to determine how strategic formulation sustains road projects in Kanduyi Sub-County. 112 contractors, 10 technical supervisors, 5 ward administrators, and 2 KeRRA workers were the target group. Both interviews and questionnaires were employed as data collection methods for this study. Closed-ended questions were included in the questionnaires to capture specific information. This study used descriptive analysis. The research's conclusions demonstrated that road project activities were adequately developed, planned, and managed, allowing for the development and application of innovative concepts. There was collaboration with experts who were familiar with the contract as well as with government experts who compiled data into accessible resources. Finally, there was coordination with stakeholders on the core of strategy formulation, as well as collaboration with IT specialists who developed the technical infrastructure to support information system management. This suggests that businesses engaged in road construction embrace strategy formulation.

I. INTRODUCTION

Road construction projects can experience delays due to a variety of reasons, including: Weather conditions: Adverse weather conditions such as heavy rain, snow, or extreme heat can cause delays in

road construction projects. For example, heavy rain can cause erosion and make it difficult for heavy machinery to operate, while extreme heat can cause tarmac to dry too quickly, making it difficult to lay properly. Permitting and approvals: Road construction projects require various permits and approvals from local and state authorities. Delays can occur if the necessary permits and approvals are not obtained in a timely manner or if there are issues with the application process. Unforeseen site conditions: Sometimes, the conditions at the construction site can be different from what was anticipated, leading to delays. For example, if the soil is not stable enough to support the road, additional work may need to be done to stabilize it. Funding issues: Road construction projects can be expensive, and delays can occur if funding is not secured in a timely manner or if there are issues with the budget. Labor and equipment availability: Road construction projects require skilled labor and specialized equipment, and delays can occur if there is a shortage of either. For example, if the contractor does not have enough workers to complete the project, or if a crucial piece of equipment breaks down and needs to be repaired or replaced. Design changes: Changes to the design of the road or the scope of the project can also cause delays. For example, if the plans for the road need to be revised, this can cause delays in the construction process. (<https://www.>). Strategic formulation is important for road construction sustainability because it helps to ensure that road construction projects are designed and constructed in a way that is efficient, environmentally sustainable, socially responsible, and planned for the long-term. The objective of this paper is to determine how strategic formulation sustains road projects in Kanduyi Sub-County.

II. TARGET POPULATION

The Kanduyi Sub county roads building enterprises were the intended audience. According to Kanduyi Sub County records from 2018 to 2020, the Sub County awarded contracts to roughly 112 road construction companies. Therefore, the 112 contractors, 10 technical supervisors, 5 ward administrators, and 2 KeRRA workers were the target group. 129 persons in total responded to the survey (Wekesa, 2022).

III. SAMPLE SIZE DETERMINATION AND SAMPLING PROCEDURES

According to Mugenda & Mugenda (2003), sampling is the process of choosing a portion of the target population to represent the total population. The sample size was decided upon using the census sampling technique. 129 responses made up the sample as a result. Respondents were chosen using a purposeful sampling method. Three Kanduyi Sub County ministry of roads employees took part in the interview process (Wekesa, 2022).

IV. RESEARCH INSTRUMENTS

Both interviews and questionnaires were employed as data collection methods for this study. Closed-ended questions were included in the questionnaires to capture specific information. A schedule for interviewing officials from the Department of Roads,

Infrastructure, and Public Works in Kanduyi Sub County was utilized to get data from them. Contrary to interviews where respondents would take their time or even fail to complete or return the questionnaires, interviews are straightforward and the researcher was able to gather information right away.

V. DATA ANALYSIS TECHNIQUES

Data analysis is the process of evaluating data using analytical and statistical methods in order to gather crucial knowledge and support decision-making. This study used descriptive analysis. Brief descriptive numbers, known as descriptive measurements, are used to compress a particular data set, which may be a representation of the entire population or a sample of it.

VI. DATA ANALYSIS, INTERPRETATION AND DISCUSSION

An organization chooses the finest and most appropriate course of action to accomplish its intended goals and objectives through the process of formulating a strategy. The goal of strategy formulation is to give an organization the ability to select the course of action and intended result without which achieving the objectives would be challenging. The respondents were given a Likert scale and asked to check the proper response for the strategic planning and long-term viability of road projects. Table 1 displays the results.

Table 1: Roads projects' sustainability and strategic planning

STATEMENTS	SD		D		N		A		SA		TOTAL	MEAN	STD
	F	%	F	%	F	%	F	%	F	%			
We create, schedule, and oversee project activities for roads.	2	1.7	3	2.3	2	1.5	48	40.7	63	53.4	118	4.4	0.09
We create and put into practice fresh concepts.	2	1.5	2	1.5	3	2.3	52	44.1	59	50	118	4.4	0.07
We collaborate with specialists who are familiar with the contract.	2	1.5	3	2.3	5	3.8	46	39	62	52.4	118	4.4	0.07

We collaborate with specialists who compile knowledge into valuable resources.	0	0	0	0	5	4.	47	39.	66	55.9	118	4.5	0.07
						2		8					
We collaborate with IT specialists who provide the technological framework for information system administration.	1	0.	1	0.	6	5.	50	42.	60	50.8	118	4.4	0.08
		8		8		1		4					
We communicate with key stakeholders when formulating strategies.	0	0	1	0.	4	3.	54	45.	59	50	118	4.4	0.09
				8		4		8					
AVERAGE												4.4	0.08

The results demonstrate that the activities for road projects are developed, planned, and managed with a mean of 4.4 and standard deviation of 0.09. A mean of 4.4 and a standard deviation of 0.07 characterize the formulation and application of new ideas. There is collaboration with experts who are familiar with the contract, on average 4.4 and with a standard deviation of 0.07. Government professionals who organize data into accessible and helpful resources with a mean of 4.5 and a standard deviation of 0.07 are partnered with. Information system management is supported by collaboration with IT specialists who construct the technical foundation with a mean of 4.4 and standard deviation of 0.08. Among a mean of 4.4 and a standard deviation of 0.09, there is coordination among stakeholders on the core of strategy formulation. With a mean of 4.4 and a standard deviation of 0.08, strategy formulation affects the sustainability of road projects in Kanduyi Sub-County on average. This suggests that road construction company's dazzle with their strategy development. The ministry representatives who took part in the interview schedules claim that road companies in the Kanduyi sub-county do develop strategies. The sustainability rate of road constructions has increased as a result. The findings are in line with those found in previous studies (Kazmi, 2008). It's critical to comprehend the meaning of some of the lingo used frequently throughout any given process. The focus of this section is on environmental concerns as they pertain

to building highways. However, in general, developing a strategy can be seen as conceptualizing an idea, assessing it, and sharing information with management within a company or organization about both the external and internal environment. Information gathering, analysis, and dissemination for tactical or strategic reasons make up this process. The practice of gathering information, both objective and factual, is helpful in identifying elements that need receive extra attention during project management.

It may be necessary to formulate a strategy in response to new problems that are having an impact on how an organization operates, or it may just be a routine task the business performs through scanning. Ad-hoc scanning is a typical type of scanning. This is typically a brief, irregular examination that is frequently brought on by a crisis. In other words, businesses do environmental scanning to get insight into the crisis that is now hurting them and examine the environment in order to pinpoint the problem's root cause (Kazmi, 2008).

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businesses do environmental scanning to gain insight into how the current crisis is affecting them and then evaluate the scenario to pinpoint the problem's root cause (Kazmi, 2008).

VII. SUMMARY OF RESEARCH FINDINGS

An organization chooses the finest and most appropriate course of action to accomplish its intended goals and objectives through the process of formulating a strategy. The research's conclusions demonstrated that road project activities are adequately developed, planned, and managed, allowing for the development and application of innovative concepts. There is collaboration with experts who are familiar with the contract as well as with government experts who compile data into accessible resources. Finally, there is coordination with stakeholders on the core of strategy formulation, as well as collaboration with IT specialists who develop the technical infrastructure to support information system management. This suggests that businesses engaged in road construction embrace strategy formulation.

CONCLUSION

Strategic formulation is a critical aspect of road construction sustainability. Strategic formulation helps to optimize the use of resources in road construction projects. By developing a clear strategy, road construction projects can identify the most efficient and effective ways to use resources such as materials, labor, and equipment, thus reducing waste and minimizing costs. Strategic formulation can help to ensure that road construction projects are designed and constructed in an environmentally sustainable manner. This can include using sustainable materials, minimizing the impact on the surrounding environment, and reducing the carbon footprint of the project. Strategic formulation can also help to ensure that road construction projects are socially sustainable. This can involve engaging with local communities to ensure that their needs and concerns are taken into account, as well as providing job opportunities and training to local residents. Strategic formulation helps to ensure that road construction projects are planned for the long-term. This means considering factors such as maintenance and repair

needs, potential changes in traffic volume, and the impact of the road on the surrounding area over time. Risk management: Strategic formulation can help to identify and manage the risks associated with road construction projects. This can include identifying potential delays, budget overruns, and other challenges, and developing strategies to mitigate these risks.

RECOMMENDATIONS

From the research findings, the study draws the following recommendations;

1. Government agencies responsible for roads projects can use strategic formulation to identify and prioritize sustainability goals and strategies for roads projects. This can help them to ensure that roads projects are aligned with national and regional sustainability policies and priorities.
2. Private sector companies involved in roads projects, such as construction and engineering firms, can use strategic formulation to develop sustainability strategies that align with their corporate social responsibility goals and improve their standing with clients and investors who prioritize sustainability.
3. NGOs focused on environmental and social issues related to roads projects can use strategic formulation to identify and advocate for sustainability goals and strategies that align with their mission and values.
4. Local communities affected by roads projects can use strategic formulation to identify and prioritize sustainability goals and strategies that address their specific concerns and needs, such as reducing air and noise pollution, promoting active transportation, and improving access to public transportation.
5. Researchers and academics in fields such as sustainability, transportation, and engineering can use strategic formulation to develop and test new approaches to sustainability in roads projects, and to share their findings with stakeholders in the field.

SUGGESTION FOR FURTHER STUDIES

This study suggests that further study to look at Strategic Planning and the sustainability of roads projects in Kanduyi sub-county

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