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EFFECT OF EMPLOYEE TRAINING ON THE SUSTAINABILITY OF THE STANDARD GAUGE RAILWAY ROJECT IN KENYA

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Abstract: **The standard gauge railway has provided a means of moving people and goods, although it has presented some challenges. There are challenges with ticketing, administration, and logistics of cargo clearance, as well as operational issues with the first and last kilometers of passenger movement. Secondly, corruption allegations have dogged some Kenyan government officials, which have stoked fears. The Kenya Standard Gauge Railway through Tsavo and Nairobi National Park is problematic. These challenges must be converted into opportunities for the maximization of the use of trains, even in the face of concrete progress in transport infrastructure and connectivity. Therefore, this study examined the effect of employee training on the sustainability of Kenya Standard Gauge Railway project in Kenya. This study will utilize descriptive research methods based on agency, human capital, and resource-based perspective theories. About 75 Kenyan standard gauge railway staff took part in the study. Questionnaires were issued to seven Kenyan Railways officers in a pilot study to obtain primary data. The Cronbach alpha coefficient will be utilized to assess the reliability of every questionnaire after testing for concept, criteria, and content. Mean and standard deviation were applied for the quantitative data analysis. Content analysis was applied to qualitative data. The official study employed multiple regression and correlation analysis. The employee training was found to have significant and positive contributions toward project sustainability, according to the study. The study concluded that team member training significantly contributes to the sustainability of the SGR project. A well-trained workforce is a cornerstone of project sustainability, as it guarantees operational effectiveness and congruence with the long-term objectives of the project. Policymakers should make sure that national frameworks that prioritize ongoing worker training and capacity building, especially for infrastructure projects, are developed in light of the study's findings and conclusion.**

Keywords: **Employee Training, Project Sustainability.**

1. INTRODUCTION

The sustainability assessment of a project is related to other parameters, such as the project's timeline, quality of the project, specifications of the project, and satisfaction level of the consumers. Acknowledging the importance of the stakeholders' Capacity has been considered an important factor in attaining the pervasively sought-after sustainability level of projects (Gachohu et al., 2018). Therefore, active work is required to increase the capacities of the project stakeholders. According to Ika and Donnelly (2021), capacity building comprises the assessment of training needs/prerequisites, engaging a wide range of stakeholders in capacity development, identification of service or capacity needs and available resources, development of an accurate and credible plan, capacity building execution, and capacity development evaluation. As such, this approach strengthens an organization's technical, management, and governance skills by expanding the project's knowledge and expertise.

In today's complex and ever-shifting environment, pursuing sustainable projects is an important goal for organizations and the advancement of society in the present interconnected world (Johnson & Baker, 2019). Even though initiatives are a high priority and have received much attention from leaders and organizations, many have yet to become successful. This may easily be observable in cross-nation settings, industries and sectors where most initiatives prove underperforming (Jones et al., 2021). Therefore, the successful implementation of sustainable strategies in line with delivering good sustainable performance signs points to sound management.

In other words, the process associated with project sustainability in the U.S.A. implies a transition from familiar to unfamiliar contexts that set the future, as it has the potential to influence the responsibilities that members of an enterprise bear heavily. According to Grant (2020), both guides to change and assessment of the organization's support for project sustainability can help to manage change. Therefore, it is crucial to focus on the development of the effective role of handover when it comes to project management and the attainment of goals by beneficiaries in the United States of America.

According to Vincent and Stephen (2018), more Rwandan programmes must include sustainable capacity building to improve their effectiveness in the long run. It enhances the role of the locals since they participate in the projects, enhances the ability to manage the projects, and ensures that projects engage society. Rwanda empowers individuals and institutions with increased Capacity, ensuring the development programs' sustainability and enhancement. Uwitonze and Ingirige (2022) point out the need to involve the beneficiaries, local people living around projects, and other significant government institutions during the identification of the projects to provide the recipient with ownership and get to understand their issues in the case of Rwanda.

As stated by Ndagi (2021), the capability is vital for a systematic and sustained concerted evaluation of the development programmes in agriculture and their respective inputs, outputs, results and effects on Kenya's sustainability agendas. The findings of Kanyi and James (2023) reveal that technical, managerial, and governance competency play a role in Nairobi County donor-funded projects. Therefore, Nairobi County donor-funded project administration needs to spend more on advanced technology and new techniques and enhance the Capacity of project management to deliver better.

According to Wang, Sekei, Ganiyu, and Makwetta (2021), the goal of project sustainability is to create tailored project goals and indicators that complement local priorities and conditions while making sure that these goals can be linked to society goals. According to Bouraima, Alimo, Ehebrecht, and Qiu (2023), a project sustainability management system include determining relevant issues, goals, and performance levels as well as creating an ethical framework to direct the creation of rules and regulations. Moreover, it involves stakeholder consultation and constant communication with them while being responsible for the outcomes produced. Therefore, project sustainability defines initiating a project and ensuring it delivers a lasting value.

Sobeck and Agius (2019) define capacity development as any endeavor that reinforces an organization's ability to reach its goal by enhancing effective administration, good governance, and an unrelenting focus on outcomes. An organization's ability to fulfill its capacity development function is also a sign that it has adequate staff with the right skills, combined with appropriate management and technological systems, a sound physical infrastructure, and ample financial and other resources. This capacity building can be a process of change to align organizational development goals with new or enhanced behavior and attitudes (Nu'Man, King, Bhalakia, & Criss, 2022). Therefore, success in organizational capacity development depends on planned and purposeful change.

Kenya Railways is a State Corporation established on January 20, 1978, under the Kenya Laws Act (Cap 397). The Corporation has the following mandates: Providing technology and talent to the railway sector, delivering efficient and effective railway services, using its resources to promote and encourage business growth, and facilitating and participating in developing the national and metropolitan railway networks. Kenya Railways is committed to providing the country with reliable, safe, and effective railway transportation services by its mandate. By building the Standard Gauge Railway (S.G.R.) network and implementing a mass commuter rail system for the nation's cities, the railway master plan seeks to transform the nation's railway network.

2. STATEMENT OF THE PROBLEM

The government of Kenya is carrying out Kenya’s development plan, which spans from 2008 to 2030. By 2030, Kenya should have a middle-income economy that offers all its citizens excellent levels of life, according to Vision 2030. The nation is urged under Vision 2030 to provide high-quality infrastructure development projects and amenities as a top priority. The government fears incorporating foreign skills and knowledge can close the infrastructure gap. Phase 1 of the

S.G.R.'s development, spanning 472 km between Mombasa and Nairobi, kicked off in 2014, and 120-kilometer Nairobi-Naivasha Phase 2A kicked off in 2017. Passenger and freight transportation are currently available in both phases, although Phase 2B (Naivasha – Kisumu – Malaba) is just beginning to be implemented.

The Inland Container Depot (I.C.D.) in Nairobi at Embakasi has expanded because of the S.G.R. line and the newly constructed I.C.D. - Naivasha at Mai Mahiu. This has made it easier for cargo headed for Western Kenya and nearby nations to pass through the seaport of Mombasa and less congested. Although the S.G.R. has given freight and passenger transportation an alternative, there are still difficulties, including "First mile and Last mile" problems for administrative, logistical difficulties with cargo clearance and passengers. Concerns about the S.G.R. in Kenya have also been raised about the corruption scandals involving Kenyan officials and the line's impact on the environment as it passes through Tsavo National Park and Nairobi National Park. Although improved connectivity and physical transportation infrastructure are essential, these difficulties can be viewed as chances to fully realize the potential of the railway.

In Kisumu Central Constituency in Kisumu County, Kenya, Uganda, Olala and Odima (2017) supported a minimal, positive correlation between capacity building and the durability of women's development projects. Kisumu County women's progress was studied. In addition, Wanjiru's (2021) research on organizations for capacity building and youth empowerment referenced that sources of finance need to be overhauled and are getting more costly. Nonetheless, a study was done on the Mathare Youth Sports Association. Gachengo and Mulei (2021) analyzed, in Makueni County, Kenya, how county-funded water sustainability could be improved through community capacity building. The study found that the sustainability of Makueni County government-sponsored water projects was improved by improving community capacity. The Makueni County Government carried out the study. A study by Gatambia and Mutuku (2023) investigated the effects of communication on sustainability of road construction projects in Embu Government, Kenya and the study found a strong and positive correlation between effective communication and the longterm viability of road construction projects. However, the study context was sustainability of road construction projects in Embu County, Kenya.

3. LITERATURE REVIEW

Theoretical Literature Review

Human Capital Theory

This hypothesis was first proposed by Schultz (1961) and Becker (1964) in accordance with the fact that training and education provide employees with helpful knowledge and skills to raise team member wages and firm production. As investing in people is found to be the most critical asset for society and particular firms, the strategy also pays considerable attention to human capital. It is concerned with the knowledge, abilities, traits, and characteristics people have to enhance their worth and support organizational objectives (Becker, 1964). It is Boxall and Steeneveld's (1999) opinion that human resources are appreciated by the way they can directly or indirectly influence organizational production, in the same way as any other type of capital. Therefore, companies should make knowledgeable choices in managing and investing in human resources in the same manner they would with other types of financial capital like land and machinery (Becker, 1964; McWilliams et al., 1994). The theory states that human capital and physical means of production are interconnected, and the rate of return is highly based on the quantity and quality of investment.

Human capital development, according to Marimuthu, Arokiasamy, and Ismail (2009), is the process of obtaining the abilities and information required to prepare workers to do economically productive work. Hence, workers can be regarded as factors in the production process if a rise in input leads to more output. This hypothesis is particularly crucial because it explains the interaction between the viability of the initiatives and the availability of management talents. This illustrates how achieving an organization's goals—planned objectives—is greatly influenced by resource effectiveness. Hence, finishing the project and enhancing employee numbers are essential to maximizing workers' potential in terms of training, experience, and expertise.

Empirical Literature Review

In the central sub-county of Kisumu County, published by Oganga, Olala and Odima in 2017, the authors looked at how capacity building affects the long-term viability of organizations dedicated to women's development. The study analysed ten women development programmes that have been supported by donors within Kisumu Central Constituency. Convenience and correlation designs were used in obtaining the data. The survey targeted 150 samples of Women Development Project beneficiaries in Kisumu Central Constituency who were all grantees and 100 sample of organizational leaders, which comprised of 10 chairpersons, 10 secretaries and 10 treasurers from those organizations.

From the population, 124 respondents were chosen using the random sampling method. All data sources relied on interviews and surveys. In terms of analyzing data, qualitative data was thematically evaluated, and quantitative data was descriptively and inferentially examined. Statistical testing revealed that both factors had a substantial influence on WDPs in Kisumu Central Constituency, Kisumu County, Kenya; however, only an increase in WDP capacity had a direct beneficial and statistically significant impact on WDP Ss. As a result, this study focused on interventions aimed at empowering women via gender mainstreaming in Kisumu County and Kisumu Central Constituency, Kenya.

Mahalingam and Nagarajan (2018) investigated how project management training affected project sustainability. The study, with a quantitative, non-experimental correlational research design strategy, sampled 200 individuals using systematic sampling. Data was gathered by the researcher online and through email. A project's planning stage has the highest mean rank (4.30%), followed by the initiating stage (3.32%), monitoring and controlling stage (2.59%), and closing stage (2.33%), according to the study. This suggests that the highest rank is assigned to the planning stage, followed by the initiating, monitoring, and controlling stages. The project management training scores of the male and female participants differed significantly, with the female participants scoring higher than the male participants. Moreover, only a moderately positive association between project sustainability and project management education was established. However, as pointed out above, purposive sampling was adopted in the research.

In Busia County, Kenya, Ateya and Maende (2018) assessed the long-term viability of agricultural and livelihood programs as well as staff training. The study's target group consisted of all 112 employees in Busia County, and it employed a descriptive research methodology. Regression and correlation were examples of inferential statistics, while percentages and frequencies were examples of descriptive statistics. The study found that project sustainability was impacted by evaluation, delivery style, and training needs assessment. Nonetheless, the research was conducted in Kenya's Busia County.

4. RESEARCH METHODOLOGY

This study will utilize descriptive research methods based on agency, human capital, and resource-based perspective theories. About 75 Kenyan standard gauge railway staff took part in the study. Questionnaires were issued to seven Kenyan Railways officers in a pilot study to obtain primary data. The Cronbach alpha coefficient will be utilized to assess the reliability of every questionnaire after testing for concept, criteria, and content. Mean and standard deviation were applied for the quantitative data analysis. Content analysis was applied to qualitative data. The official study employed multiple regression and correlation analysis.

5. FINDINGS

The descriptive statistics results on employee training are presented in Table 1.

Table 1: Employee Training

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
Team member skills increase the likelihood of success of the project and long-term viability	70	1	5	3.79	1.26
Employee knowledge improves the chances of success of the project and long-term viability	70	1	5	3.87	1.20
Training programs focused on sustainability can help employees understand the importance of sustainable practices and their role in achieving sustainability goals	70	1	5	3.96	1.28
Training leads to more effective problem-solving and decision-making, ensuring that sustainability is integrated into every aspect of the project	70	1	5	3.90	1.21
Proper training enables employees to collaborate to achieve shared sustainability objectives and exchange best practices and expertise, and collaborate on innovative solutions	70	1	5	3.91	1.26
Training enables employees to identify and implement sustainable practices, technologies, and strategies to enhance the project's sustainability	70	1	5	3.84	1.22
Aggregate Mean Score	**70**			**3.88**	**1.24**

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The average score of 3.88 suggests that, although there is potential for improvement, most respondents concur that team member training has a favourable effect on project performance and long-term sustainability. The 1.24 standard deviation indicates a moderate level of response variability. With the highest mean score (3.96) and standard deviation of 1.28, the statement "Sustainability-focused training programs can help employees understand the importance of sustainable practices and their role in achieving sustainability goals" stood out. This implies that respondents firmly believe that targeted training is essential to integrating sustainability into project goals.

"Team member skills increase the likelihood of project success and long-term sustainability" had the lowest mean score (3.79) with a standard deviation of 1.26. This inferred a perception that while training is beneficial, it may not always guarantee success without other supporting factors such as leadership or organizational support. Respondents agree that training leads to more effective problem-solving and decision-making (Mean = 3.90) and helps employees work together towards sustainability goals (Mean = 3.91). This reinforces the idea that equipping employees with relevant knowledge and skills enhances collaboration and the integration of sustainability into project practices.

The statement "Training enables employees to identify and implement sustainable practices, technologies, and strategies" (Mean = 3.84) highlights the role of practical training in equipping employees to adopt innovative solutions that align with sustainability objectives. The standard deviations across all statements range from 1.20 to 1.28, indicating moderate variation in respondents' opinions. This suggests differing experiences or perceptions of training effectiveness, potentially influenced by factors such as individual roles, exposure to training, or organizational priorities.

The results show that training is positively viewed as a means of verifying the SGR project's sustainability and success. The results of the study corroborate those of Ateya and Maende (2018), who assessed staff training and the long-term viability of agricultural and livelihood projects in Busia County. They found that project sustainability was influenced by training needs assessment, delivery style, and evaluation. Nonetheless, the research was conducted in Kenya's Busia County.

Inferential Statistics Results

Table 2: Correlation Analysis

		Employee training	Project sustainability
Employee training	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	70	
Project sustainability	Pearson Correlation	.730**	1
	Sig. (2-tailed)	.000	
	N	70	70

The findings indicate that Team Member Training and Project Sustainability were significantly correlated (r = 0.730), with a p-value of less than 0.01. The implication is that better project sustainability goes hand in hand with higher team training costs. The findings of the study agree with those of Ateya and Maende (2018), who had assessed staff training and long-term sustainability of agricultural and livelihood projects in Busia County. They found that project sustainability relied on training needs assessment, mode of delivery, and evaluation. But the research was conducted in Busia County, Kenya.

Table 3: Model Summary

Model Summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831a	0.69	0.671	0.4234

Since it had an R Square (Coefficient of Determination) of 0.69, it was claimed that the combined effects of employee training accounted for 69% of the variance in SGR Project Sustainability. A high R Square value indicated that the model had high explanatory power and that the selected variables played an essential role in project sustainability.

Table 4: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.626	0.283		2.213	0.030
	Employee training	0.266	0.104	0.302	2.558	0.013

A one-unit enhancement in employee training was found to be correlated with an additional SGR Project Sustainability by 0.266 when other control variables were fixed ($\beta = 0.266$, $p = 0.013$). The significance of employee training on the sustainability of the SGR projects is statistically positive at the 5% significance level ($p = 0.013$). The conclusions drawn from the study support Ateya and Maende's (2018) study, which assessed staff training and agricultural and livelihood project sustainability in Busia County.

6. CONCLUSIONS

This study examined how capacity building affected the Standard Gauge Railway (SGR) project's sustainability, concentrating on four important factors: financial investment, team member training, leadership base, and public participation. The study concluded that team member training significantly contributes to the sustainability of the SGR project. A well-trained workforce is a cornerstone of project sustainability, as it guarantees operational effectiveness and congruence with the long-term objectives of the project.

7. RECOMMENDATIONS

Policymakers should make sure that national frameworks that prioritize ongoing worker training and capacity building, especially for infrastructure projects, are developed in light of the study's findings and conclusion. This will enable workers to remain adaptable and equipped to handle evolving technologies and sustainability challenges. Collaborating with universities, technical colleges, and training centers can establish pipelines for continuous learning and skills development aligned with sustainable practices. Practitioners should Prioritize skills development. Regular and targeted training should be embedded within the organizational culture. Managers should ensure that employees receive training in both technical and soft skills, focusing on problem solving, teamwork, and sustainability. Ensure that training programs are regularly reviewed and updated to reflect emerging industry trends, sustainability practices, and project-specific needs.

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