

# Resource Capability and Sustainability of Health Projects Sponsored by Non-Governmental Organizations in Collaboration with County Government in Kitui County, Kenya

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**Abstract:** This study examined the influence of resource capability on the sustainability of health projects sponsored by non-governmental organizations (NGOs) in collaboration with the county government in Kitui County, Kenya. The study was motivated by persistent challenges in Kenya's health sector, including inadequate service quality, limited technical capacity, inefficiencies, and governance constraints that undermine project sustainability. The study specifically assessed the effect of financial, human, ICT, and physical resource capabilities on the sustainability of NGO-supported health projects. It was guided by the Resource-Based View Theory, Contingency Theory, and Human Capital Theory. A descriptive research design was adopted, targeting six health projects, with a census of 82 respondents drawn from project staff. Data was collected using structured questionnaires, with validity and reliability established through content validation and Cronbach's alpha. Quantitative data was analyzed using descriptive and inferential statistics, including regression and correlation analysis, while qualitative data was analyzed thematically. Findings revealed that human resource capability had the strongest and most significant positive influence on project sustainability ( $\beta = 0.533$ ,  $p < 0.001$ ), followed by ICT capability ( $\beta = 0.282$ ,  $p < 0.001$ ) and financial resource capability ( $\beta = 0.157$ ,  $p = 0.007$ ). Physical resource capability had a positive but statistically insignificant effect ( $\beta = 0.095$ ,  $p = 0.072$ ). The results indicate that human expertise, ICT integration, and financial management are critical determinants of sustainable health project performance, while physical resources alone are insufficient to ensure sustainability. The study concludes that sustainable health project outcomes depend on integrated resource capability management, with emphasis on human capacity development, ICT adoption, and financial accountability. It recommends strengthened staff training, improved digital systems, and enhanced financial governance to support long-term project sustainability in NGO-county government collaborations.

**Keywords:** Resource capability; Project sustainability; Non-governmental organizations (NGOs); Health projects; County government collaboration.

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## 1. INTRODUCTION

This study examines the influence of resource capability on the sustainability of health projects sponsored by non-governmental organizations (NGOs) in collaboration with the county government in Kitui County, Kenya. In the contemporary competitive project environment, organizations face significant challenges in achieving sustainable project outcomes, making effective project management essential for long-term success (Terouhid & Ries, 2019). Sustainable project management has therefore attracted increasing scholarly attention due to its role in integrating sustainability practices into project execution (Koc & Bastas, 2022).

Literature shows that sustainability in projects requires adequate allocation and integration of financial, human, physical, and technological resources throughout the project lifecycle (Anantatmula & Rad, 2018; Yazici, 2022). Resource capability refers to an organization's ability to identify, organize, and deploy available resources to generate value and ensure sustainable project outcomes. It encompasses financial, human, ICT, and physical resource capabilities, all of which influence project performance and sustainability.

Globally, studies indicate that resource availability and governance structures significantly affect health project sustainability. In Colombia, local taxation has improved funding for health infrastructure and human resource deployment, although weak intergovernmental coordination has negatively affected service delivery (Suarez, Arias-Arevalo, & Martinez-Mera, 2018; Roa-Garcia & Brown, 2021). In Nigeria, sustainability of health care projects is strongly linked to funding availability and timely disbursement of resources (Ibrahim, 2022), while in South Africa, project planning, funding, and human resource capacity are key determinants of health project sustainability (Jacucci, Shaw, & Braa, 2021; Swartz, LeFevre, Perera, Kinney, & George, 2021).

In Kenya, decentralization of the health system has created opportunities for improved service delivery; however, health projects continue to experience challenges such as inadequate infrastructure, limited technical capacity, and inefficiencies in resource management (Davis, Arana, Creel, & Kash, 2021). For instance, lack of advanced medical equipment and limited financial autonomy have negatively affected health project sustainability in some Kenyan hospitals (Masombo, 2022).

Project sustainability is defined as the ability of a project to continuously deliver intended benefits over time while integrating economic, social, and environmental dimensions (Silvius & Schipper, 2019; Sanchez, 2021). It involves ensuring long-term viability, cost efficiency, and quality service delivery (Edwards & Roelofs, 2022).

Resource capability is central to achieving this sustainability. Financial resource capability ensures proper budgeting and cost control (Song, Dibenedetto, & Nason, 2018; Kusumasari, Alam, & Siddiqui, 2022), while human resource capability enhances project effectiveness through skilled and competent personnel (Morrison, Zhang, Hall, & Zuo, 2021; Hoch & Dulebohn, 2022). ICT capability improves coordination, monitoring, and resource allocation efficiency (Gonzalez-Rojas, Correal, & Camargo, 2016; Dasuki, Abbott, & Azerikatoa, 2022), while physical resource capability ensures availability of essential tools, equipment, and infrastructure for project implementation (Karimi, Somers, & Bhattacharjee, 2018; Errida & Lotfi, 2020).

In Kitui County, NGOs such as Amref Health Africa have supported health and sanitation projects in collaboration with the county government. Despite these interventions, health outcomes remain below target levels, indicating sustainability challenges linked to resource constraints and implementation inefficiencies.

Previous studies have examined determinants of health project sustainability in Kenya, including stakeholder involvement and governance structures (Okoth, 2019; Masombo, 2021; Keah, Sakaja, & Shitsukane, 2022). However, these studies were context-specific and did not comprehensively examine the combined effect of resource capability dimensions in NGO–county government health projects in Kitui County. This study therefore addresses this gap by analyzing the influence of financial, human, ICT, and physical resource capabilities on sustainability of health projects in this context.

## 2. LITERATURE REVIEW

This study is anchored on three key theories: Resource-Based View (RBV) Theory, Contingency Theory, and Human Capital Theory. The Resource-Based View Theory, proposed by Penrose (1959), conceptualizes a firm as a bundle of physical, human, and organizational resources. The theory emphasizes that organizational resources and capabilities vary across firms and that these differences can be a source of sustained competitive advantage. Building on this, Barney (1991) argues that sustainable competitive advantage is achieved when resources are valuable, rare, inimitable, and non-substitutable. RBV further recognizes that organizational resources, including knowledge, processes, and capabilities, are shaped by both internal and external factors (Acedo, Barroso, & Galan, 2018; Mutuku, 2019). In this study, the theory is relevant in explaining how effective deployment of financial, human, ICT, and physical resources influences the sustainability of health projects.

Contingency Theory, developed by Burns and Stalker (1961), emphasizes that organizational effectiveness depends on the alignment between organizational structure and environmental conditions. The theory argues that there is no single best way to manage organizations; instead, effectiveness is determined by how well strategies fit situational factors such as

environmental uncertainty (Lawrence & Lorsch, 2009; Okeyo, 2013). According to Morton and Hu (2015), strategic alignment between organizational priorities and environmental demands enhances performance and sustainability outcomes. In the context of this study, Contingency Theory helps explain how NGOs and county governments must adapt resource allocation strategies to local health system conditions in order to achieve sustainable project outcomes.

Human Capital Theory, proposed by Schultz (1961) and Becker (1964), posits that investment in education, training, and skills development enhances employee productivity and organizational performance. The theory emphasizes that human resources are critical assets whose knowledge and competencies directly influence organizational outcomes. Boxall and Steeneveld (1999) further argue that human capital contributes significantly to productivity, while Marimuthu, Arokiasamy, and Ismail (2009) define it as the knowledge and skills that enable employees to perform value-adding tasks. This theory is relevant to the study as it explains how staff competencies, training, and expertise enhance the sustainability of health projects.

The empirical literature on financial resource capability shows that financial management practices significantly influence project sustainability. Cheluget and Morogo (2017) found that budgeting and financial reporting positively affect project sustainability in Uasin Gishu County, Kenya. Similarly, Mwangi (2021) established that financing availability, financial planning, and financial skills significantly influence sustainability of self-help group projects in Nyeri County. In addition, Asinza, Kanda, Muchelule, and Mbithi (2022) found that financial capacity and budget allocation positively influence sustainability of housing construction projects in Nakuru County. However, these studies are context-specific and do not fully address NGO-supported health projects in Kitui County.

Regarding human resource capability, evidence shows that human resource practices are critical determinants of project sustainability. Wambua (2019) established that human resource factors significantly influence project sustainability in Nairobi County. Similarly, Ghattas, Bassioni, and Gaid (2022) found that human resource management factors significantly affect project cost and time performance in construction projects in Egypt. Clark and Colling (2021) further noted that organizational HR practices influence employee development and project outcomes. Despite these findings, most studies focus on construction or urban-based organizations, leaving a contextual gap in NGO health projects.

In terms of ICT capability, studies show that information and communication technology improves project coordination, monitoring, and sustainability. Mutua (2017) found that ICT infrastructure, stakeholder involvement, and staff skills significantly influence sustainability of ICT projects in Kenya Revenue Authority. Adhiambo (2021) established that ICT tools positively influence performance of relief aid projects in Kenya Red Cross. Similarly, Nyandongo and Davids (2020) found a strong positive relationship between ICT usage and project sustainability. However, these studies largely focus on institutional or humanitarian settings rather than NGO–county government health collaborations.

Physical resource capability has also been identified as a key determinant of project sustainability. Karanja (2023) found that physical resource availability significantly influences sustainability of maternal health programs in Kenya. Collins and James (2018) established that physical resource mobilization positively affects sustainability of women group projects in Vihiga County. Similarly, Kuchia and Mburugu (2019) found that availability of physical resources significantly affects sustainability of community-based projects in Meru County. However, these studies are limited to community or social development projects and do not adequately capture health projects implemented through NGO–government partnerships.

### 3. RESEARCH METHODOLOGY

The study adopted a descriptive research design to examine the relationship between resource capability and sustainability of NGO-sponsored health projects in Kitui County, Kenya (Bickman, Rog, & Hedrick, 2017). The study targeted six health projects, with a unit of observation comprising 82 employees (12 project managers and 70 project team members). A census approach was used, meaning all 82 respondents were included in the study due to the small population size (Kothari, 2004).

Data was collected using structured self-administered questionnaires administered through a drop-and-pick-later method. A pilot study involving 8 respondents (10% of the sample) was conducted to test validity and reliability, with content validity confirmed through expert review. Reliability was established using Cronbach's alpha, with all constructs exceeding the 0.7 threshold, indicating strong internal consistency (Mugenda & Mugenda, 2003).

Data analysis involved both qualitative and quantitative techniques. Qualitative data was analyzed thematically, while quantitative data was analyzed using descriptive statistics (mean and standard deviation) and inferential statistics (correlation and regression analysis) using SPSS. The regression model examined the effect of financial, human, ICT, and physical resource capabilities on project sustainability.

Ethical approval was obtained from the university and NACOSTI, and respondents were assured of confidentiality, anonymity, and voluntary participation throughout the study.

#### 4. RESEARCH FINDINGS AND DISCUSSIONS

##### 4.1 Descriptive Statistics Analysis

Resource capability was analyzed under four dimensions: human resource capability, ICT capability, physical resource capability, and financial resource capability.

##### 4.1.1 Human Resource Capability

Human resource capability was assessed in terms of staff competence, training, participation, managerial effectiveness, and skills development.

**Table 4.1: Human Resource Capability**

Statements	M	SD
More employee consistent results assure the organization of project sustainability	3.864	0.612
Adequate training creates an environment where everyone contributes skills	3.912	0.584
Employee participation ensures trust among stakeholders	3.889	0.601
Efficient managers handle project challenges effectively	3.742	0.655
Employees are assigned real-world projects to build skills	3.698	0.671
Training ensures competent project teams	3.821	0.623
<b>Aggregate Score</b>	<b>3.821</b>	<b>0.624</b>

*Source: Field Data (2026)*

The aggregate mean score of 3.821 indicates a generally high agreement that human resource capability significantly supports sustainability of health projects. The relatively low standard deviation (0.624) suggests consistency in responses across participants.

The highest-rated aspect was staff training ( $M = 3.912$ ), indicating that respondents strongly believe that continuous training enhances staff competence and collaboration. This finding emphasizes that capacity building remains central to strengthening project continuity in NGO–government health collaborations.

Employee participation also scored highly ( $M = 3.889$ ), suggesting that inclusive involvement promotes trust, ownership, and stakeholder confidence, which are essential for sustainability. These findings align with Wambua (2019), who established that human resource competence and involvement significantly influence project sustainability.

Lower-rated aspects included experiential learning through real-world assignments ( $M = 3.698$ ) and managerial handling of challenges ( $M = 3.742$ ), suggesting moderate gaps in practical exposure and advanced managerial capacity. However, the scores still indicate acceptable performance levels.

Qualitative responses reinforced these findings, emphasizing that skilled, motivated, and well-trained staff ensure continuity of services even in the absence of donor funding.

##### 4.1.2 ICT Capability

ICT capability was assessed based on communication efficiency, project tracking systems, collaboration tools, and automation.

**Table 4.2: ICT Capability**

Statements	M	SD
Managers collaborate easily with remote teams	3.976	0.541
ICT tools enable progress tracking and task management	3.954	0.557
ICT improves efficiency, cost-effectiveness, and collaboration	3.912	0.566
Virtual meetings support real-time communication	3.876	0.589
ICT automates routine tasks	3.845	0.603
<b>Aggregate Score</b>	<b>3.913</b>	<b>0.571</b>

Source: Field Data (2026)

The results show strong agreement ( $M = 3.913$ ) that ICT capability enhances project sustainability. The low variability ( $SD = 0.571$ ) suggests consistency in perceptions.

The highest-rated item was remote collaboration ( $M = 3.976$ ), highlighting the importance of ICT in coordinating geographically dispersed health teams. This is particularly relevant in rural settings such as Kitui County.

ICT-based project tracking systems also scored highly ( $M = 3.954$ ), indicating that digital tools improve accountability, monitoring, and decision-making efficiency. These findings are consistent with Mutua (2017), who emphasized ICT infrastructure as a key driver of project sustainability.

Automation of routine tasks scored slightly lower ( $M = 3.845$ ), suggesting partial adoption of advanced ICT systems in health projects.

Qualitative findings confirmed that ICT improves communication, transparency, and reporting efficiency while reducing operational delays.

#### 4.1.3 Physical Resource Capability

Physical resource capability was measured through availability, procurement, maintenance, and utilization of equipment and infrastructure.

**Table 4.3: Physical Resource Capability**

Statements	M	SD
Materials are used efficiently	3.754	0.641
Adequate supply of materials and equipment	3.698	0.667
Effective procurement and identification of resources	3.812	0.619
Adequate machinery and software available	3.734	0.652
Proper selection of equipment	3.889	0.601
Equipment is maintained and optimized	3.856	0.615
<b>Aggregate Score</b>	<b>3.791</b>	<b>0.633</b>

Source: Field Data (2026)

The results indicate moderate-to-high agreement ( $M = 3.791$ ) that physical resource capability contributes to sustainability. Respondents particularly emphasized proper equipment selection ( $M = 3.889$ ) and maintenance practices ( $M = 3.856$ ) as key drivers of efficiency and service continuity.

However, adequacy of supplies scored lower ( $M = 3.698$ ), suggesting occasional shortages or delays in procurement processes. These findings are consistent with Kuchia and Mburugu (2019), who identified resource availability as a major constraint in project sustainability.

#### 4.1.4 Financial Resource Capability

Financial capability focused on budgeting, funding availability, cost allocation, and financial control systems.

**Table 4.4: Financial Resource Capability**

Statements	M	SD
Budgeting provides clarity and financial direction	3.876	0.598
Budgeting helps identify uncertainties	3.842	0.612
Financing enables risk sharing	3.798	0.629
Funding allows financial flexibility	3.721	0.654
Cost allocation supports decision-making	3.864	0.587
Cost allocation determines profitability	3.809	0.603
<b>Aggregate Score</b>	<b>3.818</b>	<b>0.614</b>

Source: Field Data (2026)

The findings indicate strong agreement that financial capability enhances sustainability (M = 3.818). Budgeting and cost allocation were particularly important in promoting accountability and transparency.

Lower-rated items such as funding flexibility (M = 3.721) indicate challenges in alternative financing mechanisms. These findings align with Mwangi (2021), who emphasized that funding availability and financial planning are critical determinants of sustainability.

#### 4.1.5 Project Sustainability

Project sustainability was assessed based on manageability, budget compliance, and client satisfaction.

**Table 4.5: Project Sustainability**

Statements	M	SD
Projects are manageable	3.654	0.702
Projects are implemented within budget	3.598	0.718
Projects meet client requirements	3.676	0.691
<b>Aggregate Score</b>	<b>3.643</b>	<b>0.704</b>

Source: Field Data (2026)

The results show moderate agreement (M = 3.643) that health projects are sustainable. While manageability and responsiveness were relatively strong, budget compliance was slightly lower, indicating financial constraints in implementation.

#### 4.2 Multiple Regression Analysis

**Table 4.6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error
1	.999	.997	.997	.01403

Source: Field Data (2026)

The model indicates an extremely strong relationship between resource capabilities and project sustainability, with 99.7% explanatory power.

**Table 4.7: ANOVA**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.225	4	1.056	5365.597	.000
Residual	.011	58	.000		
Total	4.237	62			

Source: Field Data (2026)

The model is statistically significant ( $p < 0.05$ ), confirming that the predictors jointly influence project sustainability.

**Table 4.8: Coefficients**

Variable	B	Beta	t	Sig.
Constant	0.044		1.201	.235
Financial Capability	0.151	0.157	2.809	.007
Human Capability	0.465	0.533	14.137	.000
ICT Capability	0.338	0.282	22.407	.000
Physical Capability	0.061	0.095	1.831	.072

The regression results indicate that all resource capabilities positively influence project sustainability, with human resource capability emerging as the strongest predictor. ICT capability follows closely, while financial capability also shows a significant positive effect. Physical resource capability, though positive, is not statistically significant at 5% level.

## 5. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

This study examined the influence of resource capability on the sustainability of health projects implemented by non-governmental organizations in collaboration with county governments in Kitui County, Kenya. The findings establish that resource capability is a significant determinant of project sustainability, with financial, human, ICT, and physical resource capabilities jointly explaining variations in sustainability outcomes.

The study concludes that resource capability is most effective when deployed as an integrated system rather than as isolated components. The regression results confirm that all four dimensions of resource capability positively influence project sustainability, highlighting the importance of complementary resource utilization in achieving long-term project outcomes.

Human resource capability emerged as the most significant predictor of project sustainability. This indicates that staff competence, training, experience, and effective human resource management practices are central to sustaining health projects. The findings suggest that human capital remains the most critical strategic asset in NGO–county government health partnerships.

ICT capability was also found to significantly enhance project sustainability. The study concludes that the adoption and effective use of ICT systems improves coordination, monitoring, communication, and efficiency in project implementation. ICT therefore serves as a key enabler of transparency and operational effectiveness in health projects.

Financial resource capability was found to have a significant positive effect on project sustainability. The study concludes that adequate funding, sound budgeting practices, timely disbursement of funds, and strong financial control mechanisms are essential for ensuring continuity and efficiency of health projects.

Physical resource capability was found to have a positive but statistically insignificant effect on project sustainability when considered alongside other variables. This suggests that while physical resources such as equipment and infrastructure are necessary for project execution, they are insufficient on their own to guarantee sustainability without adequate financial, human, and ICT support.

### 5.2 Recommendations

Based on the findings, the study makes the following recommendations for policy and practice.

First, county governments and non-governmental organizations should prioritize strengthening human resource capability. This can be achieved through continuous staff training, professional development programs, competency-based recruitment, and effective performance management systems. Strengthening human capital will enhance efficiency, accountability, and long-term sustainability of health projects.

Second, organizations should enhance ICT integration in project management systems. Policies should support the adoption of digital project management tools, real-time reporting systems, and ICT-enabled communication platforms. In practice, investment in ICT infrastructure and staff digital literacy is necessary to improve coordination, transparency, and project monitoring.

Third, financial resource capability should be strengthened through improved financial governance frameworks. This includes ensuring timely funding disbursement, transparent budgeting, and strong financial accountability systems. Project managers should adopt rigorous budgeting, cost control, and auditing practices to minimize inefficiencies and enhance sustainability.

Fourth, physical resource capability should be improved through efficient procurement, maintenance, and asset management systems. Organizations should align resource procurement with actual project needs and ensure regular maintenance of equipment and infrastructure to maximize utility and lifespan.

Finally, the study recommends an integrated resource management approach. This requires alignment of financial, human, ICT, and physical resources under a unified sustainability framework. Such integration enhances coordination, reduces resource wastage, and strengthens the overall effectiveness and sustainability of health projects.

## REFERENCES

- [1] Adhiambo, A. O. (2021). Influence of information communication and technology tools on the sustainability of relief aid projects in Kenya: The case of Red Cross organization in Nairobi County (Doctoral dissertation, University of Nairobi).
- [2] Acedo, F. J., Barroso, C., & Galan, J. L. (2018). The resource-based theory: Dissemination and main trends. *Strategic Management Journal*, 27(5), 123–140.
- [3] Amiri, N. A., Abdul Rahim, R. E., & Ahmed, G. (2023). The organizational resources and knowledge management capability: A systematic review. *Journal of Information & Knowledge Management*, 22(4), 235–241.
- [4] Anantmula, V. S., & Rad, P. F. (2018). Role of organizational project management maturity factors on project success. *Engineering Management Journal*, 30(3), 165–178.
- [5] Asinza, K., Kanda, E., Muchelule, Y., & Mbithi, S. (2022). Influence of financial capacity and monitoring on project sustainability of housing construction in Nakuru County, Kenya. *International Journal of Research in Management, Science & Technology*, 4(3), 38–43.
- [6] Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- [7] Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis*. University of Chicago Press.
- [8] Bickman, L., Rog, D. J., & Hedrick, T. E. (2017). Applied research design: A practical approach. *Handbook of Applied Social Research Methods*, 2(1), 3–43.
- [9] Boxall, P., & Steeneveld, M. (1999). Human resource strategy and competitive advantage. *Human Resource Management Journal*, 9(3), 5–24.
- [10] Burns, T., & Stalker, G. M. (1961). *The management of innovation*. Tavistock.
- [11] Cheluget, D. C., & Morogo, V. J. (2017). Effect of financial management practices on project sustainability in Uasin Gishu County, Kenya. *International Journal of Economics, Commerce and Management*, 5(5), 214–226.
- [12] Clark, I., & Colling, T. (2021). The management of human resources in project management-led organizations. *Personnel Review*, 34(2), 178–191.
- [13] Collins, O. D., & James, R. (2018). Influence of physical resource mobilization on sustainability of women group projects in Vihiga County, Kenya. *International Journal of Economics, Business and Management Research*, 2(4), 7–12.
- [14] Collis, D. J. (2022). Organizational capability as a source of profit. *Organizational Learning and Competitive Advantage*, 2(1), 8–13.
- [15] Dasuki, S. I., Abbott, P., & Azerikatoa, D. (2022). ICT and empowerment to participate: A capability approach. *Information Development*, 30(4), 321–331.

- [16] Davis, E. C., Arana, E. T., Creel, J. S., & Kash, B. A. (2021). The role of community engagement in building sustainable health-care delivery interventions for Kenya. *European Journal of Training and Development*, 42(1/2), 35–47.
- [17] Edwards, N. C., & Roelofs, S. M. (2022). Sustainability: The elusive dimension of international health projects. *Canadian Journal of Public Health*, 97(1), 45–49.
- [18] Errida, A., & Lotfi, B. (2020). Measuring change readiness for implementing a project management methodology. *Academy of Strategic Management Journal*, 19(1), 1–17.
- [19] Ghattas, M. S., Bassioni, H. A., & Gaid, E. F. (2022). Human resource management influence on project performance. *International Conference on Civil and Architecture Engineering*, 8(2), 1–8.
- [20] Gonzalez-Rojas, O., Correal, D., & Camargo, M. (2016). ICT capabilities for supporting collaborative work. *Computers in Industry*, 80, 16–29.
- [21] Hoch, J. E., & Dulebohn, J. H. (2022). Shared leadership in ERP implementation. *Human Resource Management Review*, 23(1), 114–125.
- [22] Ibrahim, A. D. (2022). The development of a procurement strategy for primary health care facilities in Nigeria (Doctoral dissertation, Loughborough University).
- [23] Jacucci, E., Shaw, V., & Braa, J. (2021). Standardization of health information systems in South Africa. *Information Technology for Development*, 12(3), 225–239.
- [24] Karanja, W. K. (2023). Influence of resource mobilization strategies on sustainability of maternal health programmes in Kenya (Doctoral dissertation, University of Nairobi).
- [25] Karimi, J., Somers, T. M., & Bhattacharjee, A. (2018). Role of information systems resources in ERP capability building. *Journal of Management Information Systems*, 24(2), 221–260.
- [26] Koc, A., & Bastas, M. (2022). Evaluation of project school model and organizational sustainability. *Sustainability*, 11(13), 3549–3556.
- [27] Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- [28] Kuchia, M. S., & Mburugu, K. N. (2019). Availability of physical resources and sustainability of projects. *Studies*, 3(8), 37–48.
- [29] Kusumasari, B., Alam, Q., & Siddiqui, K. (2022). Resource capability for local government disaster management. *Disaster Prevention and Management*, 19(4), 438–451.
- [30] Lawrence, P. R., & Lorsch, J. W. (2009). *Organization and environment*. Harvard University Press.
- [31] Marimuthu, M., Arokiasamy, L., & Ismail, M. (2009). Human capital development and organizational performance. *Journal of Social Sciences*, 5(2), 72–80.
- [32] Masombo, J. L. (2021). Factors influencing sustainability of health-based projects in Kenya (Doctoral dissertation, University of Nairobi).
- [33] Morrison, R. J., Zhang, J., Hall, J., & Zuo, F. (2021). Developing human capital for international research projects. *Marine Pollution Bulletin*, 77(1–2), 11–22.
- [34] Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative approaches*. Acts Press.
- [35] Mutua, S. M. (2017). Sustainability of ICT projects in Kenya Revenue Authority (Doctoral dissertation, Kenyatta University).
- [36] Mutuku, M. K. (2019). *Electronic Commerce Capability and Performance of Commercial Banks in Kenya* (Doctoral dissertation, Doctoral Dissertation, Kenyatta University).
- [37] Mwangi, K. N. (2021). Project financing and sustainability of self-help group projects in Nyeri County (Master's thesis, Kenyatta University).

- [38] Nyandongo, K. M., & Davids, M. (2020). Impact of communication on project performance. *University of Johannesburg Working Paper*.
- [39] Okoth, A. O. (2019). Determinants of sustainability of health projects in Nairobi County (Doctoral dissertation, University of Nairobi).
- [40] Orodho, A. J. (2005). *Essentials of educational and social science research methods*. Acts Press.
- [41] Penrose, E. T. (1959). *The theory of the growth of the firm*. Oxford University Press.
- [42] Schultz, T. W. (1961). Investment in human capital. *American Economic Review*, 51(1), 1–17.
- [43] Silviu, A. G., & Schipper, R. (2022). Sustainability and project success relationship model. *Procedia Computer Science*, 64, 334–342.
- [44] Song, M., Di Benedetto, C. A., & Nason, R. W. (2018). Capabilities and financial performance. *Journal of the Academy of Marketing Science*, 35, 18–34.
- [45] Suarez, A., Arias-Arevalo, P. A., & Martinez-Mera, E. (2018). Environmental sustainability in Colombia. *Environment, Development and Sustainability*, 20(3), 997–1015.
- [46] Swartz, A., LeFevre, A. E., Perera, S., Kinney, M. V., & George, A. S. (2021). Digital health sustainability in South Africa. *Globalization and Health*, 17(1), 1–13.
- [47] Terouhid, S. A., & Ries, R. (2019). Organizational sustainability excellence framework. *Journal of Modelling in Management*, 11(4), 911–931.
- [48] Wambua, M. M. (2019). Human resource factors and project sustainability in Nairobi County (Master's thesis, University of Nairobi).
- [49] Yazici, H. J. (2022). Project management maturity and organizational culture. *Project Management Journal*, 40(3), 14–33.