

Influence of Resource Allocation on the Performance of Chicken Farming Projects in the Mwala Sub-County, Machakos County

Alex Ndolo
St. Paul's University

Abstract

This study aimed to determine the influence of resource allocation on the performance of chicken farming projects in the Mwala sub-county, Machakos county. This study employed a descriptive research design. The target population was 600 chicken farmers in Mwala Sub-County who are beneficiaries of the Machakos County Government agricultural value chain initiative. A sample of 240 respondents was selected using stratified random sampling to ensure representation across the six wards. Primary data was collected using fully structured questionnaires and analyzed using descriptive statistics. The findings revealed that resource allocation has a positive and significant influence on the performance of chicken farming projects. Respondents generally agreed that their projects operate within set budgets, resources are utilized efficiently with minimal wastage, and usage is closely monitored. While input delivery was mostly timely, occasional delays were noted. A majority of the projects had clear schedules guiding resource allocation, supporting effective planning and operations. It concluded that adherence to budget plans facilitates timely project implementation and financial stability. Efficient use of resources without wastage correlates with higher profitability and expanded production capacity. Timely delivery of inputs supports project continuity, while regular monitoring ensures operations remain on track. Clear resource allocation schedules enhance overall planning and project outcomes. It recommended that chicken farming projects in Mwala Sub-County strengthen adherence to budgetary frameworks to support timely execution and financial discipline. Digital systems that promote efficient resource utilization should be adopted to reduce wastage and increase profitability. Timely procurement and delivery of essential inputs such as feeds and vaccines should be prioritized. In addition, continuous monitoring of resource usage should be emphasized to ensure accountability and sustained project performance.

Keywords: Resource Allocation, Project Performance, Chicken Farming Projects, Machakos County

Introduction

Project implementation is the phase where strategic plans are executed to achieve project objectives through resource coordination, activity management, and outcome delivery (Zhang et al., 2024; Simonaitis et al., 2023). It involves executing defined tasks, tracking progress, and ensuring deliverables align with scope, time, and cost expectations (Valdez, 2025). This stage is critical for turning plans into tangible results and requires continuous supervision, flexibility, and stakeholder collaboration (Ouabira & Fakhravar, 2021).

In the context of chicken farming, successful implementation entails constructing proper housing, sourcing quality inputs, hiring skilled labour, and enforcing biosecurity and hygiene standards (Ndunda, 2023). Well-coordinated processes lead to efficient resource use, reduced risk, and improved productivity metrics such as egg yield and flock health (Tarawneh, 2025). A systematic approach also enables timely adjustments in response to challenges such as disease outbreaks and market changes, ensuring sustainable, resilient, and profitable poultry operations (Valdinoci, 2022; Nielsen et al., 2025).

Countries like Germany apply highly regulated and technology-driven methods, while India and Uganda integrate government support and community involvement to promote rural development (Kopler et al., 2023). Rwanda and Kenya emphasize inclusive agricultural strategies, with Kenya blending national policy, county-level support, and partnerships for practical implementation (Lusambili et al., 2021; Mohamed, 2024). In Kenya, chicken farming project implementation is shaped by national agricultural policies and grassroots entrepreneurial initiatives, with government programs such as the Big Four Agenda and the Kenya Livestock Commercialization Project (KeLCoP) promoting poultry farming to enhance food security and rural incomes (Lusambili et al., 2021). Initial implementation steps include community training, distribution of improved indigenous breeds like Kienyeji, and guidance on coop construction, feeding, and disease control (Ipara et al., 2021). County governments support these efforts by providing start-up kits and improving market access, particularly in poultry-intensive areas like Uasin Gishu, Kiambu, and Machakos (Wambua, 2023). Collaborations with research institutions such as KALRO further equip farmers with scientific insights into breed selection and feeding practices (Kathuri, 2022).

Despite these interventions, several challenges hinder effective execution, including the high cost and limited availability of quality poultry feed, frequent disease outbreaks, inadequate veterinary

services, poor cooperative structures, limited access to financing, and weak extension service delivery in rural areas (Abro et al., 2020; Omondi et al., 2022). The project implementation process is the execution phase in which resources are deployed, and activities are completed to produce deliverables (Mohamed, 2023; Jarrah et al., 2022). It consists of interlinked components such as resource allocation, workflow management, stakeholder communication, and monitoring and control (Weng, 2023).

Proper resource allocation ensures the availability and timely use of finances, labour, and materials, thereby avoiding delays and inefficiencies (Grillo et al., 2022; Ahsun & Elly, 2024). Workflow management streamlines processes to maintain consistency and productivity (Gunawardana & Nissanka, 2024). Stakeholder communication promotes transparency, collaboration, and participation through regular updates and feedback mechanisms (Toussaint, 2022; Anis, 2023). Monitoring and control facilitate early issue detection, quality assurance, and corrective action, ensuring alignment with project goals (George & George, 2023; Mbugua, 2024). Project performance refers to how effectively a project achieves its intended outcomes in terms of scope, time, cost, quality, and stakeholder satisfaction (Syamil et al., 2021; Mayo-Alvarez et al., 2022). It is assessed by comparing actual outcomes to planned baselines and includes both quantitative and qualitative indicators (Chen et al., 2023). Key performance indicators include timeliness, cost adherence, output quality, and beneficiary satisfaction. Timely completion reflects strong planning, while budget control shows effective resource management (Yaqin et al., 2023; Venkataraman & Pinto, 2023). Quality performance ensures that deliverables meet required standards, supporting project sustainability (Abeysinghe, 2022). Lastly, stakeholder satisfaction indicates acceptance and perceived value of the project results (Scheepers et al., 2022). The commercial poultry sector, driven by urbanization and rising demand, includes broilers, layers, and improved indigenous breeds like Kenbro and Sasso, offering high productivity and economic returns (Macharia et al., 2022). With consistent growth and expanding market demand, chicken farming remains a profitable and strategic component of Kenya's agricultural development (Report Linker, 2024).

Despite significant investments in poultry projects in Mwala Sub-County, many continue to underperform due to poor implementation practices. High mortality rates, low adoption of improved breeds, and project collapse indicate issues beyond funding, mainly inefficient resource allocation, weak stakeholder engagement, poor workflow management, and inadequate monitoring

(Ndunda, 2023; KALRO, 2025). While studies in other regions have explored similar themes, none have holistically addressed these implementation factors in the context of Mwala. This study fills that gap by examining how these practices affect the performance of chicken farming projects in the area.

Objective of the Study

The objective of this study was to determine the influence of resource allocation on the performance of chicken farming projects in the Mwala sub-county, Machakos county

2.0 Literature review

2.1 Theoretical Framework

Resource-Based View (RBV) Theory

The Resource-Based View (RBV) Theory was introduced by Jay Barney in 1991, building on earlier work by Wernerfelt (1984). It suggests that the success of any organization largely depends on how well it uses its resources, both physical ones like land and tools, and intangible ones like skills, knowledge, and relationships. For an organization to perform better than others in the long term, its resources must be valuable, rare, hard to copy, and not easily replaced. In agriculture, especially in projects like chicken farming, having and managing the right resources effectively is key to achieving good results. Scholars such as Grant (1991) and Rothaermel (2015) have also shown the importance of strategically leveraging internal resources to improve performance.

In this study, RBV helps explain how resource allocation affects the success of chicken farming projects in Mwala Sub-County. The theory supports the idea that having access to essential resources like capital, feeds, housing, and skilled labour and using them well can lead to better farm productivity and sustainability. It also helps identify which resources matter most for performance in this specific context. While some critics argue that RBV assumes resources are always available and does not fully account for changing conditions, it still offers a strong foundation for understanding how effective resource management can improve outcomes in farming projects.

2.2 Empirical Review

Ebukiba et al. (2023) assessed the economic viability and resource efficiency of poultry egg production in Kuje Area Council, Nigeria. Using a survey of 80 egg farmers and tools like

regression and cost-return analysis, the study found poultry egg farming to be profitable, with a return on investment of 1.55. Key inputs affecting productivity included bird stock size, labour, and feed quantity. However, despite profitability, inefficiencies in resource use were evident, pointing to poor management practices. This revealed an empirical gap in identifying specific causes of such inefficiencies in poultry projects.

Ahmad and Abd (2022) analyzed resource utilization in poultry fattening by comparing actual input use to economically efficient levels. The study revealed widespread resource waste, as all resources were used beyond their optimal levels. The findings showed that projects achieve cost-efficiency when inputs are balanced to minimize total costs. However, the study failed to offer practical strategies to minimise inefficiencies, thereby creating a methodological gap in tackling real-world poultry management challenges.

Obi-Nwandikom et al. (2020) examined resource use efficiency in broiler production in Owerri, Imo State. Through surveys of 120 farmers and regression analysis, they found that stock size, labour, and depreciation significantly affected production output. Overuse of fixed assets and feed, and underuse of labour and vaccines, indicated an imbalance in resource allocation. With a return to scale of 1.055, the study showed slightly increasing returns. However, it highlighted a conceptual gap due to the lack of a clear framework for evaluating resource-use efficiency, especially for capital-intensive inputs.

3.0 Methodology

This study employed a descriptive research design. The target population was 600 chicken farmers in Mwala Sub-County, Machakos County, who are beneficiaries of the Machakos County Government agricultural value chain initiative. Mwala Sub-County was selected for its active engagement in chicken farming, despite implementation and performance challenges encountered in many of the supported projects. A sample of 240 farmers was drawn from this population using stratified random sampling to ensure representation across all six wards. Fully structured questionnaires were utilized to collect primary data from the respondents.

4.0 Findings

4.1 Response Rate

Data was collected from 240 chicken farmers in Mwala Sub-County using the Kobo Collect tool. The response rate was 100%, as all targeted participants were successfully reached. The tool proved highly efficient, enabling the research team to achieve the intended sample size without any shortfall. This complete response rate was considered excellent and provided a strong foundation for reliable analysis.

4.2 Descriptive Results

4.2.1 Descriptive Results for Resource Allocation

The first objective of the study was to determine the influence of resource allocation on the performance of chicken farming projects in the Mwala sub-county, Machakos county. Participants in the research were supposed to indicate their agreement with statements regarding resource allocation in their chicken farming projects. This was done on a scale ranging from one (1) to five (5). The lowest value of 1 indicated strong disagreement, while the highest possible value of 5 indicated strong agreement. An undecided stand was represented by (3). The percentages, means, and SDs are as indicated in Table 1.

Table 1: Resource Allocation

| | SD | D | U | A | SA | Mean | SD |
|--------------------------------------------------------------------------|-------|--------|-------|--------|--------|------|------|
| The chicken farming project adheres strictly to its allocated budget. | 0.00% | 2.09% | 2.09% | 69.04% | 26.78% | 4.21 | 0.58 |
| Any changes in the project budget are quickly noticed and fixed. | 0.42% | 10.00% | 2.92% | 69.17% | 17.50% | 3.93 | 0.8 |
| Resources allocated to the project are used efficiently without wastage. | 1.25% | 0.83% | 0.42% | 68.33% | 29.17% | 4.23 | 0.62 |

| | | | | | | | |
|-------------------------------------------------------------------------------------|-------|--------|-------|--------|--------|------|------|
| The usage rate of inputs and resources is closely monitored throughout the project. | 0.00% | 0.83% | 1.67% | 72.92% | 24.58% | 4.21 | 0.5 |
| Inputs such as feeds, chicks, and vaccines are delivered on time. | 2.92% | 20.00% | 2.50% | 68.33% | 6.25% | 3.55 | 0.98 |
| There is a schedule for resource allocation in the project | 2.50% | 4.17% | 0.42% | 67.08% | 25.83% | 4.1 | 0.8 |
| Aggregate mean | | | | | | 4.04 | 0.71 |

The analysis showed that 95.82% of respondents affirmed that their chicken farming projects consistently operate within the confines of allocated budgets. Only 4.18% either rejected this view or remained ambivalent. The high mean score of 4.21 and the low standard deviation of 0.58 indicate uniformity in responses, suggesting that budgetary compliance is systematically upheld across the projects. This pattern implies that most farms exercise prudent resource control, which may foster operational stability and enhance cost-efficiency. Ahmad and Abd (2022) similarly observed that adherence to budget plans strengthens project outcomes by reducing financial risks and promoting effective resource utilization.

Similarly, 86.67% of respondents supported the statement that any changes in the project budget are promptly detected and addressed. Meanwhile, 10.42% opposed this view, and 2.92% were non-committal. The mean of 3.93 and a standard deviation of 0.80 indicate generally positive experiences, although a slightly broader spread suggests variability in responsiveness to budget adjustments across projects (Mathieu et al., 2021).

About 97.5% of respondents acknowledged that resources are used efficiently in their chicken farming projects, with minimal waste. Only 2.08% either opposed this view or expressed uncertainty. The mean score of 4.23 and a standard deviation of 0.62 points to a broadly consistent perception of disciplined resource use across the farms. These results suggest that efficient allocation and control of inputs are embedded in operational practices, potentially enhancing productivity and minimizing avoidable losses. Ebukiba et al. (2023) similarly noted that effective resource management reduces operational inefficiencies and contributes to sustained project performance.

Nearly 97.5% of respondents affirmed that their projects consistently monitor resource usage, indicating strong tracking mechanisms across farms. Only 1.25% opposed this perspective, while another 1.25% remained undecided. The mean score of 4.21 and a low standard deviation of 0.50 reveal consistent practices in input monitoring, reflecting an embedded culture of oversight and operational accountability. These results suggest that most projects have institutionalized controls that ensure transparency in how resources are consumed, which may contribute to better cost management and project performance.

Regarding the delivery of critical inputs such as feeds, chicks, and vaccines, 74.58% reported timely distribution. Conversely, 22.92% expressed dissatisfaction, and 2.50% neither agreed nor disagreed. The mean score of 3.55 and a relatively high standard deviation of 0.98 imply variability in delivery timelines, possibly reflecting challenges in supplier coordination or logistics efficiency. Such disruptions may affect production timelines and overall project efficiency. Obi-Nwandikom et al. (2020) similarly observed that delayed access to agricultural inputs undermines operational planning and negatively influences productivity outcomes.

The presence of a defined schedule for resource allocation was recognized by 92.91% of respondents. Only 6.67% denied this, and 0.42% were undecided. The mean of 4.10 and a standard deviation of 0.80 suggest that structured planning practices are prevalent, although a few projects may still operate without clearly documented allocation frameworks. Similar findings were reported by Chepng'eno and Kimutai (2021), who showed the importance of systematic resource distribution in enhancing project efficiency.

The aggregate mean of 4.04 and standard deviation of 0.71 indicate a strong, fairly consistent perception across the sample that resource allocation is well-managed. These findings suggest that systematic budgeting, input delivery, and resource-tracking practices are embedded in most chicken farming operations in Mwala sub-county. Such practices are likely to enhance project efficiency, improve cost control, and strengthen overall performance sustainability.

4.2.2 Descriptive Results for Performance of Chicken Farming Projects

The study further sought respondents' perspectives on the performance of their chicken farming projects. Their perspectives were sought in a Likert scale of 1-5, where the respondents were to show their level of agreement.

Table 2: Performance of Chicken Farming Projects

| | SD | D | U | A | SA | Mean | SD |
|--------------------------------------------------------------------------------|--------|--------|-------|--------|--------|------|------|
| The project has been expanding and the number of chickens has been increasing. | 0.00% | 2.08% | 0.42% | 59.17% | 38.33% | 4.34 | 0.6 |
| The project has consistently recorded growth in production capacity. | 0.00% | 2.50% | 0.42% | 67.50% | 29.58% | 4.24 | 0.59 |
| I plan to continue running this project for the foreseeable future. | 0.00% | 0.00% | 0.00% | 41.25% | 58.75% | 4.59 | 0.49 |
| The project is being implemented within the planned timeline. | 10.83% | 35.00% | 0.42% | 43.33% | 10.42% | 3.07 | 1.28 |
| The project is run within the allocated budget. | 0.42% | 2.92% | 8.33% | 62.08% | 26.25% | 4.11 | 0.7 |
| The project has been yielding profits consistently. | 0.42% | 8.75% | 0.83% | 58.33% | 31.67% | 4.12 | 0.84 |
| Overall Mean | | | | | | 4.08 | 0.75 |

A total of 97.50% of the respondents reported that their projects had been expanding, with an increasing number of chickens. Only 2.08% expressed opposing views, and 0.42% were undecided. A mean of 4.34 and a standard deviation of 0.60 indicate a strongly held, relatively uniform perception of growth in project scale among the farmers surveyed. This result implies that documentation is a central part of project oversight and facilitates informed responses to dynamic project conditions. When asked about growth in production capacity, 97.08% of respondents

supported the statement, 2.50% disagreed, and 0.42% remained non-committal. The mean score of 4.24 and a standard deviation of 0.59 suggest that enhanced output is broadly evident and consistently experienced across the projects. This aligns with findings by Long (2024), who linked capacity growth to efficient resource utilization in smallholder farming systems.

All participants affirmed their intention to continue operating their chicken farming ventures into the foreseeable future. With no dissent or indecision recorded, the mean score of 4.59 and a standard deviation of 0.49 indicate strong commitment and long-term engagement by the project implementers. These results mirror those of Aoudji et al. (2024), who reported similar levels of sustained engagement in livestock ventures. A total of 53.75% agreed that their projects are being implemented within the planned schedule. However, 45.83% disagreed with this view, and 0.42% neither agreed nor disagreed. The mean of 3.07 and the highest standard deviation in this category at 1.28 reflect divided opinions and suggest considerable variation in adherence to project timelines. Morad (2023) also observed that scheduling inconsistencies are common in community-based agricultural initiatives due to resource constraints and unforeseen disruptions.

When asked whether their projects were operating within the designated budgets, 88.33% responded affirmatively. A smaller segment of 3.34% disagreed, and 8.33% maintained a neutral stance. The mean score of 4.11 and standard deviation of 0.70 suggest a strong trend of financial discipline across projects, with moderate consistency in budget adherence. This is consistent with findings by Nduthu et al. (2018), who emphasized the role of sound financial planning in sustaining rural enterprises. About 90.00% of participants confirmed that their projects had been yielding profits consistently. Disagreement was recorded by 9.17%, while 0.83% neither agreed nor disagreed. A mean of 4.12 and a standard deviation of 0.84 imply that most ventures are generating revenue, although profit levels may vary across farms. Similar trends were reported by Fayem et al. (2021), who identified profitability as a key success factor among small-scale poultry producers. The overall mean of 4.08 and a standard deviation of 0.75 reflect a broadly positive perception of project performance among chicken farmers in Mwala sub-county. The findings suggest that growth in scale, productivity, profitability, and financial sustainability is common among these projects. However, the relatively lower mean and higher variability in project scheduling indicate that timely execution remains a challenge for a notable share of respondents.

4.3 Correlation analysis

The study established a strong and statistically significant positive correlation between resource allocation and the performance of chicken farming projects in Mwala Subcounty, Machakos County ($r = 0.795$, $p = 0.000$). This implies that better allocation of financial, material, and human resources enhances project outcomes such as productivity, profitability, and sustainability. The strong correlation coefficient suggests that as resources are effectively distributed, project activities are implemented more efficiently, resulting in better outcomes.

The positive relationship indicates that resource allocation directly contributes to improved performance. Projects with adequate, well-managed resources are likely to experience fewer operational delays, reduced waste, and higher productivity. Conversely, poor resource distribution may lead to inefficiencies and slow progress. Therefore, resource allocation is a critical determinant of success in chicken farming projects, influencing both short-term output and long-term viability.

These findings are consistent with those of Ahmad and Abd (2022), who observed that the proper allocation of financial and material inputs significantly enhances project delivery outcomes. Their study demonstrated that efficient allocation minimizes inefficiencies and shortens implementation timelines, ultimately improving performance. The agreement between the present findings and previous studies reinforces the argument that effective resource allocation is a cornerstone of project success, particularly in agricultural initiatives where resource needs are dynamic and time-sensitive.

Table 3: Correlation Analysis

| | | competitive | innovation |
|---------------------|---------------------|-------------|------------|
| Performance | Pearson Correlation | 1 | |
| | Sig. (2-tailed) | | |
| Resource allocation | Pearson Correlation | .795** | 1 |
| | Sig. (2-tailed) | 0.000 | |

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

4.4 Regression Analysis

The regression results revealed that resource allocation had a coefficient of 0.456 ($p = 0.000$), indicating a statistically significant positive effect on the performance of chicken farming projects in Mwala Subcounty. This means that increased resource allocation leads to a measurable improvement in project performance. The low p-value shows that the relationship is not due to chance but reflects a genuine influence of resources on project outcomes. Hence, effective allocation of financial, material, and human inputs plays a key role in driving project success.

A coefficient of 0.456 suggests that for every unit increase in resource allocation, the performance of chicken farming projects improves by 0.456 units. This relationship reflects the extent to which proper planning, budgeting, and utilization of available resources translate into improved productivity, profitability, and sustainability of the projects. It highlights that resource management is not merely a supporting factor but a central component that influences the efficiency and output of farming operations.

The findings underscore that well-structured resource allocation enhances project teams' implementation capacity. When resources such as feeds, vaccines, housing materials, and technical support are timely and adequately provided, farmers can execute planned activities more efficiently. This results in reduced delays, minimized wastage, and higher returns. Conversely, inadequate resource allocation often leads to stalled operations, poor project execution, and diminished productivity. Thus, ensuring optimal distribution and utilization of resources directly improves performance outcomes.

Moreover, the significance of the regression results supports the idea that financial and material support mechanisms should be strengthened in agricultural projects. Resource allocation decisions must be data-driven and guided by actual on-the-ground needs. Projects that align their resource planning with production goals and operational realities tend to realize better results. This reinforces the importance of institutional frameworks that facilitate equitable and timely resource distribution, particularly in community-based or government-supported farming initiatives.

These findings are consistent with those of Ebukiba et al. (2023), who reported a strong relationship between adequate resource allocation and improved project outcomes. Their study emphasized that projects with clear budgetary provisions, well-managed inputs, and skilled human resources tend to achieve superior performance indicators. The similarity between the two studies

confirms that resource allocation is a key success factor in agricultural development and project management. It highlights the universal importance of proper resource planning and its role in fostering sustainable project growth and performance.

5.0 Conclusion

The study concluded that strict adherence to allocated budgets in chicken farming projects promotes financial discipline and enhances project execution. When project managers and farmers follow budgetary provisions, they can control expenditures and avoid cost overruns. This financial discipline ensures that available funds are used efficiently and that planned activities are completed within the set timelines. Consequently, timely project implementation becomes more achievable, allowing farmers to operate sustainably within their financial plans and maintain steady cash flow for future cycles.

It was further established that efficient utilization of allocated resources without wastage contributes significantly to profitability and production growth. When financial and material inputs such as feeds, housing materials, and equipment are used prudently, production costs reduce, and output quality improves. This efficiency enables farmers to reinvest profits into scaling up operations, resulting in increased production capacity and long-term project stability. The correlation between resource efficiency and profitability underscores the importance of proper planning and monitoring in maximizing returns on investment.

Another key conclusion was that the timely delivery of essential inputs, including feeds, vaccines, and veterinary services, is critical to sustaining production. Delays in the provision of these inputs often disrupt feeding schedules and health management, leading to reduced productivity or losses. However, when supplies arrive on time, farmers can maintain healthy flocks, ensure consistent egg or meat output, and gradually expand their operations. Therefore, prompt delivery of inputs not only supports day-to-day operations but also ensures the long-term continuity and resilience of chicken farming projects.

6.0 Recommendations

The study recommends that chicken farming projects in Mwala Sub-County should strengthen adherence to budgetary plans to support timely implementation and financial discipline. Farmers should adopt digital systems that ensure efficient resource utilization to minimize wastage and

enhance profitability. Timely procurement and delivery of essential inputs such as feeds and vaccines should be prioritized to avoid disruptions in operations. Regular monitoring of resource usage is necessary to maintain accountability and ensure smooth project execution.

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