

Citation: Nduthu, P. W; Omutoko, L. O and Mulwa, S. A. (2018). Influence of Project Planning on Performance of Indigenous Chicken Projects sponsored by Agricultural Sector Development Support Programme Machakos County, Kenya. *Journal of African Interdisciplinary Studies*. 2(3), 25- 36.

Influence of Project Planning on Performance of Indigenous Chicken Projects sponsored by Agricultural Sector Development Support Programme Machakos County, Kenya

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Abstract

The main objective of undertaking indigenous chicken projects is for food security, increase employment and increase incomes. However this has not been achieved due to poor performance caused by lack of participatory identification of the real problem that ails the indigenous chicken projects. Therefore this paper calls for a paradigm shift in project planning in indigenous chicken projects for better Performance. It is based on a study carried out in Machakos County of Kenya focusing on the influence of project planning on performance of indigenous chicken projects. The study addressed project planning from the perspective of participation in plan development, availability of plans and communication methods of plans. Mixed method research design which was guided by pragmatism paradigm was used. The target population was 80 indigenous chicken projects which were supported by Agricultural Sector Development Support Programme. The sample of 40 projects was selected through multi-stage sampling where 146 respondents were selected. Questionnaire and interview guide were used to collect from project implementers and 10 partnering stakeholders respectively. The data was analysed by use of descriptive and inferential statistics. Under descriptive statistics means and standard deviation was used whereas under inferential statistics Pearson's product moment correlation and F-test were used. The descriptive statistics realized a mean score of 3.4106 and a standard deviation of 0.45517. The descriptive statistics results pointed out that the indigenous chicken project implementers agreed to there being participation in plan development, the plans being availed and lastly the plans were communicated to end users. The findings realized from inferential statistics indicated that project planning influenced performance of indigenous chicken projects significantly with a moderate positive correlation where $r = 0.319$ and $p = 0.000$ at level of significance $p < 0.05$. However an $r^2 = 0.126$ was realized showing that project planning contribute 12.6% to performance of indigenous chicken projects. Since project planning only contributed 12.6% to performance of projects, there is need to do further research on influence of project planning on performance of projects, but instead of using the indicators of participation of stakeholders in plan development, availability of plans and communication of plans, other indicators should be identified. The study recommends that planning should be done to ensure performance is achieved.

Key words: Performance of projects, Project planning, Indigenous chicken projects

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Introduction

Indigenous chicken projects are important for food security, employment and poverty alleviation in developing countries (Moreki, Dikeme & Poroga, 2010). Similarly they make substantial contributions to household food security in form of meat and eggs in developing and under-developed countries (Muchadeyi, *et al.*, 2007). Further Bett, Musyoka, Peters and Bokelmann (2012) and Bett, *et al.*, (2014) posited that 90% of the population of the world keeps indigenous chicken because they are easy to market, have tropical adaptability, disease resistance and requires low startup capital unlike the exotic poultry projects. Due to their importance, Sarkar and Golam (2009) indicated that there is need to change the management practises in a bid to improve performance of indigenous chicken projects. However to improve performance the exact problem ailing the indigenous chicken projects need to be identified. To get the exact problem ailing indigenous chicken, studies of indigenous chicken projects implemented globally were analysed where in African continent a study on commercialisation programme for Indigenous Chicken done in Swaziland by Siyaya and Masuku (2013) implemented between 2008 and 2009 results revealed poor planning during implementation of project to cause poor performance. In Kenya study done on National Poultry Development Program (NPDP) by Okeno, *et al.*, (2012) findings revealed that poor planning and lack of breeding program to supply quality breeding stock to cause poor performance. From the study by Siyaya and Masuku (2013) and Okeno *et al.*, (2012) it can be concluded that poor planning caused poor performance of indigenous chicken projects. This study is grounded by planning theory. Planning theory is echoed in a study by Hoch (2007) where he indicated that for a project to achieve performance, the plans needs to be more dynamic, practicable, objective and more balanced outcomes of plans which could be achieved through collaborative planning which makes each project unique. Therefore this study seeks to investigate the influence of project planning on performance of indigenous chicken projects in Machakos County, Kenya.

Statement of problem

Indigenous chicken projects are profitable and hence important for employment, food security and poverty alleviation in developing countries (Ayieko, Bett & Kabuage, 2014; Moreki, Dikeme & Poroga, 2010). Despite increasing demand for Indigenous Chicken products by consumers, indigenous chicken projects continue performing poorly due to poor project management practises thereby reducing their contribution to food security and rural income (Magothe, Okeno, Muhuyi and kahi, 2012). Studies have shown poor performance of indigenous chicken projects to be caused by poor planning. Likewise Siyaya and Masuku (2013) indicated that poor planning during implementation of project to cause poor performance. Further studies done in Machakos by Nduthu, (2015) and Mutombo, (2014) none showed how project planning influenced performance of Indigenous chicken project. It is against the issues on lack of planning identified by different studies that this study is done to investigate the influence of project planning on performance of indigenous chicken projects.

Objective of the study

The research objective of the study is to investigate how project planning influence performance of indigenous chicken projects in Machakos County.

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Research hypothesis

The research hypothesis tested was:

H₀: Project planning has no significant influence on performance of indigenous chicken project in Machakos County.

Literature review

Project planning increases the level of project performance (Idoro, 2012). This is supported by statistics that have shown that lack of planning results to 39% of projects fail and lack of involvement results to 33% projects fail (Atwell, 2016). Similarly, Javed, Mahmood and Sulaiman, (2012) indicated that planning effort and commitment to project implementation by stakeholders improved performance of projects. Further Usman, Kamau and Mireri, (2014) indicated adequate planning to influence performance of projects. Likewise poor or lack of planning was identified as cause for poor performance in indigenous chicken projects (Siyaya & Masuku, 2013; Okeno, *et al.*, 2012). Though Idoro (2015) indicated that project planning is used to develop plans and tactics meant to achieve performance of project but he posited that plans should be communicated to the indigenous chicken project implementers. However Bourne (2015) agreed with Idoro (2015) but indicated that inadequate planning may lead to insufficient communication of activities which could be misunderstood or misinterpreted during implementation. Therefore to ensure no misinterpretation during implementation, Wang and Gibson (2008) asserted that project planning should have project scope definition. Further Whelton (2004) and Field, (1997) indicated that identification of problem helps needs to be accomplished and gives the project scope definition for planning hence involving stakeholders during planning manages diverse and competing needs of the implementers. From literature reviewed under project planning, it can be concluded that adequate planning should be done by stakeholders where needs are identified, plans developed and communicated to the end users.

Even after planning, performances of project need to be measured to gauge the influence of project planning on performance of project. Therefore Kerzner (2006) identified criteria for measuring performance of project which included time, cost, specification, customer satisfaction and quality maintenance. Further Schwaber and Beedle (2002) indicated performance to be measured in clear benefits like productivity, duration and customer satisfaction. Likewise Bryde (2003) showed that performance can be measured in beneficial outcomes, quality in terms of satisfaction to customer and stakeholders. Therefore this study used Schwaber and Beedle (2002) to measure performance of project in term of beneficial outcome which looks at production, timeliness of project plan delivery and quality in terms of project implementers' satisfaction.

Theoretical framework

This study is grounded by two theories namely performance theory and planning theory.

Performance theory

Performance theory came to solve project failures and management practices. Performance theory recognizes projects are different and each requires different competences especially in the area of project planning so as to achieve performance (Bauman, 1986). This was backed by Kihoro and Waiganjo (2015) where they indicated competence to influence performance. Further Bauman (1986) indicated that performance theory should focus on context of project. Likewise on context factors Woollett (2000) and Campbell, *et al.*, (1993) indicated that

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project practises should come up with a way of achieving performance and asserted practises are different with different project. In study performance was measured with increased production, timeliness of project delivery and implementers' satisfaction. However Costello, (2008) asserted that performance theory does not look at action itself but by judgmental and evaluative processes achieved through particular actions and tasks where in this study the project implementers have to mobilize resources. Study by Reilly (2007) showed performance to be measured by customer focus, leadership, processes, and values. These concepts by Reilly (2007) are linked where Customer focus is linked to implementers' satisfaction, processes linked to activity delivery time and value linked to production numbers.

Planning theory

Planning theory is important in achieving performance of projects. This is echoed by Bratman (2015) where he posits that planning theory indicates that projects be implemented through plans which are done jointly with stakeholders. Further Bratman (2015) indicated that plans brings about consistency, agglomerativity, means-end coherence, stability and are supposed to be achieved through the project implementation period. Likewise Healey (2003) indicated that implementation of plans should take care of needs identified during project design. However the theorist like Healey (2006) and Hoch (2007) indicated that more robust, feasible, just, and even more rational outcomes could be achieved through collaborative planning. They further asserted that each project is unique in place and time therefore the project need identified should be specific to each project for it to achieve performance. Barabas, (2004) indicate that the stakeholders should be objective during planning.

Dependent variable

Project Planning

Independent variable

Performance of indigenous chicken projects

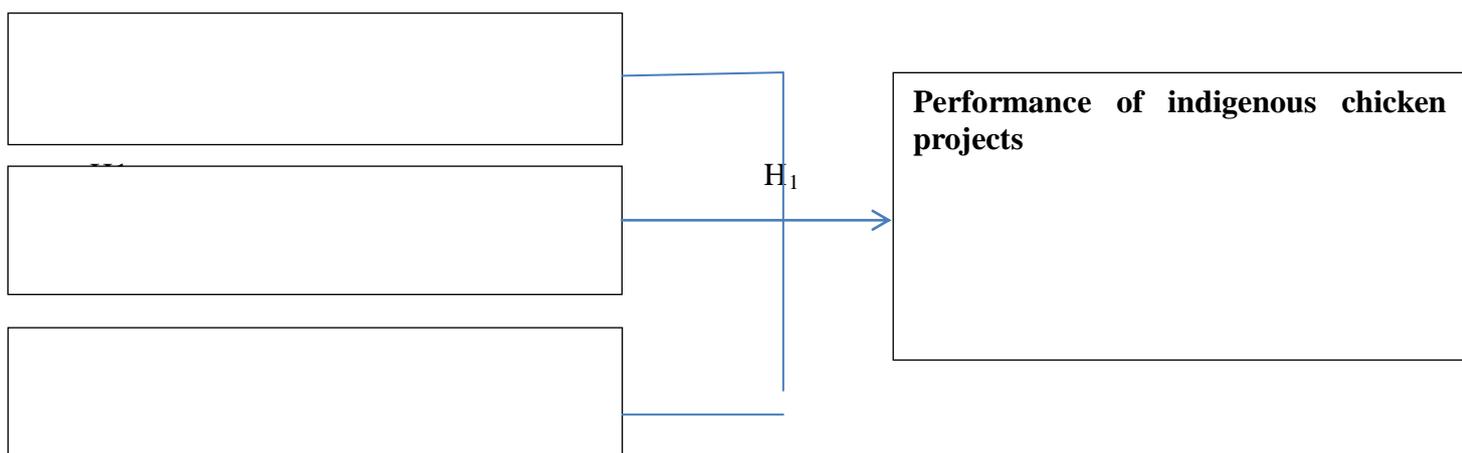


Figure 1: Conceptual framework

Methodology

The study research design was mixed method which was guided by pragmatism paradigm. Target population of 80 indigenous chicken projects supported by Agricultural sector Development Support Programme (ASDSP) and 10 partnering stakeholder organizations

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namely Kenya Agriculture Livestock Research Organization (KALRO), Social Services, Kenya Poultry Farmers Association (KEPOFA), directorate of Livestock and veterinary, World vision, Hand in Hand (HiH), Anglican Development Services (ADS) and United States Aid in Development (USAID). Multi-stage sampling technique was used to select respondents through three sampling stages hence giving respondents consistently equal chances of being chosen in a step by step procedure starting with selection of 80 indigenous chicken projects sponsored by ASDSP at the first stage, followed by selection of 40 indigenous chicken projects in the Sub-Counties at the second stage and finally selection of 146 respondents from the sampled projects based on sampling procedures of Sekaran (2003). Qualitative data was collected from 10 managers who were purposively selected from the 10 organizations partnering with Indigenous Chicken projects sponsored by ASDSP using an interview guide.

Further three experts from stakeholders' organization checked the validity of the research instrument in a focus group. Similarly, split half was used to check for reliability of the research instrument thereby giving Cronbach (Alpha) reliability coefficient of 0.788. This result indicated that the research instrument had an internal consistency. Data was collected with 146 Likert scale items questionnaires and interview guide with 10 open ended questions. Descriptive and inferential statistics were used to analyse data where under descriptive statistics, means, standard deviation was used moreover under inferential statistics, Pearson Product Moment Correlation coefficient and F test was used to test hypothesis. To analyse the influence of the project planning on performance of indigenous chicken projects, a model was formulated where $y = \beta_0 + \beta_1 (X_1) + \varepsilon$; where Y = Project performance, X_1 = Project planning; β_1 = regression coefficient of the variable

Results and findings

A total of 146 questionnaires were administered to project implementers undertaking indigenous chicken projects sponsored by Agricultural Sector Development Support Programme where 138 were returned giving a response rate of 95%.

Demographics

The respondents' demographic was reported in terms of gender, age, education levels, yearly income levels and average number of eggs laid per hen per batch. Result revealed that the majority of the respondents were female at 61.6% while males were 38.4%. This agrees with the literature where it posited that it requires low startup capital (Bett, *et al.*, 2014, 2012) therefore allowing many women to take up the indigenous chicken projects. However majority of the respondents were above 45 years at 40.6% while as the ages of 18-35 years and 36-45 years were each at 29.7%. These results indicate that this age group has understood that the indigenous chicken projects can be a source of incomes, employment and food security as highlighted by Moreki, *et al.*, (2010). Likewise majority of the respondents had secondary education at 56.5%, followed by primary education at 31.9%, then post-secondary education at 9.4% and lastly non-formal at 2.2%. These results of majority having a secondary level of education indicated this indigenous chicken project implementers understand better the issues that need to be addressed and would put them in the project plan. This is echoed by Kihoro and Waiganjo where they indicated that competence influences performance of indigenous chicken projects which in this case is related to level of education.

Similarly majority of the respondents' yearly income levels was below ksh10000 at 45.7%, followed by ksh10001-20000 at 38.4%, ksh20001-30000 at 8.0%, ksh30001-40000 at 5.8%, ksh40001-50000 at 1.4% and above ksh50000 at 0.7%. Results of majority are getting yearly

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income below ksh10000. This result indicates that the indigenous chicken project implementers did not implement all the activities in the project plan leading to poor performance which is shown by the incomes received. This agrees with Bratman (2015) where he indicated that project plans brings about systematic implementation of project activities leading to good performance.

Performance of indigenous chicken project

Performance of indigenous chicken projects was measured by increased production numbers, timeliness of resources delivery and level of project implementers' satisfaction as identified that performance should judgmental and evaluative (Costello, 2008; Reilly, 2007). To measure the indicators of performance, Likert scale items were formulated and analysed using descriptive statistics. Under production numbers, chicks survives during brooding had a mean score of 2.6087. These results revealed that project implementers were neutral on due to delay in planning the project implementers did not get trainings in time and hence could not purchase and make brooders in time which in turn influenced performance of indigenous chicken projects. Under timeliness of activity delivery, delay in plan development had a mean score of 3.5942. These results revealed that project implementers agreed that delay in plan development delayed start of activities of rearing of indigenous chicken projects. Failure to deliver indigenous chicken trainings had a mean of 3.2609. These results revealed that the project implementers were neutral on failure to deliver the trainings of rearing of indigenous chicken indicating that to some the trainings were timely. Under level of satisfaction, availability of officers' service when needed had a mean of 4.0000. The result showed that the project implementers agreed that they got the services from the officers as indicated in the indigenous chicken project plan. Good management of practises delivery on chicken rearing had and a mean score of 4.0217. These results indicated that the project implementers were satisfied with the trainings of rearing of the indigenous chicken as it was put in the plan.

Planning of indigenous chicken projects

Planning was investigated using three issues namely participation in plan development, availability of plans and communication of plans. Under participation in plan development, the gap to be addressed was identified before intervention had a mean score of 3.3478. The training needs are set by officers had a mean score of 2.9130. This result indicates for some indigenous chicken projects they identified their needs but for others it was done by officers. This disagrees with Healey (2006) and Hoch (2007) where they indicated that planning should be done in a collaborative manner. Identifying needs should be participatory had a mean score of 4.1884. These results revealed that indigenous chicken project implementers agreed that they participated in identifying the needs. The result is in agreement with Healey (2006) and Hoch (2007). Developing of training needs was done voluntarily had a mean score of 3.7391. This result revealed that the project implementers were not coerced put did agree on what was the need to be addressed so as to improve performance.

Under availability of plans, plans showed the area of technical capacity building of indigenous chicken had a mean score of 3.5435. This result revealed that indigenous project implementers agreed that the plan showed the technical areas they should use to improve performance of the indigenous chicken projects. This agrees with Bauman (1986) where he posited that competencies improve performance which is done by addressing issues through technical means. Plans showed that that project implementers were to be taken to a tour had a mean of 3.5217. The result revealed that the project implementers agreed that they were taken

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for tours to learn more on what other implementers were doing. Plan showed that the groups were to be formed had a mean score of 3.5870. The result revealed that the project implementers agreed that they formed the groups which helped them get training or other resources that facilitated their rearing of the indigenous chicken. The plan showed the resources required for rearing indigenous chicken had a mean score of 3.6739. The result revealed that the project implementers agreed that the plan showed what they needed to acquire to improve performance of indigenous chicken. This is in agreement with Okeno *et al.*, (2012) where he indicated that plans should also show the resources required to implement project.

Under communication of plans, Implementers learnt on use of the chicken rearing equipment in an exhibition had a mean of 3.0507. The result revealed that the project implementers were neutral that they learned about rearing indigenous chicken in the exhibition as some of them went and others did not. Message to train groups was done through a phone short message had a mean score of 3.0072. The result revealed that the project implementers were neutral on receiving message through the phone. This is an indication that there were other means that were used to relay messages. Stakeholders organise field day to familiarize farmers with upcoming innovations had a mean score of 3.9565. The result revealed that project implementers agreed that they attended field days. Stakeholder demonstrate on the use of the equipment had a mean of 3.6159. The result revealed that the project implementers agreed that the stakeholders demonstrated the use of the equipment which enabled them to buy some of what they required to rear indigenous chicken.

Project planning indicators and performance of indigenous chicken projects

The descriptive data analysis responses showed that indigenous chicken project implementers agreed to have participated in indigenous chicken plan development, the plan was communicated to them and the plan was available. However that information was inadequate in determining the influence of either project planning indicators on performance of indigenous chicken projects indicators or influence of project planning variable on performance of indigenous chicken projects. To further get the influence of project planning on performance of indigenous chicken, a relationship was tested. The results of the relationship are shown in Table 1.

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Table 1: Relationship between planning indicators and performance of indigenous chicken projects indicators

The Table presents data on the relationship of project planning indicators and performance of indigenous chicken project indicators.

Indicators	Production	Timeliness activity delivery	ofImplementers satisfaction
Pearson correlation	Performance of project	1.000	1.000
	Participation in plan development	.166	.130
	Availability of plans	.334	.441
	Communication of plans	.237	.340
Sig. (1-tailed)	Performance of projects	.	.
	Participation in plan development	.026	.064
	Availability of plans	.000	.000
	Communication of plans	.003	.000
	Participation in plan development	138	138
	Availability of plans	138	138
	Communication of plans	138	138

Results of Table 1 revealed that participation in plan development and communication of plans had a weak positive correlation with production numbers in performance of indigenous chicken projects where $r = 0.166$, $p=0.026$ and $r=0.237$, $p=0.003$. This result indicates that some indigenous chicken project implementers got the project plans as it was expected hence were able to implement. This is an indication that some indigenous chicken project implementers could not have received the plans showing that some activities of plans were not delivered fully leading to a weak correlation. However this agrees with Bourne (2015) where he posited that the plans that are insufficiently communicated could be misunderstood or misinterpreted. Misinterpretation could have resulted due to some activities that were meant to be undertaken to improve production not being considered due to low participation leading to a weak correlation. This disagrees with the study of Hoch (2007) which indicated that the plans need to be very inclusive.

Likewise availability of plans had a moderate positive correlation with production numbers in performance of indigenous chicken projects with $r = 0.334$ and p - value of 0.000. This is an indication that availability of plans adequately influenced production where $r=0.334$. Further the results showed that participation in plan development had a weak positive correlation on timely activity delivery in performance of indigenous chicken projects of $r = 0.130$ and p -value 0.064. This result pointed out that development of project plans were inadequately done where the time frame of that activity was not followed. Likewise availability of plans and communication of plans had a moderate positive correlation with timely activity delivery in performance of indigenous chicken projects with $r = 0.441$, $p=0.000$ and $r=0.340$, $p= 0.000$ respectively. This result indicates that some of the indigenous chicken project implementers got the plan on time whereas others did not get it on time.

Likewise the results also showed that participation in plan development and availability of plans had no correlation with satisfaction of project implementers in performance of indigenous chicken projects with $r = 0.098$, p -value of 0.127 and $r = 0.003$, $p=$

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0.416 respectively. This result indicates that the indigenous chicken project implementers did not participate or their needs were not taken into consideration. Further the project implementers were not satisfied with the plans that were availed. However communication of plans was shown to have a significant strong positive correlation with satisfaction of project implementers in performance of indigenous chicken projects with $r=0.681$ and p -value of 0.488. This result indicated that the method that was used to communicate the plans was good and all the indigenous chicken project implementers got the project plan. The correlation was significant at $P < 0.05$. Though participation in plan development, availability of plans and communication of plans had a positive correlation with satisfaction of project implementers in performance of indigenous chicken projects; it does not influence the performance as it is not statistically significant.

To further investigate the strength of project planning indicators in influencing performance of indigenous chicken projects, regression analysis was conducted on the indicators of project planning and performance of indigenous chicken. As a result, regression prediction models were developed for each indicator of project planning namely participation in development of plan, communication methods of plans and availability of plans, which were correlated to performance of indigenous chicken projects. The regression model used was described as Y to denote performance of indigenous chicken projects whereas X_1, X_2, X_3 depicts participation in plan development, availability and communication of plans respectively. The results of regression analysis are indicated in Tables 2.

Table 2: Regression Prediction Model for project planning indicators and performance of indigenous chicken projects

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.355 ^a	.126	.107	.37071	.126	6.459	3	134	.000
Model			Sum of Squares	df	Mean Square	F	Sig.		
1	Regression		2.663	3	.888	6.459	.000 ^b		
	Residual		18.415	134	.137				
	Total		21.078	137					
		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		
		B		Beta			Lower Bound	Upper Bound	
(constant)		2.382	.275		8.654	.000	1.837	2.926	
Participation in plan development		.123	.082	.136	1.508	.134	-.038	.285	
Availability of plans		.216	.069	.353	3.143	.002	.080	.352	
Communication of plans		-.037	.075	-.059	-4.86	.627	-.186	.113	
Constant		2.491	.241		10.338	.000	2.014	2.967	
Project Planning		.275	.070	.319	3.931	.001	.137	.414	

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Table 2 shows the results of the regression model. From the results realized by the regression model, the equation for estimating performance of indigenous chicken projects in relation to production numbers was developed:

$$Y = 2.382 + 0.136 X_1 + 0.353X_2 - 0.059X_3$$

Where Y= Performance of indigenous chicken projects

X₁= Composite score for participation in plan development

X₂= Composite score for availability for plans

X₃= Composite core for communication of plans

The model has a multiple regression coefficient of $r = 0.355$ and an F value of 6.459 whose critical level is 0.000. This indicated that it is a moderate model for predicting performance of indigenous chicken projects. However, the value of r^2 is 0.126, which shows that all the three indicators of project planning would contribute about 12.6 percent to performance of indigenous chicken projects. Therefore, the model is moderate in estimating performance of indigenous chicken. Further, results indicates that, out of the total contribution made by project planning, availability of plans is the most important performance as it contributed a beta value of 0.353 as compared to 0.136 and -0.059, for participation in plan development and communication methods of plans respectively. However communication method of plans had a negative beta value of -0.059 which indicated that 1 unit increase in communication methods of plans caused a decrease of 5.9% in performance of indigenous chicken projects. Therefore the regression model has revealed that communication methods in plan as being poor indicator in determining performance hence another indicator should be identified to be combined together with the other two indicators of participation in plan development and availability of plans of indigenous chicken so as to come up with a better model in project planning of predicting performance of indigenous chicken projects. This was backed by the results from the stakeholders partnering with the indigenous chicken projects where it stated that plans were done in partnership where 5 of the stakeholders were involved in development of the plans which some of them were involved in achieving.

To further test the relationship of project planning variable on performance of indigenous chicken projects the following hypothesis were formulated and tested:

H₀: Project planning has no significant influence on performance of indigenous chicken projects

H₁: Project planning has significant influence on performance of indigenous chicken projects

To get the level of significance, the hypothesis stated “project planning has no significant influence on performance of projects was tested at 95% confidence interval where a level of significance of p-value of 0.000 and $F(1, 136) = 15.455$ were realized. The correlation was significant at $p < 0.05$. Therefore the hypothesis that stated “Project planning has no significant influence on performance of indigenous chicken projects”, was rejected. A correlation therefore exists between project planning and performance of indigenous chicken project. The null hypothesis was therefore rejected showing that there was significant relationship between project planning and performance of indigenous chicken project. Though the relationship is significant, it does not show the strength of that relationship. Therefore to further investigate the strength of project planning on performance of indigenous chicken projects, a regression prediction model was developed: the regression model used was described as Y denoting performance of indigenous chicken projects; X₁ denoting project planning

$$Y = \text{Constant} + \beta_1 + \varepsilon = 2.491 + 0.275X_1$$

Y = Project performance

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X_1 = Project planning

β_1 = regression coefficient of the variable X_1 respectively

ε = Std. error

From the regression model of project planning the finding shows that a unit percent (%) increase in project planning (X_1) would bring about an increase of 27.5 % in performance of projects (y). from all the analysis done it can be concluded that project planning influences performance of indigenous chicken projects.

Conclusion and Recommendation

The study investigated the influence of project planning on performance of indigenous chicken projects sponsored by Agricultural Sector Development Support Programme in Machakos County, Kenya. The results revealed that the hypothesis that stated that project planning had no significant influence to performance of indigenous chicken was rejected showing that project planning significantly influenced performance of indigenous chicken projects. In conclusion before the indigenous chicken project takes off planning should be done which ensures that stakeholders are included and should be availed for implementation of the activities stipulated in the project plans. However the study recommends that the project plan should be availed on time to allow for implementation. Further research can be done on project planning with other indicators rather than participation in plan development, availability of plans and communication of plans as they only contributed 12.6% to performance of indigenous chicken projects.

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