

Rural Non-Farm Enterprises Supporting the Agricultural Sector and their Relative Success in Kiambu County, Kenya

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Abstract

Rural areas encounter numerous challenges, which include poverty, food insecurity and unemployment. Declining productions in agribusiness plays a critical impact in having more individuals to partake in agricultural non-farm activities in the rural area to support their livelihoods. This study sought to identify the different kinds of rural non-farm enterprises (RNFEs) that support the agricultural sector in Kiambu County and their relative success. An epistemology philosophy was adopted. The target population was all non-farm small and medium enterprises (SMEs) in Kiambu County who have prevailed by supporting agrarian related exercises. This population of RNFEs came from every one of the 12 sub-areas: Gatundu North, Gatundu South, Thika, Juja, Githunguri, Ruiru, Kiambu, Kiambaa, Kabete, Kikuyu, Lari and Limuru. The study investigated five rural non-farm undertakings occupied with the accompanying regions: agribusiness activities, rural industrialisation ventures, transport services, the travel industry activities and development ventures. The study used questionnaires and interview guides for primary data collection. The findings indicated that what made most of RNFEs to begin the business was to bring in cash and utilized as a type of revenue. The study correlation results between the diversity of RNFEs that support the agricultural sector and rural livelihood outcome was positive and significant. The regression model depicted a positive and significant relationship between the various kinds of RNFEs that support the agricultural sector and rural livelihood outcomes. The inferential statistics demonstrated that the relationship between various types of RNFEs that help the effect of country non-farm undertakings on rural business results are significant. Therefore, the study concluded that the help of RNFEs occupied with farming does affect rural business results in rural regions. Besides operating related rural-based commercial activities including agro-processing and ancillary commercial, it is possible to introduce activities to provide services to facilitate the adjoining agricultural commercial activities such as sale of fertilisers, insecticides or improved seeds.

Keywords: Rural Non-Farm Enterprises, Agricultural Sector, Kiambu County, Kenya

1.1 Introduction

In the current contemporary times, rural non-farming activities and the rural non-farm economy has been gaining prominence. Rural non-farming activities have become of primary importance in the changing contemporary times, because of many reasons. The aim being, the employment growth of the farm sector has not been consistent or of a reliable outcome, wherein rural non-farming activities play a major role in creating employment in the population. Secondly, if properly strategized, non-farming activities may prevent the migration of many rural people from rural to urban spaces, due to lack of employment opportunity. Thirdly, when employment opportunities go beyond the quintessential agricultural economy, it helps to bridge the urban-rural economic lacuna. Fourth, rural non-farm activities incur less capital and employ a larger percentage of work force/ labor. Further, rural industrialization, (falling under the category of non-farming activities) indirectly has ways to spin-off agricultural industries too. Finally, the rural spaces having the rural non-farming industries are seen to have much lesser unequal income distribution, compared to rural areas with the facility of non-farming industries (Lanjouw & Lanjouw, 2017).

All the non-agricultural activities are deemed non-farming activities. However, there are two varied ways to better define non-farming activities. The first approach deals with the locus, i.e., the space in which the activities are taking place should essentially be a designated rural area. The second approach is that of the linkage criteria. The linkage approach has to do with different industries developing commercial linkages with the RNF (rural non-farm) sectors. Non-farming activities can include various ventures like handicrafts, household as well as non-household small-scale manufacturing, construction, mining, quarrying, repair, transport, community service, but of course in the designated rural areas. The non-farming activities thus, play a vital role in providing employment facilities to small-scale farm household or to the rural-urban migrating population. As a result, rural non-farm activities need to be most extensively and effectively developed, more than ever in the recent times. Not only would it contribute to the overall Gross National Income, it would also act as a financial aid for the rural population, whose main income is vested in agriculture. However, besides their considerable growth, this sector is suffering a hiatus due to few factors like the rural infrastructure (the roads, communication or the electricity), scanty skilled labor due to lack of proper training and facilities (Tacoli, 2017).

In developing countries, rural areas encounter numerous challenges, which include poverty, food insecurity and unemployment (Dixon, 2016). Such societal problems are mostly characterised by reduction in agricultural production brought about by agro-climatic variations in addition to several socio-economic factors, including diminishing agricultural subsidies for small-scale farmers from the government (Reardon, 2017). Declining productions in agribusiness plays a critical impact in having more individuals to partake in agricultural non-farm activities in the rural area to support their livelihoods. Lanjouw and Lanjouw (2017) posited that the rural non-farm activity involves all income producing activities less those directly connected to farming activities but undertake in the rural areas. Further, Reardon (2017) characterized non-farm pay as income or wages from rural non-farm activities, self-enterprises, as well as movement income. Tacoli (2017) similarly finds that non-agricultural rural activities incorporate non-farm drives embraced in homesteads and not related to crop farming. Consequently, non-farm rural activities incorporate a variety of activities which contain manufacturing, business and provision of services (Nowak, 2019).

The obligation to help non-farm business in African countries cannot be undervalued. The rural non-farm activities add to a country's economic progression in different ways. They decrease of rural joblessness and increment job creation. Non-farm adventures address the requirements of individuals living inside a specific local area and they deliver business amazing open doors to people who can't get to customary work to meet their fundamental necessities, like food, sanctuary and dress. As Stifel and Randrianarisoa (2006) state, in Madagascar, the pace of misfortune is low among people who take part in agribusiness (78%) rather than the individuals who rely exclusively upon farm activities (39%). To portray the meaning of non-farm undertaking, research studies uncover that the rural non-farm site uses 20% of the labour force in North Africa and 10% for the most part in Africa (Haggblade *et al.*, 2015). Research studies reveal that a country's non-farm region is a critical assistance point of convergence for females (Arghiros & Moller, 2015).

Women commitment to country non-farm activities is high in African countries. In Ghana, among those that are busy with RNFs, women working in non-farm settings make up 46.5% out of 172 respondents used in a tried report, 142 individuals tending to 83% were busy with RNFs while 30 individuals laying out 17% were not busy with any RNFs (Dary & Kuunibe, 2012). The country non-farm activities play an enormous part in supporting work and family pay. In Nigeria, non-farm endeavours make up as much as 63% of family pay (Fabusoro *et al.*, 2015). IFAD (2014) determines four arguments for why non-farm pay is basic to the rural less privileged: (i) rural pay obtained by exceptionally less privileged families is not adequate to fulfil family members' necessities as a result of landlessness or on account of the way that they own little property land. (ii) establishing work is now and again imperative, so the particularly less privileged families acknowledge non-farm employment as an extra source of income. (iii) non-farm undertakings really incline toward the less preferred families since they require insignificant capital and produce more business pay per unit than agrarian exercises. (iv) giving work to those referred to as minority individuals in rural areas, for example, women, young men and women, restricted scope farmers and landless individuals, can add to diminishing remuneration distinction.

Despite the agricultural sector being pivotal and very significant in the creation of rural employment, especially in sub-Saharan Africa and specifically Kenya, its enormous contributions to the overall economy of the country have greatly diminished in the recent past (Republic of Kenya, 2014). This can be incompletely ascribed to many factors like monetary assignment decrease by the public authority (GoK, 2015) which has prompted a decrease in augmentation administration conveyance, fluctuating and declining costs of rural items, and the way that country non-farm pay extraordinarily surpasses the worth of pay from farms (Reardon *et al.*, 2017). Poverty levels remain lower in metropolitan regions in examination with country regions. As indicated by the Kenya National Bureau of Statistics (KNBS), the poor in metropolitan regions address only 9.1% of the populace when contrasted with 27.2% in County regions (KNBS, 2017).

The challenge is that advancement of effective, broadened country non-farm small and medium-scale enterprises has not been sufficiently taken advantage of in alleviating joblessness and supporting vocations (for example, which types of RNF activities are related with poverty decrease; the connection between the different RNF exercises and farming; the spatial connection between exercises). These information gaps have made the consideration of help to RNF activities as a component of a country economic development. Therefore, this research will strive to bridge the gap in knowledge by finding out the impact of rural non-farm enterprises on rural livelihood outcomes, with special reference to Kiambu County as the geographical location.

1.2 Objective of the Study

To identify the different kinds of rural non-farm enterprises (RNFEs) that support the agricultural sector in Kiambu County and their relative success.

1.3 Research Questions

What are the different kinds of RNFEs in Kiambu County that support agriculture?

2.0 Literature Review

2.1 Theoretical Literature Review

2.1.1 Sustainable Livelihood Approach/DFID Livelihood Theory

The sustainable livelihood approach (SLA) to improvement intercession has been in presence since the 1990s and it framed a basic idea of the United Kingdom's Department for International Development (DFID) masterplan in the early stages of the UK's new Labor rule. DFID (2016) called for pull together on the worldwide progression endeavours to wipe out destitution and backing financial improvements that benefit poor people. This should be possible through supporting the global manageable financial development arrangements and focuses on that create jobs for the less favoured individuals and advances human turn of events and preservation of the climate.

Chambers and Conway (2012) estimate that an asset comprises of the capacities, resources (shops, assets, protection claims as well as openness) and furthermore tasks required for an approach to everyday life: it is a type of revenue that is economical which can manage, and recover from, uneasiness and shocks; it keeps or works on its properties and limits while additionally providing practical pay opportunities for people in the future. It likewise adds benefits to different assets at the global and neighbourhood level, both in the short and in the long run. One constraint of the SLA approach is that a ground-breaking vocation examination requires time, human and monetary assets. Advancement projects do not constantly have these circumstances. Furthermore, by working on the salaries of a specific group, an unfriendly outcome could create on the earnings of others, and this could lead solidly into a normalizing quandary (Kollmair & Gamper, 2012).

This hypothesis was fitting for this review as it assisted the specialist with fathoming how rural individuals use RNFEs to work on their livelihoods as they run after taking out destitution. It helped in seeing how country networks accomplish enduring manageable jobs utilizing the assets accessible (regular, human, physical, monetary and social). This approach was utilized to rethink existing exercises and intercessions, along these lines illuminating vital reasoning and exploration, conversations, recognizing, demonstrating and evaluating new exercises, projects and undertakings utilized by country networks.

2.2 Empirical Review

Most income generating non-farm activities are connected to a family's business (Gordon & Craig, 2011). Barrett, Reardon and Webb (2011) recommended a three-level characterization of the pay producing non-farm activities. This qualification puts the sectoral, spatial and useful components as key, resulting and tertiary market assignments. The essential area takes part in changing regular assets into essential items. The essential area of the economy reaps or removes regular items from the regular market; such are fishing, cultivating and mining. The optional area changes essential

items into producers' products. Models incorporate development, material creation and handling. The tertiary area activities make life simple by offering different types of services. Examples are boutiques/hair parlours and banking. This class is dependent of where the business traffic happens, at what range, or even with what development.

The most fundamental classification of activities goes along with the sectoral differentiations of national systems of accounting: primary (comprising of mining, agriculture, and other extractives), secondary (which is manufacturing), and tertiary (that entails services) (Barret, Reardon & Webb, 2011). The rural non-farming economy broadly covers social affairs of exchange of goods and services, agro-handling, extractive, craftsman and administration activities. Indeed, even within a country, solid territorial contrasts arise, in light of assorted developments in standard assets, culture, work supply, area and infrastructural improvements. The calibre of individual rural non-cultivating endeavours, also, colossally differs from low maintenance, independently employed positions, bungalow in-house creations contrasted with broad global firms warehousing and agro-handling units. Often, season-based rural non-farm activities fluctuate with the predominant materials for horticulture and family funds, as well as work relocation between non-cultivating activities and cultivating ones (Wegulo, 2014).

For Africa, no matter what the accentuation that numerous nations set on advancement of rural businesses, producing regularly records just 20% of rural non-cultivating position creation, though development, exchanging and support arrangement include around 80%. Spatially, rural locale house enterprises, minor retailers, rudimentary on-farm administrations, farm instrument fixes and information giving organizations, contrasted with non-farm activities, for example, wellbeing facilities, schools, barbershops, processing, taxpayer supported organizations as well as transportation administrations, are primarily dispensable in rural towns. In certain areas, a major piece of rural income is represented by settlements (Barrett, Reardon & Webb, 2011). In Southern Africa's mining economies, settlements represent close to half of all country family profit. In a few rural settings, nonetheless, wage pay, and neighbourhood organizations represent a standard of non-cultivating pay, in spite of the fact that exchanges and settlements structure somewhere in the range of 15% and 20% of non-farming rural profit and 5% to 10% of the whole country income (Barrett, Reardon & Webb, 2011).

The change of rural crude produce or agro-handling, through processing, building, wrapping or moving things is a significant financial constituent of country non-cultivating monetary sources. Instances of agro-handling exercises in Kiambu County incorporate posho processing and feeds distributing. This study expects a wide importance of country regions including dispersed rural areas, other than working related rural town foundations with the vast majority of the agro-handling and auxiliary business and non-farm arrangement activities gathered to work with the bordering farming instalments (Haggblade *et al.*, 2017). In Kiambu County, the essential area exercises incorporate craftsman and extractive exercises, for instance, wood sawing, quarrying, carpentry and brickmaking; auxiliary area exercises incorporate agro-handling and exchanging. These contain takes care of distributing, selling of recycled garments and retailing. Tertiary area exercises incorporate administrations like bike, radio or shoe fix administrations, boda transport administrations, alluding to the utilization of one or the other motorbike or bike as a method of transport for individuals moving starting with one point then onto the next (normal in many pieces of Kenya).

3.1 Methodology

This study adopted an epistemology philosophy to question what knowledge is; how and to which extent knowledge is pertinent to the given entity/subject, how it could be acquired; as well as how it is related and connected to notions such as beliefs, truth and justification (Cohen *et al.*, 2018). Logical positivism, one of the paradigms of epistemology, is by nature objective and considers the independence of research against that which is studied. This study used a cross sectional survey on effect of RNFES on rural business results in Kiambu County.

The target population was all non-farm small and medium enterprises (SMEs) in Kiambu County who have prevailed by supporting agrarian related exercises. There are 157,704 enlisted MSME and SME license to operate holders in Kiambu County (Kiambu County Revenue Office, 2019). This variety of RNFES came from every one of the 12 sub-areas: Gatundu North, Gatundu South, Thika, Juja, Githunguri, Ruiru, Kiambu, Kiambaa, Kabete, Kikuyu, Lari and Limuru.

The study investigated five rural non-farm undertakings occupied with the accompanying regions: agribusiness endeavours, rural industrialisation activities, transport undertakings, the travel industry endeavours and development ventures. The study also included 10 key informants who were selected using purposive sampling for in-depth study. The key informants included: Two church ministers of the gospel, Two local MCAs, Two heads of financial institutions, Two officials of the Kenya National Chamber of Commerce and Industry (KNCCI), Kiambu chapter, two official overseers of rural and agricultural development. The sample size was apportioned according to the population in the 12 sub-counties. Simple random sampling was used to select the respondents.

The study used questionnaires and interview guides for primary data collection. Open and closed questions were used depending on the questions. Structured questions aimed at saving time and creating confidence among the respondents. Data collected through interview guides and questionnaires were analysed to identify any inconsistencies and institute the necessary corrective measures. Quantitative data was analysed by use of descriptive statistics using SPSS software and was presented through frequencies, means and percentages. Correlational statistical techniques were used to analyse association between the impacts of RNFES on rural livelihood outcomes in Kiambu County.

4.1 Results and Findings

The study used questionnaires that were administered to a sample size of 806 including, farmers, rural non-farm enterprises and key informants. The return rate of questionnaires for farmers was 96.23% while that of rural non-farm enterprise was 95.48%. The return rate for the key informants was 60%. The absolute return rate of all respondents who took part in the review was 95.41%.

4.2 Rural Non-farm Enterprises that Support the Agricultural Sector

According to the literature review, there are three sectors that support the agricultural sector in the RNDEs. These comprise the primary sector which are natural resources, secondary sector which involves manufacturing of goods, and the tertiary sector which makes work easier. These sectors support the agricultural sector, either directly or indirectly. Through this support, farmers are able to improve the agricultural sector and the rural livelihood of the country.

4.2.1 Inspiration to start the business

Different farmers and rural non-farm enterprises have different inspiration and motivation on why they started the business. The varied reasons explain the different performance of the individuals and what motivate them in their day-to-day activities.

Table 1: Inspiration to start the business

What inspired you to start the business?				
	Frequency	Percent	Valid Percent	Cumulative Percent
Identified gap in offering	11	2.9	2.9	2.9
Inspired/challenged by family/friends	27	7.1	7.1	10.0
Lost job/retrenched	26	6.8	6.8	16.8
To have independence	64	16.8	16.8	33.7
To keep me busy/occupied	11	2.9	2.9	36.6
To make money	241	63.4	63.4	100.0
Total	380	100.0	100.0	

Table 1 indicates that majority of the respondents agreed that making money was their main motivation for starting the business (63.4%). Thus, money is a key motivation factor since it improves the livelihood of the individual by improving their living standards. It is also a major source of income for different individuals. The minority started the business to keep themselves busy and occupied and had identified a gap in the market as explained by 2.9% of the respondents. If the production cost is low then majority see the need of starting the business since there will be less cost and maximum profit when running the business. There was a large number who agreed that they started the business in order to be independent and to become entrepreneurs in their locality as explained by 16.8% of the respondents. This means that many of them no longer wanted to be employed. There were a number that were inspired and challenged by friends and family to start the business as explained by 7.1%. This is where there is competition among close relatives or friends.

4.2.2 The Length of Time One Has Been in the Business

The experience of an individual is measured by how long they have worked in the business. The challenges and benefits are experienced and analyzed depending on the length of time that an individual has spent running the business.

Table 2: Length of time in the business

How long have you been in the business?				
	Frequency	Percent	Valid Percent	Cumulative Percent
1-5 years	206	54.2	54.2	54.2
5-10 years	57	15.0	15.0	69.2
Less than 1 year	89	23.4	23.4	92.6
More than 11 years	9	2.4	2.4	95.0
Over 10 years	19	5.0	5.0	100.0
Total	380	100.0	100.0	

Table 2 indicated that majority had been in the business for 1-5 years as indicated by 54.2% of the respondents. There was a significant number of respondents who had less than a year’s experience as indicated by 23.4%. The least number were those who had over 11 years’ experience (2.4%).

4.2.3 Challenges Encountered While Engaging in the Rural Non-farm Business

There are always challenges that hinder progress and development in different businesses. The livelihood outcome in rural non-farm enterprises cannot be attained in environments with numerous challenges and limitations, both at the local and national levels. The study identified various challenges that affect rural non-farm enterprises such as lack of access to capital, poor access to information, lack of business know-how, lack of access to markets, poor education on non-farm businesses, lack of access to technical assistance and lack of affordable employees as indicated in table 3.

Table 3: Challenges encountered while engaging in the rural non-farm business

Access to capital	Frequency	Percent	Cumulative Percent
No	126	33.2	33.2
Yes	254	66.8	100
Total	380	100	
Access to information	Frequency	Percent	Cumulative Percent
No	290	76.3	76.3
Yes	90	23.7	100
Total	380	100	
Business know-how	Frequency	Percent	Cumulative Percent
No	312	82.1	82.1
Yes	68	17.9	100
Total	380	100	
Access to markets	Frequency	Percent	Cumulative Percent
No	242	63.7	63.7
Yes	138	36.3	100
Total	380	100	
Education on non-farm business	Frequency	Percent	Cumulative Percent
No	285	75	75
Yes	95	25	100

Total	380	100	
Access to technical assistance	Frequency	Percent	Cumulative Percent
No	287	75.5	75.5
Yes	93	24.5	100
Total	380	100	
Access to affordable employees	Frequency	Percent	Cumulative Percent
No	310	81.6	81.6
Yes	70	18.4	100
Total	380	100	

Table 3 indicates that the majority had a challenge in accessing capital as indicated by 66.8% of the respondents. Lack of capital can be a major problem when starting and expanding a business. The least challenging factor was lack of business know-how represented by only 17.9% of the respondents. In the current world, technology and globalization has provided free access to information and training through the Internet. Business know-how is not a challenge in many of the businesses since individuals can learn from others and also educate themselves.

Those who had a challenge in accessing information were 23.7%, while those who did not encounter any challenge were 76.3%. This indicates that it is easy to access information especially due to availability of advanced technology either through mobile phones or computers. Those who had a challenge in accessing markets were 36.3%, while those who did not experience any limitations were 63.7%. This could mean that majority did not have a challenge in accessing markets due to a wide range of customers and availability of infrastructure. Through transportation systems such as long-distance vehicles and the Standard Gauge Railway there is wide market coverage since individuals can sell their produce in different counties.

The challenge of lack of education in non-farm businesses was encountered by 25% of the respondents, while and those who did not encounter this challenge were 75%. Through local community groups such as women group, youth groups and churches, proper training and education on rural non-farm activities are given to the community. However, there was a large proportion of individuals who disagreed with the statement, indicating lack of technical and knowledge in terms of the activities involved in rural non-farm businesses. Access to technical assistance is difficult as indicated by 24.5% in form of primary, secondary and tertiary sources. However, there was a large number who did not encounter the challenge (75.5%).

4.2.4 Introduction of New Services

The rural non-farm enterprises were asked about the possibility of introducing new services to the market. The majority, represented by 61.32%, indicated that they are planning to introduce new services. The population that did not agree were 36.68% as indicated in figure 4.6. These new services will contribute to improved livelihood outcomes in rural areas for both the farmers and rural non-farm enterprises.

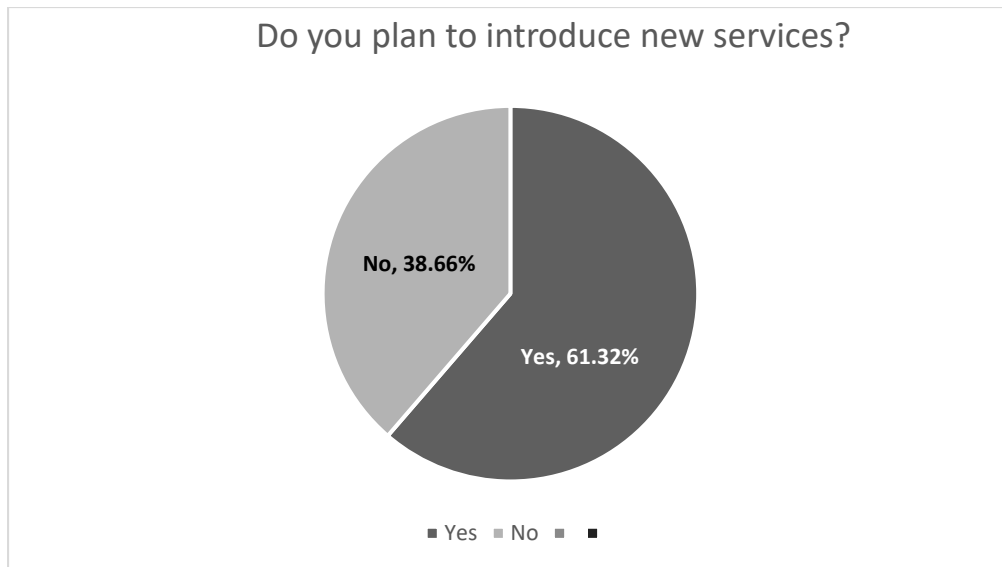


Figure 1: Are you planning to introduce new services?

4.2.5 Government Assistance in Accessing Better or New Services

The country non-farm ventures were inquired as to whether the public authority was aiding the arrangement of better and new administrations. The larger part dissented, addressing 83.95% of the respondents. This can be clarified by the way that the public authority doesn't make any critical commitment in supporting country livelihoods; the vast majority of the work is finished by the rural non-farm ventures and farmers themselves. Nonetheless, 16.05% of the respondents concurred that they got support from the public authority in offering better or new administrations as shown in Figure 2.

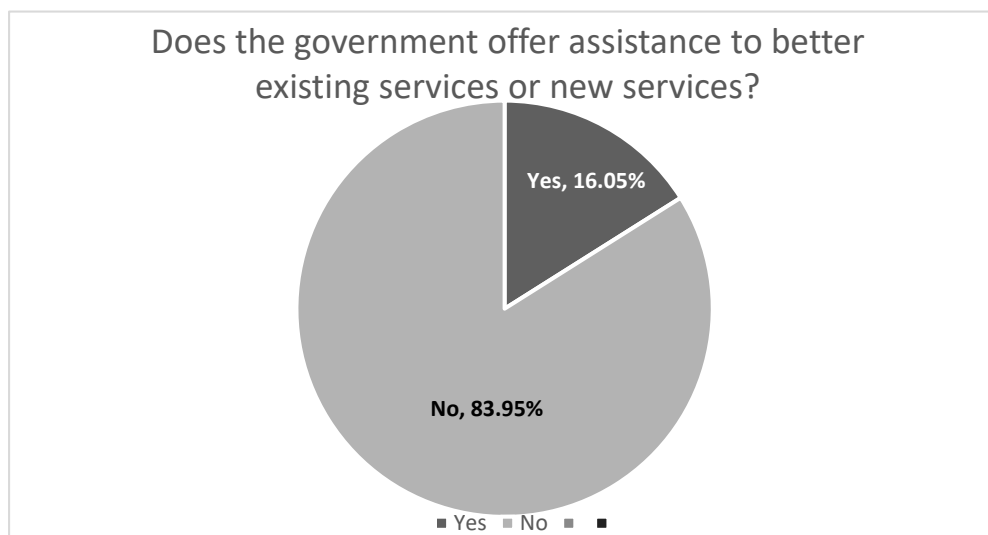


Figure 2: Government support in the provision of new or better services

4.2.6 Social and Business Organisation Membership

The rural non-farm respondents were asked if they were members in any association or business. The majority (70.53%) had no membership in any business or social organisation, while those who were members were 29.47% as indicated in Figure 3.



Figure 3: Social and business organisation membership

4.3 Correlation Analysis

Correlation analysis was used to depict the association between the different kinds of rural non-farm enterprises (RNFEs) that support the agricultural sector and their relative success. The results are as shown in Table 4.

Table 4: Correlation analysis

	Rural livelihood outcome	Different kinds of RNFEs that support the agricultural sector
Rural livelihood outcome	1.000	
Different kinds of RNFEs that support the agricultural sector	.777**	1.000
	0.000	

The results indicated that the R-value was $r = .777^{**}$, $p = 0.000$. This implies that the correlation between the diversity of RNFEs that support the agricultural sector and rural livelihood outcome is positive and significant. The results also depicted a strong correlation between the diversity of RNFEs on the agricultural sector and rural livelihood outcomes.

4.4 Regression Analysis

The regression analysis was used to analyse the relationship between the various kinds of RNFES that support the agricultural sector and their impact on rural livelihood outcome. The significance level was tested 0.05. The regression results are presented using the model summary, ANOVA and regression coefficient.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.777 ^a	0.604	0.603	0.30838

a. Predictors: (Constant), Different kinds of RNFES that support the agricultural sector

The results in Table 5 demonstrated that the RSquare value was 0.604. This implied that the diversity of RNFES that support the agricultural sector influenced 60.4% of rural livelihood outcomes. The results further implied that 39.6% was impacted by factors outside the research study.

ANOVA presents information on variability of the regression model with an overall test for the model significance. The results are presented in Table 6.

Table 6: ANOVA analysis

	Sum of Squares	df	Mean Square	F	Sig.
Regression	54.918	1	54.918	577.477	.000
Residual	35.947	378	0.095		
Total	90.865	379			

The ANOVA analysis indicated in Table 6 shows that at 95% confidence interval F calculated was 577.477 while F critical was 3.841 at F (0.05, 1, 379). Since the F test computed (577.477) > the F critical (3.841) then the model is significant. Therefore, the results confirm that the regression model adoption was significant.

The regression of coefficients model was used to indicate the relationship between the independent and the dependent variable. The outputs are presented in Table 7.

Table 7: Coefficient model

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	1.586	0.073		21.812	0.000
Different kinds of RNFES that support the agricultural sector	0.544	0.023	0.777	24.031	0.000

a. Dependent Variable: Rural livelihood outcome

Therefore, the fitted model is expressed as follows:

$$\text{Rural livelihood outcome} = 1.586 + 0.544 (\text{Different kinds of RNFES supporting the agricultural sector})$$

The model indicates that when holding all variables constant, RNFEs affect the rural livelihood outcome by 1.586. The model depicted a positive and significant relationship between the various kinds of RNFEs that support the agricultural sector and rural livelihood outcomes ($\beta=0.544$, $P=0.000$). When the various kinds of RNFEs which support the agricultural sector are added, it affects the rural livelihood outcome by 0.544 units. Since the P-value of 0.000 was below the critical 0.05, we conclude that the relationship was statistically significantly.

4.5 Discussion of findings

The findings indicated that what made most of RNFEs to begin the business was to bring in cash and utilized as a type of income. The study correlation results between the diversity of RNFEs that support the agricultural sector and rural livelihood outcome was positive and significant. The regression model depicted a positive and significant relationship between the various kinds of RNFEs that support the agricultural sector and rural livelihood outcomes. This is upheld by Haggblade et al. (2017) who expresses that the RNFE fuses self or compensation livelihoods, relaxed, intermittent and coincidental, close by assembling or creation exercises. This shows that larger part of the agrarian exercises starts as a type of revenue through the interest and supply market. Rural non-farm activities add to existing horticultural exercises, (Haggblade et al., 2017). Subsequently, as indicated by the writing audit and exploration study, in addition to information from the Kiambu study, farm adventures address the necessities of individuals living inside a specific local area, yet they additionally adventure into non-farm activities when they can't get to adequate pay in agribusiness to meet their essential requirements, like food, shelter and clothing. Although a few business people work solely by offering types of assistance, some small-scale farmers consider their pay from horticulture inadequate, and in this way take part in extra non-farm activities to procure additional income.

According to Barret and Webb (2011) within the same country, strong regional differences emerge, because of diverse endowments in natural resources, culture, labour supply, location and infrastructural developments. This can be supported by the information given by key informants when asked to classify the types of RNFE income.

One said selling “*Hardware*”, the second one, “*Welding Business*” the third and fifth indicated “*Butchery*”, the fourth indicated “*Shops*”, the sixth one responded with a “*Chef*”, the seventh indicated “*Doctor*”, the eighth said an “*Agrovet*” the ninth gave a response of “*Soil sampling facilities*” and the final one responded with “*Milk bar*”

When a small-scale farmer discovers that his or her income from farming is not sufficient, he or she may attempt a non-farm activity. If the income from the RNFE is stable and motivating, the entrepreneur could move into this activity more and more. Majority of the participants in the RNFEs, owing to the fact that they were engaged in small-scale farming, had worked for a period of 1–5 years. However, when the piece of land is too small or sale of agricultural products is too low, a small-scale farmer may add to his or her income by offering non-farm services to other farmers. The rural non-farming economy widely covers gatherings of trade, agro-processing, extractive, artisan and service provision. Even within the same country, strong regional differences emerge because of diverse endowments in natural resources, culture, labour supply, location and infrastructural developments (Barret & Webb, 2011).

According to the research data, there are still a large number of farmers who began the non-farm business in order to be independent or due to inspiration from family and friends. In rural areas the

major activity and source of income is agriculture since the majority have the source of production, which is land. If a farmer wished to add to his or her income, they would consider some non-farm activity. The challenges encountered were access to capital, access to information, business know-how, access to markets, education on non-farm business, access to technical assistance and access to affordable employees. The major challenges encountered were lack of capital as well as access to markets for products and services. When the key informants were asked:

Question: *What do you see as the current deficiencies in the service providers for farmers?*

Response: *“Capital resources”*

Question: *“What could be done to improve them?”*

Response: *“Give them access to credit.”*

The second response was:

Question: *What do you see as the current deficiencies in the service providers for farmers? What could be done to improve them?”*

Response: *“Reduce the high taxation, reduce interest rates for loans, and improve on infrastructure in more areas so as to reach a wide market.”*

This supports the argument that the major issue of lack of capital for rural non-farm activities can be solved by making credit more easily available. Market conditions also make it difficult to accomplish the day-to-day activities. There are intentions of starting new services in order to try and earn extra income on different products, but this is difficult. In rural areas, agriculture employs individuals either directly or indirectly. According to Reardon (2017),. However, when a farmer wishes to add these activities to his or her farm-based income, it is often difficult to access capital and there is little government assistance. This makes it difficult to introduce new products and services. There are cooperatives and other organisational memberships that help in capital formation especially by use of “*chama*” i.e., *investment groups that are classified as saving and investments groups.*

When the key informants were asked:

Question: *“What do you see as the current deficiencies in the service providers for farmers and what could be done to improve them?”*

Response: *“Government can subsidize the prices”*

Response: *“Also, reduce the high taxation”*

This means that there is need for government support for the RNFs. Farmers need to get to capital and monetary help. The study demonstrates that there is little connection between help of RNFs and rural business result since there is no government support. There is the test of capital. Limited scope farmers generally have no admittance to funding to start non-farm business exercises.

5.1 Conclusions and Recommendations

The study shows that rural RNF enterprises area an important factor in household economies and therefore their relative success has been on food security since it allows greater access to food. This source of income also prevents rapid or excessive urbanization as well as natural resource degradation through overexploitation. Majority had a challenge in accessing capital and a lack of

capital was a major problem when starting and expanding a business. In the face of credit constraints, RNF activity have supported the performance of agriculture by providing farmers with cash to invest in productivity-enhancing inputs. Furthermore, development of RNF activity in the food system (including agroprocessing, distribution and the provision of farm inputs) have increased the profitability of farming by increasing the availability of inputs and improving access to market outlets. In turn, better performance of the food system increases rural incomes and lowers urban food prices.

Further, the nature and performance of agriculture, themselves affected by agricultural policies, have important effects on the dynamism of the RNF sector to the extent that the latter is linked to agriculture. This sector grows fastest and most equitably where agriculture is dynamic where farm output is available for processing and distribution, where there are inputs to be sold and equipment repaired and where farm cash incomes are spent on local goods and services.

Non-farm activities provide support on the availability of cash for the farm capital investments needed to adopt appropriate technologies. Therefore, income from agro-industrial activities affects farm households' capacity to invest in farm capital and buy modern inputs. Non-farm activities support the availability of cash to make the farm capital investments (and farm input purchase) needed to adopt appropriate technologies. Thus, non-farm activity by farm households is potentially important for long-term food security because it can increase the use of farm inputs and hence farm productivity and the ability to intensify production

The study recommends that macro policies are necessary. The effect of these policies in terms of improved resource allocation should extend to the rural areas, particularly to the extent that they eliminate the urban bias frequently found in many developing countries' economic policies. Depending on the situation, reforms may have a positive effect on the incentives open to rural enterprises and farms, but there are often considerable capacity constraints that limit response to these incentives or prevent their being allocated in an equitable way that includes the asset-poor. The implication of this last aspect is an improvement in the terms of trade of tradable goods produced in rural areas, which is of particular significance for the agricultural sector but is also relevant to certain goods produced in the RNF sector. Thus, the RNF sector will benefit directly through the improved terms of trade for tradable goods produced within the sector, and indirectly through production, expenditure and investment linkage effects with the agricultural sector.

The study recommends on physical and social infrastructure and institutional reform. Investing in rural infrastructure raises RNF activity and farm productivity. Rural areas are typically underequipped in terms of infrastructure. Infrastructure investment policies can strengthen linkages between the RNF sector and agriculture and thus create RNF multipliers from the growth of agriculture. It is very important to improve both hard infrastructure (e.g., roads, electrification) and soft infrastructure (e.g., banking systems, market information systems) as a means of reducing the transaction costs for business starts and subcontracting in rural areas, and of improving the productivity of RNF entrepreneurs.

Also, in terms of education, rural areas are frequently at a disadvantage, and the importance of enhanced rural education for development of the RNF sector is incontrovertible. More specific skills and training are necessary to promote RNF activities in today's environment of competitive, liberalized trade. An example from the non-farm sector is the need to train rural people in skills that allow them to participate in skilled labour markets.

Lastly, besides operating related rural-based commercial activities including agro-processing and ancillary commercial, it is possible to introduce activities to provide services to facilitate the connecting agricultural commercial activities such as sale of fertilisers, insecticides or improved seeds.

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