

Role of farmer training and personal characteristics on agripreneurship among small scale farmers in Trans-Nzoia east sub-county, Kenya

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Abstract

The agriculture sector around the world has experienced profound changes in recent years. The ability and propensity of farmers to engage in entrepreneurial behaviours is a key explanation of the different patterns of responses within the sector. Lack of business opportunities and insufficient income in rural areas have encouraged developing countries to consider new strategies such as creating job opportunities and enhancing rural livelihood. To meet this challenge, entrepreneurship strategy as a new paradigm has been proposed by many countries. The study aimed to explore determinants of agripreneurship in Trans Nzoia East sub County with a focus on small scale farmers. The objectives of the study were to explore the contribution of farmer training, the role of financial support, the influence of individual farmer characteristics, and the role of market access to agripreneurship among small scale farmers in Trans-Nzoia East Sub-County. The study adopted quantitative and qualitative exploratory research design. The population of this study was determined by getting a list of small scale farmers in the sub County that were registered in e-extension database at the Ministry of Agriculture County records. Simple random sampling method was used to select 65 small scale farmers which were 10% of the target population of 650 farmers in Trans Nzoia East sub-County, obtained from a sampling frame. The study used a questionnaire as the instrument for data collection. Data collected was analysed by chi square at 0.05 confidence level and spearman's parametric correlation. Further, a computer statistical package for social sciences (SPSS) was used in entering and analysing the data.

Keywords: Farmer Training, Personal Characteristics, Agripreneurship, Small Scale Farmers, Trans Nzoia, Kenya

1. Introduction

The agriculture sector around the world has experienced profound changes in recent years. In most cases, farmers have demonstrated uneven abilities to adapt and adjust to these ongoing changes. The ability and propensity of farmers to engage in entrepreneurial behaviours is a key explanation of the different patterns of responses within the sector (Alsos, 2011). Rapid growth of the world's population coupled with rising unemployment has contributed to a large gap among different income groups. Moreover, lack of business opportunities and insufficient income in rural areas have encouraged developing countries to consider new strategies such as creating job opportunities and enhancing rural livelihood.

To meet the above challenges, entrepreneurship strategy as a new paradigm has been proposed by many countries. Due to its global recognition as a driver for economic growth, entrepreneurship is generally focused as an action-oriented phenomenon with immense creativity and innovativeness that ranges from opportunity or necessity entrepreneurship (Mokaya, Namusonge & Sikalieh, 2012, p. 128). Entrepreneurs add great value to local economies. This conclusion is widely evident in a number of communities that have initiated entrepreneurial development strategies over the past two decades (Entrepreneurs, 2002). Still, entrepreneurs are now recognized as vital drivers of economic growth to local communities, and this has spawned the new entrepreneurship programmes in some countries such as America. The value of entrepreneurs is evident at both the national and local levels. At the national level, nations with

more entrepreneurial activity have stronger GDP growth. Entrepreneurship accounts for one-third of the difference in the economic growth rates between developing and developed countries (Zoltan, 2001). At the community level, entrepreneurs create new jobs, increase local incomes and wealth and connect the community to the larger, global economy.

Farmer Training

Training is a key element for the promotion of Micro, Small and Medium Enterprises (MSMEs) for agripreneurship development, particularly for the first generation agripreneurs (Ahmed, Hasan & Haneef, 2011). Training is a key element for the promotion of rural entrepreneurship. Training of existing and aspiring entrepreneurs should complement existing skills and the entrepreneurs' most pressing needs. Furthermore, rural entrepreneurs need advice, guidance and knowledge as well as coaching in the management of business. They should be equipped with skills in financial management as well (Ngorora & Mago, 2012).

Developing entrepreneurial competency in the agricultural sector involves bringing the farmer from being simply a farmer to being an entrepreneur through an educational process (McElwee, 2008) [14]. Other authors, such as Filion and Timmons (YEAR?), suggest that entrepreneurs are tenacious, can live with uncertainty, make good use of resources and are imaginative, moderate risk-takers and results-oriented. Evidences indicate that for farmers to be successful as agripreneurs, they need to possess, most, if not all, of entrepreneurship characteristics or qualities. These

traits are: proactiveness, curiosity, determination, persistence, vision, hard work, honesty, integrity, strong drive to achieve, high levels of energy, goal-oriented, independent, demanding, self-confident, high self-esteem, disciplined, strong management and organizational skills, internally motivated, tolerance for failure, positive attitude, positive thinking, see opportunities where others see problems (Sancho, 2010).

Entrepreneurial characteristics like achievement motivation, leadership ability, self-confidence, risk-taking ability, management orientation and information seeking behaviour are important areas of training for the agripreneurs. Better trained farmers are known to make greater use of information, advice and training and are more proactive in adjusting to change and planning for the future of businesses (Ahmed, Hasan & Haneef, 2011). It is, therefore, obvious that the various trainings contribute to changing dynamics in agribusiness. Previous studies reveal that rural entrepreneurs need to know how to succeed in business. The types of training needed by the entrepreneurs in order to succeed include training in entrepreneurship, marketing, quality management, basic accounting and technical skills. Advisory services, business information and technical and business skills, including marketing, accounting and management, and communication skills are also rated highly. For rural entrepreneurs, access to such training and education through government assistance is crucial for them to achieve business success (Kader, Mohamad & Ibrahim, 2009) ^[8].

Overall training infrastructure within the economy will strengthen the entrepreneurial environment (Ernst & Young, 2011). Education provides a person with the ability to recognize commercial opportunities, have the knowledge, self-esteem and skills to act on them. Farmer services and training need to be more hands-on and practical (OECD, 2011), localized and adapted to the particular circumstances in the village.

Farmers face a lot of challenges. Improving capacities of farmers on strategic management and entrepreneurship will enable them to better anticipate continuous changes and keep their farms viable (Lauwere *et al.*, 2012). Agripreneurship constitutes the need to make agriculture a more attractive and profitable venture. Sustainable development of agricultural land requires the development of entrepreneurial and organizational competency in farmers. The need for an entrepreneurial culture in the agricultural sector has been recognized in recent decades (Bergevoet *et al.*, 2005; McElwee & Bosworth, 2005) ^[2, 12, 15]. For these purposes, farmers can either be integrated vertically inside a chain of value or enabled to diversify their economic activities (Carter, 2003; Haugen & Vik, 2008; McElwee, 2006; McElwee & Bosworth, 2005) ^[4, 6, 17, 13, 12, 15]. For farmers to become entrepreneurs, they have to revamp their managerial skills and entrepreneurial attitudes. The former can be taught.

Today, with the changes in political and market environment, farmers need additional skills in fields of marketing and selling, strategic management, networking, finding and realizing new business opportunities (Rudmann, 2006). An important challenge for the agricultural sector consists of facilitating farmers' development of entrepreneurial and organizational capacities and attitudes; this requires economic support and a greater emphasis on education and training (McElwee, 2006) ^[12, 15]. Kolb (2010) notes there are four levels of learning, namely knowledge transfer, attitude

change, which can be achieved in a typical class-room setting, but this setting is not conducive when the goal is to learn new people skills, as this requires intensive coaching, practicing, repetition and feedback in a much lower trainer to trainee ratio and education. When a farmer introduces a new enterprise into his farming system, there are different stages of development that the enterprise goes through. The skills of the farmer must also change and develop to meet the management demands of the enterprise (Kahan, 2012) ^[9].

The development of the entrepreneurial and organizational competency of farmers is a long-term process. A shared vision of the farmer as entrepreneur is important in land development. Farmers need new skills and knowledge if environmentally sustainable agriculture is to be achieved; support to farmers needs to sit within a policy and technology transfer context (Busenitz *et al.*, 2003) ^[3]. Through effective entrepreneurship education an individual can access the skills and knowledge needed to start and grow up a new business (Drucker, 2005). Training goes a long way in ensuring acquisition of relevant skills. Training also assists in identifying business opportunities (Kanyari & Namusonge, 2013) ^[11].

Personal Characteristics Agripreneurs

Many researchers define personality traits as enduring dispositions that are relatively stable over time and across situations. In the realm of entrepreneurship, traits explain entrepreneurial behaviour. In the psychological literature on entrepreneurship as well as in some theories by economists, entrepreneurs are often described as individuals with certain kinds of stable and enduring characteristics or features (Rauch & Frese, 2005). The emphasis is on personality traits, which presumably originate from early childhood and persist through years. Organizations with high entrepreneurial orientation distinguish themselves by: 1) constant innovation in their products and markets; 2) proactive decision-making and aggressive competition with other companies, and 3) risk-taking in business (Basso, Fayolle & Bouchard, 2009) ^[1]. These three dimensions have also been recognized as important entrepreneurial attitudes in the agricultural sector (Lauwere, 2004; Pyysiäinen, Anderson, McElwee & Vesala, 2006; Rudmann, Vesala & Jäckel, 2008) ^[13, 17, 19]. Numerous studies show that entrepreneurial attitudes towards autonomy, risk, work and income are more important in determining the success of a firm (Dimov & Shepherd, 2005; Haber & Reichel, 2007).

Researchers identify numerous traits, such as risk propensity, creativity, problem-solving and overcoming obstacles (Arenius & Minniti, 2005; Stewart & Roth, 2004), achievement orientation (Collins, Hanges & Locke, 2004), self-efficacy (Arenius & Minniti, 2005), and high sense of responsibility as key characteristics of a successful entrepreneur. Personal qualities of an agri-entrepreneur significantly affect the agribusiness. Schiebel (2002) says that successful farmer entrepreneurs differ from others in terms of three personality traits. They have more belief in their ability to control events, problem-solving abilities, social initiative (expressed through dominance, liveliness and social skills boldness). On this issue, Best (2001) says it has to be focused and riveted on the breeding of local agripreneurs, who are not just farmers, but are also thinkers, risk-takers and business people. According to Kaburi *et al.* (2013) ^[7], achievement

motivation is the most important factor that contributes in explaining variation of growth rates and entrepreneurship. Where resources are constrained such as in rural areas, innovations are more important.

Measure of Agripreneurship by Small-Scale Farmers

To understand agripreneurship necessitates understanding farmers’ leadership and managerial capabilities in a complex, multi-faceted and dynamic environment. The environment in which agricultural entrepreneurs operate is constantly changing and developing, as farmers adapt to the changes of the market, changing consumer habits, enhanced environmental regulations and so on.

This paper explores agripreneurs among small-scale farmers in Trans Nzoia East Sub-County. Agripreneurship is measured in terms of average farm income realized from various enterprises over a period of five years. Planting market oriented crops, adoption of new technologies and use of ICT in market seeking, innovativeness in the agriculture and agri-business sector and frequent extension service interactions form the basis for measurement of agripreneurship by small-scale farmers. Diversification is regarded as a way for small firms to reduce risk of being too dependent on one product. Other reasons to diversify may be to try to fully satisfy their customers’ needs to use spare resources, to obtain synergies from products, markets or technology (McElwee, 2005) ^[12, 15]. These result in increased sales of agriculture produce and increased profits.

Statement of the Problem

Farming in Kenya is predominantly small-scale, typically carried out by small-scale producers who usually cultivate no more than ten acres of land. In Trans Nzoia County, agriculture is the leading economic activity where small-scale farmers on average have 1.5 acres of land. Economic activities carried out include production of maize, beans, coffee, wheat, horticulture, tea, potatoes, fish farming and dairy (Trans Nzoia CIDP, 2013-2017). However, the concept of agripreneurship in the County has not been fully embraced. Therefore, the open research question was: how can agripreneurship among small-scale farmers in Trans Nzoia County be promoted?

A research study conducted in Malaysia to determine success factors for small rural entrepreneurs as perceived and experienced by rural entrepreneurs tested on factors such as training and extension services, personal characteristics and attributes, marketing and financial support (Kader, Mohamad & Ibrahim, 2009) ^[8]. In view of this, the exploratory study that informed this paper attempted to test the same factors to determine if they have any influence on agripreneurship in Trans Nzoia East Sub-County. The study was further based on the scientific opinion that existing published evidence of qualitative nature in the context of agripreneurship among small-scale farmers is still lacking. Therefore, the study sought to bridge this gap. The study also attempted to add to existing empirical body of entrepreneurship research in rural areas. The findings of this study will make a significant contribution to a better understanding of the factors determining agripreneurship in rural set up. It will provide recommendations that would inform policies for agricultural entrepreneurship, guide extension in promoting agripreneurship and build areas of future research.

2. Materials and Methods

The study was conducted in Trans Nzoia East Sub-County. It focused on rural farmers involved in various value chains in not more than 10 acres of land, those who had frequent contacts with agricultural extension officers and, therefore, were registered in e-extension database. There were 650 farmers registered in Trans Nzoia East Sub-County at the time the study was conducted. This formed the population of the study. Only those who consented to voluntarily participate were included in the study. A sample of 10 per cent of this population was selected for the study using stratified sampling as indicated in Table 3 below.

Table 1: Sample and Sampling Technique

Ward	Population	10%
Suwerwa/Cherangany	110	11
Chepsiro/Kiptoror	130	13
Makutano	110	11
Sitatunga	80	8
Motosiet	70	7
Sinyerere	50	5
Kaplamai	100	10
Total	650	65

The study employed questionnaires as a data collection tool. The questionnaire, which was semi-structured, was administered to the respondents with the help of research assistants. Data analysis was done by use of descriptive statistics, Chi-Square and Spearman's parametric correlation. Data was summarized using tools such as tables and charts to establish the relationship between determinants of Agripreneurship by small scale farmers at 0.05 confidence level of the chi-square. Qualitative data analysis consisted of examining, categorizing, tabulating and recombining evidences to address the research questions. Qualitative data was grouped into meaningful patterns and themes that were observed to help in the summarizing and organization of the data. Quantitative data was analyzed through the use of statistical techniques such as frequency counts, percentages, arithmetic means, modes, pie charts and tabulation to show differences in frequencies. Qualitative data was analysed descriptively. Bar charts were used to display nominal or ordinal data. Statistical Package for Social Sciences (SPSS) was also used to analyse the data.

3. Results and Discussion

Farmer Training

The study sought to determine the contribution of farmer training to agripreneurship among small-scale farmers in Trans Nzoia East Sub-County. This was achieved by analysing the highest educational level reached by the farmers and farmer training on strategic planning, farm business management, financial literacy and marketing.

Highest Education Level Reached

The research findings indicated that 29(55.77%) of the respondents had attained primary school level education, 18(34.62%) of the respondents had attained secondary school education and 5(9.62%) of the respondents had attained tertiary level education. These findings were as summarized in Figure 1

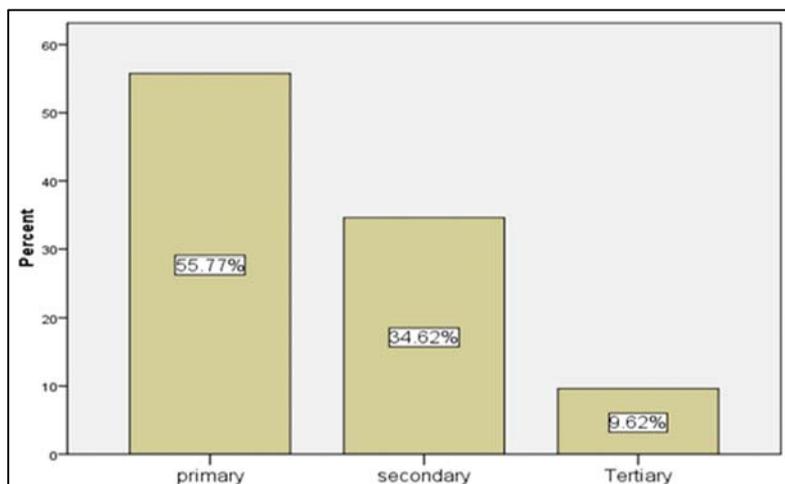


Fig 1: Highest educational level reached

Farmer Training

To evaluate farmer training on various agricultural aspects, farmers were asked to state whether or not they received

training on various topics and whether or not this added value to their farming business activities.

Table 2: Farmer Training

Type of training	%	Value added in farm business	%
Received training in crop management	65	Follow a cropping calendar	63
Received training in Animal husbandry	58	Better crop/animal husbandry	56
Training in entrepreneurship	60	Creativity in production and marketing	50
Training in diversification of farm enterprises	65	Diversify farm enterprises	62
Training in budgeting and financial management	65	Become a better farm manager	58
Training in Farming technologies	56	Easily adopt any emerging farming enterprise	56
Training in marketing of farm produce	57	Timing of markets	57

Table 2 above summarizes value added to farm business as a result of training. Most of the respondents had received training on crop management (65%) which also translated to 63% of farmers being able to follow a cropping calendar; 58% of respondents had received training on animal husbandry which resulted to 56% of farmers being able to practice better animal husbandry. Moreover, 60% of the farmers had received training on entrepreneurship and of the respondents 50% had become creative in production and marketing. Most of the farmers had received training on diversification of farm enterprises (65%) which resulted to 62% of the respondents being able to diversify farm enterprise. In addition, 65% of the farmers had received training on budgeting and financial management; 58% of the respondents who acquired this training admitted to have become better farm managers. Moreover, 56% of the respondents had received training on farming technologies and of all respondents 56% of the farmers were able to adopt

emerging enterprises. Lastly, 57% had received training in marketing of farm produce which translated to 57% of the respondents being able to time for markets. They, however, added that markets for agricultural produce were quite unpredictable.

Correlation on Farmer Training and Agripreneurship

The independent variable (farmer training) had a positive correlation with the dependent variable (agripreneurship) ($r=0.586, p < 0.01$). This shows that farmer training positively influenced the agripreneurship. The variables were statistically significant at the 99% confidence interval level (2-tailed). Therefore, farmer training is a determinant of agripreneurship, as summarized in Table 3 below. According to Hussin, Karia and Ali (2012), training factor is a key booster of participation in agribusiness. Training is needed to overcome the weaknesses and shortcomings from the production stage to the marketing stage.

Table 3: Correlations

		Agripreneurship	Farmer training
Agripreneurship	Pearson Correlation	1	.586**
	Sig. (2-tailed)		.000
	N	5	5
Farmer training	Pearson Correlation	.586**	1
	Sig. (2-tailed)	.000	
	N	5	5

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

Farmer Personal Characteristics/Attributes

This study further sought to determine the influence of individual farmer characteristics on agripreneurship among small-scale farmers in Trans Nzoia East Sub-County. To

evaluate this, a 5 item with five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) was administered to respondents. The findings were as illustrated in Table 4 below.

Table 4: Personal Characteristics/Attributes

Motivation that propels you to farming business	U	SD	D	A	SA	Mean	Standard Deviation (SD)
Creativity in production and marketing	1	4	17	26	4	3.17	1.0063
Easy adaption to emerging farming enterprise	3	4	8	23	14	3.40	1.14007
Problem solving abilities	4	5	9	22	12	3.26	1.10832
Opportunity recognition	3	9	15	22	3	2.91	1.05002
Use of ICT to access information in agriculture	1	6	10	25	10	3.33	1.35969
Problem solving ability	1	2	10	25	14	3.53	1.26292
Ability to control events	2	3	12	22	13	3.45	1.01008
Pro active	2	12	18	11	9	2.91	1.15103
Customer orientation	3	8	10	20	11	3.17	1.19043

Key: U = Undecided/Not sure, SD = Strongly Disagree, D= Disagree, A = Agree, SA = Strongly Disagree

From the study, most of the respondents felt that creativity in production and marketing was important to run agribusiness (M=3.17, SD= 1.0063); most farmers agreed that they did easily adopt emerging enterprises (M=3.40, SD=1.14007) and had problem solving abilities (M=3.26 SD=1.10832). The farmers agreed that they did recognize opportunities (M=2.91, SD=1.05002), but majority were not proactive (M=2.91, SD=1.05002). Majority had customer orientation (M=3.17, SD=1.19043) which are critical characteristics in agripreneurship. Farmers also strongly agreed that they had the ability to control events (M=3.45, SD=1.01008) and that they had problem solving abilities (M=3.53, SD=1.26292). An individual who recognizes and realizes business opportunities with risk bearing capacity and a quest for latest knowledge in agriculture sector can prove to be a right agripreneurs (Bairwa, 2014).

On the use of ICT to access information, most of the farmers agreed that they used ICT to access information on farming. This supports that farmers are able to use technology available to enhance agripreneurship as summarized in Table 4 above.

4. Conclusion and Recommendations

Based on the research findings and discussion in this paper, it is concluded that agripreneurship is a product of both internal and external factors such as personal attributes, financial support, trainings, and market access among others. The research indicated that most of the farmers have at least basic primary education. Most of them have also received some informal training on farm management. Furthermore, Farmer training has a positive correlation with the dependent agripreneurship. Therefore, Farmer training is a determinant of agripreneurship. Clearly, most of the beneficiaries of the farmer trainings have managed to add value to farming business. Nevertheless, the County Government of Trans Nzoia, through the Department of Agriculture, should still initiate the training programmes and facilitate their implementation to create a culture of entrepreneurship and business among farmers in Trans Nzoia.

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