

THE ROLE OF FINANCIAL EDUCATION AND TRAINING IN AGRICULTURAL DEVELOPMENT IN NGOKETUNJIA

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ABSTRACT

Financial Education and training has contributed enormously in the development of many industries around the world. New technologies can not be used without properly financing the education and training of the workforce. The rate at which technology is growing makes it necessary for the development of agriculture in many countries. However the lack of financial education hinders the ability of farmers to evaluate financial inputs, adopt new technologies and obtain relevant informations. This study investigates the role of financial education and training in agriculture development in Ngoketunjia. The study sampled 300 farmers and adopted a quantitative research methodology. Using structural equation modeling, the researcher produced meaning from the data collected. The path regression model showed a coefficient of 0.376 which means that for every unit change in farmers financial knowledge gained through education, there is a 0.376 unit change in agriculture productivity. Findings from the study showed that financial education and training has significant effect (positive or negative) on agricultural productivity in Ngoketunjia. The study recommended that, the government should encourage farmers to enrol in agriculture colleges to help them increase their financial knowledge in management their farms.

Keywords: Education and training, Cameroon, Agriculture Development, Ngoketunjia.

1. INTRODUCTION

High industrialization in most countries must be supplemented by agricultural production, however the much-discussed industrial development seem to have failed to lift the world out of poverty and misery (Elliott, 2006). The West have concentrated on adding value to raw materials, and have paid less attention to the growth of agricultural production basins, which are mostly located in developing countries. As a result of this, the global income gap between developed and developing countries has widened. According to Handelman (1996), continuous reliance on different sectors of the economy, rather than restructuring, continues to stymie development in the majority of third-world countries. Despite the high degree of industrialization and the advantages it provides to the people, agriculture has remained the basis of many less developed nations. It employs more than 80% of Africa's working population and is intimately connected to the continent's growth. Cameroon's position is not much different. Many have characterised Cameroon as an African in miniature, with the overwhelming bulk of the population relying heavily on agriculture for a living. Agriculture has continuously and substantially contributed to Cameroon's GDP (gross domestic product) (Noula, Linyong and Gwah, 2013). According to the Ministry of Agriculture and Rural Development, agriculture alone contributed for 76.38 percent of national GDP in 2017, up from approximately 68 percent in 2016. The connection between financial education, training, and agricultural development is critical, particularly in rural areas. Because

the rural masses rely heavily on agriculture for survival, access to credit via official or informal financial institutions is critical to agricultural growth because it provides much-needed money for investment. Despite the fact that the Ngoketunjia Division in Cameroon's North West Region has been characterised as an agricultural producing basin owing to its extremely rich soil, many families suffer without essential food items (Lambi et al., 2007). According to Brown (1996), one of the defining problems of the new age that is emerging is food scarcity (Atkins and Bowler 2001). In her population theory, Esther Boserup stressed that "necessity is the mother of innovation," which translates to the idea that as population grows, so will food production (Soby, 2017). With population expansion, the need for food and other essential services has increased throughout time. If farmers have a better financial education in terms of understanding the financial implications of making production choices, obtaining relevant information, adopting new technology, and evaluating inputs, it is problematic why empirical research on the role of farmers in agricultural growth have not always been inconclusive.

Wallace and Nilsson, (2018) discovered a favourable relationship between financial education and agricultural productivity. Even in Cameroon, the notion that financial education generates favourable returns from agricultural productivity is still an open question for debate (Haynes, 2020). If it is possible to demonstrate the good impact of agriculture in the Nkoge-ketunjia district, will open doors for local farmers to expand their operations. The main aim of this study is to assess the role of financial education and training in agricultural development in ngoketunjia. The result from this study is critical in enhancing future research as it forms the basis for literature and contributes to knowledge.

2. LITERATURE REVIEW

If agriculture is to grow faster than the population, farm labour production must increase, resulting in higher incomes for farmers and consumers and the creation of new jobs in business and services. As an increasing number of African farmers believe they will be unable to increase agricultural production to meet the needs of growing rural populations, increased production for growth and productivity will be required (Chamberlin et al., 2014).

Reimers and Klasen (2013) discovered that financial education has a very substantial influence on agricultural output. This point of view has been endorsed by various writers. As an additional point of contention, Schultz (1975), contends that financial education, helps farmers develop skills in budgeting, record-keeping, and financial planning. With a better understanding of financial concepts, farmers can effectively manage their income and expenses, allocate resources efficiently, and make informed decisions about investments in agricultural inputs such as seeds, fertilizers, and machinery (Brown et, al, 2005). Sound financial management reduces the risk of overspending, debt accumulation, and financial distress, leading to improved productivity. Financial education enhances farmers' ability to access credit and capital and by understanding financial institutions, loan requirements, and credit evaluation processes, farmers can present their agricultural operations in a more favorable light to lenders. They can also learn about alternative sources of financing, such as agricultural cooperatives or government programs (Ali et, al, 2016). Access to credit and capital enables farmers to invest in modern technologies, irrigation systems, improved seeds, and other inputs that can significantly increase productivity.

As a result, more recent work has attempted to define the (often interconnected) transmission pathways by which financial education may increase agricultural output, in light of the fact that

this notion impacts are still somewhat ambiguous. The fundamental idea of financial education supplied by Nelson and Phelps (1966) and Schultz (1975) is, nevertheless, still applicable for these investigations, and it is crucial to stress this point. A direct consequence of the criteria above is the first argument usually used to argue the possibility of a beneficial influence on agricultural output from increased financial educational attainment. Accepting that financial education enables farmers to make better use of available data and financial information, to perceive new classes of problems, and to devise autonomous solutions for those problems, it follows that those peasants will have superior decision-making skills and will, as a result, be better managers who will allocate their financial resources more efficiently than they would otherwise be (Asadullah and Rahman 2009).

Furthermore, it is often said that well-educated farmers with extensive financial knowledge are not only better able to use existing knowledge more professionally, but they also have greater access to the financial information and data they need to succeed. Given the fact that the vast majority of farmers in many developing nations have had no formal education to address their financial needs and are thus illiterate, it is simple to envision that this lack of knowledge presents a significant barrier to those peasants when seeking information on basic ways to access financial remedies from financial institution on ways to increase productivity.

Also there have also long been questions about why farmers do not use more advanced technologies. Economies of size and reach are one of the most successful ways to accelerate agricultural production in Africa (Ashkenazy et al., 2017; Knickel et al., 2017). Economies of scale are when the overall cost per processing unit decreases as farm productivity increases (Duffy, 2009; Knickel et al., 2017) It is for this reason that large farms are able to produce at a lower cost per unit than small farms (Ashkenazy et al., 2017; Chavas, 2008). Despite Economies of scale being intrinsically and predominantly related to capital-intensive technological development, the ongoing adoption of technological advances improves production and labour efficiency while lowering input costs per unit of output, as farmers are able to spread more output over the same fixed input level. A farm specialisation pattern is also linked to increased productivity, but this is possibly due to the lower difficulty produced by this strategy.

A new argument has arisen from the literature that, farmers with greater levels of financial education are said to be more likely to embrace new technologies sooner since they tend to choose riskier production methods in general with their advanced knowledge on basic ways to manage their financial profficiency, especially if these technologies yield larger predicted returns with lesser financial input (Knight et al. 2003; Asadullah and Rahman 2009). In this case, financial education is meant to lower the amount of financial uncertainty, which in turn should lower the farmer's aversion to endogenous risk.

New technologies are often expensive and can only be used profitably by scaling up, they are also driving large-scale and specialised operations which require excellent financial knowledge to manage. Farmers' decisions about the size of their operations, level of production, and degree of specialisation are heavily influenced by local input and output prices. Economies of scope, or 'integrative economies,' are described by Panzar and Willig (1981) as a situation in which the cost of providing sharable input services to two or more product lines is less than the total cost of providing these services for each product line separately. As a result, diversification can be used to lower total production costs associated with different output processes (Teece, 1980). Economies of scale exist in agriculture, where the combined processing of multiple outputs

increases efficiency and lowers overall production costs (Chavas & Kim, 2007).

Taking into account the extensive theoretical considerations presented in this section, in addition to empirical evidence from two early meta-studies (Lockheed et al. 1980; Phillips 1994) and other studies, the hypothesis is that financial education and training significantly affect the agricultural productivity .

3. RESEARCH METHODOLOGY

For this study, the researcher utilised a quantitative research technique as well as a survey design. Finally, data gathering employs a representative sample of the population to give information that may be extrapolated to the whole population (Glasow, 2005)

The study sample was drawn from an agricultural village in Cameroon's northwestern region, namely Ngoketunja. The random sample technique was employed to choose research participants. Questionnaires and interviews were used to collect data for this study. To present and analyse the findings obtained via the use of questionnaires, the author utilised descriptive and inferential statistical tools such as percentages, tables, and charts. In discourse theory research, the qualitative interview is seldom considered as a tool, but rather as analytical evidence (Cruickshank, 2012). The interview response was analysed using content analysis. The data will be analysed using an analytical model established by Mckinnon and Shaw (1973) in their study on financial liberalisation, as well as the Cobb-Douglas (1973) development equation, which analyses output as a function of inputs. The Smart PLS software was used to solve the analytic method used.

$$PRODi = \alpha_2 + \alpha_1 ENTi + \lambda_i \dots \dots \dots (1)$$

Where PRODi is agricultural productivity, ACFi equals access to finance as a source of capital, being proxy for financial inclusion, ENTi equals education and training, while WCi represent that concept to capture weather conditions in the farming area. λ_i is the error term and α_0 is the constant term while α_2 and α_1 are the coefficients to be estimated. α_1 measures the indirect effect of education and training on Agriculture productivity.

4. RESULTS

Out of 300 questionnaires that were sent, 285 were administered making 95% of the response rate. Path coefficients were used to evaluate the structural model and the hypothesis's relevance (original sample). Instead of the typical findings that are split into the model, the squared multiple correlations (R2) for a latent endogenous variable are used to evaluate the partly least square trajectory model, indicating how well the model fits the hypothesised relationship. The bootstrapping technique is used to determine the significance of a hypothesis (Chin, 1998). With 285 subsamples, a bootstrapping method was utilised to approximate the route coefficients. Table 1 shows the initial poll, mean sample, standard deviation, T-statistics, and probability. The coefficients of the hypothesis are represented by the T values. The relationship between education, training and agriculture productivity was tested using path regression and the results are as seen in table 1 below.

Table 1: Path Coefficients (Mean, STDEV, T-Values)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
FENT -> PROD	0.376	0.380	0.053	7.127	0.000

From the table 1 above, it can be seen that the level of financial education and training obtained by farmers influences the level of technological application and, as a result, the farmer's production. With a coefficient of 0.376 and a T-value of 7.127, the path regression result in Table 4.6 indicates that financial education and training (FENT) positively and substantially impact agricultural production in Ngoketunjia. This t-value shows that the outcome is significant at the 5% level. This indicates that financial education and training have a major impact on productivity since financial education enlightens farmers, allowing for mental change, while training develops the technical competence required for the acceptance and execution of a technology-driven approach to farming. While the majority of farmers did not get formal financial education, a significant amount of informal training was claimed to have occurred with the assistance of common initiative organisations and the government. In agriculture, technological transformation requires less formal financial education and more direct learning via on-the-ground skill development and the sharing of best practises. This explains why, as a latent construct, financial education and training have a significant and beneficial effect on farmer production in the region. The significance level is set at 1%, with a probability value of 0.000. A 0.00 probability denotes the greatest degree of significance and exactness in statistical testing for the given result. This implies that informal farmer capacity development in the region has a 99 percent probability of having a significant positive effect on farmer production. In other words, with a coefficient of 0.376, productivity increases are exactly proportionate to financial education and training. This implies that for every unit gain in financial education and training (improvement), there will be a 0.376 unit rise in agricultural production in the region, and vice versa. As a consequence, financial education and training are critical factors in the agriculture industry. This study discovered a favourable and substantial connection between financial education and agricultural production in terms of financial education and training. This implies that financial education and training were discovered to promote agricultural growth and, as a result, production in the research region. The higher the farmers' financial education, the better the agricultural outcomes for the farmers, their families, and, by extension, the country. This is consistent with the study's a priori assumption, which indicates that $2 > 0$. According to Wuttaphan (2017), investing in human capital may provide a competitive edge and long-term sustainability in today's complicated corporate environment. According to Leroy (n.d.), education is a growth engine and a key to progress in any civilization, depending on its quality and quantity. According to the literature, this conclusion is consistent with the findings of early academics such as George (2016), Seethepalli et al. (2008), Estashani et al. (2003), Canning and Pedroni (2004). These researchers found that if farmers do not get financial education and training, especially programmes that directly improve their capacity and competence, production would likely stay steady, if not decrease over time. Training is the enchantment that adds value to the human person, who in turn provides value to other resources. According to Njimanted (2017), transformational education is the only predictor of production in Cameroon's western highlands. The implications of this finding are congruent with the findings of

Muyia, Nancy, and Kit (2004), who praised the importance of education in human growth. This result, however, contradicts the findings of Sanchez et al. (1998), who found that financial education and training had a detrimental impact on agricultural production. This opposing viewpoint is supported by the fact that financially educated and skilled farmers shift their emphasis and begin looking for white-collar professions in order to make fast cash, particularly in third-world or developing nations. This is the unfortunate truth in many underdeveloped nations where people think agriculture is just for the poor. Indeed, many farmers in third-world nations are illiterate, making technological acceptance and dissemination challenging.

In related research, Manuel (2010) stated that financial education and training may be very effective in fighting poverty, implying that when agricultural output is great, poverty is decreased. According to simulations for Latin American countries, the effect of financial education and training on productivity is economically significant, highlighting the acceleration of growth and reduction in inequality that would result from increased availability and quality of various types of financial education and training. According to Aschauer (1989), human capital is a major factor of agricultural output. However, the findings were deemed to be of implausibly high economic significance and were not immune to the application of more sophisticated econometrics (Cashin, 1995). According to current observational research, which is mainly based on cross-country panel data, financial education and training have an important influence in agricultural output. Canning (1999) reached a similar result using panel data from a broad range of nations, whereas Demetriades and Mamuneas (2000) utilised OECD data. Roller and Waverman (2001) show that human capital development has a strong production impact in industrial nations in a framework that accounts for future endogeneity in agricultural productivity. Fernald (1999) and Njimanted (2017) found similar results for financial education and preparedness, respectively, using industry data from the United States and Cameroon.

Easterly and Rebelo (1993) found that improving farmers' abilities substantially increases agricultural production in a study of the effect of human resources on agricultural productivity. According to Sanchez-Robles (1998), general assessments of local farmers' physical and financial education and preparedness are strongly and substantially linked to agricultural output. Recognizing the development of industrialised nations' agricultural sectors, according to Easterly (2001), necessitates a computation of financial education and training density. Most significantly, the fact that financial education and training enhance agricultural output demonstrates that they may be a critical win-win element in agricultural development.

Hypothesis Testing

After reviewing the study's empirical results, it is time to put our pre-formulated hypothesis to the test. This procedure is intended to ascertain whether or not our tentative guests about the topic matter were legitimate. To ascertain the connection between financial education and training and agricultural productivity an hypothesis was developed.

H1: Financial education and training does significantly affect the agricultural productivity in Ngoketunjia Division

The impact of financial education and training on agricultural production in Ngoketunjia Division was found to be positive and significant at the 1% level, indicating 99 percent dependability or confidence. This indicates that financial education and training have a major impact on regional

production. This result allows us to accept the hypothesis since financial education and training have been shown to have a substantial impact on agricultural production in the area. Given the hypothesis's probability value of 0.00, there is insufficient statistical evidence to reject it.

5. CONCLUSION

Financial education and training were shown to have a substantial and significant effect on agricultural production in the area. Despite the fact that many farmers were not well educated, civil society groups, the government, and farmer associations have made significant efforts to enhance farmers' agricultural expertise via a variety of workshops and seminars with the view of increasing their level of financial knowledge in the Agricultural sector. Through interviews, several of the farmers stated that formal financial education is not required on the farm, even if it is important; rather, professional target financial education that is directly related to what they do is important. According to them, such financial education is only possible if one is engaged in farming and/or animal raising. The path regression result showed that financial education and training had a positive coefficient of 0.376. This means that for every unit change in farmer knowledge gained via training, there is a 0.376 unit change in production level. It is suggested that the government encourage farmers to enrol in one of the country's numerous agricultural colleges with their aim of increasing their financial knowledge in the sector. The state established Jakiri Veterinary College, Bambili School of Agriculture, and Santa Cooperage College to educate farmers and agricultural operators in Cameroon. With increased capacity, production and therefore productivity are expected to rise.

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