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# Influence of Entrepreneurship Education on Improvement of Rural Household Incomes among Art &Craft Cooperatives in Rwanda: Case Study of Cooperative Des Tailleurs Au Rwanda (COTAR)

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***Abstract:***
*This study is to examine the influence of entrepreneurship education on improvement of rural household incomes among art and craft cooperatives in Rwanda. . The impact of this kind of education is vital in the transformation of rural areas in Africa. Poverty in relation to lack of finances is identified as a global issue which is situated in rural areas. Thus the rural areas need the attention of the governments, private sector, international development partners so that the increase of income and transformation takes place among the people living in the rural areas. The objectives of this study were to: examine the influence of entrepreneurship education on the improvement of rural household incomes among art &craft cooperative in Rwanda using Cooperative des tailleurs au Rwanda (COTAR) as a case study. Entrepreneurship education has a desirable controlling influence over increment of incomes of the rural individual, family, community and society leading to development and reduced poverty. This study adopted a descriptive survey design that combines both quantitative and qualitative research designs, techniques and measure. The study targets the beneficiaries of Cooperative des tailleurs au Rwanda (COTAR) who have gotten a chance to access quality entrepreneurship education and in their community, the population consists of adults, the youth who are beneficiaries of the cooperative .A sample of 100 respondents was selected from the cooperative through purposive sampling and random sampling. The study used semi – structured questionnaire and interview tools in data collection. The data collected from the questionnaires and interviews was analyzed using the Statistical Package for Social Sciences (SPSS); questions in the research instruments were coded, variables defined. Descriptive statistics including frequency distribution tables & percentages and coefficient correlation were used in the data analysis. the findings indicated that entrepreneurship education was very significant in influencing household income with an R squared value of 79.5%.the study recommended that more training and capacity development programs should be organized for the members of cooperative, members should be exposed to technological advancement and awareness so that they are able to get new business ideas and lastly business incubation and research centers should be set up to enable the members to participate in showcasing the new ideas.*

***Keywords****: Entrepreneurship, Entrepreneurship education, rural household Income*

## 1. Introduction

*1.1 Background to the Study*

In order to appropriately conceptualize and contextualize issues of entrepreneurship education and improvement on rural household incomes among art and craft cooperatives in Rwanda, the background to the study was structured under the conceptual perspective where education is a process by which people attain skills for literacy, numeracy and entrepreneurship skills which enable them to access higher paying jobs, and being able to begin their own businesses and being able to have health practices.

A society influenced by the population that is educated is much more likely to develop faster. Education is a process which brings about changes in the behavior of the society, it enables every individual to efficiently and effectively participate in societal activities and make a positive contribution to the progress of the society.

Entrepreneurship is believed to be an important mechanism of economic growth and development. The people's role is to promote prosperity by creating new jobs, reducing unemployment and increase economic growth and development of a region. They also increase productivity by bringing new innovation and speed up structural changes by forcing existing business to reform and increase competition (Baron, 2007).

Educated workers raise national income directly because schooling raises their marginal productivity. They affect national income indirectly by increasing the marginal productivity of physical capital and of other workers (Theodore, 2012).
Education draws on the energy and enthusiasm that supports the people to realize their capabilities and potentials through its exploitation. Education is expected to provide an opportunity for citizens to have an exposure to knowledge and skills that enable them to be productive enough and also support in rural, national and household development. In particular, entrepreneurship education approaches in rural setting is a concern for improving individual lives which has been argued from various perspectives. It leads to better standard of living especially with the ability to provide the basic necessitates in the home, it facilitates homes and families in the improvement of themselves and the rural areas at large. A country's economy benefits from a high rate of individuals who are educated and have improved themselves.

According to Kuratko and Hodgetts "entrepreneurship is a dynamic process of vision, change and creation". Entrepreneurship is also defined as the identification of a new business opportunities and the mobilization of economic resources to initiate a new business or regenerate an existing business, under the conditions of risks and uncertainties, for the purpose of making profits under private ownership. Entrepreneurship is concerned with creating long-term value and creates regular cash flow streams on an individual or the group of individuals for the future through the process of imagination and initiative.

Entrepreneurship is the key to the growth and development of local industries through the processing of local raw materials into finished and semi-finished goods for the domestic and foreign markets. It also promotes the utilization of improved and cost-effective technology in small and medium-scale enterprises which enhances higher factor productivity at the local level especially in low-income countries where the traditional rural economy is predominant.
So, entrepreneurship has been considered as self-employment. While, there is a consensus among entrepreneurship scholars on that entrepreneurship is not just running a small business that already exists. Rather, it is change management, creative thinking, opportunity seeking, and innovativeness.

Rural development on the other hand, is often used as a short-hand for promoting economic growth that will permanently lift as many people as possible over the poverty line especially those in rural areas. (UNDP, 2013). The indicators of rural development include but not limited to high levels of literacy, creativity and innovation skills, creation of many job opportunities through entrepreneurship skills, high productivity of farmers goods due to having knowledge on farming and all these lead to better standards of living among the people living in rural area due to education attainment. Maclean (2008) notes that although there are many keys to support of increment of household incomes such as improved infrastructure such as dams, roads, telecommunication facilities and the like, entrepreneurship education is regarded as being the master key to economic and social change among the people in rural areas .Effective education can help ensure a safer, healthier, more prosperous and world while simultaneously contributing to social, economic and cultural progress.

*1.2. Statement of the Problem*

During the 1990s nearly every low income country has made effort to get more children into school. In many LDCs the enrollment numbers has increased. However the successful strategies for education for children in remote rural areas remain elusive/ difficult most particularly in the field of entrepreneurship where people have to create their own business. Rwanda focused on human capital rebuilding and increasing enrolment rates after 1994.

In 2006, The 4th Education Sector Strategic Plan (ESSP 2006–2010) introduced fee-free schooling for 12YBE - 12Year Basic Education – including 6-year primary and 3-year lower secondary and 3-year upper secondary education which allows the people in poor areas to attain education easily and entrepreneurship as a course unit has been introduced on the two levels. The level of education in a country is often seen as a form of capital accumulation which helps in countries' development. In Rwanda, the government implemented policies over the years to ensure there is a high literacy rate among the population. As of 2004-2008, 77% of males and females are literate, which is a relatively high percentage, however, those who continue into secondary schooling stands at 31%.

With the introduction of entrepreneurship education this would help the graduates develop their own careers and expand the job market by easing the current unemployment problem (Norasmah 2004). Entrepreneurship was acknowledged by many researchers as a solution to the problem of unemployed graduates (Salmah 2006). The higher educational institutions started offering formal entrepreneurship education, and included it as one of the subjects in the curriculum
Even though the entrepreneurship has been introduced to all the academic levels in the schools, there is still a challenge of implementing the knowledge and skills learnt which still hinders the increase of incomes in households. And government has faced the challenge on how to change the minds of students to venture into business than seeking for jobs. Based on the 2010 Human Development Index (HDI) report, Rwanda is ranked at 152 out of a total of 169 countries under the 'Low Human Development' category. The pertinent question is what has been the effect of entrepreneurship education on improvement of rural household incomes? The knowledge and skills and the training and capacity development programs and creativity and innovation can bring a change in household incomes. As much as the government has put a lot of effort in funding

entrepreneurship education little is known whether it has really achieved the target of improving the rural household incomes. Therefore, the study seeks to examine the effect of entrepreneurship education on improvement of rural household incomes in Rwanda.

*1.3 Objectives of the study*

1.3.1. General Objective

The general objective will be to examine the effect of entrepreneurship education on improvement of rural household incomes among art &craft cooperatives in Rwanda.

1.3.2. Specific Objectives of the Study

The study is guided by the following specific objectives:

- To analyze the effect of knowledge and skills on the improvement of rural household income in Rwanda
- To determine the effect of training and capacity development on the improvement of rural household incomes.
- To analyze the effect of creativity and innovation on the improvement of rural household incomes in Rwanda.
- To evaluate the relationship between entrepreneurship education and rural household incomes.

*1.4. Research Questions*

The study is based on the following research questions:

- How does the effect of knowledge and skills improve on rural households in Rwanda?
- To what extent does effective training and capacity development improve on rural household incomes in Rwanda?
- How does effective creativity and innovation improve rural household incomes in Rwanda?
- Is there a relationship between entrepreneurship education and rural household incomes?

## 2. Literature Review

*2.1. Theoretical Review*

2.1.1. Adam Smith Theory of Entrepreneurship to Economic Growth, 1776

Smith argued that the division of labor increased labor productivity, and he illustrated this with his pin factory: splitting the process of pin creation into finer and more easily repeatable tasks increased the productive capacity of a factory. Smith's account explains some portion of economic progress over time, and some deviation of output levels between places. But no matter how well this process explains the economy's increased ability to produce, say, carriages, it explains none of its ability to move beyond carriages to cars. Such a leap requires more than a division of labor and specialization; it requires fundamentally new technologies and products. The invisible hand will tend to lead individuals to pursue potentially profitable enterprises but how do they identify these enterprises?

2.1.2. Josef Schumpeter Theory of Economic Development, 1934

Josef Schumpeter explored in the theory of Economic Development (1934) and other works. Schumpeter posited that entrepreneurs lead the economy from one product or process to the next. In Schumpeter's view, an entrepreneur is an individual who takes an idea and turns it into economic knowledge. He suggested ways to identify an entrepreneurial venture by whether an entrepreneur introduces new goods or new methods of production, opens new markets or new sources of supply, or re-organizes an industry. Technical knowledge can be a prerequisite, but the transformative entrepreneurial innovations are the partner of Smith's division of labor.

Schumpeter emphasized market-expanding entrepreneurial innovation, while Smith focused on the refinement of these new markets with further productivity-enhancing divisions of labor.

Schumpeter defined development explicitly as "the carrying out of new combinations."

2.1.3. Theory on Entrepreneurship and Growth

While Schumpeter provided an early analysis of the relationship, the combination of entrepreneurship and growth was empirically consummated only recently. David Audretsch (1995) found that sectors with high rates of investment in new knowledge experience higher startup rates. Audretsch interprets this to mean that knowledge spillovers are greater in industries with heavy knowledge generation due to, for instance, former employees starting new firms. He does not explicitly link entrepreneurship with growth but merely with research and knowledge spillovers. The jump to growth, however, is not a major leap; Audretsch and others have bridged the gap.

*2.2. Empirical Review*

This review presents a detailed description of the relations between the variables under this study.

2.2.1. Knowledge and Skills on the Improvement of Rural Household Incomes

The effects of entrepreneurship education are attributable to explicit teaching of knowledge and skills, although this is the most easily visible chain of influence. Entrepreneurship education raises people's productivity and creativity and promotes technological advances, demonstrated in several countries (World Bank, 1999).The World Development Report (1997) examines how knowledge influences development, the report observes that the acquisition of knowledge and information is becoming increasingly critical to economic growth as science and engineering findings proliferate and take on ever-greater importance in production of goods and services.

The literature on return to human capital in developing countries focuses predominantly on measuring the returns to additional years of schooling for wage earners. Many developing countries have made significant progress in ensuring better access to education as evidenced by improved literacy and enrollment rates and higher quality and more equitable distribution of education services.

Theodore R. Breton explains that education affects national income indirectly by increasing the marginal productivity of physical capital and of other workers. For that matter entrepreneurship education which allows the people to create their own jobs, this increases their chances of improving on the labor market and which allows the human capital to be potentially exploited. In all countries the positive effect of rising human capital on the productivity of physical capital is required to offset the diminishing returns to investment in physical capital and make rising investment in physical capital financially viable in the development process.

Casson (2007) recognizes that the entrepreneur will need to have different skills. It is skills and knowledge that enables the entrepreneur to make judgments, to coordinate scarce resources.

According to Casson, the entrepreneur makes judgmental decisions that involve the reallocation of resources. He emphasized that lack of capital may be a barrier for successful entrepreneurship. This is because entrepreneurs require command over resources if they are to back their judgments and decisions. He also believes that an entrepreneur operates within a set of technological conditions, by making difficult judgmental decisions they are able to enjoy the reward of bearing risk. The desire for profit and the ability to judge enables the entrepreneur to coordinate demand and supply under uncertainty.

Entrepreneurship education seeks to provide students with the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings. Entrepreneurship is positively correlated with economic growth. When the country has economic growth the people are able to access goods and services easily. For that matter the households incomes improves due to available of market and easy flow of cash provided in the increase of economic growth.

2.2.2. Training & Capacity Development and Improved Rural Household Incomes

Entrepreneurship education is known as a specialized knowledge that inculcates in learners the traits of risk-taking, innovation, arbitrage and co-ordination of factors of production for the purpose of creating new products or services for new and existing users within human communities. Entrepreneurship education has to increase entrepreneurial self-efficacy, self-employment, and risk-taking attitude of the entrepreneur. Entrepreneurship education creates enormous business opportunities and trains people with innovative enterprise skills to grasp the opportunities for starting new entrepreneurial activities.

Although it has been noted that skills differ, an entrepreneur must be committed to developing both entrepreneurship and management skills (Nieuwenhuizen, 2004). The skills develop the personal and interpersonal competencies of people and management skills are an indication of how well an entrepreneur can perform important tasks and activities related to the functions of a business. It is important to take note that the combination entrepreneurial skills and business skills training in entrepreneurship education will ensure optimal results which will be most effective in developing &preparing successful entrepreneurs.

Training, according to Mullins (2010), is the process of systematically acquiring job related knowledge, skill and attitude in order to perform with effectiveness and efficiency specific tasks in an organization. He stated further that the acquisition of knowledge and skills during training is not desired for its own sake in industrial and commercial enterprises, and that it is utility that predisposes an organization to invest financial and material resources in it. The skill required by entrepreneur can be classified into three main areas: .technical skills (organizing, presentation) business management skills and personal entrepreneurial skills (risk taking, innovative, persistent)

Entrepreneurship training tends to emphasize the identification and assessment of skills, understanding of entrepreneurial process, all needed for alleviating poverty through the creation of new business and assessing other business opportunities thereby making entrepreneurs create an employment opportunities and not seekers of employment opportunities. Entrepreneurship education and training entails philosophy of self-reliance such as creating a new cultural and productive environment, promoting new sets of attitudes and culture for the attainment of future challenges (Arogundade, 2011).

Entrepreneurship education as "the structured formal conveyance of entrepreneurship competencies which in turn refers to the concepts, skills and mental awareness used by individuals during the process of starting and developing their growth oriented ventures. (Alberti,2004) .Entrepreneurship education is one way of addressing poverty reduction, as there is

strong empirical evidence suggesting that economic growth over time is necessary for poverty reduction. Entrepreneurship boosts economic growth, enhances educational attainment and increases the rate of economic growth.

The World Economic Forum in 2009 claims that the three relationships are suggestive of productive outcomes emanating from education provision. For example, in eradicating extreme hunger and poverty even if developing countries focus on innovation, creativity, talent and resources to overcome poverty, they lack the infrastructure and the expertise to support such an objective. These deficiencies could be overcome through capacity building through entrepreneurship education training to transform these assets into products and services, thereby creating more jobs, enhancing their global trade opportunities and reducing the incidence of poverty.

2.2.3. Effect of Creativity and Innovation on Rural Household Incomes

Scarborough (2008) defines innovation as the ability to apply creative solutions to problems and opportunities to enhance the lives of people. In this case, creativity is described as the ability to develop new ideas and to discover new ways of looking at opportunities and problems. Entrepreneurial ventures thrive on innovation, meaning that this concept can refer to technological innovation, a new product or a new way of producing it, of offering a service, of marketing, distributing or structuring and managing the organization(Nieman & Pretorius, 2004).

Innovation is the specific tool of the entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service .It is capable of being presented as a discipline, capable of being learned, capable of being practiced. Entrepreneurs need to search purposefully for the sources of innovation, the changes and their symptoms that indicate opportunities for successfully innovation. And they need to know and to apply the principles of successful innovation. Due to their innovative approach; an entrepreneurial business has more potential for growth than a small business. Entrepreneurial ventures are not limited to existing markets; they can create their own markets (Nieman & Pretorius, 2004).

According to Schumpeter, the entrepreneur is the prime mover in economic development and catalyst for economic change, and his/her function is to innovate or carry out new innovations/activities: introducing new quality of goods, introduction of new methods of production, opening up new markets, discovering new sources of supply of raw materials, and creating a monopoly or even breaking up an existing one.

He identified the entrepreneur as a force to economic change who brings creative destruction to the economy by revolutionizing the production processes with newer and more efficient ones. The entrepreneur is a special person for he/she is an innovator and one who brings about change through the introduction of new technological processes or products (Deakins & Freel, 2009).

Creativity is an important element in the entrepreneurial process, but how this creative process occurs, and the factors which may influence it, remain areas that are just beginning to be explored. Entrepreneurship education, among other factors may influence an individual's ability to be creative. The creation and adoption of new goods and services, new skills and new knowledge raises the new and high opportunities of access to incomes to the entrepreneurs who get less competition from the market around them thus they monopolize the source of market. These shifts are made possible by entrepreneurs who are the architects of "capacity creation" for productivity and growth. Mobilizing the specific factors of capital, labor and technology which are generally imperfectly marketed, may not otherwise be allocated to activities supplied where productivity could be the greatest. The creation of successful new ventures locally also helps to generate indigenous growth and reduce the reliance on the mercurial character of foreign direct investment.

Entrepreneurship is defined as the identification of a new business opportunities and the mobilization of economic resources to initiate a new business or regenerate an existing business, under the conditions of risks and uncertainties, for the purpose of making profits under private ownership. Aina and Salako (2008) described entrepreneurship as the willingness and ability of an individual to seek out investment opportunities and takes advantage of scarce resources to exploits the opportunities profitably. It is the process of creating something new with value by devoting the necessary time and efforts, assuming the accompanying financial social risks at the end receiving resulting reward.

On the other hand, entrepreneurship is concerned with creating long-term value and creates regular cash flow streams on an individual or the group of individuals for the future through the process of imagination, initiative and innovation for the purpose of maximizing profits and minimizing risk with the view of long term expansion.

## 3 Research Methodologies

*3.1. Research Design*

Research design is an outline of research study which indicates that what researcher will do from writing the hypothesis and its operational implications to the final analysis of data, (Clifford Woody, 2004).The research design constitutes decision regarding what is the study is about, why the study will be carried out, where it will be done, the type of data that will be collected, and where the data will be found all these concerning an inquiry or a research study. In this study descriptive design was used as it was most appropriate to get results expected. This design is used in analysis of characteristics of the situation, a group of people and the population.

*3.2. Target Population*

The co-operative beneficiaries in their households including the youth, the women and men formed the target population for the research study.

3.2.1. Population Frame

| Study Population | Target Population |
|---|---|
| Tailoring | 78 |
| Hand craft | 56 |
| Total population | 134 |

*Table 1: Art & Craft Cooperative*
*Source: Cooperative Des Tailleurs Au Rwanda*

*3.3. Sample Size Determination*

The following sample size formula is used to arrive at a representative number of respondents when population estimate is known .using the formula:
Yamane (1967) provides a simplified formula to calculate sample size.
Yamane Formula, (1967): $n=N/1+N(e)^2$
Where: n = the desired sample size.
e= (probability of error, i.e., the desired precision, e.g., 0.05 for 95% confidence level).
N= the estimate of the population size
The formula application:
Therefore, n= $134/(1+134*0.0025)$
=100 respondents

*3.4. Data Collection Procedures*

Primary data was collected using structured and analyzed. The procedure of data collection involved the activity of gathering information facts or information about a subject under research study. In regards to the effect of entrepreneurship education, the factors and the strategies of improving rural household incomes among cooperatives in Rwanda were assessed. The respondents for this study who are members/beneficiaries in the cooperative were selected specifically from Cooperative des tailleurs au Rwanda (COTAR).

The questionnaires were self- administered by the researcher for quantitative data and an interview guide for qualitative data was used for data collection in the field. Primary methods included questionnaires and interviews as research instruments which were given to the natives and stakeholders.

*3.5. Data Analysis and Processing*

In this stage of research, the collected data was processed and analyzed. The processing stage included editing, coding, classification and tabulation of the questionnaires with collected data that are ready to be analyzed. The analysis stage included hypotheses testing and interpretation of findings through statistical tests of significance to determine the validity in which the conclusions was based on. This was to ensure that the information obtained is scrutinized and then assessed. The findings were presented in tables, graphs and charts. Quantitative data was analyzed using statistical package for social sciences (SPSS) version 21. By tabulating the information, the data was summarized and displayed in the appropriate tables for further analysis. In analysis and processing, the data was transformed from the raw findings of the field into systematic categories. Comparative analysis was used to analyze data by comparing the responses emerging from different respondents as emphasized by Dawson (2009). Descriptive statistics such as percentages means and standard deviation were used for quantitative analysis.

*3.6. Data Quality Control*

3.6.1. Validity of the Instrument

Validity is the extent to which the instruments used during the study measure the issues they are intended to measure (Amin, 2005). The validity of a questionnaire item is concerned with whether or not the item actually elicits the intended information where the correct procedures have been applied to find answers. To ensure content validity, the instrument was developed under close guidance of the supervisor.

3.6.2. Reliability of Instrument

Reliability means the consistency or repeatability of the measure. Reliability refers to the confidence we can place on the measuring instrument to give the same numeric value when the measurement is repeated on the same subject, Clifford Woody (2004). Reliability is the extent to which results of a study are consistent over time and there is an accurate

representation of the total population under the study, Golafshani, (2003). Reliability was ensured by administering the same type of questionnaire through interviewing all the respondents who were in the same setting to assess the study effectively.

## 4. Research findings and discussion

*4.1. Questionnaire Return Rate*

The sample size that the researcher targeted in this study was 100 respondents hence the researcher issued out 100 questionnaires. Out of this, 78 questionnaires were returned by the respondents representing 78% questionnaire return rate. According to Saunders and Thornhill (2011) a questionnaire return rate of more than 70% is appropriate for research. The table below shows the results.

| | Target | Returned | Percentage |
|---|---|---|---|
| Respondents | 100 | 78 | 78% |

*Table 2: Questionnaire Return Rate*
*Source: Researcher, 2018*

*4.2. Knowledge and Skills and Improved Household Income*

The respondents were asked the extent to which they possess the various knowledge and skills competencies which could enable them to improve on their incomes through making sound business decisions and proper management of the business affairs, offering quality services hence able to maximize on their profits and income. The results indicated that most respondents are in possession of most of the knowledge and skills competencies save for ability to access resources/internet that guide in the management of business. 56% of the respondents don't really possess the skills to have access to resources/internet that guide in business management. Even though majority possesses these skills, there is still a percentage that lags behind. The following table summarizes the findings.

| Statement | No Extent | Small Extent | Some Extent | Large Extent | Very Large Extent |
|---|---|---|---|---|---|
| 1. Attainment of entrepreneurship knowledge and skills through the cooperative | 3(4%) | 20(24%) | 41(52%) | 14(20%) | |
| 2. making of judgments and decisions on operations of business | 3(4%) | 22(28%) | 47(60%) | 3(4%) | 3(4%) |
| 3. Formulation of initiatives of business and use of management skills | 6(8%) | 16(20%) | 41(52%) | 9(12%) | 6(8%) |
| 4. Accessibility to other resources/internet that guide in the management of business | 12(16%) | 31(40%) | 29(36%) | 6(8%) | |
| 5. Undertaking any risk and able to develop a sustainable business | 3(4%) | 9(12%) | 37(48%) | 23(28%) | 6(8%) |
| 6. Exercising the capacity to coordinate and network for purposes of market information | 3(4%) | 18(28%) | 27(32%) | 27(32%) | 3(4%) |
| 7. Identification and mobilization/reallocation of scarce resources | 6(8%) | 12(16%) | 33(44%) | 27(32%) | |

*Table 3: Knowledge and Skills Possession among Members of Art and Craft Cooperatives*
*Source: Researcher, 2018*

4.2.1. Correlation between Knowledge and Skills and Improved Household Income

The findings indicate that the correlation coefficient between knowledge and skills and household income is 0.787 which shows a strong relationship between the two variables. The correlation is also significant with a probability value of 0.000.the following table shows the findings.

| Correlation | | | |
|---|---|---|---|
| | | Knowledge and skills | Improved household income |
| Knowledge and skills | Pearson Correlation | 1 | .787** |
| | Sig. (2-tailed) | | .000 |
| | N | 78 | 78 |
| Improved household income | Pearson Correlation | .787** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 78 | 78 |

*Table 4: Correlation between Knowledge and Skills and Improved Household Income*
*Source: Researcher's Computation, 2018*
***. Correlation Is Significant at the 0.01 Level (2-Tailed)*

*4.3. Training and Capacity Development and Improved Household Income*

Over 70% of the respondents participate and get involved in training and capacity development programs and that they possess and are able to apply these skills for the growth of their business hence improved incomes. However there is some percentage who still doesn't participate in training and capacity development programs and that they are of the opinion that they are not able to develop self-efficacy and reliance from such training. The following table shows the results.

| Statement | No Extent | Small Extent | Some Extent | Large Extent | Very Large Extent |
|---|---|---|---|---|---|
| 1. Participation in several training activities undertaken by cooperative | 6(8%) | 12(16%) | 43(52%) | 14(20%) | 3(4%) |
| 2. Involvement in business programs initiated by cooperatives regarding innovation of demanded products in the market | | 20(28%) | 27(32%) | 28(36%) | 3(4%) |
| 3. retention of skills and competencies trained in and increase in production | | 14(20%) | 45(56%) | 19(24%) | |
| 4. Strengthening of capacity and ability in the production of goods | | 14(20%) | 34(44%) | 27(32%) | 3(4%) |
| 5. development of self-efficacy and self- reliance due to the training | 2(3%) | 19(24%) | 9(12%) | 34(44%) | 14(20%) |

*Table 5: Possession of Training and Capacity Development Skills among Respondents*
*Source: Researcher, 2018*

4.3.1. Correlation between Training and Capacity Development and Improved Household Income

The strength of association between training and capacity development and improved household income is measured by the correlation coefficient. From the results, the correlation coefficient between the two variables is 0.810 which is significant at 0.01 level.

| Correlations | | | |
|---|---|---|---|
| | | Improved household income | Training and capacity development |
| Improved household income | Pearson Correlation | 1 | .810** |
| | Sig. (2-tailed) | | .000 |
| | N | 78 | 78 |
| Training and capacity development | Pearson Correlation | .810** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 78 | 78 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

*Table 6: Correlation between Training and Capacity Development and Improved Household Income*
*Source: Researcher's Computation, 2018*

*4.4. Creativity and Innovation and Improved Household Income*

Most respondents agreed that they possess creativity and innovation skills. However 40% agreed to a smaller extent/no extent that they possess the skills to use new technological processes to improve on the products in addition to some smaller percentage generally possessing to a smaller extent/no extent all the creativity and innovation skills tested in the questionnaire. Its however good to appreciate that over 75% of the respondents possess creativity and innovation skills to a considerable extent.

| Statement | No Extent | Small Extent | Some Extent | Large Extent | Very Large Extent |
|---|---|---|---|---|---|
| 1. usage of new technological processes to improve on the products | 12(16%) | 19(24%) | 28(36%) | 12(16%) | 7(8%) |
| 2. production of new improved products or goods that are on market demand | 3(4%) | 19(24%) | 34(44%) | 12(16%) | 10(12%) |
| 3. formulation of new ideas to create something different from the usual | 3(4%) | 19(24%) | 34(44%) | 19(24%) | 3(4%) |
| 4. identification of new opportunities of business which have increased the labour market | 3(4%) | 19(24%) | 41(52%) | 15(20%) | |

*Table 7: Possession of Creativity and Innovation Skills among Respondents*
*Source: Researcher Computation, 2018*

4.4.1. Correlation between Creativity and Innovation and Improved Household Income

The correlation coefficient between creativity and innovation and improved household income is 0.776 and is significant at 0.01 levels. This shows that is a high positive association between the two variables.

| Correlations | | | |
|---|---|---|---|
| | | Creativity and innovation | Improved household income |
| Creativity and innovation | Pearson Correlation | 1 | .776** |
| | Sig. (2-tailed) | | .000 |
| | N | 78 | 78 |
| Improved household income | Pearson Correlation | .776** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 78 | 78 |

*Table 8: Correlation between Creativity and Innovation and Improved Household Income*
*Source: Researcher's Computation, 2018*
***. Correlation Is Significant at the 0.01 Level (2-Tailed)*

*4.5. Regression Analysis results*

To determine the magnitude of the change in improved household income among respondents due to a change in entrepreneurial education, the researcher carried out a multiple regression analysis. From the findings, R-squared value is 0.795 which is very high and implies that entrepreneurial education explains 79.5% variations in household income. The F-statistic is 27.065 with a significance of 0.000 from the ANOVA table showing that the model fit is very significant in explaining the relationship between entrepreneurial education and improved household income. The table for the coefficients shows that keeping other factors constant, a unit change in knowledge and skills ,training and capacity development and creativity and innovation leads to 0.302, 0.235 and 0.288 change in improved household income. The constant term is 0.684. The results are summarized in the following tables.

| Model Summary | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .891[a] | .795 | .765 | .30904 |

*Table 9: Model Summary*
*Source: Researcher's Computation, 2018*
*a. Predictors: (Constant), Creativity And Innovation, Knowledge And Skills,*
*b. Training And Capacity Development*

| ANOVA[b] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 7.754 | 3 | 2.585 | 27.065 | .000[a] |
| | Residual | 2.006 | 21 | .096 | | |
| | Total | 9.760 | 24 | | | |

*Table 10: ANOVA*
*Source: Researcher's Computation, 2018*
*A. Predictors: (Constant), Creativity and Innovation, Knowledge and Skills,*
*a. Training and Capacity Development*
*b. Dependent Variable: Improved Household Income*

| Coefficients[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .684 | .328 | | 2.087 | .049 |
| | Knowledge And Skills | .302 | .119 | .361 | 2.525 | .020 |
| | Training And Capacity Development | .235 | .118 | .324 | 1.992 | .060 |
| | Creativity And Innovation | .288 | .132 | .319 | 2.177 | .041 |

*Table 11: Coefficients of Regression*
*Source: Researcher's Computation, 2018*
a. Dependent Variable: Improved Household Income

*4.6. Discussion*

4.6.1. Influence of Knowledge and Skills on Improved Household Income

Knowledge and skills among members of art and craft cooperatives plays a very significant role on improvement of their incomes. Knowledge and skills enables enhances proper management of the business, sound business decision making and proper utilization of resources which ultimately leads to profit making hence improved income. From the results there is a strong positive relationship between knowledge and skills with a high positive correlation coefficient of 0.787. This shows that the two move in one direction meaning that the more knowledge and skills acquired by art and craft cooperative members, the higher income they earn. From the regression results, the beta coefficient for knowledge and skills is 0.302. Keeping other factors constant, a one percent increase in knowledge and skills leads to a 30.2% increase in household income among art and craft cooperative members. This is significant with a probability of 0.02. These results are similar to the ones of Casson (2007) who recognized that the entrepreneur will need to have different skills. It is skills and knowledge that enables the entrepreneur to make judgments, to coordinate scarce resources. And this will ultimately lead to higher returns in form of profits on the risks undertaken.

4.6.2. Influence of Training and Capacity Development on Household Income

There is a strong positive influence of training and capacity development on household income among cooperative members. From the trainings and capacity development they are able to learn new ideas of starting and managing business, sourcing and maintaining customers through providing quality services and offering quality products. Through training, they are also able to diversify their production through offering a variety of products and this leads to improved incomes. The correlation coefficient of 0.810 shows a strong association of training and capacity development and household income among members of art and craft cooperatives. The regression results indicates that keeping other factors constant, a one percent increase in training and capacity development leads to a 23.5% increase in income of art and craft cooperative members and vice versa. These results confirms the argument of Arogundade, (2011) that entrepreneurship education and training entails

philosophy of self-reliance such as creating a new cultural and productive environment, promoting new sets of attitudes and culture for the attainment of future challenges among them poverty and low income. This implies that training and capacity development is very fundamental for improvement of business income.

4.6.3. Influence of Creativity and Innovation on Household Income

Creativity and innovation is very fundamental for the development of any business and a country at large since it's one of the strategies of reducing unemployment within the economy. If the youth are able to be creative and innovative, they will be able to come up with new ideas which when implemented leads to generation of income and reduced job seeking hence reduced unemployment. Creativity and innovation also leads to exploitation of idle resources which can be used to create more job opportunities hence income generation. This indeed is the biggest challenge in African countries in that some of the resources are still lying idle due to low level of creativity and innovation. With creativity and innovation, the quality of industrial products improves through value addition and hence able to fetch higher prices. Creativity also enables the business people to come up with unique products which gives them an upper edge in a competition environment and hence able to earn more income. The results of this study show that there is strong association between creativity and innovation and income among art and craft cooperative members. This is supported by highly positive significant correlation coefficient value of 0.776 between the two. From the regression results, a one percent increase in creativity and innovation leads to 28.8% increase in household income. The results also indicate that a good percentage of the members of art and craft cooperative are not able to identify and use new technological process to improve their production. This could be due to lack of knowledge and skills, ignorance or exposure to competition. The results supports the sentiments of Aina and Salako (2008) who described entrepreneurship as the process of creating something new with value by devoting the necessary time and efforts, assuming the accompanying financial social risks at the end receiving resulting reward in form of increased business profitability.

## 5 Summary, Conclusion and Recommendations

### *5.1. Summary of Findings*

The study aimed at assessing the influence of entrepreneurship education on the improvement of rural household incomes among members of art & craft cooperatives. The study focused specifically on the influence of knowledge and skills, training and capacity development and creativity and innovation on improved incomes among art & craft cooperative members. The researcher used primary data collected using questionnaires and analyzed the data using SPSS software.

The first objective concerned the effects of knowledge and skills on improved income among cooperative members. The study found a positive significant effect of knowledge and skills on improvement of income among the members. Though the majority of respondents agreed that they poses knowledge and skills competencies, a smaller percentage were for the contrary. There was a strong positive association between knowledge and skills and improved income. The regression analysis findings further indicated a 30.2% change in improved income due to a 1% change in knowledge and skills keeping other factors constant.

The second objective analysed the influence of training and capacity development on improvement of incomes among the art & craft cooperative members. The findings indicated a positive significant influence of training and capacity development on improved income. The findings further indicated that majority are involved in training activities and that they are able to apply the knowledge gained from training in business management though a given percentage still lags behind. The findings further indicate that income of household change by 23.5% when training and capacity development changes by a unit keeping other factors constant.

The last objective involved investigating the influence of creativity and innovation on the improvement of household incomes among art & craft cooperative members. The study found a strong positive effect of creativity and innovation on improvement of household incomes among cooperative members. There is strong association between the two indicating that creativity and innovation drives income generation among cooperative members through creation of more employment opportunities and improving the value of products and ways of doing business. Keeping other factors constant, a 1% change in creativity and innovation leads to 28.8% increase in income among the cooperative members. There is still a significant percentage of cooperative members who doesn't poses the creativity and innovation competencies.

Moreover entrepreneurship education account for 79.5% variations in income the remaining 20.5% being explained by other factors that affect income generation among the members of art & craft cooperatives.

### *5.2. Conclusion*

From the research findings above, the researcher made the following conclusions.

Majority of art and craft cooperative members have acquired entrepreneurship education and are able to put it into practice while some percentage haven't and are not able to apply the same. Unfortunately, inaccessibility to resources/internet that guide in the management of business and inability to identify and use new technological process to improve their production is still a challenge to a greater percentage of members.

There is a strong influence of entrepreneurship education on income improvement among members of art & craft cooperatives. All the three facets of entrepreneurship education considered in this study exhibited a strong positive

association with income improvement. Moreover creativity and innovation exhibited the strongest association with income improvement among the members of the cooperative an indication that it's the biggest driver of income generation. Knowledge and skills however contributes the greatest on income generation since it brings the highest percentage change in income improvement of 30.2%.

*5.3. Recommendations*

From the findings it is evident that entrepreneurship education is very fundamental in stimulating income growth. Based on the findings and conclusions of this study, the researcher recommends the following.

More training and capacity development programs should be organized for the members of cooperative to enable them strengthen their skills and even develop new skills in management of their business. The training offered should be focused on entrepreneurial development and its importance in income growth so that the members are able to be motivated to participate in such programs.

Secondly the members should be exposed to technological advancement and awareness so that they are able to get new business ideas, implement them for the benefit of increased income. This can be achieved through sharing with them the various technological platforms and how to showcase their products by online marketing and selling hence improving their income. Additionally exposing them to online platform enables them to get new tips on how to manage and expend the business.

Business incubation and research centers should be set up to enable the members to participate in showcasing the new ideas and have an opportunity to think widely and consult on pertinent business issues which improves his/her knowledge in terms of creativity and innovation.

Lastly, the members should be on the forefront in attending entrepreneurship education forums in order to get the knowledge and skills needed in starting and running the business.

*5.4. Suggestion for Further Research*

This study focused on entrepreneurship education as one of the factors that leads to improvement in income more research can be done on other factors such as socio cultural education, education on legal affairs pertaining to business to ascertain their effect on improvement of income of cooperative members.

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