

# Secondary Education Attainment and its Role in Poverty Reduction: Views of Graduates Working in Informal Sector in Rural Tanzania

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## Abstract

Education is the process of imparting or acquiring knowledge and skills useful in the development of powers for reasoning and judgment. It contributes to development directly because of its relevance to the wellbeing and freedom of people and indirectly through influencing social change and economic production. This study sought to examine the contribution of secondary education knowledge and skills in enhancing self-employment in informal sectors among graduates residing in Mvomero District of Tanzania. Quantitative methods were used to collect data in which stratified sampling was done to obtain 400 participants, including both primary and secondary education graduates working in informal sectors as entrepreneurs and peasants. This was followed by systematic sampling to select participants from each stratum. The self administered structured questionnaire was used to elicit opinions on the impact of skills and knowledge acquired at school in poverty reduction. The data were analyzed using Mann Whitney U test and the results showed that secondary education has a potential in poverty reduction as the knowledge and skills acquired by graduates during schooling were helpful in managing and opting for a payable economic activity.

**Key words:** Secondary education, Poverty reduction, Informal sectors, Mvomero district, Tanzania.

## 1. Introduction

Education is the process of imparting or acquiring knowledge and skills useful in development of powers for reasoning and judgment. For this reason, every society, community or state needs some form of education to be relevant to function and to fulfill its social obligations. Education contributes to development directly because of its relevance to the wellbeing and freedom of people and indirectly through influencing social change and economic production (Sen, 1999), thus becoming an important instrument for poverty reduction. This study examined if the knowledge and skills acquired in secondary education provides support for self-employment in informal sectors to residents in rural Tanzania. The study assessed the informal activities employed by both primary and secondary education graduates residing in Mvomero District of Tanzania, as well as the trend of activity preference in relation to educational attainment. Having the information on types of informal activities performed, the study then assessed the views of both primary and secondary education graduates on the role of education in enhancing job performance.

It is worth noting that poverty and education are two terms which are negatively correlated. This means that the higher the levels of education in the population, the lesser will be the number of poor individuals as education imparts skills and knowledge which are supportive in economic productivity (Maile, 2008; Njog, 2010). Studies have identified education as having a wide range of non-economic benefits arising from better educated people and higher knowledge in society (Becker, 1975; Blundell et al. 1999 & Barro, 2001). This is so because the skills and knowledge imparted through education enables an individual to effectively utilize the physical and natural resources in the process of development, more productivity.

Traditionally, Tanzania has been using education as a key weapon to fight against poverty. Since its independence in 1961, the country declared a war against three major enemies, namely, poverty, ignorance and ill-health (Mtey & Sulle, 2013). Subsequently, the country implemented various policies which intended to improve the education system as part of the efforts to fight against poverty. One of the policies was the Universal

Primary Education which aimed at expanding enrolment in primary education (Ngowi, 2009) and promoting adult education so as to tackle illiteracy. By establishing such initiatives in the 1970s, the country succeeded to reduce illiteracy from 51 percent in 1980s to 37.1 percent in 1990s. However, the reduced enrolment and high levels of dropout in schools, caused by economic crises and structural adjustment programs during the late 1970s and early 1980s, were addressed by the donor funded program, Primary Education Development Plan (PEDP), starting in 2002.

Because of the increased enrolment in primary education, it was necessary to expand secondary education in order to capture a big number of primary education graduates. In view of this, the then Ministry of Education and Culture, now Ministry of Education, Science and Technology, implemented another donor funded program to increase access to secondary education (Ministry of Education and Culture, 2002). Since then, the total enrollment in ordinary level secondary education increased from 238,194 students in 2000 to 1,466,402 in 2010, which accounted for 249% increase (SEDP II, 2010, MOEVT, 2010 & BEST, 2013). The Ministry of Education sees secondary education expansion as a key weapon in fighting against poverty as the knowledge and skills imparted, helps an individual to be productive (TIE, 2007). Secondary education graduates are therefore expected to have improved skills and knowledge to be competent enough to join the informal sector once they graduate (ibid). The abilities, knowledge, values, attitudes and skills acquired at school are useful for both the individual and societal progress

The recent dramatic expansion of secondary education all over the country has led to an increase of secondary education graduates in the society than before. Since secondary education absorbs many candidates who are likely to work in informal sectors, (TIE, 2007; Osaki, 2004), it can be regarded as an effective tool in fighting against poverty. This study examined whether the knowledge and skills acquired in secondary education provide support for graduates who are involved in self-employment in the informal sectors as scholars posit that the economic growth of Tanzania is likely to occur in informal economy which could be fuelled by small and medium sized businesses which are likely to be established by secondary education graduates (ibid). Nevertheless, there are limited studies in the context of Tanzania which have investigated the role of secondary education skills and knowledge in providing support to graduates working in the informal sector. Most of the studies have mainly focused on challenges facing secondary education in Tanzania and the related factors (Makombe. et al, 2010; BEST, 1998-2016; Sumra & Katararo, 2014; Twaweza, 2012 & Makunja, 2016). In view of this, the current study focused on investigating graduates' livelihood to find out their views on the usefulness of secondary education knowledge and skills in their life.

### *1.1. Theoretical framework*

This study uses human capital theory as postulated by Schultz in 1960. Human capital comprises of both skills and knowledge. It is the capacity of human beings as productive agents to promote increases in income through the acquisition of skills and the accumulation of knowledge (Clark, 2006, p.240). Investing in human capital can raise the market value of future labor supply and it is deliberately accumulated by investment in training and education by individuals (ibid). Education of an individual is central to human capital acquisition (Joop & Henriette, 2007) and to the process of development. The theory considers an increase in the average years of schooling in the population to be the one which increases the human capital stock, and thus the production level (ibid). Investing in education may therefore result in generating income and hence poverty reduction. This study thus, examines whether the knowledge and skills acquired in secondary education provides support for self-employment in informal sectors to graduates in residing in Rural Tanzania.

### *1.2. Secondary Education Attainment and its Role in Poverty Reduction*

Secondary education can play a crucial role in poverty reduction because it is the level of education which absorbs many candidates who are likely to work in informal sectors. Manda and Bigsten (1998) analyzed the impact of educational expansion and returns to schooling in Kenya and found that private returns to secondary education was high, while it was close to zero for primary education. In addition (Okojie, 2002) asserts the educational levels to be significant elements in reducing the chances of the household to be poor (Rodriguez and Smith, 1994; Coulombe and McKay, 1996) and the likelihood of household being poor is higher for the lower level of education. The aforementioned studies are supported by Dollar and Kraay, 2002, who see the impact of primary education attainment is not so much important in poverty reduction. These studies insist on education advancement and specifically on the level of education to be a notable tool towards poverty reduction.

In insisting the role of secondary education in poverty reduction, Bossier, Knight and Sabot (1985) distinguished between cognitive knowledge and skills acquired through schooling, native ability and years of education. They found that attendance to secondary school in itself was not sufficient to guarantee success in the labor market but that the level of cognitive achievement is vital. The findings indicated that the higher rate of return to secondary education were due to what is learned in schools. In addition the data from the 2000/2001 Integrated Labor Force Survey in Tanzania showed a greater difference in wages from those having secondary education compared to primary school graduates (Wedgwood, 2007). The difference in earning is due to the differences in cognitive achievement which favors the one who attained secondary education to be more competent than those who did not attain secondary education. We can thus affirm that having secondary education is economically advantageous than not having.

The role of education and the level of education in particular have shown a significant impact on poverty status of household. A study conducted by Shirazi, 1994 cited by Janjua & Kamal, (2011) acknowledged the proportionality of poor households having highly educated heads was extremely low. He also affirms the probability of the household being poor to decrease as the educational level of the head of the household increases. This study tells us how the level of education of a single individual in a family can affect the poverty status of the whole family and if not the society. Moreover the level of education as a tool in poverty reduction has been shown by (Awan. et al, 2011), who found monthly earnings of an individual worker in Pakistan increased by 7.3 percent with an additional year of schooling. The study also found that each additional year of schooling increased earnings by 3 percent at primary level, 5 percent at secondary level, and by 7.1 to 8.2 percent at higher/tertiary level. It is hence quite obvious that education can increase the earning potential of the poor (Nasir & Nazli, 2000). It is thus important for the leadership and policy makers in developing world to universalize secondary education so as to reduce poverty in their respective countries to a great extent.

The Chronic Poverty Research Centre (2005) showed the vital role of formal education in poverty reduction. They showed a strong negative correlation between education and chronic poverty. Furthermore, the Chronic Poverty Research Centre (2008) shows that, low education is a key factor in keeping people poor over decades or lifecycles. The literature asserts the importance of the level of education of an individual to be the key tool in fighting against poverty since advancement in education can impart knowledge and skills to an individual which are helpful in economic development and hence reduce poverty. In line with the empirical studies, the present study intended to establish whether the knowledge and skills acquired in secondary education provides support for self-employment in informal sectors to graduates residing in rural Tanzania

### *1.3. Education Attainment and Business Performance*

Education level of an individual as an effective tool in entrepreneurship has been documented by a number of studies. These studies have shown positive relationship between education attainment and entrepreneurial performance. Swai et al, (1997) affirms that, entrepreneurs with post-primary education tend to establish more profitable enterprises. Similarly (van Praag. et al, 2009) shows formal education to enhance the performance of entrepreneurs importantly and significantly in United States of America. In addition the impact of schooling on entrepreneurial performance (van der Sluis & van Praag, 2007) tends to be significantly positive for 67% of the observations in industrial countries and for 50% of the observations in developed countries. They further concluded that, individuals with more schooling indeed tend to perform better as entrepreneurs. By having more secondary education graduates recently in rural Tanzania, there could be social economic impacts and in entrepreneur activities in particular. This study thus examined whether the knowledge and skills acquired in secondary education provides support for self-employment in informal sectors to graduates residing in Rural Tanzania.

The returns of education and post primary education in particular has shown to have positive effects in enhancing self employment to graduates by a number of scholars. The study done by (Iversen et al, 2006) shows the higher levels of schooling to have better returns for the self-employed, while lower levels indicate hardly any return in self-employment. Similarly García-Mainar and Montuenga-Gómez (2004) affirms that, secondary education is the most profitable choice for the self-employed. From the aforementioned empirical evidences we may conclude that the level of education matters for an individual to perform better in entrepreneurial activities as (Kangasharju & Pekkala, 2002) higher education improves several abilities needed in business such as risk-awareness and market prospects comprehension.

Not only does the aforementioned literature acknowledge the positive returns of education in supporting self employment, but also (Van der Sluis, Van Praag & Vijverberg, 2005) performed a meta-analysis to assess whether there are any consistent findings from the vast empirical entrepreneurship and economic literature with respect to the impact of education on performance and choice of entrepreneurship. They concluded that education has a significantly positive impact on entrepreneurs' performance. The positive impact of education to an entrepreneur is due to the knowledge and skills gained during schooling. For this case there may be a great difference between entrepreneurs who have primary education compared to one with secondary education in Tanzania. This can only be possible if the knowledge and skills impacted in secondary education are useful and if not there may be no difference at all. This study therefore examined whether the skills and knowledge acquired by secondary education graduates in Tanzania promote better performance as entrepreneurs.

## 2. Methods and Materials

A cross sectional survey which employed a case study design was used to select primary and secondary education graduates in ten wards in Mvomero District in Tanzania. Stratified sampling was employed to get 400 participants both primary and secondary education graduates working in informal sectors as entrepreneurs or peasants. Systematic sampling was then employed to select the participants from each stratum. The study employed structured questionnaire to both primary and secondary education graduates so as to get their opinions on the impact of skills and knowledge acquired at school in poverty reduction. The data were analyzed by Mann Whitney U test to ascertain if secondary education plays a significant role in poverty reduction in Tanzania

## 3. Results and Discussion

### 3.1. Informal activities employed by primary and secondary education graduates in Mvomero district

The study found a number of informal activities employed by primary and secondary education graduates residing in Mvomero district such as: shops, honey bee keeping, restaurants, vegetables selling, E-money agents, electric technician, welding, brick making, motorbike technician, salon, phone repair, motorbike taxi (Bodaboda), middlemen, cereal crops business, tailoring, masonry, carpentry and peasantry. The Mann Whitney U test was then performed to identify the type of businesses which were significant compared to others. The table below shows the types of informal activities/businesses which are significant than others.

**Table 1: Informal activities employed by primary and secondary education graduates in Mvomero District**

	Cereal crops business	Electric technician	Restaurant business	Vegetables business
Mann-Whitney U	3440.5	3685.5	3208.5	3420.5
Wilcoxon W	7626.5	7871.5	6863.5	7075.5
Z	-2.16547	-2.08735	-2.99549	-1.65672
Asymp. Sig. (2-tailed)	0.030351	0.036856	0.00274	0.097576

*Grouping Variable: Education level of the respondent*

Though there are different informal activities employed by both primary and secondary education graduates in Mvomero District, some appear to be significant than others. For example, cereal crop business  $P= 0.0303$ , electric technician  $P= 0.0368$  and restaurant business  $P=0.002$  are more significant than others.

Being aware of the informal activities practiced by both primary and secondary education graduates, the study intended to ascertain whether there are any significant differences in business preferences between primary and secondary education graduates.

**Table 2: Types of informal activities in relation to educational level of the respondents**

Business Type/Informal activity	Primary Education		Secondary Education		Total Count
	count	Percent	Count	Percent	
Cereal crops	5	27.8	13	72.2	18
E-money Agent	1	20	4	80	5
Electric Technician	0	0	4	100	4
Restaurant	23	76.7	7	23.3	30
Vegetables	33	61.1	21	38.9	54
Phone repair	1	100	0	0	1
Motorbike taxi	4	36.4	7	63.6	11
Middlemen	0	0	1	100	1
Shop	15	50	15	50	30
Honey Beekeeping	1	50	1	50	2
Welding	1	100	0	0	1
Brick making	3	60	2	40	5
Salon	3	42.9	4	57.1	7
Motorbike technician	2	28.6	5	71.4	7
Masonry	5	50	5	50	10
Carpentry	4	38.8	9	69.2	13
Tailoring	10	52.6	9	47.4	19

*Grouping Variable: Education level of the respondent*

As shown in the table above, businesses which seem to attract secondary education graduates are cereal crop production, E- money agency, electrical technician, motorbike taxi, middlemen, shop, salon, motorbike repair, and carpentry. Primary education graduates operate in businesses such as; restaurants, vegetables, phone repair, welding, brick making, shop operation, masonry and tailoring. With this trend of business preference it can be concluded that, secondary education seem to prefer business by average of 53.4% than primary education graduates who had the average of 46.6%. The trend suggests that, the knowledge acquired in secondary education is vital in business performance to graduates than the knowledge acquired in primary education. Since the informal sector and entrepreneurship in particular is a key instrument in poverty reduction, it is therefore advisable that, developing countries should make secondary education to be universal in order to significantly alleviate poverty in their countries.

Apart from entrepreneurial activities, primary and secondary education graduates in Mvomero District also engage in peasantry. The following table shows Mann Whitney U Test on the type of agricultural products produced by both primary and secondary education graduates in Mvomero district.

**Table 3: Types of agricultural products employed by primary and secondary education graduates in Mvomero District**

	Diary keeping	Layers keeping	Maize production	Vegetable production	Paddy rice production	Irish potatoes production
Mann-Whitney U	2736	2773	2757	2549.5	2340.5	2727.5
Wilcoxon W	4389	7624	4410	4145.5	3993.5	4380.5
Z	-1.0820439	-0.3796645	-0.156650472	-0.85830564	-1.9562151	-0.502549118
Asymp. Sig. (2-tailed)	0.27923303	0.70419446	0.875520323	0.390723717	0.05043982	0.615281311

*Grouping Variable: Education level of the respondent*

Table 3 shows the types of agricultural products to both primary and secondary education graduates residing in Mvomero District. The products are Dairy, Layering, Maize, Paddy rice, Irish potatoes, Fruits and Vegetables. Paddy rice seems to be significant than all agricultural products at P= 0.050.

**Table 4: Types of agricultural products in relation to education level of the respondents**

Type of agricultural products	Primary Education		Secondary Education		Total Count
	count	Percent	Count	Percent	
Diary	1	100	0	0	1
Layering	0	0	1	100	1
Maize	58	63.7	33	36.3	91
Paddy rice	37	74	13	26	50
Irish potatoes	3	75	1	25	4
Fruits	3	60	2	40	5
Vegetables	25	69.4	11	30.6	36
Other	4	80	1	20	5

*Grouping Variable: Education level of the respondent*

According to table 4, Primary education graduates prefer engaging in agricultural activities (peasantry) than secondary education graduates. There was 65.3 % of primary education graduates compared to 34. 7% of secondary education graduates who engage in agricultural production. This trend of preference in a specified type of informal activity could be influenced by the level of educational attainment resulting from knowledge and skills acquired at school. It could influence the competence and choice of business type. An individual opt to practice activity in which she/he has competence. In regard to education policy statement which affirms secondary education to be a means of transforming social economic situation in Tanzania (TEP, 1995; TDV 2025; TIE 2007 & TIE, 2010), this study reveals the potential of secondary education attainment in transforming the rural economy. Secondary education could act as the best tool in poverty reduction among the many youths who attend secondary education compared to those who attained tertiary education.

This study found the majority of secondary education graduates to employ nonfarm informal activities which pays relatively higher rates than farming in Tanzania. This finding is in agreement with World Bank 2015 report. Secondary education graduates opt to employ nonfarm economic activities than primary education graduates due to their skills in management. In addition, Janvry and Sadoulet, (2001) showed that education is a key factor in determining access to remunerative off-farm activities and self-employment and higher incomes. The ability to run business is a result of knowledge and skills acquired in secondary education. A greater change could be realized if the government of Tanzania will work on the challenges facing secondary education, such as poor quality, which is a result of the numerous challenges. By doing so, secondary education would produce competent candidates who could be the agents of change in the country.

### 3.2. Usefulness of Education in Business Performance

The purpose of this study was to assess whether the knowledge and skills acquired at school provides support for self-employment and on-the-job performance in the informal sector. Structured questionnaires regarding the usefulness of skills and knowledge in business performance were asked to both primary and secondary education graduates. The Mann Whitney U test was then used to assess whether secondary education knowledge and skills have a significant impact on providing support for self employment and job performance.

**Table 5: The role of formal education knowledge and skills in providing support for self-employment and business performance**

	Helpfulness of educational knowledge and skills in business performance	Helpfulness of education level in business creativity	Helpfulness of formal education knowledge in attracting and maintaining customers	Satisfaction of the educational level in managing business
Mann-Whitney U	12854	13037.5	12770	12945
Wilcoxon W	28607	28437.5	28170	28521
Z	-1.996176571	-1.68201102	-1.93327	-2.20717
Asymp. Sig. (2-tailed)	0.045914707	0.092566703	0.053203	0.027302

*Grouping Variable: Education level of the respondent*

The table above shows the impact of educational knowledge and skills to be significant in business performance  $p = 0.0459$ , satisfaction of the educational level in managing business  $p = 0.027302$  and slightly significant in attracting and maintaining customers. The results show the skills and knowledge acquired by an individual in formal education could play a significant role in providing support for self employment and business performance. Table 6 below clarifies the level of education which could play a great role in poverty reduction.

**Table 6: The role of formal education knowledge and skills in business performance**

		Education level of the respondent	
		Primary education	Secondary education
No	Count	58	37
	%	61.05263158	38.94736842
Yes	count	119	124
	%	48.97119342	51.02880658

*Education level of the respondent: Cross tabulation*

The table above shows that the skills and knowledge acquired in secondary education is more useful than primary education as 61.05% of primary education graduates acknowledged that the educational knowledge and skills are not useful in business performance. According to the results we can thus conclude that knowledge and skills acquired in secondary education in Tanzania could be useful in business performance.

Concerning the role of formal education knowledge and skills in attracting and maintaining customers, the results show secondary education to have a significant impact, as 62% of primary education graduates disclosed that the knowledge and skills acquired in primary education is not useful in attracting and maintaining customers. The observed results can be concluded that, secondary education is a useful instrument in reducing poverty among graduates in Tanzania.

**Table 7: The role of formal education knowledge and skills in attracting and maintaining customers**

		Education level of the respondent	
		Primary education	Secondary education
No	Count	46	28
	%	62.16216216	37.83783784
Yes	count	129	132
	%	49.42528736	50.57471264

*Education level of the respondent: Cross tabulation*

With regard to graduates' satisfaction with their educational level in managing business, secondary education graduates seem to be more satisfied with their educational levels than primary education graduates as shown below in table 8. Amongst them, 65% of primary education graduates compared to 35% of secondary education were not satisfied with their education level in managing business. This finding further affirms that, secondary education have a significant outcome in poverty reduction to graduates.

**Table 8: Satisfaction of the educational level in managing business**

		Education level of the respondent	
		Primary education	Secondary education
No	Count	39	21
	%	65	35
Yes	count	137	141
	%	49.28057554	50.71942446

*Education level of the respondent: Cross tabulation*

However it has been documented that secondary education has failed to impart the required knowledge to its candidates (Twaweza, 2012; Makombe. et al 2010 & BEST, 1998-2016) as there has been massive failures in the national examinations. This study reveals secondary education in Tanzania to have some potential in informal sector; the Ministry of Education should therefore improve the curriculum by incorporating knowledge and skills

which could be useful in the informal sector. The knowledge regarding entrepreneurship could be helpful to graduates and the country at large as it has impact on poverty reduction.

#### 4. Conclusion

Though currently there are a number of challenges facing secondary education in Tanzania, (Makombe. et al 2010; Ngao, 2011; Jidamva, 2012; King, 2013; Komba & Jonathan, 2013 and Sumra & Katararo, 2014), this study reveals the potential of secondary education as an instrument in poverty reduction. The ongoing discussion about the current quality of secondary education in Tanzania (Sumra & Katararo, 2014) that has been referring from final national examinations that test students in few learning domains is questionable as they cannot fully explore student's knowledge and skills. These types of examinations have been failing students up to more 70 percent (Twaweza, 2012 & BEST 2012) students yearly. According to the standards set by the national examinations council of Tanzania, candidates who have failed cannot proceed to post secondary education. Having inadequate qualifications, in other words means a student has acquired nothing during their studies. These failures hence go back to their societies and self employ in the informal sector.

The graduates who join the informal sector have to start experiencing new life and learning how to sustain their livelihoods. To be competent in the informal sector, one needs particular skills and knowledge which are relevant to the local life. However the study has shown the potential of secondary education in poverty reduction, there is still much to evaluate in the curriculum content and methods of knowledge delivery. The secondary education curriculum in Tanzania provides basic knowledge which in most cases is delivered by teacher centered teaching and learning methods (Lupeja, 2011). The teaching and learning methods employed by teachers produce passive students who may not critically construct knowledge. When passive students graduate and go back to their societies it becomes hard for them to adapt in the new environments. Although the study has shown a difference between knowledge and skills acquired in primary and secondary education in informal sector performance, these difference would be realized better if the methods used in knowledge deliverance would create students to be imaginative and critical thinkers.

Besides teaching and learning methods, the curriculum content itself is not sufficient to prepare competent candidates in the informal sector. What have been taught are the basic skills which could not prepare a candidate to be competent enough in the informal sector. Though the curriculum claims to prepare learners to be productive, entrepreneurial and be able to address challenges emanating from the prevailing socio-economic situation, (TIE, 2007 & TIE, 2010) what has been done in the classroom does not reflect the policy statements. The challenge ranges from inadequate teaching and learning resources to the curriculum. Although the curriculum claims to impart entrepreneurial skills and knowledge to students, the curriculum has inadequate details of the knowledge. It covers basic concepts which may not be applied in the informal sector upon the student's graduation. Secondary education can therefore be a strategic and an effective tool in poverty reduction if it would provide knowledge and skills which could be applicable in the informal sector.

This study gives a full picture on the potential of secondary education attainment in poverty reduction in Tanzania. It reveals the trend of informal work preference in relation to education level of an individual. Secondary education graduates were identified to prefer nonfarm informal activities than farm activities. Nonfarm informal activities play a significant role in poverty reduction in rural areas than farming, as the majority of peasants use traditional and rain fed farming methods which may result to poor yield. The potential of nonfarm informal activities in poverty reduction was verified by the poverty assessment report in mainland Tanzania (World Bank, 2015). The report observed that, practice of nonfarm economic activities in rural Tanzania has been associated with decline of poverty. The report further establishes that, households relying on nonagricultural businesses as a main source of income experienced a remarkable decline in poverty. Tanzania is likely to alleviate poverty not only by making the majority of children to attain secondary education but also designing a curriculum which would make students competent enough to face the challenges in the informal sector upon graduation.

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