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Free Basic Education and Gender Disparities in Tanzania: An Empirical Assessment of Challenges and Policy Options

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Abstract: *This article seeks to evaluate whether free basic education is contributing to the achievement of inclusive education for girls in line with the global Sustainable Development Goal (SDG) 4 to achieve inclusive and equitable quality education and promote lifelong learning opportunities for all as envisaged by the Education and Training Policy of 2014 (ETP (2014)). The study objective was to identify key areas of gender disparities in free basic education. It investigated what needs to be done in-order to restore gender parity and promote inclusive and equitable education in the public education system in Tanzania. The study is based on empirical analysis of published basic education statistics to arrive at correlation analysis between gender and key statistical indicators for education improvement mainly using excel worksheet and the statistical package for data analysis known as STATA. Empirical data analysis was supplemented by a review of secondary data and archival sources on basic education performance since 2016. The main conclusion of the study was gender disparities were increasing with education level leaving females disproportionately deprived; and that social and cultural disparities impinged on gender parity in public education.¹*

Key Word: Gender parity in education, basic education, education policy, girls' education, primary and secondary education

Introduction

This Article is based on an analysis of the manner girls benefit from the Education and Training Policy of 2014 (ETP (2014)) decision to re-introduce free, universal basic education provision in secondary-level education in Tanzania. Free education in public primary schools was re-introduced in

¹**Acknowledgements:** The author acknowledges Tanzania Gender Networking Programme (TGNP), which provided funding, and secondary and archival data sources used by the study. Special acknowledgements go to Ms. Maureen Mboka for the guidance provided throughout data collection and analysis. Sincere acknowledgements go to Professor Emmanuel Kigadye, Director of Research and Publication at the Open University of Tanzania (OUT) for conducting and providing an ethical review and clearance for the research design and the study as a whole.

2002 under the Primary Education Development Programme (PDEP) after school fees throughout the public education system from primary to university-level were scrapped in 1963 following attainment of independence in 1961 (Daven, 2008; Mbawala, 2017). However, the payment of school fees was retained for secondary education after they were re-installed in 1990s following an extended economic recession and ensuing structural adjustment measures (SAPs) to address it (Daven, 2008). In 2014, the Government of Tanzania issued a new education policy which among other things proclaimed the commitment to extend basic education from primary Standard VII to Secondary Form V (i.e. from 7 to 11 years) and make it fee-free, universal and compulsory.

On 27 November 2015 the Government of Tanzania made good on its policy commitment and issued Circular No. 3 of 2015 and further elaborated by Circular No. 5 of 5 May 2016. Which brought ETP (2014) into effectual implementation by directing Government-owned schools to ensure the removal of fees and contributions paid by parents and guardians in the first four years of secondary education (year 8-11). Through the Circular fee-free basic education was extended from the first seven years of education to 11 years (i.e. from Standard VII to Form IV). Collectively this segment is now defined by the ETP (2014) as basic education. An addition shift was to make basic education free, universal and compulsory.

Although free primary education had already been introduced since 2002, voluntary and compulsory contributions were still allowed and widely practiced. Circular No. 5 of May, 2016 effectively banned contributions in Government primary and secondary schools.

This change in education policy was underpinned by Government commitment and obligation to achieve global sustainable development goals, stated policy to provide free secondary education in election manifesto, the new Ministry of Education, Science and Technology (MEST) Strategic Plan, and the desire for creating a critical mass of skilled population to service the national long-term goal of an industrialised export-led economy (URT-FYDP, 2016; MEST, 2018).

This Article is based on an analytical study that conducted a secondary analysis of available empirical data to identify gender barriers, challenges and obstacles which limit proportional access by girls to basic education. Such challenges limit strides towards global sustainable goals aiming at *“ensuring inclusive and equitable education and promote lifelong learning opportunities for all.”*

Implementation of Basic Education in Tanzania

Tanzania introduced free education policy for secondary education in 2016.² Free, universal compulsory primary education continued to be implemented in 2017 since 2002 when it was introduced for primary schools (URT-MEC, 2001; Blackden and Rwebangira, 2008; URT-TAMISEMI, 2008; URT-MEST, 2018).³

Prior to this, secondary education was subsidized but still not affordable to households, which constituted lowest income segments (Hakielimu, 2017; Mbawala, 2017). School fees in Government ordinal-level secondary schools was set at TSh. 20,000 (approx. US\$ 9) per year.

Pass marks attained by primary school girls alone were not sufficient to guarantee transition to secondary education. Available capacity in terms of Pupil to Class Ratio (PCR) was a crucial contributor to transition rate of girls from primary to secondary education.^{4,5}

Significantly, any type of contributions in public schools were banned through Education Circular No. 3 of May, 2016 in-order to increase school enrollment especially for children from poor households, including girls (MEST, 2016). This must have come as a relief for school-going girls from poor and vulnerable households. School-based extra-budgetary voluntary and compulsory contributions were significant barriers to enrollment and retention of girls in secondary education. The contributions accounted for expulsions which disproportionately affected girls from poor families (HRW, 2017). According to HRW (2017) girls had previously had to pay various informal voluntary and compulsory contributions per student per annum in secondary schools as shown by Table 1 below.

² Throughout this paper unless otherwise specifies, the term secondary education refers to ordinary-level secondary education and Forms 5-6 as “advance-level” secondary education. The term “basic education” refers to the first 12 years of formal education (Standard I to Form IV)

³The reference to universal and compulsory can be named as a misnomer or desired policy goal however in actual terms only those who attained the set pass mark in national primary education leaving examination (PLSE) were selected to join secondary education. In practice, there was a nearly universal pass rate/transition to secondary education. In 2017 out of 662,035 pupils who passed their PLSE in 98.31 percent passed and were admitted to secondary education (Msibira, 2017)

⁴ In the long-term PCR is an important indicator to take into account since the lack of physical space to host girls risks a return to the situation that was prevalent in previous years where eligible pupils could not be admitted for secondary education because of low PCR capacity

⁵ Although PCR is the strongest determinant to secondary school enrollment and hence transition rate, other important indicators are not being considered. These include overcrowding, pupil to desk ratio, pupil to teacher ratio, and pupil to toilet ratio. Cumulatively these contribute to low quality of learning environment and hence low achievement of relevant effective learning outcomes

Table 1: Voluntary and Compulsory Contributions Paid by Girls in Primary and Secondary Education Prior to ETP (2014)

School Item	Amount in TShs.	Amount in USD
School Fees per year	20,000	9
Boarding Fees per year	40,000	18
Payment of security guard per year	10,000	5
Contributions for desks upon joining the school	50,000	23
For Purchase of school bag, uniforms and various materials (sometimes school organized)	75,000	34
Private tuition (sometimes school organized)	Between 10,000-20,000	5-9

Source: (HRW, 2017: 45-49)

According to Svec (2011), Hedges, Mulder, James and Lawson (2016) there was an entrenched preference among cash trapped poor households to educate male children over their female siblings, contributing to lower enrollment rate among girls, higher risk and exposure to early and arranged child marriages; early, unplanned and unwanted pregnancies; and long-term women disempowerment and gender inequality across the SDGs. HRW (2017) finds the decision to scrap-out contributions in public schools was a significant stride towards eliminating gender disparities in education (SDG 4 Target 5).

The study finds the decision to ban all forms of contributions had evident positive effect on enrollment of girls in primary school. Enrollment of girls to Standard I, for example, rose from 727,727 in 2014 to 1,012,969 in 2016 signifying an increase 39.19 percent (BEST, 2016). Girls represented 48.9 percent of children enrolled in Standard I in 2016. This was a slight decrease from 49.69 percent (of 0.79 percent) proportion of girls enrolled in Standard I in 2014 (BEST, 2016).

Government through the Ministry of Finance and Planning (MoFP) has been implementing basic education policy through the budget. MoFP has been sending subventions of capitation grants to support implement of free basic education and compensate for the voluntary and compulsory contributions that were repealed and banned after introducing free basic education. Although the question of capitation grants needs a separate and detailed study, the study found the implementation of basic education policy as envisaged by ETP (2014) can be challenged following inadequate envisaged capitation grant transfers to run education programmes in schools after fees, voluntary and compulsory contributions were abolished in 2016. This is evidenced by findings from the Government Controller and Auditor General (CAG) found capitation grants to public schools declined and were not disbursed in time to support basic education (NAOT, 2017).

Table 2: Status of Capitation Grants Disbursements in Primary Schools

Year	Amount of Capitation Grants Budgeted (Billion TZS)	Amount of Capitation Grants Disbursed (Billion TZS)	Amount Not Disbursed (Billion TZS)	% of Capitation Grants Not Disbursed
2016	32	8	24	75
2015	54	18	36	67
2014	81	43	8	47
2013	133	97	36	27

Source: President’s Office Regional Administration and Local Government in NAO (2017)⁶

According to MoFP (2017) a total of 15,195,852,000 (USD 7,597,926) was received as capitation grants by 3,593 Government secondary schools between January – June, 2017. This accounts for approximately TSh. 704,882 (USD 353) and TSh. 1,716 (USD 0.8 cents) per school and per student per month (MoFP, 2017).

A stable and steady flow of capitation grants to support implementation of basic education is described as essential since capitation grants, as they stand, have been widely reported to be inadequate to support basic functions of running a school and achieving quality education for girls as stated by the ETP (2014), MEST Strategic Plan and SDGs (NAOT, 2017; HRW, 2017).⁷

Gender, Education and Development

Gender relations are culturally and location specific (Blackden and Rwebangira, 2004). That is why a short synopsis of the context of gender relations as stands in Tanzania is called for, and wanting in-order to put the gender disparities in basic education into perspective. Gender relations are culturally defined biological division of labour based on sex and other biological and social attributes (TGNP, 2007). According to URT-MCDGC (2011) gender is broadly defined as culturally and socially determined characteristics, values, norms, roles, attitudes and beliefs attributed to women and men through constructed identity in a society (URT-MCDGC, 2011:3). Sex in contrast refers to the biological difference of women and

⁶ NAO stands for National Audit Office Tanzania

⁷This has been a source of public dilemma as some parents in some public schools expressed in parent meetings and through school boards of their willingness to re-introduce voluntary contributions in-order to fill deficits created by insufficient capitation grants in-order to finance recurrent and capital costs needed for normal functioning of schools. The parents were concerned with whether their children were attaining quality education in the public schools. The Government has responded to this twice at the highest level by an order from the President that a total ban on pupil-based contributions should be maintained. The rationale given by Government was the need to adhere to NTP (2014) and the importance of ensuring education access by children from poor families is secured.

men. Achievement of gender equity and women empowerment (GEWE) has been an elusive goal in Tanzania despite constitutional guarantees and ratification of international instruments including United Nations Convention on gender equity and human rights (HRW, 2017). The driver behind protracted gender imbalances in key human development indicators has been attributed to deeply rooted cultural relations that both favour, and are dominated by men (Blackden and Rwebangira, 2004; TGNP, 2007). Being embedded in culture, a two-prong approach has often been adopted to remove gender disparities in society. These have been to focus on girls education as a long-term transformative approach to break the vicious cycle of generation gender disparities (Lokina, Nyoni and Kahyarara, 2016).

The Tanzania Five Year Development Plan (2016-2021) which focuses on human capital for transformation of the economy into a middle-income semi-industrialised economy identifies gender equity and empowerment as key to enhance human capital development and participation in economic transformation for industrialisation (URT-FYDP, 2016). According to the 2012 Census 51.3 percent (more than half) of the population were female (URT-2012 Census, 2013). Ignoring gender parity in human capital development invariable means eliminating direct participation of the majority of the workforce in the economy. Achieving gender parity in education and lifelong learning opportunities for all is key to the long-term transformation of the economy through women economic empowerment (Wuyts and Kilama, 2014). However, as this paper shows there are many constraints girls face in attainment of education.

Study Methodology

The study used Government owned primary and secondary schools as the unit for analysis for examining gender disparities in education. Although BEST (2016) contained data for both public and private schools, public schools were the only relevant ones to the policy directive to implement the NTP (2014) on free basic education. The study conducted secondary analysis of data and information contained in the annual education census and basic education statistics for 2016. Basic education statistics in Tanzania are collected through the annual basic education census, which has been collected annually for decades in each primary and secondary school (NBS and PORALG, 2016). The annual education census is collected annually in all pre-primary, primary and secondary schools.⁸Data and information

⁸According to BEST (2016) the education structure in Tanzania is stipulated in the Education and Training Policy of 1995 as 2-7-4-2-3+, that is; 2 years of pre-primary education (year 1 and 2); 7 years of primary education (Standard I-VII); 4 years of secondary education (Form 1-4); 2 years of secondary advanced level education (Form 5 and 6) and 3 or more years of higher education (BEST, 2016: 17). This study focused on level 2 (7 years of primary

collected from the annual education census is then published as primary education statistics. The study used these data and information datasets as secondary and archival datasets to conduct analysis of gender disparities that presented themselves after commencement of implementation of free basic education in Tanzania. Data collection of the annual education census was conducted through administration of a quantitative structural institutional questionnaire containing 391 basic education statistics indicators (NBS and PO-RALG, 2016).

Being a census, the survey covered all public and private primary and secondary schools. The study instruments were institutional questionnaires meaning one respondent responded on-behalf of the institution. To this end, the questionnaires were filled by heads of school. The data collection process was supervised by Ward Education Coordinators (WECs) and data entry into the Basic Education Information System (BEIS) was conducted by district statisticians. BEIS is an online, web-based system linked to PO-RALG.

The study methodology included analysis of data was analysed to derive simple primary statistical tables on basic education statistics using 391 basic education statistics indicators. Secondary data analysis conducted by the present study was conducted through Microsoft Excel to provide basic statistics such as rates, ratios, counts, percentages and average.

In addition to the basic education statistics, the study methodology also involved the analysis of other secondary data sources and archival data. The study analysed expenditure reports by MoFP on capitation grant transfers to public primary and secondary schools in financial year (FY) 2016/17. This involved an analysis of amounts transferred per school, per-capita transfers, and distribution of grants by priorities.

The study methodology also involved analysis of semi-processed data available on the Government Open Data Portal at opendata.go.tz which is available at the National Bureau of Statistics (NBS) data portal <http://www.nbs.go.tz/>. The study used Microsoft Excel spreadsheet to conduct secondary data analysis of empirical data contained in the NBS data portal.

The study conducted an in-depth analysis of the most current education sector budget to elicit policy commitments to support equitable and quality primary education leading to relevant and effective learning outcomes for girls. The budget analysis involved analysis and comparison of personnel

education) and level 3 (4 years of secondary education). Combined, the two levels have been termed as “basic education level”

emoluments (PE), other charges (OC) and development budget lines. The study also conducted in-depth Key Informant Interviews (KIIs) in MEST. Ethical considerations were applied as stated in endnote.ⁱ

Findings and Discussion

This paper provides an assessment whether the implementation of free and universal basic education was contributing to elimination of gender disparities in Tanzania. The SDGs have made a strong link between girls education and long-term gender equality and women empowerment (GEWE). They also draw a link between quality education and life-long learning opportunities and attainment of effective learning outcomes by girls which are both relevant for long-term elimination of gender disparities (SDG 4.1). The analysis presented in this study however shows despite the policy commitments, there are still a number of factors that militate against gender parity in basic education.

Girls Enrollment in Primary and Secondary (Form 1-4) Education

Available archival data show a total of 4,225,976 girls were enrolled in Government owned primary schools in 2016.⁹ This represented 50.66 percent of the total 8,341,611 children enrolled in primary schools.

The gross enrollment for girls in Government secondary schools in 2016 was 693,756.¹⁰ This represented 50.37 percent of all 1,377,049 students enrolled in Government secondary schools. The proportion of girls enrollment in secondary schools was slightly lower by 0.29 percent compared to primary schools. Overall, arguably, gender parity was found to be achieved (and even slightly surpassed in favour of girls) in Gross Enrollment Ratio (GER) in basic education in Tanzania.¹¹

⁹Primary Education in Tanzania is a 7-year education cycle after two years of pre-primary education. It is universal, compulsory and free to all children aged 6 to 12 years old (BEST, 2016). The extent to which students are enrolled in primary education is measured by the Gross Enrolment Ratio (GER). GER in the context of Tanzania education statistics is defined as the total number of pupils/students enrolled in a given level of education expressed as a percentage of the corresponding school-age population. Tanzania has been successful in enrolling both sexes of school age children.

¹⁰Formal secondary education consists of two levels. The first level is a four-year programme of Ordinary Level (O-Level) secondary education. The second cycle is a two-year programme of Advanced Level (A-Level) secondary education. The O-Level secondary education cycle begins with Form 1 and ends with Form 4 whereby Form 1 selection and enrollment in Government and Non-Government secondary schools is subject to the performance in PSLE

¹¹ Meaning (MDG 4.5 (a) "By 2030, eliminate gender disparities in education and ensure equal access to all levels of education" was achieved

Main Services Rendered in Fulfillment of Basic Education

The study conducted an archival and secondary analysis of a number of education quality improvement services that were accessed by girls and boys in Tanzania in 2016 as shown by Table 3.

Table 3: Service Provided to Further Equitable and Quality Education in Public Owned Primary Schools in 2016

Service Type	Primary	Secondary
Total No. of Schools	16,087 (0.9% increase since 2015)	3,601 (0.22% increase since 2015)
Total No. of Streams	182,645 in (2.8% increase since 2014)	32,595 (2.01% increase from 2014)
No. of Teaching Staff Available	Total: 191,772 Female: 99,676 7.05% increase from 2015	(Form 1-6) Total: 89,554 Female: 34,108 16.1% increase from 2015
PTR (Pupil Teacher Ratio)	1.42	1:16
PQTR (Qualified Teacher Ratio)	(Qualified primary school teachers (teachers Grade A and above 1.42)	1.17
% of shortage in Teacher's Houses	81.1	-
Pupil Classroom Ratio	1:77	1:42
PLR (Pupil to Pit Latrines Ratio) for Female Students	1:56	1:31
% of shortage of Libraries	88	-
Desk to Pupil Ratio	1:5	1:1
% of schools with electricity	22.2	2,253 (62.56%)
% of schools with generator	1.5	567 (15.7%)
% of schools with solar	7.5	1,554 (43.15%)
% of schools with other sources of energy	54.6	114 (3.16%)

Source: BEST, 2016 (PO-RALG)

As it can be seen from Table 3 above, girls in 16, 087 primary schools and 3, 601 secondary schools across the country received various education services in 2016. School facility capacity for example, increased by 0.99 percent and 0.22 percent in primary and secondary schools respectively between 2015 to 2016. This meant more capacity for girls to attend school and take advantage of available free basic education.

Data and information obtained by the study from archival and secondary data sources including BEST (2016) and NBS (2018) show more teaching staff had been recruited to support implementation of basic education in line with ETP (2014); and in-order to increase delivery of quality education especially in under-served areas (MEST, 2017). This is evidenced by data and information shown by Table 3 above that shows teaching staff increased by 7.05 percent and 16.1 percent for primary and secondary schools between 2015 and 2016. This had a positive effect on the Pupil to Teacher Ratio (PTR), a key indicator of quality education to girls which stood at 1:42 in

primary and 1:16 in secondary schools. Archival data analysed by the study showed the Pupil to Class Ratio (PCR) for primary schools was still high but an accepted level had been reached for secondary schools where the PCR was closer to the recommended level of 1:35.¹² The ability for teachers to provide quality education has been attributed to availability of houses for teachers. Consequently, a low proportion of teacher's houses contributes to less preparation time, late arrival, early departure and less presence, particularly female teachers, in schools to provide protection to girls. Table 3 above shows shortage of teacher's houses in primary schools remained high at 81.1 percent shortage (BEST, 2016).

There are other service provision and infrastructure indicators which continued to limit education provision, access to quality education and learning to girls as shown by Table 1 above. According to BEST (2016) the pupil class room ratio (PCR) for example remained high at 1:77 for primary schools compared to 1:42 for primary and secondary schools. A high PCR leads to overcrowding which promotes discomfort and sexual harassment to girls (HRW, 2017). Overcrowding contributes to bullying minority girls in class. This contributes to a poor learning environment for girls.

It can further be seen from Table 1 that five girls shared a desk in primary schools. Girls in 88 percent of primary schools did not have access to libraries. School absenteeism for girls has been attributed to lack of toilet facilities in schools which can enable them to change and refresh sanitary towels. However clean and accessible toilet facilities in emergency situations were not available to girls due to overcrowding and inadequate toilets in schools. As it can be seen from Table 3 above that 56 girls shared one pit latrine in primary schools and 31 in secondary schools. The study respondents through KIIs argued long queues to girls toilets at short break-time sometimes forces girls to use nearby thickets which expose them to personal danger, low self-esteem, sexual harassment and abuse. These factors constrain education performance and retention among girls, especially in secondary schools where girls have already reached puberty.

¹²Information obtained by the study from Key Informant Interviews (KIIs) revealed the more favourable PCR reached in secondary schools could be a result of both good and bad reasons. The good reason was the massive construction of secondary schools in each ward (approx. 1 secondary school for 4 villages) contributed to the observed decline in PCR. The bad part was, a low PCR could be a result of low transition rate from primary to secondary education; and high drop-outs by girls as they progress to higher levels of secondary education (a trend which will be demonstrated in subsequent sections as being more prevalent among girls). This creates another factor that contributed to gender disparities in secondary education. High drop-out among girls contribute to a classroom dominated by boys and not conducive to the minority remaining girls to learn.

The connection of schools to electricity in 2016 was impressive, particular for secondary schools, but more needs to be done. Connection of schools to electricity enabled girls to access information and communication technology (ICT) practical lessons, as well as practical lessons of other subjects such as physics. It also allowed them to attend night preparatory classes in boarding schools or hostels. Table 1 above shows 62.56 percent of secondary schools were connected to national grid electricity. 15.7 percent had a generator. 43.15 percent had a connection to solar energy.¹³

This was an impressive proportion taking into account more than half of secondary schools were connected to the national grid, and about a half to solar. This proportion is further likely to increase given the Government ongoing effort to connect all villages to the national grid by 2020 through the rural electrification programme under the Rural Electrification Agency (REA). Higher level of school electrification has the likely hood of increasing the application of Information Communication Technology (ICT) in basic education.

This being said, much more effort needs to be done to connect primary school to energy sources. Table 3 above shows connection to electricity and other energy sources was much lower for primary schools. Only 22.2 percent of primary schools were connected to the national grid. Only 1.5 percent and 7.5 percent of the schools had a generator and connection to solar energy respectively. Connection to reliable electricity and other energy sources to schools which are at early states of basic education will contribute to development of skills in ICT, science and practical studies which are essential in today's digitized learning environment and therefore promote gender parity in access to lifelong learning opportunities.

The majority of primary schools – 54.6 percent - depended on “other energy sources” which in most cases is wood fuel (compared to 3.16 percent secondary schools). This meant girls were most likely sent to fetch firewood either during or after classes, contributing to their time used out of classes in extra-curricular activities such as sports and playing during recess. Both are useful for sports and cognitive development.

Factors Militating Against Girls Education

While cognisance is made to the above service provisions towards furtherance of girls education in Tanzania, a critical gender analysis reveals the girl child was still negatively discriminated against fully realising intended learning outcomes in both primary and secondary education. For

¹³ In some cases, the count is repeated in that the same school has national grid electricity and/or back-up generator and connection to solar energy

example, girls faced a higher rate of school drop-out compared to boys as shown by Table 4 below.

Table 4: Drop-out Rate among Girls in Primary and Secondary Schools

SN	Reason	Primary		Secondary	
		No.	% Dropout by Reason	No.	% Dropout by Reason
1.	Death	1,334	3.7	316	0.5
2.	Pregnancy	251	0.3	3,439	5.6
3.	Truancy	37,658	96	26,069	42.4

Source: BEST, 2016

It can be seen from Table 4 above that truancy was the leading cause denying girls of education at both primary and secondary levels. Pregnancy as a cause of dropout was consistently under-reported due to the unintended effects of the Sexual Offences and Special Provisions Act (SOSPA) of 1998 that criminalized pregnancy to any school girl and consensual sex with girls under 18 years by a male of any age as a capital offence (Awinia, 2008).

In-order to circumvent this and give girls a second chance, school authorities simply recorded pregnancies as truancy, and readmitted the girls as repeaters to continue with their education after child-birth. The seriousness of the problem of pregnancy and adolescent sexual and reproductive health can be seen when combined with truancy as shown by Table 4 where truancy contributed to 96 percent of dropouts in primary and 42.4 percent in secondary education levels. Furthermore, there was 28.1 percent increase in dropout by girls in primary schools between 2013 and 2015 (BEST, 2016).

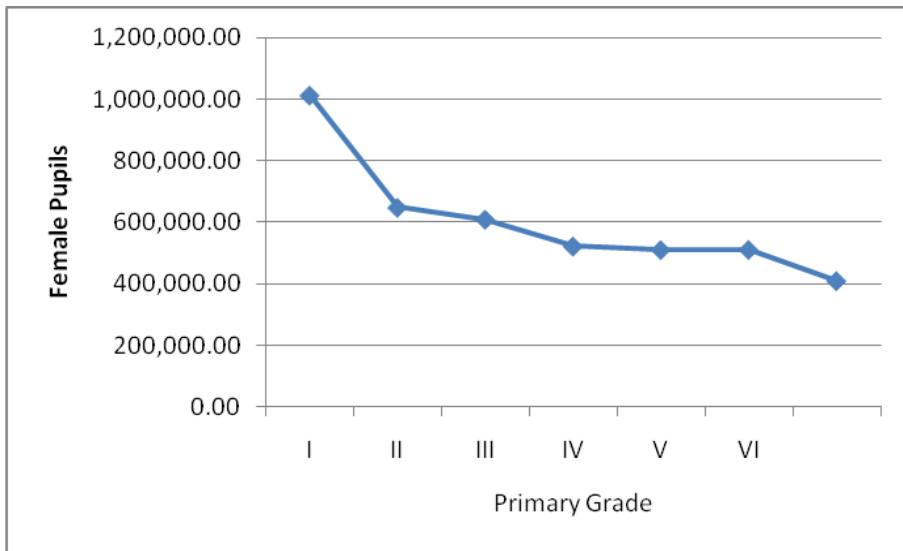


Figure 1: No. of Girls Enrolled in Public Primary Schools

Source: BEST, 2016

As a result of infrastructure and reproductive health challenges faced by girls in basic education, the cumulative impact of this was the observed incremental decline in girls enrollment across basic education. The higher the grade the lower the proportion of girls who remained in schools. This is evidenced by Figure 1 and 2 below show the proportion of girls enrolled in primary and secondary schools declined with grade/age.

The same decline pattern can be observed for secondary education as shown by Figure 2 below.

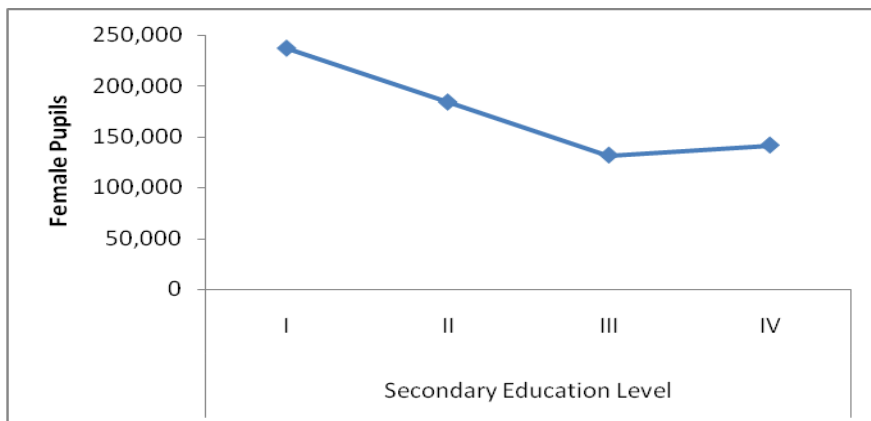


Figure 2: Number of Girls Enrolled in Public Primary Schools

Source: BEST, 2016.

It can be observed there was an increasing trend in dropout of girls as they advance upwards the education ladder in both primary and secondary education. This contributed to a declining Net Enrolment Ratio (NER) for girls.¹⁴ The NER for girls in primary education was 85.8 percent in 2016. Although this may sound impressive on the surface; inversely, it also meant there were 14.2 percent of school age girls (7-13 years) who were not in school (BEST, 2016).

The NER for public secondary education (Form 1-4) was only 33.4 percent in 2016. This was despite 2016 being the year when free, universal and compulsory education was introduced in secondary education. While the global SDGs call for eliminating gender disparities in education, 66.6 percent of girls at the age of attending secondary education (14-19 years) were not in school.¹⁵ Girls education and retention in primary and secondary is likely to be enhanced with a higher ratio of female teachers who can serve as role models and provide girl friendly services and protection against sexual abuse in schools. Girls were well served in this respect as 51.9 percent of teachers, the majority, in primary schools were female in 2016. The proportion of female teachers in secondary education (Government and Non-Government schools) was lower at 38 percent in 2016.

Gender Disparities in Education Outcomes

Education outcomes are the ultimate measure of the quality of education. School infrastructure, enrollment, retention, teachers and textbook availability is ultimately measured in terms of achieved education outcomes. The study has established that the cumulative impact of the aforementioned gender disparities worked against prospects to achieve SDG 4.1 which states “by 2030, all girls and boys to complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.” Ultimately, learning outcomes from an education system are measured by the pass rate. Pass rate is defined as the number of pupils/students who passed an exam expressed as percentage of total candidates who sat for the examination (BEST, 2016). According to URT-

¹⁴NER represents school age pupils/students enrolled in a given level of education expressed as a percentage of corresponding school-age population. A lower NER means there were more girls of school going age who were not enrolled in schools thereby missing on education

¹⁵ Important to note that NER in secondary education was affected by initial dropout rates in primary and further dropouts in secondary education. There are various factors outside the education system which contribute to this including pregnancies, early/forced marriages, child trafficking as domestic workers and low education achievement which serves as an incentive for dropout

NECTA (2017) 909,950 students set for primary school standard VII examinations (PSLE) and 662,035 passed (Msibira, 2017; URT-NECTA, 2017). This translates to an overall pass rate of 72.75 percent. According to the same source, 480,784 girls set for the exams, which represented 52.8 percent of all pupils who sat for PLSE in 2017. Out of the 662, 035 students who passed, 341,020 were girls representing 51.51 percent among those who passed. However, reflecting critically, although girls were the majority of those who passed PLSE, the pass rate among girls was 70.03 percent, which was lower compared to 74.80 percent among boys.

Regarding the Secondary Education Examinations (CSEE) 385,767 students sat for the exams, 198,036 being girls representing 51.34 percent and 187,731 boys; equal to 48.66 percent (URT-NECTA, 2017). Among those who sat for the exams 287,713 passed representing a pass rate of 77.09 percent. Among those who passed 143,728 were girls representing a pass rate of 75.21% among girls and 143,975 boys with a pass rate of 79.06% among boys.

Rouse (2017) argues there were persisting gender disparities in secondary CSEE performance. Only 67 percent of girls passed with Division I - IV compared with 73 percent boys. A greater disparity was also seen in the higher examination grades, with only 22 percent of girls achieving Division I - III compared with 33 percent of boys. Rouse (2017) argued these disparities did not happen in isolation but were a reflection that closer scrutiny and attention is needed on specific needs of girls when implementing basic education policy.

It can be observed that pass rates were significantly higher for boys compared to girls in both PLSE and CSEE. This reflects gender disparities in learning outcomes still persisted in 2017. Gender disparities persisted despite education improvements as the overall, pass rate increased between 2016 and 2017 by 2.4 percent and 7.22 percent for PLSE and CSEE respectively.

Opportunities to address Gender and special Needs of Girls Education

Despite daunting challenges facing the implementation of free basic education for girls the analysis provided by the present study show that budget priorities of MEST remained consistent since 2016. The most recent policy position by the Ministry are the instruments which created MEST stating its main focus is implementation of free, universal basic education, skills development through vocation and technical education, improving quality of education, expansion of enrollment at tertiary and higher learning; as well as increasing research and innovation to transform agriculture and industrialization.

However, the leadership and implementation of education policy was guided by the 1978 National Education Policy, ETP (2014) and the Ministry's Strategic Plan with its vision and goals. The education policy framework as a whole is implemented principally through the national and sector budget which interprets the different education policy instruments.

The goals of the 2018/19 education sector budget were (a) enlarging education opportunities at all levels, and (b) to improve quality of education and training at all levels.^{16, 17} However as the saying goes the "taste" or rather the test of policy intentions is "in the pudding" i.e. budget details. This is where opportunities to steer ETP (2014) towards reducing gender disparities is reflected.

It can be seen from Figure 3 below the distribution of the 2018/19 education development budget concentrated on school supervision, teacher education, vocational and technical training and basic education development.

¹⁶ 2018/19 had three objectives two of which are mentioned here, and the third was on strengthening national capacity in science, technology and innovation to support an industrialised economy

¹⁷ Before proceeding in further analysis, it is important to define key concepts often used in budget analysis. The budget is an instrument to implement a country's fiscal policy, which involves a balance of revenue and expenditure to achieve budget objectives. The budget is principally divided into recurrent and development budget. Recurrent on the other hand is divided into PE and OC. PE is principally direct salaries and OC or other expendable and non-expendable ("office running") costs. The development budget is divided into domestic and international ("donors") sources.

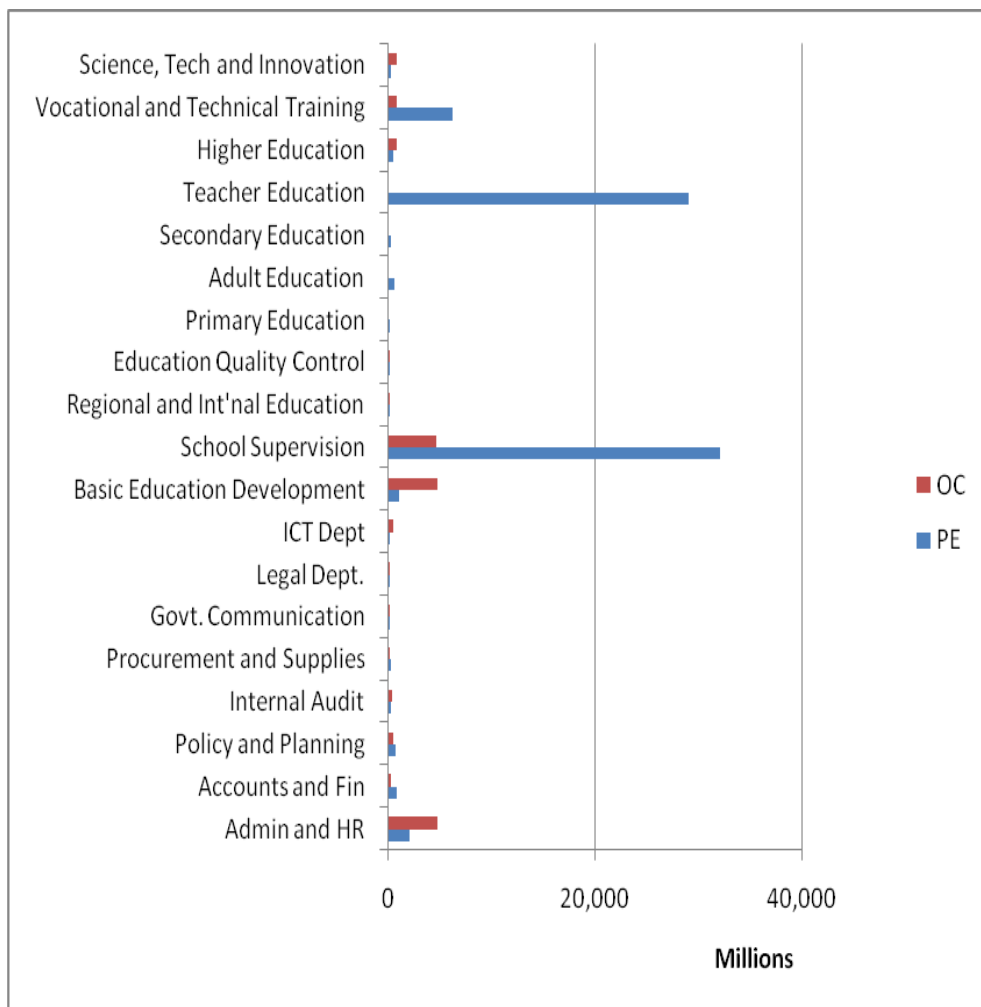


Figure 3: Distribution of PE and OC in MEST - 2018/19

Source: URT-MEST, 2018

Figure 3 clearly stipulates Government priorities in improving supply-side reforms in education implementation as reflected in teacher education and supervision. The strategy is plausible and will benefit girls if they remained in school.¹⁸

OC are operating funds which reflect education leadership decision to invest in development activities aimed at improving girls education as shown by figure 4 below.

¹⁸ The study finds OC going into a combination of teacher training, school supervision, basic education and vocational and technical training demonstrates a careful and calculated balance, under present budget constraints and competing priorities to benefit girls education in line with the global SDGs

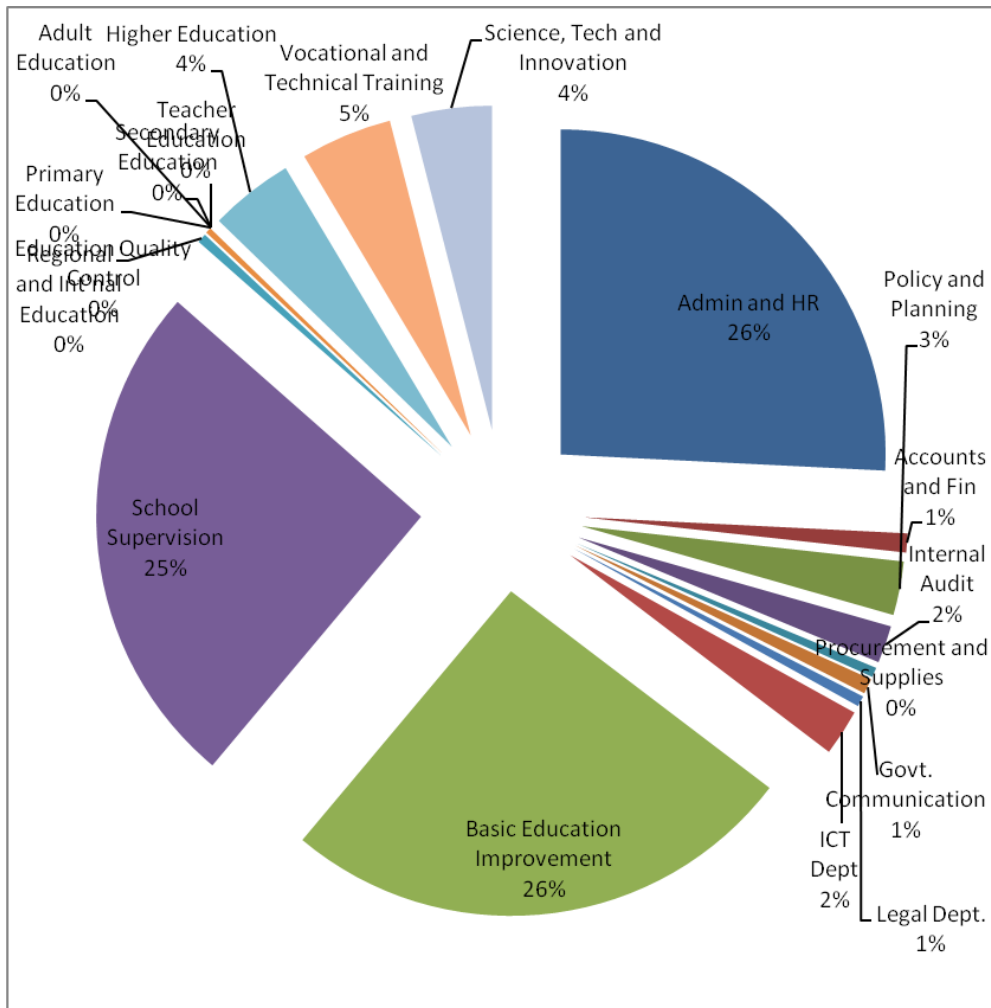


Figure 4: Distribution of Allocation of OC in MEST

Source: URT-MEST, 2018

It can be seen MEST had many policy choices and competing priorities. Many departments and sub-sectors were left unfunded but basic education improvement and school supervision received over 50 percent of OC allocations.

MEST priorities to basic education were not explicit partly because the development budget and implementation of basic education lies under a different Ministry under President’s Office (Regional Administration and Local Government) (PORALG). A lion share of MEST development budget allocation went to higher education and the Ministry’s own performance improvement, which includes strengthened Monitoring and Evaluation

(M&E), which will be good for identifying priorities for girls education as shown by Figure 5 below.

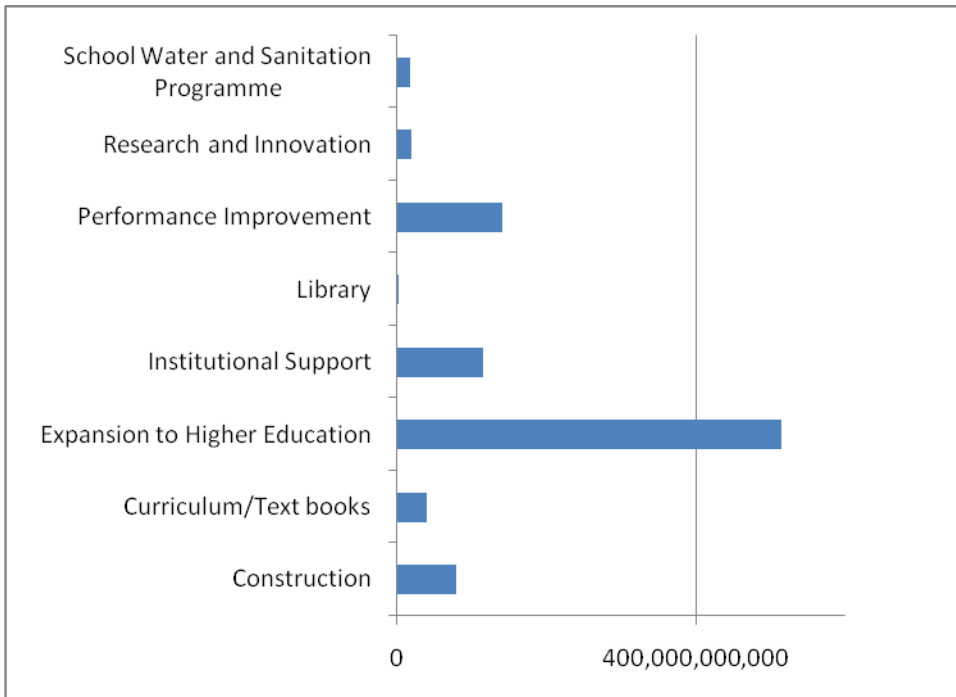


Figure 5: Distribution of MEST 2018/19 Development Budget by Key Expenditure Items

Source: URT-MEST, 2018

Expenditure allocated towards construction, curriculum/text books, performance improvement and school water and sanitation (SWASH) have high impact on girls education.

Conclusion and Recommendations

Despite the post-2015 SDG goal to attain gender parity in all levels of education, the prospect to achieve this goal remains bleak for girls in Tanzania. Girls faced a number of challenges that came in their way to achieve basic education in Tanzania. The rate of school drop-outs was consistently and incrementally higher for girls in both primary and secondary education levels. Girls performed less in primary and secondary exit examinations, which affected their transition rates to higher levels of education. School infrastructure stood-out as a key determinant factor to universal education. The analysis further showed the pupil class room ratio is a key determinant factor in increasing the proportion of students who pass primary education to be admitted in secondary schools. The analysis further revealed pregnancy was a significant determinant of drop-out among girls. Lack of toilet and sanitation facilities in schools was also found

to be a major contributor of absenteeism among girls. Cumulatively, these factors contributed to likelihood of Tanzania to miss SDG education targets. The analysis further showed the Government decision to scrap of formal and informal voluntary and compulsory contributions had positively contributed to girls enrollment and retention. Although the step was a positive move to increase enrollment of girls and reduce gender disparities in education; voluntary contributions from parents were insufficiently replaced by capitation grants from budget sources, putting at risk education quality and effective learning outcomes attained.

Despite the foregoing challenges, the implementation of basic education achieved positive developments. School classroom capacity and teaching staff, for example, significantly increased between 2015 and 2016. This move upgraded the pupil/teacher ratio to acceptable levels particularly for secondary education. However, the ratio is likely to deteriorate following dismissal of teachers following Government's crackdown on ghost workers. The study makes several recommendations. The first key recommendation relates to the need to embark on a national programme to construct infrastructure, which makes the school environment safer for girls. This includes construction of water, sanitation, incinerators and toilet facilities in schools. Secondly, the study recommends construction of hostels for girls who travel long distance to schools.

Third, the study recommends the amendment of provisions in the 1978 education policy, which calls for expulsion of girls from the education system after they get pregnant. There is a need to recognize reported truancy levels as proxy indicators of drop-outs due to pregnancy so appropriate levels of policy attention to provide second chance to girls can be given to giving drop-outs a second chance after delivery.

Fourth, the study recommends infrastructure expansion as part of a strategy to achieve gender parity in education. School infrastructure development should include construction of secondary education classrooms in-order to reduce the pupil to classroom ratio; and teacher houses. A reduction of the classroom to pupil to classroom ratio will allow higher proportion of girls to make the transition from primary to secondary education. Second it will contribute to retention due to safer classroom environment. Construction of teacher houses will attract posting of female teachers in remote schools. An increased level of female teacher to pupil ratio will contribute to a safer school environment for girls.

Finally, the study ends with a recommendation to MEST and the Basic Education Statistics to increase the level of gender disaggregation to cover

all basic education indicators so further analysis can be done on trends towards attainment of gender parity in education.

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Effect of Exchange Rate Fluctuation on Rwandan Tea Price and Exports

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Abstract: In small and developing economies, exchange rate volatility is important as it creates gains or losses to farmers and exporters. This paper analyses the effect of exchange rate volatility on Rwanda tea price and exports. The analysis used monthly time series data on bilateral exports and real effective exchange rates from January 2001 to December 2016. The analysis is done with the co-integration methods and error correction model using the autoregressive distributed lag procedure and GJR-GARCH model. The findings show that an increase in exchange rate volatility resulted in an increase in Rwandan tea exports price in the long run and decrease in tea exports in the short run. The real income in importing country increases tea price and volume exports in the long run and short run. There should be the review of monetary policy to address the volatility of exchange rate and hedging system introduction to respond and to stabilize the exchange rate.

Key words: Real exchange rate, exchange rate volatility, Rwandan tea price and exports.

Introduction

The agriculture sector remains the engine of the Rwandan economy (UNDAP, 2013). It provided more than 30% of the GDP for the last decade and is still offering employment opportunities to 68% of the Rwandan population with 76% living in rural areas (NISR, 2015). It is dominated by small-scale subsistence farming under traditional agricultural practices and rain-fed agriculture (Broka *et al.*, 2016). Tea and Coffee are major agricultural export crops and origin of foreign currencies since 1930 (NAEB, 2011). Other exports come from crops including cassava, maize, Irish potatoes, sweet potatoes, plantain, beans, rice, etc., and animal products like milk and beef jointly make up 80% of agricultural production value (Broka *et al.*, 2016).

Following the genocide of 1994, tea industry averagely experiences good returns resulting from using the best clones grown and efficient and diligent plucking allowing to produce the brightest, briskest and most aromatic tea in the world (MINAGRI, 2013). The volume of tea production and exports have almost doubled in Rwanda in the recent decade, which helped to triple the earnings from tea exports, bringing it to above US\$60 million in 2016 (World Bank, 2017).

To boost exports, Rwanda has amongst others set up the exchange rate policy whose core objective is to preserve the external value of the national currency and also to ensure the effective operation of the foreign exchange market (Mukunzi, 2004). Rwanda introduced a flexible exchange rate regime in 1995 (BNR, 2015) with the goal to stabilize the exchange rate and prices to enhance the economic growth as well as to link that national foreign exchange market to the world market (Mukunzi, 2004). However, the export share percentage of GDP from 2000 up to 2015 showed a fluctuation where the highest share was 16% in 2007, the lowest share was 6% in 2000, and the recent statistics shows that the share was 15% in 2014 (BNR, 2015).

According to Kenen and Rodrik (1986), DeGrauwe (1988), Pozo (1992) and McKenzie (1999), there exists a long-run relationship between the volume of a countries exports and the level of economic activity of the importing country, the real exchange rate as well as the measure of exchange rate risk. The end results of exchange rate volatility on trade have long been at the center of the discussions on the optimality of different exchange-rate regimes (Buguk *et al.*, 2003). The exchange rate volatility impacts on exports by creating gains or losses to farmers and exporters. The total value of export earnings depends not only on the volumes of exports traded abroad

but also on the worth paid for them (Faridi, 2012). This paper investigates the effect of exchange rate volatility on price and exports of Rwandan Tea.

Materials and methods

The study used secondary data consisting of monthly time series data on bilateral exports and real effective exchange rates from January 2001 to December 2016 for tea in Rwanda. These data on real exchange rate and export prices for tea were gathered from National Bank of Rwanda, National Institute of Statistics of Rwanda, National Agriculture Export Development Board and Food and Agriculture Organization Statistics. The analysis of data was done using the cointegration methods complemented with error correction and the GARCH models. Based on the assumption that there are expectations about the real exchange rate series to follow an ARIMA process, an important assumption was made where the conditional variance is specified as a GARCH process using equation (1), (2) and (3).

$$A\phi_m(L)DLX_t = \gamma_0 + A\phi_m(L)\varepsilon_{1,t} \quad (1)$$

$$\varepsilon_{1,t} = Z_t \sqrt{h_t} \quad (2)$$

$$Z_t \sim N(0,1) \quad (3)$$

Where

- DLX_t is the first difference of the real exchange rate expressed in logarithm. It represents the percentage fluctuation in the monthly real exchange rates.
- $\varepsilon_{1,t}$ in equation (1) are residuals which are normal and independent and identically distributed, - Z_t and h_t are the model's conditional variance.

The GARCH model, as specified in equation (4.1), was used to examine the dynamic conditional exchange rate volatility.

$$h_t = W_0 + \sum_{j=0}^q \alpha_j \varepsilon_{1,t-j}^2 + \sum_{k=1}^p \beta_k h_{t-k} \quad (4.1)$$

The GARCH model allows h_t to vary over time and is modeled as a function of the lagged squared residuals $(\varepsilon_{t-k}^i)^2$ as well as the conditional variance (h_{t-k}^i) suggested by Glosten, Jagannathan and Runkle GARCH (GJR-GARCH (p,q)) (Glosten *et al.*, 1993). The conditional variance specification to maintain the tractability of conventional GARCH models while accommodating a leverage effect by adding a term to permit asymmetry in the GARCH model in specified as follows;

$$h_t = W_0 + \sum_{j=0}^q \alpha_j \varepsilon_{1,t-j}^2 + \sum_{k=1}^p \beta_k h_{t-k} + \eta S_{t-1} \varepsilon_{1,t-j}^2 \quad (4.2)$$

The leverage effect variable S_{t-1} takes on the value of 1 if $\varepsilon_{1,t-1} < 0$, and $S_{t-1} = 0$ otherwise. The leverage effect is captured by the parameter η ; if $\eta = 0$ the GJR model reduces to the conventional GARCH specification. The imposed restrictions are as such as $W_0 > 0; \beta_k \geq 0, \forall k; \alpha_j \geq 0, \forall j, \text{ and } \eta \geq 0$.

These conditions are parameters that are imposed in such a way that they strictly ensure positive conditional variance. The value of the summation of the parameters in equation (4.2) has to be less than one to satisfy the necessary as well as the sufficient conditions of covariance of stationarity. The summation of the parameters may be interpreted as a measure of the persistence of variance. The first difference in the real exchange rate in natural logarithms ($DLRX_t$), as specified in equation (1), (AR (1)-GARCH process is then used to derive the successive periods ($DLRX_{t-k2}^e$) for $k2$ -period-ahead and ($h_{i,t-k3}^e$) for $k3$ -period-ahead changes in the expectations of the real exchange rate (conditional variance estimates for exchange rate risk).

$$DLRX_t^e = \gamma_0 \sum_{i=0}^{k-1} \phi_1^i + \phi_1^k DLRX_{t-k} \quad (5)$$

$$h_t^e = w_0 \sum_{i=0}^{k-1} \beta_1 + \alpha_1 k_1^{k-1} \varepsilon_{1,t-k}^2 + \beta_1^k h_{1-k} \quad (6)$$

The $DLRX_t$ series is then undifferentiated back to exchange rate levels (RX_{t-k2}^e), which indicates the expected level of exchange rate while $h_{i,t-k3}^e$ reflects exchange rate volatility. The expected values are regressors in the model as specified in equation (7).

According to Kenen and Rodrik (1986), DeGrauwe (1988), Pozo (1992) and McKenzie (1999), there exists a long-run relationship between the volume of a country's exports and the level of economic activity of the importing country, the real exchange rate as well as the measure of exchange rate risk. Holding this assumption true, the reduced form of the error correlation model was specified as:

$$\ln Q_{i,t} = \delta + \sum_{k1=1}^a \delta_{1,k1} \ln(IP_{t-k1}) + \sum_{k2=1}^b \delta_{2,k2} \ln(RX_{i,t-k2}^e) + \sum_{k3=1}^c \delta_{3,k3} \ln(h_{i,t-k3}^e) + \sum_{k4=4}^d \delta_{4,k4} S_{k4,t} + \sum_{k5=1}^e \delta_{5,k5} \ln(Q_{i,t-k5}^e) + \varepsilon_{2i,t} \quad (7)$$

Where $Q_{i,t}$ is Rwandese tea i export to its export partner in time t , IP_{t-k1} is the monthly industrial production of export partner. The industrial production was used as a proxy for the exogenous component in period $t-k1$. RX_{t-k2}^e is the expected rate that is predicted for traders at time t during $t-k2$ period as generated in equation (5), $h_{i,t-k3}^e$ is the analogous estimates of the expected monthly exchange rate volatility as predicted by traders in

equation (6) and k_1 , k_2 , and k_3 are optimal lags and leads that were identified using Hendry non-standard method.

The quarterly dummy variable, $D_{k_4,t}$, was introduced to control the seasonality effect that is inherent in export plots. $Q_{i,t-k_5}^e$ is the lagged export volume that was included in the model specification so as to allow for an estimable lag length (k_5) of the autoregressive persistence in export volumes. The equation error term, $\varepsilon_{2i,t}$ is assumed to hold Gauss-Markov properties. Variables in equation (7) are natural log transformation except $D_{k_4,t}$, thus capturing elasticity effect.

Because the time series data is inherently non-stationary and unpredictable, the regression estimates obtained from the analysis of time series data may be misleading. Consequently, the time series used in this study has been tested for their stationarity and have been transformed to stationary where necessary. The Augmented Dickey-Fuller Test (ADF) were used. The ARDL bounds testing procedure was used to test for the co-integration of variables in equation (7) since variables were not integrated of the same order. This involved modeling equation (7) as an ARDL model. The general ARDL representation was specified as follows:

$$\begin{aligned} \Delta \ln Q_{i,t} = & \delta + \sum_{k_1=1}^a \delta_{1,k_1} \Delta \ln(IP_{t-k_1}) + \sum_{k_2=1}^b \delta_{2,k_2} \Delta \ln(RX_{i,t-k_2}^e) + \\ & \sum_{k_3=1}^c \delta_{3,k_3} \Delta \ln(h_{i,t-k_3}^e) + \sum_{k_4=4}^d \delta_{4,k_4} \Delta S_{k_4,t} + \sum_{k_5=1}^e \delta_{5,k_5} \Delta \ln(Q_{i,t-k_5}^e) + \\ & \beta_{1,k_1} \ln(IP_{t-k_1}) + \beta_{2,k_2} \ln(RX_{i,t-k_2}^e) + \beta_{3,k_3} \ln(h_{i,t-k_3}^e) + \\ & \beta_{5,k_5} \ln(Q_{i,t-k_5}^e) + \varepsilon_{2i,t} \end{aligned} \quad (8)$$

The terms that have the “*gammas*” are the short-run dynamics while the “*betas*” represent long-run estimates. F-test was implemented to test for co-integration of the variables. The F-test tests the null hypothesis that $\beta_{1,k_1} = \beta_{2,k_2} = \beta_{3,k_3} = \beta_{5,k_5} = 0$. The Pesaran et al. (2001) provide lower and upper bound critical F-values and were scrutinized for co-integration. The null co-integration hypothesis is not rejected when the computed lower bound F values is less than the critical F value but it is rejected when the computed upper bound F value exceeds the critical F value or otherwise the F test is inconclusive. When there is co-integration among variables, the Error Correction Model (ECM) can be used to describe the short-run dynamics of the variables (Maddala, 1992). Equation (9) specifies the ECM.

$$\begin{aligned} \Delta \ln Q_{i,t} &= \delta + \sum_{k1=1}^a \delta_{1,k1} \Delta \ln(IP_{t-k1}) + \sum_{k2=1}^b \delta_{2,k2} \Delta \ln(RX_{i,t-k2}^e) \\ &+ \sum_{k3=1}^c \delta_{3,k3} \Delta \ln(h_{i,t-k3}^e) + \sum_{k4=4}^d \delta_{4,k4} \Delta S_{k4,t} \\ &+ \sum_{k5=1}^e \delta_{5,k5} \Delta \ln(Q_{i,t-k5}^e) + \pi ECM_{t-1} + \varepsilon_{2i,t} \end{aligned} \tag{9}$$

The equation (9) presents a description of the variation in $\ln Q_{i,t}$ around its long-run trend regarding a set of I (0) exogenous factors. The negative error term implies that the predicted variable has to fall in the next period for equilibrium to be restored. On the other hand, when the residual is positive, the predicted variable has to rise in the next period for equilibrium to be restored. The variables used in the estimation of tea exports price (USD/Kg) is denoted by TP, the industrial production of export partner denoted IP, real effective exchange rate denoted REER which is an average of basket of foreign currencies and real exchange rate volatility (denoted h_t or *ExVol*) which is the level of change in the trading price series over time as measured by the standard deviation of logarithmic return. In other words, it measures uncertainty/risk associated with exchange rate fluctuations.

Results and Discussion

Times series properties

Table 1: Unit root test of tea export function variable

Variables	ADF		PP	
	Level	First difference	Level	First difference
Industrial production	-2.27	-20.70 ^c	-1.50	-27.80 ^c
Tea export	-5.51 ^c	-13.71 ^c	-5.49 ^c	-14.06 ^c
Tea export price	-2.04	-21.48 ^c	-1.38	-24.55 ^c
Exchange rate volatility	-5.05 ^c	-18.09 ^c	-5.05 ^c	-18.09 ^c
Real effective exchange rate	-2.37	-7.07 ^c	-2.37	-7.07 ^c

Note:^c Denotes rejection of the null hypothesis of a unit root at 5 percent level of significance (MacKinnon, 1991).

Results in Table 1 indicates that the computed ADF and PP test statistics for the exchange rate volatility exceeds the absolute critical values at 5% significance level. This implies that the variable is stationary in level. The computed values for ADF and PP tests for tea export prices, industrial production and real effective exchange rate are less than the absolute critical values. This implies that they are not stationary at level and the variables must be differentiated for making them stationary. Thus, the variables were differentiated of order one I (1) process and found to be stationary.

Effect of exchange rate fluctuation on price of tea
Estimation of long run relationships of tea export prices function

The following table 2 points out the results of estimation of long run coefficients for tea exports price function.

Table 2: Long-run coefficients for tea export price function

Variable	Coefficien t	Std. Error	t- Value	Prob
Industrial Production	-2.78	2.13	-1.30	0.20
Real Effective Exchange Rate	10.79*	4.93	2.19	0.03
Exchange Rate Fluctuation	-1.41	1.34	-1.05	0.29
Trend	0.01**	0.00	2.69	0.01

Note: * means significant at 5 percent

The results of the long-run dynamics are consistent with economic theory and have the correct signs; the tea exports prices are elastic to the real effective exchange rates in long-run. An increase by 1 percent in the Rwandan francs price of the currencies of the trading partners or a depreciation increases tea exports prices by 10.79 percent in the long-run. This result is consistent with findings by Khalediet *al.* (2016) who found that the change in exchange rate in long-term was one of the most important factors that affecting export prices of dates in Iran. Jumah and Kunst (2001) found that dollar/sterling exchange rate volatility on futures markets for coffee and cocoa was the main source of risk for the commodity futures price. However, the current results are not consistent with the ones of Brun *et al.* (2015) who found that there was no statistically significant influence of the exchange rate over the physical prices of soybean.

Estimation of error correction model

The estimated results of short-run coefficients for tea export price function are shown in Table 3. The results of the short-run dynamics are consistent with economic theory and have the correct signs. The previous month's prices of tea have a negative and significant effect on the current prices in short-run. The coefficient of the lagged prices implies that a 1 percent increase in the export prices results in the previous one month leads to a reduction in the current prices of tea exports by 0.41 percent in short-run. This may be due to previous performance on the international market. An increase of 1 percent in conditional variance result in a decline by 0.29 percent in the current Rwandan tea export price in the short-run. This result is consistent with the findings by Zhang and Buongiorno (2010) who found that exchange rate volatility affects export prices of US forest products negatively. The results also corroborate with Kantike and Eglite (2013) who found that the currency exchange rate fluctuation was among the most significant factors that affect grain prices in the world.

Table 3: Short-run coefficients for tea export price function

Variable	Coefficient	St. Error	t-Value	Prob
C	11.58	2.42	4.77	0.00
D (TP (-1))	-0.41***	0.12	-3.24	0.00
D(IP)	-0.19	0.51	-0.38	0.70
D(EXRATEF)	2.48	2.41	1.03	0.31
D(HtF)	-0.29*	0.17	-1.71	0.09
X ₁	0.07	0.05	1.47	0.15
X ₂	0.03	0.02	1.19	0.24
X ₃	0.02	0.05	0.32	0.75
CointEg (-1)*	-0.43***	0.09	-4.76	0.00
R-squared				0.
Prob (F-statistic)				0.
Breusch-Godfrey LM Test (Prob>. Chi-Square)				0.
Breusch-Pagan-Godfrey (Prob>. Chi-Square)				0.
Ramsey RESET Test (Prob F)				0.
Jarque-Bera (Prob)				0.

Note: *, **, *** means significant at 10, 5 and 1 percent respectively.

The error correction term is negative and significant thereby confirming the existence of real long run relationship between tea price and exchange rate volatility, real effective exchange rate and industrial production. The coefficient of the error correction term implies that 43 percent of the disequilibrium is corrected within a month. Since the error correction term is significant and large, the speed of adjustment towards the long-run equilibrium is therefore high.

Effect of exchange rate fluctuation on exports of tea **Estimation of the long run relationships**

Table 4 reports the estimation results of long-run coefficients for tea export function. Results show that the long-run export elasticity concerning the income of the trading partner is 1.15. A 1% increase in industrial production of the trading partner resulted in 1.15% increase in tea exports volumes in the long-run. Goudarzi et al. (2012) reported similar results in a study that estimated the effect of industrial production on Iranian pistachio export volumes. Contrastingly, Ragoobur and Emamdy (2011) established a negative association between foreign income and Mauritius exports. Moreover, Anagaw and Demissie (2012) found a positive but insignificant

impact of an increase in the trading partner's real gross domestic product on Ethiopian exports.

Table 4: Long-run coefficients for tea export function

Variable	Coefficient	Std. Error	t-Value	Prob
Industrial Production	1.15**	0.48	2.39	0.02
Real Effective Exchange Rate	1.47**	0.63	2.32	0.02
Exchange Rate Fluctuation	0.29	0.18	1.59	0.11
Trend	0.00	0.00	0.77	0.44

Note: ** means significant at 5 percent.

Tea exports are elastic to the real effective exchange rates. An increase in the Rwandan franc's exchange rate against the currencies of the trading partners or a depreciation increases tea exports by 1.48% in the long-run. Similarly, Fedoseeva (2016) found that, in the long-run, exchange rate changes influenced tea export volumes asymmetrically. Relative to the depreciation of the Euro that is usually beneficial to the European agri-food exports, the appreciation of the Euro was less harmful to exportation the Rwandese tea.

The current finding is consistent with results by Anagaw and Demissie (2012) who established a positive and significant influence of exchange rate on Ethiopian exports. Contrary to the current result, Menji (2013) found that the real effective exchange rates had an insignificant impact on Ethiopian merchandise exports. Agasha (2009) also indicated that the real effective exchange rate had a negative and significant relationship with the Ugandan coffee exports.

Estimation of error correction model

The error correction term is negative and significant thereby confirming the existence of real long run relationship between tea export volumes and exchange rate volatility, real effective exchange rate and industrial production in Table 5. The real income (industrial production) of the trading partner positively impacted on both short and long-run tea export volumes. The reason for the reported positive coefficient is that as the economies of the trading partner grow, they may channel their resources towards processing of the same commodity. This may lead to more processed tea activities than production, leading to increased importation of tea. The short-run export elasticity concerning the income of the trading partner was 1.11%, implying that 1% increase in the income of the trading partner results in 1.11% increase in tea exports. Ragoobur and Emamdy (2011) reported similar results by indicating that industrial production of the trading

partner positively influenced Mauritius export volumes in the short-run. The previous three months of IP was found to have an adverse short-run effect on the current tea export volume. This means that a 1% increase in IP from the previous three months leads to a decline in tea export volume by 0.93 percent.

Table 5: Short-run coefficients for tea export function

Variable	Coefficient	Std.error	t-Value	Prob
c	-20.32***	2.91	-6.97	0.00
D(TEXP(-1))	0.19*	0.10	1.85	0.06
D(TEXP(-2))	0.13	0.08	1.49	0.13
D(TEXP(-3))	0.29***	0.07	4.14	0.00
D(IP)	1.11**	0.42	2.58	0.01
D(IP(-1))	-0.15	0.53	-0.29	0.77
D(IP(-2))	0.58	0.53	1.10	0.27
D(IP(-3))	-0.92*	0.50	-1.83	0.06
X₁	-0.02	0.06	-0.33	0.74
X₂	0.09*	0.05	1.66	0.09
X₃	-0.29***	0.06	-4.93	0.00
CointEq (-1)*	-0.81***	0.11	-7.06	0.00
R-squared				0.78
Prob (F-statistic)				0.00
Breusch-Godfrey LM Test (Prob>. Chi-Square)				0.14
Breusch-Pagan-Godfrey (Prob>. Chi-Square)				0.06
Ramsey RESET Test (Prob F)				0.18
Jarque-Bera(Prob)				0.39

Note: *, **, *** means significant at 10, 5 and 1 percent respectively.

The error correction term is negative and significant which affirms that the variables are co-integrated. Results show that a 1% increase in industrial production of the trading partner resulted in 1.15% increase in tea exports in the long-run. Goudarzi et al. (2012) reported similar results in a study that estimated the effect of industrial production on Iranian pistachio export volumes. Tea exports are elastic to the real effective exchange rates. An increase in the Rwandan franc's exchange rate against the currencies of the trading partners or a depreciation increases tea exports by 1.48% in the long-run. Similarly, Fedoseeva (2016) found that, in the long-run, exchange rate changes influenced tea export volumes asymmetrically to European

region. Relative to the depreciation of the Euro that is usually beneficial to the European agri-food exports, the appreciation of the Euro was less harmful to exportation of the Rwandese tea. This finding is consistent with results by Anagaw and Demissie (2012) who established a positive and significant influence of exchange rate on Ethiopian exports. Contrary to the current result, Menji (2013) found that the real effective exchange rates had an insignificant impact on Ethiopian merchandise exports. Agasha (2009) also indicated that the real effective exchange rate had a negative and significant relationship with the Ugandan coffee exports.

The previous month's tea exports volume was significantly encouraging in influencing the current level of tea exports. The coefficient indicates that a 1% increase in the previous month's tea export volumes resulted in augmentation in the current volume of tea exports by 0.19% and 0.29% one and three preceding months, respectively, in the short-run. This may be due to prior performance on the international market. If a nation exported more in previous months and gained profit, then the current period's export volumes increase.

Seasons two and three had positive and negative short-run effect on the current tea exports respectively. This means that during season two, the volume of tea exports rose by 9.79%. Regarding season three, the results imply a decline in tea export by 29.76 percent. The error term coefficient is high reflecting a faster speed of adjustment from disequilibrium to a long-run equilibrium. This implies that 81.38 percent of the disequilibrium is corrected within one month.

Conclusion

The Rwandan economy remains dependent to agriculture sector which contributes more than one third to the GDP. Tea and coffee greatly contribute to GDP (above 15%) and agricultural exports (above 80%). However, from 2000 to 2016, statistics of Rwandan exports show that the contribution of tea and coffee to GDP significantly fluctuated. As the exchange rate volatility impacts on trade, this article analyzed effect of exchange rate volatility on Rwanda tea price and exports from 2000 to 2016.

The findings show that there has been a reduction in tea price due to increased exchange rate volatility in the short-run. In the long run, tea price increased due to the increase in real exchange rate. The exchange rate volatility impacted negatively and significantly the Rwandese tea exports. There should be the review of monetary policy to address the volatility of exchange rate and hedging system introduction to respond and to stabilize

the exchange rate. Economic policies stabilizing the exchange rate would be likely to increase the tea exports volumes. Hedging would contribute to tea price stability in the short term.

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Mobile Phones, a Virtue or a Bomb for Tanzanian Secondary Students?

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Abstract: *This study investigated the position of the use of mobile phones in secondary schools in Tanzania. It examined perceptions of secondary school teachers and students on the importance of students' use of mobile phones as among the learning resources in classroom and the reasons associated with the prohibition of mobile phones in secondary schools in Tanzania. A total of 60 participants were engaged, 40 secondary school students and 20 secondary school teachers all from two secondary schools in Ilala municipality, Dar es Salaam region. Data were collected using open-ended questionnaires, focus group discussions, semi-structured interviews and documentary review. Through inductive data analysis, it was revealed that participants had varied responses regarding the importance of students' use of mobile phones, and the reasons associated with their prohibitions in secondary schools in Tanzania. Teachers had a view that mobile phones would facilitate self-directed learning among learners while the position of the majority of students was that mobile phones would contribute to in-depth learning in various subjects. The study concluded that the government of Tanzania should involve key stakeholders in sharing experiences in establishing mobile phones monitoring software, rules and policies regarding the suitability or faults of various decisions related to educational matters including the use of mobile phones in classroom learning.*

Keywords: Mobile phones, information and communication technology, competence-based instruction.

Introduction

The integration of information and communication technology [ICT] in education has become one of the attractive and exciting enterprises in both developing and developed countries. Most of the countries are updating their education systems so as to achieve the desired and survival outcomes. One of the popular updates in the 21st century is the use of modern technologies including smart and cell phones in teaching and learning process (Oller, 2012; Goundar, 2011). The use of mobile phones is acknowledged in various researches (Oller, 2012; Grimus, Ebner & Holzinger, 2010) as indispensable for learning as they can combine and integrate text, audio and video with interaction amongst learners in varied settings such as classroom, home and on the bus (Kafyulilo, 2014; Chambo,

Nkansah-Gyekye & Laizer 2013). In the competence-based instruction [CBI] setting for example, Njoku (2015) asserts that mobile phones technologies support students' learning since learners use them to search materials essential for learning and entertainment (Tiba, 2018). Again, these devices have been declared to be potential for the students who live in remote locations where there are few schools, teachers, electricity and libraries (Ally, 2009). In particular, the utilization of mobile phone in learning has attracted teenagers' learning as it simplifies their access to various information that are in the form of news, publications, photos and videos (Baron, 2010; Hartnell-Young & Heym, 2008). Bugger (2010) share as well that student appreciate the use of mobile phones as they can help them keep in touch with their families, friends and teachers and they form a base of security. During emergencies parents use it as monitoring devices to their children and teachers use mobile phones to communicate important message about their students to parents. Wong (2016) adds that the use of mobile phones in teaching and learning provide comfortable opportunities for students to answer the questions but also, for the teacher to track the answers with no extra efforts.

While there have been arguments by researchers on positive outcomes in learning through mobile phones, there are also opposing views from some scholars studies asserting the demerits of their use in the learning settings. Mehdipour and Zerehkafi (2013) and Irina (2012) exemplify that most of students primarily use mobile phone to engage in inappropriate behaviours such as cheating in learning, gossiping, harassment and cyber-bullying. Further, Irina (2012) share as well that mobile phones affect students in terms of linguistic skills development as they take too much time texting which involves a neglect of some spelling and punctuation marks. This in turn brings chaos, disturbance and mental incapacitation to students but also in their syntax and pedagogy (Krithika & Vasantha, 2013; Irina, 2012).

Mobile phones have been popular among users in recent years around the world. The use of mobile phones in learning started between 1950's and 1990's in Europe before it spread to other parts of the world when it went beyond its traditional communication role to sharing information, business matters and to support teaching and learning process (Angello, 2015; Msuya, 2015; Hansson & Jobe, 2014; Aoki & Downes, 2013; Mehdipour & Zerehkafi, 2013; Mtega et al., 2012; Gounder, 2011; Baron, 2010; Hare, 2007; Srivastava, 2004). Throughout this history, mobile phones have confirmed to have potentiality in the provision of education and have transformed national education system in different parts of the world (UNESCO, 2012).

Many educational institutions have fast switched to using mobile phones because of its attractive and easy means to communicate and gain constant

access of information for teaching and learning (Gounder, 2011; Mehdipour & Zerehkafi, 2013). Its popularity has increased as is a device that is easy to carry, flexible, free or of low cost applications, and suitable for learning at any time and place as compared to laptops and note pads (Kafyulilo, 2014; Goundar, 2011; Dede & Wirth, 2009). As a pedagogical resources for teaching and learning processes, mobile phones make students confident, creative and productive (Ferry, 2009). Teachers incorporate mobile phone pedagogies such as mobile playing, digital games, and learning with robots in their daily practices so as to engage metacognitive activities of learners (Reena & Sora, 2013). However, in Texas and South Africa for example, teachers' limited use mobile phones resulting from inadequate access to equipment, connectivity, inability to troubleshoot minor technology problem, absence of training in learning activities and limited technological resources (Tiba, 2018; Davidson, Richardson & Jones, 2014).

In Tanzania the potentiality of mobile phones in classroom instructions started with the ICT policy that allowed for the integration of ICT in education system since 2002 (Ministry of Education and Vocational Training [MoEVT], 2007; Hare, 2007). Kihwele and Bali (2013) point out that this was the time that children of Tanzania were able to interact with the vast resource materials to facilitate learning while seeing the world in their classrooms (Dede & Wirth, 2009). The policy that allowed the use of mobile phones in the classroom provided a chance to even students from low income families and marginalized groups to see the world in the classroom (Chambo et al., 2013; Mehdipour & Zerehkafi, 2013).

Despite the common knowledge of the potentials of mobile phones in teaching and learning, the use of mobile phones especially in public secondary schools in Tanzania is strictly prohibited and teachers strongly ensure students do not come with and use them in the classroom since they waste time in chatting (Muhanga, 2017; Msuya, 2015; Kihwele & Bali, 2013). However, mobile phones foster effective learning, like supporting mathematical calculations and flexibility (Dede & Wirth, 2009; Gounder, 2011).

This paper reflects the position that secondary schools in Tanzania hold so far to ban the use of mobile phones in schools and classrooms. The paper seeks to investigate the position of mobile phones in Tanzania secondary schools with its particular contribution in facilitating competence-based instructions [CBI]. Specifically, the study aimed at examining perceptions of secondary school stakeholders on the use of mobile phone in facilitating quality teaching and learning practices. The paper establishes challenges associated with the prohibition of mobile phone in secondary schools in Tanzania that students encounter as they try to access education materials, communicate with parents and friends while in school. The paper argues

that mobile phones in schools should not be seen as a sin and a distracter to learning; it should also be seen as a tool for learning, just like other modern technologies such as ultra-books, e-readers, tablets, iPod, net books, computers, and a classroom projector. It is, thus, time we acknowledge the potentiality of mobile phones and allow our students to see the world on their hands, just like their counterparts in the developed world in order to narrow the digital gap that we are creating with our own hands.

Materials and Methods

In fulfilling the purpose of this study, the researcher engaged a population of secondary school teachers and students of whom 20 (10 per each school) were secondary school teachers and 40 (20 per each school) were students found in two secondary schools. Students were randomly selected in which pieces of cards written MOBILE PHONE and LAPTOP were inserted in a box with the assistance of academic master. Then the students were asked to pick a piece of card. Those who picked MOBILE PHONE were involved in the study. Secondary school teachers were conveniently sampled with the assistance of the head of school. Study participants were essentially involved in the study as their insights can help in smooth use of the mobile phones in education and overcome the limitations and challenges of teaching and learning resources. The conveniently and randomly procedures employed to engage participants with equal opportunity of being selected in the study.

In depth interviews and open ended questionnaire were used to collect data from the secondary school teachers while four focus group discussions with a maximum of 10 students per each group were administered. Further, the study used documentary analysis for generating background information that probably, were not noted by other methods of data collection. The use of multiple data collection strategies were used so as to ensure credibility, transferability, and dependability of the study. The study also, considered informants consent and willingness of participants to be involved for data collections. Respect of anonymity and confidentiality of participants were ensured through the use of alphabetical letters. After data collection they were analyzed by organizing themes and subthemes.

Results

Perceptions on the Use of Mobile Phones in CBI

The study sought to investigate the perceptions of secondary school teachers and students on the use of mobile phones in CBI. Results indicated that majority of secondary school teachers (17) negatively perceived the usage of mobile phone in CBI. Few of teachers (3) positively held views on the potentiality of using mobile phone in CBI. Teachers held negative perceptions with the usage of mobile phones insisting that students would

instead of using them in searching materials and genuine information for their learning, they would engage in downloading culturally-inappropriate materials. Pornography, chatting and playing games were mentioned to be preferred by students indicating that they could move students' attention out of academic learning during classroom session.

Also, teachers viewed that the use of mobile phones in learning will negatively affect students in terms of language usage especially, in punctuation marks, word formation and syntax. One teacher pointed out as follows:

You know students are chatting by using words such as g9t instead of good night, clac instead of class, xaxa instead of sasa meaning (now), ko instead of kwahiyo (therefore), ccta instead of sister, info. instead of information etc. This habit slowly affects students' minds which in turn develop inappropriate language usage (Interview, D)

From teachers' views, introducing mobile phones as a learning device and resource in school is considered as being inappropriate in facilitating positive learning practices.

On the side of teachers who held positive perception in the use of mobile phones in CBI, they argued that mobile phones could facilitate self learning among learners. They explained that through mobile phones students would have access to materials before and after the class session. Access to soft copy materials by the students would give them time to discuss and control their learning at school or home. One of the teachers elaborated that:

Use of mobile phones is more economical than laptops or desktop computers in teaching and learning process which would enable students and teachers have wide opportunity to facilitate preparation and learning at any place and time (Interview, C)

Looking at the teacher's arguments, one could learn that though few teachers hold positive perceptions towards the use of mobile phones in teaching and learning, integration of technology means a lot including use of mobile phones. Analysis of the data collected through FGDs with students indicated as well that mobile phones would contribute to in-depth learning of various subjects' matters (see Figure 1).

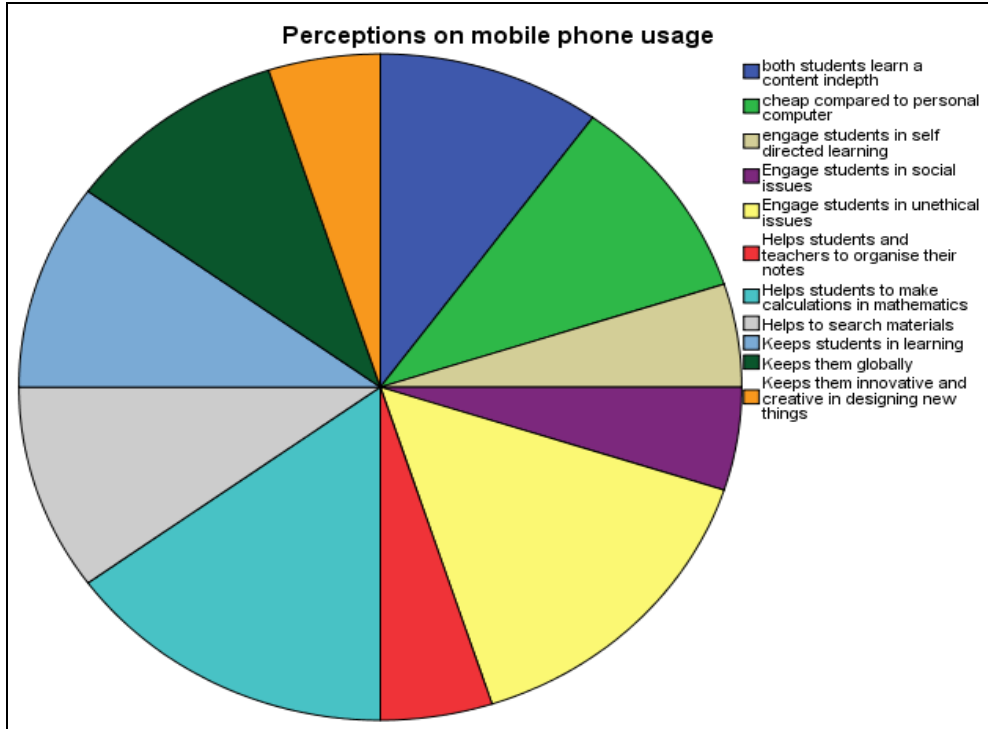


Figure 1: Students perceptions on mobile phone usage in CBI

Source: Field data

The figure illustrates that students viewed the usage of mobile phones in CBI as a useful resources. They viewed that with mobile phones usage students and teachers would offer an opportunity to search for various contents related to their subjects and combinations. Again, mobile phones had to be used in teaching and learning process as students can be self-directed in learning globally as they would be informed of the experiences and practices of the same in different parts of the world. In addition they viewed mobile phone as a device for facilitating execution of some mathematical operations.

Students shared as well that mobile phones are cheapest device compared to personal computers. In different FGDs, students were quoted arguing:

Mobile phone is cheap compared to other electronic devices such as laptops. The government should allow the use of mobile phones in learning, as our parents can afford to buy it (FGD, 4).

If I had an opportunity to make decisions for this nation, I would allow school (teachers and students) to use mobile phones in teaching and learning as it reduce costs on

construction of libraries, employing librarians and purchasing materials like books (FGD, 1).

The quotes presented here provide a lesson that students perceived mobile phones as useful in facilitating learning particularly through CBI.

Other students perceived mobile phones as a destructive device to students. They argued that the use of mobile phones by students would expose students to unwanted and undesirable behaviours as some would instead of concentrating with academic matters tend to access unethical contents particularly those related to sexuality and drug abuse. Moreover, mobile phones in CBI would not make its purpose achieved as students can tend to engage most of their time chatting social matters in social groups such as WhatsApp, Twitter, Facebook, LinkedIn, YouTube, Blogs and Instagram which in turn would lower their concentrations in academics.

The researcher reviewed government documents on the use of mobile phones in Tanzanian secondary schools. Documentary analysis revealed that the Education and Training Policy [ETP] of (2014) emphasizes on the use of ICT devices in facilitating teaching and learning in general. Again, the Ministry of Communication and Transport [MoCT] (2003) and the Ministry of Works, Transport and Communication [MoWTC] (2016) acknowledge on the effectiveness of ICT devices in facilitating delivering of education contents. In the analysis of the secondary school curriculum of (2007) it admits in the optimization of the use of radio broadcasts for online contents, computers, printing and photocopying machines, scanners, internet connectivity and SMS-enabled interactive television programmes. Mobile phones have been recognized by the MoWTC for being used in monetary services such as M-Pesa, TigoPesa, Airtel money and Halopesa only.

Reasons for Mobile Phone Prohibition in Secondary Schools

The study explored the reasons for the prohibition of mobile phones in secondary schools in Tanzania. Findings showed that one of the main for banning mobile phones in schools is the fact that students were misusing the phones by engaging more into it than academics. They pointed out some bad behaviours such as cheating, early pregnancy, absenteeism, engaging in drug abuse and joining social networking groups seemed to increase among students.

Analysis of data collected through FGDs with students revealed that the government prohibited the use of mobile phones in secondary schools probably, because students were bringing confusion, unrest and troubles among students themselves, students and teachers, students and their parents, students with their teachers and parents and to the community at large. They had the view that with the use of mobile phones a large number

of students were engaging in pornography, intimate relationships, gossiping, play games and cheating instead of concentrating in their school based learning. This in turn would bring students, teachers, parents and the government to blame to each other as students would be unethical, corrupt and immoral. Students held the views that:

Last year in a nearby school I heard two students who were suspended because they were caught with mobile phones during classroom session chatting with their fellow students about football match (FGD, 2).

In my street there is a secondary school girl who left the school because she had pregnancy caused by a man who bought the girl a smart phone which facilitated communication when she was outside their home place. Without a phone a girl could have not fallen into that trouble as her parents are strict into good conducts of their sons and daughters (FGD, 4).

The views by students would make someone deduce that mobile phones cause demerits to school students and affects the CBI because of their unfruitful academic engagements such as chatting with friends and engage in inappropriate behaviours.

Discussion

In light of the research questions the study revealed that secondary school teachers and students held varied perceptions regarding the mobile phones usage in teaching and learning process. The findings reveal that majority of teachers were against the use of mobile phones while students were in favour of using mobile phones in CBI. These findings seem to concur with those of Chambo et al (2013) who found that majority of the surveyed students and teachers have access to mobile phones though policy frameworks and school regulations prohibit the use of mobile phones at school premises in Tanzania secondary schools. Moreover, it concurs with a study by Msuya (2015) which revealed that teachers from private and public schools were against in allowing their students to carry mobile phones in the classroom although these students already had owned mobile phones and had an access and in favour to mobile phones (Gibbons, Galloway, Mollel, Mgoma, Pima & Deogratias, 2017; Kafyulilo, 2014).

The findings also, concur with the study conducted by Buchegger (2010) which found that mobile phones were forbidden as they constitute a nuisance in terms of ringtones, talking, cheating, taking and publishing photos and videos and conflicts among students, teachers, parents and school directors too.

Again, the study findings concur with those revealed by Muhanga (2017) that mobile devices impacted students' academic performance in a sense that students wasted time in chatting, engaged on sexual affairs and their moral values were destructed.

Conclusion and Recommendations

Based on the varied findings revealed from students and teachers perceptions regarding mobile phones usage in CBI yet, evidences from literatures indicate that mobile phone technologies have potential to provide new learning experiences such as students' engagement in learning activities outside the class and the community practice (Kim, Rueckert, Kim, & Seo 2013). Also, mobile phones have been documented as greatest inventions of human beings that have brought the world closer in terms of learning, attachment, accessibility, self expression and connectivity to each other. Nevertheless, it has been indicated through literatures that students are ahead of their parents and teachers when it comes to mobile applications therefore, prohibiting mobile phones in schools is not a practical and long term solution. Hence, stakeholders should collaborate with the government in establishing monitoring software, rules and policies as well as to educate the students the advantage and disadvantages of using mobile phones. These rules and regulations of mobile phones should align with the education policies that foster CBI implementation. Further studies on mobile phones usage should be done in other public and private secondary schools in Tanzania.

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Examining Teacher Trainees' Attitude towards Teaching Profession and Teaching Subjects in Tanzania

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Abstract: *Teacher trainees' positive attitude on teaching is fast becoming a key instrument in teacher trainees' motivation to teaching. Thus, it is regarded as a central policy agenda that has recently captured the minds of academics and researchers. Based on those facts, we examined the extent to which teacher trainees hold positive attitude on two dimensions – attitude towards teaching profession and teaching subjects. Additionally, we investigated whether these dimensions of attitudes are significantly related to demographic variables such as gender, GPA, whether or not they had worked before joining teacher education university programme, years of work, future work preferences and subjects of specialization. Participants for this study constituted a sample of 901 final-year teacher trainees from one of the teacher education university college in Tanzania. Findings indicated that teacher trainees' attitude and GPA were not significantly related. Instead, a significant correlation was observed between the two dimensions of attitudes. Shockingly, findings indicated that more than 50% of teacher trainees had no preferences of working as teachers. Worse enough, the figures were similar even among science and mathematics majors who are highly demanded in the teaching career. Finally, the implications for policy and future research are put forth.*

Key words: Attitude; attitude towards teaching profession; attitude towards teaching subjects; teacher trainees; teaching

Introduction

Retaining quality teachers in the teaching profession remains to be a central policy agenda (Kavenuke, 2013; Nesje, Brandmo & Berger, 2018; Prasad, Showler, Ryan, Schmitt & Nye, 2017) for any country desiring to improve teaching. Nevertheless, having quality teaching goes hand in hand with teachers' positive attitude towards teaching profession and the teaching subjects. Teacher trainees' positive attitude towards teaching profession and the teaching subjects influence their choice to enter teaching. In that regard,

there are both intrinsic and extrinsic motives that influence an individual to choose to enter teaching. Scholars have mentioned social utility value attached to teaching (Eren & Vefa, 2010; Jugovic, Marušić, Ivanec & Vidovic, 2012; Lin, Shi, Wang, Zhang & Hui, 2012), time for family (Klassen, Al-dhafri, Hannok & Betts, 2011; Whitaker & Valtierra, 2018) and autonomy and opportunity for professional growth (Eren & Vefa, 2010; Whitaker & Valtierra, 2018) as factors that influence teacher trainees' choice to enter teaching.

Studies have indicated that, for teacher trainees to remain committed to teaching profession as they enter teaching, they need to have a positive attitude towards teaching itself (Moses, Admiraal & Berry, 2016; Moses, Berry, Saab & Admiraal, 2017). This is because attitude has been linked with positive outcomes such as future performance (Aksoy, 2016; Kim, Chiu, & Zou, 2010; Seema, Udam & Mattisen, 2016), retention (Nesje, Brandmo & Berger, 2018; Prasad, Showler, Ryan, Schmitt & Nye, 2017) and motivation to teach (Kim, Chiu & Zou, 2010). Given the importance attached to positive attitude, we realised the need to examine teacher trainees' attitude towards teaching profession and the teaching subjects in accordance with their demographic variables.

Studies of attitude among teacher trainees represent an under researched area in Tanzania. While Moses et al., (2016) investigated the relationship between gender and teacher trainees' commitment to teaching in Tanzania, we extended this study to cover other variables such as whether or not teacher trainees had worked before joining a pre-service teacher education university programme, years of work, future work preferences as well as subjects of specialization. In general, we focused on both, attitude towards teaching profession as well as attitude towards teaching subjects.

Furthermore, we extended this study because several studies conducted elsewhere have associated teacher trainees' attitude with factors such as gender, work experience, years of work, future work preferences and professional training, academic achievement, subjects of specialization and class level. Furthermore, Moses et al., (2017) conducted a study almost similar to this, but their study used a qualitative approach, whereas this study used a quantitative approach. Additionally, studies conducted in the context of Tanzania have indicated that teaching profession has been accorded low status and hence secondary school students (Mosha, 2016), teacher trainees (Moses et al., 2017; Moses, Admiraal, Berry & Saab, 2019) and full-fledged teachers in the teacher industry (Bennell & Mukyanuzi, 2005) have all tended to have a negative attitude towards teaching profession as a whole. Thus, this study become imperative in order to examine the extent to which teacher trainees hold positive attitude towards

the teaching profession and their teaching subjects; establish the relationship between teacher trainees' attitude and the demographic variables; as well as examining the correlation between teacher trainees' attitude and their GPA.

Research on the factors influencing teacher trainees' attitude towards the teaching profession as well as their teaching subjects has produced mixed results. Generally, teacher trainees' attitude has been associated with work experience, especially those who join teaching for upgrading purpose (Bullough & Kenyon, 2011; Shen & Hsieh, 1999), years of work (Aksoy, 2016; Ugras, Altunbas, Ay & Cil, 2012), future work preferences (Seema, Udam & Mattisen, 2016) and professional training (Saborit, Fernández-Río, Cecchini Estrada, Méndez-Giménez & Alonso, 2016). Other factors include gender (Güneyli & Aslan, 2009; Kartal, Kaya Hasan, Ozturk, & Ekici, 2012; Metin, Acisli & Kolomuc, 2012; Onen & Merve, 2012; Sener, 2015; Tutku, 2016), subject of specialization (Onen & Merve, 2012; Sülen, 2010; Sener, 2015), academic achievement (Kartal et al., 2012; Sülen, 2010) and grade level (Güneyli & Aslan, 2009; Metin et al., 2012; Sülen, 2010; Sener, 2015).

With respect to gender, research has also produced mixed results. For instance, Tutku (2016) studied teacher trainees' attitude towards language learning through social media and found no significant relationship between gender and attitude. Similarly, Metin et al. (2012) found no significant difference between male and female elementary teacher trainees with regard to their attitude towards science teaching. On the contrary, Güneyli and Aslan (2009) who also researched on teacher trainees, found a significant difference between men and women with regards to their attitude toward the teaching profession. A similar study was conducted by Sener (2015) and found a significant difference between men and women with respect to their attitude towards the teaching profession. Both studies concluded that female teacher trainees had significantly more positive attitude towards the teaching profession. Likewise, Guven and Aydogdu (2014) found that female teacher trainees had significantly more positive attitude towards computer assisted technology as compared to their male counterparts.

Moreover, teacher trainees' attitude has been associated with grade levels. For instance, while Tutku (2016) found that teacher trainees' attitude towards language learning with social media varied significantly with years of study, other scholars (Metin et al., 2012; Sülen, 2010; Sener, 2015) found no significant relationship between grade levels and teacher trainees' attitude. Nonetheless, given that teacher trainees who participated in this study were about to graduate, our study covered final-year teacher trainees only. The assumption was that they had already developed their future work preferences regarding working as teachers or not after graduation. Furthermore, studies that included academic achievement (Kartal et al.,

2012; Sülen, 2010) and subject of specialization (Onen & Merve, 2012; Sülen, 2010; Sener, 2015) found no significant difference between these demographic factors and teacher trainees' attitude towards teaching. On the contrary, Kartal et al. (2012) found that teacher trainees' attitude towards the teaching profession varied significantly across subjects of specialization.

Additionally, attitude also has been found to significantly influence teacher trainees' future intentions to persist in the teaching profession (Seema et al., 2016). Regarding experience, Ugras et al. (2012) found a significant relationship between experience with computer technology and teacher trainees' attitude towards the use of computer technology in teaching.

Given these mixed research results, we examined whether or not there is a significant difference in teacher trainees' attitude in relation to their Grade Point Average (GPA), gender, whether or not teacher trainees had worked before joining teacher education programme, years of work, future work preferences, and subject of specialization. Thus, this study addressed the following research questions and hypotheses.

1. To what extent do teacher trainees hold positive attitude towards the teaching profession and their teaching subjects?
2. What is the relationship between teacher trainees' attitude and their gender, years of work, future work preference, subject of specialization and whether or not they having worked before?

H1: Male and female teacher trainees will differ significantly with regard to their attitude towards the teaching profession and their teaching subjects

H2: Teacher trainees who worked before and those who had never worked as teachers will differ significantly with regard to their attitude towards the teaching profession and their teaching subjects

H3: There will be a significant relationship between years of work and teacher trainees' attitude towards the teaching profession and their teaching subjects

H4: There will be a significant relationship between subject of specialization and teacher trainees' attitude towards the teaching profession and their teaching subjects

H5: There will be a significant relationship between future work preferences and teacher trainees' attitude towards the teaching profession and their teaching subjects

3. What is the correlation between teacher trainees' attitude and their GPA?
H6: Teacher trainees' attitude towards the teaching profession, attitude towards teaching subjects and GPA will be significantly correlated.

The Concept of Attitude: A Theoretical Framework

There is an agreement among scholars regarding the importance of attitude. For instance, teacher trainees' attitude towards teaching profession are associated with teacher trainees' willingness to dedicate their efforts in accomplishing teaching tasks when they become full-fledged teachers (Güneyli & Aslan, 2009). Attitude is not only important as knowledge itself (Andronache, Bocos, Bocos & Macri, 2014), but also it significantly influences teacher trainees' teaching skills, thinking processes and professional changes as they undergo teacher learning (Huang, Lee & Yang, 2019; Janssen et al., 2019; Thibaut, Knipprath, Dehaene & Depaepe, 2018). Also, there is a possibility of transferring the benefits of positive attitude from teachers to students.

For instance, Metin et al. (2012) found that teacher trainees' attitude towards science subjects and science teaching is likely to influence students' attitude towards science when teacher trainees graduate and go to the world of work with that attitude. However, the question is: what are the features of attitude that make it so important to study? Andronache et al. (2014) described attitude as "an individual predisposition to evaluate a social element, considering it favourable or unfavourable, and thus showing a certain behaviour toward it" (p. 628). That is to say, attitude, as a mental state determined by one's experience (Andronache et al., 2014), exerts a significant influence on the individual, directing him/her to act in a specific manner. Moreover, there are three dimensions—cognitive, affective and behavioural—of attitude as defined by Wood (2000). The three dimensions provide a better understanding of attitude and how they work to influence individuals' behaviour.

According to these scholars, the cognitive dimension involves individual's assumptions, beliefs and perceptions of events and facts. The affective dimension is concerned with individual's emotional experiences and responses to various events and facts. Finally, the behavioural dimension is concerned with how an individual shows an intention to act in relation to an event or fact.

These dimensions, according to Wood (2000), interact together to influence individual's behaviours. For instance, an individual's intention to act in relation to an event or fact is influenced by his/her assumptions and perceptions about such an event or fact. Based on these dimensions, we view teacher trainees' attitude towards the teaching profession as well as towards the teaching subjects as constituting a combination of assumptions, beliefs and perceptions regarding their future work preferences (the cognitive) as well as the emotional attachments influenced by experiences (the affective). Such a combination, in turn, influences teacher trainees' preferences and

intentions to act in accordance with the professional requirements (the behavioural). In other words, if teacher trainees have a positive attitude towards teaching, they are more likely to enjoy the profession in future, believe the profession is important in society and act in ways that advance the profession.

Materials and Methods

Participants

Participants for this study constituted a random sample of 901 final-year teacher trainees from one of the teacher education university college. This sample was selected from a population of 1718 final year students. The group became our target given that these teacher trainees had lived experiences on the topic under study and were assumed to have had formed clear career placement. We planned to collect data from about 1100 students.

Nonetheless, only 901 participants completed and returned the questionnaires, yielding a response rate of 81.9%. Table 1 below summarises the demographic characteristics of sample.

Table 1: Demographic characteristics of sample (n=901)

Characteristics	No	%
Gender		
Male	625	69.4
Female	276	30.6
Worked or not worked before joining teacher education programmes		
Yes	236	26.3
No	661	73.7
Years of work		
Less than 2 years	176	74.6
2 to 5 years	48	20.3
6 to 9 years	8	3.4
10 years and above	4	1.7
Subject of specialization		
Science and Mathematics	284	35.8
Social Sciences	509	64.2
Future work preferences		
Self-employment	413	47.5
Employment in public schools	299	34.4

Employment in private schools	83	9.6
Employment in non-teaching sector	74	8.5

Instruments

Attitude Scale Towards Teaching Profession and Teaching Subjects

To measure teacher trainees' attitude towards teaching profession, we used a four-point scale (1=strongly disagree, 4=strongly agree). We used four items to measure their attitude towards teaching profession (e.g. "All in all, I enjoy working as a teacher"). Moreover, four items were used to measure their attitude towards teaching specific subjects of specialization using a seven-point scale (1=strongly disagree, 7=strongly agree). For instance, one of the items used was "I prefer teaching my subject (s) of specialization than other subjects". These items measuring attitude towards teaching were customised from Senler (2016) who measured pre-service teachers' attitude towards science teaching using a five-point Likert scale format. The reliability in terms of Cronbach's alpha in Senler's study was .82. The Cronbach's alpha values for this present study were .70 and .61 for attitude towards teaching profession and attitude towards teaching subjects respectively.

Demographic Characteristics of Survey

In this study, we included independent measures such as gender, having worked before joining teacher education university programme or not, years of work, teaching subjects of specialization, and future work preferences. We asked participants to indicate their gender by ticking the options provided to them. Similarly, participants were asked to tick whether or not they had worked before joining teacher education university programme. If they had worked before, they were asked to indicate the number of years they had worked. The years of work ranged from less than 2 years, 2-5 years, 6-9 years, to 10 years and above. In the context of Tanzania, some teachers, particularly, primary and lower secondary teachers are officially employed as teachers after attending two-years in teacher education programme. To qualify to teach to high school level, they are obliged to register in a pre-service programme leading to a bachelor degree. Thus, these teacher trainees who participated in this study joined the pre-service programme with some years of work experience.

Also, participants were asked to indicate their subjects of specialization. For the purpose of analysis, we classified these subjects into two categories namely science and mathematics and social sciences. Further, participants were requested to indicate their future work preferences. Thus, they were urged to select one among the following options: self-employment, employment in public schools, employment in private schools, and employment in non-teaching sector. Finally, in order to assess whether

teacher trainees' academic achievement (GPA) is related with teacher trainees' attitude towards teaching profession and their teaching subjects, participants were asked to indicate their GPA.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) version 22 was used to analyse the data. Several data analyses were computed in order to respond to the three research questions delineated earlier. Firstly, we conducted the reliability tests and reported the Cronbach's alpha value for each dimension, that is, attitude towards teaching profession and attitude towards teaching subjects. To respond to the first research questions, we computed mean and standard deviation for the two dimensions as well as the mean and standard deviations for the individual items. Moreover, we conducted an Independent Samples *t*-test and Analysis of Variance (ANOVA) to respond to the second research question. Finally, we computed correlations in order to address the third research question.

Results

The study aimed at examining whether or not there are differences in teacher trainees' attitude towards the teaching profession as well as towards their teaching subjects with respect to their gender, whether or not teacher trainees had worked before joining teacher education university programme, years of work, future work preferences, and subject of specialization. Additionally, the study investigated the relationship between attitude and academic achievement, measured using GPA.

Teacher trainees' attitude towards the teaching profession and their teaching subjects

As shown in Table 2, results indicated that teacher trainees had moderate levels of attitude towards the teaching profession as well as towards the teaching subject.

Table 2: Mean and standard deviations

	Min	Max	M	SD
Attitude towards teaching profession	1	4	2.98	.851
Attitude towards teaching subjects	1	7	5.69	.665

In order to gain a deeper understanding of teacher trainees' attitude towards the teaching profession and their teaching subjects, we extended our analysis to individual items (see Table 3).

Table 3: Mean and Standard Deviations of Individual Items

	Min	Max	M	SD
I find the advantages of being a teacher outweigh the disadvantages	1	4	2.71	.941
Working with students makes me interested in teaching	1	4	3.41	.858
All in all, I enjoy working as a teacher	1	4	3.16	.864
If I could decide again, I would still choose the teaching profession	1	4	2.79	1.067
I find my teaching subject interesting to teach	1	7	5.41	1.073
My subject (s) of specialization should be a core component of the curriculum	1	7	5.80	.887
I prefer teaching my subject (s) of specialization than other subjects	1	7	5.73	.900
I believe I can teach my subject of specialization competently	1	7	5.52	1.119

Results have shown that, generally, teacher trainees had lowest mean scores on items that measured their inclination toward the teaching profession. For example, results indicated that if teacher trainees involved in this study could be given a second chance to choose a profession of their choice, they almost favoured choosing other professions.

The relationship between teacher trainees' attitude and the demographic variables

The study investigated the relationship between teacher trainees' attitude and the demographic characteristics of gender, years of work, future work preferences, subject of specialization and whether or not they had worked before joining teacher education university programmes.

Table 4: T-test and ANOVA results

	Gender	Worked or not before joining teacher education university programme?	Years of work	Future work preferences	Subjects of specialization
Attitude towards teaching profession	.361	.107	.382	.000**	.218
Attitude towards teaching subjects	.001**	.275	.170	.003**	.241

**p<.01, *p<.05

With respect to gender, a significant difference (p<.01) was observed between males and females with regard to their attitude towards their teaching subjects. In this case, as shown in Table 5, females outperformed their male counterparts. On the other end, there was no any significant relationship between gender and teacher trainees' attitude towards the teaching profession. Thus, we accepted our hypothesis (H1) on the aspect of

teacher trainees' attitude towards the teaching subject while we reject the same hypothesis on the aspect of attitude towards teaching profession.

Table 5: Mean scores attitude towards teaching subjects by gender

		Gender	M	SD
Attitude towards teaching subjects	Male		5.60	.722
	Female		5.73	.509

With respect to whether or not teacher trainees had worked before joining teacher education university programmes, *t*-test results (Table 4) indicated that, for all teacher trainees, having worked before joining a pre-service teacher education university programme and subsequent years of work were not significantly related to their attitude towards teaching profession and attitude towards teaching subject. Similarly, for those who had worked before, their years of work, as ANOVA results indicated (Table 4), were not significantly related to any aspect of attitudes. Therefore, we reject hypotheses (H2 and H3) altogether.

Turning to subjects of specialization, contrary to our hypothesis, ANOVA results indicated that subjects of specialization were not significantly related to all aspects attitude for all teacher trainees (see Table 4). Thus, we also reject our hypothesis (H4). Regarding future work preferences, a significant relationship was observed between teacher trainees' future work preferences and their attitude towards the teaching profession and teaching subjects (Table 4).

Table 6: Mean Scores for Attitude Towards Teaching Profession and Teaching Subjects by Future work preferences

Future work preferences		Attitude towards teaching profession	Attitude towards teaching subjects
Self-employment	<i>M</i>	2.8943	5.5769
	<i>SD</i>	.84873	.66442
Employment in public schools	<i>M</i>	3.1288	5.7392
	<i>SD</i>	.80225	.59741
Employment in private schools	<i>M</i>	3.2469	5.6327
	<i>SD</i>	.91898	.65202
Employment in non-teaching sector	<i>M</i>	2.4792	5.4722
	<i>SD</i>	.78470	.87568

Descriptive statistics (Table 6) indicated that teacher trainees who intended to work in non-teaching sector had the lowest mean scores on both aspects of attitude, implying a negative attitude towards both the teaching profession and the teaching subjects. Also, while teacher trainees who intended to work in private schools had the highest mean scores on attitude

towards the teaching profession, the highest mean score on attitude towards the teaching subject was observed among teacher trainees who intended to work in public schools. This implies that teacher trainees desiring to teach in both public and private schools had positive attitude towards both teaching profession and teaching subjects.

Correlations among teacher trainees' attitude and their GPA

Finally, the study intended to establish whether or not teacher trainees' attitude and GPA were significantly correlated. To achieve this, we performed Pearson correlations.

Table 7: Correlations among Attitude and GPA

	1	2	3
1. GPA	—		
2. Attitude towards teaching profession	-.047	—	
3. Attitude towards teaching subjects	.053	.108**	—

As shown in Table 7, results, have shown that only attitude towards teaching profession and attitude towards teaching subjects were positively and significantly related ($r = .108, p < .01$). Thus we accept out hypothesis (H6) for these two variables only. That is to say, GPA was not significantly correlated with any of the variables.

Discussion and Conclusion

Demographic data indicated that the proportion of female teacher trainees was 30.6% which appear to reflect less continued proportion of women in higher education in Tanzania (Masanja, 2010). Also, the percentage (26.3%) of teacher trainees who had worked before joining teacher education university programme is not surprising given that a majority of students tend to join higher education through direct entry from high school. In other words, these teacher trainees who had worked before teacher education university programme constituted those who came to higher education for the purpose of upgrading their education.

Besides, the proportion of teacher trainees majoring in science and mathematics was low (35.8%) compared to those in social sciences. Moreover, the proportion of female students majoring in science and mathematics was low (27.5%) compared to their male counterparts. Such findings are similar to many other studies (Bottia, Stearns, Mickelson, Moller & Valentino, 2015; Buschor, Berweger, Frei & Kappler, 2014; Kasembe & Mashauri, 2011; Kier, Blanchard, Osborne & Albert, 2014; Price, 2010) which have been conducted on the topic under scrutiny. Surprisingly the number

of teacher trainees who plan to continue working as teachers after graduation constitutes only 44%. Given the costs of training these teacher trainees, the findings have implications in the government's expectations of combating teacher shortage, in particular, science and mathematics teachers. Additionally, after splitting data set by subjects, it was astonishing that even teacher trainees majoring in science and mathematics who are highly employable and demanded in teaching career, still they (55%) do not want to teach after graduation. Overall, these teacher trainees do not only want to teach but also the findings have indicated that they had significantly low attitude towards both teaching profession and their teaching subjects of specialization, implying negative attitude towards both teaching profession and the teaching subjects.

On the other hand, the results communicate good news that only those with positive attitude towards teaching intend to join teaching after graduation. On the other hand, losing more than 50% of teacher trainees calls for a special attention. Thus, in relation to our theoretical framework, further research is needed to investigate the intersection among the cognitive, affective and behavioural dimension of attitude among teacher trainees in Tanzania in relation to their attitude.

Understanding that intersection and its nature is key to designing relevant mitigation strategies. Furthermore, in this study, we identified significant gender differences with respect to attitude towards teaching subjects. Further, female teacher trainees outperformed their male counterparts on this aspect. These findings appear to support earlier studies (Güneyli & Aslan, 2009; Guven & Aydogdu, 2014; Sener, 2015). Overall, these findings add to the existing mixed research results on gender and attitude towards teaching profession and teaching subjects. Therefore, further research is needed to investigate the matter. For instance, one possibility might be to investigate how social and constructions of gender are related to teaching profession. This is important because gender constructions around masculinity and femininity have been associated with occupational choices (Pozzebon, Visser & Bogaert, 2015; Simon, Wagner & Killion, 2017).

With regard to the relationship between teacher trainees attitude and academic achievement, our results support earlier findings (Kartal et al., 2012; Sülen, 2010) that found no significant relationship between teacher trainees attitude and academic achievement (GPA). These findings imply that while academic achievement and positive attitude are theoretically supposed to work together in producing an ideal professional (Sülen, 2010), the correlation between them might not automatically exist. Thus, policy and practice must emphasize on improving both teacher trainees' attitude and

academic achievement. To this end, with regard to teacher trainees' attitude towards teaching profession, it may be concluded that, teacher trainees' lack of intentions to work as teachers has more to do with their negative attitude towards teaching profession and their teaching subjects. In other words, this has less to do with the hypothesized recent stoppage of immediate placement after training in Tanzania.

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New Realism, Social Criticism and Prostitution Motif in Shadreck Chikoti's *Free Africa Flee!*

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Abstract: *The post-Banda Malawian poetry, like its precursor, has largely been marked by commitment to social and political issues. In taking on these subjects, the poets in Malawi tend to adopt critical stance reminiscent of the role of the traditional bard, who excoriates social misconducts and political malfeasances on the part of the common people and the elite. A contemporary Malawian poet, Shadreck Chikoti's debut collection, Free Africa Flee!, falls in this category. Despite its topicality and other strengths, the collection has suffered critical neglect. Against this backdrop, this article closely examines selected poems in the collection, and argues that Chikoti makes social criticism out of his poetry, using a singular motif across dissimilar issues, a feature that is quite unusual in a debut collection. The poet's criticism is located in the context of new realism, a writing convention which privileges 'hyperextreme sincerity' and pluralism in its representation of realities. The article concludes that the poet's thematic renderings preserve a strong link with Abiola Irele's notion of new realism in the post-independence sub-Saharan African novel.*

Keywords: Malawian poetry, Shadreck Chikoti, New realism in African literature, Social criticism in poetry

Introduction

Many critics have commented on the focus of African literature on society. For instance, Kunene (1982) observes that situating artistic vision within social experience is not only normal, it is also natural. Similarly observing that every kind of African literature has a social function, Ojaide (1996:2) gives the intimation that 'songs, prayers, praise chants, and abuse are placed at the service of the community'. He also adds that this utilitarian function, originally associated with orature, has been imbibed by modern African writers as well, which is another way of saying that African literature is socially and politically committed. This inclination to commitment has, however, made Eurocentric critics of African literature question the artistic merits of African writings. Ken Goodwin (1982), for example, claims that the commitment of later modern African poets to politics has adversely affected artistry in the poetry, compared to that of first generation poets like Wole Soyinka, Christopher Okigbo, John Pepper Clark, Kofi Awoonor, and Lenrie Peters. While this, indeed, may hold true to some poets of later generations,

there are many others who combine commitment with ingenious craftsmanship. This paper considers Chikoti as belonging to this class.

In fact, to say that Modern African poetry is a committed genre like its prose and drama siblings is to re-state the obvious. To also observe that they are often critical of their social milieu or contexts might also appear blatant enough. Yet, the degree of commitment, critical value and approach of the poets offers exciting varieties across generations, regions, nationalities and gender divides, making their works subjects of sustained critical interests.

Unfortunately, until they win literary recognition through awards or make a shortlist of prestigious competitions, many of them are ignored by critics in the academy. This has been the fate of Shadreck Chikoti, one of the twenty-first century Malawian poets and activists. Although Chikoti has courted better recognition as a short story writer, his poetry volume *Free Africa Flee!* deserves critical attention for its unique approach to the treatment of familiar social and political issues in the collection. In the article, I argue that the issues are largely explored, using prostitution in both literal and metaphorical senses, and deftly as a motif in the first half of the collection. This is informed by the fact that while some of the poems directly comment on the indignity of prostitution by women, the notion of prostitution also underlines the infidelity of political leaders who jump from one political party to another in pursuit of self-interest.

As noted by Syned Mthatiwa (2007), most Malawian poets are social critics. The poets mostly draw their poetic afflatus from the quotidian realities that straddle the social, the economic and political issues of their milieu. Interestingly, they tend to be critical of these quotidian muses, as they primarily see themselves in the image of the traditional African bard who the society recognises as its conscience. As writings rooted in social criticism are usually sublimated through the convention of realism, the extent to which the realist mode has helped Chikoti project the material evidence of the social world of Malawi is the objective of this paper.

A Brief Overview of Politics and Malawian Poetry of English Expression

Unlike most other Anglophone countries in Africa, poetry of Europhone expression in Malawi was slow to emerge. This slow emergence, according to Roscoe and Mpalive-Hangson (1992), is traceable to the neglect of international publishing houses. While one may wonder at this charge, it is nevertheless plausible because the multinational companies with which international publishing houses had shared provenance had invested heavily in other commercial interests in the country, ignoring the

intellectual and creative writing fields. The turn of serious critical attention to the emergent poetry was, again, slow. This was understandably so for possibly many reasons, but two of which are easily identifiable. First, the local political atmosphere surrounding the emergence of the poetry was not only tense, it must also have been frightful to potential local critics. The despotic government of the Late Dr Hastings Kamuzu Banda, which paradoxically mid-wifed the delivery of the poetry, was generally impatient with whatever it considered politically incorrect, much of which the poetry is stuffed with. Second, it naturally takes time for new writings to win the attention and confidence of critics, especially with respect to its potential for being enduring work.

As equally noted by Roscoe and Mpalive-Hangson (1992), Malawian poetry in English would not come alive and beckon to critics until the 1980s after many years of self publications. With self-publishing, a sizeable body of creative writings of varying qualities had found markets in the hands of petit bourgeois, from among whom early local critics also emerged, particularly members of the academic staff at the Chancellor College, University of Malawi. After the surge in self-publications came international recognition in the early 1980s with a re-issue in 1981 of Felix Mnthali's *When Sunset Comes to Sapitwa*, originally published by Neczam of Zambia, then by Longmans, an international publishing house headquartered in London. This would later be followed by the publication of Jack Mapanje's *Of Chameleon and Gods* in the same year by Heinemann, the prestigious publishers of African Writers Series.

This achievement was made in spite of the highly charged political atmosphere and repression characterising the period. With the exile and gaoling of foremost poets of the era such as Jack Mapanje, David Rubadiri and Frank Chipasula, it is not surprising that the growth of modern African poetry in the country belies its potential. Interestingly, politics, which served both as inspiration and midwife of the Malawian poetry of the Banda era, is functioning in similar capacities in the post-Banda era. This is quite visible in Bright Molande's *Seasons* and Shadreck Chikoti's *Free Africa Flee!* (henceforth referred to as *Flee!*).

Some Conceptual Views on Realistic Mode of Representation

In the realm of temporal speculation, realism as a convention of writing could be said as dating to the Platonic and Aristotelian theory of mimesis. Though differing in terms of the mechanism or goal of imitation, both agree on the idea of art as imitation of reality (Melberg, 1995). Since the period of these philosophers, realism has continued to attract scholarly interests and generate new forms. In agreement with Taghizadeh (2014), realism in literature is indeed multi-faceted. For instance, there are social realism,

socialist realism, neo-realism, magical realism and new realism. To be certain, the emergence of variations of realism must have been driven by certain objections to the extant form by critics and writers.

As a central concept to most forms of writings, realism thrives on the assumption that there is correlation between what exists in the material world and the textual representations of same. Baldick (1990) describes realism as 'a mode of writing that gives the impression of recording or "reflecting" faithfully an actual way of life' (p.184). He further likens it to verisimilitude and emphasises its rejection of 'idealization, escapism and other extravagant qualities of romance in favor of recognizing soberly the actual problems of life' (p.184). It may well be this assumption that readers of realistic fiction bring to texts, make them suspend their disbeliefs and even occasionally accept the improbable. Because realist writers rely on imagination, some critics have picked bone with their mode of writing. For instance, Oripeloye accuses writers with realist intention of possible 'perspectival distortions' since they rely solely on their imaginative power. He insists that if what they have presented are subjected to proper scrutiny they 'cannot pass the test of truth value as they lack the grains of circumstantial evidence' (2017:172). To press his argument further, he draws on Louise Rosenblatt's (1995) view which, according to Oripeloye, 'provides an insight into the fallibility of imaginative reading in real life situation'. Rosenblatt had observed that:

in imagination we rehearse various possibilities of action in a given situation. We go through a process of imaginative trial and error, trying out different modes of behavior and working out their probable effects. When the situation arises in actual life, we are better prepared to act successfully. [...] Literature may thus offer us a means of carrying on some of the trial-and-error experimentation that might be disastrous in real life. (p.190)

The obvious fact, both from Oripeloye's and Rosenblatt's words, is that the latter is speaking of imaginative reading, not writing. Even if for argument's sake, Oripeloye's mis-reading is ignored, it is not expected that because realist writers' works lack 'grains of circumstantial evidence', they consequently lack 'truth value'. What is truth value, who determines it, and how is it determined? In so far as what is deemed 'truth value', like truth itself, is anchored in subjective and personal experiential reality, anything of 'truth value' for that matter is, *ab initio*, also indeterminate.

While agreeing with Jeyifo (2012) 'that language and literature can be made to truthfully and providentially reflect the world in which we live'(p.3), this

paper proceeds on the assumption that the realities reflected in Chikoti's debut collection of poems are, indeed, experiential, as well as preserve links with the post-Banda Malawian society. As hinted earlier on, the poet's capacity to imbricate prostitution with diverse subjects such as culture, politics, power, spirituality and economics, and turn it into a motif in the first part of the collection, invites this critical intervention. Consequently, the concept of 'the new realism' observed by Irele (2001) in post-independence African writings, is appropriated in a close reading of the poems from Chikoti's *Free Africa Flee!* The poems are 'Lost Child', 'Another Defection', 'The Honorable's Goddess', 'Democratised Prostitutes' and 'Dancer Woman'.

For its centrality to the interest of this article, a comment or two on 'new realism' is expedient in order to establish its conjuncture with 'African New Realism', as theorised by Irele (2001), and which actually undergirds our analysis. Basically, new realism moves beyond depicting life experiences in a text to textualising unusual, strange but plausible realities. According to Novikov, (2008) new realism is characterised by:

a deep felt attention to life, to all that is bright and dark in it; an enamored admiration of it; a fearless ease with it; an extreme and sometimes hyperextreme sincerity, the heavy burden of baring the soul, because only then will the bloody movements of the soul become interesting; empathy, pity, pain, sometimes through negation, but still with a final goal of eliciting the best feelings. (p.67)

What is striking about this characterisation is that new realism connotes a convention of writing that does not flinch from the bristly and horrid components of life. The African post-independence African novel may well be described in this light, and this probably informs Irele's observation about the emergence of new realism in African fiction in his reading of some African novels. In the African context, new realism, as observed by Irele (2001), 'relates essentially to a new attitude toward the African experience in the more recent literature, a new apprehension of events, social forces, and human character as they interact to create the sense of a moral universe impinging upon the writer's consciousness' (p.214). It is a realism that emphasises the writer's ability to objectively reflect the goings on in his or her society in a manner that contradicts the negritudist romanticisation of Africa's past, and one that rides on the mood of disillusionment which followed independence in many African countries in the 1970s and 80s.

According to Irele, the mood, in turn, incites a 'manner [that] relates to the deployment within the imaginative work of a particular scheme of symbols,

which register a negative apprehension of the African world' (p.214). By negative apprehension is implied that the interpretive reception of such writings is inescapably doomed to foreground the unpleasant realities of life, which is not only plausible but also well demonstrated in Irele's reading of selected African novels in the essay under review. However, this does not suggest that new realism is blind to the felicitous aspects of life, or that it cultivates dystopian vision.

In this paper, the post-Banda era in Malawi, marked by multiparty democracy and expectation of a better life for common Malawians, is conceived as parallel to what obtains in many African countries shortly after the euphoria of political independence, thereby spawning new realistic fiction. Less than a decade after Banda's exit from power and the euphoria of being rid of dictatorship, the old culture of political dancing, as well as political, cultural and economic prostitutions, has taken over the Malawian socio-political landscape, and consequently births new realistic writing.

Of Social Criticism and Prostitution

In the poem 'Lost Child', the poet-persona speaks of a young member of the community who is well cultivated in the ways and culture of the people until the advent of Westerners and their civilization. Seduced by this new civilization or way of life, the young man asks his elderly father to give him 'just a portion of his freedom' (*Flee!* p.5) so that he could go and join these new people. After much cry and pressure from the young man, the chief grants the request, noting that 'if a child cries for *nsatsi* horn/carve it for him, it will wither with/the scorching sun'. By this proverb, the chief hints at the futility of the young man's pursuit. Not only does the young man join the Westerners and their acolytes in eating and dining, 'he talked like them and laughed like them' (*Flee!* p.5), believing he is one of them. He also derides his ancestors and calls his people 'monkeys and idiots'. Efforts to make him see reason and have a change of mind are unheeded, constraining his people to declare him a persona non grata. Not long after, he returns to the village, collapses at his father's feet, and cries profusely. He had seen through his seducers' deception, arrogance and fraud. He now sees himself as a weakling and would not have his father call him a man, but a woman. The father, however, insists on calling him a man. In fact, he kills a pig and roasts it for his son, and gives him a leopard skin and a shield.

This narrative easily parallels that of the prodigal son in the Bible. The biblical prodigal had requested his inheritance from his father, got it and spent it extravagantly, and later returns to his father, regretful and penitent. The father forgives him and accepts him back into the family fold. Whether this allusion is designed or fortuitous, its import is unmistakable. While the young are enticed and excited by the superficial, the elderly are guided by

the profound. However, using metaphorical optics, it is not the shallowness of thought or the profligacy of the young man in question here that the poet is trying to expose, it is that of the younger generation of Africans who have been to Western schools or exposed to Western civilization that the poet is concerned with.

This is easily betrayed in the poet's observation that the young man abandons his people and joined those who 'called us monkeys and idiots' (*Flee!* p.5). Because of their Western education or exposure to occidental civilisation, they treat their own people's values and culture with derision. They embrace foreign ways like a prostitute embraces another man simply on asking. However, while the prostitution observed here is not sexual but cultural, it does not happen just on asking; it is one facilitated through subtlety. This is clearly underscored by the poet's choice of the words 'seduced' and 'delicate heart', each of which belongs in the register of flirtation and sex, and used twice for emphasis.

Party politics tends to be seen as a means of personal economic advancement by some politicians. Therefore, when a politician's self interest or economic interest is threatened in his party, he does not vacillate a bit before jumping to another party. This is the subject taken on in the poem 'Another Defection'. The poet-persona observes that 'Parties are not anthills/on which you ascend and descend/and ascend and descend' (*Flee!* p.7). The return of multi-party democracy to Malawi, after about three decades of one party dictatorship of the late Kamuzu Banda, was expected to turn things around politically, and to enthrone and nurture political pluralism. Sadly, this is only so on paper, rather than in practice. Politicians, upon losing election or feeling politically threatened, gravitate towards the ruling party, and thereby further emasculate the hitherto weak opposition parties. This practice is what Englund (2002: 12) refers to when he says 'Malawians have been exposed to several bewildering shifts in their leaders' identities and allegiances' in his introduction to *A Democracy of Chameleons*.

If the bewildering shifts implied here refer to moving from one party to another, then Englund is unduly charitable by describing what is clearly a prostitution as 'allegiances'. Although party politics involves alliances, alignments and realignments, to change parties like one changes clothes or to change parties based on whims and greed is to enact political prostitution. As he observes in the title of the book, as well as the subtitle of its introduction, 'The Culture of Chameleon Politics', the metaphor of chameleon is more objective and apt, for the politicians change their identities rather too frequently. For Chikoti, political defection is a 'wicked game' which causes him and many others pain. He believes it would not help in nurturing democratic ideals, and wonders:

Tell me
Is it money you look for?
Is it honey you run for?
I assure you:
 You don't know your self
 You only know but self (*Flee!* p.7)

Obviously directed at politicians, this extract inscribes the poet-persona's perplexity about the motivation for Malawian politician's partiality for political prostitution. Whether motivated by money or other gleams of life, the poet attributes the tendency to selfishness. He feels betrayed and disappointed that those he had thought they belong in the same party together do not actually subscribe to the party in principle. The extent of his disappointment can only be imagined by the repetitive use of the word 'pains' in the poem, which is repeated nine times in a poem of twenty four lines. In support of the probability that money or access to wealth is 'the long and short of it', Englund (2002) recalls how John Tembo revealed in the National Assembly how he was able to buy the support of the Malawi Congress Party (MCP) Area Chairman in his Dedza South constituency with a lot more than the K7,000 the man was offered by officials of National Democratic Alliance (NDA). Tembo was a strong member and former president of Malawi Congress Party.

In 'The Honorable's Goddess', members of the political class also constitute the object of Chikoti's poetic salvo. Apparently using the Honorable as representative of the class, the poet explores the supernatural and cultic proclivity of political power mongers in Malawi. A number of African leaders, including the late Malawian president, The Late Hastings Kamuzu Banda, have been rumoured to rely on magic or voodoo to perpetuate their hegemonic rule over their countries. Even in post-Banda Malawi, the issue of abduction and killing of people with albinism has been linked to powerful politicians. In a report by Chakuchanya Harawa of the British Broadcasting Corporation (BBC), the United Nations is credited with the observation that attacks on albinos increase around election time 'because of the false beliefs that their body parts can bring good luck and political power when used in witchcraft related rituals'. This spate of killings and the dread it inspires are probably what Tembo (2014) has in mind when he speaks of the 'dis-ease that Malawians went through during the reign of Bakili Muluzi' (p.51).

In his quest for power, and/or its consolidation, the Honorable goes from one spiritualist to another. He visits the priestess of a certain goddess, spends 'seven days in the python's belly, naked/covered with mucus,

stinking, sickening' and comes out 'on the eighth day, a zombie/frightening' (*Flee!* p.9). Clearly a disgusting and degrading act, the poet deploys this scatological imagery to invite opprobrium unto the politicians in the country. If prospective, *de facto* or *de jure* leaders could bring themselves to this abject situation because they want power, what they would do to retain the power can only be left to imagination. The emergence of the Honorable on the eighth day as 'a zombie frightening' must therefore be received with little consternation. A zombie is a lifeless and completely unresponsive person; or, in voodoo practice, a dead body brought back to life but devoid of soul. Metaphorically interpreted, a leader produced through a ritual like this is a zombified leader, which invariably explains why the poet describes the development as frightening, in the sense of being disastrous.

Unsatisfied, the Honorable resorts to the junior priest of the goddess, spends 'two days in a pot, baked, boiled/seven days under an anthill, naked/flesh torn by red ants, hissing and groaning/in total darkness' (*Flee!* p.9). On the eighth day, he emerges 'a monster, so dirty'. This patronage of another priest is meant for greater fortification, the result of which testifies to same. Now, rather than have a zombified leader, Malawians would become 'blessed' with a dirty monster as leader. Physically ugly, psychologically terrifying and innately evil, the metaphor of monster in this context is further modified with dirtiness, which suggests another negative attribute, more like recklessness in the exercise of power. If, as suggested by Kalua (2016), the works that dominated Banda era can be described as 'a storm of protest' against Banda narcissism and dictatorship, Chikoti clearly sustains this tradition of protest in the post-Banda era in his collection.

To acquire more spiritual rampart, the Honorable approaches the priest of the goddess, spends 'nine days in the air, meeting kings/and queens, dancing, singing, vowing' and returns on the tenth day 'so weak/and wicked'. While the weakness here easily and logically suggests tiredness following from the exertion of singing and dancing, in the political context where the Honorable is expected to operate, weakness here signifies lacking in resolve. Combining this with wickedness will, no doubt, spell disaster for the people, the poet implies. In what may be regarded as the peak of his spiritual prostitution, the Honorable goes to the goddess herself, spends 'nine days under the waters eating human meat/drinking human blood/sipping human urine/partying with horrifying/creatures' (*Flee!* p.9). This evokes a frightening image of cannibalism, which, in turn, suggests that Malawian political leaders prey on their followers to consolidate their power. Now satisfied, the Honorable is confident that no bullet can harm, no magic can harm him, nobody can jail him and he is going to be loved by all. He is going to have fame, life and glory. Unfortunately, all these are

without consequences. He would become a slave to the goddess, offer blood sacrifice, mumble incantations, observe many do's and don't's, and keep some talisman and an idol.

By the foregoing inscriptions, Chikoti exposes the underbelly of Malawian and, by extension, African politicians who shop for spiritual charms and magic of luck in order to achieve their political aspirations. In desperation, they go from one spiritualist to the other, or join one occult group today and to move to another tomorrow. Sadly, the consequences of their fetish ways rub off gravely on the people they rule over. In the last stanza of the poem, Chikoti, like the traditional African bard, waxes philosophical and didactic. While observing that the Honorable forgets rather quickly the fate of former powerful leaders, he reminds us all:

Mbona was purer than him
Makewana was holier than him
Zwangendaba was mightier than him
Hastings was more descent than him
but no Mbona, no Makewana, no Zwangedaba,
no Hastings lives for ever (*Flee!* p.10)

Here, allusions are made to the widely acknowledged powerful gods and leaders. Mbona is a deity in Malawi, a rain god who is also invoked on occasions of locust plagues, floods, epidemic diseases, and other serious threats to the productive and reproductive capacities of the land and its people. Makewana is also a rainmaker. Both were regarded as powerful, highly influential and generally good. Zwangedaba was a mighty and powerful leader of a section of the Ngoni people, who ravaged many countries he crossed on his way from the southern part of the continent to the tropical north in Central/East Africa. Hastings was the powerful and dictatorial president of Malawi from independence until 1994. For the poet, in spite of the power of these deities and individuals, for good or for bad, they did not live forever. In other words, all the desperation and machinations to get or hold on to power would avail nothing everlasting. Life and all its allures are ephemeral.

As suggested in the title of the poem 'Democratised Prostitutes', the poem has political characterisation as its backdrop, while its subject is steeped in prostitution of the carnal form. Using two major political figures of World War II, Winston Churchill and Adolph Hitler, as metaphors of good and bad leaderships, Chikoti comments on how both are nevertheless implicated in the indiscretions of promiscuity and prostitution. In the words of the poet, these leaders

watered their scorched throats here
once thirsty once wicked
here they met unknowingly
at this well they met
ever giving ever wanting
at this well they met
but in nudity (*Flee!* p.13)

The leaders said to be 'thirsty' here are not in need of water, as the first line and the fourth line of the extract suggest. Their thirst actually implies a lust for coitus, which may be gratified peaceably or violently, depending on the circumstances of their situation. The idea of well, rather than refer to a hole dug into the ground to obtain water, is a euphemistic reference to vagina which, according to the poet, is 'ever giving and wanting'. To be sure, this kind of reference suggests that the poet is sexist, if not misogynistic.

Partly overcoming the inhibition often imposed by the culture of restraint or reticence about sex or sex anatomy in African social discourses, Chikoti removes any doubt about his subject of discussion with his reference to nudity. In the nudity of the 'well' and the 'throat', a conversation ensues where the 'well' expresses her love for the 'throat's' money and the 'throat' feigns surprise. Seeing the surprise, she promptly claims to have said she loves the 'throat's' party. Following this is:

intimate silence. Legs stretching from
Dzalanayama to Misuku hills
stomachs singing un holy songs
demons beating *mpanje* drums
the fire burning the brains
the body wet as in rains
fingers deeped into the innocent
tax payers money after that day's work (*Flee!* p.13)

If the images evoked in the first six lines of the extract here tell of the coital relation between a leader and his mistress, the last two lines tell of what else goes into the bargain. Not only does the leader pay the mistress, the money used is drawn from the state's treasury. Consequently, she is able to drive 'a Toyota XV/wears Pierre Cardin dresses/and shouts on cell phones' (*Flee!* p.14). All of these indicate the prevalence of corruption, extravagance and profligacy of the leaders. However, while this seems to be the poet's intention, the following stanza raises questions as to whether he finds them blameworthy. He laments:

BUT
these thighs dear!
these skirts friend!
these so called beauties!
pollute our men *shuwa!*
pollute our government *shuwa!* (*Flee!* p.14)

The impression one gets from these lines is that women given to prostituting their natural sexual endowments are actually responsible for the corruption of men political leaders. The impression is created that men in leadership positions are deliberately corrupted by some women through their sexually infelicitous relation with them, hence their mis-governance or inept leadership. Except we choose to impute some spiritual or supernatural agency into the matter, this is clearly in dissonance with known rules of logic. Rather than condemn the leaders for their lack of sexual discipline, wasteful spending and misappropriation of the people's patrimony, he transfers the blame to women, leaving the reader to wonder whether the said 'thighs' and 'skirts' rape the men in power or government. This clearly confirms the poet as chauvinistic and sexist.

In another poem, 'Dancer Woman', the poet not only confirms his sexist and chauvinistic dispositions to women, he inscribes a misogynist tendency. Like in the immediate poem above, he imprints some link between the male political class and women prostitutes in 'Dancer Woman'. The poem is addressed to a dancer woman, ostensibly a professional dancer who is usually hired to entertain people at political rallies. However, the dancer may well symbolise 'party women' who are often used as 'entertainers' during electioneering and campaign rallies by African politicians. In the case of Malawi, Gilman (2009) has indeed noted that successive post-independence regimes exploit dancing women for political gains.

Chikoti details what he apparently considers disapproving about the dancer - provocative and seductive dressing, laissez faire parenting style, dealing in illicit liquor, nocturnal trading in the flesh pot zone, and dancing at political rallies. While all of these are parts of the social ills being criticized by the poet, the last two are of greater interest to the analysis at hand. However, for the information that she also deals in liquor, the dancer is depicted more like a professional sex worker in the fifth stanza:

You penetrate the solid night
you go to those undertones
like a wild hyena, fearing not
your heart panting for their reed beds

reaping joy where you never sow
for a penny! a penny! Just a mere penny?
To buy a soap you say?

This brings an absolutely commercial and economic angle into the prostitution equation in the collection. The woman goes out in the night to trade her body for 'a penny' not just because she needs the money to buy soap, but also for sensual gratification, clearly suggested by the observation that she carelessly but fearlessly runs to flesh pots, and by the notion of her heart panting for 'reed beds'. Yet, while the poet finds this appalling, it is the idea of exchanging this sensual and emotionally therapeutic contact for material gratification that attracts his ire. In what is clearly a hyperbolic rendering, he degrades the dancer by accusing her of trading her body for 'Just a mere penny' (*Flee!* p.15). At a political rally, the dancer is also seen singing and dancing, actions reminiscent of the role of women during Banda era (Semu, 2002). We learn that she 'danced money' and 'danced men', implying that she makes money through dancing and through men.

The poet's proclivity for sexism and chauvinism is further inscribed in the poem, as he devotes its last fifteen lines to blackmailing the dancer woman for polluting the leaders. The leaders are said to be polluted by the woman 'with cheap cosmetics, over done make ups, fake Pierre Cardins', whereas they

are the waters supposed to quench the fire
are those whose words become sweeter
even after many rainy seasons
are the female dog
that never scratches itself for
no apparent reason (*Flee!* p.16)

Water is used to quench fire when the fire is destructive or of no use. A person's words become sweeter after many years if the words are memorably pleasant to recall. A female dog only scratches itself with good reasons. With these depictions, the impression is created that the leaders are a benevolent lot who do not deserve to be polluted. If the depictions are meant to attract opprobrium to the dancer woman or attribute some kind of innocence to the leaders, it is quite successful. However, the depictions contradict the realities that obtain in the political spaces in African countries, with Malawi being an apt example. The late President Kamuzu Banda of Malawi, rather than get married, kept a mistress as his official first lady for the better part of his leadership of the country. With his unmarried status, the probability of being 'polluted' from many other sources could only have been very high. Sadly, the above seems not to be the case when

we consider the last two stanzas of the poem, where the poet-persona declaims accusingly:

Dancer woman these leaders
you dance their brains out
their spirit down

in light you dance your legs and hands
at night you dance your buttocks your hips your breasts
you dance them whole, them fully
you dance them money, them American dollars. (*Flee!* p.16)

In these stanzas, the poet-persona again vilifies the dancer woman as a bad influence on leaders, and as nothing but prostitute. These lines not only obviate the ironic possibility observed earlier, they further corroborate the misogynistic tendency of their author. As typical of sexual prostitution, the sex provider feels no inhibition returning to a partner once patronised. Except for the feeling of regret, little difference exists between sexual and cultural prostitutions depicted in the collection. While those involved in the latter regret their conduct, the former are indifferent. It is this indifference which makes the vision of the poet, especially about political leadership in Malawi, quite troubling, revolting and gloomy; a picture similar to Adebisi's (2015) observation about military leadership in Nigeria.

Conclusion

In this paper, Chikoti's profile as a social critic is established, while his imaginative prowess as a new realist writer is foregrounded. However, it is his ability to comment on diverse social and political issues bedeviling his 'liberated' country through a conflation his views in a single motif - prostitution- that he comes across as a consummate artist, who also doubles as the 'conscience' of his society. From metaphorical deployment of prostitution in poems such as 'Lost Child', 'Another Defection' and 'The Honorable's Goddess', to its partly metaphoric, partly literal rendering in 'Democratized Prostitutes', and fully literal rendering in 'Dancer Woman', the poet offers his readers, especially his compatriots, a lot to chew on. If what he has offered is tasteful, it is because he wants his readers to masticate and 'savour' it for a while. On the other hand, if it is distasteful, it is because that is in the character of new realism. Although Irele's concept of new realism is connected to the tonality of disillusionment in sub-Saharan African novels, the reading of Chikoti's *Free Africa Flee!* is done here against the backdrop of post-Banda Malawi era, where unpleasant realities have come to saturate this era in the country's history.

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Positive Relationships: do Student Teachers have what it takes? Analysis of Germany and Tanzania

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Abstract: *Positive teacher-student relationship (TSR) is fundamental for a student's learning and development. TSR does determine a student's engagement, adaptation to change and motivation to learn. Teachers are the primary architects in determining the extent to which positive relationships are realized in classrooms and schools. This study examined student teachers' knowledge of positive TSRs and their perceptions of the role of TSRs in students' learning and development. Study compared student teachers in Germany and Tanzania. It employed the Mixed Methods Research approach and utilised both the theoretical and statistical logic in data collection, sampling and data analysis. Data analysis and presentation employed both quantitative and qualitative methods. Findings have indicated that despite the positive change in relational knowledge, final year student teachers have inadequate knowledge of basic concepts and procedures of TSRs. In comparison, student-teachers in Germany demonstrate a statistically significant higher knowledge levels both in quantitative and qualitative terms than their Tanzanian counterparts. The study recommends for an introduction of a module on TSRs in the initial years of teacher education (within pedagogical courses) in order to provide knowledge and skills about positive teacher-student relationships.*

Keywords: Positive teacher-student relationships, relational virtues, teacher competencies

Introduction

Human beings are social beings. They crave for harmony in the ways they relate to each other in a given social setting (Guerrero, Anderson & Afifi, 2011). Relationships are said to be positive when they are characterised by stable behavioural interdependence between persons (Jones, 2009). Teacher-student relationship refers to a connection between a teacher and student. This connection is said to be positive when their relational space is founded on the virtues of care, trust, responsibility, human worthy, mutual respect and supportive environment to mention a few (Fulford, 2015; Zygmunt, Cipollone, Tancock, Clausen, Clack & Mucherah, 2018). In order to enable teachers and schools to foster the required relationships and appreciate their pivotal role in students' learning and development, initial teacher education or pre-service teacher education is duty-bound to orient and reorient

student teachers on nature, skills and virtues for effective relationships, among other teachers' competencies. Literature shows that positive teacher-student relationships are critical in solving students' discipline and behaviour problems (Price, 2008). In this regard, teachers' ability to establish and sustain positive relationships with their students have been proven to be effective in reducing students' indiscipline and propelling pro-social and moral behaviours (Boynton & Boynton, 2005). Spaulding (2005) posits that noticeably, an escalating moral crisis in schools results from teachers' inability to own their students and win their confidence and trust. Consequently, students develop feelings of rejection as well as mistrust and resort to unguided behavioural choices (Glasser, 1998).

Further, positive TSRs are instrumental in helping students who are at risk of school failure where situations of conflicts and disconnections tend to gravitate it (Hamre & Pianta, 2006; Kesner, 2000). Students in schools come from all sorts of backgrounds. They include students from both extremes of social-economic status, family-marriage status, mental and physical conditions as well as family history factors. These factors guarantee diverse nature of students' mental, psychological, and physical and conditions. Negative extremes of such factors create potential risks on students. Building positive TSRs in schools and classrooms is considered the primary panacea in fostering the sense acceptance and belonging, self-concept and school engagement whilst reducing their helplessness and susceptibility to risks (Giles, 2008; Raufelder, Sahabandu, Martinez, 2013).

The holistic view of education demands that learners are educated across cognitive, psychomotor and affective domains of their development (Pianta et al., 2012). Teaching and learning of cognitive competencies may fit well in a formal paper and pencil modality, and that the realisation of the social-moral and ethical competencies is best founded on positive TSRs environment (Berkowitz, 2011). In this context, teachers transmit values and pro-social dispositions to their students through role modelling of relational virtues (Corley & Mathur, 2014).

Social relationships, on other hand, provide an important condition for teachers and students to fully engage in lesson activities (Kesner, 2000). Without an environment of trust, respect and warmth demonstrated by teachers to their learners, the latter find it difficult to freely take part in the teaching and learning activities; particularly young learners (Sands, 2011). For this reason, absence of positive TSRs retards learners' creativity, independent thinking and dehumanizes the teaching and learning processes of their inherent human and social nature (Glasser, 1998; Drake, 2010). Shapira-Lishchinsky (2009) describes the quality to relationally adapt and connects to learners as critical and uniquely characteristic of the teaching

profession. At the same time, Cooper (2011) and Campbell (2003) view this quality as an indispensable for extending maximum academic and social help to learners.

The recognition of the primacy of positive TSRs has widely acquired policy and administrative impetus (Cooper, 2011; MoEVT, 2007; OECD, 2011). Despite variations in the nomenclatures given to positive teacher-student relationships, it is evident that positive relationships stand out as one of the key qualities for effective teaching and learning as well as teacher professionalism. In Tanzania, the Teacher Education, Development and Management Strategy (TDMS) reiterates the need for teachers to master adaptive relational skills and virtues as a precondition for their professional successes (MoEVT, 2007). The Programme for International Student Assessment (PISA) in Europe and Germany, in particular, has adopted and mainstreamed teacher-student relationships (named as the teacher-student relational index) as one of its measures of internal efficiency. It is further viewed as a crucial factor for learners' engagement in the teaching and learning processes in schools (European Commission, 2013).

Theoretical framework

This article draws on the conceptual change theory in understanding how professional competencies can develop or be developed among novice teachers. Posner et al (1982) views the onset of conceptual change to be on the restructuring process of the very concepts in an individual. Concepts here refer to innate mental pictures that aid in a categorization of the real world events and phenomenon (Rips, Smith & Medin, 2012). The restructuring takes place when the existing concepts are confronted with new experiences that present more intelligible, more plausible and more useful concepts, thus causing an abandonment of the existing concepts in light of the new ones (Hewson, 1992). In professional learning, and in the teaching profession, in particular, the change may take place threefold: (i) through an extinction of former misconceptions in light of the new concepts; (ii) through an exchange of lesser intelligible concepts by more intelligible ones; (iii) through an extension of narrow concepts by more precise concepts about teaching and the teaching profession.

Conventionally, this article buys the fact that the acquisition of professional attributes among the novice teachers is: formally speaking, initiated by the initial teacher education (Hsieh, 2016). Evidences for a positive change in the direction of teacher-student relational competencies are vital because: first, arguably, learners' prior knowledge and experiences do influence on learning of new concepts and competencies (Ausubel, 2000; Frankish & Ramsey, 2012). At the onset of their professional journey, novice teachers join teacher education with myriad experiences on how teachers should

relate with their students. They have pre-conceived sets of knowledge, attitude, beliefs about the teaching profession and the nature of teacher-student relationships. They have prior conception about the nature of teacher-student relationships, patterns of pedagogy and beliefs about learning as well as learning outcomes (Smith & Hatmaker, 2014). However, more often than not, these preconceptions do not necessarily conform to the existing theory and practices (ideals) of education. This mismatch can inhibit their relational learning.

Second, novice teachers in colleges and universities are the product of the school system which produced them. This could mean that their beliefs and experiences of teacher-student relationship is a replica of the relational realities they encountered when in school (Ronfeldt & Grossman, 2008). In this context, if their current professional socialization is not geared towards a positive change, chances are that they would perpetuate their relational experiences (knowledge, skills, beliefs and attitudes) in their future practices as professional teachers, no matter how inappropriate such teacher-student relationships may be (Korthagen, 2004; Sexton, 2008).

Further to the outgoing argument, the conceptual change theory presupposes that any learning must be demonstrated by a change in individual's knowledge, beliefs and perceptions about a phenomenon (Sinatra & Pintrich, 2003; Posner, Strike and Gertzog, 1982). Although this theory has customarily been reflected in the teaching and learning of natural sciences' concepts, its application in explaining professional learning in teaching and how novice teachers can develop and sustain their teacher-student relationships is of great relevance. Becoming a professional in teaching is essentially a matter of change (Hsieh, 2016), brought about by new experiences (in knowledge, skills, values and perceptions), which causes restructuring of elements in the pre-existing concepts.

Characterizing teacher-student relationships

Human relationships exist in different forms, styles and networks. As such, human relationships are diverse and culturally-defined (Guerrero et al., 2011). In this section, an attempt is made to review and characterise teacher-student relationships in theoretical and empirical scrutiny. Of particular importance, this conceptual analysis tries to harmonise conflicting positions in the body of knowledge to better understand and characterise the tailor-made teacher-student relationships as one of teachers' professional competence. Five features that guide and characterise positive teacher-student relationship phenomena entail voluntarism, continuity, growth, mutuality and transcendence.

(i) *Voluntarism*

Positive teacher-student relationships are neither automatic nor accidental phenomena. Relationships are voluntary and do require proper pedagogical and didactical strategy (Cooper, 2011; Meier, 2005). For positive TSRs to exist, teachers should have knowledge, virtues and skills on how to handle such relationships. Indisputably, teachers as professionals are duty-bound to craft supportive relationships in their dealing with learners (Giles, 2012). Efforts to form or promote positive relationships by teachers must be preceded by a thorough grasp of the nature of TSRs. In addition, teachers ought to have positive perceptions of positive relationship since it is a necessity for learners' development. A further description of the nature of TSRs is presented in the next features.

(ii) *Continuity*

The term refers to the quality of teacher-student relationships that exist in a continuum of magnitude; that is to say, relationships are fed by positive behavioural interdependence (Hattie, 2012; Jones, 2009). When the interpersonal space between teachers and students is dominated by stable and predictable positive behavioural interdependence (such as positive communication), the relationships between them tends to advance from its lowest level (imagined *zero*) to the highest level called sustained teacher-student relationships (Jones, 2009; Sands, 2011).

(iii) *Growth*

Whereas continuity makes reference to a vertical advancement of relationships as propelled by sustained and predictable behavioural exchange between teachers and learners, growth is results from inward experiences, connections and bonding; that is the relational growth within the actors (Giles, 2012). Giles (2008) and Palmers (1997) trace the origins of this inter-human bond from human self which combines the physical, intellectual, emotional and spiritual domains of the relating parties. Palmer (1997: 3) illustrates that "*good teachers should join their self, students and subject matter in the fabric of life*"

(iv) *Mutuality*

The former qualities of voluntarism, continuity and growth can hardly produce lasting relationships if two actors (teachers and learners) do not work together to form and sustain positive teacher-student relationships (Shapira-Lishchinsky, 2009). Although teachers are viewed as primary architects in sustaining positive relationships, the role of learners in reciprocating relational gestures is as well significant. Therefore, positive teacher-student relationships require reciprocity of efforts to sustain them (Fulford, 2015).

(v) *Transcendence*

The term transcendence is the quality that positive relational virtues and practices ought to be comprehensive and predominant characteristic of all that happens between teachers and learners. It includes the verbal and non-verbal patterns of their interactions when they are in a classroom and beyond (Beebe & Timothy, 2009; Campbell, 2003). Relationships, in this case, should not be equated or limited to conventional teacher-student interactions as dictated by teaching methods. Teachers are called to embrace the holistic view of relating and apply themselves wholeheartedly in expounding positive elements of relationships. Kesna (2000) and Pianta, Hamre and Allen (2012) argue for the need of supportive structures in schools in order to saturate interactions in schools with social and relational virtues. They further support the view by Palmer (1997) and Glasser (1998) that positive teacher-student relationships should not be viewed as mere means to some academic ends but the vital ends in themselves. From the conceptual analysis and the arguments for the necessity of positive teacher-student relationships, the following implications are drawn: positive teacher-student relationships and their realization in schools demand teachers who are well-versed with the knowledge, virtues, and techniques to do so.

Initial teacher education, therefore, is duty-bound to orient and reorient student teachers on positive TSRs along with other professional competencies. Arguably, student teachers' ability to handle positive relationships can be viewed to be contingent upon the quality of student teachers' recruitment, theoretical and practical experiences offered to them while at colleges or universities as well as their commitment to the professional ethics of teaching (Campbell, 2003, Weiss & Kiel, 2013). The two pertinent questions in this regard are: Can student teachers form and sustain positive relationships in schools? To what extent do student teachers bear what it takes in handling positive relationships in schools?

Problem statement

Despite the policy and administrative anticipation that teachers should be able to confidently handle relationships in schools, there is evidence of poor and unpromising relationships in schools. Studies by Raufelder, Bukowski & Mohr (2013) and Raufelder and Sahabadu & Martinez (2015) in Germany have indicated that school life and its culture are characterised by unsupportive social relationships. Teachers, in particular, maintain rigid focus on academic attainments. As a result, school relational roles are reduced to institutional roles and there is no room for advancing a human and pedagogical bond between teachers and students (Raufelder et al., 2013). The studies ascribe the relational challenges in schools to teachers' inability to flexibly craft social relationships in their day to day professional

accomplishments. In Tanzania, there is evidence of an unethical students' character and immoral acts that are indicative of sour relationships in schools. They include fight, bullying, violence, sabotage and sexual immorality (Anangisye, 2010; Masath, 2013).

In light of these research evidences, this study presumes that teachers as professionals ought to be well-equipped with knowledge, virtues and skills to form and sustain social and positive relationships as a precursor for professionalism and professional efficiency (Cooper, 2011; Campbell, 2003; Sexton, 2008). Arguably, such competencies must invariably be an integral part of the initial teacher education experience (Zygmunt et al., 2018). Thus, this study seeks to examine knowledge and beliefs of (final-year) student-teachers on positive TSRs. This examination partly answers the question: *How prepared are our student teachers in handling positive relationships in their future role as school teachers?*

Methodology

Research approach and design

The study was informed by the pragmatic philosophical position which was deemed appropriate in order to flexibility and optimally addresses both qualitative and quantitative research questions (Ary, Jacobs & Sorenson, 2010). Being driven by the notion of comparing student teachers of the two countries, two universities; the University of Dar es Salaam, Tanzania and the University of Leipzig, in Saxony Germany were selected as *typical* cases. They both provided typical teacher education experience in terms of structure and duration (Gerring, 2007). The university of Leipzig, Faculty of education offers initial teacher education in both: traditional; state examination (*Staatexamen*) and Bachelor-Master modalities, leading to graduate teachers for special education (*Fordershule*), middle schools (*Mitterschule*) and Grammer schools (*Gymnasium*). The selection of the University of Leipzig was ideal in providing typical experiences of the two modalities of initial teacher education used by other universities. The University of Dar es Salaam offers initial teacher education leading to graduate teachers (in both natural and social sciences) fitting the centralized national secondary school curriculum. The universities permitted for a cross-case analysis of teacher education and teacher-student relationships competencies in particular (Mills, Durepos & Wiebe, 2010).

Methods

The study targeted a population of student teachers in Germany and Tanzania. Student teachers in the final-year (finalists) and beginners (fresher) were purposively included in the study. Data collection employed the use of a questionnaire with both close and open-ended items. The

open-ended questions solicited student teachers' knowledge (relational basic facts and virtues). The open-ended items were pretested for their discrimination power ($Dp = (R_u - R_l) / 0.5N$)¹⁹. In this regard, final-year student teachers were the higher group (R_u) while first years (beginners) were treated as the lower group (R_l). The items yielded a discrimination index ($Dp = .58$), which is within the excellent psychometric range of items' discrimination power (Rana & Suruchi, 2014). The description index was deemed necessary in ascertaining the items' ability to differentiate the first-years and final-year student teachers based on their knowledge of TSRs.

In Tanzania, the questionnaires were administered to 343 final-year and 96 beginner student teachers ($n=442$). The sampled student teachers included specializations in Social sciences and Natural sciences. In Germany, 205 final-year student teachers and 77 beginners ($n=282$) completed the questionnaire. They represented strata of Middle school (*Mittelschule*), Grammar school (*Gymnasium*) and Special education (*Förderschule*) specializations. In both cases, the threshold sample size per segment of the population was adopted from the Bartlett, Kotrlik & Higgins (2001, p. 48)' sample size estimation table for categorical and non-categorical data at 95% confidence level and .05 alpha level and .50 proportions of the population.

Data analysis

The data analysis employed discursive narratives, descriptive and inferential statistics in an attempt to fulfil a balanced demand of the theoretical and statistical logic of data and procedures. In the open-ended items, all student teachers' responses on the meaning and virtues of positive teacher-student relationships were meticulously read and marked against the conceptual guidance. Depending on their precision, the responses were marked as **satisfactory** (graded as 2) and **unsatisfactory** (graded as 1). We selected 120 questionnaires (60 from each case; 30 from each cluster of satisfactory and unsatisfactory responses).

Subsequently, summative content analysis was then conducted (Mayring, 2000). *Manifest* and *latent* meaning of words as used in the student teachers' responses were analysed and their frequency of usage coded for comparative purposes (Hsieh & Shannon, 2005). Further to that, Mann-Whitney *U* test (Non-parametric test), Welsh's *T*-test; a robust test in comparing group means of unequal group sizes, as well as Cohen's *d* measure of the effect size were performed. Data are presented in textual,

¹⁹ See Rana & Suruchi (2014): *Dp* discrimination index; *N* total correct responses; *R_u* the number of student teachers in the upper 27% who responded satisfactorily; *R_l* the number of student teachers in the lower 27% who responded unsatisfactorily.

tabular and figurative formats. Student teachers' perceptions on the importance of positive TSRs to learning and development was expressed through multiple choice items which required them to select the choice that best suited their perception or beliefs of the role of positive relationships on students' learning and development.

Study findings

Findings of this study are presented in four sub-questions. What are student teachers' knowledge levels of TSRs? Is there a difference in knowledge between student teachers in Germany and Tanzania? Is there a difference in knowledge between final-year and beginner student teachers? What are student teachers' beliefs about the role of TSRs in students' learning and development?

(i) *What are the student teachers' knowledge (facts and virtues) on positive TSRs?*

Table 2: Comparative student teachers' TSRs knowledge (quantitative) results

Precision	Basic knowledge of TSRs		Knowledge of positive TSRs virtues	
	Germany	Tanzania	Germany	Tanzania
Satisfactory	133 (64.9%)	39 (11.4%)	126 (61.5%)	74 (21.6%)
Unsatisfactory	70 (34.1%)	302 (88.0%)	77 (37.6%)	264 (77.0%)
Missing	2 (1.0%)	2 (0.6%)	2 (1.0%)	5 (1.5%)
Total	205 (100%)	343 (100%)	205 (100%)	343 (100%)

Source: Field data, 2017

Table 1 presents final-year student teachers' knowledge of basic facts in teacher-student relationships and relational virtues. The two aspects of knowledge are considered critical for student teachers, especially at their final-year of initial teacher education. The results show a higher proportion of unsatisfactory knowledge of both basic facts and virtues for Tanzanian student teachers, that is, 88% and 77% respectively. On the contrary, student teachers in Germany exhibit relatively higher satisfactory knowledge scores in basic facts (64.9%) and relational virtues (61.5%), unlike their Tanzanian counterparts with only 11.4% and 21.6% satisfactory responses in basic facts and virtues knowledge respectively.

(ii) *Is the difference in knowledge levels between student teachers in Germany and Tanzania statistically significant?*

The combined score for relational facts and virtues for individual student teachers was computed, and then the Mann-Whitney *U* test was performed. This is a robust measure for non-parametric comparison (Milenovic, 2011). The Mann-Whitney *U* test results indicated that the mean-rank of total knowledge scores for German student teachers ($N=205$) were significantly higher ($Mdn=378.78$) than Tanzanian student teachers, ($N=343$) which were

($Mdn=205.27$), $Z= -13.679$, $p= .000$. Hence, $p < .05$. Based on these results, the difference in relationships knowledge between student teachers in Tanzania and Germany was confirmed to be statistically significant.

(iii) *Is there a difference in knowledge between final-year and beginner student teachers?*

The Welch's T -test was conducted for each pair of student teachers (final-year and beginners for each case). Later, descriptive statistics were subjected to the Cohen's d measure of effect size. For Tanzania, the mean knowledge score differed significantly by the year of study (Final-year & Beginners). Where, $t(181.771)= -5.945$, $p=.000$, the final-year student teachers ($N=336$) scored significantly higher $M=2.84$, $SD=0.68$ than the beginners ($N=95$) with $M=2.39$, $SD=0.56$). The 95% confidence interval is between 2.27 and 2.91 points. These results confirm an existence of a difference in TSRs knowledge between them. The results of the effect size indicated Cohen's $d^{20} = 0.72$, which is a medium effect size (Cohen, 1988).

For Germany, the mean knowledge score differed significantly by year of study according to Welch's T -test $t(137.26) = -5.699$, $p = .000$. Final-year student teachers ($N=203$) scored significantly higher, $M=3.27$, $SD=0.72$, than the beginner student teachers ($N=77$) with $M=2.73$, $SD=0.71$. The 95% confidence interval of the difference lies between 2.56 and 3.37 points. These results confirm the existence of a difference between them. The corresponding effect size results indicated Cohen's $d = 0.76$, which is a medium effect size (Cohen, 1988). Also, it can be noted that beginner student teachers in Germany demonstrate higher prior knowledge of TSRs ($M=2.73$, $SD=0.71$) than their Tanzanian counterparts ($M=2.39$, $SD=0.56$).

Qualitative responses

A total of 120 responses (of final-year student teachers for Tanzania and Germany) were subjected to a thorough summative content analysis with the view to scrutinize and analyse words used by student teachers in expressing positive TSRs. Student teachers' expressions were aggregated into four clusters of meanings while noting down their frequency and respective percentages. Figure 1 presents the themed responses of knowledge as clustered into four major categories with varying degrees of precision. From Figure 1, a higher proportion of student teachers' responses cluster around the low view of teacher-student relationships. Generally,

²⁰ Computation of the Cohen's d effect size index was aided by the University of Colorado Springs Online Statistical Portal, found at www.uccs.edu/-/faculty/lbecker/1. To compute the Cohen's d , mean scores and standard deviation for the two samples were entered and the index computed.

there is a decreasing frequency of student teachers associated with the direction towards the ideal view of positive TSRs. This indicates that majority of student teachers in both countries have the low view of positive TSRs. Majority of student teachers in Tanzania and Germany demonstrate that TSRs is an *interaction* between teacher and students. Similarly, a small proportion of student teachers hold the ideal (connection) view (knowledge) of positive TSRs.

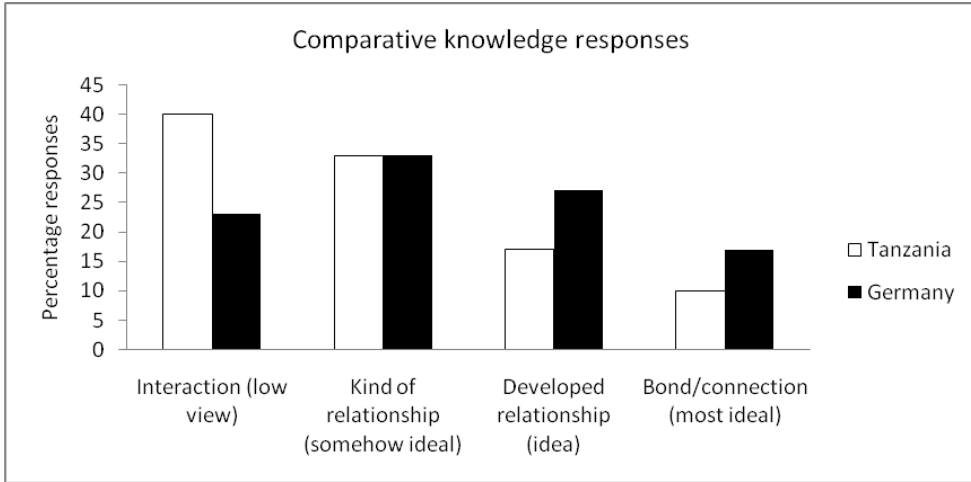


Figure 1: Comparative grouped bar graph on the distribution of themed responses of student teachers knowledge of positive TSRs.

(iv) *Student teachers' perceived role of positive teacher-student relationships on students' learning and development*

Final-year student teachers for Tanzania ($n=343$) and Germany ($n=205$) indicated their perceived effect that the teacher-student relationships have on students' development and learning. Figure 2 captures their responses in a comparative fashion between the two countries.

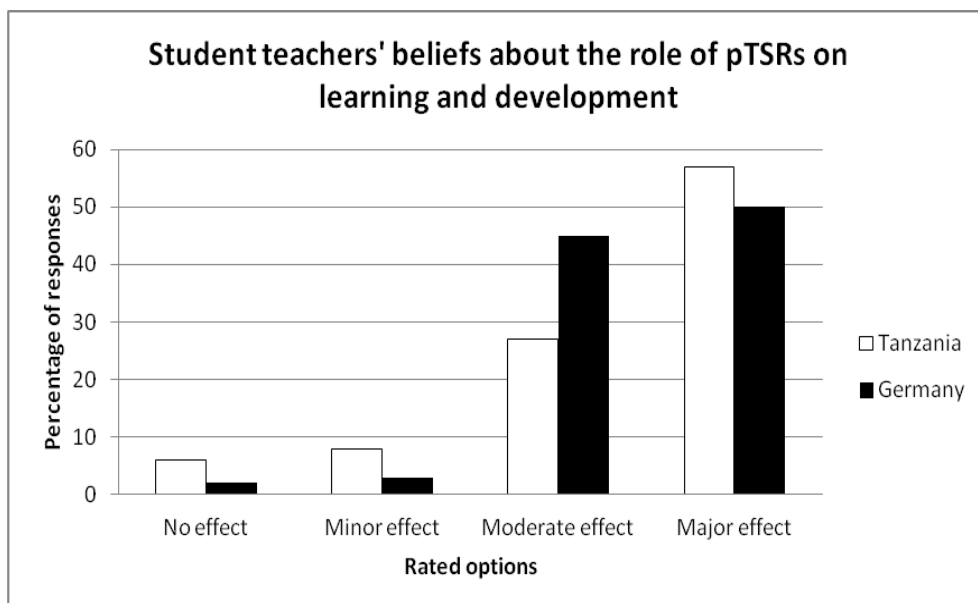


Figure 2: Student teachers' beliefs about the role of teacher-student relationships on students' learning and development

The findings indicate that at their final year of the university-based initial teacher education, over 50% of student teachers, in both countries, do perceive teacher-student relationships as a critical factor for students' learning and development. However, about the same proportion of student teachers hold the lower perceived role of positive TSRs. Apparently, student teachers in Tanzania have a better perception (57%) of the critical nature of TSRs than their German counterparts (50.7%).

Discussion of Findings

Despite the significant contribution of the initial teacher education in promoting positive relational knowledge among student teachers, at their final year, many student teachers, do not have a thorough command of relational virtues and basic TSRs facts. As presented in the conceptual framework and literature, fostering positive TSRs demand voluntarism on the side of the teachers. The qualitative findings have consistently unravelled the erroneous perception that teacher-student relationships are synonymous to teacher-student interactions.

Quite a few student teachers indicated the *connection* or *bonding* quality of the teacher-student relationships. This perception is considered narrow and flawed when paralleled with the conventional view in the literature (Giles, 2012; Sands, 2011). In this context, teacher-student relationships must transcend the interpersonal relational space that is usually dictated by the teaching methods (Giles, 2008), institutional prescribed relational patterns

(Raufelder et al., 2013), and should foster human element when relating with students within and outside the classroom environments. Jones (2009) and Glasser (1999) views sustained and predictable positive behavioural interdependence between teachers and students to be the hallmark of healthy learning relationships. Pragmatically, voluntarism starts with teachers' sound awareness of relational learning, commitment to the virtues of social relationships and crafting the skills in the teaching and learning environment (Pianta & Hamre, 2006; Sands, 2011). The demonstrated lack of awareness by teachers could derail their capability to demonstrate positive relationships in their verbal and non-verbal patterns of communication and in their attitudinal dispositions when dealing with their students (Beebe & Timothy, 2009).

Positive teacher-student relationship is inevitable in the processes of teaching and learning (Pianta et al., 2012). It follows that student teachers' beliefs about this sense of necessity is a key determinant of their efforts in sustaining such relationships (Kuzborka, 2011). Findings have indicated that on average, only 53.9%) of final-year student teachers in Germany and Tanzania, believed in the necessity of positive TSRs. Besides, an average of 46.1% of student teachers was yet to embrace this view. Demonstration of such beliefs could suggest that the initial teacher education did not comprehensively and systematically address the relational competencies entirely as a critical aspect in students' learning and development. Regardless of the knowledge imparted to them about TSRs, many (final year) student teachers are yet to comprehend the vital role of the same.

This finding augers well with the theoretical assumptions of this article that unless the initial teacher education address teacher-student relationships comprehensively and instil a sense of its urgency, intelligible and plausible to student teachers, chances are that they would accord little or no impetus on relational learning. As well, this finding resonates with the argument that professional competencies in general and ability to handle positive relationships with students in particular, can be determined by the quality of initial teacher education. That is the professional rigour in its theoretical and practical experiences. The orientation ought to transform and orientate student teachers' knowledge and beliefs, among other things (Sexton, 2008; Dall'Alba, 2009).

In Germany, particularly in the State of Saxony (*Sachsen*), student teachers join the university based initial teacher education after a successful *abitur*²¹

²¹ *Abitur* [In Germany education system] this refers to the National Examination results attained after a secondary education (mainly *gymnasium* or grammar schools) that gives students merit for any university education. Based on these results students can be selected to join different fields of study in a university.

examination (Terhart & Kotthoff, 2013). In the new structure, following the Bologna agreement, student teachers complete three years of Bachelor's degree and two years of Master's degree. After this phase, student teachers join the teacher training seminar (*Lehrerseminar*) for 1 to 2 years depending on one's specialization. This second phase, called preparatory training (*Referendariat*) ends with the second state examination (Kotthof & Terhat, 2013). The training is detached from the university and is separately managed by the Ministry of Culture of State (*Kultusministerium*).

In Tanzania, student teachers join the formal route for university-based initial teacher education after passing the Advanced Certificate Secondary Examination (ACSE). The education and training in the universities take three years after which fresh graduates are employed in secondary schools for teaching. Thus, the difference in the duration of the university-based teacher education could partly explain the revealed disparity in knowledge between the two cases. Arguably, the longer the duration provided to student teachers in Germany the longer the duration of theoretical and practical instruction which is essential for reflection and acquisition of professional qualities (Da'Alba, 2009).

Conclusions and recommendations

Student teachers in Tanzania and Germany have demonstrated some knowledge and beliefs in teacher-student relationships. It is however certain that there are profound variations in the knowledge of TSRs among student teachers which could suggest novelty and lack of efficacy in addressing principles, virtues and facts for effective teacher-student relationships in the initial teacher education.

In light of the findings, this study recommends for the introduction of a module on positive TSRs in the professional or pedagogical courses in the university-based initial teacher education. The module should, among other things, stress on the theoretical and practical translation of the relationships as one of the vital teachers' competencies. In the same vein, an emphasis should be given to enable student teachers to comprehend the inherent features of teacher-student relationships prescribed in the conceptual framework of this study, namely; voluntarism, continuity, growth, mutuality and transcendence.

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Factors Influencing Implementation of Environmental Management Practices among Hotels in Tanzania

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Abstract: *This study aimed to identify factors that influence implementation of environmental management practices among hotels in Tanzania. Basing on previous studies, five factors that were vital in the implementation of the hotel Environmental Management Practices (EMPs) were acknowledged as management commitment, business competitiveness, governmental regulation, employees training and hospitality industry awareness. The study was conducted in two cities Arusha and Dar es Salaam whereby structured questionnaire with likert scale range from 1 to 5 was used to collect information from the sample size of 400 managers and supervisors of hotels. SPSS software was used for data entry and AMOS software version 23 was used to analyze multivariate analysis and Structural Equation Modeling (SEM) was used to test the hypotheses. The findings indicated that, management commitment affects positively implementation of EMPs in hotel, with significance $p < 0.05$; likewise business competitiveness effects positively the implementation of EMPs in hotel with significance $p < 0.05$. In addition, employees training on EMPs has significant positive effects on the implementation of EMPs in the hotel at $p < 0.001$; also, implementation of hotel EMPs has significant positive effects on hotel business sustainability at $p < 0.001$. Therefore, the implications to industry managers and expertise are: first, hotel managers' commitment is vital for the successful EMPs implementation. Second, training of employees on implementation of EMPs is crucial in achieving business sustainability. Third, there is relationship between business competitiveness and implementation of EMPs. Fourth implementing EMPs is crucial for sustainability of hotel business. This contributes to body of knowledge by coming with guiding framework on how the hotel could implement EMPs. The main limitation of this is lack of generalizability of the finding in Tanzania. The study recommends future research in game parks and beaches, as these are visitors' main attraction in Tanzania.*

Keywords: Implementation, environment management practices, hotels and Tanzania.

Introduction

Various studies that have been conducted in the hotel industry and environmental management, revealing how environmental management issues contain effects in the sustainability of the hotel industry (Nidumolu *et al.*, 2009). Studies conducted in 1998 shows that 90% of the guests would prefer to stay in the hotel that cares environment (Martineau, 2011). Most of corporate bodies consider environment as a factor in their choice of venues for meeting (Mensah, 2006). Mungai and Irungu (2013) noticed that overseas visitors along Kenya Coast were willing to pay a higher rate for an environmental friendly hotel. Also Kamar (2013) observed that, quality and environmental management system has positive effect to financial performance of hotels.

Together with efforts to research on environmental management in hotel industry, most of these studies have based on the outcomes of implementing the environmental management practices rather than the drivers that make managers seek to achieve sustainability. These outcomes include; achieving financial goal (Kamar, 2013; Alzboun, 2014) non-financial benefit and competitive advantage (Zaiton, Syamsul, Kasimu, and Hassan, 2016; Pereira- Moliner *et al.*, 2014), regulatory compliance, building image and cost reduction (Oliver, Naar and Harries, 2015; Hays and Ozretic-Došen, 2014; Kasimu, Zaiton and Hassan, 2012; Kola - Lawal *et al.*, 2014), ecological saving and public relation (Bonilla-Prego, Najera and Font, 2010).

However, Siti-Nabiha *et al.*, (2010) suggested that, it is essential to identify what drives the adoption of environmental management practices and; understand the benefits of these practices on hotel sustainability as would stimulate hoteliers to become more environmentally conscious and ensure the industry's sustainability in the future. Tourism industry in Tanzania continued to be the largest foreign earning after gold earning fell significant due to prices of gold in the world market (Ihucha, 2015). The tourists' arrival made the country earn USD 2.23 billion in 2016, 11% increase than 2015, which was USD 2.01 billion (Qorro, 2017).

The increase in tourists arrival is steady as the figure in 2017 and 2018 were promising, data from the Ministry of resources and tourism show that number of tourists arrival in 2018 were 1.5 million compared to 1.3 million in 2017 (Mirondo, 2019). During that period the revenue collection increased from USD 2.3 billion in 2017 to 2.4 billion USD in 2018, this increase is 7.2% from the previous collection (Mirondo, 2019). This is evidence that every effort should be directed to hotel industry to ensure that environmental management practices are adhered to in order to assure growing sector the possibility of sustainability. Therefore, this study identifies factors influencing implementation of environment management practices among

hotels in Tanzania. The environment management and organization business operations is linked by Triple Bottom Line approach (TBL), which was first coined by John Elkington as a means of measuring the sustainability in business operations in 1993 (Elkington, 2004). Slapper and Hall, (2011) named it as pillars of sustainability with three Ps (people, planet and profit) "Profit" means profit enjoyed by shareholders to consider the net economic benefit to society. "People" relates to the health and wellbeing of people impacted by the activities of an organization "Planet" refers to the wellbeing of the natural environment. Triple Bottom line approach emphasizes the importance of delivering sustainable economic value to shareholders, by focusing on the generated bottom line profit (Slapper & Hall, 2011). The approach considers that for the longer-term sustainability of a firm, the firm performance on environmental and social must equally be same as economic performance. Therefore, the sustainability of the hotel business depends largely on how organization ensures that profit, people and planet benefits equitably from the successfulness of the business.

From that understanding, the environmental management is the company strategic issues, which requires managersto commit resources to be successful. This meant that management commitment is the internal political support to faster cooperate environmental strategy (Reynolds, 2013). Currently in the hospitality industry sustainability has become top agent to issue hotel managers (Pramano *et al.*, 2014).

However, it has been said that manager does not see the values of environmental management in relation to their business, which slow the speed of caring of environment (Dhankar & Raheja, 2015). Therefore, in the country which has serious agenda on environmental management have imposed regulation so as to influencemanagement decision (Padilla, 2012). The regulations range from penalties to incentives, for example, burning public institutions and organizations not to hold meetings in the hotels that do not have environmental management system in place or imposing tax reduction for importation of low use energy equipment (Doyle, 2012).

Studies have shown that the growing environmental consciousness in the industry could be attributed to governmental regulation (Kuunder *et al.*, 2013; Mensah, 2006). Organizations that have implemented EMPs have realized competitive advantage where by hotel reputation, company popularity and brand effect have gone up. In that case managershave agreed that marketing green hotel is the powerful weapon in promotion of hospitality business (Chen & Chen, 2012). Awareness has prompted impacts to the company operations, to extent that, most hotel firms have become proactive in the implementation of the environmental management

practices (Mensah, 2006). Which justify important of hospitality industry to be aware of environmental management and ensure management of the organizations are engaging stakeholders in planning and communication so as to promote sustainability (Mokhtar & Deny, 2014). Important stakeholder group that needs to engage is employees that perform daily activities. It should clearly be noted that environment management practices cannot be separated from the daily activities thus its implementation goes laterally with normal operations of the hotel business. A good example is switching off the hot plate after use, which is one way of conserving energy. The practice occurs while the cook is preparing the meal for a guest. Therefore hotel managers believe that success of environmental management practices can achieve by entire employees' effort (Chen & Chen, 2012). Fukey and Isaac (2014) insist that employees need to be trained and educated to be eco-friendly. Zengani, *et al.*, (2013) echoed that, in Zimbabwe, managers had ideas that training session should be conducted to increase awareness on green practices among hotel staff. During training the benefit of the green practices can be communicated with employees hence encourage their green participation (Kim 2009)

The above discussed factors influence on the implementation of EMPs that brings effects to the sustainability of the hotel business. The practices that could be implemented include; energy saving (Oliver *et al.*, 2015) water saving (Molina- Azorin *et al.*, 2009) green purchasing (Bonilla - Prego *et al.*, 2013) solid waste management (Ondieki, 2013) and information sharing through website and social media (Deale, 2013). The outcome of implementing environmental management practices is sustainability of industry and hotel business in general (Molina - Azorin *et al.*, 2009). The sustainable hotel business means, an increase in market share, business performance improve (Safshekan, 2014); and profit maximization and shareholders' wealth rise.

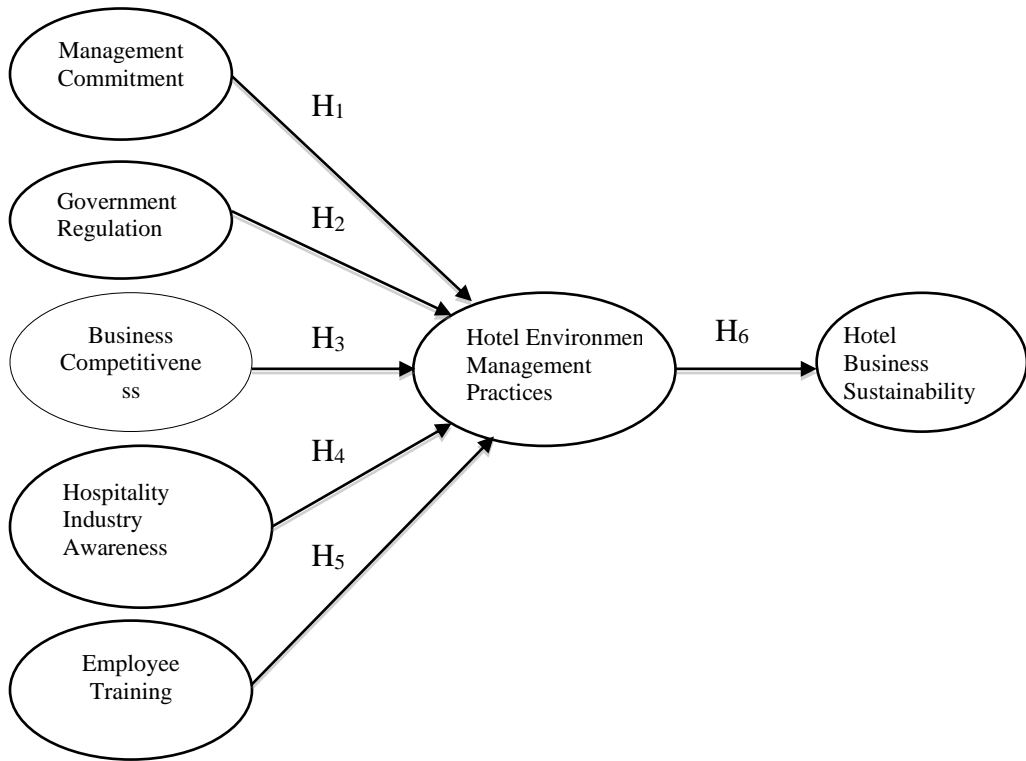


Figure 1. The study theoretical Model

Studies have shown that implementation of environmental management practices plays a pivot role in ensuring sustainability of the hotel business. Rao & Holt (2005) conducted study in four South East Asian countries: Philippines, Indonesia, Malaysia and Thailand, and noted that good environmental performance save cost significantly, improve productivity and reduce the cost of operation and lead to competitive edge. Relatedly, Hay & Ozretic - Došen (2014) noted that green environmental philosophy communicated by hotel to customers and local community adds values to their service and has positive impact to tourist destination. Therefore, the study theoretical model was presented in Figure 1.

The model provides an insight on relationship of different variables that influence the implementation of the hotel environmental management practices. Five variables which are; government regulation, management commitment, business competitiveness, employees training and hospitality industry awareness on environmental protection have been used to formulate the six research hypotheses as follows:

- H₁: Management commitment influence positively implementation EMPs in the hotel
- H₂: Government regulation has influence in implementation of EMPs in the hotel
- H₃: The business competitiveness has positive effects implementation of EMPs in the hotel
- H₄: Hospitality industry awareness on EMPs influences positively the implementation EMPs in the hotel
- H₅: Employees training on EMPs have positive effect implementation EMPs
- H₆: The implementation of hotel EMPs has positive effect on sustainability of hotel business.

Methodology

This study adopted descriptive research design to obtain information concerning the current status of the phenomena and to describe, "what exists" with respect to conditions in a situation. The study was conducted in two cities, which are Dar es Salaam and Arusha because these cities are considered as hubs for tourism in Tanzania.

The study used structured questionnaire to collect information from the respondents who are hotel managers, supervisors and others senior staff. The questionnaire made up of questions that were closed. The questionnaire consisted of constructs that were to be measured by items that have been developed to operationalize the constructs. The items were developed based on the literature review of similar studies, which have been conducted over the world. These studies include; (Saenyanupap, (2011); Tzschentke, *et al.*, (2008); Jeong and Jang, (2010); Martineau, (2011); Chen & Chen (2012); Hsieh, (2012); Safshekan, (2014).

The list of hotels with three to five stars category was obtained from the Ministry of Natural Resource and Tourism Registration book (2015). Thirty (30) and twenty (20) hotels were purposively sampled from Dar es Salaam and Arusha respectively. From the sampled hotels, eight (8) respondents including; General Managers and Departmental Managers, Chefs, Housekeepers, Maintenance Managers and Training Manager and human resources Managers were purposively sampled from each hotel thus totaling up four hundred (400) respondents. The purpose sampling was used as study required respondents with key information. Self-administration method was used in collecting information from the respondents.

Findings and Discussion

Findings of data analysis were presented through tables, charts and comprehensive scripts. Out of the 400 questionnaires 266 were retained which is equal to 66.5% that is quite acceptable for inference Fincham (2008), Baruch & Holton (2008). In 266 of returned questionnaires 11 (4.2%) had missing value, a Listwise deletions method was used remove the missing data (Thank, 2014). The Mean method was used to clear outlier (Tabachnick & Fidell, 2007), Wu (2009). Data normality was checked and kurtosis ranged from 1 to 3 which acceptable (Brown, 2006).

The exploratory factor analysis (EFA) was performed in order to reduce number of variables into smaller manageable one. The Principal Factor Analysis was preferred to Principal Component Analysis (Field, 2000). To produce a better estimate of factors among correlated latent variables Oblique rotation was used as oppose to orthogonal rotations (Fabrigaret *al.*, 1999). The KMO was 0.856, which is meritorious, which mean that inter-item correlations were explained by attained communalities factors (Pallant, 2005). Tables were produced which includes KMO, measure of sampling adequacy and Bartlett's Test of Sphericity, Factor Loading Table, Total Variance Explained with Eigenvalue, Patterns Matrix and Factor Correlations Matrix.

The Bartlett's test of Sphericity for this study was significance at $P < 0.001$ which indicate for factor analysis and data was suitable for analysis and the communalities table showed that value of all items was above 0.4, which is good (Field, 2005). The discriminatory validity was attained as correlation matrix table indicated absence of variables correlation and multicollinearity. The extraction was performed using Principal Axis factoring with an Oblimin with Kaiser Normalization's rotation.

Total of 16 factors were produced with variance accounted for less than 70%. Twenty (20) cross-loaded and insufficient loaded factors were dropped. The exploratory factor analysis was re run and 11 factors accounting for the variance 70.661% produced, providing the unique pattern matrix loading (Table 1) (Rietveld & Van Hout, 1993; Field, 2000).

Table 1: Factors Loading Pattern Matrix

Variables	Factor							
	Employee Training	Business competitiveness	Water management Energy saving management	Government regulation	Solid waste management	Green Purchasing	Management commitment Hospitality industry awareness	Sustainability of business
MC1: ensures environmental policy is in place							.496	
MC4 ensures environmental management practice is in place							.835	
MC5 perceives that the environmental friendly practices low quality							.489	
MC7 a presence of environmental management committee in hotel							.991	
MC8 a presence of environmental management officer in hotel							.663	
GR3 organization demands certification of green practices to hold a meeting in your hotel				.925				
GR4 availability financial incentives to encourage green practices				.438				
GR5 waives of development fees to hotel for green practice development				.580				
GR6 receive a cash incentives to hotel for achieving certification of green practices				.944				
BC1 marketing strategies incorporate of hotel sustainability aspects		.579						

BC2 utilizes green cuisine concept to promote the food and beverage service	.779	
BC3 sources food ingredients within the local community	.860	
BC4 practices corporate social responsibility	.836	
BC5 rises of numbers of guests that demand green life style	.796	
BC6 use green practices to lower operational costs	.730	
HIA1 includes environmental issues in marketing material		.741
HIA2 communicates environmental efforts to stakeholders		.822
HIA3 participate in environmental conservation meetings		.880
HIA4 educates guests on environmental management issues		.759
ET4 benefits employees with profit of success of the green practices;	.728	
ET5 trains environmental conservation culture to new employee;	.570	
ET6 briefs employees daily on environmental management issues;	.579	
ET7 incentives outstanding employee in green practices;	.584	
ET8 includes environmental management concept in recruitment criteria.	.579	
WM1 in place water conservation program policy	.996	
WM2 educate guests on water conservation	.977	
WM3 implements linen re-use policy	.927	
WM5 installs low-flow showerheads	1.000	

WM7 educates customers and staff on how to conserve water	.511	
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SW2 donating of food remains to the needy		-.458
SW4 uses two-sided printing standard practice in business		-.701
SW5 uses two-sided copying standard practice in business;		-.757
SW6 recycles toner cartridges;		-.667
SW7 recycles newspaper;		-.930
SW8 uses recycled paper;		-.545
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ES1 in place energy management policy	.882	
ES2 uses of solar energy	.717	
ES3 uses of energy-saving light bulbs	.789	
ES5 reviews energy bills to monitor consumption	.980	
ES6 uses of energy-efficient appliances	.514	
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		.488
GP3 purchases of recycled products;		
GP4 Purchases of used equipment;		.928
GP5 purchases of Energy Star appliances;		.855
GP6 informs suppliers that hotel prefer eco-friendly products;		.951
GP7 preferences given to environmentally responsible suppliers;		.956
GP8 preference is given to purchase recyclable packaging;		.493
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		.488
SIE2 uses social media to spread of environmental conservation issues customers		

SIE3 inform customers on environmental policies implemented by hotel;	.928
SIE4 trains customers on environmental conservation through media	.855
SB2 improves relationships with local communities;	.574
SB3 gains in market share;	.600
SB4 improves financial gain;	.734
SB5 improves brand image;	.765
SB6 enhances employee satisfactions;	.761
SB7 increases guests' satisfaction	.778
SB8 gain of stakeholder's confidence	.663

Table 2: Total Variance Explained

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% Of Variance	Cumulative %	Total
1. Employee training	12.388	21.733	21.733	6.138
2. Business competitiveness	5.862	10.285	32.017	4.918
3. Energy saving management	4.251	7.457	39.475	5.526
4. Water management	3.625	6.359	45.834	5.944
5. Government regulation	2.927	5.135	50.969	4.735
6. Solid waste management	2.724	4.779	55.748	5.230
7. Green purchasing	2.346	4.116	59.864	6.181
8. Hospitality industry awareness	1.820	3.193	63.057	4.058
9. Management commitment	1.595	2.797	65.854	5.640
10. Sustainability of business	1.532	2.687	68.541	6.567
11. Sharing of information on environment conservation	1.209	2.120	70.661	3.036
12	.968	1.698	72.360	
13	.907	1.591	73.951	
14	.835	1.465	75.416	
15	.811	1.423	76.839	
16	.743	1.304	78.142	
17	.724	1.270	79.412	
18	.682	1.196	80.608	
19	.632	1.108	81.717	
20	.613	1.075	82.791	
21	.584	1.024	83.815	
22	.558	.979	84.794	
23	.530	.929	85.723	
24	.515	.903	86.626	
25	.479	.840	87.466	
26	.467	.819	88.285	
27	.459	.805	89.090	
28	.452	.792	89.882	
29	.423	.743	90.625	
30	.399	.699	91.325	
31	.383	.672	91.997	
32	.356	.625	92.622	
33	.342	.601	93.222	
34	.332	.582	93.804	
35	.299	.524	94.328	
36	.278	.488	94.816	
37	.263	.461	95.277	
38	.257	.451	95.728	
39	.247	.433	96.162	
40	.229	.401	96.563	
41	.227	.397	96.960	
42	.218	.383	97.343	
43	.188	.330	97.672	
44	.183	.322	97.994	
45	.156	.273	98.267	
46	.151	.265	98.533	

47	.129	.227	98.760
48	.125	.220	98.980
49	.118	.206	99.186
50	.106	.186	99.372
51	.096	.168	99.540
52	.073	.128	99.668
53	.064	.113	99.781
54	.058	.103	99.884
55	.034	.060	99.944
56	.023	.041	99.984
57	.009	.016	100.000

The extraction produced the Total Variance Explained (Table 2) indicated Guttman- Kaiser Rule was adhered as all Eigenvalues were larger than one and total variances should account for 70% - 80% (Rietveld & Van Hout, 1993). After Exploratory Factor Analysis, the Confirmatory Factor Analysis (CFA) was performed and produced CFA model (Figure 2) with chi-square χ^2 705.912 at 449 p-value 0.000 CMID/DF =1.415 other indices GFL, TLI, CFI and RMSEA value were 0.865, 0.951, 0.956 and 0.040 with significant of $p < 0.001$ indicating that model was fit (Smith, 2000). Table 3, shows the loading of the attributes and its significances.

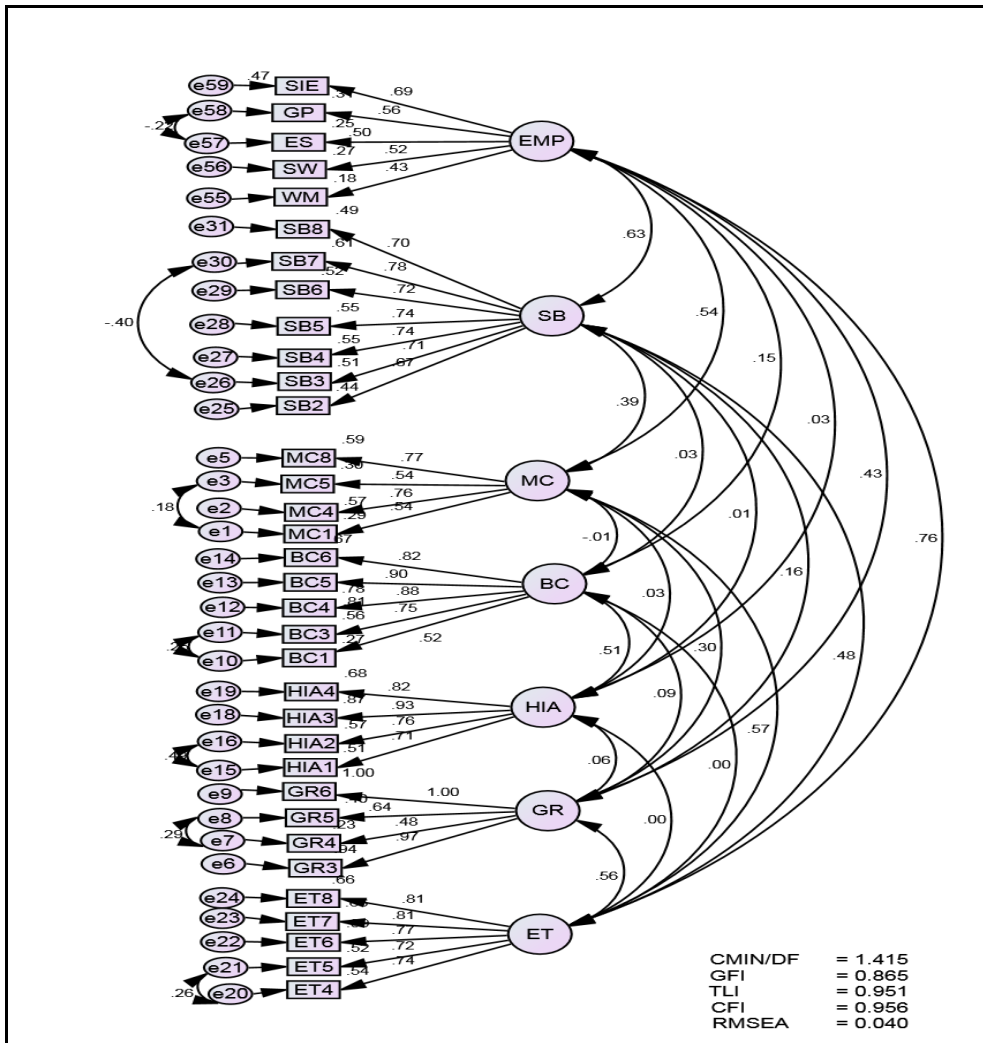


Figure 2: Confirmatory Factor Analysis Model

Table 3: Regression Weight for the Overall CFA Measurement Model

	Variables	Regression line	Factor	Unstandardized Estimate	S.E.	C.R.	P	Standardized Estimate
BC1	marketing strategies incorporates of hotel sustainability aspects	<---	Business competitiveness	1.000				.863
BC2	utilizes green cuisine concept to promote the food and beverage service	<---	Business competitiveness	1.008	.041	24.547	***	.939
BC3	sources food ingredients within the local community	<---	Business competitiveness	1.003	.048	20.919	***	.907
BC4	practices corporate social responsibility	<---	Business competitiveness	1.001	.045	22.218	***	.932
BC5	rises of numbers of guests that demand green life style	<---	Business competitiveness	1.037	.048	21.739	***	.923
BC6	use green practices to lower operational costs	<---	Business competitiveness	1.065	.045	23.539	***	.955
SB2	improves relationships with local communities;	<---	Sustainability of business	1.000				.682
SB3	gains in market share;	<---	Sustainability of business	1.305	.131	9.931	***	.718
SB4	improves financial gain;	<---	Sustainability of business	1.310	.128	10.229	***	.723
SB5	improves brand image;	<---	Sustainability of business	1.268	.126	10.076	***	.711
SB6	enhances employee satisfactions;	<---	Sustainability of business	1.302	.124	10.534	***	.748

	Variables	Regression line	Factor	Unstandardized Estimate	S.E.	C.R.	P	Standardized Estimate
SB7	increases guests' satisfaction	>---	Sustainability of business	1.303	.119	10.964	***	.785
SB8	gain of stakeholder's confidence	>---	Sustainability of business	1.015	.100	10.148	***	.717
GR3	organization demands certification of green practices to hold a meeting in your hotel	<---	Government regulation	1.000				.968
GR4	availability financial incentives to encourage green practices	<---	Government regulation	.482	.057	8.531	***	.476
GR5	waives of development fees to hotel for green practice development	<---	Government regulation	1.210	.131	9.231	***	.778
GR6	receive a cash incentive to hotel for achieving certification of green practices	<---	Government regulation	1.288	.138	9.354	***	.806
HIA1	includes environmental issues in marketing material	<---	Hospitality industry awareness	1.000				.785
HIA2	communicates environmental efforts to stakeholders	<---	Hospitality industry awareness	1.022	.064	16.056	***	.862
HIA3	participate in environmental conservation meetings	<---	Hospitality industry awareness	1.074	.055	19.517	***	.900
HIA4	educates guests on environmental management issues	<---	Hospitality industry awareness	1.096	.058	19.023	***	.992
MC1	ensures environmental policy is in place	<---	Management commitment	1.000				.571
MC4	ensures environmental management practice is in place	<---	Management	.810	.123	6.609	***	.514

	Variables	Regression line	Factor	Unstandardized Estimate	S.E.	C.R.	P	Standardized Estimate
MC5	perceives that the environmental friendly practices low quality	<---	Management commitment	.986	.136	7.239	***	.582
MC8	a presence of environmental management officer in hotel	<---	Management commitment	1.274	.147	8.659	***	.774
ET4	benefits employees with profit of success of the green practices;	<---	Employees training	1.000				.744
ET5	trains environmental conservation culture to new employee;	<---	Employees training	.914	.069	13.210	***	.739
ET6	briefs employees daily on environmental management issues;	<---	Employees training	1.047	.086	12.228	***	.789
ET7	incentives outstanding employee in green practices;	<---	Employees training	1.096	.092	11.881	***	.777
ET8	includes environmental management concept in recruitment criteria.	<---	Employees training	1.150	.096	12.024	***	.785
WM	Water Management	<---	Environmental management practices	1.000				.592
SW	Solid waste management	<---	Environmental management practices	1.072	.161	6.674	***	.526
ES	Energy saving Management	<---	Environmental management practices	1.020	.155	6.585	***	.524
GP	Green purchasing	<---	Environmental management practices	1.233	.193	6.406	***	.506
SIE	Sharing Information on Environmental conservations	<---	Environmental management practices	1.241	.155	8.008	***	.680

Most of the constructs attain required of AVE >0.5 according (Awang, 2011) however two (2) construct management commitment and environmental management practice had value below 0.5, this can also be accepted according to Huang *et al.*, (2013) (Table 4). The construct validity test was achieved as all model fit indices were at required level. The correlation between all constructs was lower than 0.9 hence discriminant validity achieved (Tharenous *et al.*, 2007). The composite reliability was achieved, as value was 0.6 (Hair *et al.*, 2010).

Table 4: Average Variance Extracted (AVE) for the Measurement Model

Construct	Variables	Λ	Λ^2	$\Sigma \Lambda^2$	N	AVE ($\Sigma \Lambda^2 / n$)	
Business competitiveness (BC)	BC1	marketing strategies incorporates of hotel sustainability aspects	0.863	0.744769	5.081717	6	0.8
	BC2	utilizes green cuisine concept to promote the	0.939	0.881721			
	BC3	sources food ingredients within the local community	0.907	0.822649			
	BC4	practices corporate social responsibility	0.932	0.868624			
	BC5	risers of numbers of guests that demand green life style	0.923	0.851929			
	BC6	use green practices to lower operational costs	0.955	0.912025			
Sustainability of Business (SB)	SB2	improves relationships with local	0.682	0.465124	3.698252	7	0.53
	SB3	gains in market share;	0.718	0.515524			
	SB4	improves financial gain;	0.717	0.514089			
	SB5	improves brand image;	0.723	0.522729			
	SB6	enhances employee satisfactions;	0.748	0.559504			
	SB7	increases guests' satisfaction	0.785	0.616225			
	SB8	gain of stakeholder's confidence	0.711	0.505521			
	Government Regulations (GR)	GR3	organization demands certification of green	.968			
GR4		Availability financial incentives to encourage green practices	0.476	0.226576			
GR5		waives of development fees to hotel for green practice development	0.778	0.605284			
GR6		receive a cash incentives to hotel for	0.806	0.649636			

		achieving certification of green practices					
Hospitality Industry Awareness (HIA)	HIA1	includes environmental issues in marketing material	0.785	0.616225	3.153333	4	0.8
	HIA2	communicates environmental efforts to stakeholders	0.862	0.743044			
	HIA3	participate in environmental conservation meetings	0.9	0.81			
	HIA4	educates guests on environmental management issues	0.992	0.984064			
Management Commitments (MC)	MC1	ensures environmental policy is in place	0.571	0.326041	1.528037	4	0.4
	MC5	ensures environmental management practice is in place	0.514	0.264196			
	MC7	perceives that the environmental friendly practices low quality	0.582	0.338724			
	MC8	a presence of environmental management officer in hotel	0.774	0.599076			
Employee Training (ET)	ET4	benefits employees with profit of success of the green practices;	0.744	0.553536			0.6
	ET5	trains environmental conservation culture to new employee;	0.739	0.546121	2.942132	5	
	ET6	briefs employees daily on environmental management issues;	0.789	0.622521			
	ET7	incentives outstanding employee in green practices;	0.777	0.603729			
	ET8	includes environmental management concept in recruitment criteria.	0.785	0.616225			
	Environmental management practices (EMP)	WM	Water Management	0.592	0.350464	1.620152	
SW		Solid waste management	0.526	0.276676		5	
ES		Energy saving Management	0.524	0.274576			
GP		Green purchasing	0.506	0.256036			

	Sharing Information			
SIE	on Environmental conservations	0.68	0.4624	

The Overall SEM model for the study (Figure 3) was constructed and hypotheses were tested rearranging the overall CFA model. After running the system, the results that were obtained were: Chi-squares (X^2) 712.858, degree of freedom (*df*) 504, probability level (*p*-value) 0.000, CMIN/DF 1.414, GFI 0.864, TLI 0.951, CFI 0.956 and RMSEA 0.040. The values of indices obtained indicated strong model fitness. (Tables 5) indicate the results of hypothesis testing and it showed that two were significant at Significant at $p < 0.001$ and two significant at $p < 0.005$. This result illustrated as follow:

- H1: Management commitment affects positively implementation of the EMPs and was highly significant at $p < 0.005$
- H3: Business competitiveness affects positively the implementation of EMPs and was highly significant $p < 0.005$
- H5: Employees training on hotel EMP affects positively the implementation of EMPs and was strongly significant at $p < 0.001$
- H6: The implementation of EMPs has positive effect on hotel business sustainability and strongly significant $p < 0.001$

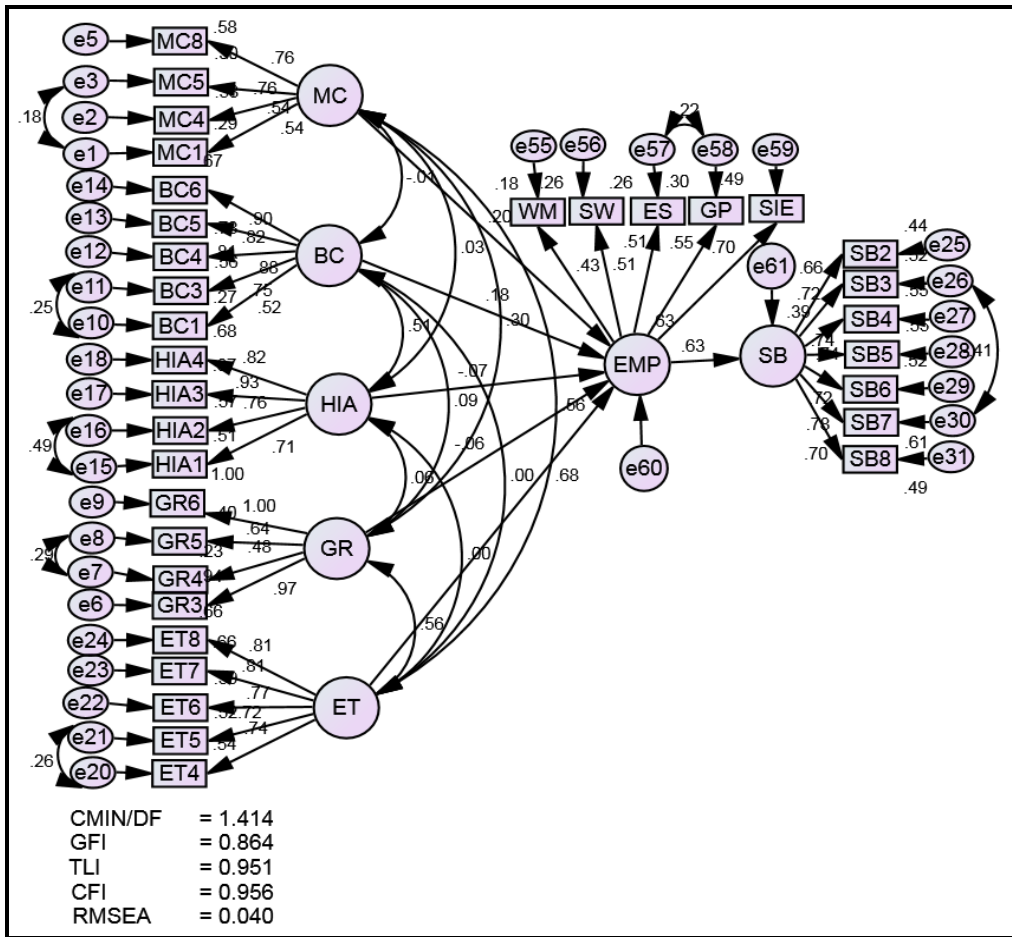


Figure 3: Overall Model for the study

Table 4: Regression Weights for Structural Equation Model

Variables	Regression n line	Factor	Unstandar dized Parameter	S.E.	C.R.	P	Standardi zed Estimate
EMP Environmental management practices	<---	Management commitment	.829	.377	2.196	.028**	.196
EMP Environmental management practices	<---	Business competitiveness	.880	.375	2.324	.020**	.177
EMP Environmental management practices	<---	Hospitality industry awareness	-.202	.211	-.957	.339*	-.067
EMP Environmental management	<---	Governmental regulation	-.103	.126	-.823	.411*	-.058

Variables	Regression t-Statistic	Factor	Unstandardized Coefficients	S.E.	C.R.	P	Standardized Estimate
practices EMP Environmental management practices	<---	Employee training	1.869	.382	4.888	***	.681
Sustainability of SB Business	<---	Environmental management practices	.150	.025	5.230	***	.628
Water WM management	<---	Environmental management practices	1.000				.428
Solid waste SW management	<---	Environmental management practices	1.421	.271	5.246	***	.510
Energy saving ES management	<---	Environmental management practices	1.125	.217	5.181	***	.508
Green purchasing GP	<---	Environmental management practices	1.765	.328	5.386	***	.548
Sharing of SIE information on environmental conservation	<---	Environmental management practices	.868	.145	5.984	***	.697
improves SB2 relationships with local communities;	<---	Sustainability of Business	1.000				.663
improves brand SB5 image;	<---	Sustainability of Business	1.384	.135	10.417	***	.743
enhances SB6 employee satisfactions;	<---	Sustainability of Business	1.295	.127	10.179	***	.723
increases guests' SB7 satisfaction	<---	Sustainability of Business	1.336	.125	10.690	***	.781
gain of SB8 stakeholder's confidence	<---	Sustainability of Business	1.021	.103	9.911	***	.701
Improves SB4 financial gain;	<---	Sustainability of Business	1.362	.131	10.407	***	.742
gains in market SB3 share;	<---	Sustainability of Business	1.305	.131	9.931	***	.718
sources food BC3 ingredients within the local community	<---	Business competitiveness	1.688	.183	9.206	***	.748
practices BC4	<---	Business	1.991	.226	8.794	***	.884

	Variables	Regression t-value	Factor	Unstandardized Parameter	S.E.	C.R.	P	Standardized Estimate
	corporate social responsibility		competitiveness					
BC5	rises of numbers of guests that demand green life style	<---	Business competitiveness	2.097	.237	8.858	***	.902
BC6	use green practices to lower operational costs	<---	Business competitiveness	1.905	.224	8.521	***	.820
GR3		<---	Government regulation	1.000				.968
GR4	availability financial incentives to encourage green practices	<---	Government regulation	.482	.057	8.531	***	.476
GR5	waives of development fees to hotel for green practice development	<---	Government regulation	.629	.045	12.853	***	.636
HIA1	includes environmental issues in marketing material	<---	Hospitality industry awareness	1.000				.712
HIA2	communicates environmental efforts to stakeholders	<---	Hospitality industry awareness	1.049	.065	16.073	***	.755
HIA3	participate in environmental conservation meetings	<---	Hospitality industry awareness	1.313	.100	13.143	***	.931
MC1	ensures environmental policy is in place	<---	Management commitment	1.000				.543
MC4	ensures environmental management practice is in place	<---	Management commitment	1.490	.195	7.476	***	.759
MC8	a presence of environmental management officer in hotel	<---	Management commitment	1.322	.177	7.487	***	.764

	Variables	Regression t-Value	Factor	Unstandardized Coefficients	S.E.	C.R.	P	Standardized Estimate
ET4	benefits employees with profit of success of the green practices;	<---	Employee training	1.000				.738
ET5	trains environmental conservation culture to new employee;	<---	Employee training	.900	.066	13.064	***	.722
ET6	briefs employees daily on environmental management issues;	<---	Employee training	1.025	.087	11.841	***	.766
ET7	incentives outstanding employee in green practices;	<---	Employee training	1.158	.092	12.580	***	.814
ET8	includes environmental management concept in recruitment criteria.	<---	Employee training	1.195	.095	12.522	***	.810
BC1	marketing strategies incorporates of hotel sustainability aspects	<---	Business competitiveness	1.000				.522
HIA4	educates guests on environmental management issues	<---	Hospitality industry awareness	1.153	.092	12.426	***	.825
MC5	perceives that the environmental friendly practices as low quality	<---	Management commitment	.970	.138	7.034	***	.544
GR6	receive a cash incentives to hotel for achieving certification of green practices	<---	Government regulation	1.015	.022	45.514	***	1.000

*** Significant at $p < 0.001$, ** significant at $p < 0.005$, * Non significant Initially

it was postulated that five factors have influence on the implementation of hotel environmental management practice. These factors included management commitment (Chan & Wong, 2006; Saenyanupap, 2011) business competitiveness (Quinn 2011) employees training (Zengani *et al.*, 2013) and industry awareness, (Min, 2011; Mensah, 2006). The findings showed that factors that were influencing the implementation of the environment management practice among hotels in Tanzania include management commitment Dharmesti (2015), business competitiveness, Tan and Yeap (2012) and employees training (Zengani *et al.*, 2013).

The management commitments revealed that, use of technology in handling the hotel business activities was important (loaded by 0.75) meanwhile monitoring of environmental management performance (loaded by 0.75) was also crucial. The finding implied that managers should embrace technology in the execution of hotel activities (Mungai and Irungu, 2013) and monitoring of environment management performance is the key in ensuring sustainability of the business (Lakshmi 2002). The competitive advantage showed that implementing environmental management practices through green marketing strategy creates competitive advantage to hotel through enhancing level of customer satisfaction (Kim, 2012, Perera and Prishpanathar, 2015). While sourcing food ingredient from local community (loaded by 0.7) enhance sustainability (Kapiki 2012) also, practicing Corporate Social Responsibility (CSR) enhances sustainability (Punitha *et al.*, 2014).

Manager agreed that increase in the number of guests demanding green lifestyle (loaded 0.9) would influence the implementation of EMP (Han *et al.*, 2011; Ogbeide, 2012; Thao, 2017). However, this should be done in combination with sharing of information on environmental conservation through social media (loaded 0.73), informing customers on environmental policies (loaded by 0.82) and educating customer on environmental conservation through media (loaded by 0.81). The finding tells manager that informing the guests on what hotel does on environmental management play a positive role in attaining the sustainability goal. On the other hand, managers also agreed that implementation of green practices impact positively operational cost (loaded by 0.82). (Rao & Holt 2005) and also accepted that hotel can save money by implementing EMP (Mensah, 2004)

Training of employees on environmental management practices makes them to be ecofriendly (Fukey and Isaac 2014). Incentivizing outstanding employees in green practices (loaded by 0.72) and including environmental management in the recruitment criteria (loaded by 0.7) that confirm the previous study findings (Eldermerdash and Moustafa, 2013). In addition, training of new employees on environment conservation culture (loaded by

0.81) and briefing employees daily on environmental management issues (loaded by 0.7) is important aspect in attaining business sustainability (El Dief and Font, 2010). Further, findings indicated that profit of success of green practices should benefit the employees (Zengani *et al.*, 2013). Thus, this narrative substantiated that employees are the center of hotel business sustainability in the hospitality industry.

Lastly, managers agreed that implementation of EMPs brings about positive effect on hotel business sustainability as also been said by (Rao and Holt 2005; Molina – Azorin *et al.*, 2009; and Leonidou *et al.*, 2013). The identified positive effects were; increase guests satisfaction (loaded by 0.78) Kim 2012) improving brand image (loaded by 0.74) Pramano *et al.*, (2014) and Safshekan, (2014); financial gain (loaded by 0.74) enhancement of employee satisfaction (0.72) Dhankar and Raheja (2015) gaining market share loaded (0.71) Ekwueme *et al.*, (2013) and Ashraf (2013) gains of hotel stakeholder confidence (loaded by 0.7) Branco & Rodriguez (2007). Improving relationship with local community (loaded by 0.66) Alcorn & Curtis (2016) Hay & Ozretic Došen (2014).

Conclusion

This study has addressed three major issues in the sustainability of hotel business; these are commitment of manager in order to have successful EMP implementation in the hotel. Secondly, implementing EMP gives hotel business competitiveness advantages and environmental management strategy is as important as marketing strategy, financial and operational strategies. Third, managers should understand that, employees are important component in the formulation of hotel business sustainability strategy, without employees company will jeopardize itself. In addition, the benefits of sustainability in hotel business are incredible thus it is thoughtless to trade it with whosoever else. Theoretically, findings of this study supported that; environmental management is the key aspect in the pillar of sustainability as observed by Slapper & Hall, (2011).

From this, it was concluded that: Implementing environmental management practices in hotel in Tanzania bring about sustainability of business in the hotel industry. Second, awareness of environmental management among hotels in Tanzania is very low level and little; and coordinated at individual hotel level not at sector level.

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Local Community Perceptions on Causes of Climate Change in Dry Areas of Rombo District, Tanzania

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Abstract: *The study assessed community perceptions on the causes of climate change in the drought area of Rombo District in Tanzania. Corroboration of the research findings were made by employing different methods of gathering data including questionnaires, focus group discussions and interviews. While quantitative data were analysed by statistical package for social science software to generate descriptive statistics, qualitative data were analysed thematically. Data were mainly presented by using tables, figures and the participants' narrations or voices. Results indicated varied perceptions on the causes of climate change that are shaped by levels of education, age, sex, marital status and possession of communication facilities. Despite the varied perceptions on the causes of climate change, the anthropogenic factors were frequently mentioned by the study participants. Thus, the study recommends on creating awareness among members of the studied community through education on the actual causes of climate change for effective intervention measures.*

Key words: Climate change, community perceptions, drought area

Introduction

There exist different schools of thought on the causes of climate change. A report by the Intergovernmental Panel on Climate Change (IPCC, 2007) attributes the current climate change primarily to human activities and secondarily to natural processes. In this regard, Singer (2008) also observed that climate change is a natural phenomenon. The difference between human and nature-induced climate change has also been reported by Cunningham and Cunningham (2004) that human-induced climate change takes place rapidly, whereas nature-induced change takes place gradually. Probably, this distinction was not taken into account when Singer (2008) considered the current climate change just as a natural phenomenon.

Conversely, local people relate climate change to social and spiritual causes. The Maori of New Zealand, for example, believe that climate change is induced by lack of spirituality, cruelty and selfishness (King *et al.*, 2008). A reviewed literature by Kemausuor *et al.* (2011) on the perceptions of causes of climate change revealed that people perceived hailstorms as punishment

from God which tends to happen particularly when young women aborted their pregnancies. The review further indicates that increased temperature is caused by the sun coming closer to the earth. A study by Speranza *et al.* (2010) in semi-arid areas of the former Makueni District in Kenya also indicates that communities treat drought as God's plan and, therefore, cannot be mitigated.

Moreover, Orlove *et al.* (2010) found that the indigenous of Southern Uganda believed that everything including climate is controlled by God. Similarly, Mertz *et al.* (2009) reported that farmers in the Rural Sahel perceive weather as a divine intervention over which they were powerless. Prabhakar *et al.* (2009) also reported that local people in Japan believed the actions of other communities in their locations were more responsible for changes as the study could not find any poor management practices within the local community which would have contributed to the global problem such as climate change.

Similarly, Egeru (2012) asserts that Iteso people in Eastern Uganda believe that they were not responsible for inducing climate change as they regarded themselves as peace-loving, generous and socially responsible people. These characteristics, according to them make Iteso people steer away from God's or ancestral punishment. This is because they believe that climate change is a punishment from God and ancestors for failing to love each other. Tambo and Abdoulaye (2012) also revealed that farmers in the Nigerian Savannah have a belief that climate change is a punishment from God because of sin as well as disobedience and unfaithfulness to Him.

Studies by Fundisha *et al.* (2016) revealed the existence of climate change in Rombo District evidenced by increased temperature and wind, decreased and unreliable rainfall and recurrent droughts. Mushi and Mamkwe (2015) also found that drought and unreliable rainfall were the main effects of climate change in Rombo District. The recurrent drought in the lowlands of Rombo District caused food insecurity, water shortages and pasture deterioration (Mongula, 2000).

However, none of these studies attempted to assess the perceptions of local community on the causes of climate change. Therefore, this study assessed the perceptions of local community on the causes of climate change for appropriate intervention measures.

Methodology

The study was conducted in the drought area of Rombo District in Kilimanjaro Region, Tanzania (Figure 1). The figure shows that the district is naturally divided into two agro ecological zones: lowland (drought area)

and highland. The drought area of the district receives average annual rainfall and temperature of about 400 mm and 30 °C respectively (Meena and O'Keefe, 2007).

This condition creates semiarid like conditions with recurrent droughts. The dominant crops grown are those adapted to little rains which include sunflower (*Helianthus annuus*), groundnuts (*Arachis hypogaeae*) and sorghum (*Sorghum bicolour*). The drought area was chosen with the idea that her dwellers are more aware on the causes of climate change due to prolonged exposure to the recurrent droughts.

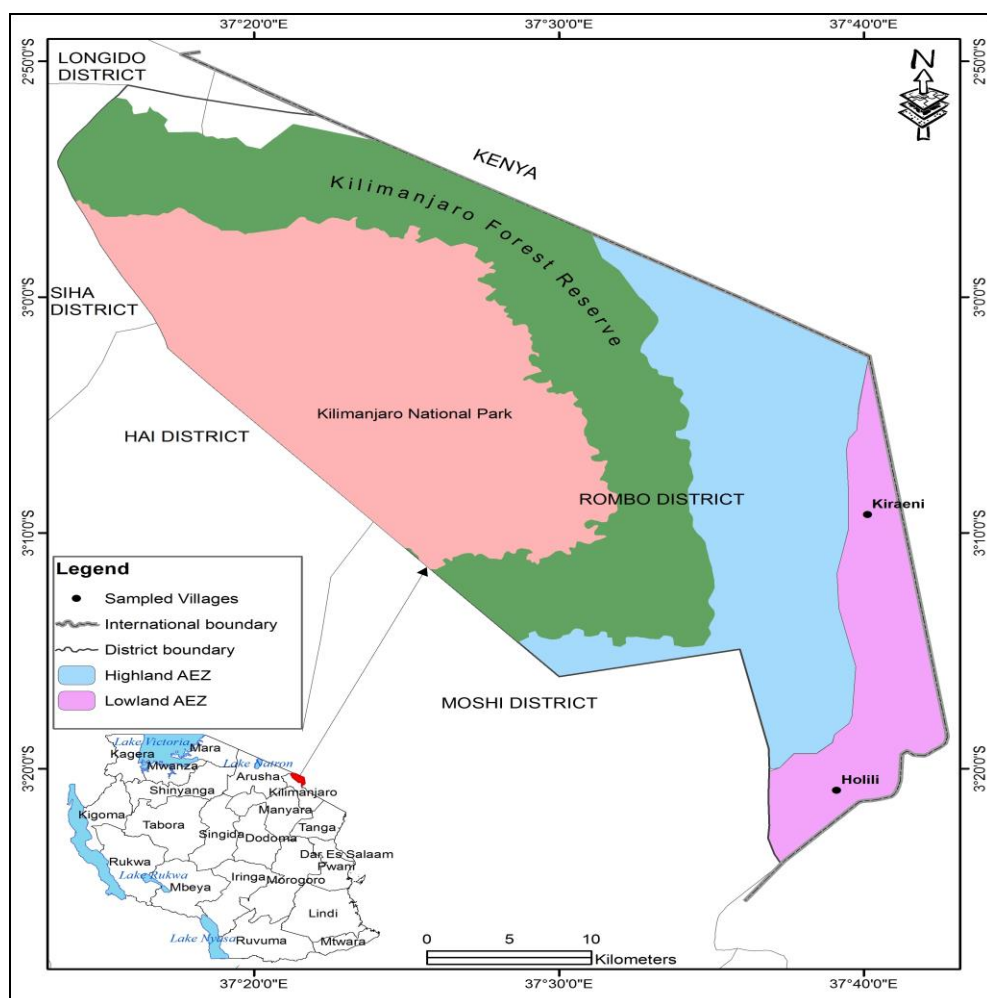


Figure 1: Map of the study area

Primary data were collected using questionnaires with open and closed questions, in-depth interviews and focus group discussions (FGDs). A total of 113 respondents were involved in the study. Among them, 107 were heads of households, of which 55 and 52 were from Holili and Kiraeni

villages respectively. The villages were randomly selected from 18 villages found in the drought area of Rombo District.

The sample also included 6 key informants: 2 Agricultural Extension Officers; 2 Village Executive Officers; and 2 religious' leaders. While heads of households were randomly selected, key informants were purposefully selected. Sixteen individuals participated in the FGDs, eight from each village, were selected from heads of household who participated in filling in the questionnaire to enable the researcher to identify the resourceful persons with knowledge of climate change. This technique helped to consolidate and clarify controversies encountered in the administration of questionnaire.

Qualitative data from the questionnaire, interviews and FGDs were organised into themes and presented by narrations or voices of the participants. Quantitative data, on the other hand, were organised into independent and dependent variables and analysed with the help of the Statistical Package for Social Sciences Version 16 to generate frequencies and percentages. Frequencies and percentages were further cross-examined with the selected characteristics of heads of household (i.e. to include agroecological location, age, gender, marital status and level of education) to determine their relationship. These data were presented in the frequency tables and graphs to simplify interpretations.

Results

Characteristics of the respondents

The characteristics of respondents are summarised in Table 1. The table indicates that respondents who participated in the study from two villages had different levels of education, age, sex, marital statuses and in possession of different communication facilities. The aim was to establish the relationship that would exist between the characteristics of the respondents and their perceptions on the causes of climate change.

Table 1: Characteristics of respondents (N=107)

Variable	Percentage of respondents (%)	
Village	Holili	51.4
	Kiraeni	48.6
Education	Primary	79.4
	Secondary	12.1
	Post secondary	3.7
	No formal schooling	4.7
Age	15-24	1.9
	25-34	15.9
	35-44	17.8
	45-54	19.6
	55-64	30.8

	65+	14.0
Sex	Male	81.3
	Female	18.7
Marital status	Single	6.5
	Married	82.2
	Separated	3.7
	Widow	6.5
	Widower	0.9
Communication facilities	Radio	1.9
	Mobile phone	33.6
	Radio/mobile phone	50.5
	Radio/mobile phone/TV	9.3
	NIL	4.7

Perceptions about the causes of climate change

Table 2 indicates that majority of the respondents believe that climate change is mainly caused by anthropogenic factors. This is, however, with exception of the development of science and technology. The anthropogenic factors referred to were mainly associated with clearing of vegetations over the earth's surface in what is termed as deforestation mainly through indiscriminate tree felling.

Table 2: Perceptions on the causes of climate change (N=107)

Perceptions	Percentage of respondents (%)
1. Anthropogenic factors	
Indiscriminate tree felling	82.0
Development of science and technology	10.5
Burning of forest	7.7
Population increase	4.9
Free ranged livestock	2.8
Blasts in stone quarrying	1.5
Not burning forest	0.2
2. Supernatural factors	
God will	11.3
Failure to make sacrifice	3.9
Increased sinners	3.1
Witchcraft	1.1
3. Natural factors	
Earth's revolution	2.9
Absence of mountain	0.7
4. Don't know	
	8.0

The results from Table 2 imply that, whereas some heads of household believed that burning of forests induces climate change, others had an opposite opinion. This was noted when administering questionnaire to heads of household in Kiraeni Village where one respondent believes that droughts are the result of not burning forests. The view of this respondent was based on the belief that burning of forests stimulates cloud formation that would bring rainfall. It was further noted, from the same respondent, that it was common to experience rainfall whenever there was fire in the Kilimanjaro National Park.

Deforestation was another cause as it was mentioned during in-depth interviews with religious leaders and during FGDs as a factor that induced climate change. The FGD participants and religious leaders claimed that Tanzania government should be charged with inducing climate change for poor forest management. They cited Rombo district forest reserve as a focal point where poor forest management gained momentum in the post-independence period. The participants explained that in 1952 the colonial government started to clear natural forests in the eastern slopes of Mt. Kilimanjaro by offering three acres to each native resident to cultivate crops (maize, beans, Irish potatoes) for the three subsequent years and then planted exotic trees (cedar, spruce and pines) instead. When the trees grew up well to render cultivation of crops underneath was difficult, as a result, farmers were given three more acres somewhere else in the natural forests to open new land for cultivation. This practise was; however, changed after independence when a few rich people were given natural forests to open up land for cultivation with no specified timeframe and sustainable land use agreements as it was the case under the colonial government in the 1950s.

Furthermore, the FGD conducted in Kiraeni Village cited the absence or presence of only a few tree nurseries to limiting afforestation and reforestation programmes. It was noted that there existed many tree nurseries during the British administration which facilitated tree planting programmes. They also cited lack of emphasis on environmental education for the citizens as part of the problem that exacerbated environmental degradation that induces climate change. It was further revealed that the prohibition of collecting firewood and livestock fodders in the natural forests had also contributed to climate change. The respondents commented that the prohibition created anger among the riparian people, which made them reluctant to participate in controlling forest fires whenever they occurred. Commercial logging was also cited as one of the causes of climate change. The government as well as some households sold immature planted trees simply because of the growing market and demands for timber. Wanton tree felling was also mentioned during interviews with the key informants. One of the key informants elaborated by associating

indiscriminate tree felling with the use of chain-saw tree-cutting machines as attributable to the development of science and technology in timber industry. Chain-saw machines were becoming increasingly common in the timber industry in the study area, the practice, which victimised several trees as they were turned into timber within a short period. Formerly, timber preparation was mainly done using hand-saws. The interview with the key informant from Kiraeni Village established further that the year 2012 marked the first time in which many people were engaged in the preparation of timber from mango trees.

Blasts in stone quarrying were perceived to induce climate change by individuals in Holili Village where there was stone quarry. This indicates that most of the causes of climate change which were mentioned by the heads of household are rooted in the local environment and, hence, site-specific.

The development of science and technology as a contributing factor that induced climate change was also mentioned during the FGD in Kiraeni Village. The FGDs cited the use and testing of bombs; increased number of automobiles, mobile phones, the internet and industries as the causal factors that had nothing to do with the local communities. One of the FGD participants raised concern over the effects of telephone waves on the atmosphere that:

"I am concerned that the increasing number of mobile phones must have contributed to the climate change observed because each family has a minimum of two mobile phones; leave aside radios and televisions"

The above statement implies that the FGD participant had a concern that the electromagnetic waves produced by communication facilities do interfere with variables of the climate thereby influencing their characteristics and patterns. The Earth's revolution was also cited during an FGD session in the Kiraeni Village by a retired primary school teacher as being a cause behind climate variability. This was associated with the incidents of droughts, which occurred at the intervals of 10 to 11 years. The years which ended with '4', especially 1974, 1984 and 1994, were cited to be characterised by droughts.

On the contrary, one of the Roman Catholic Priests interviewed believed that the failure of human beings to follow God's directives induced climate change. The priest cited the book of Genesis chapter 2 verse 15, which reads: *"God took the man and settled him in the Garden of Eden to cultivate and take care of it."* The priest associated the care the man had in the Biblical Garden of Eden and the current environment in which no one seemed to take care of it. He further associated it the failure to take care of the environment, and so

implored followers to care of the environment as doing so is an order from God. A similar concern was raised during the FGD sessions and through questionnaire-based results (Table 2) as a factor that increased climate change and so, constituted a punishment list from God for the increased sinners. In this regard, they associated the increased rate of corruption, prostitution, abortion, theft, and excessive consumption of alcohol with increased climate change.

Climate change, particularly unreliable rainfall, was associated with the failure to offer sacrifices in the study area. It was further noted during an interview with a head of household at Kiraeni Village that it was common for many clans in the study area to offer sacrifices at the beginning of each agricultural year, which begins in September. Male animals, particularly cattle, goats or sheep were slaughtered at areas deemed sacred known as *Kiungu* amongst locals. *Kiungu* commonly known were located where footpaths crossed the river (*Iruko*). Most of the *Kiungu* have been abandoned following the introduction of Christianity and Islam, which forbid any practice associated with ancestral worship and traditional deities under the long-established traditional cosmology.

Furthermore, during an interview with a head of the household at Holili village, it was established that climate change were caused by witches and wizards with an intension to make the livelihoods of others difficult. Other heads of household believed that rainfall had ceased to fall on time because tomato growers prevented it to avoid damage that could be unleashed to their tomatoes afield during heavy rains. In this regard, one participant said:

“Do you think the growers of tomatoes enjoy losses? They must make sure that the rainfall does not come earlier to destroy their tomatoes.”

The results on the major causes of climate change were triangulated against layers of education levels of the heads of household to determine whether or not a relationship existed between the two variables. The results are presented in Figure 2. The figure shows that all the responding heads of household with post-secondary education believed that climate change is solely caused by anthropogenic factors. It further indicates that the heads of household with no formal education outweigh others in believing that supernatural power induces climate change. These results imply that there is a relationship between a level of education attained by heads of household and their perceptions on the major causes of climate change.

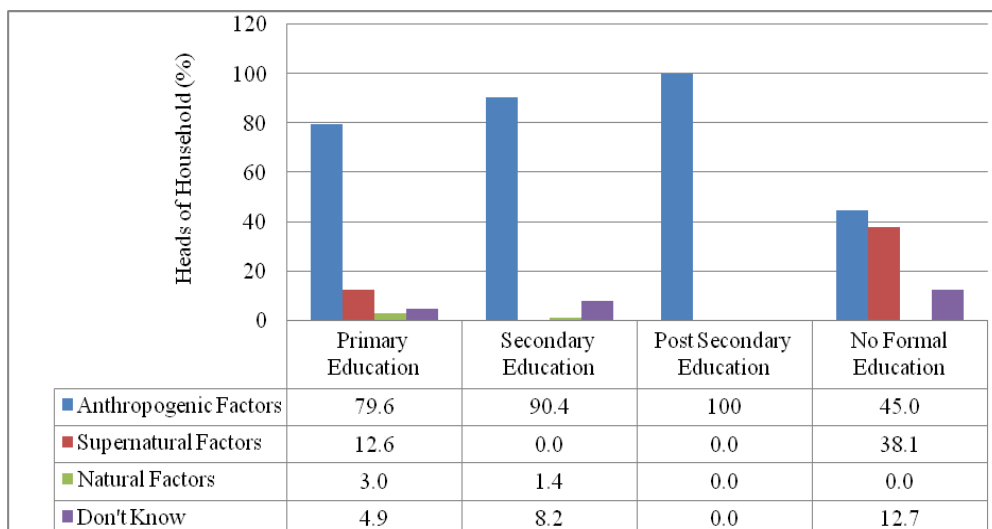


Figure 2: Education and the major causes of climate change

The phenomenon was also attested using age groups of the heads of household to establish whether a relationship exists between the two variables (Figure 3).

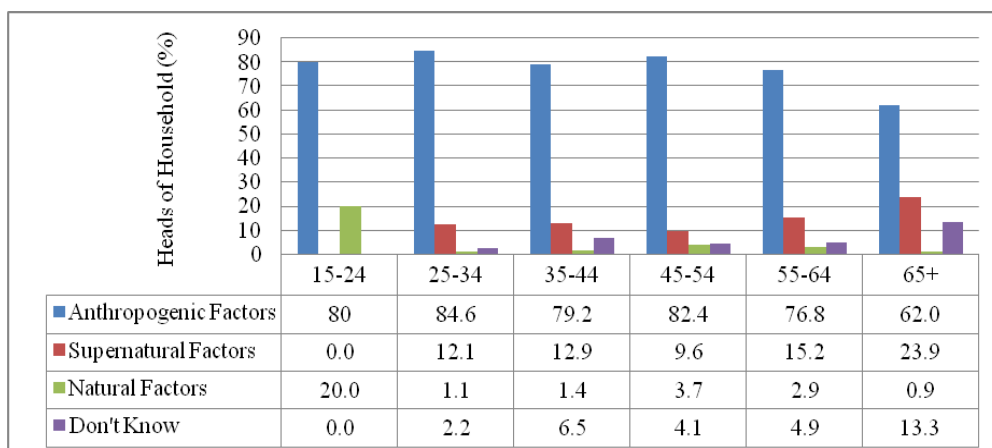


Figure 3: Age groups and the major causes of climate change

Figure 3 shows that although anthropogenic factors dominated in all age groups, the heads of household aged 65+ dominated in believing that supernatural factors induce climate change. Comparatively, there were no heads of household in the age-group of 15-24 who believed in supernatural factors as causes of climate change and in providing “Don’t Know” responses. The relationship between the gender of the heads of household and the major causes of climate change is indicated in Figure 4. On one hand, the Figure shows that males dominated in believing that climate

change are caused by anthropogenic and natural factors. On the other hand, the females dominated in supernatural factors and in not knowing the real cause of the climate change.

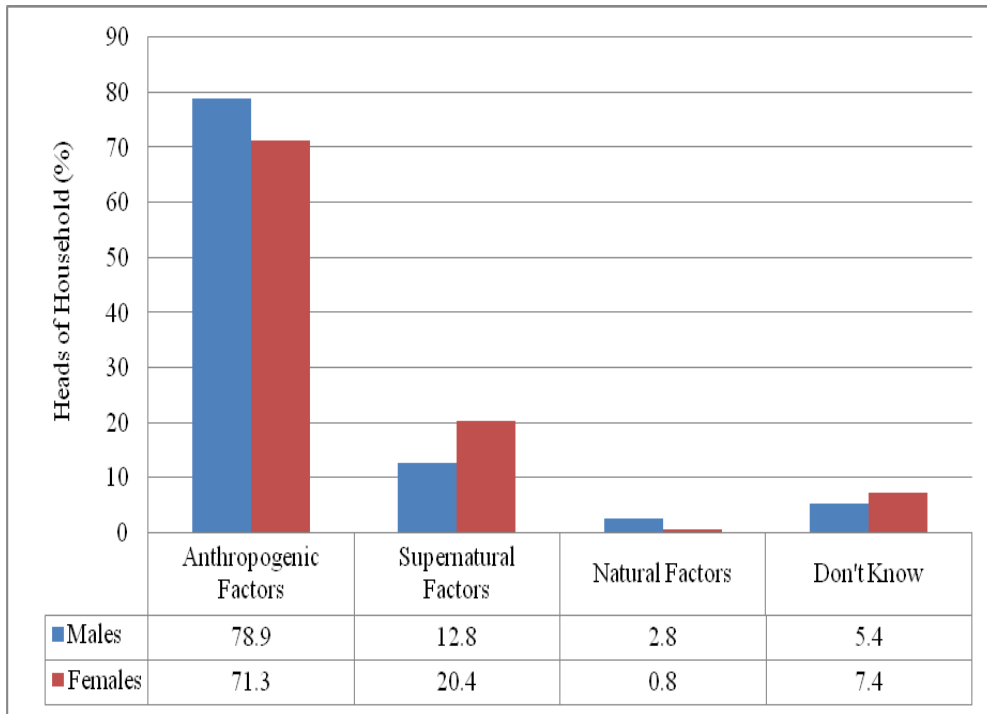


Figure 4: Sex and the major causes of climate change

The marital status of the heads of household was cross-tabulated with the major causes of climate change to determine their relationship. Results are presented in Figure 5 and they indicate that anthropogenic factors dominated in all groups and the rate was so high with divorced heads of household. Furthermore, the Figure shows that widowers believed that climate change was more induced by supernatural factors than other factors. Only married and separated heads of household believed that climate change was induced by natural factors.

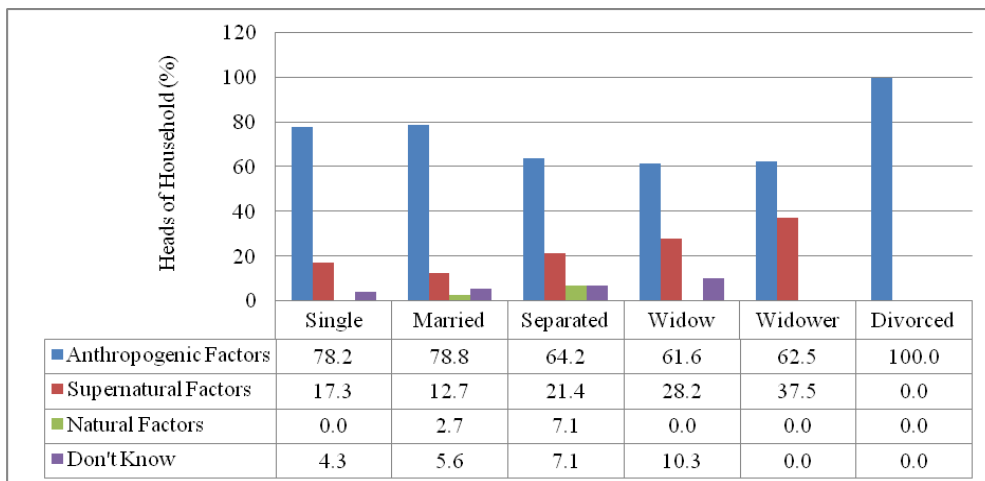


Figure 5: Marital statuses and major causes of climate change

The relationship between the possession of communication facilities and the major causes of climate change are presented in Figure 6. The figure shows that all the heads of household believed that anthropogenic factors are major causes of climate change, with the majority among these respondents, being those who possessed radios, mobile phones and televisions. On the contrary, the heads of household who did not possess any type of communication facilities overshadowed others in believing that supernatural factors were responsible for inducing climate change. Nonetheless, the Figure shows that the percentages of the heads of household who did not know the causes of climate change decreased with the increasing number of communication facilities, but not for those without any communication facility. This implies that acquisition of knowledge on climate change is not only determined by possession of communication facilities but also by experience and information sharing.

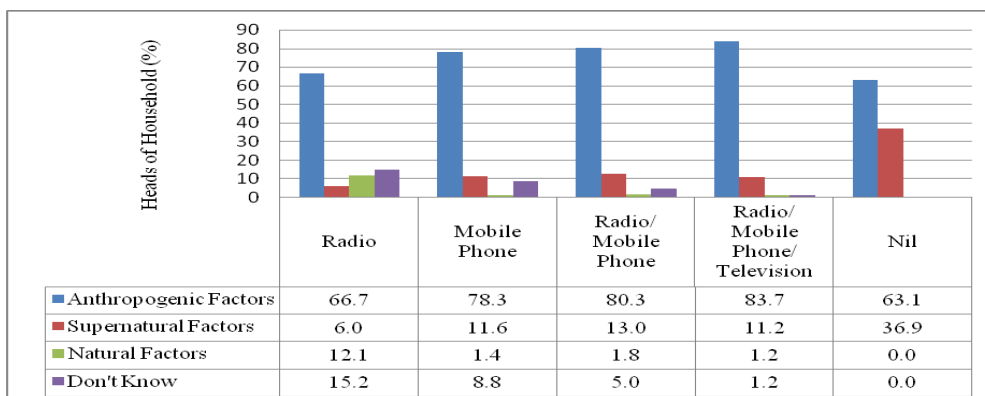


Figure 6: Possession of communication facilities and major causes of climate change

Discussion

The major contribution of the emissions of GHGs in developing countries including Tanzania is through land use change and forest-related sources (Shemsanga *et al.*, 2010; Nyong *et al.*, 2007). In developing countries, forests are cleared for building materials, firewood, agriculture and settlement. The present study (see Table 2) and those by Srinivasan (2004); Speranza *et al.* (2010); and Tambo and Abdoulaye (2012) cite deforestation as the main cause of climate change. The IPCC has estimated that between one-quarter and one-third of anthropogenic CO₂ emissions in developing countries are due to deforestation (Bast, 2013). Tree felling in the present study area is not caused by land preparation for agriculture but by the need for firewood, building materials and for income generation. In this regard, the explanation given by the key informant is corroborated. The key informant said that because of the growing market for timber, many individuals were attempted to prepare timber from mango trees, the practice which was not common in the previous years cited in the study.

The participants who were involved in FGDs do not believe they were culpable for the development of science and technology which induces climate change; hence, implying the externality of these changes. Similarly, the findings by Prabhakar *et al.* (2009) and Egeru (2012) also reveal that local people claimed not to be responsible for inducing climate change but other people somewhere else. Various reasons can be considered as a cause for climate change regardless of who is responsible as the ozone layer is essentially shared by both the developing and the developed countries. The developed countries contribute to economic growth in developing countries through trade, aid and tourism (Goklany, 2007). In this sense, both developing and developed countries induce climate change.

The findings that more heads of household with no formal education believed that climate change were induced by supernatural factors (Figure 2) concur with the one by Tambo and Abdoulaye (2012) which was conducted in Nigeria's Savannah which found that high illiteracy level of farmers was a major contributing factor to the low level of knowledge on the causes of climate change. Kemausuor *et al.* (2012) also report that many subsistence farmers, who are by definition, often poorly educated, resort to superstition to explain natural events because that is their only source of information. The same was found for the age group of 65+ respondents (see Figure 3), females (Figure 4), widowers (Figure 5) and heads of household who did not possess communication facilities (Figure 6). They believed that climate change was induced by supernatural factor provided by these groups primarily due to lack of information. In particular, females are deprived of their right to access information because they are tied with family chores, which limit them to access information from various sources such as watching TV, listen to radio and attending social and political

gatherings (Codjoe *et al.*, 2012; Eriksen *et al.*, 2006). With the exception of family cores, the females are tied with, other groups such as age group of 65+, widowers and those without communication facilities as they all get along. The perceptions from the present study that failure to make sacrifice induce climate change concurs with studies by Rancoli *et al.* (2002) and McDowell and Hess (2010). This kind of practice might be deteriorating in the study area because of the growing modern religion which considered being atheism and the failure of traditional practices to bring intended results. For example, communities in Bolivia had eased on offerings for rainfall due to long practice without promising results (McDowell and Hess, 2010).

The perception that climate change is a punishment from God for the increased number of sinners concurs with the findings by Tambo and Abdoulaye (2012), as well as studies by Speranza *et al.* (2010); Orlove *et al.* (2010); Mertz *et al.* (2009); Falaki *et al.* (2013) and Bacha *et al.* (2018), which established that climate is controlled by God. Eguru (2012) also found that the indigenous people of the Teso subregion in Eastern Uganda believe that climate change was punishment from God and ancestors for the rebelliousness and selfishness that some people had adopted. The findings that climate change is caused by natural factors such as the earth's rotation and absence of mountains corroborate with Barry and Chorley (2003) and Cunningham and Cunningham (2004) who also provide evidences on the natural causes of climate change. They associated it with the periodic changes in sunlight intensity, resulting from Milankovitch cycles. Similar to the Milankovitch cycles is the occurrence of severe droughts reported in the present study to occur at regular intervals of ten to eleven years especially years that end with 4 in their right.

Conclusion and Recommendation

The study has shown that majority of the respondents were aware of the fact that climate change is mainly caused by anthropogenic factors, which would sound a scientific thought. Indeed, any intervention measures to climate change should focus on either to increase sinks of greenhouse gases through afforestation and reforestation programmes or technological changes that lead into reduced emission of greenhouse gases. However, there appeared to be varied views on the causes of climate change among the heads of household, the perception that was associated with different individual characteristics ranged from level of education, age, gender through marital status. Thus, the difference in perception on what would be the cause of the climate change in the studied area compels the need to raise awareness through education among members of the community about the actual causes of climate change to appropriately mitigate the drought in the area.

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The Apparition of the Perceived Enemy: National Identity and Peace Building in South Sudan

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Abstract: *Between July 8th and 11th, 2016 an intense fighting erupted in South Sudan. This was the second instance to the previous fighting that broke-out between December 15th and 18th, 2013 and both happened in Juba the capital city of the country. These revealed that, South Sudan was not only the newest nation in the world, but also but also the youngest nation facing many dilemmas in forging for national identity and consolidating peace. These incidences require scholars to be sober and surpass the oversimplifications of the causes of this mayhem. Thus, understanding these challenges calls for re-considering and re-framing the understanding of the real enemy, to forge a healthy national identity that the country needs. In this journey, I challenge South Sudanese to re-think reflectively and critically if they are to understand the manifestation of the postcolonial–neo-colonial image of imperialism that have not allowed meaningful transition and state building and unlearn the perceived misunderstanding, and invitation is for them to embrace roles of democracy, nationhood, and governance in peace and nation building. As this paper advances, it is by embracing such reconsiderations that nation building, and the identity formation among South Sudanese, the prospects newly country of South Sudan will be possible.*

Keywords: Conflicts, democracy, governance; national identity, peace; and South Sudan

Introduction

Three days before the commemoration and celebration of the fifth anniversary of their Independence Day, South Sudanese were plunged into intense fighting that lasted for three days, from 8 to 11 of July, 2016. Different from the December 2013 fierce civil violence incident, the first after the independence of South Sudan; this time civilians were killed in front of United Nations Mission in the Republic of South Sudan (UNMISS) forces, who were charged by the UN with the ‘responsibility to protect’ civilians (Mamdani, 2017a). December 2013 fighting erupted following collapse of the new government signified by the dismissal of the Vice-President and other high-ranking officials; the July 2016 fighting that erupted on his return to Juba with more than 1,200 armed fighters which was perceived as an essential starting point for the implementation of the peace agreement

(UNMISS, 2016; AUCISS, 2014; Mamdani, 2014). This return and its aftermath in particular was a challenge to the African Union's efforts for the implementation of African Union Commission of Inquiry on South Sudan (AUCISS) report recommendations and the concluded peace deal between the two major warring parties in 2015. It testified to the validity of one of the commonly held political positions that "Dinka without Kiir will not settle; Nuer without Machar will not settle; and yet, the two will not work together" (Mamdani, 2014: 53). In a way, the "ongoing conflict is a manifestation of several aspects of the poor implementation of the Comprehensive Peace Agreement (CPA), as well as historical power and resource conflicts between the Dinka and Nuer ethnic groups and the weakness of mechanistic approaches to peace" (Masabo, 2014). In addition, it echoes Masabo (2013: 149) observation, that "separation without addressing the root causes of the conflicts is not panacea to ensuring sustainable peace" in South Sudan.

In this article, I invite South Sudanese to re-consider more processes that are inclusive, which are mindful of the fact that, there are multiple sources of authority and thus constant and dynamic competition and struggles for recognition (Lund, 2016). This is key for a better new South Sudan since, and as other scholars have remarked, "'the situation in South Sudan is not just another African war'. This is a test of a new state and nation-building concepts. Mediation and peace building that undermine the work done to date will simply cement the crisis" (Le Riche, 2014a). This is so because "this crisis is beyond anything we have seen in scale, magnitude and depth. A quick fix power-sharing agreement will not work – problems of the country and leadership are too deep. [She repeated, for emphasis], 'we need to reboot South Sudan – no quick fix, no deal, will do it'" (Mamdani, 2014: 53).

The latter emphasis was similar to Le Riche's (2014a) observation as well as to what Mamdani observed in his 2016 lecture, 'South Sudan: The Road to Civil War', that "It's unfair to call South Sudan a failed state, because the political foundation for the existence of a state has yet to be forged in South Sudan" (Hawkins, 2016). Thus, "it needs a second transition, this time under an authority other than the United States, Britain and Norway, whose project has failed, or IGAD, whose members have conflicting interests in South Sudan" (Mamdani, 2017a: 11). As such, one can argue that the separation of Sudan into Republic of Sudan and Republic of South Sudan in July 2011, following the secession referendum and ultimate independence for southerners opened a new chapter in the South Sudan that goes beyond the perceived problem (Masabo, 2013). It partly calls South Sudanese to re-address and rethink anew if their hard-won independence is to reflect what they long fought for particularly the access to resources and recognition.

This article revolves around the imperative for appreciating diversities as a basis for forging a better future in South Sudan. I tease South Sudanese understanding of how capitalist mechanisms have been manifesting themselves in the postcolonial or the neo-colonial in Africa. In addition, I pursued them to unlearn the perceived misunderstanding of the problems by gauging how to transform themselves from a long history of warring as survival mechanisms to embrace democracy, new nationhood, and governance as alternatives of wars, guns, bullets in the course of statecraft.

In that regard, in this article, I concentrates on the conflicting dynamics of South Sudan since 2011 and more particularly the December 2013 civil plight and developments after December 2013 fighting. I focus on African Union's initiatives in response to the South Sudan crisis. I pay particular with attention decisions reached by the Peace and Security Council of the African Union (AU), during its 411th meeting held at the level of Heads of State and Government, in Banjul, The Gambia, on 30 December 2013, which mandated the establishment of the Commission of Inquiry on South Sudan (AUCISS).

One of these developments is the collapse of the peace deal between President Kiir and his vice President Machar that reinstated him and called for his and assuming his executive duties which were revoked from him in April 2013. These, will serve as the conceptual foundation in explaining peace dilemmas and national building trajectories in South Sudan, which is frequently experiencing a series of civil revolts that has been going on in the country since its founding day. In this particle also, I discuss the dilemma of secession and missed opportunities on the one hand, and challenges and prospects for peace consolidation in the South Sudan on the other. It is my hope that, by discussing missed peace opportunities, and proposing a way forward; I will contributing to this noble endeavour for peace in South Sudan.

After this introduction, I structure the rest of the article as follows: the second part provides an account on how scholars have approached South Sudanese peace, and how this article approaches it immediately follows. Within this part, I present various scholarly views of South Sudan peace, and thereafter the theoretical lens that this article employs for understanding the conflicts and peace building in processes. The third part addresses the dilemmas and missed opportunities. Fourth part that is devoted to discussing challenges as well as the prospects for peace consolidation in South Sudan follows and finally the conclusion.

Approaching the South Sudan Peace Processes

South Sudan and the challenge of change

Founding of South Sudan almost fifty years after the African phase of decolonization, has not made it a unique case. Just like many other African countries, it has not managed to avoid what characterizes most of African countries: the imported state, or state formation preceding nation creation. Banking on Ndlovu-Gatshen (2013: 24), what is going on in South Sudan like many other postcolonial African states reveals the “negative manifestation of sovereignty normally ascribed by other states rather than positive sovereignty rooted inside and manifested in effective control and popular acceptability.” Thus, if the state has preceded the nation then, the South Sudanese do not only need to overcome this inherent African phenomenon; but also, to build a nation out of fifty years of war, as well as address the common façade of the inherited state.

For a number of scholars (e.g. AUCISS, 2014; Johnson, 2014; Le Riche, 2014a; Mamdani 2017a; Masabo, 2014; 2013), what is happening in South Sudan reveals the internal weaknesses of the 2005 Comprehensive Peace Agreement (CPA). That is to say, by excluding political, civil and women groups, and strengthening the armed dictators in the north and introducing one in the South, the 2005 CPA saw the seeds of retardation are inhibiting progress in South Sudan (Mamdani, 2017a). It set a bad beginning with a militaristic assumption that; only those who waged war should determine the terms of the peace. The talks excluded political and civic groups, strengthening the armed dictatorship in the North, and introducing one in the South (Mamdani, 2017a: 11). In this way, I argue (2014), South Sudanese are confronted to mirror the extent to which the their peace processes have been so rationalised that, the emotional and affective part of it sometimes gets drowned in rational and idealistic concepts, good only for the classroom and often inefficient in the field. Moreover, they need to understand that warriors alone will not bring them long-lasting peace, and that any future peace talks need to consider the proper involvement of the various groups of people and various approaches such as feminist approaches, have to peace. As experience has taught us, “while most men come to the negotiating table directly from the war room and battlefield, women usually arrive straight from civil activism” (Masabo, 2014). As such, it is vital to recognise that, in South Sudan, “the very political and institutional foundation for the existence of a state—as a political process that legitimates a sovereign power, and the creation of an administrative, technical and legal infrastructure as the means for exercising that power — has yet to be forged” (Mamdani, 2017a: 11).

Studies on South Sudan peace process: a synopsis

Several scholars have written on South Sudan conflicts, and suggested solutions to solve the problems of peace building. From their analysis, there are two groups or types of factors suggesting causes for conflicts. The first group of factors is from the theorists and scholars, who assert that, the problem of South Sudan has gone far beyond local boundaries, and that its solution needs national and international efforts. These are scholars like Copnall (2014) and Johnson (2011). This study supports this assertion, and agrees that, of course, when one talks about the conflicts of Dinka and Nuer in the context of South Sudan, which goes further to include disputes on the nature of CPA, international solution are indispensable. However, when one thinks about the relationship between the two ethnic groups, referring to things shared in common in our case political power and access to resources, here the traditional approaches are more appropriate to international and mechanistic approaches (Masabo, 2014).

The second group of factors is from theorists and scholars, who contend that, there are traditional measures based on people's culture that are still useful to solve the contemporary conflicts. Within this are by scholars like Sansculotte-Greenidge and Tsuma (2011), Sansculotte-Greenidge (2011), Hagg & Kagwanja (2007), and Osman (2007). In the same line of thinking, this study supports the need to apply traditional cultural approaches.

However, in differentiating itself from the existing line of scholarship, the study calls for reconsidering democracy, citizenship, and governance as key areas within which South Sudan can overcome the challenges it is facing. Given this scenario, one can suggest then, that, the end of the conflict between Republic of Sudan and Republic of South Sudan has nothing to do with conflict between these two tribes. As many have argued, the conflicts between Dinka and Nuer are older than the former, and factors or sources of conflict apparently differ. Competition for resources is necessary for livelihood for the two tribes, but unfortunately, this is not the case for the two nations (Republics of Sudan and South Sudan). Therefore, specific solutions for Dinka-Nuer have to come mainly from within the two ethnic groups, and less from outside. Furthermore, other issues such as the military-civilian based conflict, state-people (ordinary citizens) based conflicts ought to have the right path to their address. Nevertheless, when it comes to other ethnic groups in South Sudan, like Shuiulk, Equatorian similar logic follows soot that: solving of conflicts among ethnic groups is the first as it is the basis for enhancing national cohesion.

Cementing on the relevance of culture to maintain peace, Mckay (2009: 235) asserts that, since 1956 for instance, there have been several civil wars between tribes allied with northern Sudan and those allied with South

Sudan. Although the Dinka tribe's men maintained influence for the 50 years' war against the former North Sudan, the role of Nuer was also significant in the struggle against North. To overcome this, Hagg & Kagwanja (2007: 25), call for the acknowledgment of the role of regional peace and security mechanisms in conflict resolution, as well as the use of traditional justice mechanism in conflict resolution, especially in the context of increasing state failure on the continent. They further caution against the enthusiastic embrace of international justice mechanisms that may sometimes create obstacles to peace and reconciliation.

Additionally, they stress that, since 'war begins in the mind'; peace too ought to begin from the mind. This entails conflict transformation that seeks to broaden perceptions and social relations, by creating historical awareness, and destroying myths upon which adversary identities rests. Understanding culture and cultural diversity is an important key to unlocking and understanding complex human nature. Many earlier and more recent expeditions and studies point to the existence of a rich oral culture, and resilience and creativity amongst the people. However, as colonialism took root in the country as in most countries on continent, one of the earliest casualties was this noble institution; culture (see Osman, 2007: 125), Dinka and Nuer's culture being amongst the casualties. But as Jinadu (2000: 3) attests, their culture must be viewed from the more positive and more embracing perspective of creating and enabling an environment for self-realization and for the enjoyment and sustenance of self-development.

Theoretical framework

In the course of understanding the nature and dynamics of conflicts, theorists have developed several theories that capture some or most of the major preoccupations of the phenomena. This study utilizes the theoretical formulation of Morton Deutsch, Peter T. Coleman and Eric C. Marcus – the Cooperative Theory as refined in 2006.

Cooperative theory has two basic ideas: one relates to the type of interdependence among goals of the people involved in a given situation; and the other pertains to the type of action taken by the people involved. In addition to that, the theory postulates two basic types of interdependence goal correlations, positive and negative interdependence. Positive interdependence correlation occurs when goals are linked in such a way that the amount or probability of a person's goal attainment is positively correlated with the amount or probability of another obtaining his/her goals. However, in negative interdependence correlation the goals are linked in such a way that the probability of goal attainment is negatively correlated with the amount of probability of the other's goal attainment. As Deutsch et al. (2006: 24) simply puts it; "if you are positively linked with another, then you sink or swim together and with negative linkage, if other

sinks you swim and if the other swims you sink.” Thus, positive interdependence can result from people linking to one another, and rewarded in terms of their joint achievements. Similarly, with regard to negative interdependence, it can result from people delinking from one another or from their being rewarded in such a way that the more one gets of the reward, the less another gets, and so on. In addition to positive and negative interdependence, it is as well necessary to recognize that, there can be a lack of interdependence or independence, such that the activities and fate of the people involved do not affect one another directly or indirectly. If they are completely independent of one another, no conflict arises; the existence of a conflict implies some form of interdependence (Deutsch et al., 2006: 25). Further to that, Deutsch et al., (2006) also highlights two basic types of action by an individual: ‘effective actions’, which improve the actors’ chances of obtaining a goal and ‘bungling actions’, which worsen the actors’ chance of obtaining the goal.

Using the above theoretical framework, then the conflicts between Dinka and Nuer have a positive interdependence. The history shows that, over time, these two tribes have been able to share their struggles, and, in fact, their goal was to swim together. Positive interdependence is clear, which informs that, effective action can easily work. In addition, both Dinka and Nuer share the country, but with slight difference shares of political positions. That is to say, although South Sudan President Kiir is Dinka, Machar a Nuer has been a leading figure of this second major ethnic group in the Sudan People’s Liberation Movement and Sudan People’s Liberation Army (SPLM/A) politics for years. Therefore, it is in this context that, I advocate for amicable and horizontal conflict resolution mechanisms which will embracing modernity without discarding the culture of co-existence, addressing the quest for national building, and forging true national identity needed in this newly country as the one of the most valid and reliable approaches to solving the conflicts South Sudan.

Along with the Cooperative theory, the study adopts the Institute for Economics and Peace (IEP) (2013), ‘Pillars of Peace Framework’ as an auxiliary theoretical lens to help in understanding the process of peace consolidation in South Sudan. This framework identifies the national characteristics, which are most closely associated with peace, and have been derived from a process of statistical analysis (IEP, 2013: 1). Pillars of peace framework approaches peace by emphasising on the need for understanding and describing the factors that create peaceful societies. In that regard, pillars of peace framework is best suited to understanding the dynamics and challenges facing the peace consolidation in South Sudan.

Dilemma of secession and missed opportunities

December 2013 and July 2016 contain two sad events in the country's memory, such that South Sudanese are challenged to reflect upon as they forge ahead and they proceed to their forthcoming anniversaries of statehood. They signified that, the road to statehood and national building in South Sudan was premised on the wrong assumption. Assured of unconditional international support, South Sudan's rulers acted with impunity, while strategies to establish healthy future for all South Sudanese were not entertained. More seriously, the resolutions to create an all-party transitional government of national unity, to hold a constitutional conference and an election within two years were ignored after independence in 2011. Moreover, as many scholars have argued, it seems that there is no consensus on how to move forward (see Mamdani, 2017a: 8).

It is probably because of this, that one of the terms of reference given to the AUCISS the AUPSC, Communiqué PSC/AHG/COMM.1 (CDXI) dated December 31 2013 directly instructed the commissioners "to investigate the causes underlying the violations" (AUCISS, 2014: 8). According to Mamdani's (2014) AUCISS separate opinion (report), the explanation to such term of reference is that, the underlying causes for ongoing violation in South Sudan is a "conundrum" of apparition of the perceived enemy. Taking it further Mamdani, (2017a: 11), argue that, the troika (the United States, Britain, and Norway also often known as Friends of IGAD [Inter-Governmental Authority on Development, the regional bloc]) were convinced that the main threat to peace after independence would come from the north, the troika pushed for a hasty transition, bypassing democratic reform. Here under are two examples of the dilemma and missed opportunities.

Dilemma of secession

Secession in the CPA was a last resort if the possibility of the new Sudan was impossible. However, it became the only issue, that, both the South Sudanese, IGAD and the troika – Friends of IGAD were interested in. "The demise of the enthusiasm to Sudan reform agenda: struggling for the 'New Sudan'" (Masabo, 2013: 147) as primary agenda to CPA, opened an era of strong emphasis on secession as the only solution to the prevailing problem. As Iyekolo (2011: 54-56) puts it, "events in the post-Garang era saw the re-awakening of self-determination clause that was meant to be a last resort should unity be impossible to attain. [In its aftermath] ... the quest for independence then became the main vision and driving force of SPLM/A commitment to the CPA implementation under a façade of sometimes 'untenable excuses' as well as tacit and indifferent posture with a final aim of secession in view." Thus instead of reforming Sudan; separation was preferred and other critical issues such as of contested or the three

transitional areas (TTA): Abyei, Southern Kordofan and Blue Nile were ignored or less attended to (Masabo, 2013). In that regard, the declaration of the independence of the Republic of South Sudanese manifested that: "The CPA's national reform agenda has been largely ignored, although this was the very underlying comprehensive claim of the CPA" (Institute of Security Studies (ISS) 2009: 10).

Thus, with the secession, basic challenges of peace building became evident, as the often-framed archenemy framed Khartoum perceived for quite long as almost the only problem, could no more provide the benchmark for unity. The opening of internal realities that followed the secession revealed how South Sudanese misperceived the problems of their nation. It became apparent that the challenge for peace building in South Sudan lied within the perception formed by South Sudanese who framed their country's problems (Sudan before separation of South Sudan) and embraced images of the North (present Republic of Sudan) as the only enemy. This led to the limited nationalist struggles, which took struggle for self-determination to mean secession. They seemed to have not realised that the major challenges were the crisis of the colonial legacy, particularly recognition (citizenship) and access to property.

As the result, how to approach national building and identity formation amongst South Sudanese which was key to the prospects of the new country-the Republic of South Sudan escaped their imagination. Because of that, governance rooted in the country's multiple diversities that could have been the only guarantee for South Sudan's unity and viability could not take root. However, when addressing the challenges and consequences of southern Sudan's secession, it is important to focus on the future rather than on the past (Nyaba, 2014: x). In that respect, if South Sudanese is to reap from its fifty years efforts, it has to devise a means to overcome the triple challenges. This may be by embracing modernity without discarding the culture of co-existence; addressing the quest for national building by putting in place structures work governance systems; and forging of appropriate true and needed South Sudanese identity by politics of inclusion and co-existence.

Ongoing South Sudan fighting: civil war or ethnic cleansing?

The collapse of government of South Sudan in 2013 following Kiir's dismissal of the cabinet members, beginning with the vice President Riek Machar, has been explained different by different scholars (De Vries and Schomerus, 2017; Gosztonyi, 2016; Krause, 2019; Nyadera, 2018; Owiso, 2018). However, many may agree with Johnson's (2014: 300) analysis that "despite the fact that the arrested ministers came from a variety of communities across South Sudan, Western media reports cast the political

struggle exclusively in tribal terms, of Salva Kiir's Dinka against Riek Machar's Nuer. The targeted killings in Juba and revenge killings ... in Akobo and Bor in Jonglei state seemed to bear this out." Put differently and capturing Mamdani (2016) 'Who's to Blame in South Sudan' piece appearing in the *Boston review*, Hawkins (2016) argue that:

...the outbreak of violence in South Sudan in 2013 was accompanied by various political motivations. One, identified by Mamdani, was the motivation of the South Sudanese political leadership to separate society into "us vs. them." This strategy, he argued, turned the crisis from political to ethnic. While it had been common for neighboring tribes to fight over resources in the past, these tensions were exacerbated by external influences that emphasized tribalism over common culture (Hawkins, 2016).

With this note, making sense of the situation unfolding in South Sudan is a daunting task since "most commentary on the situation mirrors most of which has come before regarding conflict in Africa more generally" (Le Riche, (2014a). Nevertheless, as Johnson (2014) and Mamdani (2016) observe, the collapse of national building project is transforming it from political violence into a civil war and ethnic conflict between the Dinka and Nuer. This was a proof that unique "context was largely overlooked during South Sudan's crucial interim period and after independence" (Mamdani, 2014: 54).

Missed peace opportunities

Peace is one of the major opportunities missed by South Sudanese people. Peace if viewed through the lens of both negative and positive peace (Galtung, 1964; Galtung and Fischer, 2013). Negative peace which is the absence of violence, or fear of violence (used as the definition of peace to create the Global Peace Index [GPI]); while positive peace may be defined as the attitudes, institutions and structures that, when strengthened, lead to a more peaceful society (IEP, 2013: 1). It is in the latter sense that ought to be in South Sudan's case and which is likely to be attained by employing the 'Pillars of peace framework'. The utility of this framework emanates from the general trend in peace and conflict scholarship, which has revealed limited research investigating the underlying causes of peace. Many studies have focused on understanding, factors which are commonly associated with conflicts. As such

[Pillars of peace framework] ...provides a framework for assessing the positive peace factors that create peaceful societies. The taxonomy also forms an ideal base for measuring a society's potential for peace. This is an eight-

part taxonomy consists of: a well-functioning government; a sound business environment; an equitable distribution of resources; an acceptance of the rights of others; good relations with neighbours; free flow of information; a high level of human capital; and low levels of corruption. These eight pillars were found to be associated with peaceful environments and are both inter-dependent and mutually reinforcing, such that improvements in one factor would tend to strengthen others and vice versa. Therefore, the relative strength of any one Pillar has the potential to positively or negatively influence the others, thereby influencing peace (IEP, 2013: 1-2).

It is true that, if put within this framework or if South Sudan could have embraced such an approach; continued internal crises could have given way to peace and to the ultimate goals of peace building and national development. However, this seems to have not been the case. To forge ahead in the search for peace, the first proposal is for the government of South Sudan and its people to work towards a consensus, and not a compromise and see how they can re-work, and repair their road map towards better peaceful co-existence. Secondly is that “the ruling political elite in South Sudan must change their *modus operandi* if South Sudan is not to slide back into conflicts and anarchy” (Nyaba 2014: x). The eight pillars of the proposed approach can as well summarize what was missing within the thinking of many South Sudanese military-political elites who have thought to address their misunderstanding wrongly-by the use of guns! While many can rebuke the so-called rebels; the fact remains that, the work done in the South Sudan by the incumbent, has to large extent stimulated what has happened. Since this is not the subject intended to be addressed in this article; the next parts concentrate on analyzing the triple challenges to South Sudan peace and link them to Pillars of Peace Framework as the solution where possible.

Challenges and prospects for peace consolidation in South Sudan

Some of the terms of reference given to the AUCISS commissioners on their appointment to the commission, were “to make recommendations on the best ways, and means to ensure accountability, reconciliation and healing among all South Sudanese communities with a view to deterring and preventing the occurrence of the violations in future, and to make recommendations on how to move the country forward in terms of unity, cooperation, and sustainable development” (AUCISS, 2014: 8). In fulfilling these tasks associated with these terms however, an observation was supposed to be made, that, “South Sudan is not a failed state but a failed transition. It needs a second transition, this time under an authority other

than the former one whose approach was of one-size-fits-all (Mamdani, 2017a: 11).

Moreover, though the July 2016 fights erupted while implementing the peace deal between Machar and Kiir South Sudanese should not despair. Instead, we have to work to help South Sudan to overcome its statecraft challenges. As observed by Johnson (2014: 309), "there is potential for opening up space for other voices to be heard and other groups to be involved in resolving the underlying issues that led to conflict." In responding to this observation and contributing towards Sudan's second transition, I propose hereunder three issues or areas to be considered by South Sudanese as they forge ahead to make their country reflect what they fought for.

Embracing modernity: human rights and democracy in South Sudan

Eruption of intense fighting in December 2013 and July 2016 in Juba, in a period of five years after its independence was one of the signs that roots for respect of human rights and promotion of democracy and democratic leadership have not taken roots in South Sudan. It was an indication that, unless people are listened to, involved, included, their rights respected, and protected; Africa will never graduate from violence. That is to say, as a continent, Africa seems to be de-democratising.

Instead of popular empowerment, participation, competition, and legitimacy, the democratisation process in South Sudan seems to result into feelings of dispossession and growing alienation amongst the people. To South Sudanese leadership in particular, these wars were signs of immaturity to both sides: the incumbent and the sucked vice president because of three reasons. One, they failed to learn from history that, on the one hand, it was because of the perceived oppressions of the North, which forced the southerners to take up arms and launch the liberation movement for self-determination.

As such, they quickly forget that even with fifty years of war, South Sudan's independence finally came through peaceful negotiation envisaged by the CPA. Two, it seems that they have not Secondly, they did not understand what made them to experience internal differences soon after secession which were formally were absorbed by their perceived enemy. In addition, they seem not to acknowledge that the challenge of competing or struggles for recognition and access to resources could not be avoided, but only lived-with and solved inclusive politics and not by the bullets. Had they have embraced Garang's roadmap for reforming Sudan (Masabo, 2013; Zambakari 2015), it could have helped to bind them together as people of South Sudan. And thirdly, they did not capture the real picture that what

was happening was a clear sign that the problem was not only the North, but the specter of decolonization, poor governance, lack of development and the continued forces of imperialism that were feeding on the lucrative resources of the underdeveloped and South Sudan respectively.

To overcome all these some scholars (Owiso, 2018; Radon and Logan 2014) are calling South Sudanese to rebuild their country under the principles of modern statecraft, which put at the centre respect and promotion of human rights, democracy and democratic leadership. However, the question that such proposal leaves unanswered is how South Sudanese should go about it. This is so because it is not a new call and not a novel arrangement different from those that were anticipated the CPA almost fifteen years ago. Nevertheless, others too, have not been tired in responding to the how question. Scholars such as (Awolich, 2018; De Vries and Schomerus, 2017; Krause, 2019; Nyadera, 2018; Owiso, 2018; Zambakari, 2015) have responded to this question, and attempted to show how South Sudanese can go about in embracing human rights, democracy and democratic leadership. Two approaches from these scholars stand out in providing implementable solutions to South Sudan. The first focus on the “the establishment of an inclusive framework to manage diverse populations within a unified nation” (Zambakari, 2015), and the second focuses on the establishment “transitional authority that will help deconstruct the myth that ethnicity is the basis of survival and instead suggests the establishment of a government” (Nyadera, 2018: 60-61). Although they are implementable proposals, they are nevertheless not easy ones, as they may seem since they touch the core issues that have characterised the politics that have been constraining peace and national building in South Sudan. They invite South Sudanese to shifting from their focus on ethnic groups and embrace the whole nation in organising their polity as one of the necessary pathways for greater good for all.

Within these proposals, leaders’ self-criticism and realisation that peace in South Sudan is beyond Dinka and Nuer, and that nation building strategies ought to move beyond Dinka-Nuer binary by providing strategic direction and vision that all South Sudanese can rally around regardless of their differences in ethnic origin. Once such acknowledgement and self-evaluation is made, Zambakari (2015:71) then challenges them that given their diversities in terms of languages and nationalities (ethnic groups), “they must build a more inclusive political community that upholds unity in diversity, maintains the rule of law, and practices democracy in governance.” If this is to be realised, many of the issues that have been haunting South Sudan will be solved amicably and peacefully. Nonetheless, going incidences after independence particularly those of 2013 and 2016 that claimed people’s lives and property, signs of respect human rights and

promotion of democracy and democratic leadership seem to have not roots in South Sudan. It is even frustrating when we the very independence that people have been fighting for long, becomes a reawakening moment for old conflicts, and exacerbating created new ones.

This have anticipated neither by the 2005 CPA negotiators nor by those coming to power cession referendum. Surprisingly even the newly military-political elite seem not to care about it and issues of national building under the template of modern statecraft receives only lip service. Its top priority has been to constitute itself as a military aristocracy through various predation strategies (some dating the days of war) that are keen to favour expansion of its own kinship network (Pinand, 2014: 193) without regarding other groups, all who are part of the nation. This is contra to the words from the July 2011 South Sudan Independence speech that President Salva Kiir made in which he affirmed the imperative of the government that is democratic, inclusive and accountable as a critical foundation for the future of the South Sudanese and as a guarantor for sustaining a sovereign nation (Gosztonyi, 2016: 180).

Other point of disagreement particularly between President Kiir and vice President Riek Machar that have led the spirit of South Sudan's ruling party Sudan People's Liberation Movement (SPLM) into two: SPLM mainstream under President Kiir, and Sudan People's Liberation Movement In Opposition (SPLM-IO) under Machar are their approaches on how South Sudan should be governed. Kiir favoured a more unitary reorganisation of South Sudan, which was to base and maintaining the former 10 existing states, while Machar favoured a federal system of government and wanted an increase in number of states from 10 to 21. Kiir opposed Machar's approach anchoring that such proposed governance system would undermine national unity. However he later made a U-turn following the 2015 Agreement on the Resolution of the Conflict in the Republic of South Sudan (ARCSS) by hijacking Machar's federal government system proposal and increased the number of states not only from 10 to 21 states as previously Machar proposed, but from 10 to 28 states, and later to 32 states. This move has been interpreted by the SPLM-IO as a containment strategy of its Neur constituency (Aalen, 2019).

These and all other ill implementation of the CPA (Mamdani, 2017a; Masabo, 2013), new leaders lack of political will (De Vries and Schomerus, 2017), and identity and citizenship crisis in South Sudan (see next section) poses a stumbling block to Zambakari's (2015) inclusive political community solution for South Sudan. It is here and from a more refined analysis Nyadera (2018) recommends going back to roots and address the root causes for war recurrence and failure of various peace deals. This is so because, "competition for political power and differing ideologies among

local leaders create a scenario where communities regroup within their ethnic cocoons in order to advance their cause” (Nyadera, 2018: 69). For peace to flourish, addressing all these is cannot be overemphasized.

To resolve with factors inhibiting progress in South Sudan and for ending conflict recurrence, like De Vries and Schomerus (2017) and Masabo (2013); Nyadera (2018) proposes moving beyond Dinka-Nuer binary because such framework framing of South Sudan conflicts and problems has been responsible for the many failures of the many peace agreement. This is so because most of the solutions made, have fallen victims of this framing and thus ignoring ethnic animosities and rivalries beyond those of Dinka and Nuer. Within the international community such framing have led to oversimplification of the conflict in South Sudan (De Vries and Schomerus, 2017) and as the result “the excessive attention given to the government and the opposition in the ongoing civil war has overshadowed genuine grievances that ordinary citizens of the country are facing and that can motivate them to take up arms and fight” (Nyadera (2018: 75). And because of this trend of war recurrences in South Sudan, Nyadera, (2018: 60) proposes the establishment of transitional authority as “an exit strategy that will ensure the gaps that allowed previous peace agreements to collapse are sealed by involving local, regional and international actors.” This is a powerful proposition though it also attracts a number of questions such, how novel is the proposal, and to what extent does it differ those proposed in the CPA and subsequent peace agreements such as the 2015 Agreement on the Resolution of the Conflict in the Republic of South Sudan (ARCSS)? It for these and many other unanswered questions this article proposes the embracing of human rights, democracy and democratic leadership as a tool to help in overcoming the existing tensions and for better organisation of the new South Sudan.

However, an observation have to be made, that, although external help and support is necessary for South Sudanese in this journey; it is only them who can only successfully bring about needed changes and transformation. In addition to what has been suggested, South Sudan’s the take-off point for peace need to consider self-reflection and self-criticism particularly asking themselves the extent to which they have benefited from last seven or so years of instability. It is high time to stop shelving history but also is not time to embark of history of warring ethnic groups. Nevertheless, as Zambakari (2015) have rightly argued; the way forward ought to be an embrace of unity in diversity. Diversity ought to be cerebrated but not as a means of identifications and national building. Since they have joined the East Africa community, they have good examples. Countries like Tanzania have many ethnic groups though not matching in number to those in South Sudan, and can provide learning lessons for them as they strive to embrace

values of modern states organization. South Sudanese need to remind themselves that, democracy as an element of modernity calls for good governance, respect of human rights, accountability, and democratic ascendancy to power. These echo President Kiir independence speech words and calls for revisiting their aspirations and work out their practical implementation. The SPLM /SPLM-IO leaders should not overlooked the people's higher expectation of independence gained by the price of blood of those who died in wars, hunger, displacement, and all the ramifications the fifty years of wars. To move forward addressing their differences amicably and putting people first in all what is done be it the government, leaders or ordinary citizens do and by remembering that if they are to embrace the eight pillars of peace framework; there are possibilities of having a viable community determined to peaceful co-exist not only with itself but also with its neighbours.

Nationality challenge: who is and who is not a South Sudanese?

One of the major impacts of foreign domination in Africa was the introduction of categories of recognition (Lund 2016; Mamdani, 2017b; 2012). They set in motion the need for some of communities to constantly struggle for their recognition and access of resources as these newly introduced categories created became the major defining principles for citizenship, belongingness and provided means for access use of resources (Lund, 2016; Marko, 2016; 2015). Moreover, these new categories of recognition became among the many causes of the postcolonial wars in Africa that have consumed lives of many people and devastated property.

The people of the present South Sudan, are among those who have been fighting for recognition as the result of historical crated categories and a country where struggle for recognition and access to resources continue to destroy property and devour lives of many people (Zambakari, 2015). Like it was to many Africa countries and people in the 1960s, 1970s, 1980s and 1990s, July 2011 South Sudan's independence most of the South Sudanese was expected to be the beginning of new end: the beginning of a new country where struggle for identities and access to resources could be left to shelved historical books. Their hoped was that, this hard won independence and newly created country could provide a single and common identity, by striking balance between history, cultural values, and modernity; what Makumba (2007: 110) calls, "African twin-desire: the desire on the one hand for cultural personalization and to the other hand for doing so in dialogue with modernisation."

The crisis of citizenship in South Sudan is linked to the history of state formation in Sudan (Zambakari, 2015: 73). When the British decided to rule it and give it demarcation, the people continued to live under the different chiefdoms. It took colonialism to make what we call South Sudan today. In

that regard, the national identity of this new country is not automatic, but it has to be re-worked-on by inspiring people to regard themselves as one. Although some scholars tend to particularise the South Sudan case as a country whose “independence came about under unique circumstances that differed from those in African countries with fair social, economic and education infrastructures” (Nyadera, 2018: 80); with regard to the citizenship and identity question it is not unique. As Zambakari (2015: 76) points-out, there are similarities between identity and citizenship struggles by South Sudanese to those “struggles with the contested nature of citizenship and the dual system of native/settler that operate in most countries in East Africa.” It is an important struggle they should face as many African countries have faced it and some continue to face it.

Some have made significant successes such as Tanzania (Mamdani, 2012) but other on continuous reforms such as Rwanda (Mamdani, 2002). Nonetheless though is not unique, South Sudan is case which calls for devising “a new concept of citizenship that is inclusive of the different nationalities within the country as well as those who are coming from outside may wish to make South Sudan their homes” (Zambakari, 2015: 76). This is necessary if peace is to flourish and forging common identity is to be achieved. An understanding that identity formation and making people feel as South Sudanese citizens will not come by only identifying demarcations that divides them; but rather by twining the common history (colonialism and struggles for independence) with the common vision of enjoying the country’s resources together is necessary. This is a call to self-denial for the sake of South Sudan’s better future.

To make this possible the government has to provide for its people in order to make them feel the value of being citizens. People ought to go beyond the ethnic binary by embracing a countrywide identity ethic that recognizes everyone. South Sudanese and their leaders should know that violence will not smash the legacy of colonial created identities, but rather it requires a political vision and political organisation. The so-called South Sudanese identity will only depend on the legal and administrative apparatus in place. They should reckon Mamdani’s (2012: 107) advice in *Define and Rule: Political as Identity*, that envisages the “creation of a substantive law from a multiple sources – pre-colonial life, colonial modern form of state and anti-colonial resistances (for South Sudan this should as well constitute anti-north resistances) – and establishment of a single and unified law-enforcing machinery meant for every citizen.” This is key to resolving their problems. More so, they should not undermine the fact that South Sudan is a multi-diversified society in terms of ethnicity, culture, and religion and that secession cannot be the answer to their diversity (Hawi, 2014: 41). That is to say, South Sudan does not belong to Dinka and Nuer only; and any clashes

between them should not translate into a country clash and slain lives of innocent citizens. Rather, they should find means to deliberate their conflicts amicably considering the interests of other ethnic groups. In addition, the major ethnic groups should not translate the vote value of secession referendum that gave birth to South Sudan into another form of domination. They need to understand the fact that, there will be no leader who will not belonging to either ethnic group and that, in itself should not be a problem, but only when it is misused and used as a point of discriminating others.

Role of governance in the South Sudan's challenge of national building

Since 1980s and more particularly in 1990s, the term 'governance' and increasingly 'good governance' and 'bad governance' have permeated development discourse and especially research agendas and other activities funded by public and private banks and bilateral donors such as the United Nations (UN) and its agencies, the World Bank and International Monetary Fund (IMF) (Weiss, 2000). Nonetheless, the term governance is not new and uncontested one. What are probably new and contested are the newly coined concepts of 'good governance' and 'bad governance', which are, disputed among scholars and policy experts. Based on Elahi's (2009: 1167) account, the term, 'good governance' was first mentioned, causally, in the World Bank's (1989) report: *Sub-Sahara Africa: From Crisis to Sustainable Growth - A Long-Term Perspective Study*, but the idea crystallized into the most popular international development policy project within a decade.

Governance can be defined as a concept as well as a process. As a concept, however it has no universal accepted definition, but rather varying definitions that tend to have an emphasis on some issues but almost depicting the same purposes. In public administration literature for example, it reflects a paradigm shift within the field. To public administration pundits, governance paradigm emerged in early 1990s. And as Henry (2007: 40) remarks, governance is the results of "1980s...trends that connote fundamental change in how we perceived the governments and its administration...under the rubrics of globalisation, redefinition and devolution and these developments are causing enormous change within and among the three sectors—public, private and non-profit." Within this understanding, and as the way Hooghe, Liesbet and Marks (2009: 2) conceptualise it, governance has two entirely different purposes. First, it "is a means to achieve collective benefits by coordinating human activity." Given the variety of public goods and their varying externalities, efficient governance will be multi-leveled. Second, governance is "an expression of community. Citizens care passionately about who exercises authority over them." Within the UN, the World Bank and IMF literature, the United Nations Development Program (UNDP) often binds them with term

governance to the 1997 most popular definition. In one of its 1997 policy documents, *Governance for Sustainable Human Development*, the UNDP defined governance as “the exercise of economic, political and administrative authorities to manage a country’s affairs at all levels, [comprising] mechanisms, processes and institutions, through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences” (UNDP, 1997:1-2).

In this perspective, governance comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences (Braathen, Chaligha & Odd-Helge, 2005: 9). As such, “it entails a more devolved system of governance as opposed to centralized one, which opens door for common people to participate in the governing of their own affairs and creating a sense of ownership” (Masabo, 2013: 144). It is in this context that governance systems become an imperative aspect of South Sudan national building as it can enhance participation and accountability that forms amongst many other factors pointed out as the causes of the continued wars in this new African republic.

Scholars writing on South Sudan conflicts especially those focusing on the period after independence tend to peg governance as a litmus paper test for the rebuilding of South Sudan. Radon and Logan (2014: 149) for example, posit South Sudan as “a prime example of how governance arrangements can either achieve and maintain peace or become the trigger for civil war.” Based on this observation, deciding which framework best suit the organisation of South Sudan polity is primary for its sustainability; an imperative ordering framework that can accommodate challenges coming from a country that “is sparsely populated and ethnically, culturally and linguistically diverse” (Radon and Logan, 2014:152) such as South Sudan.

In that regard, adoption of a decentralised and federal system of governance is not a choice but a must. This is so because “studies have indicated that presidential systems are prone to ‘authoritarian collapse’ or ‘democratic breakdowns’ than parliamentarianism (Radon and Logan, 2014:156) and the experiences of South Sudan so far seem to affirm this view. The challenge, like many proposals from other scholars is how this proposed framework work-out and which template at had that South Sudanese could re-work on, to work-on, adjust to their contexts, and implement to reverse what has been going on since independence.

In response, Awolich (2018) dives-in and provides some suggestions on how to go about embracing governance in South Sudan. In his policy brief for Sudd Institute in Juba, which he titles ‘Fixing Governance is Key to

Stability in South Sudan', he identifies major challenges facing the country and examine the extent to which the 2018 Revitalized Agreement on the Resolution of Conflict in South Sudan (R-ARCSS) has put governance and mechanisms to realise it at its core. Persisting major challenges that Awolich (2018) finds are the lack of good governance strategic direction and vision at which all the people rally around in forging a national identity. Although the R-ARCSS seem to have missed the target, Awolich is still hopeful that, it has "set out mandates for the Revitalized Transitional Government of National Unity (RTGONU)" (Awolich, 2018:10).

The emphasis these authors make suggests the imperative and power of governance in re-organising the ethnic torn South Sudan. It is so because governance remains core for peace consolidation while at the same time is challenging, since establishing a functioning governance system in war torn country is not an easy task. To have it in place, government's commitment to development and citizens' patience are needed. As such, South Sudan reminded to avoid and not imitate the ill examples from other independent countries. While there are many African leaders who embraced repressive governance systems, as well as siphoning public resources by squandering the country's wealth as individual properties, South Sudan's leaders should avoid that.

They should be aware that, if they do so, it would take them back to war. Furthermore, the claim of poor functioning of the incumbent's government and corruption complains (Awolich, 2018; Nyadera, 2018) should be worked-on seriously and addressed squarely if the government wants to prove its legitimacy. Adoption of decentralized governance is not only a bridge to successful nation building, but also a key to empowerment and participation. South Sudan should aim at being an exemplary state in Africa since it has a lot to learn from the experiences of other countries. It should adopt a mode of government that qualifies it as a newly twenty-first-century created state, as such self-awareness is important to this understanding.

Moreover, it is tacit that, the struggle for popular sovereignty is an ongoing process and thus South Sudan is not an exception. The popular uprising that rocked the North African region beginning with Tunisia and spreading to Egypt, Libya and now recently Omar Bashir government in Sudan, others is a testimony of how juridical freedom and civil-military relationship is being translated by ordinary people into popular freedom (Ndlovu-Gatshen, 2013: 32). Likewise, for South Sudan leaders they should know that the signal sent by the attempted coup should not be underestimated, but rather serve as an awakening moment to resolve all the pending questions of power in South Sudan.

Lastly, South Sudanese ought to be aware that something you cannot do for yourself, no one can do it for you. They should be confident and understand that, if they made it for territorial self-determination; they should not hesitate for political, cultural, and economic self-determination. To forge ahead, investment in both economic, political and administrative infrastructure and human resources is paramount. South Sudan should provide progressive and liberating education to its citizens to empower them to stand for the development of their country by avoiding producing westernized graduates who are alienated from South Sudan, African society and its African values.

Conclusion

Although South Sudan still faces many challenges, it still hold hope for making it a better place for the millions of population. The challenges that it faces particularly the historical one of state formation or what Lund (2016) calls 'production of property and citizenship' needs fresh answers. One of the ways to address and answer the many dilemmas highlighted within this article is by challenging what Marko (2015) call 'ethnic turn' which entails the return to the colonial categorization and classification of people according to ethnicity; which has become central to South Sudan citizenship production process. Given the many dynamics of state formation processes in the country, there is a need of addressing some key issues. Among those key issues are that the country is faced with is the formidable challenge of recognition and access to resources. Thus, addressing issues of recognition and national identity creation is one of the stepping-stones towards sustainable peace in South Sudan. The international community ought to continue offering help to South Sudan in demilitarization, especially by collecting the small arms that are easily available in country. Furthermore, working on what the AUCISS (2014) report proposed and the ongoing African Union initiatives to normalize the peaceful condition in the country, have to be worked out to re-awaken the hope of life in newly born and the youngest African country – Republic of South Sudan.

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Services Related Barriers for Male Involvement in Utilization of Family Planning in Chato District Tanzania

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Abstract: Tanzania has one of the highest Total Fertility Rate in Africa of 4.8 and a 32% level of Family planning utilization. The Ministry of Health Community Development Gender and Elderly of Tanzania through Family planning Research Agenda has established that, low involvement of men in Family planning services is one of the barriers towards contraceptive uptake in many African societies due to male dominance in decision making including Family planning issues. The study was conducted to document current family planning (FP) utilization and identify possible underlying barriers affecting male involvement in utilization of Family planning in Chato District, Geita Tanzania. A cross-sectional study using both quantitative and qualitative techniques was conducted. Semi-structured questionnaires were administered to 496 participants in 4 wards of Chato District. Focused Group Discussions and Key Informant interviews were conducted from each of these areas. Descriptive statistics was done to determine frequencies of FP methods used. Using odds ratios, bivariable analysis was done to assess the effect of individual factors on FP use. Inferential logistic regression was then run to assess for the effect of potential confounding variables. The proportion of men or their partner using Family planning was found to be 17.5%, which suggest that, there is low male involvement in utilization of family planning in Chato District due to many barriers. Logistic regression results suggested that it was 2 times more likely for participants that reported residing near Family planning service delivery points to use FP [(OR=1.949, 95% CI=1.069-3.555, p=0.030)] than those that reported residing distant from FP services delivery points and 2 times more likely for participants who had FP side effects not to use FP [1.888, 95% CI =1.067-3.341, p=0.029], than those who never had side effects after use of FP methods. Overall

17.5% men currently utilized Family Planning. Access to FP service delivery points and side effects were more likely to be associated with FP use. The study underscored the need for Family Planning programs to adopt approaches that improve access to Family Planning methods and improved skilled provision of Family Planning methods to reduce side effects, in order to promote FP use in line with National objectives for scale up of Family planning utilization to 60%.

Key words: Family planning, Service-related barriers, Male involvement

Introduction

Family Planning is defined by the U.N. Department of Social Affairs Population Division (2004) as "educational, comprehensive medical or social activities which enable individuals, including minors, to determine freely the number and spacing of their children and to select the means by which this may be achieved" Family planning enables individuals to attain their desired number of children and spacing of their children, through use of contraceptive methods (WHO, 2018). Low utilization of Family planning is a global problem for developed and non-developed countries (WHO, 2015).

Globally Family planning use varies widely, both in terms of total use and the types of methods used. In 2015, a total of 57.4% of married or in-union women of reproductive age worldwide were using some form of contraception. However, contraceptive use was much lower in the least developed countries (40%) and was particularly low in Africa (28.5%). Among the other major geographic areas, contraceptive use was much higher, ranging from 61.8%, in Asia to 66.7% in Latin America and the Caribbean.

Tanzania introduced FP services since 1959, but the National contraceptive prevalence has remained at 32%, which is very low compared to the National target of 60% (Williamson *et al.*, 2009; TDHS, 2015-2016), whereas in Chato District Council FP utilization is 16.4% (DHIS, 2016) with high TFR of 4.8. High fertility is associated with maternal and child morbidity and mortality, as mothers are frequently exposed to risks of child bearing and its complications, including heavy bleeding after delivery, gestational high blood pressure and diabetes, pre-eclampsia and the risks of abortions which could result to death (Audet, 2008). Tsui *et al.*, 2010, in their studies on Family Planning concluded that, using family planning services could help to reduce the number of exposure of mothers to risks of child bearing and its complications. Another studies on Family Planning by Yeakey *et al.* 2009 and Tanzania Demographic Health Surveys (TDHS), 2018, also have explained the association between high fertility rate and low use of contraceptives, high infant mortality rates, under five mortality rates and maternal mortality rates which is the case in Tanzania and that efforts for

promoting FP use should be strengthened from policy level to individual level taking on board the role of men in Family planning services. Effective utilization of FP services can help address such emerging public reproductive health concerns and overall improve maternal and child health outcomes in general (WHO, 2015). Men desire but at the same time do not use any FP methods due to many barriers and among other barriers. Service delivery related problems such as limited FP methods for men, side effects as a result of FP use, un-awareness of FP services, and few FP clinics remain barriers to contraceptive use (WHO, 2015). Enabling men to play a more active role in reproductive decisions has significant benefits to the family planning methods acceptance, continuation of use, client satisfactions and efficacy (Lundgren *et al.* 2012). There is a need to recognize men instead of women alone in studies on fertility (Agadjanian, 2008).

MHCDEC has put in place favorable policies that promote utilization of FP services in general yet FP utilization is still reported as a challenge. This study assessed the current utilization among men and factors that influence male involvement in utilization of FP in Chato district which could be at health care service level; so as to design better strategies to improve FP service delivery.

Methodology

The process-context approach was developed after going through various researches concerning barriers affecting FP programs to achieve desired results. Male involvement in utilization of FP services is reported to be influenced by a complex interaction of many factors at service delivery levels. The conceptual framework in this study is based on the assumption that, there are a set of service provision barriers for male involvement in utilization of family planning.

The service provision barriers involved are poor accessibility of services, side effects after FP use, inadequate availability of FP commodities, FP clinics not known, few available FP clinics and limited choice of available male oriented FP methods. These barriers are likely to be more important for the poor and other vulnerable groups, where the costs of access, lack of information and cultural barriers impede them from benefiting from public services. Policy also influence freedom of choice of an FP method.

The study was conducted in Chato district, Geita region in western Tanzania. The reason for selecting Chato district was that, it has the highest rate of maternal deaths in Geita region. Chato District Council is a new Council with unknown prevalence of Family planning utilization among men. Also there were no information on studies on male involvement in Family Planning in the lake zone including Chato. Study

design used in this study was a cross sectional that used both quantitative and qualitative research methods. Multistage sampling technique was used to randomly select the wards, villages and hamlets of the study area. The sampling unit was men aged 19 years and above who live in a particular household in Chato District. Systematic sampling enabled the selection of 496 men, which was used as a sample size for the study. Also, four Focus Group Discussions were conducted and 12 Key Informants were interviewed. The combination of techniques that gathers both quantitative and qualitative information was important to yield the most comprehensive results.

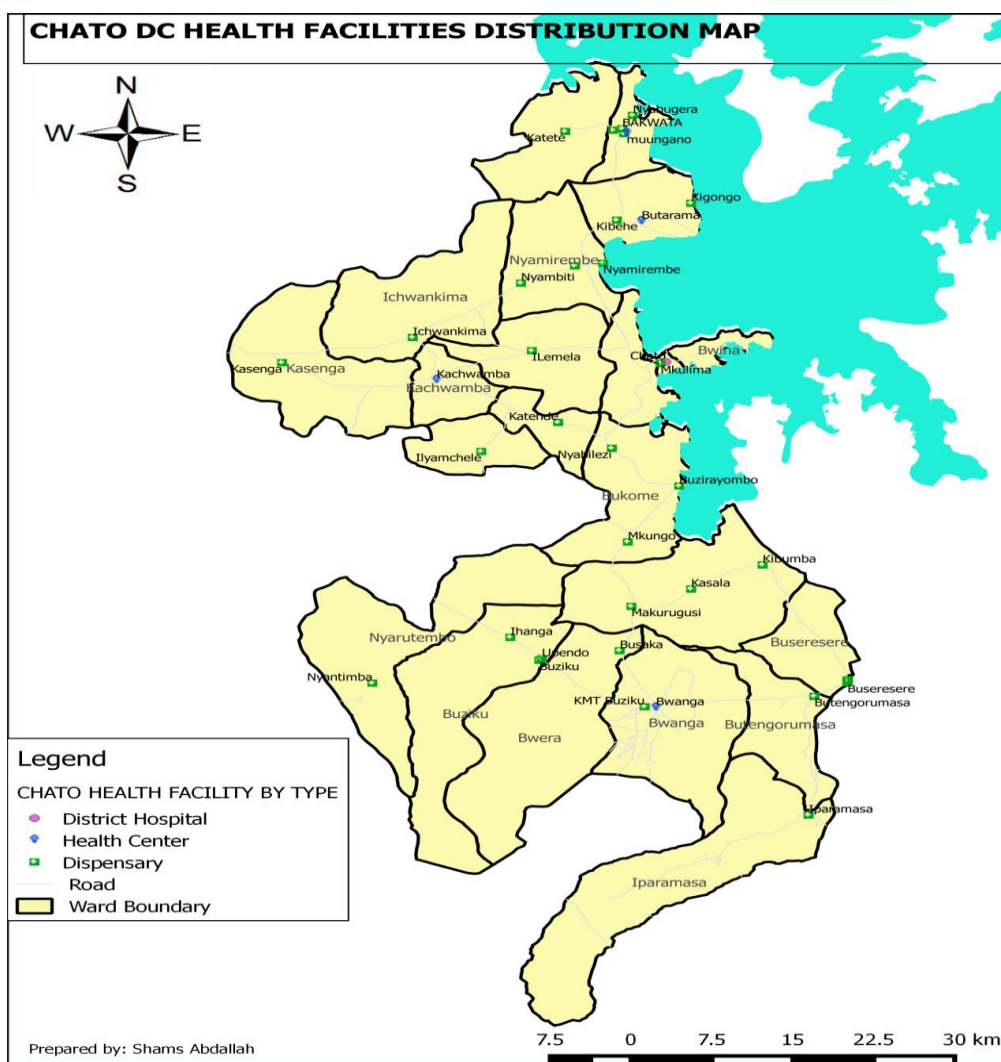


Figure 1: The Map of Chato DC showing Distribution of Family Planning Services within Health Facilities (CHATO, 2018)

Data were analyzed differently according to the objectives using SPSS statistical package. Quantitative data analysis on the current FP use among men, was reported for all methods as a percentage (%) where the numerator was the number utilizing FP and the denominator was the total number of respondents. For the barriers that were associated with utilization or non-utilization of FP. Initially, bivariable analysis was performed between FP utilization (dependent variable) and each of the potential barriers associated with FP utilization (independent variables). These included distance to FP clinics, side effects after FP use, inadequate availability of FP commodities, FP clinics not known, few available FP clinics and limited choice of available male oriented FP methods. Their odds ratios (OR) at 95% confidence intervals (CI) and p-values were obtained. The findings at this stage helped us to identify important associations.

Then multivariable analysis was performed using Binomial Non-linear Logistic regression model. Factors that were significantly associated with FP utilization at bivariable analysis ($p < 0.05$, those with p-values $< \text{or} = 0.1$) and those not significant but with previous evidence from literature review indicating possible association with FP use were considered in the logistic regression model. Their respective odds ratios (OR) associated with these potential factors were reported as a measure of strength, together with their respective 95% confidence intervals. The investigation of the factors influencing male involvement in Family Planning Utilization were two. The first one was Demographic factors which includes age, marital status, education level, occupation and Religion. The second one was service related factors which includes Distance to FP centre, Side effects after FP use, Availability of FP commodities and Availability of FP clinics.

For qualitative data, Narrative analysis with the Thematic version was employed to analyse data emanating from Focus Group Discussions (FGD) and key informants (KI). The collected information was analysed and coded by themes and sub-themes. There were two themes; individual barriers and service related barriers and 20 sub-themes. For each FGD outcome of discussion and KI interview proceedings were summarized and used to supplement obtained quantitative information and verbatim quotations were used to illustrate responses on relevant issues.

Results

Current use of FP methods by Men

Results in Table 1 shows that, the proportion of men utilizing family planning services was found to be 17.5%, which mean male involvement in FP use is very low.

Table 1: Frequency Distribution of Family Planning Utilization

		Frequency	Percent	Valid Percent
Used FP	Yes	80	16.1	17.5
	No	378	76.2	82.5
	Total	458	92.3	100.0
Missing	System	38	7.7	
Total		496	100.0	

Socio-demographic characteristics of study participants

The findings on the Socio-demographic characteristics in relation to Family planning utilization in Chato district are summarized in Table 2.

Table 2: Distribution of Socio-Demographic Characteristics of Respondents

Characteristics		Frequency	Percent	Valid Percent
Age group	19 and below	4	0.8	0.8
	20- 29	142	28.6	28.6
	30- 39	180	36.3	36.3
	40- 49	119	24	24
	50+	51	10.3	10.3
	Total	496	100	100
Marital Status	Not married	11	2.2	2.2
	Married	445	89.7	89.7
	Widowed	11	2.2	2.2
	Separated	18	3.6	3.6
	Cohabiting	11	2.2	2.2
	Total	496	100	100
Do you have any child	Yes	475	95.8	95.8
	No	21	4.2	4.2
	Total	496	100	100
Number of children	One	80	16.1	16.1
	Two	104	21	21.6
	Three	27	5.4	5.6
	Four	104	21	21.6
	More than four	167	33.7	34.6
	Total	482	97.2	100
	Missing System	14	2.8	2.8
	Total	496	100	
Number of wives	One	412	83.1	86.2
	Two	50	10.1	10.5
	Three	6	1.2	1.3
	Four	1	0.2	0.2
	Other	9	1.8	1.9

Characteristics		Frequency	Percent	Valid Percent
	Total	478	96.4	100
	Missing system	18	3.6	3.6
	Total	496	100	
Occupation	Peasant	318	64.1	64.1
	Casual	25	5	5
	Employed	21	4.2	4.2
	Petty Business	93	18.8	18.8
	More than one occupation	39	7.9	7.9
	Total	496	100	100
Level of education	No formal education	59	11.9	11.9
	Adult education	12	2.4	2.4
	Primary Education	277	55.8	55.8
	Secondary Education	121	24.4	24.4
	College	26	5.2	5.2
	Others	1	0.2	0.2
	Total	496	100	100
Religion	Christian	397	80	80
	Muslim	60	12.1	12.1
	No religion	38	7.7	7.7
	Others	1	0.2	0.2
	Total	496	100	100

The mean age of the participants was 35.98 (+/- 10.018) years, age range was 19-70, and 36.3% of the respondents were in the age bracket of 30-39 years. Most of the participants were married (89.7% n=445). Men who had children were 95.8% (n=475) and 83.3% (n=402) were reported to have two or more children. More than half of men who responded were Peasants (64.1% n=318) while very few men had no formal education (11.9% n=59). The rest were educated from primary level (55.5%), secondary level (24.4%) and college education (5.4%).¹ The findings of the present study show that most men belong to the Christian religion (80% n=397).

Health care system factors and utilization of Family planning

Analysis of the service provision related barriers yielded the following results as shown in Table 3.

Table 3: Utilization of Family Planning Methods by Service-Related Barriers					
Characteristic		Did use FP during sex		Total	Significance
Family planning methods known	Pills	1	5	6	Chi-square =0.350, P-value =0.950
		16.70%	83.30%	100.00%	
		1.30%	1.50%	1.50%	
	Injection	1	3	4	
		25.00%	75.00%	100.00%	
		1.30%	0.90%	1.00%	
	Implants	1	1	2	
		50.00%	50.00%	100.00%	
		1.30%	0.30%	0.50%	
	More than one	77	319	396	
		19.40%	80.60%	100.00%	
		96.30%	97.30%	97.30%	
Total	80	328	408		
	19.40%	80.60%	100.00%		
Knowing any FP clinic		100.00%	100.00%	100.00%	Chi-square =7.031 P-value= 0.008
	Yes	77	321	398	
		19.30%	80.70%	100.00%	
		96.30%	85.40%	87.30%	
	No	3	55	58	
		5.20%	94.80%	100.00%	
		3.80%	14.60%	12.70%	
	Total	80	376	456	
	17.50%	82.50%	100.00%		
	100.00%	100.00%	100.00%		
Distance from family planning clinic	Below 2km	62	217	279	Chi-square =6.655 P-value= 0.036
		22.20%	77.80%	100.00%	
		78.50%	64.80%	67.40%	
	2-5 km	11	93	104	
		10.60%	89.40%	100.00%	
		13.90%	27.80%	25.10%	
	6 km or more	7	25	32	
		19.40%	80.60%	100.00%	
		8.80%	7.50%	7.70%	
	Total	80	335	415	
	19.30%	80.70%	100.00%		
	100.00%	100.00%	100.00%		
Ever visited FP clinic in the past six months	Yes	54	88	142	Chi-square =61.441 P-value= 0.001
		33.00%	62.00%	100.00%	
		68.40%	23.40%	31.20%	
	No	26	288	314	
		8.30%	91.70%	100.00%	
		32.50%	76.60%	68.90%	
	Total	80	376	456	
	17.50%	82.50%	100.00%		
	100.00%	100.00%	100.00%		
	Yes	35	58	93	Chi-square =12.419
		37.60%	62.40%	100.00%	

Characteristic		Did use FP during sex		Total	Significance
Side effect after FP use		50.00%	29.30%	34.70%	P-value= 0.002
	No	35	140	175	
		20.00%	80.00%	100.00%	
		50.00%	61.10%	57.80%	
	Total	70	198	268	
Miss FP methods when you visited family planning service provider	Yes	4	10	14	Chi-square =0.362 P-value= 0.547
		28.60%	71.40%	100.00%	
		5.60%	4.00%	4.30%	
	No	67	241	308	
		21.80%	78.20%	100.00%	
		94.40%	96.00%	95.70%	
	Total	71	251	322	
	22.00%	78.00%	100.00%		
	100.00%	100.00%	100.00%		

Key: Statistically significant difference means (p<0.05)

Table 2 shows that , Family planning use is more likely associated with knowledge of men for any family planning clinic, distance from FP service delivery points, ever visited family planning clinic and side effects after FP use.

The findings were similar to those of FGD:

“Some of us men we do not know where we can get Family Planning services and we don’t know much about most of the available family planning methods, but we always get condoms from retail shops, we urge the Government to bring for us condoms ecause when we have them in our houses, it is convenient for us”. **Males, Chato FGD**

“FP services does not reach us in villages, it’s difficult to go to FP clinic frequently due to distance” **Female respondent FGD.**

The issue of side effects was also associated with scarcity of skilled human resource for health as commented by this respondent;

“I have used Family Planning for the past five years and I was told which problems to expect and those problems of FP people talk about are just rumors and tend to discourage others, and I think they usually come if you have additional sickness, as for me I have no problem with FP and even if I were to get a problem I would go back and get treatment as I was told”. **Female respondent, Bwina FGD**

“There is shortage of trained FP health care providers and the few available often overworked because they also perform a number of other activities and this has affected the quality of FP services provided and contributed to low client satisfaction”. *“Also, we have few Doctors and equipment to provide*

long term methods to our clients". DRCHCo (KI)

However, results also shows that, missing family planning methods when visited family planning services providers, and knowledge on any family planning method did not affect the utilization of family planning services.

Multivariable analysis

The variables included in the final logistic regression model were Number of Children, spouse, knowledge on FP clinic, Distance to FP clinic, side effects after FP use.

The results of the model used are shown in Table 4. The logistic regression model that best predicts use of FP from the various predictors considered has p-value <0.001.

The model used was: $\text{Logit } P(\text{predictors of FP use}) = \alpha + \beta_1 \text{ number of children} + \beta_2 \text{ influence of FP side effects} + \beta_3 \text{ Knowledge on FP clinic} + \beta_4 \text{ Distance to FP clinic}$

Table 4: Odds ratios and p-values obtained from the best model

Table 4: Logistic Regression Predicting Likelihood of Utilization of Family Planning Methods by Men				
Characteristic	P-value	Exp(B)=OR	95% C.I.for EXP(B)	
			Lower	Upper
Number of Children	.423	1.091	.882	1.350
Knowing FP clinic	.388	.422	.060	2.994
Distance FP clinic	.030	1.949	1.069	3.555
Side effects	.029	1.888	1.067	3.341

Statistically significant factor P value <0.05

The logistic regression model after adjusting for other factors, results indicated statistically significant predictor factors to FP utilization to be; distance to FP clinic and side effects after FP use. It was 2 times more likely that participants that reported closer to FP clinics will use FP [95% CI 1.069-3.555: P<0.05] than those who were far from FP clinic. It was also 2 times more likely that participants who had side effects after FP use will not use FP methods [95% CI 1.067- 3.341: P<0.05]. From Focused Group Discussions, four (4) factors influencing men’s involvement to Family planning Utilization was identified which includes; distance to Family planning clinics discouraging men to utilize FP, perceived side effects of female contraceptive methods, limited availability of Family planning Service

Delivery Points, and perceptions that Family planning Utilization was a woman's business.

Discussion

Current use of FP methods by Men

Few men (17.5%) were currently using some form of either modern or traditional FP methods. This current contraceptive prevalence of any FP method is quite low (poor) than the National prevalence target of 60% (TDHS, 2016). Low male utilization of FP has also been observed in a study done in Northwest Ethiopia where the proportion of men using or directly participating in the use of family planning services was only 8.4% (Kassa *et al.*, 2014). Similar observation have also been documented in the Democratic Republic of Congo where 17% of male were found to use family planning (Kerry *et al.*, 2015).

In Tanzania varying results on male utilization of FP services from place to place has been recorded, from studies done in Moshi rural district which was at 47% (Chuwa, 2001), and in Kisarawe district at 52,9% (Kassimu, 2008). The observed differences could be due to substantial variation of family planning usage across the country could be due social economic factors and difference in reference populations and difference in sample size (Mtae, 2015). Therefore, male involvement in family planning service should be intensified as research has demonstrated that it can greatly contribute to maternal death reduction (TDHIS, 2016). Family planning could prevent up to one in every three maternal deaths as it allows women to avoid high risk pregnancies and abortions (TDHIS, 2016).

Barriers to FP use

Distance to FP clinic

The results also showed that residing in close proximity to FP service delivery points is significantly associated with utilization of family planning than those who are far. We found in this study that men who lived beyond walking distance of health facilities with family planning clinics (more than 2 kilometers) were significantly less likely to use modern contraceptives compared to those who lived within 2 kilometers of health facilities. This is because Chato is still a rural District with majority of occupants being peasants with low economic income as seen from the demographic results. This results are similar to a study on Family planning among men done in Kisarawe which also found that, distance to Family planning services beyond 2 kilometer influenced Family planning utilization nearly 2 times than those residing within 2 kilometer due to poor social economic status which makes men leaving far from Family planning services providers unable to pay fare or due to poor infrastructure (Kassimu, 2008). This result is also supported by Kaeda

et al. (2005) in Uganda who also reported distance from family planning services providers as a significant barrier to utilization of family planning services. Distance is negatively associated with utilization of family planning services as those leaving far away from the clinics tend not to use FP methods due to poor accessibility (Agadjanian, 2015).

During interviews it was also revealed that, men are discouraged to use Family planning due to distance as they have so many family issues to take care hence family planning become less important. Men emphasized on the importance of FP services to reach them in villages where they live and suggested that, the Government should provide more FP clinic to make access to FP easy for all.

Side effects after FP use

Furthermore, results show that, side effects after utilization of Family planning influence significantly utilization of Family planning. Side effects had significant effects on use of family planning methods, meaning that for those respondents who experienced side effects were more likely to report non-utilization of family planning methods.

This observation is also reported by Ochako et al. (2015) in Kenya where fear of side effects was found to be a barrier to utilization of family planning methods, there is need for research focusing not only on behavioural outcomes but also on health outcomes (morbidity). Clients are more likely to quite utilization of Family planning to avoid problems or stay away from complications associated with the use of FP methods (Sir Lewis, 2001; Alvergne et al., 2017).

During interviews side effects were mentioned as factors influencing Family planning utilization. Side effects mentioned by respondents included; heavy bleeding after FP utilization, becoming fat, changing colour of the skin, stomach aches, and headaches while utilizing FP. It was revealed that, there is misinformation association among respondents between Family planning use and infertility, abnormalities of unborn babies specifically hydrocephalus was mentioned, cervical cancers and changing of hair colour. Although side effects was mentioned as a factor influencing FP utilization, but some of the respondents from FGD acknowledged the importance of provision of Family planning by skilled health workers to control side effects as every individual is given Family planning methods according to need and health status, not only that but also receives proper counselling on the proper use of the methods to avoid or counteract side effects.

Conclusions and Recommendations

In this study, the proportion of men or their partner utilizing family planning services was found to be very low, thus, advocates integration of men into existing family planning services for improvement of Family Planning use and sustainability.

Other factors that were more likely to be associated with FP use were distance to FP service delivery points and side effects after FP use. This means reproductive health barriers cannot be addressed in the absence of accessible health services and medical knowledge and skills across all Service Delivery Point. The recommendations are proposed to Government, Health managers, Policy makers and FP service providers and other direct program implementers for improving use of FP services. Family Planning use among men is still low. Service delivery related factors such as access to wide range of FP methods, and side effects were associated with FP use.

Effective delivery of FP services availability and access of supplies through outlets or outreach services need to be strengthened. There is need for ongoing monitoring of FP methods and their side effects to help assessment of effectiveness of FP methods. This will help to know if what people complain about FP methods side effects is true or not and what are the best alternatives.

Governmental Policies on family planning services should incorporate the responsibility and role of males in the uptake of family planning services. Policies and strategies which mention men, offer strong opportunities for male involvement at implementation level (service level).

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Perceived Psychological Contract Breach on Organizational Continuance Commitment in the Tanzanian Public Universities: The Case of Selected Universities

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Abstract: *This paper explores the effects of Perceived Psychological Contract Breach (PPCB) on Organizational Continuance Commitment (OCC) of the public universities' academic staff in Tanzania. A cross-sectional survey was carried out on a sample of 187 academic staff from five public universities. A 24 commitment scale of Allen and Meyer was used. The descriptive statistics, correlation, linear and multiple linear regression analysis techniques were applied. The study found that PPCB significantly negatively affected organizational continuance commitment. Old academic staff above 51years of age showed more organizational commitment than the rest of the groups, married couples showed more organizational continuance commitment than the other demographic groups. The paper recommends young academic staff can be motivated to stay through university HR retentions schemes like providing training for masters and PhD Studies, proving research small grants and fully engaging them in academic and consultancy works. Academic staff regardless of their marital status could be provided with incentives like childcare services, house allowances and family support programmes*

Keywords: Psychological contract breach, organizational continuance commitment and Public Universities

Introduction

Organizations are growing the need to retain quality staff. Understanding the employment relationship between employer and employees becomes more important. One framework that has been used to examine this relationship between employees and employer is the psychological contract. Psychological contract is a belief of an individual concerning the implicit terms of an agreement between the individual and an organization (Rousseau, 2000). When psychological contract is perceived positive it results into increase of individual performance, job engagement and high commitment. However when psychological contract is perceived negatively then it results into negative workplace behavior like late coming, absenteeism, poor performance, intention to quit and high turnover (Sturge, *et al.*, 2005).

Organizational commitment has been recognized as one of the critical factors that lead to organizational success (Alsiewi & Agil, 2014). Moreover, organizational commitment has increasingly attracted researchers in the current environment of scarce human resources and reduction of management tasks in attracting, increasing employee's morale, motivation, performance, that leads to organizational citizenship, and retaining employees (Chordiya, R., Sabharwal, M., & Goodman, D. 2017; Gunlu, E., Aksarayli, M. & Şahin Perçin, N. 2010). Organizational commitment is considered as one of the key job attitudes that have been studied about employee's motivation and productivity as it is a cornerstone of employee performance (Tolentino, 2015). Organizational commitment of employees to their organization is regarded as the core of human resource management practice whereby employees are motivated and fully engaged to their organization, and therefore, their performance (Gbadamosi *et al.*, 2007) and the success of organizational objectives are also increased (Khalili & Asmawi, 2012).

Organizational commitment has three dimensions; affective commitment, continuance commitment and normative commitment. This paper explores the second dimension; continuance commitment on it is affected by the perceived psychological contract breach. Continuance commitment relates to how much employees feel the need to stay at their organization. In employees that are continuance committed, the underlying reason for their commitment lies in their need to stay with the organization. Possible reasons for needing to stay with organizations vary, but the main reasons relate to a lack of work alternatives, and remuneration. A good example of continuance commitment is when employees feel the need to stay with their organization because their salary and fringe benefits won't improve if they move to another organization. Such examples can become an issue for organizations as employees that are continuance committed may become

dissatisfied (and disengaged) with their work and yet, are unwilling to leave the organization (Khalili, A., & Asmawi, A. 2012). For academic staff at university continuance commitment results into them are continuing staying at university. Their services are highly needed because they are the ones who produce all other professional needed in the all daily social, economic life.

Psychological contract breach is a perception by employees which may lead them to be less committed to the organization, its vision, mission and values. The perception of the psychological breach can accrue when individuals perceive weak congruence between themselves and their organization (Southcombe *et al.*, 2015). Levison *et al.* (1962) define a psychological contract as a series of mutual expectations of which the parties to the relationship may not themselves be dimly aware which nonetheless govern their relationship to each other. The psychological contract is an unwritten, understanding, and it is informal obligations between employer and employees regarding their mutual obligations of how each will perform their tasks with a typical trust.

The psychological contract has a root from the employment relationship. Employers and employees are always engaged in a relationship whereby each part has an obligation toward another part. The relationship between employer and employee has been changing over time due to the influence of globalization, technological advancement, socio-political and economic events (Morris & Robinson, 1997).

The psychological contract emanates from the social exchange theory, which was developed by Homans (1958). Linking the social exchange theory to employment relations, it states that, trust forms the basis of employee's investment concerning organizations. Argyris (1960), Levinson *et al.* (1962), Blau (1964) and Schein (1965), are considered as early pioneers who laid a foundation of the psychological contract as adopted the idea from the social exchange theory. It states that individual will search for fair and balanced exchange relationship (Homans, 1958). The social exchange theory strives to explain the exchange which occurs in a relationship that should be stable. If inequality occurs, it attempts to repair the inequality.

The psychological contract is perceived as the exchange relationship between employees and employer, which comprises mentioned promises and obligations in which both are exchanged. These promises are subject to breach if not fulfilled (Morrison & Rousseau, 1997; Robinson, 2001). The psychological contract breach, when perceived by employees, leads to retaliation of reducing their commitment to the organization. Conway and Brinner (2002) also explained the concept of psychological contract literature

by arguing that a psychological contract lies in the reciprocal exchange. Levinson *et al.* (1962) suggest that tangible resources and contracted relationship also involved the exchange of intangibles. Schein (1965) emphasized the matching of expectations between the employees and the organisation.

It is therefore expected that both concepts - perceived psychological contract breach and organizational commitment - form part of the reciprocal exchange and would be related. That is, when employees perceive that the psychological contract between them and the employer has been breached, they reciprocate with low commitment to the organization, its vision mission and values, leading to a negative relationship between the two concepts.

However, little empirical research has been done on the link between perceived psychological contract breach and organizational commitment (e.g. Antonaki, Trivellas, 2014; Hazrat, 2017), and none in Tanzania. Although there have been a few studies on organizational commitment in Tanzania, none of them is linked to perceived psychological contract breach. See, for example, Johnathan, Thibeli, and Darroux (2013) and Jonathan, Darroux and Maselle (2013) who linked organizational commitment to demographic factors and job satisfaction, Ngatuni (2019) who linked organizational commitment to job involvement and perceived supervisory support, and Nguni (2006) who linked organizational commitment to leadership styles. Sector wise, all these studies, focused on education sector.

Except Ngatuni (2019) who focused on multisectoral discipline. Other authors like Nguni (2006) focused on the education sector, investigating the organizational commitment of primary school teachers. Jonathan, Thibeli & Darroux, (2013) studied on Job satisfaction and commitment on secondary school teachers. However, higher education - specifically academic staff of universities have not been studied.

The ability to attract, retain and develop competent worker is vital for all organizations. However, such need is more important to universities because they depend on the knowledge and abilities of their academic staff (Alvesson, 2004). The difficulty and ambiguity of academic work (Benson & Brown, 2007), the worldwide demand for and scarcities of high quality academics, the ageing academic workforce, and high costs associated with the replacement of competent academic workers (Southcombe *et al.*, 2015), further challenge universities to recruit, develop and retain committed academic staff becomes topical issues currently to be discussed. More important is the continuing staying at university which makes academic staff richer in knowledge and expertise. Once they motivated to stay they

become more committed to stay. Continuance Organizational commitment has been shown empirically to be linked to positive organizational outcomes such as efficiency, growth and development profitability and competitiveness, service quality and job performance. In addition, continuance organizational commitment has also been shown to reduce the negative organizational outcomes such as absenteeism and turnover intentions. These outcomes accrue to any kind of organizations, universities included.

Despite all these benefits, little research has been done to understand the antecedents of organizational commitment, but more importantly in institutions of higher learning, where committed academic staffs are the engine of knowledge creation, utilization and preservation, in addition to preparing the much needed high level skilled and competent human resource by organizations. Research in organizational commitment especially the continuance dimension in Tanzania is scantier with a few examples being those of Jonathan, Thibeli and Darroux (2013), Jonathan, Darroux and Thibeli (2013), and Jonathan, Darroux and Masele (2013) all of which focused on secondary school teachers' commitment.

Another study by Nguni (2006) also focused on the education sector but specifically on primary school teachers' commitment. Universities' academic staff's commitment was therefore left out and much more the continuance dimension aspect. Although Ngatuni (2019) study was based on a multisectoral sample, academic staffs were minimally included to draw any conclusion related to academic staff commitment.

In addition, the studies in Tanzania identified several antecedents of organizational commitment. However, they covered demographic variables (Jonathan, Darroux and Thibeli (2013), job satisfaction (Jonathan, Darroux and Thibeli, 2013; Jonathan, Darroux and Masele, 2013), leadership style (Nguni, 2006) and job involvement and perceived supervisory support (Ngatuni 2019). Perceived psychological contract breach as an important antecedent to especially academic staff has not been studied in Tanzania despite its potential in explaining the reciprocal relationship outcomes between the academic staff of public universities and their employer – the Government of Tanzania. Elsewhere, studies linking organizational commitment to perceived psychological contract breach are not many either – see, for example, Antonaki and trivellas (2014) and Hazrat (2017).

In addition, of these studies, only Jonathan Darroux and Thibeli (2013) and Nguni (2006) disaggregated the organizational commitment concept, but differently – with Nguni disaggregating it into value commitment and commitment to stay. Filliana (2016) found those different dimensions of job

satisfaction (intrinsic and extrinsic) affected organizational commitment and its dimension differently, amplifying the importance of disaggregating the not only the organizational commitment construct, but also the multidimensional antecedents, e.g. job satisfaction. This is also supported by the fact that the different dimensions of organizational commitment represent different motives to commit to the organization – wanting to (affection), ought to (obligation) and needing to (side-bets) (Meyer and Allen, 1997, Yahaya and Ebrahim, 2016, Folorunso, Adewale, & Abodunde, 2014).

Therefore, the present study focused on the organizational continuance commitment of the academic staff of public universities in Tanzania with the aim of determining the effect of perceived psychological contract breach. The resulting empirical evidence adds to the list of antecedents of organizational commitment which universities' human resource managers can use to build committed academic staff. The study adds knowledge on organizational commitment is a number of ways – (i) contributed knowledge on organizational commitment of academic staff of public universities in Tanzania; (ii) added empirical evidence on perceived psychological contract breach as antecedent of organizational commitment in Tanzania in general, but also in academic staff in particular, and (iii) added empirical evidence on the effect of perceived psychological contract breach on organizational commitment overall as well as on its dimensions.

Many of the issues afforeraised are predominant in public universities. Therefore, the present study was designed to study the organizational continuance commitment of the academic staff of public universities and determine whether such commitment is affected by perceived psychological contract breach, based on the social exchange theory. The academic staff in Tanzania makes them a niche profession in Tanzania. They are few and hence they become academic elites. They work in a poor developed country with low social economic development. Only that currently the country is focusing on the agenda to become a middle industrial country by 2025. Achieving this vision requires a commitment from all sectors but most important from high learning institutions and universities in particular. Academic staffs at universities are the core elite to the function of university success and education in general of the country.

They have a huge role, for example, they are the breeders of scientists, managers, decision-makers of all fields, they develop and review study curriculum and also they solve community problems through consultancies and lastly they create and transfer knowledge through research. Our education system is still perceived to be low (Qualify this normative statement), therefore demands huge investments in human capital. Few

studies have been conducted explaining the current situation of lack of commitment among academic staff at universities; poor compensation, little attention to training opportunities, poor social and family facilities and huge workload in terms of lecturer student ratio.

It is due to the above reasons that academic staffs are not imparting adequate knowledge to the students. Therefore university products not fulfilling the job market demand (Daud, 2010). Academic staffs are perceived to be committed when their needs, for example, are aligned with university values, mission and objectives. This is known as affective commitment. Another academic staff becomes committed because leaving their current job may affect their prestige, social networks and benefits. This is known as continuance commitment, which is the focus of this study. Yet others become committed to universities because they perceive as their obligation to do so. This is known as normative commitment.

Each of the three dimensions of commitment is experienced at different degrees by all academic staff (Islam et al 2012). As pointed above academic staffs that are committed to their universities are expected not only to emphasize upon their duties being the best performers to achieve their objectives but also staying to their universities. Therefore, attracting developing and retaining committed academic staff has become an important factor to achieve university goals (Saifuddin *et al.* 2012). University management has to control the perceived deterrent of psychological contract breach so as to bring a positive perception of academic staff and therefore becomes committed in order to be able to succeed in the provision of high quality and relevant education and knowledge to the society.

Continuance commitment is the degree that a person stays with the organization because he or she believes that leaving the current employer is more costly than staying. It is the need component or the gains versus losses of working in an organization. It is known as side bets or investments. The gains and losses that occur determine an individual stay or leave an organization (Becker, 1960).

An individual may commit to the organization because of the belief or perception of a high cost of losing organizational membership. Things like monetary costs (such as pension accruals) and public costs (friendship ties with co-workers) would be the costs of losing organizational membership. However, an individual when does not see the actual costs as enough to stay with an organization, must also take into account the accessibility of substitutes (such as another organization), disrupt personal relations, and other side bets that would be incurred from leaving their organization.

People want to stay with the organization because they need to; (continuance) is determined by the perceived cost of leaving the organization. It portrays sacrifices to stay at the current employer because it is costly to leave and limit opportunities to other employment. Zhao *et al.* (2007) gave the continuance theory of commitment by asserting that a particular negative or positive work event on psychological contract breach on commitment could lead to particular effective reactions.

These reactions are likely to be behavioural or attitudinal. Therefore, psychological contract breach has been shown to lead a lower continuance commitment. Not only that, the psychological contract breach has led to lower continuance commitment by linking the individual's assessment of investment and risks in deciding to leave an organization. Employees seem to evaluate to what extent their contributions reciprocate their contributions continually. Psychological contract breach perception shows that there is a discrepancy between the expected and received outcomes along with employer's failure to fulfil promises thus leading to a decrease in employee's contributions and the emergence of negative attitude and behaviours in an attempt to re-establish the balance to their exchange relationship with the organization.

Methodology

The study was descriptive quantitative, where a cross-sectional survey was used to provide information of the university academic staff. The approach permitted easy comparison and understand and explanation of the study phenomenon (Saunders *et al.*, 2012). The chosen public universities included the University of Dar es Salaam (UDSM), Open University of Tanzania (OUT) and Muhimbili University of Health and Allied Sciences (MUHAS), Sokoine University of Agriculture (SUA) and Mzumbe University (MU). The population of the study of the academic staff in the five (5) public universities is summarized in table 1.

Table 1: Academic staff in the selected public universities

University	Professors		Senior lecturers		Lecturers		Asst. lecturers		Tutorial assistants		Total
	M	F	M	F	M	F	M	F	M	F	
UDSM	23	6	78	57	108	71	92	64	21	17	537
OUT	13	4	13	5	32	24	93	84	21	13	302
SUA	32	23	48	26	63	44	72	53	28	19	408
MU	11	2	20	6	83	49	68	41	15	9	304
MUHAS	17	4	42	31	75	41	42	23	20	9	304
Total	96	39	201	125	361	229	367	265	105	67	1855

Source: TCU2019

Measurement model

$$Y_1 = \beta_0 + \beta_1 PCB + \varepsilon$$

Where: Y_1 = Dependent Variables (CC)

β_0 = Y - Intercept

β_1 = Slope of the Line defined as ratio rise or change in X

PCB = Independent Variable

ε = Error term

The study applied Green (1991) formula with a more significant number than 50 as validated by Comrey and Lee (1992) rule of thumb formula, $n = 50 + 8m$ where m is the number of independent variables. It provides a guide for sample size as 50, poor, 100 still weak and 200 reasonably well. Therefore 200 respondents were targeted as a sample size in order to cater for non-responses.

$N = 50 + (8 \times 12) = 146$ as a minimum sample. In order to make sure that the sample is correctly obtained the numbers were 200 as suggested by Pallant (2010)

Table 2: Sample from the selected public universities

University	Population	Computation	Sample
UDSM		$\frac{537 \times 200}{1855}$	58
	537		
OUT		$\frac{302 \times 200}{1855}$	33
	302		
SUA		$\frac{408 \times 200}{1855}$	44
	408		
MU		$\frac{304 \times 200}{1855}$	32
	301		
MUHAS		$\frac{304 \times 200}{1855}$	33
	304		
TOTAL	1855		200

Findings

Descriptive statistics Continuance commitment

Descriptive statistics (mean, standard deviation, minimum, and maximum scores) were computed for the continuance commitment scale (Table 3). The results show that the academic staff felt the need to stay with their university more as a matter of necessity and desire ($M = 4.67$, $S.D. = 1.75$), followed by the feeling of the need to stay for having too few options to consider leaving the university ($M = 4.23$, $S.D. = 1.98$). This may be due to the fear of losing the benefits they enjoyed in the present university, which may not be offered by other universities, something which would amount to

massive personal sacrifice if they leave. Scarcity of alternatives on the labor market as a consequence of leaving emerged the lowest reason for staying with the university (M = 3.44, S.D. = 1.83).

Table 3: Continuance Commitment variables

	Statement	Min.	Max.	Mean	Std.Dev.
1	CC1 I am not afraid of what might happen if I quit my job without having another one lined up	1	7	4.21	2.023
2	CC2 It would be very hard for me to leave my university right now, even if I wanted to	1	7	3.58	1.999
3	CC3 Too much in my life would be disrupted if I decided I wanted to leave my university now	1	7	3.81	2.036
5	CC4 It wouldn't be too costly for me to leave my university now	1	7	4.00	1.813
6	CC5 Right now, staying with my university is a matter of necessity as much as desired	1	7	4.67	1.752
7	CC6 I feel that I have too few options to consider leaving this university	1	7	4.23	1.972
8	CC7 One of the few serious consequences of leaving this university would be the scarcity of available alternatives	1	7	3.44	1.826

N = 187

Descriptive Statistics for Perceived Psychological Contract Breach

Descriptive statistics (mean, standard deviation, minimum, and maximum scores) were computed for the perceived psychological contract breach scale (Table 4). The three items 1 – 3 (negatively worded) were reverse - coded. The results show that the academic staff's feeling of perceived psychological contract breach was above average as the mean scores ranged from 2.97 to 3.34 (S.D. from 1.12 to 1.8).

Table: 4: Perceived Psychological Contract Breach Variables

	Statement	Min.	Max.	Mean	Std.Dev.
1	PC1 Almost all the promises made by the university during recruitment have been kept so far (R)	1	5	3.20	1.135
2	PC2 I feel that my university has come through in fulfilling the promises made to me when I was hired (R)	1	5	3.06	1.181
3	PC3 So far, my university has done an excellent job of fulfilling its promises to me (R)	1	5	3.34	1.121
4	PC4 I have not received everything promised to me in exchange for my contribution	1	5	3.13	1.161
5	PC5 My university has broken many of its promises to me even though I've upheld my side of the deal	1	5	2.97	1.268

N= 187

Regression Results of Continuance commitment on PCB

Regression Results of CC on PCB

A regression models was run: CC on PCB. Results (Table 5) shows that, the total variance in CC explained by PCB was 2.1%, $F(1,185) = 3.93$, $p = .49$). PCB was negatively, and statistically significantly, related to CC ($b = -.16$, $p = .049$).

Table 5: Regression Results of CC on PCB

Variables	CC
Constant	4.54***
PCB	-.16*
Fstat	3.93*
R ²	.021

* $p < 0.05$ (two - tailed), ** $p < 0.01$ (two - tailed) *** $p < 0.001$ (two - tailed)

CC = continuance commitment PCB = Psychological Contract breach

Whether psychological contract breach, affect Continuance commitment of University academic staff commitment

People want to stay with the organization because they need to (continuance). Their continuity is determined by the perceived cost of leaving the organization (Side bets and other). They sacrifice, limited opportunities to other employment. Zhao *et al.* (2007) on continuance theory of commitment asserted that a particularly negative or positive work event on psychological contract breach of commitment could lead to particular active reactions. These reactions are likely to be behavioural or attitudinal. Therefore, psychological contract breach has been shown to lead a lower continuance commitment. Not only that the psychological contract breach has led to lower continuance commitment by linking the individual's assessment of investment and risks in deciding to leave an organization.

This study found that (Table 6) psychological contract breach is negatively, significantly and have a weak relationship to continuance commitment. Academic staff joined universities as a tutorial assistant or higher rank after the high performance in academics. First, they joined because of affection. However, after staying longer at universities, they stay because of side bets, that sometimes it is difficult to be accepted in other organizations especially professors whereby they only feel that is where they belong, and it becomes costly if they leave. Supporting these findings Meyer and Allen (1997) found that employees display a strong continuance commitment decide to work and stay with the organization because they fear of losing their amount of time, money and efforts invested and perceive that they have limited options of getting new employment. However, on the other side employees who still think that they have doors of opportunities still opened at other organizations tend to have weaker continuance commitment.

This is contrary to Agarwal (2014) who found that people stay in organization because of collectivism especially in South East Asian countries like Indonesia, Korea and China. Employees have little choice of moving around different organizations. People stay in organizations because of side bets fear that if they leave, they lose everything, including family ownership. This leaves with no choice except deciding to stay. According to Koskei *et al.* (2018) among the three dimensions of commitment, continuance commitment is the one which directly link academic staff staying with their experience and number of years spent at university. It supports the empirical finding of this study, whereby it was found as well that continuance commitment was strongly rated. Academic staffs are ready to sacrifice their current job at universities even if other jobs arise somewhere, although not ready to leave at the moment because there are no such opportunities or very few opportunities arise. Bozkurt and Yurt (2013) also found that academic staff generally showed a high commitment level to their organization mainly in continuance because academic staff think perceive the longer they stay at university the higher the chances of

growing to academic ladder to become professors which is perceived as a noble and unique academic qualification one can acquire.

The contribution of this study on the effects of psychological contract breach on continuance commitment is that tenure has been identified as very crucial in making academic staff stay at a university. Academic staff decided to stay because after staying too long, they become used to it and see they must stay because leaving is more costly.

Variables Descriptive Statistics, Reliability and Correlation Analysis

Descriptive statistics were computed for continuance commitment (CC) using the cut-off points suggested in Albdour & Altaraweh (2014), adjusted to 7-point rating levels. Results (Table 7) indicate that the academic staff were, overall, moderately committed to their universities continuance commitment (M = 4.03, SD = .96). The correlations between individual dimension and overall organizational commitment were between .54 and .72 indicating strong and significant relationship (Cohen, 1988).

Using the original cut offs of Albdour and Altarawneh (2014) academic staff had a moderate feeling of psychological contract breach (M = 4.03, S.D = .61). Psychological contract breach was significantly negatively correlated with the Continuance commitment ($r = -.14, p = .05$).

Scale test for reliability analysis was carried out to determine the internal consistency of the measurements scales. Cronbach's alphas (Table 7) in the diagonal show good internal consistency for continuance Psychological contract scales (George and Mallery, 2014).

Table 7: Sample Correlation Matrix and Reliability Statistics

Variable	Mean	Std. Dev.	CC	PCB
CC	4.03	.96	.78	
PCB	3.14	.86	-.14*	.79

N = 187

*p < 0.05 (two - tailed), **p < 0.01 (two - tailed) ***p < 0.001 (two - tailed)

NOTES: CC = Continuance Commitment and PCB = Psychological Contract Breach

Outliers, Normality, Linearity and Homoscedasticity Regression Assumptions Testing Results for CC

The histogram (figure 1) shows a bell-curved of the distribution of residuals, Mean is close to, and SD is close to 1, evidencing of a normal distribution of residuals. Also, figure 3 shows that residuals are distributed along the diagonal line. Therefore, there is no much deviation from normality. The scatter plot (figure 2) case residual dots are not spread rectangularly around zero (0) to infer homoscedasticity (equality of variance). Therefore, there is a suspicion of heteroscedasticity (unequal variance in the data). Subsequently, confirmation using statistical tests was done. Using Ahmad Daryanto's plugin on SPSS the Breusch Pagan (BP) and Koenker test were run to confirm this, and the results (figure3) shows there is heteroscedasticity (BP, Chi-square = 6.71, $p = .01$; Koenker Chi-square = 6.69, $p = .01$). Thus, the null hypothesis that heteroskedasticity is not present (homoscedasticity) is therefore rejected (Hayes & Cai, 2007). Confirming its presence. However, the results on effects of PCB on CC are not changed (p . value only reduced from .049 to, 048 after controlling for the presence of heteroscedasticity) R^2 also increased from 2.1 % to 3.6 % . Therefore, the conclusion based on linear regression analysis remains the same.

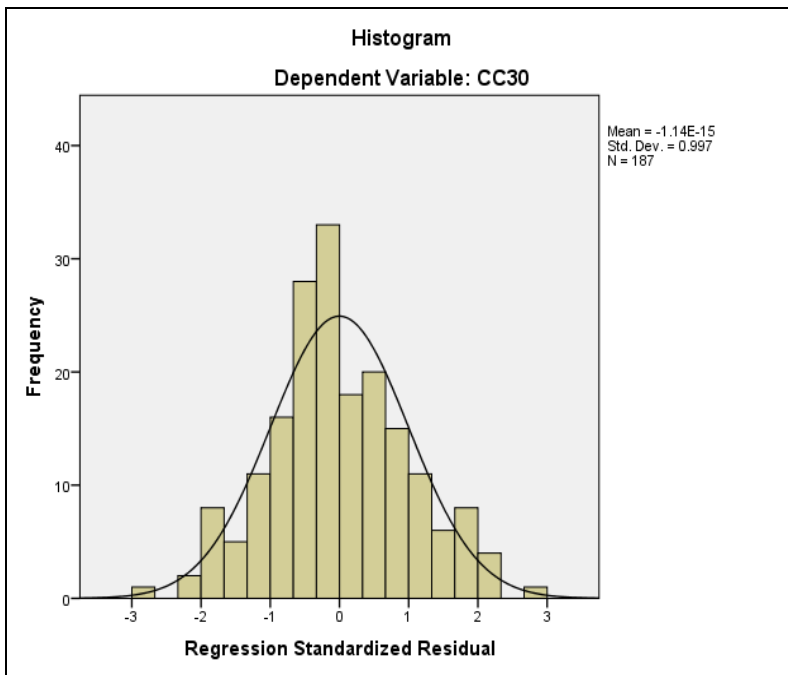


Figure 1: Histogram for CC
Source: Data analysis (2018)

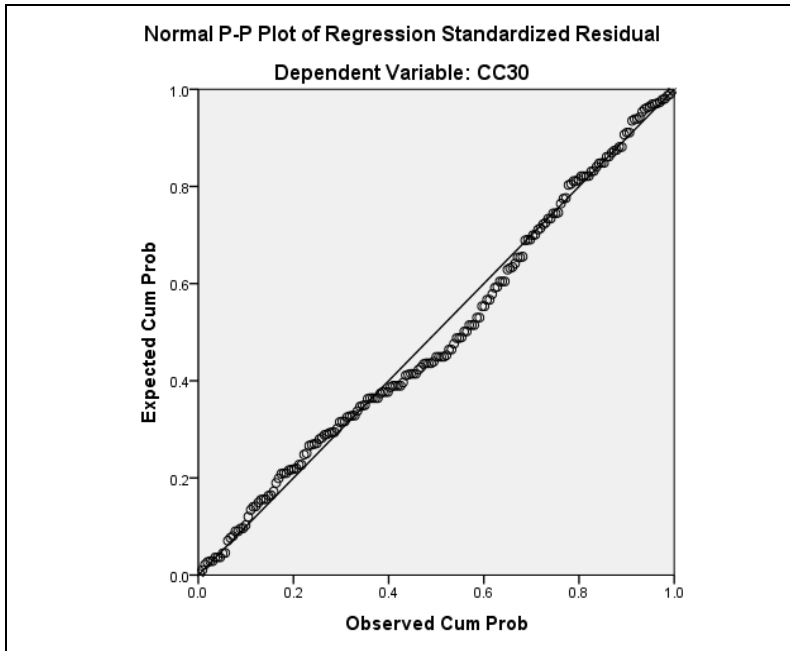


Figure 2: Normal P-Plot for Regression Standardized Residual of CC

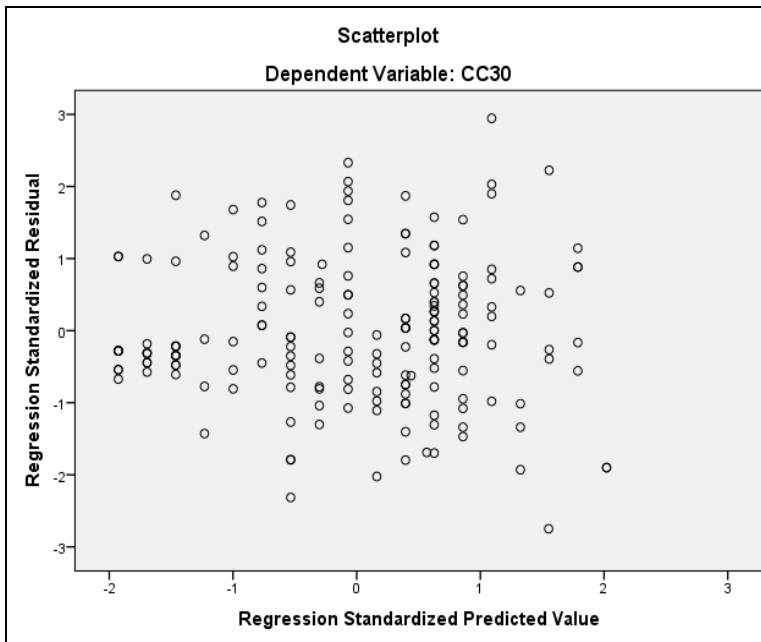


Figure 3: Scatter Plot for the Standardized Residual for CC

Conclusion

Minimal studies on the relationship of psychological contract breach and organizational commitment and its three dimensions have been done in

Tanzania, particular at universities' academic staff. Continuance commitment among academic staff hardly had received research attention, therefore makes this study so valuable to understand as to why once an individual is found as academic staff they have a tendency of staying longer at academic profession. The universities influences on their expectations determine academic staff commitment. The decision to stay due to counting cost of leaving or fear of losing what has been gained over the years or just obligation to the university are depending on the degree of perceived psychological contract breach. Academic staff with families showed higher continuance commitment than the rest of the groups. Those who stayed longer (above 51 years) also showed higher continuance commitment than the rest of the groups. This is because probably they perceive that they have been at university too long and accrued too many hence leaving all behind will be more costly. This is contrary to young academic staff or those who have just joined the university their commitment is not continuance driven rather other dimensions of commitment like affection. If they perceive a high psychological contract, they decrease their commitment and eventually affect performance and the last thing is to quit. The negatively relationship between the perceived contract breach on organizational continuance commitment as the study found prove the theoretical argument which hint that people may decide to stay because of side bets. However, if the degree of perceived psychological contract is minimal, then their affection and continuity and obligation will remain and therefore increase commitment to the universities.

The current study focused on academic staff. Future studies may look on the effects of psychological contract breach on organizational commitment to all university staff including administrative and technical staff instead of concentrating on academic staff only. The study applied a global scale of psychological contract breach in order to determine at what extent psychological contract breach affects the relationship to organizational commitment. The future studies may extend applying specific psychological contract breach whereby all elements of PCB like a breach in pay, working condition, relationship with supervisors are measured as independent variables against commitment. Only five public universities were surveyed; still, further studies may decide to broaden both public and private universities and other great learning institutions and determine the effects of PCB on OC as a comparative study in order to determine whether public universities have more psychological contract breach effects on academic staff commitment or private universities. Perceptions of people are not static. Hence it poses difficulty in conclusion. People have feelings, attitudes, emotions that changed depending on different circumstances. The result of measured perception today may not necessarily be the same next

study; this problem was dealt with, making sure participants are given the freedom and ample time to respond to have reliable data.

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Testing Mediation Effects of Information Communication Technology Usage on Technological, Organizational and Environmental Factors and World Heritage Sites Performance

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Abstract: This study seeks to explain the mediation effect of Information Communication Technology (ICT) usage on the relationship between the technological (i.e., perceived relative advantage, perceived compatibility and perceived complexity), organizational (i.e., ICT support infrastructure and ICT support skills) and environmental (i.e., perceived competitive pressure and perceived pressure from customers) factors and world heritage sites performance. The study proposes the mediation model of ICT usage and world heritage sites in Tanzania. Methodology: The proposed order of the model is that ICT usage depends on technological, organizational and environmental factors and ICT usage may further predict world heritage sites performance. These measures capture our research questions. Respondents included decision makers off all the seven UNESCO sites of Tanzania. Data were collected from August to February 2018; 353 filled questionnaires were gathered and 238 were usable for further analysis. Final questionnaires were analyzed using SPSS and Structural Equation Modeling (SEM). Main Results: The findings support that world heritage sites' decision makers may consider perceived relative advantage, perceived complexity, ICT support infrastructure, ICT support skills, perceived competitive pressure and perceived pressure from customer to be the main determinants of ICT usage toward influencing performance of the world heritage sites. Originality of the research: The paper strengthens theoretical arguments by indicating the mediation effect of ICT usage on the relationship between the determining Technological, Organizational and Environmental (TOE) factors and world heritage sites. Thus, this study adds to the literature as it has confirmed both TOE and Technological Acceptance Model (TAM) theories.

Keywords: Environmental, ICT usage, organizational, performance, technological, world heritage sites.

Introduction

The evolution of ICT has allowed World Heritage Organization to promote and distribute information about their attractions, on the other side; it has enlarged dramatically the possibility for interested people to reach rich and updated info about any World Heritage Sites (WHSs) [1].

In order to run online communication effectively and efficiently and win the currently tourism market share, WHS managers are supposed to invest on time, resources and effort to deliver accurate and clear message, update the contents on a regular basis, interact with online customers, provide feedback on online customers reviews as well as to offer a wide range of services, dialogues with users [37]. In 2016, 50% of the developed countries utilized ICT opportunities to choose holidays on the basis of available information at the internet [9]. In 2008 it was found that 82% of US online consumers have checked online reviews, blogs and other online feedback for their travel related purchasing decision [1].

Through the recognition of ICT in the range of economic and social activities in Tanzania, ICT enhanced productivity and efficiency led to increase in job, "ICT contribution to the Gross Domestic Product (GDP) from 1.5% in 2004 to 2.4% in 2013 and sector growth has increased from 17.4% of GDP in 2004 to 22.8% by 2013" [33]. Despite the contribution of ICT into tourism industry particularly the WHSs in promoting the identity of the country and provide livelihood to those employed in the industry, in Tanzania, the sector contains a number of challenges including low promotion and maintenance, poor publicity of the country image and many sites are still hidden with poor online content [35]. "Most people are not aware of the cultural heritage sites and cultural materials present in our country making these sites receive only minimal attention from the public which in turn leaves the heritage sites in poor condition and eventual deterioration" [35, p.53]. Inadequate institutional arrangements, inadequate communications and poor infrastructure, shortage of ICTs facilities and skills as well as limited data management capacity has resulted Tanzania WHSs being slow in ICT usage in the process of transforming their service delivery system [35]. Their ICT systems are out of date with poor access and less content, therefore, they are not able to promote, distribute information and potentially not able to compete on a level playing field in the global tourism industry [36], [46]. This paper taps into a literature

designed to explain how ICT usage mediates the relationship between determining TOE factors and World Heritage Sites' performance. The research model is grounded in technology acceptance model [15] and TOE framework [52] and is empirically tested by survey data gathered in 2018 within the Tanzania UNESCO World Heritage Sites.

Theoretical Background

Technological, Organizational, Environmental Theory

This study considers the mediation effect of ICT usage on the relationship between the determining TOE factors and World heritage sites performance. Specifically, the assumption grounding TOE theory is that, it describes both the existing technologies in use and new technologies relevant to the firm. Technology factors play a critical role in the way business operates by changing the organizational structures as well as the degree of competition. The assumption grounding technological factors for this article includes features such as perceived relative advantage (PR), perceived compatibility (PCT) and perceived complexity (PCL). Organizational factors include features within the organization that encourage or discourage ICT usage [3]. These features are: firm size, centralization, complexity of its managerial structure, executive support, human resource effectiveness and competencies, the amount of slack resources available internally [3], [23].

The assumption grounding organizational factors for this article includes features such as ICT support infrastructure (INF) and ICT support skills (SS). Environmental factors in the TOE theory include features in which the firms conduct business [32]. These features are influenced by the industry itself, its competitors, customers and the firm's ability to access resources supplied by others, and the firm's interactions with the government.

Reference [17] indicated that the environmental factors include different elements that facilitate a firm to use ICT and is thus driven by the competitors and customer pressure. The assumption grounding technological factors for this article includes features such as Perceived Competitive Pressure (PCP) and perceived pressure from customers (PPC).

Relatively few studies have looked into the mediation effect of ICT usage on the relationship between the determining TOE factors and world heritage sites performance in developing countries particularly in Tanzania [35]. Thus, this study presents a model of the mediation effect of ICT usage on the relationship between determining factors (TOE) and world heritage sites.

Proposed Model of the Study

The proposed model includes several theoretical constructs from the TOE factors influencing ICT usage and their sets of indicators chosen as testable. The independent variables are made up with the seven constructs under TOE factors. ICT usage mediates the relationship between the TOE factors and the dependent variable (i.e. World heritage sites performance). Earlier studies have, in other contexts than Africa, identified the organizational, environmental, firm's related context, decision maker's context as determinants of ICT adoption with actual usage levels and the value creation process induced by e-business application [17]. These insights build the basis to conceptualize and propose a general theoretical framework for Tanzania. In addition, the framework includes ICT usage variable to mediate the relationship between determining factors (TOE) and world heritage site performance. The inclusion of ICT usage as a mediating variable is one of the key contributions in the literature on explanation of the determining factors influencing ICT usage toward world heritage site performance. The proposed order of the model is that ICT usage depends on TOE factors and that ICT usage may further influence world heritage sites performance.

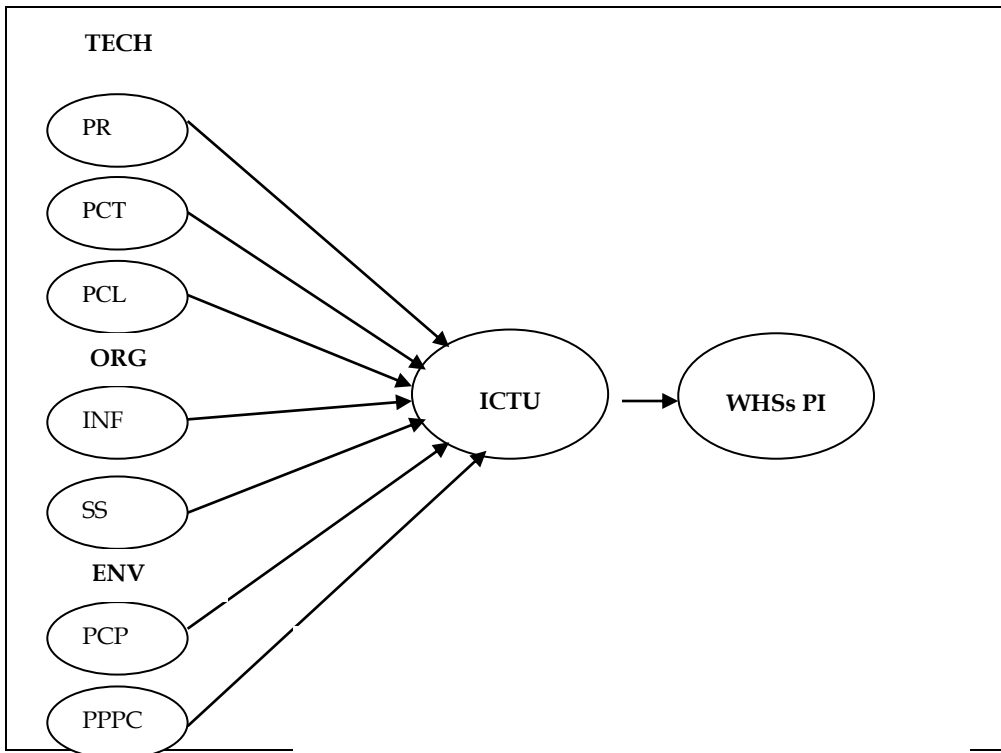


Fig. 1 Conceptual Framework of ICT usage mediation effects on TOE factors and WHSs

Theoretical Background of Constructs and Hypotheses

PR

Reference [17] provided the working definition of PR as the degree to which usage of new ICT system is considered to be better than the old system in terms of improving individual performance. When employees or business owner perceive a relative advantage to new ICT system then the chance of using ICT will increase [23]. "The greater the benefits received by SMEs, the higher the possibility of ICTs adoption" [17, p.58]. Several studies have proven the positive relationship between PR and ICT usage in tourism context SMEs (e.g. [54, [41]). PR has proven statistically to be positive significantly to determine ICT usage thus will lead to organization performance [11]. The concepts are linked with the gaps being addressed by the hypotheses in the current study. The authors are not aware of any study that has investigated the mediation effect of ICT usage on the relationship between relationship PR and WHSs performance. Thus, the hypotheses below are proposed:

- (i) H1a: ICT usage mediates the positive effect of PR and WHSs performance (PI)

PCT

Reference [49] defines PCT as a degree to which new ICT system is compatible with the existing system. When the users perceive the new technology they wish to use will match their beliefs, culture and values and there is no resistance to change from the staff, they will use that technology. In case the potential users have a negative perception of their previous technology, then the new technology ideas will be evaluated from the previous ICT performance [39]. A study [2] proved the positive relationship between PCT and ICT usage in tourism context SMEs, while no significant effect was found between PCT and ICT usage in world heritage sites.

References [27], [30], [34] found that a statistically strong and meaningful relationship existed between PCT and ICT usage, while no mediation effect was found of ICT usage on the relationship between PCT and world heritage sites' performance. In this study, it is argued ICT usage fully mediates the relationship between PCT and world heritage sites performance. Therefore, the following hypothesis is proposed for this study:

- (ii) H1b: ICT usage mediates the positive effect of PCT and WHSs performance (PI)

PCL

PCL refers to ICT usage being perceived as relatively difficult to understand

and use by user of new ICT system, the less complex of ICT usage, the higher chance of being used [44]. Several researchers met PCL in dealing with the study of ICT usage. The usage of ICT is highly related to the PCL of the users. Depending with the previous ICT usage experience, if the experience was negative to an organization, then the complexity will consequently be negatively associated with the new ICT and the future [9]. Researchers have agreed that PCL is a determinant of ICT usage [5], [6], [48]. Organizations are less reluctant to accept using ICT if it expects that a high level of new expertise must be recruited to cater for the new system.

The present study suggested that ICT usage mediates the relationship between PCL and world heritage site performance. On the one hand, this concept is consistent with previous literature by [22] who reported that ICT usage positively mediates the relationship between perceived ease of use and business performance. On the other hand, [14] found that the most cited benefit by Macedonians SMEs as result of ICT use and adoption is improved quality of service. Therefore, the following hypothesis is proposed:

- (iii) H1c: ICT usage mediates the positive effect of PCL and WHSs performance (PI)

INF

ICT infrastructure is defined to be one of the main components within the organization that enable a foundation of shared information technology capabilities upon which business depends [3]. Reference [23] strongly perceives ICT infrastructure as a technological framework that provides direction to organization in fulfilling business and management needs.

Reference [28] found that improved INF ensures effective use of ICT and increases the percentage of staff who have access to broadband and internet in the work place and this will support research innovation and service provision. Reference [19] found that lack of INF, poor, old, unmaintained hardware, lack of software, lack of internet connectivity were positively related to hindering ICT usage. Today, empirical studies on the relationship between INF and ICT usage are very limited in world heritage sites. The concepts are linked with the gaps being addressed by the hypotheses in the current study. The authors are not aware of any study that has investigated the mediation effect of ICT usage on the relationship between INF and WHSs performance. Thus, the hypothesis below is proposed:

- (iv) H2a: ICT usage mediates the positive effect of INF and WHSs performance (PI)

SS

SS refers to elements such as computer and internet skills in terms of

operating, processing, changing, accessing and using software and hardware of computer and internet devices [32]. The implication is that, knowledge in operating the above elements is an essential and key as it influences ICT usage toward performance of WHS. Poor ICT skills within the organization are regarded as barrier to ICT usage thus cause difficulties in realizing the potential brought by ICT investment within the organizations [42]. In this study the two theoretical components, SS and ICT usage are related. References [50] and [54] reported that SS has a positive significant relationship with ICT usage. Reference [47] found that SS enables ICT usage which contributes positively significant to firm performance. The concepts are linked with the gaps being addressed by the hypotheses in the current study. The authors are not aware of any study that has investigated the mediation effect of ICT usage on the relationship between SS and WHSs performance. Thus, the hypothesis below is proposed:

- (v) H2b: ICT usage mediates the positive effect of SS and WHSs performance (PI)
PCP

Reference [30] defined PCP as a driving force toward ICT usage in many organizations for them to remain competitive. When the level of competition is high, organizations may use ICT not on account of its relative advantage, but on account of the competitors who are already using it [31]. Companies invest in ICT driven by the need to keep up with competition. ICT usage helps the company to increase the value of their competitiveness by allowing them to improve the process value. Researchers have agreed that pressure from competitors increases ICT usage rate of an organizations [18, 34, 8]. Organizations who do not feel any pressure from competitor will also will fail to adapt to the fast pace and complexity of the business which will eventually lose from the growing globalization. This concept is consistent with previous literature by [20] who reported that increase level of competition has indeed induces innovation and ICT usage in OECD countries resulting into increase of productivity. The concepts are linked with the gaps being addressed by the hypotheses in the current study. The authors are not aware of any study that has investigated the mediation effect of ICT usage on the relationship between PCP and WHSs performance. Thus, the hypothesis below is proposed:

- (vi) H3a: ICT usage mediates the positive effect of PCP and WHSs performance (PI)

2.3.7. PPC

PPC refers to the pressure given from the external factors including customers. Customer pressure represents a major force on WHSs. Indeed, it is widely acknowledged that the internet and other related technologies create 'powerful customers' who have a wealth of accurate, updated and unbiased [36]. Therefore, WHSs will have higher levels of performance if their customers exercise substantial pressure on them to be highly involved in ICT. Lacking pressure from customers, business owners and managers may perceive ICT usage as a waste of resources [16].

[8] Found that, PPC had a positive effect on ICT usage. [51] Indicated that small businesses are vulnerable to customer pressure thus they adopt and use ICT from their customer demand. Customer pressure is the significant determining ICT usage. [12; 45] found that external pressure from customer is a determinant effect of ICT usage for SMEs in Europe. [10] Proposed that in various developing countries, pressure from customers had a strong influence on ICT adoption and usage and it cost much less when compared to using telephone costs to contact their customer and it also keep their customer happy.

The concepts are linked with the gaps being addressed by the hypotheses in the current study. The authors are not aware of any study that has investigated the mediation effect of ICT usage on the relationship between pressure from customers and WHSs performance. Thus, the hypothesis below is proposed:

(vii) *H3b: ICT usage mediates the positive effect of PPC and WHSs performance (PI)*

Methodology

The data were collected in August to February, 2018. Data were gathered from world heritage site decision makers including; directors, senior managers, general park warden, managers, head of units, head of departments and zone warden officers as they are sought to be part of the decision making in regard to increasing performance of WHS through ICT usage. Drop-and-collect technique was applied by leaving a questionnaire with a respondent and going back later to pick it up after having filled it up. A total of 353 questionnaires were distributed in this study, in which 238 usable responses were retained for further analysis.

Table 1: Characteristics of Respondents

Characteristics	Distribution of answers
Gender	Male:68%; Female: 30%
Education	Primary school:4%; High school:8.2%; Certificate/Diploma: 13.2%; 4Bachelor degree: 47.7%; Advance Diploma:24.7%; Master degree:3.7%
Job position	Chief Park: 10.3%; Park Warden: 18.9%; Head of Department:18.1%; Head of Unit:21.4%; Others:28.4%
Job Experience	Less than a year; 12.3%; Between 1-5 Years: 8.2%; Between 6-10 years: 40.3%; Between 11-15 years: 32.1%; Between 16-20 years: 4.1%; More than 20 years: 0.8%
Number of Employees	of 40-60 employee's: 57.6%; 60-80 employee's:31.3%; 80-100 employee's: 5.8%; More than 100 employee's: 2.5%

3.1. Measurement

The measurement scales used to collect data were adopted from the existing ICT measurement scales. The items were measured using five-point Likert-type scales. The technological factors were adopted from previous studies and adapted to fit WHSs from [21; 38; 43]. It consisted PR (8 items), PCT (8 items), and PCL (7 items). [17; 44] provided the basis for designing the items for measuring organizational factors which is measured by variables such as its ICT infrastructure (8 items) and ICT skills (6 items). We also adopted and items from [10] for measuring environmental characteristics. The items were measured by PCP (7 items) and PPC variables (8 items).

Structural Model Results

In testing the structural model for the overall sample, the analysis started by evaluating goodness-of-fit indices. The model met the recommended guidelines for goodness of fit (CMIN/DF =1.555, RMSEA= 0.0048, GFI= 0.790, CFI= 0.946, TLI= 0.942). In testing for mediation the initial process involves the removal of the mediator (i.e. ICT Usage), we need to show that the direct effect of determining factors (T.O.E) on WHSs performance indicators (PI) is significant. The model produced the following indices CMIN/DF= 1.375, GFI = 0.825, TLI = 0.965, CFI = 0.968 and RMSEA=0.040, thus, model fit confirms the suitability of the structural model to explain the mediation effect of ICT Usage on the determining factors (T.O.E) and WHSs performance (PI).

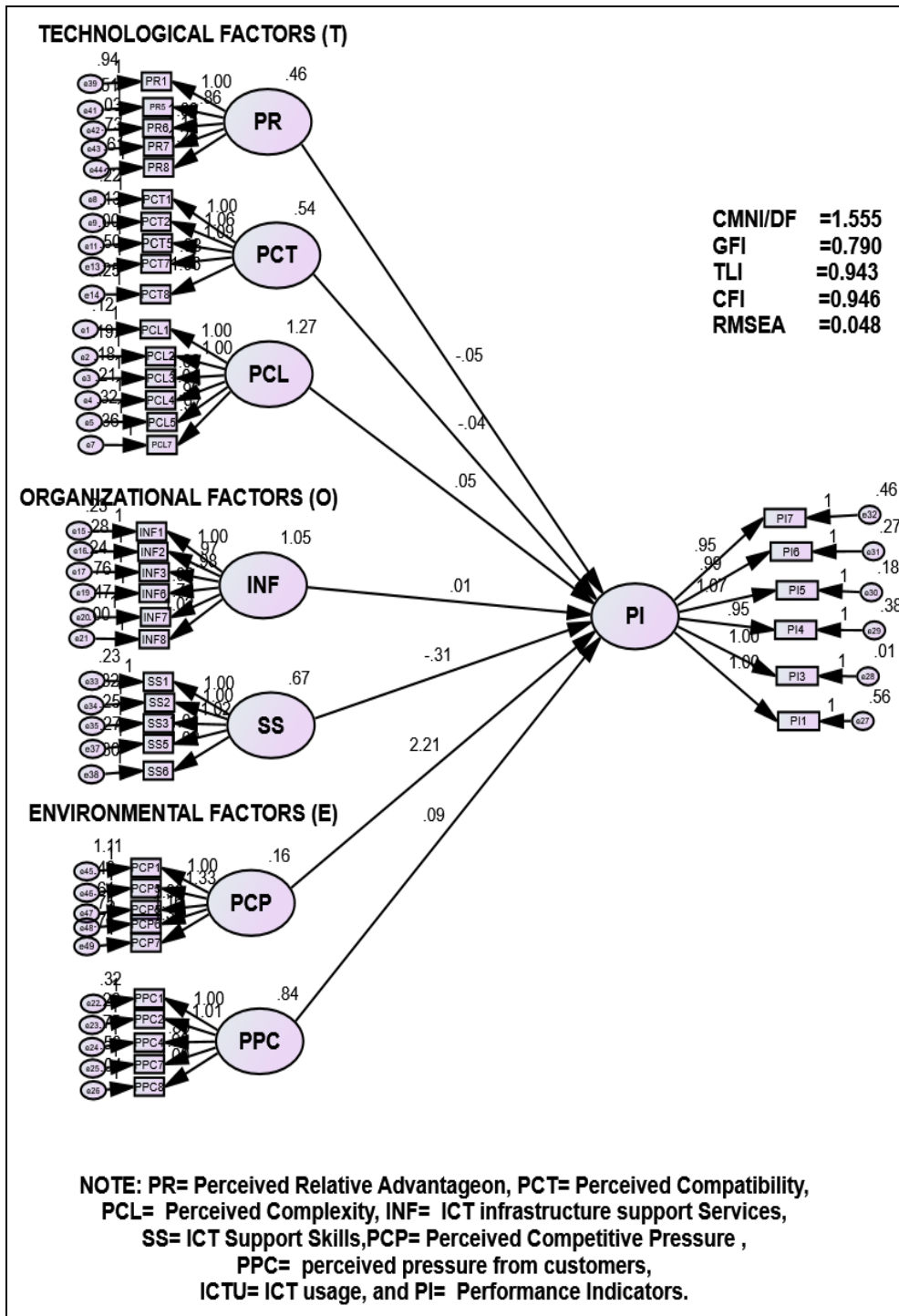


Fig. 2: The structural Model for Direct effect without a mediator (ICTU)

The magnitude of a direct effect indicated that the path coefficient from PI to PR (.11), PI to PCT (.11), PI to PCL (-.04), PI to INF (.10), PI to SS (.05), PI to PPC (.35) and PI to PCP (.17). Only two factor had a value below 0.10 (PI

to PCL=-.04 and PI to SS=.05) suggesting a small direct effect while other variables had small to medium effect. This help to compare the test of the indirect effect of the structural model when ICT Usage is entered as a mediator as presented in below.

4.1. The Mediation Test for both Direct and Indirect Effects with Mediator

The structural model is executed to test for both direct and indirect effect with a mediation variable of ICTU. This process is intended to test for direct and indirect effects. This is followed by confirmation of model fit to ascertain the legitimacy of estimates shown above. The model fit results for the structural model with the mediator are; CMIN/DF= 1.519, GFI = 0.796, TLI = 0.945, CFI = 0.950 and RMSEA=0.047. This confirms that the structural model is appropriate to explain the mediation effect of ICT Usage on the relationship between determining factors (T.O.E) and WHSs performance (PI).

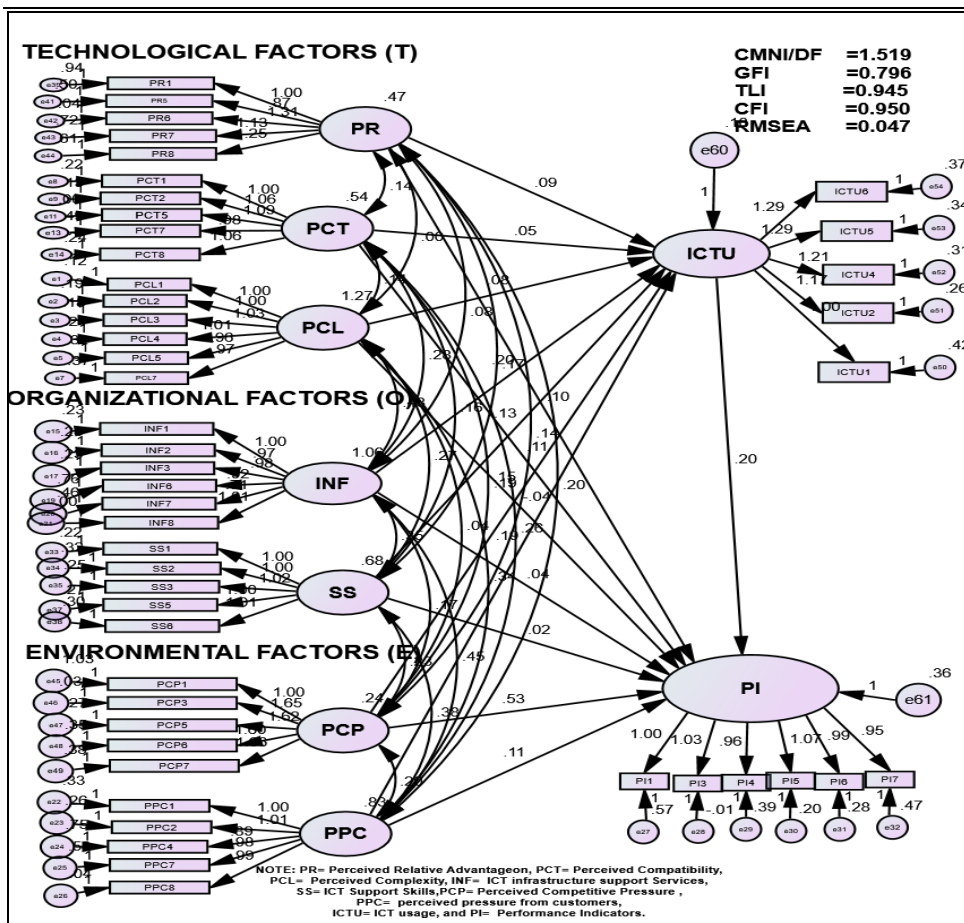


Fig. 3: The Standardized Regression weights for every path in the model

Results from the direct effect before mediation where PR has a direct relationship with PI supported the study by having a positive significant relationship between PR and WHSs Performance (PI) ($\gamma = 0.120$, $p = 0.041$). However, when the mediator enter the model, the strength of the direct effect dropped while the relationship remained significant ($\gamma = 0.096$, $p = 0.050$). Thus partial mediation occurs and H1a is supported. The study also examined the ICT usage mediate the relationship between PCT and WHSs performance (PI).

Results from the direct effect before mediation where PCT has a direct relationship with PI supported the study. The relationship between PCT and PI were observed to be positive and significant ($\gamma = 0.130$, $p = 0.025$) when the mediation enter the model, strength of the direct effect dropped and the relationship was not significant ($\gamma = 0.056$, $p = 0.250$) thus, ICT usage would not mediate the relationship between PCT and performance of WHSs (PI). Thus no mediation occurs and H1b is not supported.

The study went further to investigate the ICT usage mediation on the relationship between perceive complexity and WHSs performance. Results from the direct effect before mediation where PCL has a direct relationship with PI was weak, negative and insignificant ($\gamma = -0.040$, $p = 0.477$). However, when the mediation enter the model, the strength of the direct effect increased and the relationship observed to be positive and significant ($\gamma = 0.146$, $p = 0.003$) (refer to table 4.46). Thus fully mediation occurs and therefore, H1c is supported.

The relationship between INF and PI were observed to be positive and insignificant ($\gamma = 0.112$, $p = 0.063$), when the mediation enter the model, strength of the direct effect increased and the relationship was very significant ($\gamma = 0.329$, $p = 0.000$) thus, ICT usage would partially mediate the relationship between INF and performance of WHSs (PI), thus H2a is supported. Likewise, ICT usage partially mediated the relationship between SS and WHSs performance.

The results from the direct effect before mediation where SS has a direct relationship with PI was positive insignificant ($\gamma = 0.061$, $p = 0.326$). However, when the mediation enter the model, the strength of the direct effect increased and the relationship observed to be positive and significant ($\gamma = 0.169$, $p = 0.005$), thus H2b is supported. On the other hand, the results from the direct effect before mediation where PCP has a direct relationship with PI supported the study. The relationship between PCP and PI were observed to be positive and significant ($\gamma = 0.382$, $p = 0.000$) when the mediation enter the model, strength of the direct effect dropped and the relationship remained to be significant ($\gamma = 0.148$, $p = 0.170$) thus, ICT usage

would partially mediate the relationship between PCP and WHSs performance (PI). Thus H3a is supported. Likewise, the result of a direct effect before mediation where PPC has a direct relationship with PI were weak, positive and significant ($\gamma = 0.181$, $p = 0.004$). However, when the mediation enter the model, the strength of the direct effect increased and the relationship observed to be positive and very significant ($\gamma = 0.285$, $p = 0.000$), thus partial mediation occurs and H3b is supported.

Discussion

This study was inspired by the need to learn more about the mediation effect of ICT usage on the relationship between the determining (T.O.E) factors and WHSs performance. The findings provide evidence that ICT usage fully mediates the relationship between PCL and WHSs performance, partially mediate the relationship between PR, INF, SS, PCP and PPC. It also shows ICT usage did not mediate the relationship between perceive compatibility and WHSs performance.

To start with, it was found that ICT usage partially mediates the relationship between perceive relative advantage and WHSs performance (H1a). The findings are not surprising given the nature of the study where WHSs decision makers need to perceive a high level of relative advantage for them to start using ICT thus they can increase organization efficient and effectiveness [11].

The finding was consistent with what [29] describe, ICT usage is being determined by PR by SMEs in Libya which in turn increase firm performance and gain competitive advantage. It was also found that ICT usage did not mediate the relationship between perceive compatibility and WHSs performance. The findings make sense on the account that WHSs decision makers has low perception level on compatibility associated with ICT usage because they have not been exposed to such technologies, in most case, WHSs decision makers would prefer to be the followers rather than leader in ICT usage within their sites. A study by [13] found that, the main barriers to ICT usage in Malaysia were lack of compatibility between existing systems and the new technologies. [2] PCT is less a determining factor to ICT usage especially when technology is a change from a traditional business model to e-commerce.

Furthermore, it was found that, ICT usage fully mediates the relationship between PCL and WHSs performance. This notion correlate with [22] ICT usage positively mediates the relationship between perceived ease of use and business performance. Similarly, [14] found that the most cited benefit by Macedonians SMEs as result of ICT use and adoption is improved quality of service.

ICT usage partially mediates the relationship between INF and WHSs performance. [28] Support the findings that INF ensure effective use of ICT and increase level of service provision. There are contradictory results in the empirical literature in this field, [4] found that, supported ICT infrastructure and ICT usage alone does not guarantee a good student performance. [40] Poor INF may form a barrier to ICT usage hence poor performance of the organization. This study was conducted in different field and different geographical areas where socio-economic, technological is quite different from that of Tanzania UNESCO WHSs. In order for tourism organization to use ICT, organization should implement INF.

ICT usage partially mediates the relationship between SS and WHSs performance. Any kind of performance in any industry needs people who are skills and expertise [24] articulated that in order to have this, there must be some costs incurred by WHSs decision makers facilitate the progress of ICT usage. WHSs decision makers need to provide ICT training for them to gain full potential brought by ICT usage.

Finally, ICT usage partially mediated the relationship between PCP and WHSs performance. This finding are supported by [18] who found that pressure from competitors has influenced business to gain performance after ICT usage firm are now cable of promoting services to customers, and staying competitive and be able to manage changes. [7] Emphasize that, there is a positive relationship between PCP results into ICT usage toward corporate performance. [53] Competition is the key in selecting firms that are able to seize the benefits of ICT and in making them flourish and grow.

The above results indicate that the PPC and ICT usage toward improving WHSs performance should not be overlooked. This is supported by [10] whom they proposed that, in various developing countries, pressure from customers had a strong influence on ICT adoption and usage and it cost much less when compared to using telephone costs to contact their customer and it also keep their customer happy because they don't use cash to buy their products. Regarding the full and partial mediation effect of ICT usage on the relationship between PR, PCL, INF,SS,PCP,PPC and WHSs performance, decision makers will need to focus more on ICT usage whilst to improve performance of their sites. This implies that WHSs decision makers have to positive perceive these variables to influence their ICT usage level which will eventually contribute to increase of sale, facilitate business and customer relationship. This is because, Tanzanian WHSs are not able to sustainably promote, distribute information and potentially not able to compete on a level playing field without a proper online media platform [36; 46]. Most people are not aware of the cultural heritage sites and cultural materials present in our country making these sites receive only minimal

attention from the public which in turn leaves the heritage sites in poor condition and eventual deterioration” [35.p53]. This call for WHSs decision makers to positively adopt ICT usage in their daily operation so as increase sales, and facilitate business and customer relationship. ICT reduces operating costs, raise value to customers, achieve strategic competitive customers, and achieve strategic competitive advantage [25; 26]. This notion, tells that, for the success of any tourism business, particularly WHSs ICT usage is inevitable to enhance sites performance.

Conclusion

ICT usage in tourism industry provided destination management organization with the possibility of reaching tourist and prospects in a direct way such as online promotion and marketing, distribution of tourism products, managing and coordination of all stakeholders involved in the creation and delivery of tourism product [1]. As this study confirms ICT usage full and partially mediates the relationship between PR, PCL, INF, SS, PCP, PPC and WHSs performance. Previous studies in ICT have focused on ICT determinant factors none of the study have looked on the mediation effect of ICT usage on the relationship between the determinant (T.O.E) factors and WHSs performance, thus to be one of the theoretical contribution of the study. Future studies in Tanzania and elsewhere can adopt this model also in other tourism organizations context. Moreover and specifically, this model can be applied to other UNESCO world heritage sites in other African destinations that are similar to Tanzania and compare the findings to the recent study in order to build more robust models.

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Pastoral Maasai's Perceptions of the Value of Education and Completion Rates in Primary School in Longido District, Tanzania

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Abstract: *This article aims to reveal the progress of attaining compulsory primary school education among the pastoral Maasai community. It explored the perceptions of the pastoral Maasai of the value and completion rate of primary education in Longido District. The study adopted a social justice theory, which stress equal opportunities to cater for the needs of the disadvantaged members of the society. A qualitative approach and case study design was used to allow an in-depth understanding of pastoral Maasai perceptions and completion rate. A total of 35 participants were involved in the study. Face to face semi-structured interview, Focus Group Discussions (FGDs) and documentary review were used in the data collection process. The findings revealed that the pastoral Maasai had several negative perceptions of the value of primary education. This made them to attribute higher priority to herding livestock than education. The Pastoral Maasai associated the impacts of formal education with cultural alienation and loss of labour power. The study results showed that in some of the sampled schools, the completion rates were low as more than fifty percent of the pupils who were enrolled in Grade One in the year 2008 dropped out from the school before completing the primary school education cycle due to the value attached to education. The study calls for pastoralists' role models who have benefited from education to organize sensitization campaigns to each individuals, family and pastoral society on the value of primary school education.*

Key words: Compulsory education, Completion rate, Value, Perception, Pastoral Maasai, Primary school

Introduction

There has been a rapid progress in making education compulsory for every individual child globally (United Nations Educational, Scientific and Cultural Organization, 2015). Educational attainment is a crucial factor in determining human development, social-political and economic positions of individuals and countries throughout the world (Mosha, 2006). Through the 2030 agenda for Sustainable Development on ensuring attainment of free and equitable education, Tanzania has accorded a high priority to the education sector in bringing social and economic transformation in the lives of individuals and society at large (United Nations (n.d); United Republic of Tanzania {URT}, 1999). Such transformation has been improving social

equality, infant and maternal mortality as benefits of primary education which is one of the targets of the Tanzania Development Vision (URT, 1999). In achieving social equality, for example, education enables children from disadvantaged families to get ahead with their lives in enjoying or competing with those from the well-off families (Omari, 1997).

Further, primary education is a basic human right of every child and has been affirmed in global human rights treaties such as UNESCO Convention Against Discrimination in Education [CADE] (1960), the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) (1981), World Conference on Education for All 1990 in Thailand, The Dakar Framework and Millennium Development Goals (MDGs) of 2000 (UNESCO, 2007). All conferences aimed at eliminating all forms of disparities in education participation. Also EFA awakened the members of the global states to see education as one of their essential human rights which has a base in social justice theory by Rawls (2009). The Social justice theory stresses on equal opportunities to meet the needs of the disadvantaged members of the society (Rawls, 2009). According to social justice theory education serves as a gateway for every member of the society to obtain the desirable benefits of education such as employment, adequate income and political power.

In spite of the initiatives made to ensure that every individual is educated, progress towards primary school completion is disappointing. For example, among 137 million children who entered First Grade in 2011 in the world, 34 million left before reaching the last grade of primary school (United Nations, 2013). The dropout rate constitutes a 25 percent thus posing a challenge in achieving EFA goals (ibid). Recent evidence suggests that in the Sub Saharan Africa, the survival to last grade in 2016 was 55.11 (World Bank Group, 2019). In Tanzania the national statistics shows that, only 56.3 percent of boys and 54.8 percent of girls of 13 years old for example, reached Grade VII in 2014 (URT, 2017). Therefore, in Sub Saharan Africa, participation in education seems to be confronted by inequalities which impact negatively on the marginalized communities, including the pastoralists.

According to Dyer (2010), the pastoral society is one of several groups that are confronted with discrimination in education. In his study, she therefore demanded active commitments so as to be able to remove the educational disparities. There have been several thoughts on the causes of educational disparities of pastoralists in formal education. Such thoughts are related to practical challenge such as distance from brick and wall classroom and mobility in search of food for their animals. The enrollment rates of pastoralist in formal education, for example, were consistently lower than

the national average (Dyer, 2010). Other thoughts were related to traditional values and attitudes of formal education and pastoral culture, which demanded knowledge, and values to be passed on to the younger generation through informal education. Such thoughts have made Pastoral communities to be under-represented in the provision of services particularly primary school and education at higher levels. The village surveys report conducted in Monduli District revealed that nearly half of the adults (aged 15 years old and over) had no formal primary education (Sandet, Adolf, Mollel, et al., 2010). Specifically, the surveyed villages of Kimoukuwa, Elerai and Eworendeke had 55.9 percent, 61.1 percent and 75.8 percent respectively of adults who had no formal education (Sandet, Adolf, Mollel, et al., 2010). It is therefore obvious that, the presence of large numbers of adults without primary education poses a barrier to achieve benefits of compulsory education for children from such community.

Studies such as Bishop (2007) have shown that in Tanzania, pastoral Maasai had experienced inequalities in education with very little attention to address the situation compared to other countries such as Kenya and Mongolia where pastoralists are found. The existence of inequalities in education participation among pastoral Maasai might pose a challenge to sustainable development of Tanzania to the extent that, it could remain marginalized. As pointed out in a study with pastoralist community in Monduli district in Tanzania (Sandet, Adolf, Mollel, et al., 2010). Having a community where nearly half of the adults have no formal education is a threat to the nation. This has therefore aroused the researcher's interest at exploring the pastoral Maasai perceptions of the value of primary education; and assessed the completion rate of primary school education for the cohort enrolled in 2008-2014 among the pastoral Maasai in Longido District in Tanzania.

Methodology

The qualitative research approach informed the study through a single case study design. The qualitative approach offered an effective way of capturing the actual voices of the pastoral Maasai value of the perceptions on education (Creswell, 2012). A case study was used to allow an in-depth account of the pastoral Maasai perceptions and completion rates on education within the natural settings (Zainal, 2007). Further, the nature of the study demanded more on the use of intensive interviews and focus group discussion, which were some of the unique features of a case study (Yin, 2011). In particular, a single case study was conducted in which the unit of analysis was primary education in Longido District.

The study was conducted in Longido District of Arusha region in Northern Tanzania, which was purposively selected for historical reason. It was

historically referred to as the Maasai land (Semali, 1994). Therefore, the researcher found the informants in their natural setting. Also more than 90 percent of its people were pastoralists with low response to schooling (Regional Administration and Local Government, 2013). Therefore, it was expected that sufficient and more reliable/valid data regarding the nature of the study would be obtained from this area compared to other areas where pastoralists were found.

The target population of the study consisted parents and pupils found in study area. The researcher employed purposive sampling technique in Longido District to obtain the required participants for the field data and in the selection of schools. Out of the 38 government schools, only 31 schools had pupils who had completed Grade Seven in 2014. Those schools, which had no pupil and had reached Grade Seven were new with classes in lower grades and were not included in the sampling process. Among the 31 primary schools, five schools were purposively selected based on the criterion of having the highest number of pupils' dropout rates in Longido District. Further, grade seven pupils' class was purposively involved in the study to provide information on the challenges and views held in participating in primary education. Grade Seven pupils were selected because they were mature enough and had longer experience at primary school such that they could provide the needed information compared to those in lower grades. Six pupils from pastoral families were selected through the use of stratified random sampling. In each school where pastoral Maasai children were more than six pupils, pieces of paper written "Yes" and "No" were put in a box and shuffled. Both boys and girls were divided into two groups, whereby in the boys group three papers written 'Yes' were provided, likewise to the girls. Each pupil from a pastoral family picked a piece of paper. Those who picked the papers labelled "Yes" were automatically selected to participate in the study. A total of five parents and 30 pupils were involved in answering the questions for the study. Pupils from the sampled five primary schools were organized into small group discussions.

The data collection methods used included semi-structured interviews, focus group discussions and documentary review. Semi-structured interviews allowed the researcher to be flexible in making the clarification of ambiguous issues, which were raised by the participants during the data collection process, and to compare the unique experiences of different respondents regarding the perceptions of the Maasai pastoralists on the value of primary education. Five parents who were also Maasai village leaders with their children in the respective sampled schools were purposively selected to represent other parents in the society. They were purposively selected to give their views on the value attached to primary

education. In Focus Group Discussions (FGDs), small groups of six pupils are brought together by a 'moderator' (the researcher) to explore attitudes and perceptions, feelings and ideas about a specific topic (Denscombe, 2007). Five Focus Group Discussions with six pupils in each group were conducted in the school compounds.

Various documents, which provided data on completion rates, were reviewed. Appropriate written official primary documents were used as one of the sources of data collection methods. Such documents had pupils' records about personal profiles on enrolment, attendance, dropout and completion rates. They were provided by the school heads who clarified some issues which were not clear to the researcher especially where some relevant information were missing or not seen. The attendance register for the pupils enrolled in Grade One in 2008 until their completion in 2014, monthly school reports for the respective cohort for seven years, the transfer book, disciplinary book and completion rates charts were reviewed to obtain relevant information on completion rates. At national levels, several documents were reviewed such as The Education and Training Policy (1995 and 2014), The Tanzania Development Vision 2025 (1999) and Brief Statistics for Pre-Primary, Primary, Secondary, Adult and Non-formal Education (2017).

Thematic data analysis techniques were used in analysing data for this study. Thematic analysis refers to qualitative analytic method for 'identifying, analysing and reporting patterns (themes) within 'data' (Braun & Clarke, 2006). The data analysis procedures started by making familiarization (data reduction) which involved transcribing and summarizing data from all sources on a daily basis. The process of data analysis conformed to the proposition advanced by Huberman and Miles (1994) that the analysis of qualitative research data involved data reduction, data display and conclusion drawing/verification

The study observed several ethical issues including respecting the research sites, informed consent and confidentiality. First, permission was sought from the University of Dar es salaam before the process of data collection. All other administrative procedures for research clearance were followed. Second, a consent form provided to participants guaranteed some of their rights such as willingness to be involved, withdrawal from the study and the right to know the purpose of the study. For pupils who participated in the study, their parents signed on their behalf. In the consent form, the study objectives were made very clear to the participants to guide their decision on whether to participate or not. Third, participants were assured of their anonymity such that, their names were not requested during the data collection process and the sampled schools were assigned

pseudonyms. Every study participant in each interview and focus group discussion was assigned a numerical number whereas schools were assigned alphabet letters. The process of using anonymous names was completed at the early process of data analysis i.e during data cleaning.

Results

Maasai Pastoralists' perception of the value of primary school education

The first research objective sought to explore the pastoralists' perceptions of the value of primary education. The findings are presented in four points:

First, education is less prioritised than livestock: The study revealed that pastoralists attached little value to formal primary education compared to livestock keeping. For them, livestock meant everything to their lives. The ownership of livestock seems to influence and shape pastoralists' lives. Every Maasai pastoralist, for example, fight to add up the size of herds and not the number of individuals with primary education in the society which was revealed by parent three who said:

“Our community values livestock compared to education. A parent wishes each group of livestock to get someone to look after, one for the cows, another for goats, etc. Then the remaining children can be sent to school (Interview with parent 3, June 2015)”

This assertion was further echoed in FGD 3 who argued that “Any Maasai pastoralist with a vision would prefer cows/goats to education. Cows are everything in the Maasai community. Even if you want to send your child to school, you must have cows (July, 2015)”. The FGD views imply that the value attached to ownership of livestock cannot be compared with anything such as education. It seemed that the setup of Maasai life rests on livestock ownership. Parent 5 for example, had this to say:

“When you give a chance to Maasai to select or opt for either education or cows, the Maasai will prefer cows. Awareness in education is very low. When you discuss with them, they will say education, but in the real sense, that is not the case (Interview with parent 5, July, 2015)”

This is to say individuals with a large number of livestock were more valued and respected than those who had the education or had sent their children to school. Additionally, in accessing the scarce resources such as water, livestock are given the highest priority. This was pointed out by one parent who stated that ...In this place, there is a shortage of water. But in few places where water is available, a higher priority is assigned to animals even before taking water for family use (September, 2015). A similar view was echoed by parent 4 as follows:

“If in the Maasai *boma*, when it happens that there is a sick cow and a sick child, normally the Maasai will first look for medicine to treat the cow and then consider the child (Interview parent 4, July 2015).”

The quotations above confirm the seriousness of Maasai pastoralists on livestock rearing. Other life aspects or items are side-lined after livestock, including the value for the child and education.

Moreover, the findings from the FGDs revealed that if children were asked to choose between continuing with education and cows, they would prefer to choose cows. The majority of pupils who participated in FGDs preferred to possess or acquire cows rather than education. The pupils insisted that, they would reap more tangible benefits from cows than from education. This entails that within their community; individuals with large numbers of livestock are more valued and respected than those who attended schools.

Possession of livestock is given a high priority among the Maasai pastoralists. The situation of not enrolling some children in order to take care of the livestock attest to the fact that less priority is attached to education. Likewise, parents' behaviour of dedicating more attention to livestock than pupils' school needs shows they value livestock than education. This is contrary to the perception of many people in Tanzania and elsewhere in the world where primary education is considered a means to attain personal fulfilment of their dreams and life (Tamasha & Twaweza, 2010). Contrary to pastoralists, many other communities viewed primary education as a key tool for economic growth and the greatest single factor that affects the nation's economy as well as its people's development (Mosha, 2006; Omari, 1997).

Additionally, the individual is respected among pastoralists based on the size of the herds. Many pupils wished to own livestock rather than possess primary school education certificate. Livestock ownership, rather than primary education, is believed to raise their status thus, many pupils were not proud of being at school. This was also experienced in Uganda among the Karamajong pastoralists in Kotido District where animal wealth has been more highly prioritized than education (Namukwaya & Kibirige, 2014). These results differ from the situation in Ethiopia where pupils of pastoralists' parents perceived education as a way toward success and really want to go to school in order to learn (Kidane, 2012). Children do not value education in the community around and they feel that possessing primary education does not add any value or status to their life and community around. This situation is a threat in achieving the Tanzania Development Vision 2025, which focuses on having a nation whose people

are ingrained with the development mind-set and competitive spirit (Planning Commission, 1999). This implies that some of the pastoralists such as those studied in Longido have not yet recognized the value and rationale of primary education. There is a long way to go in a pastoral community where primary education is not a priority in achieving a well-educated and a learned Tanzanian society.

Second, school as a source of cultural alienation: The study pointed out that parents had negative attitudes towards primary school education. They believed that sending their children to school would expose them to behaviours, which would distort the Maasai pastoralist culture. One parent, for example, had this to say:

Parents who sent their children to school are regarded as losers. The society is facing a challenge for the new things, which pupils learn at school, which affect the Maasai daily life (Interview with parent 4, June 2015).

This was echoed by one student in FGDs who narrated the story shared by her father as follows:

My daughter....I feel so heart-broken and rejected when a child after completing her education, refuses the man prepared for her. We feel so ashamed when the man prepared for her who could also be the source of income and a gift to her is rejected. Some of such girls move here and there which is shameful to the society. Even after getting a formal education, girls should accept the husbands prepared for them (FGD 5, July 2015).

The foregoing quotation denotes that, pastoral parents expressed fear in sending their children to school because education will negatively compromise their culture. This discourages parents who need to send a girl child to school. This, however, is a very unfortunate situation indeed. Since education transforms individuals, pastoralists described the transformation process as an introduction of new cultural norms to pastoralists' pupils which may eventually lead to erosion of their culture. The education attained made pastoral children uncomfortable with their traditional norms and customs such as accepting husbands prepared for them and the practice of female genital mutilation. This was also observed among the Somali pastoralists who viewed both school and schooling as divorcing their children from the pastoralists' way of life (Bishop, 2007).

In Kenya, Sifuna (2005) indicated that many pastoralists regarded school with great suspicion as it caused many children to abandon their culture. Similarly, Abdi (2010) reported that among the Wajir pastoralists in Kenya, some parents expressed fear that, their culture and religion might be eroded

if they took their children to school. In Uganda, among the Kalangala pastoralists, parents viewed education to have no positive returns and the society had a saying that “the one who keeps livestock generates income while educated young men do not even respect their own culture” (UNESCO, 2005). This implies that the children who attended formal schooling learnt new aspects of culture due to interaction with other groups, which threatened the preservation of pastoral culture.

Culture is dynamic, thus in the aspect of learning, some of the pastoralist children in schools acquired new aspects of culture. UNESCO (2005) report on pastoralists of East Africa showed that the early school goers appeared to have been disconnected from pastoralists after losing the indigenous knowledge, skills, attitude and values. This implies that, the new aspects of culture acquired in the process of schooling affected the traditional values of the Maasai culture. This is contrary to the aim of education in promoting the acquisition and appreciation of culture, customs and traditions of the people of Tanzania, particularly pastoralists (URT, 1995; Katola, 2014). Evidently, this influenced pastoralists in deciding on leaving some of the children at home doing grazing activities. Probably, it aimed at reducing the extent of damage or cultural alienation and supporting grazing among the pastoral community. This implies that education should give a chance to equalize cultural aspects of different societies in primary education. Thus, a proper way of ensuring promotion and acquisition of pastoralists' culture in education is vital in improving the pastoral participation rates of primary education.

Third, sending children to school reduces labour force: The findings revealed that pastoralists believed that sending their children to school to acquire primary education would reduce their labour force. Majority of the participant indicated that pastoralists keep several species of livestock such as cattle, goats, sheep and camels, which require intensive and constant availability of labour force. It was revealed that the cultural division of labour adversely affects school age children as they had to perform grazing activities. Parents who participated in the study argued that taking all of their children to schools would interfere with the pastoral activities in the society. One of the parents remarked:

A family, which has cows, goats and sheep, may decide to send four out of six children to school. Two children will be assigned the role of handling pastoral activities. In this scenario, it may be difficult to choose between going to school and performing pastoral activities. (Interview with parent 2, July 2015)

The foregoing quotation helps to explain that not all pastoralists' children are sent to school. The labour force is reserved for cattle grazing activities.

The findings indicated that there is a probability that pastoralists with several species of livestock denied their children's right to education so that they could engage in cattle grazing activities. In one of the visited schools, it was found that the decision about who should be sent to school or not was based on the child's ability. Pastoralists grouped their children into bright/obedient pupils and slow learners. Those who seemed to be bright and obedient are assigned grazing activities. One parent was quoted saying:

Children perform pastoral activities. When it comes to sending children to school, bright children are hidden at home to look after livestock while slow learners are allowed to attend primary education. (Interview with parent 5, July 2015).

The quote signifies that the value of primary education influences parents' decision to determine the number of children to attend schooling and those to be left at home for grazing activities.

During FGDs, each pupil who participated was asked to mention the number of relatives or nearby *bomas* who had never been to school and engaged in grazing activities. It was revealed that several school aged children from areas around the sampled schools engaged in pastoral activities instead of going to school. The participants indicated that such pupils were doing grazing activities for their families. This was rooted in the pastoralists' perception that pastoral life gave them prosperity rather than primary education.

Education consumed pastoralists' labour power. Pastoralists complained that sending their children to school wasted their labour power to be used in grazing activities. One of the indirect costs incurred by parents in sending a child to obtain education was the opportunity cost of labour power at home (McEwan, 1999; Avenstrup, Liang & Nellemann (2004). This implies that pastoralists were not aware of the indirect costs incurred in sending a child to school. However, pastoralists in Uganda have a saying that children go to school empty and come out empty, something which made the adults refuse to enrol their children so as to retain the labour power (UNESCO, 2005). Similar findings among the Kotido pastoralists in Uganda revealed that the parents' decision to withdraw their children from school was attributed to the value they attached to education and the failure to see the immediate impacts of primary education (Namukwaya & Kibirige, 2014). This implies that the perceived value of education influenced pastoralists to associate education with loss of labour power. The immediate expected returns were also low in a way that pastoralists were not attracted to send their children to school. These findings are contrary to findings

reported in other areas in which parents willingly volunteered time as watchmen, cooks for school meals and were happy with the foregone contribution of the child at home. The study revealed that wise children were reserved for grazing activities while unwise ones were sent to school, which affected their right to participate in education as reflected in social justice theory. When the participation of individual in education is influenced by parental values on education, the social justice theory is violated (Rawls, 2009). This was also common in Kenya among the Wajir pastoralists where some children were sent to school, while others were kept at home to look after animals and be responsible for looking after the house (Abdi, 2010). Clearly, pastoralists' decision on who should go to school is contrary to what philosophers such as Plato argued regarding an ideal society which consists of three main classes of people: producers (craftsmen, farmers, artisans, etc.), auxiliaries (warriors), and guardians (rulers). According to Plato, society is just when relations between these three classes are right (Ishumi, 2002). This creates an impression that the participation of the pastoral society understudy was unjust. Some of the learners dropped out of school due to low interest in education and the low level of understanding. This is in line with the completion rates of the pastoralists for 2008-2014 cohort. For example, the findings on Table 1.1 as in many of the surveyed schools indicated that, more than half dropped out before completing the primary education cycle. This implies that the decision of continuing to send some of the children to school and leaving others behind would increase inequality of opportunities in education among the Maasai pastoralists.

Fourth, education reduces pastoralists' wealth: It was further found that pupils were abducted from continuing with secondary education so that they could engage in pastoralism. The reason behind this was to avoid a reduction of the family wealth. Parents seemed to develop the thought that, taking their children to secondary education would add extra costs with limited return thus reducing family wealth. During the FGDs, one pupil narrated the following:

Last year my father warned my sister who was in Grade Seven... father had said that it was a curse for a child to continue with secondary education. My father said further that passing the Grade Seven examination at the school was sacrificing the wealth of the *boma* because so many cows would be sold in order to cover the secondary school costs (FGD 4, July 2015)

This experience reveals that pastoralists do not want to send their children to secondary schools because they are afraid of reducing the size of their herds. In order to avoid selling their livestock to cover school costs, parents

convinced their children to put little effort in education. Pupils are threatened not to concentrate on their studies while in primary education as a strategy to limit their desire to continue with the other levels of education. Therefore among the Maasai pastoralists, education is regarded as reducing family wealth. This is simply related to the cost-benefit analysis on the returns of education experienced by pastoralists.

Although primary education was free, there were other costs covered by parents such as uniforms, exercise books and meals. However, the education returns received from primary education influences pastoralists to participate in education. A research carried out by Boyle et al (2002) in Hunt (2008) showed that in Sri Lanka, Zambia and Kenya pastoral communities often did not send their children to school because they thought there would be no job after graduating. This reveals that pastoralists were afraid of using their wealth in financing the education of their children due to little knowledge on the multiple benefits that abound in education. This indicates that, lack of pastoralist readiness in financing the education of their children is attributed to the value placed on education.

Completion Rates of Pastoral Maasai in Primary Education

The second research objective sought to assess the completion rates of pastoralists' children in primary education for the cohort enrolled in Grade One in 2008 and completed in 2014. Data for this objective were obtained from the attendance registers and monthly school reports. The pupils' completion rates are presented in the Table 1.1 below:

Table 1.1
Percentage of Pupils Completion Rate in Five Sampled Schools

Name of the School	Boys' Percentage	Girls' Percentage
A	28	42
B	32	35
C	57	42
D	56	58
E	57	58

Source: Field Data, 2015

Table 1.1 shows the percentage of pupils' completion rate in the sampled primary schools. The table indicates that many pupils dropped out from the school before completing the primary education. Generally, the results show that in two of the five sampled schools more than fifty percent of the pupils who were enrolled in Grade One in the year 2008 dropped out from the school before completing the primary education. For example, in primary school A, only 28 percent of the enrolled boys completed primary

education in 2014 compared to 42 percent of girls. Majority of the pupils who participated in the study revealed that many pastoral Maasai school children aged seven years and above were not attending school, which were around their living places (around their *bomas*). The findings show that the realization of universal primary education among the pastoral Maasai remains a dream. Furthermore, the completion rates of 100% as an obligation to many countries, particularly among the pastoralists around the world, remained an unattainable dream (Dennis & Stahley, 2012; Woldesenbet, 2015). Generally, completion rates remain a critical problem in pastoral schools despite the increase of the number of schools and higher enrolment of pupils into Grade One.

Conclusions

Several issues can be drawn from the findings of this study. First, despite the efforts and movements both at the international and national level to promote the programme of compulsory education for all, pastoralists still have negative perceptions of the value of primary education. The perception has practically made the value of primary education to contribute to low participation in education. This has further increased the pastoral inequalities in education opportunities.

The study findings revealed that pastoralists' completion rates in education are low. There is a long way ahead in attaining the goal of compulsory education among the pastoralists due to low completion rates. The completion rates have remained a critical problem among the pastoralists. There is, therefore, a definite need to put in place, retention mechanisms and policies to ensure that, every enrolled child is able to complete the primary school.

Recommendation

First, this study calls for all pastoralists' role models who have benefited from education to organize sensitization campaigns to each individual, family and pastoral society on the value of primary education. This would enable the pastoralists to develop positive attitudes towards education.

There is a need to integrate the social justice theory ideas in making the curriculum to be relevant to a Maasai society so as how to improve cattle grazing in pastoralist societies. If this is done, it would reduce the Maasai perceptions of seeing formal education as irrelevant.

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Influence of Agricultural Training on Youth Farm Entrepreneurial Self-efficacy: A Study of Folk Development Colleges in Tanzania

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Abstract

Providing entrepreneurial competencies to youth is currently the key to employment generation given the declining public sector employment opportunities in Tanzania. However, to generate such employment youth need to develop a strong belief in their capabilities to use the provided knowledge and skills, and the training provided has to reflect such intention. This further means that Folk Development Colleges (FDCs) being among the training institutions need to offer employment goal-oriented education centred equally in all domains of learning. The study aimed to address two specific objectives: First, to assess the influence of agricultural training on youth farm entrepreneurial self-efficacy. Secondly, to assess the relationship between farm entrepreneurial self-efficacy and youth farm entrepreneurial intention. A cross-sectional design was used involving 300 respondents randomly selected from three FDCs offering agricultural courses. Qualitative and quantitative data were collected and analysed by using descriptive and inferential statistics. The analyses generally show a significant relationship between agricultural courses studied and youth farm entrepreneurial self-efficacy. A significant relationship was also found between farm entrepreneurial self-efficacy and youth farm entrepreneurial intention. However, resource acquisition and operational competencies self-efficacy constructs seemed to have more influence on youth farm entrepreneurial intention compared to managerial and financial competencies self-efficacy constructs. It is recommended that course contents and the teaching environment be updated regularly according to changes in the demands of the agricultural sector industry. As it stands, the whole FDC curriculum needs a review, and urgent improvements are needed in relation to financial and managerial competencies.

Key words: Self-efficacy, youth, Folk Development Colleges, farm entrepreneurial intention, unemployment

Introduction

The effect of agricultural training on increasing productivity and income of farmers has been widely acknowledged (Aceleanu *et al.*, 2015; Heanue and Donoghue, 2014). However, agricultural training has not been quick in responding to the needs of the labour market and the changing environment in this era of unprecedented youth unemployment (AGRA, 2015; Sanginga *et al.*, 2015). This is because the agricultural sector seems to be neglected by agricultural graduates, despite the opportunities for youth employment in developing countries like Tanzania where there are limited formal non agriculture sector employment opportunities.

It is estimated that only about 15.5% of tertiary and higher learning graduates in Tanzania are employed in agriculture sector while only 13% of lower tertiary vocational education is employed in farming career (Takei, 2016; URT and IIEP, 2011). The competence of the graduates is among the factors that remain in question to pursue the career in the studied domain (Ndyali, 2016). This study specifically focused on assessing the influence of agricultural training on youth farm entrepreneurial self-efficacy. Self-efficacy is central in the formation of a person's intention which in turn determines whether or not he/she will choose a particular career (Hashemi *et al.*, 2012). This clearly shows that self-efficacy influences an individual intention towards a specific career and its' development. Studies conducted on entrepreneurship have associated entrepreneurial self-efficacy with the success of enterprise start-ups and growth (Imran *et al.*, 2019; Shaheen and Al-haddad, 2018)

McGee *et al.* (2009) defined self-efficacy as an individual's level of confidence and belief about his/her capabilities to successfully carry out a course of action, perform a given behaviour, accomplish a given task and attain the desired performance outcome. Thus, farm entrepreneurial self-efficacy is an individual's level of confidence or belief about their ability to perform farm related behaviour. Kanten and Yesiltas (2016) pointed that entrepreneurial self-efficacy plays a key role in determining the level of interest in pursuing an entrepreneurial career. With the acknowledged relationship between entrepreneurial self-efficacy and career intention, the youth studying agricultural courses are expected to engage in farm entrepreneurship in this era of unemployment challenge since they are taught both agriculture and entrepreneurial skills. However, despite the increasing support of the association between belief in the possessed knowledge and skills and career intention, youth who are studying

agricultural courses have shown limited interest towards farm related careers. This is evidenced by Dhakre (2014), who found that 73.8% of students joined agricultural colleges so as to be employed in government institutions and only 2.5% so as to start an enterprise. Adams *et al.* (2013) found that 39.0% of self-employed Folk Development College (FDC) graduates were partly involved in farming. In addition, it is estimated that only 13.0% of lower tertiary technical college (Vocational Education and Training Authority and FDCs) graduates annually are self-employed in farming (URT and IIEP, 2011). This raises the question of the strength of behavioural beliefs or confidence youth develop based on the knowledge and skills acquired, or whether indeed such knowledge and skills do facilitate the establishment and running of farm related enterprises.

Exposure to Agricultural Education and Youth Farm Entrepreneurial Self-efficacy

In assessing this relationship, Temisan *et al.* (2016) found significant joint contributions of agricultural experiences and students' achievement to career decisions in agricultural science. Similarly, Pierce (2012) found that after having worked in a garden, youth participants perceived themselves as having more positive dietary behaviours, increased knowledge of agriculture, and leadership skills, while Ratcliffe (2007) found that the hands-on experiences in the school garden led to increased ecological knowledge, and performance of environmentally responsible behaviours, but no improvements in ecological attitudes.

Mukembo (2017) found statistically significant relationship between the training and youth perceived agri-entrepreneurship competencies but questioned that the relationship depend mainly on teaching approaches. While evaluating the long term impact of an urban farm youth internship programme, the participants reported an increased sense of responsibility, higher levels of self-confidence, and strong connections with their community (Sonti *et al.*, 2016). Wang *et al.* (2015) tested the mediating effect of self-efficacy on personality trait and entrepreneurial intention and found that the mediation model of self-efficacy is partially supported by entrepreneurial intention through conviction and preparation among agricultural students.

At the same time, Quisto and David (2012) found that non-agriculture students experienced increase in self-efficacy for agricultural communications tasks and obstacles for pursuing a degree in agricultural communications while agricultural students decreased in all three

constructs. Frazee *et al.* (2011) noted that participants' pre- and post-workshop tested knowledge of agricultural facts revealed no significant differences. Similarly, Aldridge (2014) indicated that the three components model of agricultural education (number of agricultural education courses, Future Farmer of America (FFA) program participation, and level of Supervised Agricultural Experience (SAE) involvement) were not a statistically significant predictor of total self-efficacy for the participants. Fizer (2013) found that 20% chose "FFA/4-H experience" as the most important factor affecting their choice for the career path, but farming background and the size of schools did not play a role in choosing a major.

Moreover, Edziwa and Chivheya (2012) analysed the agriculture education programme in Zimbabwe and found low self-efficacy level in subject content and practical skills. McKim and Velez (2016) found that mastery experiences may not be the optimal method for initially increasing pre-service teachers' self-efficacy, but vicarious experiences and other type of efficacy is supported. Adila and Samah (2014) assessed factors affecting inclination of students towards agricultural entrepreneurship and found that the highest mean score was recorded for social value, followed by subjective norm, then behavioural attitude, then closer valuation and finally confidence in their abilities.

From the reviewed literature, the practical related agri-education approach seems to influence positively youth farm entrepreneurial self-efficacy. However, the influence seems to be determined by context since such educational programmes yielded no impact on youth farm entrepreneurial self-efficacy in some schools or colleges. Also duration spent in study and background environment of the learners influence self-efficacy (Sonti *et al.*, 2016; Frazee *et al.*, 2011). Yet the findings continue to vary from positive and negative influence and sometimes to no impacts. Thus this study will further examine this relationship.

The Relationship between Self-efficacy and Youth Farm Entrepreneurial Intention

The study employed the Theory of Planned Behaviour (TPB) (Ajzen, 1991). The theory states that a person's behaviour is determined by his/her intention to perform the behaviour and that this intention is, in turn, a function of his/her attitude, subjective norm and perceived behavioural control (PBC) toward the behaviour. The first component is 'attitude' toward behaviour which is determined by the total set of accessible

behavioural beliefs linking the behaviour to various outcomes and other attributes. It represents the person's general feeling of favourableness or unfavourableness towards an object. The second component is 'subjective norm', which is the individual's perception of the social pressure to engage (or not to engage) in entrepreneurial behaviour.

The third TPB component is Perceived Behavioural Control (PBC) (Self-efficacy) which refers to individuals' perceptions of their ability to perform a given behaviour (Ajzen, 1991). Individuals usually choose to perform behaviours that they think they will be able to control and master. This concept is therefore very similar to self-efficacy and is used interchangeably (Bandura, 1982) that is employed in this study. The theory is the most applied one in the field of behavioural change. One of the weaknesses of this theory is that it assumes the behaviour as the result of linear decision making process and does not change over time.

According to the Theory of Planned Behaviour (Ajzen, 1991), self-efficacy (perceived behavioural control) is the strongest determinant of intention compared to other antecedents of intention, that is, attitude and subjective norms. Self-efficacy of an individual is determined by the control belief which in turn is a function of his or her past experiences, information and perceived opportunities. In this case, youth pursuing agricultural education may develop the self-efficacy about farm entrepreneurship through learning agricultural courses and their past experiences in farming.

However, looking at empirical findings, results by Liguori (2012) provided no support for the notion that the learning context directly or indirectly affects entrepreneurial self-efficacy or entrepreneurial intentions. Kidane (2016) found a moderately strong correlation (0.555) between entrepreneurial intention and self-efficacy compared to other personality traits, while Yanan (2015) found that personal factors such as voluntary enrolment and farm related experiences were significantly correlated with intention. Hashemi *et al.* (2012) analysis further showed positive and significant relationship between both entrepreneurial self-efficacy and college entrepreneurial orientation antecedents with entrepreneurial intention among agricultural students.

The review of the above studies reflects varied results on the relationship between agricultural training and farm entrepreneurial self-efficacy. Some have shown positive and significant relationships with mixed variation in their strength of relationship while others have shown no significant relationship (Liguori, 2012; Yanan, 2015). The cause of this variation

appeared to be attributed to sources that influence control beliefs which are largely determined by context. Thus as yet there is no clear pattern that has been established on the relationship between farm entrepreneurial self-efficacy and youth farm entrepreneurial intentions. Therefore this study will further assess the type of relationship that exists between farm entrepreneurial self-efficacy and youth farm entrepreneurial intention in the Tanzanian agricultural learning context.

The study aimed to address two specific objectives: First, to assess the influence of agricultural training on youth farm entrepreneurial self-efficacy for the selected FDCs. Secondly, to assess the relationship between farm entrepreneurial self-efficacy and youth farm entrepreneurial intention.. The colleges were chosen for the main reason that they offer agricultural training for self-employment. The specific objectives of the study were: first, to determine the relationship between the courses studied and youth farm entrepreneurial self-efficacy; and secondly, to determine the relationship between youth farm entrepreneurial self-efficacy and intention.

Methodology

The study area

Three Folk Development Colleges (FDCs) were involved in this study. These colleges were; Mantukuna (Kilimanjaro Region), Monduli (Arusha Region) and Chisale (Dodoma Region). These FDCs were selected because one of their major objectives of training is to equip the learners with the knowledge and skills that would enable them to be self-employed and self-reliant based on their local situations. The three colleges were selected purposively because of the similarity in the nature of the agricultural courses which were blended with an entrepreneurship course.

Study design, population, sampling procedures and sample size

A cross-sectional design was employed as the data were collected from three colleges which are located in three different Regions at one point in time. The study population was all final year certificate students pursuing agricultural courses. A sample size of 300 students was developed from an estimated population of 1200 from the three colleges using the formula developed by Israel (2009):

$$n = N / (1 + N(e^2)) \dots \dots \dots (1)$$

Where n is the sample size, N population size, e is the level of precision. The formula assumes that $p=.05$ (maximum variability). The desired confidence

level is 95% and the degree of precision/sampling error accepted is $\pm 5\%$. Therefore, $n = 1200 / (1 + 1200(0.05)^2) = 300$.

Every element in the sample was selected by using simple random sampling, as this procedure considers the sampling elements to have homogenous characteristics (all are finalists and their courses were blended with entrepreneurship courses). The sample was drawn from admission record books.

3.3 Data collection

Three data collection techniques were employed. These include a questionnaire, focus group discussions and interviews. Pilot study was conducted whereby questionnaire copies were administered to 12 respondents, equivalent to 4 per cent of a sample size. Few unfamiliar terms were noted, which include ascertain (changed to "identify") shown in item 15, oversee (changed to "supervise") shown in item 18 and stir (changed to "inspire") shown in item 20; all these changes is reflected in table 2. While 300 questionnaire copies were administered, properly filled questionnaires copies were 294 (98%). Six focus groups each consisting of seven students were formed through nomination strategy. Also six college staff (two staff per college) and two Ministry Health, Community Development, Gender, Elderly and Children officials were purposively selected based on their experience and roles for Key Informant interviews.

Data processing and analysis

Quantitative data for both objective one and two of this study were analysed by using descriptive and inferential statistics. Qualitative data for the same objectives were transcribed through content analysis. Specifically, respondents' socio-demographic characteristics and existence of self-efficacy were analysed by using frequencies and percentages. The differences in self-efficacy across sex and program studied were analysed by Kruskal-Wallis non parametric test. In further analysing the first objective, factor analysis was performed for the expected learning outcome variable items and self-efficacy variable items whereby new set of factors with underline structure commonalities were identified with the respective items factor loading coefficient ranging from 0.3 and above as shown in Appendixes 3 and 6. The two identified expected learning outcomes are skills outcomes and knowledge outcomes. The six identified factors for farm entrepreneurial self-efficacy were: resource acquisition, opportunity recognition, operational, managerial, financial and communication competencies.

The relationship between the identified factors for both expected learning outcomes and self-efficacy variables were run by multiple regression as defined by Hair *et al.* (2014):

$$Y'_1 a + b_1 X_1 + b_2 X_2 \dots \dots \dots (2)$$

where Y'_1 resource acquisition competencies, a Y-intercept, b_1 change in Y for each 1 increment change in X_1 , b_2 change Y for each 1 increment change in X_2 , X_1 skills outcomes and X_2 knowledge outcomes. Since there were six dependent variables the same independent variables (X_1 and X_2) were regressed against Y'_2 opportunity recognition competencies, Y'_3 operational competencies, Y'_4 managerial competencies, Y'_5 financial competencies and Y'_6 communication competencies using the same formula.

Similarly for objective two, factor analysis was performed for self-efficacy variable items and intention variable items. The relationship of the identified factors for both self-efficacy and intention were determined by using multiple regression defined as:

$$Y'_1 = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 \dots \dots \dots (3)$$

whereby Y'_1 intention, a Y-intercept, b_1 change in Y for each 1 increment change in X_1 , b_2 change Y for each 1 increment change in X_2 , X_1 resource acquisition competencies, X_2 opportunity recognition competencies, X_3 operational competencies, X_4 managerial competencies, X_5 financial competencies and X_6 communication competencies.

Reliability and validity

Internal reliability of items for self-administered questionnaire was measured by Cronbach alpha as defined by Fami (2000): $\alpha = K / K - 1 \times S_T^2 - \sum S_I^2 \dots \dots \dots (4)$

Where α (alpha) coefficient; K the number of items; S_T^2 is the total variance of the sum of the item and the S_I^2 variance of individual item. The positive alpha coefficient ranging from 0.7 to 1 was taken into consideration. Pair-wise deletion method was applied in performing the reliability analysis. To obtain the required alpha results two items in the questionnaire were deleted. The deleted item include: First, "I have ability to delegates task and responsibilities to employees in my business". Secondly, "I can use all my capacity to be a farm entrepreneur". The reliability test results measured in terms alpha coefficient for expected learning outcomes items is 0.707, for entrepreneurial intention items is 0.870 and for entrepreneurial self-efficacy items is 0.884. To ensure that the instrument covered all the components of information, content validity was determined through reviewing previous

studies in assessing the adequacy, accuracy of what it measures. The questionnaire items that measured farm entrepreneurial intention were adopted and modified and fixed to the context from work of Liñán and Chen (2006), Ajzen (1991) and Malebana (2012). The development of items on course learning outcomes was guided by the following studies: Damian and Wallace (2015), Gibb and Price (2014), Vesala and Pyysiainem (2008) and Adeyemo (2009).

Results and Discussion

Socio-demographic characteristics of respondents

The analysis of descriptive statistics shows that the mean age of the respondents is 20.6 years, the lowest age being 15 years and highest age 31 years with a standard deviation of 2.439. The average age falls within the age criterion definition of youth by United Nations (2018). It also concurs with operational definition of youth as used in this study. The distribution by sex shows that there were 11.6% more females than males as shown in Table 1. The respondents involved in the study were in two main groups. The first group included those specializing in animal husbandry and the second group involved those studying general agriculture. The second group did not specialize because they do not sit for the Vocational Education Training Authority (VETA) exams which have enrolment limitation as per Form Four National Examination results. In the analysis, the two groups were combined since they are taught using FDC and VETA curricula.

The finding is supported by the key informant's interview as explained by the Ministry Director coordinating Community Development Training Institutes and FDCs:

...we are currently using VETA curriculum to cope with changes in the industry and it allows our students to sit for VETA exams as our curriculum doesn't allow our students to proceed for further studies...

Table 1: Socio-demographic characteristics of respondents

Type of variable	Sub items in the variable	Frequencies	Per cents
Sex	Male	130	44.2
	Female	164	55.8
	Total	294	100
Programme pursued	General	73	24.8
	Agriculture		
	Animal husbandry	221	75.2
	Total	294	100

Farm entrepreneurial self-efficacy

Various entrepreneurial competencies and skills in relation to farm entrepreneurship were assessed. The competencies and skills assessed covered the two main areas; namely agriculture competencies and general entrepreneurship competencies. Also the skills and competencies were assessed according to the enterprise life-cycle stages which include searching, planning, marshalling and implementing stage (Malebana, 2012; Hanxiong, 2009).

The descriptive statistics in Table 2 show that majority of scores are aligned to fairly confident and very confident levels of measurement. This implies that youth generally perceived themselves as fairly confident and very confident in terms of farm entrepreneurial capabilities. However, the principal component factor analysis was performed and the Bartlett test of sphericity was at acceptable standards; $\chi^2 = 3907.900$, degrees of freedom (df) = 406, p-value = .000 and Kaiser-Meyer-Olkin (KMO) = 0.921 and variance explained by 63.01% as shown in Appendix 6. Six self-efficacy factors were developed from that analysis and the ratings indicate that youth are very confident in resource acquisition competencies, opportunity recognition, and operational competencies and fairly confident in managerial, financial and communication competencies as shown by the weights of variance for each factor.

The results imply that the graduates from the selected FDCs possess both agriculture competencies and general entrepreneurship competencies. The possession of these combined knowledge and skills is an added advantage for them to pursue farm entrepreneurship career. They are in better position to modernise the existing tradition ways of production and marketing

strategies for profit generation rather than for consumption purposes. This could change the entire image of agriculture from less attraction to a paying sector.

This is further evidenced by opinions from the focus group discussions where the group members were asked to at least mention any career that they are confident to engage in immediately after graduation. The discussant responses were as follows:

.....I will open my agro-veterinary shop; I will open and run a vegetable farm..... I will open a poultry keeping farm.....

The discussion indicates that the youth were fairly well prepared to establish their farm enterprises after graduation. The findings concur with the studies by Cooper *et al.* (2008) and Rasheed (2003), who found an increase in self-efficacy after studying entrepreneurship course.

Table 2: The perceived level of farm entrepreneurial self-efficacy of the respondents

Farm entrepreneurial self-efficacy	F	V LC%	LC%	U%	FC%	VC%	Total
1 It is easy for me to start a farm enterprise and keep it working	294	1.4	2.7	6.8	35.4	53.7	100
2 I am prepared to start a viable farm enterprise	294	4.1	5.4	9.2	37.1	44.2	100
3 I can control the initial/start up process of new farm enterprise	294	3.1	7.1	8.5	40.8	40.5	100
4 I have necessary practical details for a new farm enterprise	294	3.1	7.5	6.5	33.7	49.3	100
5 I have ability to generate new ideas for a product or service in my farm enterprise	294	1.7	4.4	6.8	29.9	57.1	100
6 I have ability to identify a need for a new product	294	1.4	3.1	7.1	39.8	48.6	100
7 I have ability to design a	294	1.0	3.7	9.9	27.2	58.2	100

	product or service that will satisfy the customer needs and wants							
8	I have ability to estimate customer demand for a new product or service	294	1.7	4.4	10.5	39.5	43.9	100
9	I have ability to determine competitive price for a new product or service	294	0.3	4.8	8.2	35.4	51.4	100
10	I have ability to estimate a start-up funds and working capital necessary to start a farm enterprise	294	3.1	3.1	8.5	38.8	46.6	100
11	I have ability to design effective, advertising campaign for a new product or service	294	2.7	4.1	7.5	32.3	53.4	100
12	I have ability to make contact and exchange information with others	294	1.7	2.4	4.4	32.7	58.8	100
13	I have ability to clearly and concisely explain my farm enterprise idea in simple terms	294	0.7	4.1	4.8	38.8	51.7	100
14	I have ability to develop relationship with key people who are connected to sources of capital	294	0.3	5.1	7.1	35.7	51.7	100
15	I have ability to identify potential sources of funds for any farm enterprise investment	294	1.0	7.5	10.9	35.7	44.9	100
16	I have ability to train and recruit new employees	294	2.4	6.5	7.5	39.1	44.6	100
17	I have ability to supervise employees	294	1.4	1.4	5.8	32.7	58.8	100
18	I have ability to deal							

	effectively with day to day farming problems and crisis	294	2.0	2.0	6.5	39.5	50.0	100
19	I have ability to inspire, encourage and motivate my employees	294	1.0	2.7	6.8	37.4	52.0	100
20	I have ability to persist in the face of adversity	294	1.0	2.4	7.5	35.7	53.4	100
21	I have ability to make decisions under uncertainty	294	1.0	3.1	7.8	32.0	56.1	100
22	I have ability to organize and maintain financial records of my farm enterprise	294	1.0	4.1	6.5	25.5	62.9	100
23	I have ability to manage financial assets of my farm enterprise	294	1.0	3.7	6.5	29.5	58.8	100
24	I have ability to identify profit and loss of my farm enterprise	294	1.4	4.4	3.4	29.3	61.6	100
25	I have ability to identify farm appropriate inputs	294	1.4	1.7	7.8	30.3	58.8	100
26	I have ability to operate machines and apply farm inputs	294	0.7	4.1	8.2	37.8	49.3	100
27	I have ability to use new farming procedure	294	0.7	3.1	7.8	32.3	56.1	100
28	I am capable to compete and produce more or get more profit with other farm entrepreneurs	294	0.7	2.0	5.4	27.6	64.3	100

Note: F-frequency, VCL-Very little confidence, LC-little confidence-unsure, FC-Fairly confident, VC-very confident

An index was developed to determine the overall self-efficacy of the respondents which was then analysed by descriptive statistics. As shown in

Table 2 the Likert scale consists of 28 items and five response options with their respective weights reading as Very little confidence (1), Little confidence (2), Unsure (3), Fairly confident (4) and Very confident (5). With regards to respondents' responses, the total minimum score for 28 self-efficacy items was 28, the total neutral or unsure scores for 28 items was 84 and total maximum score for the 28 items was 140. In developing the index the researcher grouped the Very little confidence and little confidence options and labeled them as no confidence, unsure was labeled as undecided and fairly confident and very confident were labeled as there is confidence. Generally the descriptive analysis in Table 3 shows that youth in FDCs have confidence towards farm entrepreneurship.

Table 3: Overall farm entrepreneurial self-efficacy of the respondents

Self-efficacy	Frequency	Percent
There is no confidence	49	16.7
Undecided	8	2.7
There is confidence	237	80.6
Total	294	100.0

The difference in self-efficacy across sex and program studied was analysed by the aid of Kruskal-Wallis non-parametric test as shown in Table 4. The findings show that only operational competencies self-efficacy variable appeared significantly different at 5% level of significance for both sex and program type with the respective sum of ranks showing female students being more confident than their male counterpart. However, generally there was no significant difference in 5 self-efficacy factors across sex and type of the program. This further implies that approaches used in delivering the competencies were equally fair for both male and female students. In the case of program type the lack of significant difference, meant that the program types have underlying commonalities in terms of content and objectives of their establishment.

Table 4. Kruskal-Wallis test for the deference in self-efficacy across sex and program

Variable	Resource A.	Opportunity	Operational	Managerial	Financial	Communication
X ² with 1 d f s	1.101	0.217	16.029	0.312	2.565	1.937
Probability s	0.2941	0.6411	0.0001*	0.5763	0.1092	0.1640
X ² with 1 d f p	1.357	1.616	30.491	3.043	0.282	0.088
Probability p	0.2441	0.2037	0.0001*	0.0811	0.5953	0.7671

Note X²- Chi-square, d f s -degree of freedom, s -sex, p-programme, A-acquisition, * Significant at 5%

4.3 The relationship between learning outcomes and farm entrepreneurial self-efficacy

Multiple regression analysis was conducted to determine the relationship between the expected learning outcomes and farm entrepreneurial self-efficacy. Principal factor analysis was performed first for the set of expected learning outcomes and the respective Bartlett test of sphericity was at acceptance level ($\chi^2 = 341.684$, df= 36, p-value = 0.000 and KMO =0.802 and variance explained by 52.19% as shown in Appendix 3). Two expected learning outcome factors (skills and knowledge) were developed from the factor analysis and used as explanatory variables in the regressions. Since there were six dependent variables; six regressions were performed against explanatory variables as summarized in Table 5.

Generally in all the six regressions, expected learning outcomes have significant impact on self-efficacy since p-values are less than 0.05. Also the adjusted R² for all the regressions is above 50% indicating the models are of acceptable standards. Specifically, the expected learning skills outcomes have impacts on efficacy variables than knowledge outcomes except in regression 4. For instance, a unit increase in expected learning skills outcomes increases confidence in resource acquisition competencies by 0.680 while a unit increase in expected learning knowledge outcomes increases confidence in resource acquisition by 0.599. In other words, confidence in resource acquisition competence can be explained by educational outcomes by 57%. This implies that agricultural training have positive influence on youth farm entrepreneurial self-efficacy.

The results imply that the competencies gained by the studied youth is an outcome of training conducted by FDCs. The hiring of VETA entrepreneurship curriculum seem to positively impact the soft skills competencies especially opportunity recognition, managerial and financial management skills. The graduates from these colleges are expected to bring changes in the agricultural sector related enterprises through innovation and creativity which in turn will make the sector attractive to other youth.

Table 5. The relationship between expected learning outcomes and self-efficacy

	Coef	Std. Err.	T	P>t	[95 % Conf	Interva l]	Model Summary
1.Resource A							
Skills	.680	.052	13.0	0.00	.578	.764	Prob> 0.000
		3	1	0			F 0
Knowledge	.599	.052	11.4	0.00	.496	.701	R ² 0.581
		3	5	0			4
cons	1.46e	.052	0.00	1.00	112	-.112	Adj 0.578
	-10	2		0			R ² 5
2.Opportunity							
Skills out	.357	.049	7.25	0.00	.260	.453	Prob> 0.000
				0			F 0
Knowledge	.335	.049	6.81	0.00	.238	.432	R ² 0.541
				0			7
cons	-	.048	0.00	1.00	.114	-.114	Adj 0.536
	192e			0			R ² 6
	-10						
3.Operatinal							
Skills	.648	.053	12.0	0.00	.543	.754	Prob> 0.000
			2	0			F
Knowledge	.604	.053	11.1	0.00	.498	.709	R ² 0.564
			9	0			5
cons	-	.051	0.00	1.00	.102	-102	Adj 0.561
	9.35e			0			R ² 5
	-10						
4.Managerial							

Skills	.306	.048	6.29	0.00	.211	.402	Prob>	0.000
				0			F	
Knowledge	.332	.048	6.81	0.00	.236	.428	R ²	0.538
				0				6
cons	-	.047	0.00	1.00	.113	-.113	Adj	0.535
	4.04e			0			R ²	4
	-10							
5.Financial								
Skills	.295	.050	5.86	0.00	.196	.394	Prob>	0.000
				0			F	
Knowledge	.276	.050	5.49	0.00	.177	.375	R ²	0.533
				0				1
cons	7.22e	.049	0.00	1.00	.114	-.114	Adj	0.529
	-10			0			R ²	9
6.Communicati								
on								
Skills	.618	.052	11.7	0.00	.514	.721	Prob>	0.000
				0			F	
Knowledge	.600	.052	11.4	0.00	.497	.703	R ²	0.557
				0				1
constant	6.67e	.051	0.00	1.00	115	-.115	Adj	0.554
	-10			0			R ²	0

Note A-acquisition, adj.-adjusted, pro. -probability, significant at 5%

4.4 Farm entrepreneurial self-efficacy and intention

In examining the relationship between farm entrepreneurial self-efficacy and intention, principal component factor analysis for the items that measure intention was performed as shown in Appendix 3. The results of the analysis was of the acceptable standards as shown by Bartlett test of sphericity ($\chi^2 = 1060.511$, $df = 36$, $p\text{-value} = 0.000$, $KMO = 0.897$ and variance explained by 50.75%) as shown in Appendix 5. Only one factor was developed from this analysis implying that the constructs measuring intention share commonalities.

The analysis of multiple regression shows that there is significant relationship between farm entrepreneurial self-efficacy and intention as $p\text{-values}$ are less than 0.05. However, there is slight variation in the levels of influence among self-efficacy constructs. Resource acquisition competencies construct have more influence in the youth intention towards farm

entrepreneurship compared to other constructs as shown in Table 6. A unit change in resources acquisition competencies influences intention by 0.596. On the other hand, financial competencies construct had the least contribution to the influence on farm entrepreneurial intention as a unit change in financial control competencies influences intention by 0.103.

The model summary shows that the results were statistically significant ($F(6,286) = 56.32, p < 0.000$). This indicates that 53% of the variance in youth farm entrepreneurial intention was explained by farm entrepreneurial self-efficacy. This finding implies that youth farm entrepreneurial intention can be explained by other factors by 47%. Also it raises the question on the strength of the self-efficacy as some of its constructs appear to have low or weak influence as shown in Table 5. In other words, the strength of efficacy can be attributed to the kind of competencies taught during training with their respective teaching approaches. The findings concur with Hashemiet al. (2012) who found significant relationship between entrepreneurial self-efficacy and intention among agricultural college students.

Table 6. Relationship between self-efficacy and youth farm entrepreneurial intention

Intention	Coef	Std. Err.	T	P>t	[95 % Conf Interval	Model summary	
Resource A*.	.596	.052	11.26	0.000	.492 .699		
Opportunity	.183	.048	3.74	0.000	.087 .279		
Operational	.325	.052	6.23	0.000	.223 .427		
Managerial	.140	.048	2.87	0.004	.044 .236		
Financial	.103	.049	2.11	0.036	.007 .199	Prob> F	0.0000
Communication	.318	.050	6.27	0.000	.219 .418	R ²	0.5416
constant	-1.147	.217	-5.25	0.000	-1.56 -0.713	Adj R ²	0.5319

Note: A*- acquisition

Conclusions and Recommendations

Generally, the youth perceived themselves as being 'fairly confident' to 'very confident' about their farm entrepreneurial self-efficacy. This variation is also reflected in the specific farm entrepreneurial self-efficacy constructs since their variance weights differed with confidence in resources acquisition competencies being higher than others. No significant differences were found between sex of the respondents and self-efficacy constructs. This indicates that both sexes have nearly the same confidence level for all self-efficacy constructs. Also it may further imply that the environment for learning was gender sensitive.

Significant relationship was found between the expected courses outcome and farm entrepreneurial self-efficacy. Nevertheless, skill-based educational outcomes seem to influence more the farm entrepreneurial self-efficacy constructs than knowledge-based outcomes. Yet, generally the level of influence was around 50% implying that the remaining percentages may be further explained by other factors; probably the social, cultural and economic environment where agriculture is practiced. Further implication may be that the youth were fairly satisfied with the kind of competencies offered in pursuing farm related enterprises.

Significant relationship was also found between farm entrepreneurial self-efficacy and intention. Despite significance relationship shown, some of farm entrepreneurial self-efficacy constructs contributed low influence on farm entrepreneurial intention, for example financial and managerial competencies. This may be attributed to the content of the courses studied and approaches of teaching which may not be adequate for a career in farm enterprising. In addition self-efficacy generally explained youth farm entrepreneurial intention by 53% implying that the remaining percent can be explained by other factors which were not covered in this study.

It is recommended that course contents need to be updated from time to time as per industry demand changes and their respective teaching approaches should be revised based on regular tracer studies. Nonetheless, as it stands, curriculum needs to be reviewed so as to improve financial and managerial competencies which seem to be inadequate or not properly taught when in fact they are very basic in running a farm enterprise. It is also recommended to make training more applied, but observing a proper balance between knowledge and skills based competencies.

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Identification of Entomological Drivers for Persisting High Malaria Transmission in Ruangwa District Lindi Region Tanzania

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ABSTRACT: *High malaria prevalence remains a major problem, despite high coverage rates of malaria control interventions. The study was carried out to investigate entomological factors responsible for malaria high malaria transmission in Ruangwa district. Three villages were selected from three wards of Ruangwa district; Mnacho and Chienjere. Likangara represented low, Nandagara moderate and Chienjere high malaria prevalence's. In each village six houses with open eaves were selected for mosquito collection both indoors and outdoors using Human Landing Catches. A total of 2532 female mosquitoes were collected. Malaria vectors constituted 26.66 % (*An.gambiae* s.l 680(26.35); *An.funestus* 8 (0.31) and *An.coustani* s.l 3 (0.11%).while non –malaria vectors accounted for 73.26 (*Culex* sp. 1854 (73.2%) *Aedes* sp. 1 (0.03%). Most mosquito abundance was dominant in Chienjere 932 (37%), followed by Likangara 820 (31%) and the least was Nandagara composed of 780 (31%). Out of 688 anophelines subjected for PCR speciation, *An.gambiae* s.s was relatively higher 297 (43%) compared to *An.arabiensis* 278 (40%), *An.funestus* s.s 6 (0.87%) and unamplified 107 (16%). The high abundance of *Anopheles* mosquitoes was observed in rainy season 553 (95.18%) as compared to dry season 28 (4.82%). *An.gambiae* s.s and *An.arabiensis* species are responsible for maintaining high prevalence of malaria even in the absence of other vectors. *An. coustani* has an epidemiological concern since it is important vector in neighboring country of Kenya and Zambia. The findings provide useful information that would enable to plan and innovative and effective malaria control strategies in the district.*

Key words: Malaria prevalence, species, *An.gambiae*, *An.funestus*, *An.coustani*, Ruangwa

Introduction

Globally, the malaria burden has dramatically decreased in the past decade as shown by the 14-percentage fall in malaria incidence rates in all age groups worldwide since 2010 and by 20 percent in the WHO African Region as attested by the World Health Organization (WHO, 2019). The Long-

Lasting Insecticides treated Nets (LLINs), Indoor Residual Spraying (IRS) and case management with artemisinin combination therapies (ACTs) have strongly contributed to this reduction (Ssemppira *et al.*, 2017; WHO, 2019). However, malaria continuity in these settings was noted in the World Malaria Report. Conversely, this resilience is mainly linked to the spread of insecticides resistance across many endemic countries (Ranson and Lissenden, 2016). Mosquitoes species responsible for the residual transmission can also comfortably and successfully feed and survive on blood from non-human host (Main *et al.*, 2016). Thus, residual malaria transmissions are now persistent in many places (Mwesigwa *et al.*, 2017). Residual transmission refers to those fractions of transmission, mediated by mosquitoes, which are behaviourally resilient to the existing primary malaria interventions. Even though, residual malaria transmission was not given enough attention in the past (Elliot *et al.*, 1972), there is currently an increasing evidence and wide acknowledgement that for elimination to be realized (Benelli and Beir, 2017), interventions that tackle residual transmission should be prioritized (Mwesiga *et al.*, 2017). In sub-Saharan Africa, Tanzania is a vivid example of the dual complexity in pushing malaria control further down. In southern and north western regions, Malaria has remained persistently high (11.7% to 24.7%) in spite of the wide coverage with LLINs, IRS and case management using Artmethers-Lumephantrine (TMIS, 2017). For example, in the Lindi region, the average regional malaria prevalence remains high at 11.7% (TMIS, 2017), but with great village variations. For example, in the Ruangwa District, Malaria prevalence rates of 17.7%, 54.3% and 85.7% were recorded from the villages of Likangara, Nandagara and Chienjere respectively (DHIS, 2016).

However, the main contributing factors for this persistence in malaria transmission despite widespread use of the current core vector control intervention measures are not well known. In addition, factors such as; unknown species which reduced behaviour susceptibility to indoor insecticidal intervention (Russell, *et al.*, 2011), and rapid expansion of insecticide resistance to malaria vectors (Nkya, *et al.*, 2013) could be playing an important role in malaria transmission. Furthermore, the emergence of antimalaria drug-resistant strains of malaria parasites (WHO, 2019), insufficient levels of access and up take of lifesaving malaria tools preferably early diagnosis and treatment at village levels have been documented (Huho *et al.*, 2013). Substantial research evidence on this entomological factor is still limited (Govella *et al.*, 2013). Therefore, the major aim of the present study was to identify entomological drivers for persisting high malaria transmission despite high coverage with long

lasting insecticides treated nets. The information obtained could be used as a benchmark for comprehensive approach of new tool and strategies to address residual transmission burden.

Methodology

Study area: The study was conducted in Ruangwa district, populated with 131,080 people. It's a flat land with hilly areas, the altitude is 313 - 549 meters above sea level. It has 160.1 hectares of 2,850 km² potential areas for irrigation. There's one rainy season (November – May), averaging 800 mm of rainfall per year. The daily temperature ranges from 24 to 35 degrees Celsius with very high humid air; a source of malaria prevalence rate. The three study villages (Likangara, Nandagara and Chienjere) have rural-urban and para-rural settings with low malaria prevalence of 17.7%), moderate 54.3% and high 85.7% respectively. (DMIS, 2016). The villages are located in low savannah area covered with grasses, bushes and scattered trees, narrow slow running streams with marginal vegetation and pad fields, shallow wells, bored wells and ponds which are seasonal breeding habitats. Many villagers are agriculturalists, few are petty traders. Numerous livelihood social - economic activities are conducted along main roads during nocturnal hours. These habits placing them at a greater risk of contracting malaria (Monroe *et al.*, 2019).

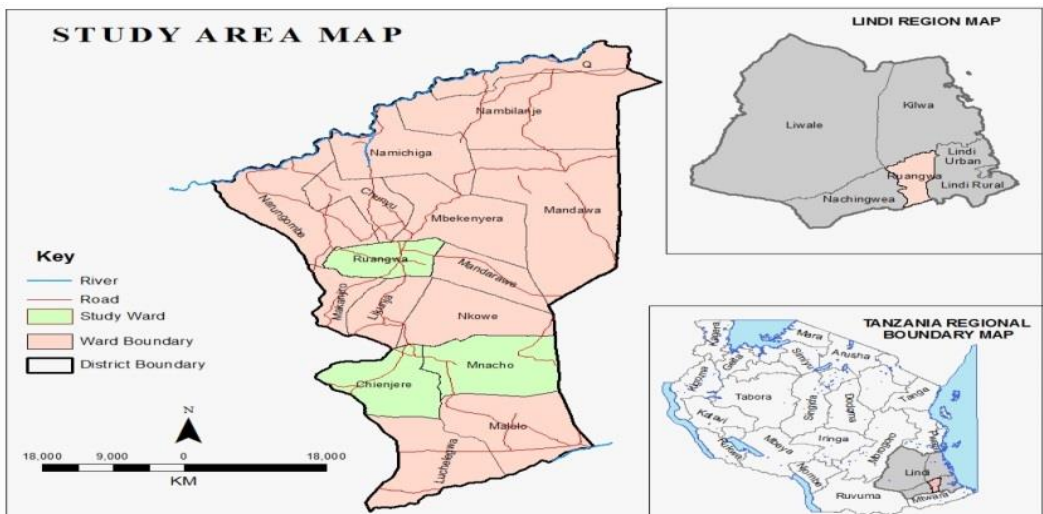


Figure 1: Maps showing the region, district and 3 villages where malaria vectors collected

Mosquito sampling, field processing and species identification; Mosquito collections were conducted in the three wards of the Ruangwa District,

Lindi Region (Figure 1). Human landing catches (HLC) were used to collect host seeking mosquitoes (Service, 1993). Mosquito collections were conducted for three consecutive nights weekly between 1800hrs and 0700hrs from March, 2017 to July 2018. Mosquitoes were collected indoors and outdoors in 18 houses (NIMR, 2011) randomly selected houses situated at least fifty meters apart in the three villages (Killeen *et al.*, 2006). A team of two trained collectors per house (one sitting indoors and another sitting five meters outdoors collected host seeking mosquitoes as they landed on their exposed their legs). Mosquitoes coming to bite the collectors were detected using a flashlight and were aspirated and placed in paper cups (Mboera, 2005). Each morning all collected mosquitoes were killed in the field using diethyl ether. Thereafter female *An. gambiae* s.l. and *An. funestus*, were identified, morphologically counted and stored in labelled Eppendorf tubes with dry desiccant (silica gel) for later laboratory processing at Ifakara Health Research and Development Centre (IHRDC) (Gillies and De Mellion, 1968). Other *Aedes* and *Culex* species mosquitoes were scored and discarded.

Laboratory Processing of Mosquitoes; Polymerase chain reaction (PCR) technique was used to differentiate sibling species belonging to the different species complex group using Genomic DNA extracted from both *An. gambiae* s.l and *An. funestus* complexes adult mosquitoes' legs (Scott *et al.*, 1993). The legs of each individual adult mosquito were placed in 1.5 ml Eppendorf tube followed by addition of 20 µl of TE buffer, tris –EDTA. The specimens were then incubated at the temperature of 95°C for 15 minutes in a heating block. The tubes were vortexed for 2 minutes and then the DNA containing supernatant was separated by centrifuging at 12000 rpm at a room temperature for two minutes. After amplification 13 µl of PCR products were analyzed. The four positive controls for *An.gambiae* s.l, *An.funestus*, *An.arabiensis*, *An.quadriannulatus* and *An.merus* and the control for *An.funestus*: *An.rivulorum*, *An. vanedeen*, *An. parensis* and *An.leeson* were obtained from Ifakara and Maureen's insectary. DNA bands were revealed and photographed under ultraviolet light using Kodac. The presence of infection rates in infected *anopheles* mosquitoes species the infection rate in malaria vectors with *plasmodium falciparum* within collected mosquitoes were detected by Circumsporozoites protein (CPS ELISA) (Burkot *et al.*, 1984).

Statistical Analysis; Analysis was processed using Statistical package for the Social Science (SPSS), IBM Statistics version 20 (2018). The total *Anopheline* mosquitoes captured by human landing catches (HLC) on the same night was calculated by the numbers of *Anopheles* collected by

species and the percentage divided in sub genus for each of these 3 villages (Likangara, Nandagara and Chienjere). These mosquitoes were tested and analysed by Chi-square test.

Results

The proportional abundance of mosquitoes captured in Ruangwa District
Abundance of mosquito species composition; A total of 2,532 female mosquitoes were collected between March 2017 and September 2018 in 18 houses from the study area. Out of these malaria vectors *An.gambiae* s.l constituted 26.35 (n=680), while *An.funestus* group comprised 0.31% (n=8) and *An.coustani* s.l 0.11% (n=3). In non-malaria vectors collected, *Culex* sp. was the dominant species with highest density of 73.2% (n=1,854), but *Aedes* sp. was composed a low density at 0.03% (n=1). The high density of mosquitoes was collected in Chienjere village 37% (n=932), followed by Likangara village 32% (n=820) and the least one was Nandagara village 31% (n=780). None of the *An. funestus* and *An.coustani* s.l was collected in Nandagara and Chienjere villages (Table 1) This implies that mosquitoes density varied from one species to another ($\chi^2 = 80.82$, df=3, p< 0.005). In addition, the detailed results of *Anopheles* mosquito's species are further discussed in the following section.

Table 1: Mosquito species composition captured in Ruangwa District
Table 4.1: The proportional abundance of mosquitoes captured in Ruangwa District

Village	<i>Culex</i> sp.		<i>An.gambi</i> ae s.l		<i>An.funest</i> us		<i>An.cousta</i> ni		<i>Aedes</i> sp.		Overall	
	n	%	n	%	n	%	n	%	n	%	N	%
Likangara	438	24	373	55	6	100	3	100	1	100	820	32
Nandagara	745	40	35	5	0	0	0	0	0	0	780	31
Chienjere	671	36	261	40	0	0	0	0	0	0	932	37
Total	1853	100	678	100	6	100	3	100	1	100	2532	100

The composition of *Anopheles* species confirmed as malaria vectors by polymerase chain reaction (PCR) method; A total of 688 of *An.gambiae* s.l and *An.funestus* group were further subjected to PCR analysis for sibling

species identification (Scott *et al.*, 1993). The PCR results indicated that (84.4%, n= 581) were confirmed as malaria vector species identified for the first time in the study area. In *An.gambiae* s.l two species of were identified, these are *An.gambiae* s.s 43 % (n=297) and *An.arabiensis* 40% (n=278), whereas in *An.funestus* group, only *An.funestus* s.s 1% (n=6) was also identified (Figure 2). Few unamplified mosquitoes constituted 16 % (n=107) of all *anophelines* collected. The DNA unamplified specimen may have been due to lack of appropriate primers in the PCR to identify migrant species. There was a considerable variation between *An.gambiae* sensu lato and *An.funestus* ($\chi^2=79.93$, df =3, p<0.005).

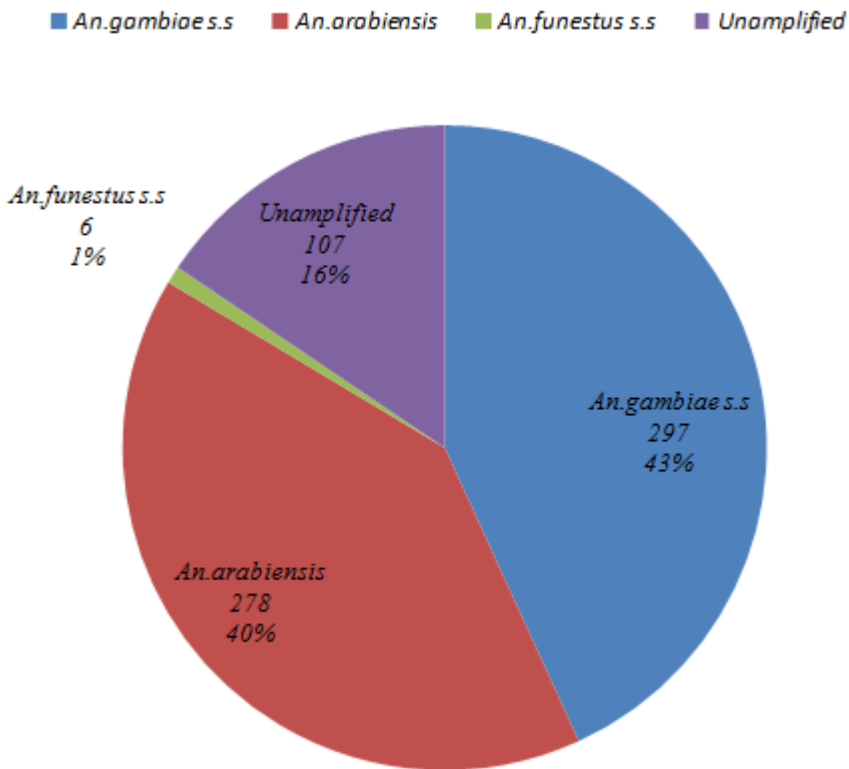


Figure 2: The proportional abundance of *Anopheles* mosquitoes captured in Ruangwa District

In addition, out of four species *An. gambiae* s.s was the most abundant to *An.arabiensis* in Likangara villages as compare to other villages of Nandagara and Chienjere and they constituted 167 (56.22%) of the total *An.gambiae* s.l speciated. Similarly, *An.arabiensis* was dominant species in

Chienjere village and constituted 147 (52.87%) of the total speciated *An. arabiensis*. Likewise, *An.funestus* s.s represented 6 (100%) of the total *An.funestus* speciated and was collected in Likangara village. None of the *An.funestus* s.s was found in Chienjere and Nandagara villages. There was a significant difference in mosquitoes collected between *An.gambiae* s.s, *An.arabiensis* and *An.funestus* in the study area ($\chi^2=79.93$, df =3, p<0.005).

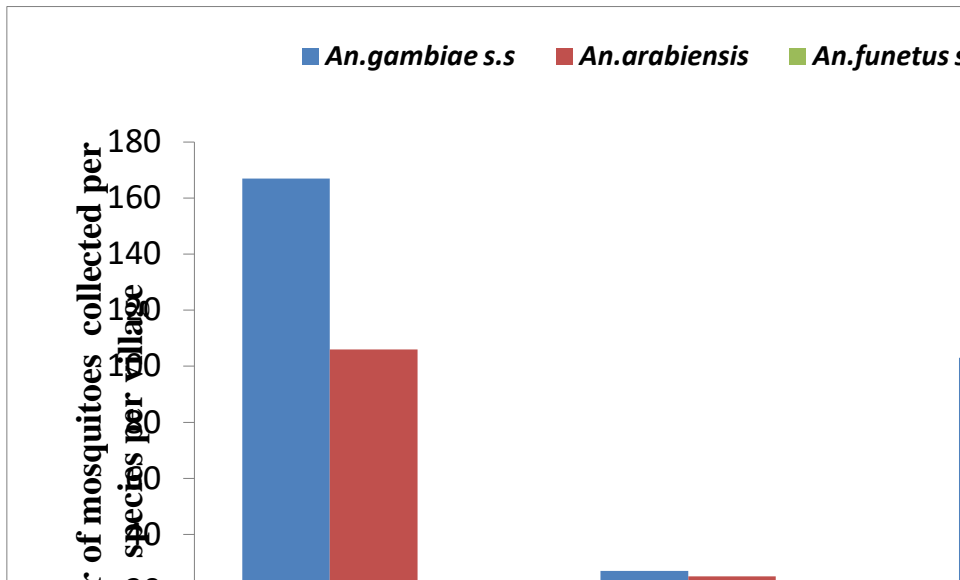


Figure 3: Variation of *Anopheles* mosquito population collected in the three villages of Ruangwa District

A study of seasonal population dynamics of malaria vectors detected variation between species collected during the rainy season (95.17%,n=553) and in the dry season (4.81%,n=28). While the population of *An.funestus* decreased during the rainy season (0.34%, n=2), it increased in the dry season (0.66%, n=4). Chienjere village had high mosquito density of (52.34%,n=298) followed by Likangara(n=203) and (9.12%, n=52) Nandagara village in both seasons. Within species, a large number of mosquitoes was *An.gambiae* s.s was observed to be high at 94.27%, n=280) in the rainy compared to dry season (5.73%,n=17). While in *An.arabiensis* (97.48%, n=271) was collected in the rainy season and (2.52%, n=7) in the dry season and *An.funestus* s.s consisted of (33.3%, n=2) in the rainy season and (66.6%, n=4) in the dry season (Table 3).

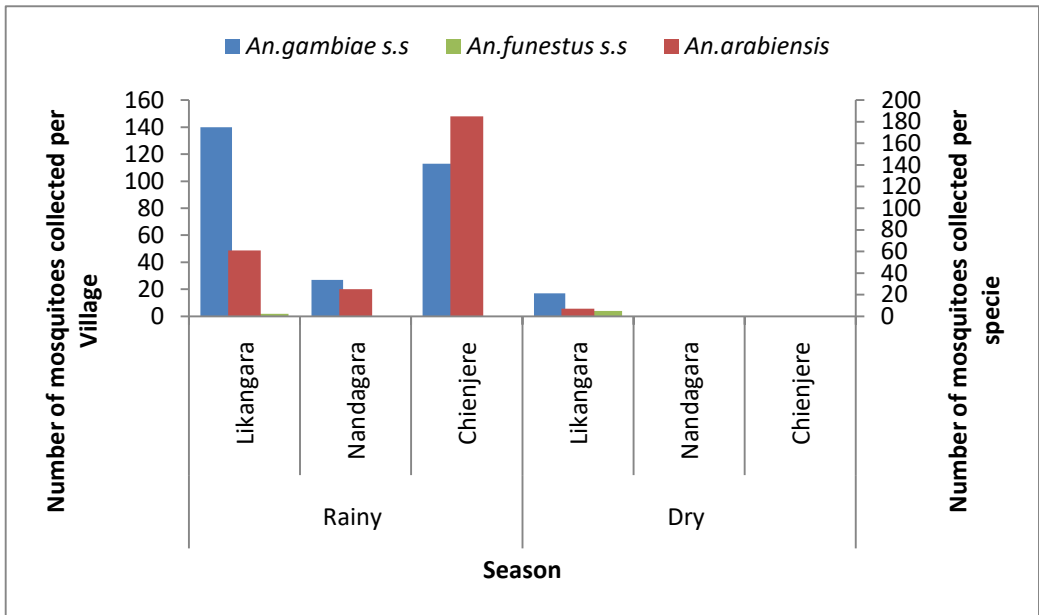


Figure 4: Seasonal variation of malaria vectors between species by villages and species

Discussion

Species Composition of Malaria Vectors available in Ruangwa District

It is important to note that, this is the first report on speciation of *Anopheles* mosquito species in Ruangwa, Lindi region. Although these malaria vectors have been reported in other regions of Tanzania, there was no information on species composition available in Ruangwa district. The results show presence of two broad efficient malaria vectors species of *An. gambiae s.s.* and *An. arabiensis* from *An.gambiae* complex. Secondary malaria vector species are; *An .funestus s.s* from *An. funestus* group and *An. coustani*. The first two species are responsible for maintaining high prevalence of malaria even in the absence of other vectors (Colluzzi, 1984; PMI, 2018).

Using the human landing catches Service (1993), this study ought to answer the current baseline data on composition of malaria vector species available in Ruangwa district. In the present study, based on the results an affirmative answer has been found, the composition of malaria vector species available in Ruangwa district entails new four potential malaria vector species, namely: *An.gambiae s.s and. An. arabiensis, An.funestus s.s and An.coustani*. The first two spiciest are responsible for maintaining high

prevalence of malaria even in the absence of other vectors (Colluzzi, 1984 and PMI, 2018). This is an important step towards the control of malaria vector populations which influence ongoing residual malaria transmission in Ruangwa district (Mwanziva, 2011; Stevenson *et al.*, 2016 and; Degefa *et al.*, 2017).

The significance of this discovery is that this information forms a benchmark which will be integrated in a national map of dominant malaria vector species as well as assisting in the planning and implementation of malaria prevention interventions. According to (Coetzee, 2000; Sinka *et al.*, 2012), this claim is premised on the fact that identifying species leads to associate knowledge of that species which in turn suggests effective approaches for malaria control interventions. Coetzee, (2004) observed that *An. Quadriannulatus* a non malaria was more susceptible to organochlorine (Benzene hexachloride), sprayed indoors than malaria vectors *An. arabiensis* that were resistant during the malaria epidemic that occurred in 1977 in Zimbabwe. This led to a policy change to shift to the use of DDT that gave greater impact in prevalence reduction. In addition, in Cameroon (Tabue, 2014) identified *An. ziemanni* as a main malaria vector compared to other *Anopheles* vectors such as *An. gambiae* s.s and *An. christyi*, *An. nil*, *An. maculipalpis*, *An. implexus*, *An. funestus*, *An. pharoensis* and *An. tenebrosus*. This led to a change in vector control strategies. Therefore, the result of the present study concurs with Erlank (2018), who recorded *An. arabiensis* and *An. gambiae* as a main vectors needed to improve malaria control efforts and control strategies for malaria elimination.

There was generally seasonal preference by vector species which subsequently affect their distribution in the study area. The high density of mosquitoes was collected during rainy season 95.18% and few (4.56%) figure 4. This result coincides with ones reported in other studies done by (Kigadye *et al.*, 2010; Kulkarni, *et al.*, 2010; Kabbale *et al.*, 2013) in other parts of Tanzania and Uganda, that rainfall favours the high abundance of *An. gambiae* populations and doubles the increase of malaria infections. In the present study, *An. funestus* is the most important dry season malaria vector as compared with a rainy season and can be able to maintain the population of the mosquitoes year-round (Figure 4). This result is also consistent with one obtained by (Minakawa *et al.*, 2005; Lwetoijera, 2014) that *An. funestus* were more abundant in the dry season as compared to rainy season in Kenya and Kilosa Tanzania. Other non-malaria vectors of medical importance collected in the study area *Culex* species; In the present study,

two genera of *Culex.sp* and *Aedes sp.* non- malaria vectors were collected from three village of Ruangwa District. *Culex sp.* was the dominant species with highest number (72.87%) among all mosquitoes collected (Table 1). The result concurs to studies done at Niete, Cameroon (Bigoga *et al.*, 2012) which also found the dominance of *Culex sp.* over *Anopheles sp.*; (Emidi *et al.*, 2017). The higher density of *Culex sp.* could be attributed to their preference to breed in dirty water which is available throughout the year. The sampled houses in the villages of Likangara, Nandagara and Chienjere are located near wet pit latrines and uncontrolled waste. These findings are also similar to the findings of earlier study conducted by (Nwoke *et al.*, 1993; Rwegoshora *et al.*, 2005), they found that the abundance of mosquito was homogenous in polluted water. Therefore, *Culex sp.* the vector of *W. bancrofti* should be of great epidemiological concern to policy makers and researchers since it may pose a great threat to humans in future. This is because *W. bancrofti* transmission is still ongoing in the neighbouring region of Pwani; in Mafia Island despite long term use of community mass administration drugs for about 15 years and twelve rounds in Rufiji district (Jones *et al.*, 2015; Jones *et al.*, 2018).

Aedes species; *Aedes* was the least species having a lower number of mosquitoes among collected species (0.51%, 1). The low number was probably a consequence of ecosystem and feeding preferences. *Aedes* species is a small container available with water, year-round breeder and do not depend on rainfall availability Huber *et al.*, (2002). These species breed in any storage container. In the present study, there was a low close to zero density of *Aedes sp.* during March and April (the months of heavy rainfall in rainy seasons). This result is the same as reported by (Coulibaly *et al.*, 2010; Mohan *et al.*, 2014) in their study on distribution and seasonal variation of *Aedes aegypti* in Abidijan, Cote D'ivoire, Kolkata, India and Argentina. They reported a significant decrease in *Aedes aegypti* mosquito abundance during the period of high rainfall, the rains overflowed storage containers and female mosquitoes lacked space for eggs deposition and this could probably be the reason for low density of *Aedes* mosquito collected in the study area (Powell and Tabachnick, 2013). However, the findings of the present study are contrary to the findings reported by (Emidi *et al.*, 2017). They reported that, during their study, in Muheza Tanzania, mosquitoes of *Aedes* species were abundant during the dry season compared to the rainy season. Conversely, the low density of *Aedes* species collected in Ruangwa district warrants further investigation.

Therefore, identification of the local malaria vector responsible for high malaria prevalence in a study area is an important step in acquisition the information on species composition available, their distribution and role in the ongoing residual malaria transmission (Erlank *et al.*, 2018). This observation would guide in the planning and and implementation of effective vector control strategies.

Conclusion and Recommendation

Conclusions

The results have shown that: *An. gambiae* and *An. arabiensis* are important local malaria vector in Ruangwa district and *An. coustani* s.l and *An. funestus* are less important vectors, but an incidental *An. coustani* has epidemiological concern since it is an important malaria vector in neighbouring countries of Kenya and Zambia along with other African countries like Nigeria and South Africa. The abundance of *Anopheles* mosquitoes are high in rainy season as compared to the dry season. *Culex* species are also found in high density in Ruangwa district. These mosquito species are considered as one of the potential vectors causing Lymphatic filariasis and there is evidence of the presence of microfilaria in human populations in the nearby coastal regions. Therefore, mapping of these vectors in national map of dominant species as identified for the first in Lindi region, planning and effective control and elimination strategies of malaria vector and *Culex* species in the study area would eliminate the ongoing malaria transmission and the presence of microfilaria risks which are ongoing in the neighbouring coastal regions of Tanzania.

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Author's contributions

Clement Godfrida was the principal investigator of the study and led collection of data, designed the sampling technique, conducted data analysis, and interpreted results. Prof. Emmanuel S.Kigadye and Dr. Nicodem J. Govella provided technical support guidance. Ifakara Health Institute laboratory Staff provided sibling species analysis protocol. All authors read and the Open University approve the manuscript.

Conflict of interest: The authors declare no conflict of interest

Ethical clearance: This received an ethical approval from the Medical Research Coordination Committee of the National Institute of Medical Research in Tanzania Reference no NIMRI/HQ/R.8a/Vol. XI /3232. Collectors were employed voluntarily with oral and written consent and advised to withdraw to from the study at any time. Before the study all collectors were screened every week for malaria and were given chemoprophylaxis malarone® without any payment. Anybody found positive was discontinued, fortunately no collector contracted malaria during the experimentation process. Permission to enter households was obtained from household heads after explaining the objective and benefit of the study.

The Role of Urban Agriculture in Alleviating Poverty Facing Women in Tanzania: A Review

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Abstract

This paper examines the role of urban agriculture in alleviating poverty facing women in Dar es Salaam Region in Tanzania. This is a review paper where different literatures including books, reports and journals have been surveyed to answer the identified specific objectives. The findings proved that women's participation in urban agriculture contributes to food security, increases household income, offers employment and reduces poverty. This review paper also found that women engaged in urban agriculture are able to get an average net income of Tshs 58,356.2 per month. Urban farms make the life in the city much easier by creating jobs for women and other family members engaged in it. Urban agriculture offers ecological benefits by reducing the city waste, improving urban biodiversity and air quality, and reducing the environmental impact related to soil erosion and land degradation. Despite its contributions, there are number of bottlenecks facing women's involvement in urban agriculture such as poor markets, water shortage, land shortage, seeds unavailability and lack of capital. Other constraints include unavailability of inputs, crude working tools (hand hoe), lack of government support, lack of water pumping machines for irrigation, poor storage facilities and lack of agricultural extension services. It is recommended that urban farmers should be assisted in transforming the practice of traditional farming into modern, sustainable and environmentally friendly ones in order to increase productivity.

Keywords: Farming, Livestock keeping, Poverty, Urban agriculture, Women

Introduction

According to FAO (2012), 3.1 billion people, 45% of all human in the world live in rural areas. 2.5 billion of whom derive their livelihoods from agriculture (FAO, 2012; 2016). Agriculture is an important

component of the economy of many developing countries as it significantly contributes to domestic food production, employment and revenues of different countries (FAO, 2016). The urbanization process has gradually increased urban poverty (Gamhewage *et al.*, 2015). Increasing urban poverty simultaneously has increased the malnutrition and food insecurity in the urban areas (Baker, 2012). According to the World Bank, poverty refers to a situation where a person is living on less than US\$1.90 per day. This is in line with FAO (2012a) which found that high prevalence of poverty is among urban residents in Sub-Saharan Africa where majority of people survive on less than US\$1 a day and poor housing is among the most glaring manifestation of urban poverty in Africa. Small scale agriculture is one of the economic activities practiced in urban areas and it supports livelihoods of people residing in urban areas (Mougeot, 2000; Mhache, 2015). It is estimated that about 40% of the urban population in Africa is involved in urban agriculture (Mougeot, 2000). Urban agriculture has received increasing attention throughout the developing world (Hamilton *et al.*, 2013).

In Tanzania, urban agriculture is a very common practice and it involves livestock keeping and cultivation of crops (Mntambo, 2012). In Tanzania, some urban dwellers depend entirely on urban agriculture for their livelihoods (Mhache, 2015). Within the informal sector, although an estimated 35.75% of all operators and 34.33% of all employees are women (Mlozi, 2004), the percentage of women involved in urban agriculture is unknown. Urban agriculture ensures food security and income of the people engaged in it in Developing Countries including Tanzania. The agriculture practiced in urban areas is different from the agriculture practiced in rural areas in terms of land size, crops grown (perishable in nature) and type of the people doing it.

Farming and types of crops cultivated in urban areas include onions, carrots, tomatoes, spinach (*mchicha*) and others. These crops are produced both for domestic consumption and for sale. Urban agriculture in Dar es Salaam is practiced in small land size ranging from 0.25 to about 0.75 acre (Jacobi *et al.*, 2000). In this article, urban

agriculture denoted farming and livestock keeping in urban areas. Urban agriculture is an industry located within or on the fringe of a town which grows or raises diversity of food and non-food products (Mougeot, 2000; Mougeot, 2000a). Foeken *et al.* (2004) pointed out that urban agriculture is a common undertaking in most Tanzanian townships and that it is undertaken for both subsistence and commercial purposes. Crops involved in urban agriculture among others include cassava, carrot, cucumber, lettuce, maize, beans, flowers, bananas and livestock keeping among others.

Urban agriculture is defined as production in the home or plots in urban or peri-urban areas. Urban agriculture is the practice of livestock keeping and cultivation of crops in the town or in the city (Nzimande, 2013). As such, it is in most of the cases an informal activity quite difficult to characterize with accurate data and trends (Ruel *et al.*, 1998). Urban agriculture is an activity carried out by both male and female. It is an important source of income for low income households and for female-headed households in urban areas. Small capital, reliable market of crops and small piece of land required are among the reasons for more females to be involved in urban agriculture. Among the characteristics of urban agriculture include ease of entry, reliance on indigenous resources, small scale of operations, labour intensity and lack of formal training (Howorth *et al.*, 2000; Mntambo, 2012).

Urban agriculture provides a better opportunity for additional income by selling the excess produce. A study by Mhache (2015) conducted in Dar es Salaam and Morogoro Regions that focused on the role of urban agriculture in poverty alleviation identified a number of reasons influencing urban people to involve in urban agriculture such as source of income and food. Maxwell *et al.*'s. (1998) study in Ghana identified the constraints faced by women farmers which hamper their participation in urban agricultural activities. Such constraints include lack of capital, lack of seeds and unreliable market as constraints to urban agriculture. Several studies regarding the role of urban agriculture in breaking the poverty of women have been done in different areas (Mntambo, 2012; Mlozi, 2004) but no specific study for Dar es Salaam Region. This review paper is designed to

bridge this gap. The main objective of this paper is to assess the role of urban agriculture in alleviating the poverty facing women in Dar es Salaam Region, Tanzania. The specific objectives of this paper are (i) to identify factors influencing urban agriculture (ii) examine the contribution of urban agriculture in alleviating poverty facing women and (iii) determine constraints facing women participation in urban agriculture in Dar es Salaam Region.

Research Methodology

This is a review paper where different literatures from scholarly articles, journals, books and internet web pages were used to review the role of urban agriculture in alleviating poverty facing women in Dar es Salaam Region in Tanzania. This paper is thus a library study and adopted critical review and analysis in reviewing books and articles in interdisciplinary agriculture studies journals and from food and agriculture bodies from such organizations as FAO. It is based on basic agricultural issues, urban agriculture, problem of food security and women income in urban agriculture.

This paper addresses literatures from Tanzania and other parts of the world. A good strategy for data collection is important for the study to generate the intended results (Tonya, 2015). A selection of strategic writing and paper related to the topic was done. This was a good strategy to ascertain the role of urban agriculture in alleviating poverty facing women in Tanzania. In this review paper, key concepts were identified and clarified. Examples of such key concepts are poverty, poverty alleviation, gender and urban agriculture. Then systematic literature review was done to identify recent and suitable references, whereby about 77% covers literatures published from 2000 – 2018 year. The analysis intended to assist women to cope-up with their life/ livelihoods. The knowledge generated in this paper will support decision makers to put in place strategies to empower women economically and be able to contribute to economic development of their families and nation at large. About 31 journals and books were reviewed for this paper.

Findings

Factors influencing urban agriculture

Agriculture is denoted as an activity involving farming and livestock keeping. Agriculture provides both food and cash crops from which people get income and the government gets revenue and forex. The government is supporting agriculture in different ways such as setting directive of price of agricultural produce, subsidizing fertilizers and pesticides, allocating veterinary officers and extension officers to rural and urban areas to support farmers and livestock keepers. Urban agriculture is undertaken in urban areas wherever land is available (Foeken *et al.*, 2004).

Urban agriculture is practiced in small scale because of limited size of the land available in urban areas which most of the sizes of the land are less than one acre (Mvena *et al.*, 1991). Marginal lands such as flood areas or/ plains and swamp areas are used for urban agriculture. Crops involved in urban agriculture are determined by the type of soil, climate and size of the land available. Crops grown in urban areas include various types of vegetables, fruits (oranges, mangoes, water melon, pineapples, pawpaw etc), maize, beans, bananas and cassava, to list a few. Animals kept in urban areas include dairy cattle, goats, sheep and poultry. In their studies, Mvena *et al.* (1991) and Mhache (2015) identified livestock kept in urban areas as poultry, goats, sheep, pigs and dairy cattle.

According to Sawio (1998), numerous actors of urban agriculture have been involved in the practice including men, women, elderly, professionals, educators, administrators, and the majority of the unemployed and the urban poor. It was further observed that, urban agriculture contributed significantly to the survival strategy to the urban poor and enhanced urban food security (Sawio, 1998; Mvena, 1999; Mhache, 2015).

Urban agriculture is one of the activities in urban areas supporting food and income of the people involved in it (Sawio, 1998; Mhache 2015). Most people in urban areas are engaged in urban agriculture due to lack of employments in private or in government organizations and they thus opt for urban agriculture as a way of

creating self employment. Other people are engaged in urban agriculture as a way of getting money (income) to finance their livelihoods/ survivals. Thus, income is another reason which influenced people especially women and the poor to engage in urban agriculture. Some women or housewives are engaged in urban agriculture as a way of subsidizing their families' income.

Available or ready market of urban agriculture produce has also influenced women to be engaged in urban agriculture. There is a reliable and stable market of the products of urban agriculture. Whatever is produced in urban agriculture gets to market; everyday people prefer to buy products like vegetable and related products. Not many people can buy vegetables which can last for a week, unless one has a fridge as most of the urban agriculture products are perishable. Another factor instigating urban agriculture is the small capital required to initiate urban agriculture since one only needs a plot, seeds, organic manure and water. With capital of Tshs 30,000/= or less one can start farming in urban area.

Contribution of urban agriculture in alleviating poverty facing women

Sustainable Development Goal One (SDG1) is focusing on "end poverty in all its forms everywhere". Urban agriculture is practiced to empower and reduce the poverty facing women. Urban agriculture is used as a tool of alleviating poverty facing both women and their families. The reasons for urban agriculture are inter alia the provision of income, food and support livelihoods of the people. Not all people residing in urban areas have means of survivals, alternatively engaged in urban agriculture. This situation influenced people to engage in urban agriculture to support their families' livelihoods. Benefit of urban agriculture is evidenced by 100–200 million urban farmers worldwide providing the city markets with fresh horticultural goods (Orsini *et al.*, 2013). Produce from urban agriculture helps to supplement the diet and save on food expenses. Women practice urban agriculture as a strategy of poverty reduction. This part focuses on the contribution of urban agriculture through

provision of food security and food quality, employment, income, agricultural education to the family and socio-economic benefits.

Provision of food security

Food security is consistently having access to, availability and being able to afford nutritious, safe and enough food. Traditional agriculture does not guarantee constant food security for the growing population and urbanization. Food production should be further executed using proper technology, applying irrigation, using proper seeds, following advice of extension officer and planting and weeding in time. It is recommended that urban space should be reconsidered to exploit more space for cultivation and food production in order to improve the level of food security. Urban agriculture has opportunity of improving food security by providing healthy and fresh food to urban families. In most cities and towns many people do not have access to affordable and healthy food because of inability to buy or produce their own food. Urban agriculture helps to correct this by reducing the price of healthy food by eliminating the middleman and increasing the opportunity for community members in need to participate in the growing of food.

Families engaged in urban agriculture are more likely to have access to wider variety of nutritious food such as vegetables, fruits and animals' meat and poultry products. Apart from farming, women are also engaged in livestock keeping. Livestock in this paper includes cows, goats, sheep, pigs and poultry. Livestock provides income, milk, eggs and meat. Urban agriculture can be a resilience mechanism for women in low income households' emancipation from poverty. Urban agriculture is important in supplementing food at home hence plays a key role in mitigating problems of food shortages (Sawio, 1994; 1998). In Dar es Salaam, urban farms provide 90% of the city's leafy vegetables and over 60% of its milk (Jacobi *et al.*, 2000). Smaller scale local markets provide the opportunity for farmers to foster more unique varieties of produce. Although the full potential of urban agriculture is still to be determined; based on literature review, raising fresh fruits, vegetables and animal near consumers in urban areas can improve food security and nutrition, especially for underserved communities.

Employment and income

Urban agriculture offers informal employment mainly to women who are engaged in it for sale and for money (income). Most of the produce in urban agriculture is perishable thus it has to be sold immediately thus giving money to women and their families. Income from urban agriculture is particularly high in most African cities. In Bamako, Mali and Dar es Salaam to list a few, the economic return to urban farmers has been estimated to be comparable to the income of unskilled construction workers (Simatele and Binns, 2008).

Women engaged in urban agriculture improve their economic situation through using the income they get to finance their families' needs. The income obtained from urban agriculture is used to build houses, pay school fees for their children and pay for medical treatment of their family members, among others. Since the poor people (people living under one dollar a day) spend up to 85% of their income in food purchase and most urban farmers belong to poor populations, urban agriculture has emancipated many women from the poverty line.

Ecological benefits of urban agriculture

Urban agriculture has ecological benefits by reducing the city waste, improving urban biodiversity and air quality, and reducing the environmental impact related to both food transport and storage (Orsini *et al.*, 2013). By localizing produce, urban farms cut down on the significant amount of fossil fuel consumption necessary to transport, package and sell food items. Urban agriculture is part of the urban ecological system and plays an important role in the urban environmental management system. It is obvious that, a growing city produces more and more wastewater and organic wastes which can be used in urban agriculture. Urban agriculture can help to solve such problems by turning urban wastes into a productive resource. Water used in washing clothes, cleaning the houses, water and waste water from wash rooms can be treated and used in urban agriculture. Tree

planted in urban areas help to sequester carbon produced from vehicles and factories.

Constraints facing women participation in urban agriculture

Urban agriculture is obviously contributing to the livelihoods of many families in urban areas. Despite its contributions, there are number of bottlenecks facing women involvement in urban agriculture. Constraints facing urban agriculture include poor markets, water shortage, land shortage, unavailability of seeds and lack of initial capital. Other constraints are unavailability of inputs, crude working tools (hand hoe), lack of government support, lack of water pumping machines for irrigation, poor storage facilities and lack of agricultural extension services.

The first challenge facing urban agriculture is getting market of the harvest timely and securing good prices of the harvest. Most of the crops involved in urban agriculture are perishable in nature (vegetables, carrots, tomatoes, lettuce, pineapples, mangoes, oranges and others). They need market immediately to avoid getting damaged and rotting which would lead to loss of the expected benefits. In most urban areas like Dar es Salaam City, shortage and unavailability of water for irrigating farms/ gardens is another bottleneck to urban agriculture. The study by Sawio (1998) showed that, water in urban areas is used for domestic and industrial uses; getting water for irrigation is a last resort and is difficult. Sometimes waste water is used which is not safe for human health. In some areas like Jangwani Valley and Bonde-la-Mpunga in Dar es Salaam Region, people used polluted water from industries which have dangerous elements like zinc, iron and other heavy metals which are dangerous to human health.

Urban agriculture is not free from diseases. The literature reviewed indicated diseases as another challenge facing farming in urban areas. Some diseases are naturally caused while others are a result of ignorance; if the causes of diseases are not controlled urban agriculture cannot be beneficial to people, mainly women involved in it. Diseases mainly facing urban farming include blight, canker, leaf-

curl, leaf-spot, powdery-mildew, root-rot and wilt, to list some. These diseases reduce the expected output of urban farming. Shortage of agricultural officers and extension officers to support urban farmers was another constraint facing urban agriculture. Most of the agricultural officers work in rural areas, thus it is difficult to get them in urban areas. Even if one manages to get them, they are very expensive. Thus many urban farmers do not use these agricultural officers.

Getting proper seeds and in time was difficult in urban areas. Some seeds had expired resulting into lack of germination. Fertilizer is one of the important ingredients to urban agriculture. People involved in urban agriculture do not use fertilizers as a result they end up getting poor harvest. Urban farmers do not use fertilizers and pesticides because they are very expensive while other people practicing urban agriculture do not have knowledge of using fertilizers and pesticides. Coupled to availability and high prices of fertilizers, sometimes it was difficult to get proper fertilizers in time and in affordable. Alternatively farmers preferred using manure because it was available for free or at very low price.

Another challenge facing urban agriculture is floods and water logging. In most cases, urban agriculture is practiced in lowland areas, areas susceptible to floods. Floods and water logging is a problem facing lowland areas like Jangwani and Bonde la Mpunga in Dar es Salaam and areas close to rivers. In case of overflowing of rivers, water sweeps all crops grown or planted along the rivers. Some women get loss of their crops because of overflowing of rivers. Apart from floods was drought. Long time without rains leads to stunting of crops, then crops died due to shortage of water. During drought time there is no natural flow of water in most urban areas and resorting to using tap water for irrigation is very expensive and not affordable.

Eviction of farmers and destruction of their crops is another threat to urban agriculture. Eviction of farmers done by municipalities' leads to destruction or damage of crops as urban farmers are not given

notice in advance to vacate (Sawio, 1998). This process of eviction leads to loss of crops, money and energy people have incurred to prepare the land, growing and taking care of the crops. Another challenge to urban agriculture is theft. Thieves steal crops from the farms during the night.

Domestic animals (goats, sheep and cattle) and poultry (chicken and ducks) is another serious problem facing urban agriculture. Animals kept in urban areas feed on crops leading to damage of crops. In some areas animals are freely feeding in the urban areas. Chickens have been pointed in the literature as an issue which has caused conflicts between several families as they feed on crops such as maize and *mchicha*. Some families do live with chicken in the same house which forces them to release them early in the morning feeding on the neighbors' crops or farms.

Discussion

According to Foeken *et al.* (2004), urban agriculture is a common undertaking in most Tanzanian townships and that it is undertaken for both subsistence and commercial purposes. Urban agriculture poses various benefits to urban women and their families. The main benefits obtained from urban agriculture comprise of socio-economic benefits, food security, nutrition and family health (Bishoge and Suntu, 2018). Among these benefits, food and economic benefit receive high attention (Mhache, 2015; Bushesha, 2018). Other people are engaged in urban agriculture for income and employment. According to Smit *et al.* (2001), urban agriculture has proved that economic benefits are essential as the environmental and nutritional benefits. Most studies are in congruency with the observation that urban agriculture contributes significantly to urban food security and household income generation (Bushesha, 2018; Mhache, 2015; Foeken *et al.*, 2004; Dongus *et al.*, 2001).

According to Smit *et al.* (2001), the major economic benefits of urban agriculture are income generation, employment and the development of national agricultural sector. Urban agriculture is crucial to reduce the expenditure on food consumption of the family (Kutiwa *et al.*, 2010). Growing food and non-food crops in and near town and cities

contributes to healthy communities by engaging residents in work and pleasure that improves their well-being. In fact, there are few robust analyses that measure the actual social, economic and health impacts of urban agriculture; it is obvious that, improved urban agriculture contributes in food security. With rapid urbanization and population increase, urban agriculture has evolved from a simple and traditional activity into a commercial and professional activity (FAO, 2008). The study by Mhache (2015) and Foeken (2004) found that, urban agriculture is an important activity for people mainly women residing in urban areas. Women were engaged in urban agriculture because of many reasons such as small capital to buy seeds, hoe and big knife (*panga*). Urban agriculture can be done by everyone because it does not need to have higher education and big capital.

For women, food security and income are the main motivation for engaging in farming in town, and for some it is a survival strategy (Foeken, 2004). Nevertheless, many of the urban poor engaged in urban agriculture sell some of their produce not only to enable them to afford other basic household needs such as buying food, paying school fees and medical treatments but also because some crops are perishable and cannot be stored and/or because storage space is not available. Almost 50% of the crop cultivators consider crop cultivation activities in town as their major food source. Yet quite a number of households sell some of the crops they produce. People have used the income obtained from urban agriculture to build houses, paying for school fees for their children and paying treatment costs for their families.

Urban agriculture is not free from constraints. The constraints facing urban agriculture vary from one urban area to the other; some constraints are natural and some are human induced. Through literature review, different constraints facing women participation in urban agriculture were discovered. Some of the challenges facing farming in urban agriculture included poor markets, water shortage, land shortage, seeds unavailability, lack of capital, unavailability of inputs (pesticides and fertilizers), crude working tools, lack of government support, lack of water pumping machines for irrigation

(during the drought), lack of man power, poor storage facilities, and poor/ lack of agricultural extension services. It was also found that, most of the people involved in urban farming do not have title deeds the land and lacked land tenure which makes them susceptible to eviction. Eviction has left some people with nothing as their crops got damaged. Also lack of land tenure does not allow people to grow perennial crops such as planting fruits like mangoes, oranges, coconut, guava, lime, avocado, banana and jackfruits. These are the main constraints facing urban agriculture in Tanzania and other urban areas in Africa. It is true that, in most urban areas there is no land left for urban agriculture. People on their own-will cultivate wherever they see free land.

Through literature review it was discovered that, challenges facing urban farmers are unreliable markets, low prices of crops and price fluctuation. Vegetable growers during the peak seasons, prices usually go down significantly due to bumper harvest to the extent that vegetable growers failed to break even. The problem of unreliable markets is compounded by low/poor technology whereby produces are sold raw since no processing is done to improve preservation and sell when the price is good or is high. Low and lack of capital is a hindrance which does not enable farmers to process their crops in order to add value and preserve crops for the future sale. Lack of capital also limits farmers from buying farming machines and implements. Due to lack of capital farmers in urban areas could not afford water pumping machine to draw water from a nearby river channel. As a result, farming becomes labor intensive which is less profitable. FAO (2012) noted similar findings that, vegetables grown in Tanzania urban areas are highly perishable and that production is very low-tech based, and it is basically based on such simple farm tools as hand hoe and watering can.

Land is a problem to almost urban all farmers, majority of the farmers have less than 0.5 acre for agricultural activities. This is contrary to the Town and Planning Ordinance of 1992 which recognizes urban agriculture as one of the country's developmental strategies and thence forth it sets a limit of 1.2 ha of land per urban farmer (FAO, 2012). Seed is another challenge facing farmers in urban areas. In the

literature, farmers reported that, seeds for some vegetables are hardly available; such vegetables include chilly, elephant tomatoes, spinach and Chinese. In some cases seeds perform poorly in terms of germination. Furthermore, farmers noted that extension service is poor as they hardly receive any agricultural officers who could otherwise assist them with relevant advice and ultimately improve production and productivity.

Urban agriculture is undertaken mainly by women for both subsistence and for commercial purposes. Many of the women involved in urban agriculture are housewives as a way of subsidizing income of their families while others are separated, widowed or single (not married). Thus, these women rely on urban agriculture as a strategy of getting food, income and employment. Thus, this article concluded that food and economic benefit are the major benefits and roles of urban agriculture. Growing food and non-food crops in and near town and cities contributes to healthy communities by engaging residents in work and pleasure that improves their well-being. For the women engaged in urban agriculture, food security, income and employment are the main motivation for them being engaged in farming in town, and for some it is a survival strategy (Foeken, 2004). The study by Mlozi (2004), found that urban agriculture relieved urban residents from income poverty. Like most farmers with seasonal income, they do not keep records of their revenue and thus it is difficult to calculate profit and loss.

However, the study by Mntambo (2012) found that, revenue per month for *matembele* was Tsh. 40,000, Tsh. 30,000 for Chinese and Tsh 50,000 for Amaranthus in an area of less than 0.25 acre. These estimates varied with the size of the cultivated area, type of agricultural inputs used, water availability as well as productivity. Thus, women engaged in urban agriculture are able to get an average net income of Tsh 58,356.2 per month (Jacobi, 1996; Mntambo, 2012). It is true that, urban agriculture has relieved women from income poverty, employment and food. Poverty is the situation in which a family lives below 1 US Dollar which does not enable the family to get the required food and other necessities. With urban agriculture,

women are able to get income and feed their families, as a result, poverty is reduced. This activity has helped women to deal with marital problems, since they recount through struggles; their husbands had taught them to work hard and earn their own income which is used for taking care of their children. The wife does not have to wait for them to bring money; you buy food from the vegetable sales or pick vegetables to cook for your children". This shows the importance of urban agriculture to women and their families.

Conclusions and Recommendations

Poverty is a situation where people or family fails to meet their basic needs. The World Bank defines poverty as living on less than US\$1.90 per day. In African societies, man is the head of the household; he is supposed to feed the family and finance other activities such as medical treatment, paying for school fees, buying clothes and many others. In comparison, men support the family while women fulfill the family needs with the assistance of men. In the absence of men, women take the responsibility of men. Women practice urban agriculture on a small scale and thus earn little income. The little income women get in urban agriculture enable them to meet their needs such as feeding their families, paying for school fees and medical treatments and paying rents for the house they reside in. On average, urban agriculture gives women engaged in it an average net income of Tsh 58,356.2 per month. Since women engaged in urban agriculture have managed to meet the basic needs of their families, urban agriculture has relieved women from poverty. Apart from farming, women are also engaged in livestock keeping. Livestock in this paper includes cows, goats, sheep, pigs and poultry. This activity provides income, milk, eggs and meat.

It is recommended that the government should monitor the implementation of its policies such as the National Agriculture and Livestock Policy as well as other relevant guiding rules and regulations so as to ensure proper support to urban farmers. Water supply is an important infrastructure for urban agriculture; hence considerations should be made to ensure that urban farmers are provided with the necessary support for them to access water resources for agriculture. Furthermore, as FAO (2012) suggested,

urban farmers need to be encouraged to form cooperatives which can help them to negotiate better prices for their produce. With cooperatives urban farmers can apply for training from by Small Industrial Development Organization (SIDO) on how to process their crops and add value to it. The government at local levels should also assist farmers in terms of access to soft loans with a focus to improve agro-processing units and small industries. Finally, extension officers should collaborate with different stakeholders for sustainability of urban farming.

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Guide for Authors

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Huria Journal is an international journal that publishes original research papers of academic interest (theoretical, applied and general), targeting tertiary institutions and researchers and is therefore hospitable to scholarly writing on a variety of academic topics. The types of contribution range from original research papers, review articles and technical notes.

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The first page following the title page should contain an abstract. Abstract should contain up to 250 words mainly of the summary of background, objective, methodology, main findings of the paper and conclusions and recommendations. Three to five key words representing concepts of the paper may be written at the end of the abstract. The Abstract shall be in italics.

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Figures must be clearly drawn, placed as close as possible to the related text. All Figures must be numbered according to the order in which they appear in the text. A Figure caption should be typed in bold immediately below the Figure.

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Gao, S., McGarry M., Latham, K.E., Wilmut, I. (2003), Cloning of Mice by Nuclear Transfer. *Cloning stem Cells*, 5: 287-294;
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