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ECONOMIC GROWTH BEYOND STRUCTURAL TRANSFORMATION IN TANZANIA- SMALL AND VULNERABLE ECONOMY

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ABSTRACT: *War against three development archenemies (ignorance, poverty and disease) started in 1961. Since then enormous efforts have been underway in different phases with different objectives. Recently, Tanzania Development Vision (TDV-2025) set the goal of transforming the nation in to semi-industrial or middle income nation. This paper investigates economic growth beyond structure changes to analyse nexus between structure transformation and productive sector during growth process. The study found that despite of up-haphazard structure changes there is direct connection between structure changes and economic growth. Statistics shows that 1% change in the primary, secondary, high school, vocational/college and university create a change of 33.5%, 1.9%, 27.1%, 0.1% and 23.9% to the employment respectively. Similarly, 1% change in employment in agriculture, industry and service sector create change of 9.8%, 0.06% and 2.5% to the GDP respectively. Therefore, education is the determinant of changes in the employment while employment determines changes in the GDP.*

KEYWORDS: Tanzania, Structure Transformation, GDP, Inclusive Growth

INTRODUCTION

Soon after independence in 1961, Tanzania declares war against three development archenemies which are Ignorance, Poverty and Disease. Since then these three trio-archenemies have been mainstreamed in the strategies, policies, plans and programme to free the nation from them. The outcome started to be seen in early 1980s, whereby over 90% of Tanzanians were able to read and write and over 90% of school age children were enrolled in schools. On the other side, there was significantly expansion of health facilities and staff pairing with better improved water system. The idea was to ensure that people are in a good heath and have enough skills and knowledge that can be applied to increase productivity. This was to prepare the people for smooth economic transformation and fuelling the effort of removing the trio-development archenemies.

Globalization and modernization forced the plans and programme underway to be modified within different phases. However, the transformation challenges and economic growth trend have been tricky, partly because the relationship is multifaceted and dynamic, nonetheless it is vital to know background and phases of economy so that we can understand their contribution to the current economic situation. The first phase was from 1961-1980, where the country

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deliberated effort to build national unity. The second phases started in 1981 to 1995 with main focus on macroeconomic stability, quality of public financial management, policy development and implementation, reducing government expenditure and minimize domestic and non-concessional borrowing. In this phase there was an adoption of structure adjustment and reforms which were aimed at restoring stabilization and growth with no clear socioeconomic transformation objective. The phase is characterized by rapid but jobless growth (Kilama & Wuyts, 2014), low productivity within and between productive sectors in which agriculture absorb all surplus labour within the economy. However, there was a degree of improvement in the degree of environment of economic growth. The third phase was from 1996-2012, in this phase the country embarked on more comprehensive economic and social policies implementation with the focus in the development agenda. The target was on higher level of investment in human capital and physical infrastructure, improvement of business environment and strengthening of government capacity (Utz, 2008).

The past three years, the country's focus is on the economic development in the context of improving livelihood of their people by strengthening its fiscal position through fiscal consolidation measures, but main determine to transform the economy to the semi-industrial to make the nation as the middle income country. Programme, policies and strategies developed encounter number of challenges to compete, but using its policy to spurs economy in a wide gain and makes use of its available opportunities and engenders economic development in rural areas, might triggered significant increases in productivity and investment in the manufacturing sector through inclusive growth policy as a driver of the economic development. For historical reasons, the structure of the economy was dominated by agriculture (still dominate) for past five decades, while that of industrial is dominated by manufacturing of food and beverages, the structures that have been existed since independence, the slow changes is partly caused by limited financial resources to implement structural change, but also the external influence to the governmental plans

This research study investigate economic growth pattern to analyses the behaviour of the productive sectors during growth process and beyond structure transformation. The study came in right time as the nation is doing multiple efforts aims at improving livelihood of the people and transform the nation into middle income country by 2025.

EXPERIENCES OF ECONOMIC GROWTH AND STRUCTURE TRANSFORMATION

Growth and Economic Structure in Tanzania

The structural transformation in Tanzania, as elsewhere in East Africa was extremely limited (Kenny & Syrquin, 1999) until 2000 where the service sector started growing faster than agriculture sector (figure 1). This has caused the shares of agriculture in total output and of primary exports in total exports going downward trend but remain dominant in total employment. For the past five decades, the share of food consumption in total consumption has remained stagnant at approximately 70 percent of total household expenditure (World Bank & URT, 2002). Compare with structural change in East Africa, the structural transformation in Tanzania based on share of the labour force which has been changing up-haphazardly. Agriculture labour force shares decreased from 90 percent in 1965 to 65.7 percent in 2012 then to 62.1 percent in 2014. Whilst service sector share of labour force increase from less than one percent to 24.7 percent in the same period of time. A study of Komba (2010) reported

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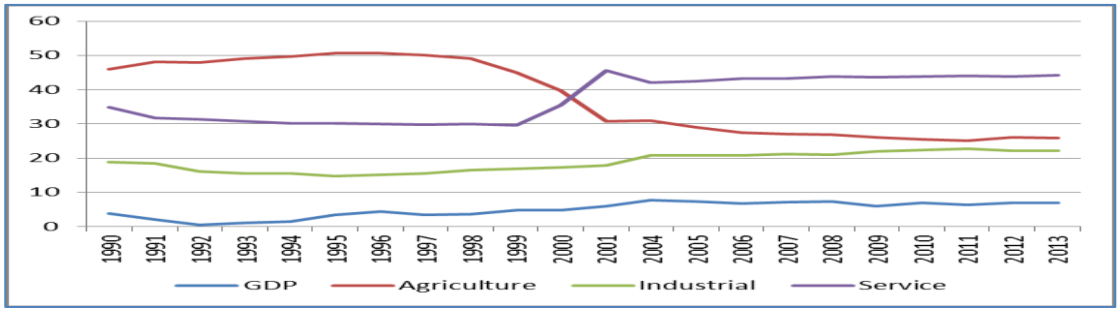
contribution of labour in Tanzania economy grew from 0.7% in 1961-1966, 1.3% in 1967-1985 and later fall to –0.9 in 2000, then grew to 0.3 in 2005 and 3.1 in 2009.

Since the economy is in the state of transformation from agrarian based to semi-industrial economy, although existing industries are dominated by the food manufacturing which accounts for about 22 percent of GDP and concentrates on agricultural processing and the manufacture of light consumer goods. However, the improvement of road underway, railway, water transportation and discovery of gas has the potential to increase production of equipment and machinery industries. Industrial development which was dominated by public enterprises was marked by low technological adaptation and absorption, however, privatization of manufacturing enterprises that formerly were publicly owned gather momentum, signs are appearing of gains in efficiency and greater use of new technology. Although still there is a big potential for explore given the natural and mineral resources endowments of the nation.

Market Based Economy Institutionalization

In 2000, the government has embarked on institutionalizing market-oriented economic systems after nearly three decades of a socialist approach to economic and social development (World Bank & URT, 2002). For nearly a decade, economic reforms took place against the backdrop of the inertia of the government's control mentality, as well as property rights and legal systems that were designed to facilitate a socialist economy. After privatization, private sector became main implementer of the market-based economic policies, while government concentrating on the core functions of the government (law and order, defence and security, the regulatory framework, and the provision of infrastructure).

However, despite of all changes, attitude and perceptions of the people remain the same, of which change of attitude and perception was not prioritized until recently where the service sector target changes in attitudes and enhanced efficiency in the delivery of public services (World Bank & URT, 2002). One can say service sector is the new pacemakers for growth, unlike the pre-reform period, when the sector was dominated by government institutions which had no sufficient coordinated service delivery policy, the core of the open business is now open market oriented and guided by the private sector. However, for sustainability the nation has to invest more in market research, infrastructure, publicity, promotion, and improvement of service skills.



Data source: Tanzania national bureau of statistics (2014)

Figure 1: Trend of main productive sectors contribution to the GDP

Figure 1 showing the abrupt decrease in agriculture contribution to the GDP from more than 50% in 1995 to 26% in 2013. Nevertheless, the economic growth changes over time, not only in terms of their rate of expansion but also in terms of their structure and the evolution of

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relative productivities between and within the sectors. Thus, economy does not just grow in size but also changes in appearance. Therefore, figure 1 depict historical trajectory short-run ups and downs in the rhythm of quantitative expansion of Tanzania's aggregate economic output, and not growth history of Tanzania as it associated with major process of institutional and structural changes with massive relative price changes that invariably take place in a growing economy (Kilama & Wuyts, 2014).

However, the modest growth of agriculture sector recorded since 2000, which was gauged through indicators such as changes in technology, infrastructure development, prices of certain cash crops, and changes in volumes of outputs of certain crops and livestock and acreage under crops over time, despite the fact that it has not been translated into livelihoods improvement. Recently massive shift of percentage of employment from agriculture sector automatically lowers the contribution of agriculture to the GDP and gives a way for service sector to gain and expand in the same manor.

Decreasing share of agriculture in GDP while is still maintaining high share of employment (65.7%), shows that the agricultural labour remains 'locked' because agricultural productivity remains persistently low, which make agriculture acts as a refuge sector of excess labour.

METHODOLOGICAL APPROACH

Productive Sector Approach

There are two main difficulties that justify the use of a macro-micro modelling framework: (a) it is almost impossible to isolate a control group for a macroeconomic policy because, by definition, all individuals and households are affected by the same policy; (b) It is needed to figure out not only a micro but also a macro counterfactual, and the latter usually has to be done in a general (Corso, 2011).

The data for this study were culled from Tanzania National Bureau of Statistic, Ministry of Education and Vocational Training and World Bank data store. The annual growth rates of GDP were calculated by using the time series data from 1990 to 2012, whereby calculation of the pattern of the growth and behaviours of the economic structures represented by three main "*productive sectors"* contributed by the percentage share of employment on (a) Agriculture sector (known as Primary), that is crop, animal, fishing and forestry. (b) Industry sector (known as Secondary) that is mining, manufacture, electricity, gas, construction and water (c) Service sector (known as tertiary) that is trade, finance, hotels, transport, storage and communication. The three sectors represent total employment for both public and private sectors. The time series data of employment for single years are missing, so the data from labour force surveys and employment earning surveys of 1990/91, 2000/01, 2002, 2006/07, 2010/11, 2012 and 2013 were used. For easiness of analysis following abbreviation of variables were used: GDP representing annual growth rates of economic growth, whereby, PA, PI and PS is percentage share of employment in agriculture, industry and service sector respectively.

Statistical Analytical Models

Since the data were time series, Prais-Winsten autoregressive model for both STATA and or SPSS packages were used as the main tool of analysis depending on the variables. The method of computation was autocorrelation of residual, however to avoid omission of the parameter due to the collinearity in Prais-Winsten model, the suppression of the constant term was observed. GDP used as dependent variables while employment in each sector was used as

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independent variable. The nonparametric analysis to test hypothesis through Kendall's tau *(τ)* and Spearman's rho *(ρ)* correlation coefficient were used as the main tests. The models used for testing was;

$$GDP = \alpha + \beta PA \quad \ldots\ldots(1)$$

Where *GDP* is economic annual growth rate, *PA* is the proportion of employment in agricultural sector to the total employment, and economic growth elasticity of an increase in agricultural employment.

$$GDP = \alpha + \beta PI \quad \ldots\ldots(2)$$

PI is the proportion of employment in industry sector to the total employment, and economic growth elasticity of an increase in industry employment.

$$GDP = \alpha + \beta PS \quad \ldots\ldots(3)$$

PS is the proportion of employment in service sector to the total employment, and economic growth elasticity of an increase in service employment.

Correlation Coefficient Test

The nonparametric analysis of Kendall's tau (τ) coefficient and Spearman's rho used to measure association between the productive variables to see their dependent. Whereby the Kendall τ coefficient used to test hypothesis was:

$$\tau = \frac{NC - ND}{\frac{1}{2}n(n-1)}$$

Where *NC* is numbers of concordant pairs and *ND* is numbers of discordant pairs for the production sectors on each other. While Spearman's rho *(ρ)* model used was:

$$\rho = 1 - \frac{6\sum P_i^2}{n(n^2-1)}$$

Where *P* represents employment in the sector, *i* is the number within the sector and *n* is numbers of the sector. The study defines the hypothesis as:

Ho: $\tau \geq 0$, against
H1: $\tau < 0$, in the regression.

Education and Health Methodological Approach

The employment in the nation depends entirely on the education of its people, this study used the percent of employment to the total population above fifteen years ratio as independent variable for different levels for Tanzanian education system. Specific series of NBS data from 1996 to 2012 with combination of the data from Tanzanian census of 2012 were used in the analysis. The relationships between three main productive sectors were the main focus with clear consideration of the growth and behaviours of the economic structures during transformation. At the same time, health status of the people was used as it might affect productivity. Health has greater significance in the impact of three main productive sectors mentioned above. However, the nexus between sectors was analysed based on the education and health of the people by considering employment as the dependent variables.

Regression through Prais-Winsten AR(1) was carried on six parameters, which are percentage of employment to population ratio for the population above fifteen years old as dependent variable against independent variables, such as primary, secondary, high school, vocational training, teacher training & college and University enrollment. The model used was:-

$$E = \alpha + \beta Pi$$

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Whereby *E* is the % of employment to the total population ration of the age below or above fifteen, α is the constant term, β is the correlation coefficient term for the parameters, *P* is the Education at the i^{th} level, whereby, i^{th} term is; primary, secondary, high school, vocational/college and university levels.

RESULTS ANALYSIS AND DISCUSSION

Economic Growth Pattern and Behaviour of the Productive Sectors During Growth

Agriculture Slows Down Economic Growth

Agriculture sector has employment potential but there is no proper service delivered to the producers since the agriculture has not well developed in such a way that farmers are specializing. Farmers are not only still doing multitask (doing agriculture and non-agriculture tasks) but also working in small plots for subsistence. The study analysis of the nexus between economic growth and employment effect on agricultural sector shows descending growth, opposite of the economic growth trends (agriculture decreases while economic growth and other sectors are increasing).

However, statistical results show that 1% change of employment on agricultural sector can create change in the GDP growth by 9.8%. R^2 was 80%, and the result was statistically significant. These results show vividly the potential that agriculture has towards employment creation. However the potential has not been explored, hence slowdown growth of agriculture partly caused by poor support in the agriculture transformation hence limits sector's productivity, ultimately slow down development in agricultural intensification and commercialization. Another reason of retarding agriculture is overtaxed, especially during the control regime, whereby inadequate public support for boosting productivity growth in the sector has also stagnated its growth and ability to shift from subsistence to the commercialization. An important result obtained by Kendall's tau was that the asymptotic distribution of t- statistic on its independent variables and their behaviour in the Newey-West regression. A high negative value of Kendall's tau statistic (τ-statistic) indicates the opposite growth pattern of the agricultural sector against other sectors and GDP growth but not decrease in potentiality.

Slow intensification in agriculture constrained access to inputs (World Bank & URT, 2002), finance access and timely advice based on sound research. In fact, enormous researcher pointed out several reasons for retarding agriculture growth but the major reason is low productivity which is critical for raising incomes of the majority of the poor households in the rural areas. The low productivity is cause by insufficient allocation of agricultural research and development (less than 0.3% of GDP). In fact services delivered by government are insufficient, that cause difficulties in accessing farm inputs (fertilizer and improved seeds) in a timely manner and at affordable prices. URT (2011) reported abuses of the subsidy voucher scheme such as farmers selling vouchers but also selection of eligible farmers was based on favouritism. But also subsidies were given to few people (1.5million only) while the demand is high (over 8 million). To worsen the situation even the smallholder farmers who received subsidy has insufficient knowledge on how to optimize the use of improved agriculture technologies, caused by insufficient of qualified extension services/workers in terms of numbers, and quality service delivered by them to the farmers.

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Table 1: Kendall's Tau Results of the Test

			GDP	Agriculture Employment	Industry Employment	Services Employment
Kendall's tau_b	GDP	Correlation Coefficient	1	-0.8	0	0.8
		Sig. (2-tailed)	.	0.05	1	0.05
	Agriculture Employment	Correlation Coefficient	-0.8	1	-0.2	-1.000*
		Sig. (2-tailed)	0.05	.	0.624	.
	Industry Employment	Correlation Coefficient	0	-0.2	1	0.2
		Sig. (2-tailed)	1	0.624	.	0.624
	Services Employment	Correlation Coefficient	0.8	-1.000**	0.2	1
		Sig. (2-tailed)	0.05	.	0.624	.
Spearman's rho	GDP	Correlation Coefficient	1	-.900*	0.1	.900*
		Sig. (2-tailed)	.	0.037	0.873	0.037
	Agriculture Employment	Correlation Coefficient	-.900*	1	-0.2	-1.000**
		Sig. (2-tailed)	0.037	.	0.747	.
	Industry Employment	Correlation Coefficient	0.1	-0.2	1	0.2
		Sig. (2-tailed)	0.873	0.747	.	0.747
	Services Employment	Correlation Coefficient	.900*	-1.000**	0.2	1
		Sig. (2-tailed)	0.037	.	0.747	.

* Correlation is significant at the 0.05 level. ** Correlation is significant at the 0.01 level. Negative sign means deccending
Source: authors calculations

On the others side, dependency of rainfed reduce farmer's output, actually, rainfed dependency is cause by lack of irrigation schemes despite of availability of fresh water in most places. Skarstein (2005) reported 6 per cent of the crop-growing holdings use irrigation and only 2 per cent of total planted area was under irrigation. He mentioned rivers as the most common source of irrigation, done through furrows mainly in Kilimanjaro, Arusha, Tanga and Mbeya.

Low productivity is partly contributed by attitude of farmers. Comparing agriculture productivity in different regimes between and within East African Community (EAC); Tanzania productivity was 2% in 1965-1976 (lower than Uganda, Kenya and EAC average), then increases to 3.5% in 1975-1986 (highest within EAC), then decreased to 2.6% in 1985-1996 (highest within EAC), then decrease to -5.2% in 1996-2006. It therefore increases to 4% in 2005-2011 (lower than Uganda and Rwanda but higher than EAC average). Generally, average productivity for 1965-2012 was 1.7%, which is higher than neigbouring countries and

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the regional average. Despite of this, most farmers still doing subsistence farming (70% of farmers use hand-hoe, 20% animals, 10% tractors) that make agriculture unattractive to the youth, as it seem as un-paying business. However, high post-harvest losses (estimated to be 30% for cereals, 70% for fruits and vegetables and 20% for fisheries), partly caused by poor access to the market (restricted market) and market information, pose a challenges for investment in agriculture. URT (2011) reported lags behind of agricultural investment compared to other sectors, partly caused by insufficient support of physical infrastructure, such as rural roads, energy and storage facilities as well as financial services in the agricultural sector.

Table 2: Percentage Agriculture productivity (cereal) in Tanzania compared with EAC in different regime

Regime	Tanzania	Uganda	Burundi	Kenya	Rwanda	East Africa Regional
1965-1976	2.035	4.27	0.83	2.335	-3.14	2.535
1975-1986	3.495	0.42	0.6	-0.765	0.755	1.03
1985-1996	2.635	1.77	1.29	0.545	-1.07	1.875
1996-2006	-5.21	1.04	-0.335	0.42	-1.575	-2.44
2005-2011	4.01	6.66	-0.08	-2.54	12.22	3.13
1965-2011	**1.73**	**1.08**	**0.74**	**0.55**	**0.17**	**0.96**

Source of data: Karugia, Joseph; Massawe, Stella; Guthiga, Paul; Macharia (2013), authors own calculations

Box 1: Relationship between GDP and employment in productive sectors

i)Relationship between Growth Rate (GDP) and employment in Agricultural Sector (Primary sector)

$$GDP = 19.30 - 9.80PA + e_t \qquad R^2 = 0.801$$

ii)Relationship between Growth Rate (GDP) and employment in Industrial Sector (Secondary sector)

$$GDP = 0.62 + 0.06PI + e_t \qquad R^2 = 0.521$$

iii)Relationship between Growth Rate (GDP) and employment in Service Sector (Tertiary sector)

$$GDP = -2.4 + 2.5PS + e_t \qquad R^2 = 0.861$$

Utz & Ndulu (2002) strongly argued that, to expect structural transformation to occur together with accelerated growth, agriculture should be given priority. The argument is armour-plated by the fact that industry (secondary) and service (tertiary) sectors has been growing at significantly higher rates than agriculture, but this does not imply that industry and service sector should come at the absolute expense of agriculture. In fact, agriculture is still the backbone of the economy and it has massive potential of growing and has big share of employment than other sectors. It was reported by World Bank & URT (2002) that Tshs 1 worth of income generated in agriculture generates a Tshs 1.80 increase in overall GDP, compared with Tshs 1.20 if the same income were generated in light industry. This implies that for smooth structural transformation the support of agriculture should base on a cohesive, long-term strategy that targets intensification and commercialization.

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Industry Productivity Supports Economic Growth

Industrial sector show partial relationship with GDP, agriculture and service. However, Kendall's tau coefficient shows strong concordant pair but the results show no significant effect on increasing employment. The results shows that 1% changes of employment on service sector can create a change in the GDP growth by 0.06%. The results indicate that industrial sector is still small and shall remain small until there is deliberate support gear toward modernization. Poor performance of industrial sector is mainly caused by the massive closure or failed public and parastatal enterprises, as well as power instability. Actually, industry has managed to continue posting an average annual growth rate of 8.4 percent in the past decade (2001-2013), compared to 5% in 1990-2000. This means that new invested and surviving firms are growing much faster to more than compensate for failing firms. Deliberate efforts needed to enhance the consistent supply of skilled labour to support the existing and potential investors towards open markets and withstand global competition.

There is no doubt that productivity in industrial sector has been increasing tremendously since 2000 from 5.2% to 7.8% in 2005, showing prospect of revamping the sector. The history of slow development of industry is due to the fact that the manufacturing sector is often seen as the champion of technological change only if its structure is dominated by metals and engineering activities. For Tanzanian case manufacturing sector is dominated by food, beverages and tobacco, which rank first in all three policy regimes (Mbelle, 2005). Reflecting to the historical legacy, after independence in 1961, the economy had no significant industrial activities, it started with few industries while importing substitute consumer goods, and giving priority to the beverage and textile industries to emerge, which have been dominating the sector until recent. Since Tanzanian vision is to be middle income country by making the nation semi-industrial by 2025, the road towards revamping the sector is still at large. In fact it is expected that the policy makers should lead the process of transforming the country's economy from low productivity and low growth to dynamic economy and high productivity, associated with structural change and sustained income growth.

Service Sector the Catalyst for Structural Change

Service sector shows positive trend of growth between economic growth and employment effect. Kendall's tau test revealed concordant pairs of the two parameters. The results show that 1% change of employment on service sector create a change in GDP growth by 2.4%. R^2 was 86.1%, the result was statistically significant. The service sector had slow growth until recent where it gained momentum. The structure change in Tanzania has been so fast with no proper preparation since industrial sector has not yet developed enough to pass to the service sector, this means, still there is no proper specialization.

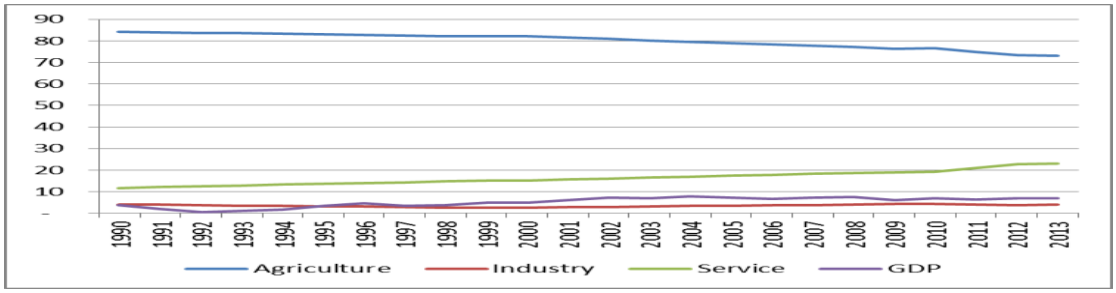

Figure 2: Shows growing trend of GDP and % of employment in Agriculture, Industry and service sectors.

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The Figure 2 shows the growing trend of the GDP and employment in different sector. While GDP is slightly increasing, the employment in agriculture is experiencing decreasing trend while the service and industrial (show slim changes) sector are increasing. The decrease in total employment in agriculture is mainly cause by government withdrawal of public sector involvement in the delivery services which left it to the private sector which been slow in filling the gaps. Poor availability of price information, poor infrastructure, undeveloped financial facilities, and weak competition in the markets, contributed to the shift of labour force from agriculture to other sectors. High costs of transportation of agriculture products caused by to poor condition of the rural road network and inadequate connectivity of this network to the main road arteries limit accessibility to markets. Lack of clearly defined and coordinated strategies among the various government institutions for the development of agriculture, and of rural development more broadly, constrained the development of a coherent strategy for the transformation of agriculture; as a result give way to service sector to grow.

NATIONAL INCOME AND PRODUCTIVE GROWTH

The national income per capita shows the similar trend, the economic growth will be affected if the employment in the productive sectors changes. The effect is strong in agriculture sector, followed by service and industry sector. To be precise, changes of 1% in the employment for the agriculture, service and industry sectors will results to an increase in the national income per capita by 27.97%, 6.12% and 1.32% respectively.

Reason for Unexpected Structural Change

The structural shift from agriculture to services and industry sectors is partly caused by migration of people from rural to urban area, the statistic shows that urban households at national level increased from 26 percent in 2002 to 33 percent in 2012; whilst those in rural areas decreased from 74 percent to 67 percent in the same period of time. This implies that there was a shift of labour force from agriculture (mostly done in rural area) to service or industry sector (both are most located in urban area). The shift of workforce from agriculture to service may be instigated by multiple reasons but mostly is insufficient service delivery in rural area.

This research paper found that, people in rural area acquire their land through inheritance, which affects the status of being used as by youth who are in the age of being independent. Similar finding was also reported by Proctor & Lucchesi (2012) that 51 percent of households in Sub-Saharan Africa (SSA) inheriting land that is already under cultivation were the most common means for their young people to obtain land. This means, the land for youth can only be available when their parent retired from agriculture work or if they have decided to shift their activities to another sector or if they die. The fact is, youth cannot stand by waiting to get land from inheritance rather will look for opportunity elsewhere. Since the service sector seem to be the most attractive as it is full of new technology, then most youth shift their workforce on service sector.

NEXUS BETWEEN SECTORS DURING GROWTH AND TRANSFORMATION PROCESS

Economic transformation is important for sustained income growth as it allows economies to catch up by sustaining high growth rates over extended periods of time (Aghion & Howitt, 1992; Romer, 1990). Empirical evidence shows that not a single country has been able to

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achieve significant economic growth and poverty reduction without structural transformation and economic diversification (Imbs & Wacziarg, 2003). The way in which economic transformation shapes its people depends on the precise characteristics of that transformation process. For low income countries with small economy, structural transformation implies export diversification as access to foreign investments enables countries to realize economies of scale (Hausmann, Hwang, & Rodrik, 2007). This research analyses conditions affecting the ability of individuals as well as household to engage productively and contribute to the economic transformation.

Economic transformation process involve analysis of multifaceted factors, which includes education and health of the people who work in the sectors and they can adversely affect the economy depend on their status. For example if the education or heath system is not accessible, or if education does not match with skills demanded by employers, then the education structure is problematic. In the same way if the health service system does not allow everyone to be served then the producers will reallocate time to take care of sick relatives (more time will be spent in the hospital rather than doing production). This will definitely impair the productivity, hence affecting economic growth and exuberating poverty among community.

Education and Health Access

The education and health was chosen because it is viewed as critical to promoting social mobility and therefore improving equity. The ability of a country to educate and take care of health of its people must not depend solely on schooling or enrollment rates or number of health care buildings, but also on its capacity to provide quality service, such as knowledge and skills for education and treatments for health, all these required to be delivered effectively, efficiently and on time needed the community around it. While accessing education and health are mostly certainly a necessary condition for development, it is by no means quality is not a question.

However, this paper focus is on access to education and health care, with less focus on quality. The household survey data used for the analysis do not contain information on the quality of education or health services. However, the issue of improved access to education and health care is relevant where by a descriptive analysis of key education and health indicators were done with some emphasis on the quality. For the simplicity of the analysis, this paper divides the discussion into two parts; (1) education and (2) health, for the period of twenty five years (1990-2014).

Education Trend in Tanzania Since 1990 To 2014

Education system is divided into formal and informal. Informal is the education of to-out-of formal education system which has two part; children aged 11 – 18 years who missed formal education, which takes 2 to 3 years to graduate (NBS, 2015). Second part is adult education which takes all persons aged 19 years and above (NBS, 2015) taking the same years 2 to 3 to graduate. The adult education programme offered includes Integrated Community Based Adult Education (ICBAE) for basic and post literacy education for advanced stage. For instance, in 2012, there were 43,258 students attending different levels of teacher's training selected across the country for advanced stage learning (NBS, 2015).

The structure of formal education and training system in Tanzania is a 2-7-4-2-3+, which means; two years of pre-primary education, seven years of primary education, four years of ordinary level secondary education, two years of high school or advanced level secondary

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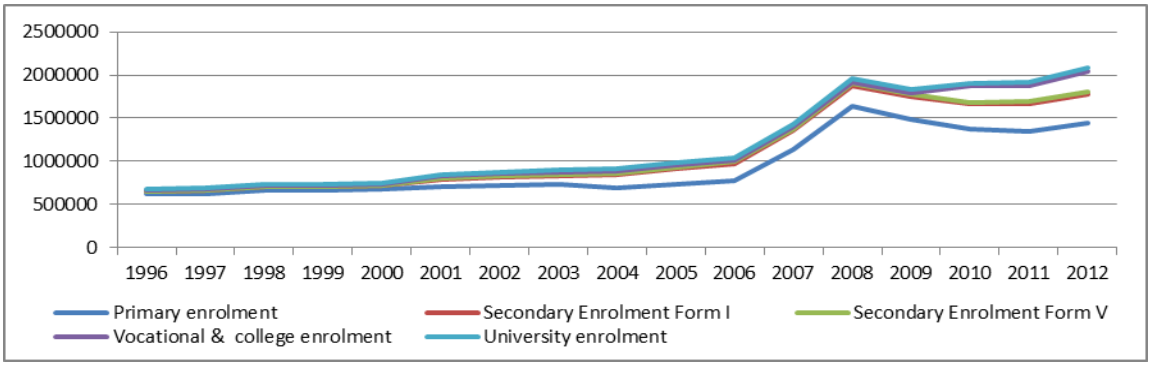
education and at least three years of university education and other equivalent courses(NBS, 2015).

Back to the history lane, in the late 1990s there was education was reform started by introducing basic education master plan for 1998–2002. The master plan developed lead to the formulation of the Education Sector Development Program (ESDP) started effectively in 1998. To ensure access, equity, and quality education for all children, government developed Primary Education Development Plan (PEDP). However, implementing PEDP was a challenge, so policy had to be amended to abolish school fees and all other mandatory contributions to ensure access of more children to primary education, aimed at revamping primary education. The second phase was secondary school development programme called Secondary Education Development Plan (SEDP). The phase was supposed to start 2002 ending 2006, but the delay caused by challenges in implementation from the beginning caused both PEDP and SEDP to start being implemented with the new amendments in 2004.

This study as depicted in Figure 3 shows the trend of enrolment of pupils/students in primary, secondary, vocational/college and university level. The trend shows progressive increase in enrolment rate at all level of education since 1990 to 2014. Adedeji, Du, & Opoku-afari (2013) reported impressive expansion of secondary enrolment after the gross primary school enrolment rate being increased from 68 percent in 1995 to 102 percent in 2009, with the net enrolment ratio increased from 49 percent in 1995 to 98 percent in 2008. This makes the Grows Enrolment Ratio (GER) of primary school 94.6% which is equal to the population of 8,007,539. According to NBS (2015) outlook, net enrolment ratio (NER) for the primary school decreased from 98% (2008) to 76.8% (6,506,020 pupils) in 2012 for the pupils with age of 7-13 years. The numbers reflect the average, which disguises major regional differences, whereby the negative quotas of traditionally poorer regions is in central and north western part of the country Tabora (55.9%) which is lower than the richer regions such as Kilimanjaro (94.1%).



Data Source: World Bank and Tanzanian National Bureau of Statistics; Authors own calculations

Figure 3: Education enrolment trend in Tanzania 1996-2012

Primary School: Figure 4 depicts the average ratio of pupil/student to a teacher/trainer/lecturer in a class. The graph shows that as pupils/student increase, the teacher/lecturer also increase in almost the same rate, however, for the primary school, in 1998 one teach could teach at least 36 pupils (minimum within 16 years), while in 2004 one teacher could teach more than 58 pupils in one class. Taking the average interval of at most five years, one teach could teach 38, 54, 52, 51 pupils for the years 1996-2000, 2001-2005, 2006-2010, 2010-2012 respectively. Except 1996-2000, all other intervals have minor differences, which mean the rate of increase of the pupils is almost the same as the rate of increase in teachers, although one teacher taught

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huge number of pupils in one class after 2000. The normal class that teacher should teach effectively and efficiently is in a range of 25-30 pupils per class at a time.

Despite of the country wide average given above, the specificity of the school in the region shows slightly different level of enrolment status. The massive increase of pupils in schools created challenges of quality. Adedeji et al., (2013) reported the teaching and learning being compromised by large classes and a shortage of teachers. Sifuna, (2007); Sumra & Rajani (2007) reported similar challenges of teachers being handling large classes of 60–80 students or even 100 pupils per class at a time. Adedeji et al., (2013)and Sifuna (2007)argued that although the interventions to provide universal primary education from the 1970s into the twenty-first century have made significant differences in the lives of many communities by increasing access to education of children who would have been denied schooling but in recent past quality has been impaired.

Similarly, quality indicators, including attrition and completion rates and examination scores, were compromised and stagnated at best or declined. Adedeji et al., (2013) reported high pupil-to-teacher ratio, increasing from 37 percent in 1995 to 51 percent in 2010 for primary education, while this study found disturbing result of decrease ratio, where by in 2012 the ration decreased to 46%, showing dropping of the student-teacher ratio. However, NBS (2014a) reported the highest level of education attained in 2012 for primary as 81.7% (14.5mil) and the training after primary school as 81.7% (11.8mil), showing number of drop out being a little higher (18.3%).

This study found that 1% changes in enrolment in secondary school student will change employment by 1.93%. This means as more people access secondary education the more ability can be gained and more employ opportunity will be accessed.

Secondary School: Secondary school is six years of schooling, which has two parts; four years of ordinary secondary and two years of high school/advanced secondary. The trend of enrolment of pupils in secondary school is increasing year to year (due to increase enrolment for primary school). The surprising increase of students was recorded in 2010 (1,825,956 students) where the number of students doubled from the previous year, 2009 (781,959 students). This huge increase revealed that access to education has increased as it was reported by Adedeji, Du, & Opoku-afari, (2013) that access to secondary education improved in Tanzania, with the increase of average opportunity with the equity index of opportunity increased from 0.45 to 0.74 in the period of 2000-2008. According to NBS (2015), enrolment rate dropped to 59 percent for persons aged 14 – 17 and to 32 percent for those aged 18 – 19 indicating low transition from primary to the secondary education. Regional variations were observed among different regions, ranging from 76 percent in Kilimanjaro to 42 percent in Tabora. According to NBS (2015) book, secondary school net enrolment were 59.1% (2,203,124 pupils) for the pupils aged 14-17 years, 32.4% (576,898 students) for the high school students aged 18-19 years old in 2012

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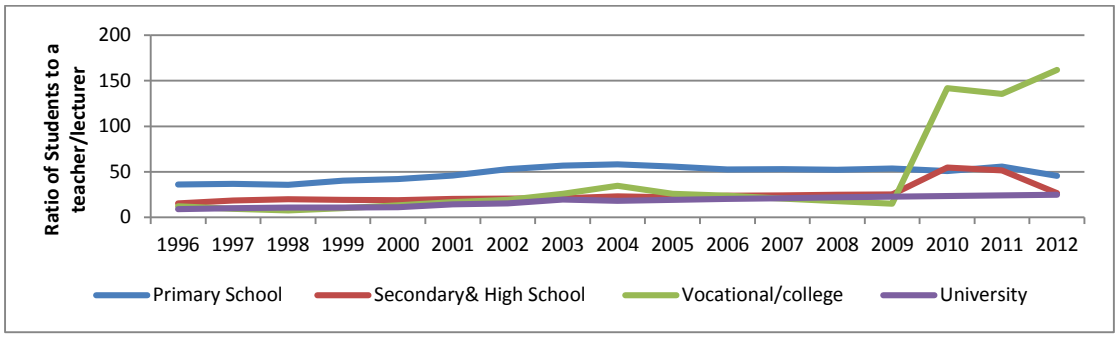

Data Source: World Bank and Tanzanian National Bureau of Statistics; Authors own calculations

Figure 4: Ratio of students to a teacher/trainer/lecturer from 1996 t0 2012 in Tanzania

Students-teacher ratio recorded very low in 1996, whereby one teacher taught an average of 15 students in one class at a time. Whilst in 2010 one teacher taught an average of 55 students in one class, which is the highest average number of student in one class for the past 20 years. The average of five years shows the ratio of 18 for 1996-2000, 21 for 2001-2005, 30 for 2006-2010 and 44 for 2010-2012. According to (NBS, 2014a) the highest level of 14.4% (equivalent to 2.1 million people) of education for secondary school was attained in 2012. Among these training after secondary school was 0.8% which is equivalent to 116,216 people.

This paper found amazing results in high school, where 1% changes in enrolment of student will change employment by 27.07%. This tremendous achievement for one who earn advanced certificate of high school, means that the person is more valuable as research shows that most of high school graduates are more capable in adapting well in the employment. High school opens more doors to continue with college or get trainings that can add skills to individuals.

Vocational Training and College: Vocational, teachers' trainings and college education has been expanding every year. Since the number of graduates from secondary school has been increasing, the demand for skills to acquire job has been also increasing. Subsequently, the vocational trainings, teacher trainings and colleges are the source of skills development for the secondary schools graduates especially for those who misses the chance of going to the university. However, record shows that number of enrolment every year is increasing. Whereby, in 2010 the number of enrolment (187257 students) was ten times that of previous year 2009 (18900 students). The increase in enrolment is the result of increased number of secondary school enrolment.

On the other hand, the ratio of the students to a teacher is also increasing. For the past twenty years the least record of ratio of student to teacher was recorded in 1998, whereby one teacher taught an average of 8 students in one class whilst the biggest number of students in on class was recorded in 2012, where one teacher taught an average of 162 students in one class. This is the huge difference within very small range, showing difference of 20 times the average of 2008 for the difference of only 14years, which definitely impair quality of education especially practice.

It is surprising to see the result on vocation/college; where by 1% changes in the enrolment will change employment by 0.097%. This result was expected, since the student enrolled in vocational or college, most of them are already engaged in one form of employment in private or public sector. They enrol in the vocational or college for the sake of increasing or improving their working skills, and probably they have been sent for further skill gain by their employers.

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University Level: University is the highest level of learning in the education of any country, where degrees are conferred to the graduates. In Tanzania there are number of degree courses offered within 52 registered universities distributed almost every regional zone in Tanzania. The mushrooming of private universities has given opportunities for more student to get chance to attain higher learning and gain more skills. The research results analysis shows that, the enrolment is increasing year to year. According to NBS (2015) book, in 2013 there were 13.4% (509,895 students) for the college and University for the student with the age of 20-24 years old. The increase in universities and students has been going parallel with increased number of lectures in the universities. The results shows that the minimum class per lecturer for the past twenty years was an average of 9 student per one lecturer in 1996, whilst the maximum number of students in one class per lecturer was recorded in 2012 as an average of 25 students per lecturer. The ratio of student per lecturer is in a good range as an average but not per degree programme or per course. According to (NBS, 2014a) the highest level of education attained in 2012 for college and university were 2.3% which is equivalent to 337,881people.

Universities in Tanzania have high number of fresh students from high school and small percent of students from the vocation or college who going for the further studies or developing their careers. The research result shows that 1% changes in enrolment for students in the university will change employment by 23.92%. These results are not surprising since the graduate from the university is expected to have skills and knowledge that make them qualify to be employ with minimum trainings. So the impact in the employment sector changes tremendously as you get more skilled people graduated. Some graduates are absorbed by the system but majority use their skill gained to invest in their own business and employ other people, of which they create more employment.

4.3.3 RESULTS ANALYSIS FOR THE EDUCATION AND EMPLOYMENT

The analysis was done by STATA Regression through Prais-Winsten AR(1), gave the following results:

Box 2: Regression Between Employment and Education levels

Relation between primary school versus percentage of total employment below 15 years old

$$E = \alpha + \beta P_E \ldots\ldots\ldots\ldots\ldots\ldots\ldots (i)$$

$E = 83.9793 + 0.334906P_E$; At the R-squared=99.19% and Adj R-squared=99.13%

Relation between secondary school versus percentage of total employment above 15 years old

$$E = \alpha + \beta P_S \ldots\ldots\ldots\ldots\ldots\ldots (ii)$$

$E = 84.43533 + 1.931779P_S$; At the R-squared=98.6% and Adj R-squared=98.5%

Relation between high school versus percentage of total employment above 15 years old

$$E = \alpha + \beta P_H \ldots\ldots\ldots\ldots\ldots\ldots (iii)$$

$E = 83.74767 + 27.07687P_H$; At the R-squared=96.67% and Adj R-squared=96.88%

Relation between vocational/college versus percentage of total employment above 15 years old

$$E = \alpha + \beta P_{VC} \ldots\ldots\ldots\ldots\ldots\ldots (iv)$$

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E = 85.78189 -0.09717P_{VC} ; At the R-squared=99.13% and Adj R-squared=99.07%

Relation between universities versus percentage of total employment above 15 years old

$$E = \alpha + \beta P_U \ldots\ldots\ldots\ldots\ldots\ldots (v)$$

E = 83.07321 + 23.92267P_U ; At the R-squared=93.82% and Adj R-squared=93.41% .

LITERACY RATE TREND IN TANZANIA

Literacy refers the ability to be able to read and write simple statements on everyday life Tanzania literacy rate has been unstable for the past 25 years. For instance, literacy in 1998 was low for the female especially adults above fifteen years of age, but increased to above half (62%) in 2002. In 2010, literacy rate decrease to 67.8% (table 3). Two years later in 2012, there was tremendous improvement whereby 78.1 percent of the population aged 15 years and above were literate, compared to 67.8 in 2010, which is also slightly higher than the regional average of Sub-Saharan Africa of 70% (2012). Record across the regions shows that literacy rates range from 96 percent in Kilimanjaro to 59 percent in Tabora (NBS, 2015). Adedeji et al., (2013) reported the literacy rate of 73 percent in 2009.

Despite this achievement, large disparities were also observed among regions. For example, while some regions have already or are close to achieve 2015 MDGs of reducing adult illiteracy to 16 percent by 2015, that target may not be achieved by some regions.

Table 3: Literacy rate trend for interval of ten years from 1988 to 2012

Indicator for Literacy Rate	1988	2002	2010	2012
Adult female (% of females ages 15 and above)	48.09	62.17	60.75	73.30
Adult male (% of males ages 15 and above)	71.37	77.51	75.47	83.40
Adult total (% of people ages 15 and above)	59.11	69.43	67.80	78.10
Youth female (% of females ages 15-24)	77.87	76.20	72.77	82.40
Youth male (% of males ages 15-24)	86.20	80.92	76.49	87.40
Youth total (% of people ages 15-24)	81.75	78.40	74.56	84.00

Source: NBS, author's own calculations

Generally, the effort on progressive fight against ignorance is not sustainable, despite the government's efforts to strengthen human capabilities through increased access to formal education. The fact is, the contribution of human capital to growth declined from 0.3 percent during the 1960s to 0.1 percent during the 1980s (World Bank & URT, 2002). This is vivid evidence of high dropout and failure rates at the primary and secondary school which resulted in a high share of the population with no basic skills and knowledge to enable them to engage gainfully in a labour market. World Bank & URT (2002) reported Tanzania's to be among the lowest countries in attainment rates in secondary and higher education in Sub-Saharan Africa. In fact, the data show that the share of Tanzania's population with at least some formal post-primary education had declined from 5 percent at independence to 3.2 percent by 1990(World Bank & URT, 2002). A major cause is high cost of secondary and tertiary education relative to income levels in Tanzania, whilst 80 percent of poor children and 100 percent of the rich enrol

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in primary, only 40 percent of the poor complete primary, compared with 75 percent of the rich, which shows degree of inequality.

Table 4: Percentage Distribution of Employed Population by Main Occupation and Geographical Areas, 2012, from the age of 15 years and above

Occupation	Dar es Salaam	Other Urban	Rural	Tanzania
Professionals, Legislators, administrators and managers	6.7**	2.9	0.4*	1.4
Craft and related workers, Technicians and associate professionals	12.7**	6.1	1.4*	3.2
Clerks, Service workers and shop sales workers	18.3**	6.3	1*	3.4
Skilled agricultural and fishery workers	**0.7**	**0.6***	**0.7**	**0.7**
Elementary occupations	5.1**	2.7	0.7*	1.5
Household farming	4*	**43.9**	**88.5****	**73.6**
Plant and machine operators and assemblers	8.8**	2.8	0.3*	1.4
Self-employer or employee non agriculture	**37.8****	28.3	5.7*	12.3
Unpaid household helper	5.7	6.4**	1.3*	2.5
Total	100	100	100	100

* Minimum personnel within the occupation by region; ** Maximum personnel by occupation; Blue colour is the maximum personnel per region and Red is the minimum personnel per region

Higher growth of the economy and education are therefore important elements in the effort to stem rapid growth of the population. Utz & Ndulu (2002) gave a caution that due to low post-primary education attainment, it is imperative that measures be put in place to increase the incentives and returns for undertaking investments. However, the situation might have improved but might also raise the challenge of unemployment, since there is no clear plan for the graduates.

Education Access in Tanzania

According to Keynesian's rule of opportunity curves, the education in the country is accessible to all at least in the primary school (figure 5). Higher levels of education shows difficult in being accessible until recently past where private university gave opportunities for private students with self-sponsor to enroll with discount payments.

A serious public debate continues over the quality of the school system, which also has negative effects on the higher education. However, the institutions that are owned by faith-based organizations, proved to show fair and sustainable quality of education, yet it is not affordable for all Tanzanians. However, government has made a long-term commitment to develop a pool of well-trained and educated personal to all investors. Nevertheless, the education opportunity curves on figure 5 shows outward shifts, which suggest that the growth process has been inclusive, using the indicator of access to education.

Allowing private investors in the education has shown direct impact to the structural change which is depicted in the statistical figure that portrayed a big change in employment. However, as youth gain more education, as more they migrate to town seeking for white collar job in

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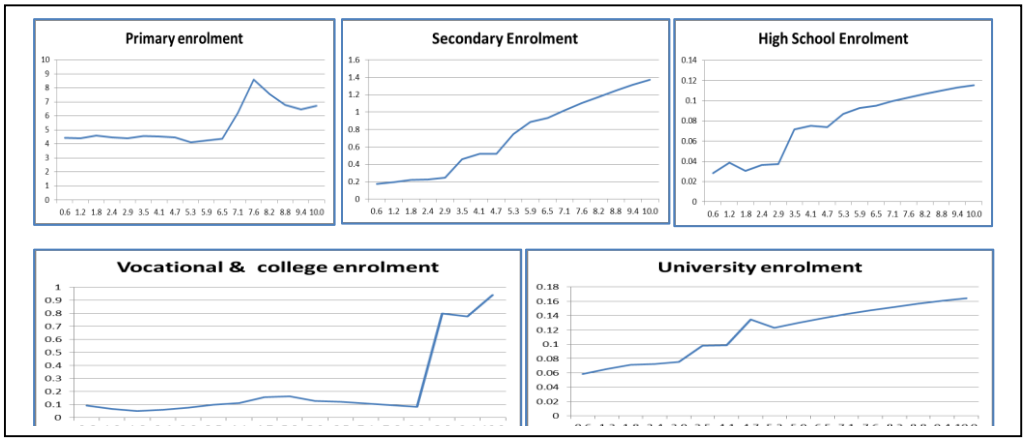
urban where there are high level of activities of service sector followed by industrial, hence, shift of structure from agriculture to services and industry.



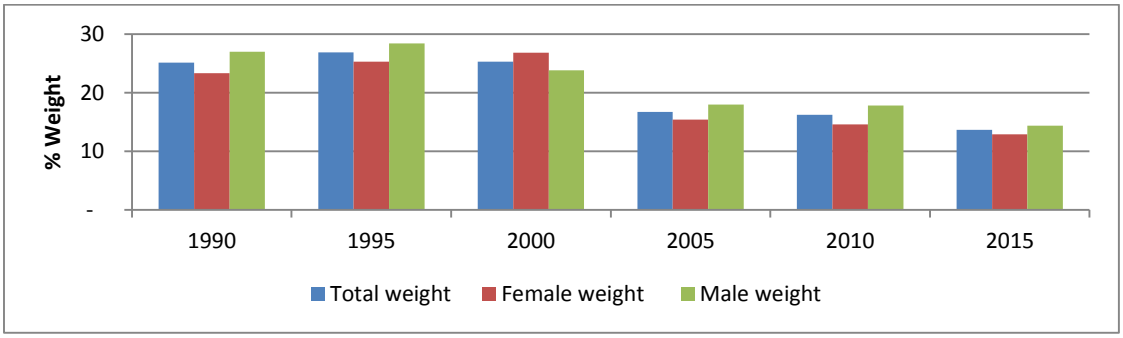
Data Source: World Bank and Tanzanian National Bureau of Statistics; Authors own calculations

Figure 5: Opportunity Curves for Education Access within the Population

Health Trend in Tanzania for Past 25 Years (1990-2015)

In 1994 the government began to focus on health care reform aiming at improving access, quality, and health of its people. Major reform was directed to strengthen district health services, primary health care, secondary and tertiary service delivery (Adedeji et al., 2013). Through the policy of decentralization by devolution authority and responsibility for health care were transferred from the Ministry of Health and Social Welfare to the Local Government Authorities (LGAs), and enforced by 1998 landmark legislation of the local government reform. The changes was positive especially on health care financing policy, where by new financing policy included cost sharing and user fees as well as insurance mechanisms for the health sector(Adedeji et al., 2013). Fees were collected at all health facilities, with a system of waivers and exemptions to accommodate the poor. Numerous insurance mechanisms were established, targeting different populations.

The health sector strategic plan (2009 – 2015) is under implementation in line with the national strategy for growth and poverty reduction (MKUKUTA) and the Millennium Development Goals (MDG). Since then, the trend of prevalence of malnutrition over 25 years in Tanzania shown to decrease for percentage of children under five years old, based on the indicator of height and weight. The trend of prevalence base on the weight indicator shows the decrease from 25.3% in 1990 to 16.5% in 2015, with the records of male children being more affected than female children (figure 6).



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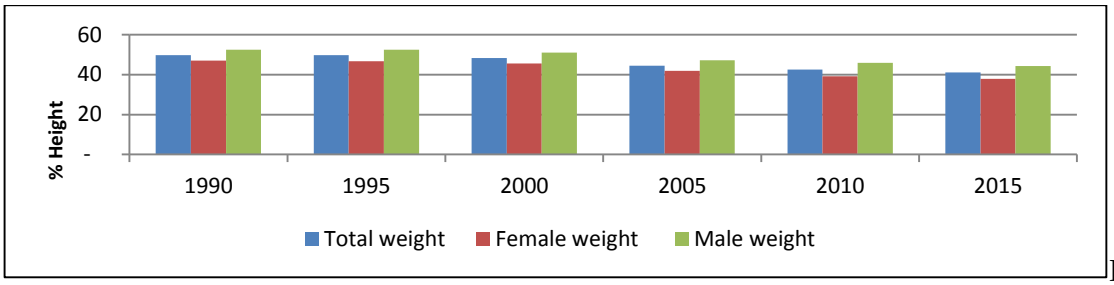
Data Source: World Bank and Tanzanian National Bureau of Statistics; Authors own calculations

Figure 6: Malnutrition prevalence for Weight for percentage of children under 5 years

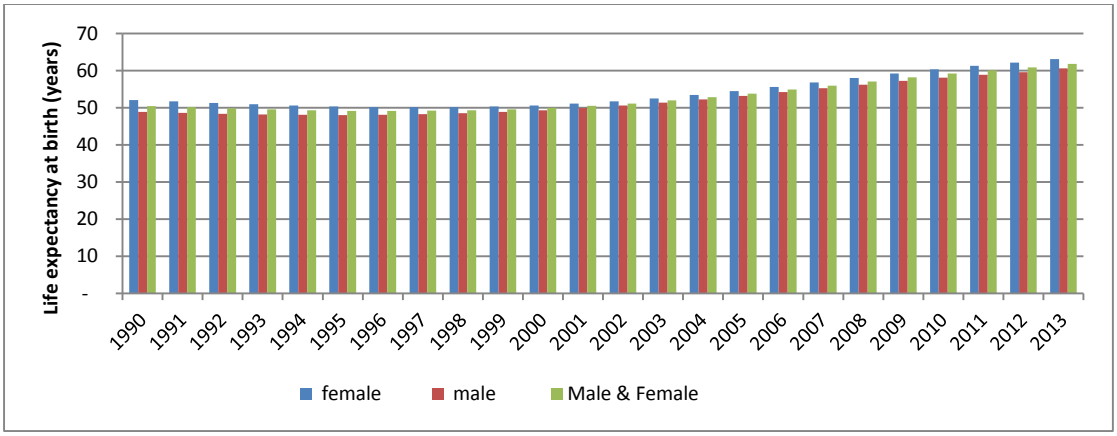
Indicator for the height shows the same experience of decreasing trend but with slow pace compared to the weight indicator. In 1990 it was as high as 49.7% and decreased to 42.01% in 2015 as shown in the figure 7. This implies that 1994 reform was somewhat successful but with question of the sustainability.



Data Source: World Bank and Tanzanian National Bureau of Statistics; Authors own calculations

Figure 7: Malnutrition prevalence for height for percentage of children under 5 years

Life expectance at birth in Tanzania since 1990 has not been stable until 2000 when it started to stabilize. In 1990 the life expectance was 50.5 years, with women (52.1) being higher than men (48.9). Since then, life expectance has been decreasing up to year 2000 (50) when it started to increase again to 61.8 years in 2013 (figure 8).



Data Source: World Bank and Tanzanian National Bureau of Statistics; Authors own calculations

Figure 8: Life expectances at birth in Tanzania since 1990 to 2013

Mortality rate has been decreasing year to year. The maternal mortality ratio decrease from 910 in 1990 to 450 in 2010 (which is drop of 50.55%), following the same pattern it is estimated to drop to 350 in 2015 (figure 9). The same trend experienced on the infant and children under five years, whereby in 1990 mortality rate was 101.3 for infants and 167 for children under five years of age (both calculated per 1000 live of births), the rate decreased to 32.8 for infants and 46.5 for children under five years of age in 2013. It is estimated to drop again to 29.5 for infant and 40.6 for children under five years of age in 2015 (figure 10).

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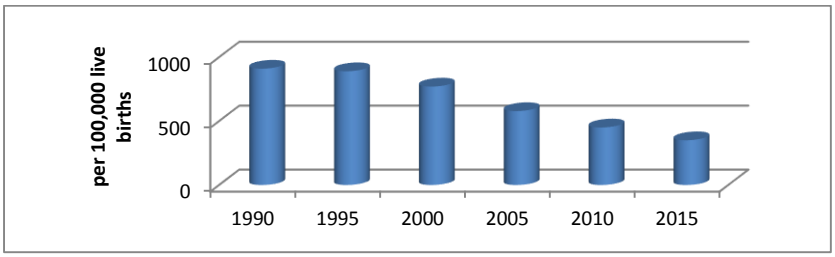
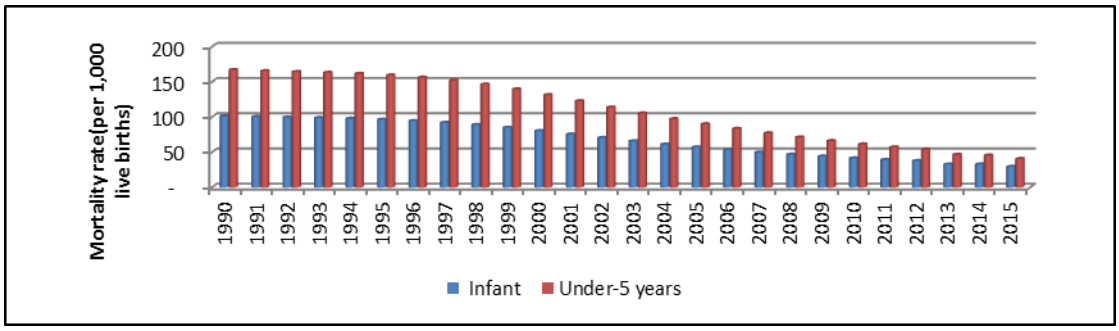


*The data for 2015 is the estimates interpolated from the previous trend
Source: Data from NBS and WB, authors own calculations

Figure 9: Maternal mortality ratio calculated per 100,000 live births

It is surprising that the stability of mortality rate for infants and children under five years of age and maternal mortality ratio decrease at the same time the ratio of Nurses and Midwives per 1,000 people has been deteriorated from 0.37 in 2002 to 0.24 in 2010. Nevertheless, NBS (2014) reported 71% of ill or injured persons consulted a health provider in 2012.

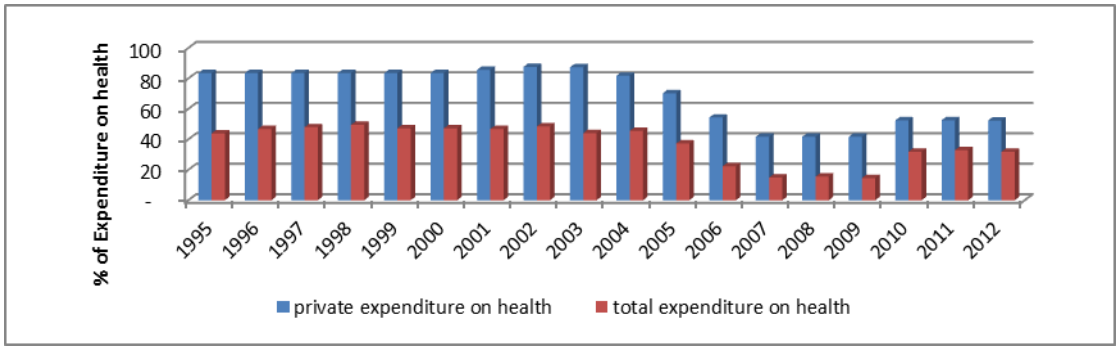
On the case of hygiene, it was reported that 7.8% of the population live without proper toilet(NBS, 2014b), while 36.8% of the total household in the country access the fresh piped water NBS (2014a).



*The data for 2015 are the estimates interpolated from the previous trend
Source: Data from NBS and WB, authors own calculations

Figure 10: Infant and children under 5 years mortality rate, calculated per 1000 live birth

Out of pocket health expenditure for private and overall total was constant from 1995, which were 83% for private & 44% for total, the expenditure increased to 86% for private and 47% for total in 2001. Since 2001 up to 2005 there was decrease of expenditure where private expenditure was 70% while total was 37%, then the expenditure decreasing up to 42% for private and 16% for total expenditure in 2007 before it started to increase again to 52% for private and 32% for total expenditure in 2010 that have been constant up to 2012 (figure 11).



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Data Source: World Bank and Tanzanian National Bureau of Statistics; Authors own calculations

Figure 11: Out-of-pocket health expenditure for private and total from 1995-2012

It's obvious that the health of the people is important for the economic growth and development. The data analysis shows the unstable condition of health status in the country where by almost 30% of people who are in need of consultation fail to get it in one way or another. Although there is improvement in life expectance, mortality rates and prevalence of malnutrition, but quality of the health care is still far behind. This means most people from the age of 15 and above who graduates school or did not attend school worry too much of the sickness rather than thinking of develop plan. This impairs the labour force and affecting productivity, hence the structure transformation is definitely affected as a result of economic growth being artificial causing exuberating poverty.

CONCLUSION

This research paper assessed economic growth pattern and analyses the behaviour of the productive sectors during growth process. The study investigated the growth pattern and quantitative expansion of Tanzania's aggregate economic output, was not limited to growth history which is associated with major process of institutional and structural changes with massive relative price changes that invariably take place in a growing economy. The Tanzania economy is small and vulnerable but just like many other countries its economy does not just grow in size but also changes in appearance. The socio-economic changes that occurs during transformation unfolds have reverberations that go far beyond the mere quantitative changes in the composition of output and employment.

Five decades in a row, the economy has been solely depending on agriculture which had bigger share to the GDP. Since 2000 the service sector started growing faster than agriculture and industry sector, which has caused shares of agriculture to decrease but remain dominant in the total employment. However, the initiatives of TDV 2025 of transforming the nation into the semi-industrial economy should look back in the agriculture sector rather than having blind economic growth with no consideration of the agriculture being part of the inclusive growth.

While the economy is moving from agrarian based to semi-industrial economy, the human resources and health were the major area of transformation. The education which proved to be inclusive in the growth, increased and expanded since 1990, which face number of challenges. However, the increase number of graduates causes migration of the labour force from rural to urban, especially for those with secondary and above education. The educated and energetic youth shift their work from agriculture to the service or industrial sector leaving old generation doing agriculture in rural area. The massive shift of labour force from agriculture sector automatically lowers the contribution of agriculture to the GDP and gives a way for service sector to gain and expand, despite of the fact that, agriculture is still biggest employer and has big potential for expansion. The decrease in employment in agriculture was partly cause by government withdrawal of public sector involvement in the delivery services which left it to the private sector that has been slow in filling the gaps.

On the other side, industrial sector has been struggled to increase annual growth rate, whereby new investments and surviving firms are growing much faster to more than compensate for the failing firms. Unfortunately most are food industries which cannot absorb labour force, leaving out surplus labour to be absorbed by agriculture in a subsistence way. Hence the raw material

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for industrialization will be at stake since agriculture productivity will go down. In fact, agriculture is still the backbone of the economy and it has massive potential of growing and has big share of employment than other sectors, this should not be ignore but given attentions it requires.

This paper conclude by showing the nexus between growth and structural change; results shows direct and strong connections between economic transformation and economic growth stability, whereby, 1% change in education in primary, secondary, high school and higher learning institutions creates a change of 33.5%, 1.9%, 27.1%, 0.1% and 23.9% to the employment respectively. Similarly, 1% change of employment in agriculture, service and industry create a change of 9.8%, 2.5%, and 0.06% to the total GDP respectively. This indicates that change in education has direct influence to a change in the GDP if the graduates are absorbed in existing system. However, agriculture shows much potential for expansion than any other sector (although is not given priority), which implies that agriculture is still backbone of the Tanzanian economy. Hence the growth pattern is much depends on the education, health and absorption of the employment in productive sectors. Henceforth, for the small and vulnerable economy, the investment in education and health sector will boost and sustain the growth and development only if there is inclusive growth policy mainstreamed in the strategies. Therefore this paper recommends detailed study on the main prerequisites for structural transformation for small and vulnerable economy.

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