Quality of Life, Poverty and Wellbeing in Rural Households: A Case of Tanzania

Gabriel Kulomba Simbila (National Bureau Of Statistics, Tanzania)

Session 7D: Well-BeingII

Paper Prepared for the 34th General Conference of The International Association for Research in Income and Wealth.

Dresden, German August 20-28, 2016.

Quality of Life, Poverty and Wellbeing in Rural Households: A Case of Tanzania

Gabriel Kulomba Simbila

Gabriel Kulomba Simbila

For addition information please contact

Name: Gabriel Kulomba Simbila

Affiliation: Eastern Africa Statistical Training Centre

Email address: sku.lomba@hotmail.com

gabriel.simbila@nbs.go.tz

gabriel.simbila@eastc.ac.tz

Abstract: The concept of quality of life and wellbeing for the whole population is one of national development strategies in Tanzania, but poverty remains a challenge, especially for rural households who largely depend on Agriculture for their livelihood. Their incomes come from farming and the Government is making efforts to improve the agriculture sector. This paper examines the terms of trade for agriculture and its relation to wellbeing of the people.

An index of the terms of trade (ITT) for agriculture and non-agriculture sectors are used to measure the relative change in the prices received by the farmers for the produce sold in relation to the change in the prices paid for commodities purchased for final consumption, intermediate consumption and capital formation. A value greater than 100 indicates a favourable terms for agriculture sector, that is improvement of price, income and quality of life and wellbeing. On the other hand, a value of ITT less than 100 would indicate adverse terms of trade for agriculture, that is the prices received by the agriculture sector have lagged behind the prices paid by this sector. Data used in this research paper comes from different sources of household based surveys, conducted by the National Bureau of Statistics. The index of terms of trade can help the Government in formulating price policy for the purpose of protecting the farmers from excessive fall of price due to bumper harvests and thus improving the wellbeing of farmers.

Keywords: Quality of life, poverty and wellbeing, index terms of trade, poor households.

Introduction:

This paper outlines the quality of life, poverty and well being which are used interchangebly. The well being is the opposite of poverty while the quality of life is the measurement of well being. Like other developing countries, Tanzania is a low-income rural economy about About 70 percent of Tanzania population lives in rural areas and is largely employed by agriculture , as the main activity for providing food, employment and income (According to the 2012 Population and Housing Census). Agriculture makes a substantial contribution to the national economy and most of the poor depend on it. The performance of the agriculture sector[1] is crucial to understanding how levels of poverty in the rural households responded to poverty reduction stratergies. Moreover, understanding how rural households welfare are changing over time helps in assessing levels of poverty and as the basis for preparation of poverty reduction strategies. The agricultural prices are an impotant factor in understanding the trends in real welfare of rural households since they have a significant effect to rural poverty. Productivity increases in agriculture may have greater potential to raise rural incomes and attain a high purchasing power leading to high effective demand for non-agriculture commodities, provided that markets perform well and producer incentives are maintained. The terms of trade calculated from produce prices, input prices capital formation and final consumption shows the relationship between farm prices and prices of goods purchased by the farmers, it also can tell if profitability in this sector has improved or deteriorated, if the gap in the poverty for rural household is it widening or narrowing and if the welfare of agricultural households during the period under study improved or worsened, It also leads to greater attention in the formulation of agriculture price policy in order to protect farmers from a fall in prices which has a major impact on their incomes and wellbeing.

Literature Review:

The debate over agricultural prices revolves around two different views. One view is that the government must support the agricultural prices and the farmers must be protected from the decline in market prices of the agricultural commodities (Khan, 2005). The results of Zahid and Hyder's study show that the domestic terms of trade with respect to consumer prices improved over the base year 1973-74 for only three years i.e1975-77 and 1978-79, and for the remaining periods the domestic terms of trade declined over the base year. The real per capita income terms of trade remained below that of the base year for first six years from 1974 to 1980 and then improved for three years from 1980 to 1983 and declined in the last year of the study i.e 1983-84. The terms of trade index with

---

[1] Agriculture sector: under International Standard of Industrial Classification (ISIC Rev 4) it comprises crops, livestock, forestry and fishery.

respect to input prices remained above that of the base throughout the study period. This shows that the rate of increase in prices of agricultural output was more than the rate of increase in prices of agricultural inputs, providing greater margin to farmers. Chaudhry and (Chaudhry,1997) have criticized the pricing policies of the government, arguing that the adverse pricing policies followed by the government had a greater negative impact on small farmers than on large farmers. They argue that, except for the 1960s, agricultural commodities have generally been under-priced. This has led to lower profit margins for the farmers and as a consequence declining employment opportunities for agricultural labor. Zahid and Hyder (1986) have covered the period 1973-84 and have calculated agricultural terms of trade based on produce prices, input prices, and consumer prices.

The Problem:

For a long time, there has been a great concern about the extreme poverty in rural areas and the debate always comes down to the performance of the agriculture sector, since it looms so large in the economy, and it may be noted that an agricultural households derives most of its income from agriculture. Thus, the research paper concentrates on the analysis of quality of life, poverty and welfare for rural households, using an index of terms of trade between agriculture and non agriculture with particular reference to (2007-2015).

There is much correlation between poverty and agriculture. The main reason being that the majority of poor people live in rural areas and make their living from land. The performance of agricultural sector is an important matter for us since we are interested in understanding the trends in real welfare of the Tanzanian people a majority of whom live in the rural areas and depend on subsistance agriculture for their food and cash income. If agriculture is uplifted we shall be moving people out of poverty and this could be achieved through improved farming practices and adoption of best practice by other countries which can make farmers produce more outputs with higher market value added.

The role of agriculture in the rural development in the developing countries is big since agriculture is the main employer of rural population and is likely to remain so for many time to come. It is observed that about eighty percent of peasants, (Tanzania National Agriculture Sample Census, 2008) are still practicing subsistence farming agriculture that is not irrigated and using traditional implements such as a hand hoe which are time consuming, less

coverage and low productivity attributed to low price agriculture outputs with less market value added. ''Most of the extreme poor in the developing world earn their living now from one- acre –farms, they can earn much more money by finding ways to grow and sell high value labour intensive crops such as off season fruits and vegetables, to do that they need access to very cheap small farm irrigation, good seeds and fertilizer and markets where they can sell their crops at profit''.(Paulo Polak,2007). In addition to that there is need for formolation of policy and for proper incentives to protect farmers from low prices especially when there is a bumper harvests in the country.

The Gross Value Added of Agriculture sector at volume terms 2007 registered a positive growth rate over the entire period from 2007 to 2013 with an average of 5.5 percent (National economic survey, 2014). But poverty still remains a challenge, the economic growth does not trickle down to ordinary population, especially the rural households, hence a need for further research.

Data:

The data are from National accounts statistics based on household surveys: Household Budget Survey, Agriculture Sample Census, National Panel Survey (NPS) and Consumer Price Index (CPI) conducted in both periodically and annually from 2007 to 2015.

Methodology:

The construction of ITT for the agriculture sector and the non agriculture sector prices received and paid by farmers for all items of expenses including consumption, production and investment are used and calculated as follows:

$$\text{ITT} = \frac{\text{Index of Price Received by the Farmers}}{\substack{\text{Index of Price Paid for Farm Inputs, Final Consumption} \\ \text{and Capital Investment}}} * 100$$

A value of ITT greater than 100 indicates a favourable terms of trade for agriculture sector. On the other hand , a value of ITT less than 100 would indicates adverse of terms of trade for agriculture, that is the increase in prices received by agriculture sector lagged behind the increase in the prices by this sector.

Weighting:

For calculation of weights in the respect of selected commodities are derived from Household Budget Survey using the following criteria:

i) Selection of items sold and purchased by the agricutural sector and determine of the weights.

ii) Identification of reliable indicators of prices for all sales and purchases made by the sector and

iii) The selection for base year based on the following: the base year should be recent enough so that the comparison is meaningful; it should be normal year of agriculture production and allied with other data sources.

An index of price paid (IPP) by Agriculture sector: the terms of trade between agricuture and non agriculture is based on an examination of the comprehensive list of the items that are traded between the agriculture and non agriculture sectors. Index of prices paid by the agriculture sector would depend upon the items and their quantities, which the agriculture sector purchases from the non agriculture sector and their prices. Agriculture usually makes the purchases from non agriculture sector under the following three main items; final domestic consumption[2], intermediate consumption[3] and capital formation[4.] These indices are constructed based on data obtained from National accounts statistics and other household based survey conducted by National Bureau of Statistics.

The computation of indices for for final consumption, intermediate consumption and capital formation was given as below:

$I_G = \frac{\sum W_c I_c}{\sum W_c}$ where I_G is the combined index of price paid (IPP)

W_c is weight of commodity or item and

I_c is Index of commodity or item

---

[2] Final/domestic consumption: all consumed goods with exception of purchases for own construction or improvements of residential housing which are located as part of gross capital formation.
[3] Intermediate consumption: includes goods and services which are entirely used up by producers in the course of production to produce output of goods and services during accounting period.
[4] Capital formation: includes only produced and non produced assets such as machinery, buidings and land.

The combined index of price paid (IPP) is based on a weighted average of three component indices

Component	Weight (%)
IPP for Final Consumption (IPP-FC)	80.11
IPP for Intermediate Consumption (IPP-IC)	18.75
IPP for Capital Formation (IPP-CP)	1.14

Source: Author calculations

About eighty percent of what is produced is consumed in its raw form, meaning that living from hand to mouth, there is no value addition before consumption, capital formation/investment is very low because of little or no saving and intermediate consumption that helps production also it is seems to be low, that means little farm inputs i.e fertiliand irrigation are being used.

Index of Price Received: the construction of the index of Price Received by the farmers included 25 major crops and 7 livestock products: The group of crops and livestock includes: cereals, pulses, oilseeds, fiber, fruits & vegetables, livestock products and miscllaneous. These variables cover about 80 percent of the total value of output and had an overwhelming weight in agriculture sector.

The indices for produce prices were calculated as below using laspeyers formula with 2007 as base year.

Price Index (PI) is $\dfrac{\sum WtPi/Po}{\sum Wt}$

WtPi/Po is the price relative times weight and

Wt is the weight and Pi/Po is price relative

And finally is the the weighted general index of producer prices with 2007 as base year.

Weighted Index ITT producer price is $I_{pp} = \dfrac{\sum WcIc}{\sum Wc}$

Ipp is General index of producer price.

W_c is weight of commodity or item

I_c is Index of commodity or item

Research Findings:

The wellbeing of the people is affected because they are spending a lot on farm inputs,it implies that the cost of production is higher and therefore, there is little value addition which means there is no profitability in agriculture sector and the future is gloomy because terms of trade are not good for the period under study. It is only one year of 2008 which show some improvement after which they declined from 2009 to 2015.

Chart 1: shows index of input prices is higher than producer prices and terms of trade, this indicates they are not selling at profits for their agriculture produce, economically there is no significant value addition as the results poverty is increasing and quality of life is decreasing. Hence, the Government should control price of inputs i.e fertilizer and irrigation equipment. They should not be left to private sector alone since more than anything else, they are after profit maximization.

|	Domestic Terms of Trade		
Period	Terms of Trade	Index of producer price	Index of Input prices
2007	100	100	100
2008	100	100	100
2009	93	97	105
2010	89	91	102
2011	91	96	105
2012	92	99	107
2013	92	97	105
2014	85	97	114
2015	85	138	163

Chart 1: Domestic Terms of Trade
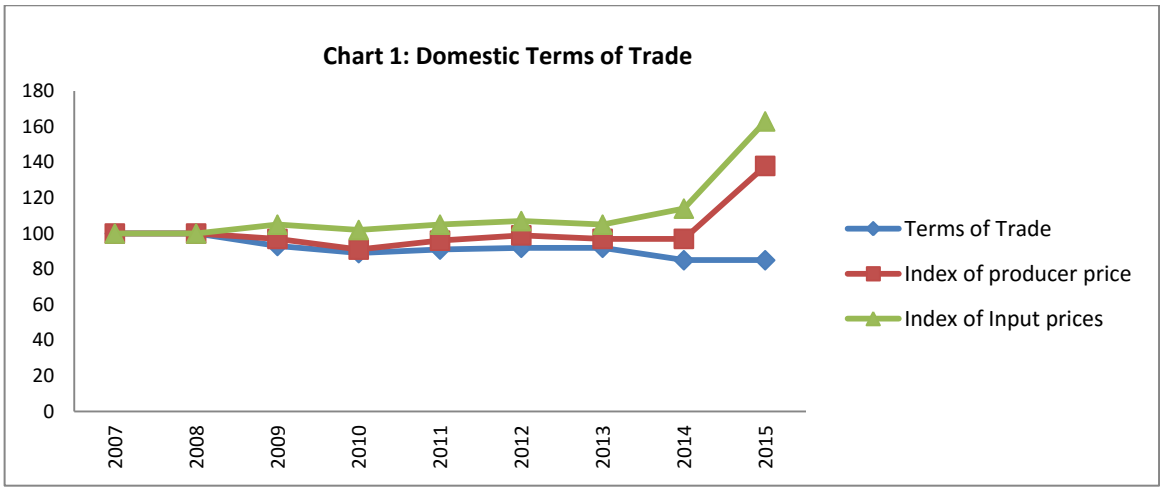
Quality of Life:

The terms of trade shows declining trend and this implies the decreasing of puchasing power of rural households. This is confirmed by the index of producer prices which also depicts a declining trend except for the year 2015. This is mainly due to the low price of agriculture produce.

	Domestic Terms of Trade		
Period	Terms of Trade	Index of producer price	Index of consumer prices
2007	100	100	77
2008	100	100	84
2009	93	97	95
2010	89	91	100
2011	91	96	113
2012	92	99	131
2013	92	97	141
2014	85	97	149
2015	85	138	98

Source: Author Calculations

Chart 2 Domestic Terms of Trade
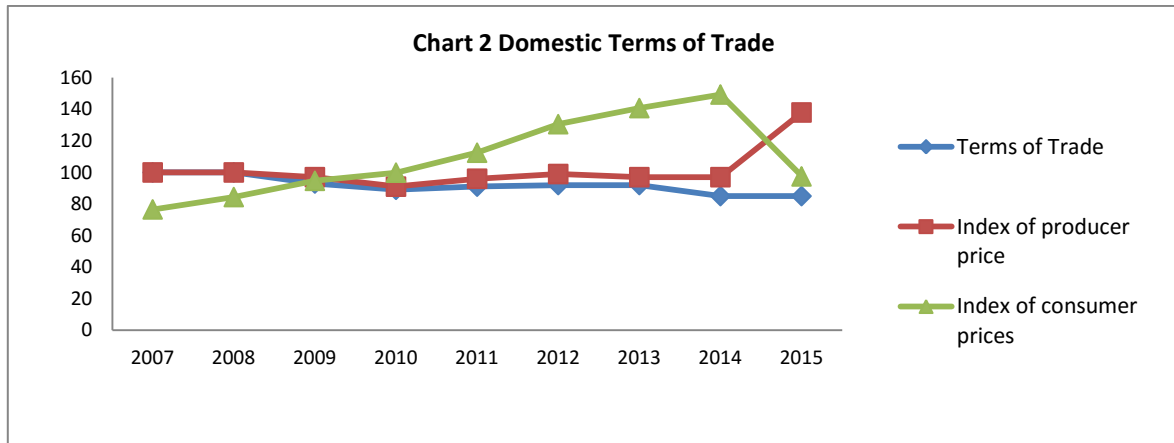
The index of consumer prices (CPI) increased more than the indexes of producer prices and Agriculture terms of trade. The divergence begins in 2009 and this implies that the prices of non agriculture were moving faster than those of agriculture and the increase of index of consumer prices is making life stagnant to agriculture sector, the graph begins to flatten in 2014 to 2015. This is mainly due to the fact the consumer consumer price index in most of developing countries including Tanzania is food driven. When there is a bumper harvest during agriculture production, the CPI will be increasing at decreasing rate.

General conclusion:

The government should build the missing infrastructure, control price of inputs, and irrigation equipments also formulation of price policy in order to protect farmers from fall of price for their agriculture produce. This will allow economic growth in poor rural areas which in turn move people out poverty.

Abbreviations:

ITT -Index of Terms of Trade

NPS- National Panel Survey

CPI- Consumer Price Index

IPP-Index of Price Paid

ISIC- International Standard of Industrial Clarification

Reference Lists:

Tanzania Population and Housing Census-2012

Out of Poverty (Paulo Polak,2007).

Tanzania National Agriculture Sample Census- 2008

National Economic Survey -2014

National Strategy for Growth and Reduction of Poverty -2010.

The End of Poverty – Jefferey D. Sachs