

Relationship between Gold Export and Gross Domestic Product in Tanzania

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Abstract

Objective: Gold production and export has been among the fastest growing business and promising in the world with stable world market price. The significance of gold export is very crucial for the economy and GDP. The main objective of the study is to examine the relationship between gold export and gross domestic product in Tanzania.

Research Design/Methodology: The study covers time series data from 1990 to 2014. Simple linear regression analysis and correlation were applied.

Findings and suggestions: Data evidenced that there is a positive relationship between Gold Export and Gross Domestic Product in Tanzania and therefore Gold export is significant to GDP of Tanzania. Gold production must be increased to increase the share of economic growth in Tanzania. For the big results of GDP, it must empower citizens with skills and technology to increase gold export as it has significance relationship with the economy.

Keywords: Gold Export, Gross Domestic Product.

1. INTRODUCTION

Tanzania is identified to be among the African countries with gold production and export after South Africa and Ghana. The nature of gold production in Tanzania is mainly dominated by the giant foreign firms who control the output and revenue. Gold export can assist the country with financial constraint it has in meeting all social and economic needs. Countries in Africa must take steps to promote and control gold production and export to help recover the domestic economy through utilizing the gold revenue potential and its surplus must be invested in strategic sectors like agriculture, before gold is depleted away. This study therefore examine the relationship between gold export and gross domestic product in Tanzania

2. LITERATURE REVIEW

United States Geological Survey (2013) also points out that Gold performs critical functions in computers, communications equipment, spacecraft, jet aircraft engines, and a host of other products for industrial metal. When the demand for these products increases, the gold value also increases. Scottsdale (2014) demonstrates that 12% of gold demand is generated from industrial applications.

Manufacturers use gold in all sorts of electronic devices, from computers to GPS systems, and medical devices like heart stints.

Sindhru (2013) and Elfakhani S, Imad B.B and Hind R (2009) explain that gold is known from old times of civilization to date where gold demand and value has been growing tremendously. The author reveals that even the world financial crisis has driven back for the return of gold standard and therefore the value of gold is significant to the economy. The authors also add that many western banks in England and USA recognize the importance of Gold and is used as a major reserve asset that why the most rich countries have huge reserve of Gold. The authors focus on gold prices and are appreciated on using regression analysis to validate their study regarding the gold price.

The above authors provided opinion about gold value which is very similar with that of Gayathri V and Dhanabhakym (2014) who also explained the gold as an important assets in our times. But this is not the same perception in Africa where the multinational companies enjoy the fruits of gold value since they know the value and the market. Given this perception they enjoy high profit .

It is also pointed by the Ausman G,Mutambatsere E and Ndiaye G,(2012), that mining companies in Africa has been realizing high profits due to Gold price increase over the past decade. Furthermore the companies enjoy lower tax rates and lower royalty rates and repatriate all the profit with less benefit to the local economy.

David I.(1995) reveals that Tanzania has variety of resources although has not been fully explored. The authors also reveal that gold and diamonds are the mainstay of the country mineral production. The author applaud the government of Tanzania in liberating mineral production through attracting foreign companies with favorable lower taxes. Among the main mining investors are mainly coming from the united state of America, South Africa, Japan, Australia, Canada and United Kingdom. Their firms enjoy gold export with lower taxes and leaving behind little benefits.

Therefore given the significance of gold deposit in Tanzania, the industry is promising in terms of price stability and as an asset that can be used to improve the domestic economy. Gold deposit and export must match with the level of development in the country as analyzed by Elfakhani S, Imad B.B and Hind R (2009) that gold is very valuable resources for development of the nation

3. SIGNIFICANCE OF GOLD IN ECONOMIC GROWTH

In the past ten years statistics shows that GDP growth rate has been tremendously growing to its constant level of 7% per annum even though has not been poverty inclusive. Among the contributing sectors to this growth is identified to be mineral sector and gold export is among the key contributing factor to this growth under the mineral sector. Gold production and export has attracted many multinational companies to invest into gold activities. The attention into gold activities is a result of the world economic crisis that attracted many foreign direct investors into Tanzania and Africa as whole with a focus into gold mining activities.

According to Gayathri V and Dhanabhakym (2014) explain that gold as an assets is normally equal to safe heaven and as a medium of exchange. The author reveals that in India society gold has been taken as pride for Indian families and gold is identified as an asset that protect one from financial crisis. In India gold has some cultural image and therefore is very valuable. Gold is used to protect families during inflation times and war times where the value of gold is always stable and promising. The authors added that there are strong reasons for why people hold gold that includes security reasons, Gold has capacity even to maintain its value in times of global crisis, people hold gold to build diversified portfolio and also it is used as collateral and security against loans. Therefore gold is very valuable.

It is also revealed that with given global cycle some investors, institutions and individuals prefer to buy gold to keep gold for speculation purposes and risks diversification World Gold Council (2016). Therefore, when the desire for gold speculation purposes increases among investors and speculators, also the demand for gold value increases and other factors remaining constant

4. OBJECTIVES AND HYPOTHESES

The main objective of the study is to examine the relationship between gold export and gross domestic product in Tanzania. The study is guided by the following hypotheses;

H₀: There is no significance relationship between Gold Export and Gross Domestic Product in Tanzania

H₁: There is significance relationship between Gold Export and Gross Domestic Product in Tanzania

5. GOLD EXPLOITATION IN TANZANIA

Gold is one of the natural resources that form part of the wealth of the nation. Natural resources both renewable and non renewable are very important in promoting economic development of the country and poverty alleviation, also it can be a good source of foreign exchange OECD(2011). Natural resources contribute towards government revenue and job creation among people. Therefore the gold deposit is an opportunity for poor nation like Tanzania to exploit this resource for the betterment and prosperity of the nation. When used wisely it can be used to boost other investment like agriculture sector which can in turn assist in poverty alleviation. The effective utilization of gold resource by the nation will depend on the citizens themselves to know the value of Gold resources otherwise it shall remain as a paradox.

The history of Gold started during German colonial period, beginning with gold discoveries in the Lake Victoria region in 1894. Mining began at the Sekenke Mine in 1909. After 1930, gold production was substantial and increased steadily until World War II. By 1967, the gold industry had declined to insignificance, only to revive after 1974-75 when the world gold price increased greatly. Beginning in April 1990, the Bank of Tanzania began buying gold at the world market price through commercial banks, paying miners in Tanzanian shillings calculated at the parallel market rate for the US dollar rather than at the official rate. In the late 1990's, several mining companies from Canada, United Kingdom, Australia and South Africa arrived in Tanzania, interested in gold exploration and development. From 2000, production of gold at an industrial scale is growing, especially from the Geita (AngloGold/Ashanti) and Bulyanhulu (Barrick) mines Euroamerican Data (2006).

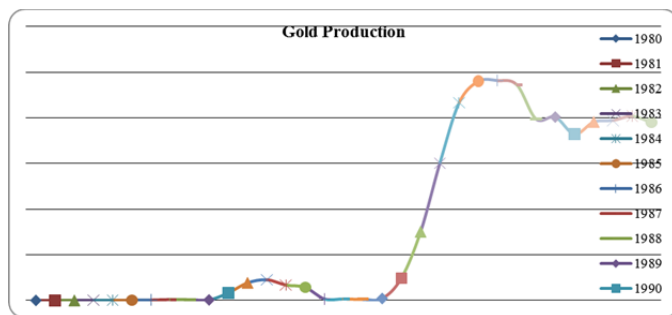
To date Tanzania is among the African gold producer that include the following countries South Africa, Ghana, Mali and Tanzania. Data suggest that there is a significant amount of gold deposit in Tanzania.

This is again evidenced by Euroamerican Data (2006) that Tanzania has become one of the fastest emerging gold producers in Africa, and is now the continent's third-largest gold-producing country after South Africa and Ghana. It is estimated that the country has more than 2,222 tons of Gold deposits and reserve Presidential Mining Review Report (2008). Its exploitation is mainly dominated by foreign giant corporate firms that enjoy maximum production and revenue with tax relief and incentive packages.

Given good business climate and environment with revenues yield by these gold giant producers in Tanzania it is revealed by Euroamerican Data(2006), in each year since 1998 a new gold mine has been opened in Tanzania some are owned by Resolute Ltd, Ashanti Gold field, Barrick Gold Corporation, Meremeta Ltd etc.

The analysis from literature suggest that the continued world economic crisis has made these giant companies to turn their interest into Africa particular in the exploitation of natural resources and gold in Tanzania and make sure its interest is on economic recovery and gains. That is why there is a positive growth of production and export of gold.

The Fig. 1 demonstrate the Gold production for Tanzania from the period 1980 indicating lower gold production the period of 1980s'. At that time Tanzania was still a socialist country and gold deals was dominated by the government until later 1986 when the country adopted SAPs that allowed the multinational to come and exploit gold with free capital flight and lower taxes, Tanzania gold production increased significantly with its lowest production of 3 kg in 1980 to 48,176 kg in 2004 and slightly fell in



Source: Research Survey Data (2016)

Fig. 1: Gold Production in Kg per Annum from 1980 to 2012

2012 to 39,012 kg but significant. The speed of Gold exploitation is noted during the adoption of SAPs to Tanzania with a massive gold exploitation that has never been before.

6. DATA AND METHODOLOGY

The study covers time series data from 1990 to 2014. Simple linear regression analysis and correlation were applied to validate the study for the period. Data were processed by using excel spread sheet for the output. Researchers collected data on economic growth (Gross Domestic Product growth rate) and Gold export from the World Bank, the government of Tanzania. The researchers obtained average annual price of Gold from the Statista (2016) with head office in Hamburg in German with its branch offices in London and New York. The price used as the base for estimating the average annual price for Gold. After this estimation the researchers computed the annual Gold production in kilograms multiplied with the average annual price per troy ounce where 1 kg is equivalent to 32.15 troy ounces. This provided the baseline for prediction of gold export from 1990 to 2014. Gold production was available through the Tanzania ministries of energy and the Central bank and it was given in Kilograms.

Researchers examined the variables, Gold export and economic growth for the time series data for the period 1990-2014. Generated data assisted the researchers to run the simple

linear regression analysis to examine the level of significance. Correlation analysis was used to validate the study. Economic growth or the real GDP growth was identified by the researchers as the dependent variable in this study while Gold Export, identified to be independent variables. The researchers in this context examined the significance relationship of Gold export and economic growth. After the scrutiny of the variables the researchers expressed these variables in the following simple regression equations.

$$\text{Real GDP growth}(\text{Gr } t) = f(\text{Get} , \epsilon)$$

Where;

Gr t = Real GDP Growth

Get = Gold Export

ϵ = error term

The above function could then be expressed in the following equation:

$$\text{Log GRt} = (\lambda_1 + \lambda_2 \text{Get} + \epsilon)$$

7. FINDINGS AND RESULTS

The researchers also used secondary data to investigate the significance relationship between gold export and gross domestic product. Researchers examined the variables, Gold export and economic growth for the time series data for Tanzania covering the period 1990-2014. Generated data assisted the researchers to run the regression analysis to examine the level of significance using excel spread sheet.

Economic growth or the real GDP growth was identified by the researchers as the dependent variable in this study while Gold Export, identified to be independent variables. The researchers in this context would like to examine the significance relationship of Gold export in economic growth. The results are summarized as follows:

Regression Statistics	
Multiple R	0.548008757
R Square	0.300313598
Adjusted R Square	0.26989245
Standard Error	1.92705947
Observations	25

	df	SS	MS	F	Significance F
Regression	1	36.65976	36.65976	9.871869362	0.00456912
Residual	23	85.41184	3.713558		
Total	24	122.0716			

Coefficients	Standard	t Stat	P-value	Lower
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		Error		
Intercept	4.141470454	0.523375	7.913013	5.17E-08
Gold Export	1.73E-09	5.5E-10	3.141953	0.0045691

Give the value of significance of 0.00456912 and the P – value, this is very small at 5% level of significance and suggest that it is significant to assume that there is a positive relationship between Gold Export and Gross Domestic Product in Tanzania.

Furthermore given the value of R^2 is that, there is 30% of the variability in distance is explained by the regression line this suggest that as Gold export increases by 30% GDP growth rate will also increase by 30% and the rest 70% can be explained by other variables. But the most important is the positive coefficient value of the gold export that demonstrates that gold has positive relationship with GDP growth. As gold export increases also the GDP growth rate increase and when it decreases also the GDP growth rate decreases. This relationship is important to draw our policy and make decision and therefore it is significant to the economy of Tanzania.

Therefore we reject the null hypothesis at 5% significant level that there is no significance relationship between Gold Export and Gross Domestic Product in Tanzania and accept the alternative hypothesis that there is significance relationship between Gold Export and Gross Domestic Product in Tanzania.

The correlation between real GDP and Gold export has been shown in the following table:

Table 3: Correlation Analysis

	Real GDP Growth Rate	Gold Export
Real GDP Growth Rate	1	
Gold Export	0.548008757	1

The above table correlation output suggests that there is a positive relationship between economic growth and Gold export.

8. CONCLUSION AND RECOMMENDATIONS

Data evidenced that there is a positive relationship between Gold Export and Gross Domestic Product in Tanzania and therefore Gold export is significant to Tanzanian economy (GDP). The results shows the significance P-value of 0.00456912 lower than 5% significant level and this validate the researcher's findings. Gold production must be increased to increase the share of economic growth in Tanzania. For the big results of GDP the government must empower citizens with skills and technology to increase gold export as it has significance relationship with the economy.

Giant firms and governments in the world involved in the exploitation of Gold in Tanzania and Africa must increase responsibility, accountability and transparency on tax deals, incentives must be avoided and their capital flight must be controlled so that more money gained from sales of Gold export and other natural resources to a large extent must be ploughed back to domestic economy before its depletion point and bring about development in the country.

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