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Sudan's Economic Decline and the Role of Fiscal and Monetary Policies in Sustaining Recovery

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Abstract

Economic recovery continues to elude Sudan. The absence of proper strategies, economic reforms and lack of fiscal and monetary policies have now resulted in low levels of per capita income, where a majority of labor force involved in agricultural activities. The paper provides a new structural economic perspective of such declines. The research seeks to study and analyze the recent economic reforms policies and its implications in supporting structural transformation and economic development, which aimed to improve the standard of living, enhancing macroeconomic stability and sustaining inclusive growth. The author reviews the different theories on structural change, economic development and industrial growth. A Factor Augmented Vector Auto regression Approach was used to test our model. We conclude that Sudan has significant potentiality for stabilizing its economy in the three-year economic reform 2012-2014. The author recommends for the ongoing a five-year economic reform 2015-2019, the fiscal, financial, institutional, and regulatory reforms are needed to enhance productivity and raise growth. The results would provide information to policy makers to design an optimal industrial strategy and thus lead to structural transformation.

Keywords: Industrial policy; Structural change; Economic development; Monetary and Fiscal policies.

INTRODUCTION

This work is a natural outgrowth from my previous research projects, which dealt with a number of aspects of the following areas: (1) the lack of conducting fiscal and monetary policies in Sudan; (2) issues related to industrial policy, structural change and its effects of on economic transformation in Sudan; (3) Back to the Agriculture - the Development of the Comparative Advantage of Sudan's Commodities ; (4) Injections into the Dutch Disease: Do IMF packages and foreign aids recover Sudan’s economy. Among these topics, I am particularly concentrating on the first two research projects. Currently, I am involving in a survey of fiscal and monetary policies and productive sectors in the whole of the country, the industrial policy and structural change, and at present I am heavily engaging in the statistical and quantitative analysis of this survey.

For many developing countries, including Sudan, the monetary policy is considered to be one of the most influences on productive sectors and it continues to contribute in the growth domestic product (GDP) of these countries. Sudan has been plagued with several challenges besides fiscal and monetary policies, the economic potentials for rapid economic development, where the productive sectors are suffered from the lack of monetary and financial policies. The sustainability of growing economic growth can be achieved through combination of stabilization and structural policies. The main goal of stabilization policies is to achieve lower prices and lower inflation and thereby reduce budget deficits. However, over the past few years, Sudan has experienced external trade deficit, continued a depreciation of exchange rate and higher inflation and unemployment rates, which results higher inflation of 53%, unemployment of 43% and budget deficit (Y. Elryah 2015).

In this study, I argue that there are many alternatives policies that policy makers can be initiated and implemented to return the economy back to the health. These alternatives policies may provide a comprehensive and complete picture to resolve all economic, political and social issues. What this study attempts to do, is to try to give the policy makers and reader to understand the lack monetary and fiscal policies that policy maker have adapted, and how Sudanese people were affected to implement these policies.

I believe this study is an important contribution to declining of economic growth in Sudan. There is clearly stated for academic and practitioners to pay attention to the impacts of the secession of South Sudan and losing the oil revenues on economic growth, as it has received little or no academic attention. However, the main aim of this study is to make an empirical contribution to the ongoing debate on inflation rate, monetary expansion and fiscal policies relationship in several aspects. We tend to investigate the effects of stabilization policies on economic growth in short-run. To this end, the research applies a variety of econometric models to identify the relationship between the endogenous and exogenous variables for the recent period from 1999 to 2015.

The field of economic development has been addressing issues such as these and much of technology and innovation for transfer poor countries has been working out to a considerable degree. Nevertheless there continues to be in developing countries failure, particularly on the least developing countries, to recognize the true importance of structural change for these countries.

In this research, our main purpose is to add to existing empirical studies by examining impacts of stabilization policies on declining Sudan's economy. We consider macroeconomics indicators for the period 1999 and 2014 to answer the following questions; Why Sudan missed the opportunities to develop the production sectors during the long oil boom? In which projects the large oil revenues used? How Sudan can achieve the economic instability while the conflicts and demonstrations continue in most parts of the country? How new adjustments the weak and poor fiscal and monetary policies that designed and implemented by Sudanese policy makers have decreased the gross domestic product (GDP) and sharply increased both inflation and unemployment? And, could the ongoing economic reforms bring the recovery to the economy?

Since late 2011, Sudan has observed remarkable decrease in economic growth, which increased inflation and unemployment rates. Since then, Sudan underwent economic reforms that favored adopt stabilization policies. Considering that the ongoing five-year economic reform plan (2015-2019) for growth and poverty reduction cannot be achieved unless stabilized the macroeconomic indicators.

Economic recovery continues to elude Sudan. The absence of proper strategies, economic reform and lack of fiscal and monetary policies have now resulted in low levels of per capita income, where a majority of labor force involved in agricultural activities. Addressing these require structural transformation to high productivity levels and focusing on long-term sustainable sources for economic growth and inclusive development, and move towards agro-processing industries. As (Barro, R. J., and X. Sala-i-Martin 1995) argue "if we can learn about government policy options that have even small effects on long-term growth rates, we can contribute much more to improvements in standards of living than has been provided by the entire history of macroeconomic analysis of countercyclical policy and fine tuning". To promote this transformation, the fundamental question arises from how policy makers in Sudan design effective development policies.

Over the years, Sudanese economy has been plagued with several challenges besides fiscal and monetary policies, the economic potentials for rapid economic development. For many developing countries, including Sudan, the monetary policy is considered to be one of the most influences on productive sectors and it continues to contribute in the growth domestic product (GDP) of these countries. In Sudan, the productive sectors are suffered from the lack of monetary and financial policies.

The sustainability of growing economic growth can be achieved through combination of stabilization and structural policies. The main goal of stabilization policies is to achieve lower prices and lower inflation and thereby reduce budget deficits. However, over the past few years, Sudan has experienced external trade deficit, continued a depreciation of exchange rate and higher inflation and unemployment rates, which results higher inflation of 53%, unemployment of 43% and budget deficit (Y. Elryah 2015).

The study finds that there is a significant potentiality for stabilizing of Sudan economy in the three- year economic reform 2012-2014. Furthermore, the ongoing a five-year economic reform 2015-2019, the fiscal, financial, institutional, and regulatory reforms are needed to enhance productivity and raise growth.

This paper examines the root causes for Sudan's economic decline by deepening the analysis and links the fiscal and monetary policies to the productive sectors in the context of economic reform plans of 2000-2015. The paper consists of five sections. The section follows this introduction is literature review. Section 3 presents the empirical methodology. The results are discussed below.

LITERATURE REVIEW

Recovering from an economic shock requires stabilization and structural policies that complement one another. As general known, stabilization policies lay the foundation for economic growth to achieve lower inflation and reduce government deficits. Then the structural policies attain its effect after resolving the macroeconomic imbalances. Likewise, the structural policies intensify the effectiveness of many stabilization measures: promoting competition, for instance, this may lead to lower prices and, consequently, lower inflation

A relative stability in domestic prices, high rapid and sustainable economic growth and full employment are most three ultimate macroeconomic goals every economy strives to ensure sound macroeconomic policy. Macroeconomic theories offer various explanations on how declining in economic growth may affect the economic activities.

Theoretically, there is a debate over the effective policy to stimulate economic growth, promote growth, and adjust unemployment and inflation rates through fiscal and monetary policies. The Keynesian approach often argues fiscal policy is more essential, and governments intervene through fiscal policy tools to stimulate economic activities. Central banks and based on Monetarists, are responsible of controlling money supply (Friedman and Schwartz, 1963; and Ando and Modigliani, 1965). Previous evidences concentrated on the impacts of fiscal and monetary policy on growth in developing countries carried out by (Anderson and Jordan (1968), Friedman, (1968) Senbet (2011). Friedman, (1968) concluded that has critically analyzed the causality relationship between economic growth and monetary policy.

In his study, Senbet (2011) adopted new-classical model used in most recent studies to test the causality relationship between monetary and fiscal policy on nominal GNP stabilization. He found that the fiscal policies are unlikely less effective that monetary policies on economic activities. Similarly, Shahid et al (2008) conclude that monetary policy compared to fiscal policy is a powerful tool in ASEAN countries. Simorangkir and Adamanti (2010) have revealed that the combination of fiscal and monetary expansion is effectively boost economic growth of Indonesia. Over time, many economic scholars have identified theoretically and empirically the crucial factors that cause economic decline in different countries. For instance, in the long-run growth rate of GDP the neoclassical growth approach emphases that the population growth and technological progress rates are the most exogenous variables extensively used.

In this study, I argue that there are many alternatives policies that policy makers can be initiated and implemented to return the economy back to the health. These alternatives policies may provide a comprehensive and complete picture to resolve all economic, political and social issues. What this study attempts to do, is to try to give the policy makers and readers to understand how lack monetary and fiscal policies have delayed the economic recovery, and how Sudanese people were affected to implement these policies.

I believe this study is an important contribution to declining of economic growth in Sudan. There is clearly stated for academic and practitioners to pay attention to the impacts of the secession of South Sudan and losing the oil revenues on economic growth, as it has received little or no academic attention. However, the main aim of this study is to make an empirical contribution to the ongoing debate on inflation rate, monetary expansion and fiscal policies relationship in several aspects. We tend to investigate the effects of stabilization policies on economic growth in short-run. To this end, the research applies a variety of econometric models to identify the relationship between the endogenous and exogenous variables for the recent period from 1999 to 2015.

The rational of choosing this period are that, it is intended to investigate the impacts of monetary policies on inflation rate; it also examines the effect of fiscal deficit on the private investment in Sudan. During this period, the inflation has increased and showing a double digit figures. In Sudan, this period has underscored substantial changes in the monetary policies due to the response of losing the oil revenues followed the secession of South Sudan in late 2011.

DATA COLLECTION AND EMPIRICAL METHODOLOGY

The economy is a large component with lot of diverse and sometimes complex parts; this study will only look at a particular part of the economy (the monetary and fiscal policies). This work will not cover all the facts that make up the financial sector, but shall focus only on the monetary and fiscal policies and how it should be conducted. The empirical investigation of the impacts of monetary and fiscal policies and related the declining of Sudan’s economy shall be restricted to the period between 1999 and 2015 due to the non-availability of some important data. Though the scope of study will be limited to the monetary and fiscal policies, it is hoped that the exploration of this framework will provide a board view of the importance of conducting a monetary policies. It will contribute to existing literature on the subject matter by investigating empirically the role, which the financial sector plays in the economy. The main importance of this

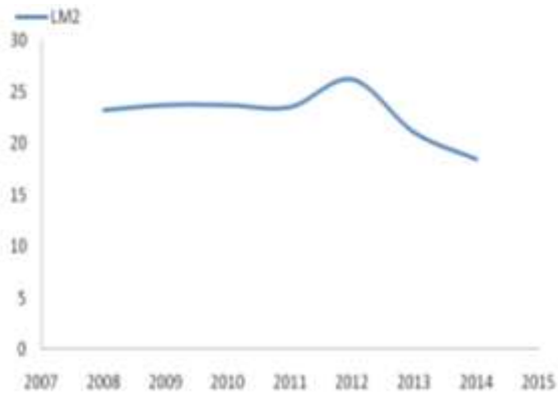

Fig 1. log of Broad Money

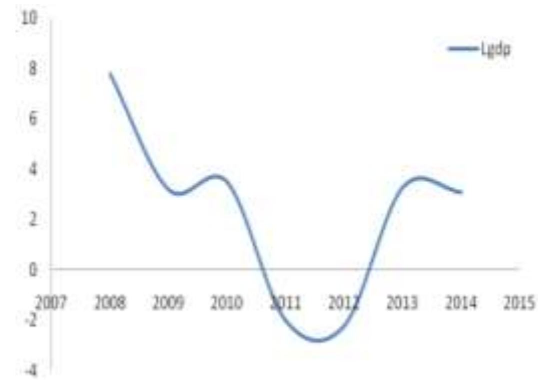

Fig 2. log of GDP growth

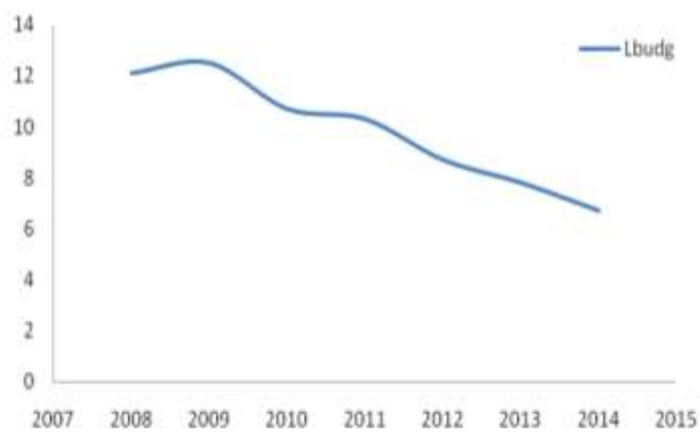

Fig 3. log of Government Spending

study is that it will provide policy recommendations to policy- makers on ways to improve and develop the conducting of monetary policy.

Data

This paper uses annually data from 1999 to 2015. The dataset for Xt consist of 74 series, and is a combination of the one used in Haryo Kuncoro (2015). The data set includes data on real activity, inflation, money, and profitability ratio. The data of this research would be obtained mainly from secondary source, particularly from ministries of financial and planning economy, Central Bureau of Statistics, Central Bank of Sudan publications and relevant journals and textbooks.

Research Model

The first step is to transform the data for ensure stationarity. The following figures show the logarithms of broad money, gross domestic product (GDP growth) and government spending over the last ten years as shown in the above figures, it clear that the ongoing economic reform has a significant impact on macroeconomic stabilization. Due to the slow of oil revenues specifically after the secession of South Sudan, public spending continues to exercise negative impacts on the economy.

The following equation estimates the impacts of monetary and fiscal policies on the gross domestic product (GDP) can be expressed as follows:

$$\Delta \gamma_t = \beta_0 + \sum_i^n \propto_i \Delta M_{t-i} + \sum_i^k \gamma \Delta G_{t-i} + \varepsilon_i$$

Table 1. Unit Root Results (1999-2015)

Variables	Dickey-Fuller	Augmented Dickey-Fuller
Log(M2)	-4.19*	-3.65**
Log(G)	-2.96**	-1.72**

"*" 5%, **" 1% refer indicate significance level

Table 2. Estimation Results

Number of lags	Coefficient		t-statistic	
	log(G)	log(M2)	log(G)	log(M2)
0	0.003	-0.094	4.31	-0.71
1	0.281	-0.003	3.75	-3.04
2	0.062	0.061	2.81	0.07
3	0.075	0.007	0.62	1.63
4	-0.036	0.304	-0.07	3.02
5	-0.008		-0.28	
6	-0.060		-1.93	
7	-0.072		-2.62	
8	0.520		-3.78	
Sum of lags: log(G)	0.710			
Sum of lags: log (M2)	0.351			
R^2	0.931			
A. R^2	0.886			
F-statistic	15.92			

Where:

Δ = the percentage change of the variable

n and k = are the lag length of the corresponding variables

Y = the output

G and M = reflect fiscal and monetary policy variables

ε=□ □ □ the random error term

Output is measured by the GDP; M2 represents broad money supply, and public expenditure is measured byactual spending defined by G. First, we establish stationarity of the log form of economic variables involved, namely: broad money aggregate and actual public spending. Both augmented Dickey-Fuller test and Dickey-Fuller test using the following equations.

$$\gamma_t = \beta_0 + \beta_1 t + \beta_2 \gamma_{t-i} + \varsigma_i$$

$$\gamma_t = \beta_0 + \beta_1 t + \beta_2 \gamma_{t-i} + \sum_i^n \alpha \Delta \gamma_{t-i} + \epsilon_i$$

RESULTS

Unit Root Tests

To test our hypothesis, using a logarithmic for both independent variables, we assume that Y_t has a unit root, while $ß_2$ = 1 (the variable is nonstationary) as shown in the table above. Using logarithms, table -1 illustrates the unit root results between the economic growth and fiscal and monetary variables, which shows that during this period, Sudan has significant potentiality for stabilizing its economy in the three- year economic reform 2012-2014. For the ongoing a five-year economic reform 2015-2019, the fiscal, financial, institutional, and regulatory reforms are needed to enhance productivity and raise growth.

Estimation Results

The table above shows estimated results, which fits the satisfactory of our model. It also explains the variability of our data with 93.1%. The elasticity of economic growth with respect to fiscal and monetary policies was positive at (0.710) and (0.351) and statistically significant. In the long-run, on the one hand, if the money supply grows by 10%, the economic growth will grow by 3.5%. On the other hand, if the government spending rises by 10% the economic growth will defiantly increase by 7.1%. This fact indicates the effect of fiscal policy much stronger than monetary policy.

CONCLUSION AND POLICY IMPLICATIONS

The aim of this study was to provide direct empirical evidence on Sudan's economic decline and the role of fiscal and monetary policies in sustaining the economic growth. To the best our knowledge this is the first study that investigates the economic decline by linking the new structural economics approach in the case of Sudan. We use a factor augmented vector auto regression models and conduct augmented dickey-fuller tests.

In this study, I have tried to argue that structural change and industrial upgrading are becoming increasingly important function in economic transformation process, which consists of multiple components, and these components must be managed both by private sector and government. I have tried to show that the various economic policies in Sudan are not closely linked and unable to transfer the economy further.

I hope it is clear from what has been said above that economic recovery continues to elude Sudan and the absence of proper strategies, economic reform and lack of fiscal and monetary policies have now resulted in low levels of per capita income, where a majority of labor force involved in agricultural activities.

The study concludes that Sudan has significant potentiality for stabilizing its economy in the three- year economic reform 2012-2014. For the ongoing a five-year economic reform 2015-2019, the fiscal, financial, institutional, and regulatory reforms are needed to enhance productivity and raise growth. The results would provide information to policy makers to design an optimal industrial strategy and thus lead to structural transformation.

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