

The Effect of Changes in Oil Prices on Economic Development of South Sudan: A Case Study of Juba City Republic of South Sudan

Ocum Genes Karlo & Maxwell Adea

Abstract

The study looks at how fluctuations in oil prices affect South Sudan's economic growth. This entails investigating the variables that affect oil prices as well as the connection between shifting oil prices and economic growth. The impact of oil prices on the economic growth and development of the nation is significant. For instance, the literature study shows that Pakistan's inflation of oil prices had little effect on economic growth over the medium and long terms. However, there were indicators of it raising the general price level in the economy. Eighty-eight (88) questionnaires were distributed to collect data from different respondents who were conveniently selected in Juba City and the response rate was 100%. The empirical evidence indicates that the correlation between oil prices and South Sudan's economic progress has improved. The government of South Sudan should rewrite and simplify the policy framework in order to guarantee increased oil revenue and a better socioeconomic standing for the populace. An impartial committee or entity that can supervise and keep an eye on the actions of individuals engaged in oil revenue management should be established by this policy framework. This tactic has the potential to greatly lower the incidence of corruption and improper handling of oil revenue while also raising socioeconomic conditions in South Sudan.



IJSB

Accepted 01 February 2024
Published 08 February 2024
DOI: 10.58970/IJSB.2299

ISSN: 2520-4750 (Online) 2521-3040 (Print)



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Keywords: *Oil price, Gross Domestic Product (GDP), Economic Development, Inflation, Endogenous Growth, Exogenous Growth, Neoclassical Growth.*

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1. Introduction

1.1. Background of the Study

Oil has been a vital component of the global economy since its early discovery in the 1800s. Painter (1986) asserts that the development of the internal combustion engine was the primary factor contributing to the increasing significance of oil. According to Lutz (2009), the importance of oil has increased to the point where, in an unexpectedly oil-free world, all major distribution networks that facilitate cross-border trade would collapse, bringing an end to global economic activity.

An increasing number of global economies are still dealing with the significant issue of oil prices and their impact on economic activity. Since the previous three decades have seen a wealth of empirical research on the relationship between oil prices and GDP, the relationship between oil prices and the level of economic activity has received a lot of attention. Among the earliest studies were Derby (1982) and Olomola (2006), which came to the conclusion that a significant increase in the price of oil typically preceded economic recessions. Over time, this idea lost traction as more recent empirical research revealed that oil prices had less of an impact on GDP.

Energy is the main force behind economic expansion and a prerequisite for advancement in the economy. Energy is used in every part of life, from running a business to keeping up a home. One of the top ten Sustainable Development Goals (SDG) is energy. Ensuring the availability of dependable energy and meeting energy requirements are important components of comprehensive policies for economic development in all countries, not just developing ones. Energy is essential for economic development; hence many developing nations take steps to guarantee that they have access to dependable and effective energy sources. However, economic progress requires more than just having access to energy. Long-term and effective use of energy resources is necessary. In general, oil has not been as important as it is now. Since the turn of the 20th century, oil has become much more significant, surpassing coal as the primary energy source. Crude oil, also known as hydrocarbon, is a black, pungent liquid with an unpleasant odour that is mostly made up of a mixture of different chemicals, primarily carbon and hydrogen. Over the past half-century, the world's oil consumption has quadrupled, with oil and gas now making up over 70% of all energy consumed worldwide. The shift in energy sources from coal to oil was mostly a response to advances in technology. Since oil serves as the primary energy source for both home and industrial applications, it is a natural resource of utmost importance to the global economy. This made the product's pricing extremely sensitive to supply and demand in the market, which resulted in an event known as oil price instability. However, issues surrounding the volatility of oil prices and their impact on economic expansion continue to fuel disagreements among economists and decision-makers. While some argue that it can promote growth, others (Derby, 1982) believe that it can impede growth. According to the former, an increase in oil prices will boost the foreign profits of countries that export oil, which will have a favourable impact on such countries' national income. However, in supporting their argument, the latter mention the example of net oil importing countries (which are aware of inflation, declining non-oil demand, higher input costs, and reduced investments). Conversely, the sharp drop in crude oil prices causes the economies of net exporting countries to implode (reduce national income and increase budget deficits). For instance, in 2014 the price of a barrel of crude oil lowers from \$110 to less than \$60, and in 2015 it drops to less than \$40 (CBN, 2015). This suggests a reduction in the net exporting countries' national revenue of more than 60%. Researchers and policy makers have continued to find the influence of oil price volatility on economic performance to be a significant issue ever since the first oil price shock of the 1970s. The relationship between

macroeconomic activity and oil price volatility is still unclear despite a wealth of prior empirical research. Prior to the most recent economic downturn in the 2000s, the majority of empirical research revealed a strong negative correlation between changes in oil prices and economic activity (Hooker, 2002). However, empirical research using data from the past ten years has shown that the effects of shocks to oil prices on economic performance are negligible (Omolola, for example, 2006). Naturally, the world's oil consumption is not distributed equally; oil-rich and advanced Organisation for Economic Co-operation and Development (OECD) nations consume significantly more oil than do less developed nations, and over time, the OECD's oil consumption has decreased. Since oil demand is widely acknowledged as one of the primary determinants of oil prices, it is crucial to comprehend the patterns of present and future oil consumption and their impact on the oil market.

Since the majority of people in these nations cannot afford energy, many of them are regarded as energy-poor (African Development Bank, 2009). Africa produces 12% of the world's oil, with the greatest deposits being in Nigeria, Angola, and Libya. Due to high production costs and inadequate infrastructure, oil prices have trended upward from 1980 to 2019. This is despite growing production. due to the fact that 38 of the 53 African nations import oil nett. The economy of the continent are challenged, meanwhile, by rising oil prices. The primary energy source for the South Sudanese economy's productive sectors is crude oil. It makes up over 92% of energy consumption in the manufacturing and transportation sectors and 96.7% of energy consumption in the agriculture sector (Abiola, 2005). As a result, fluctuations in the price of crude oil have a significant impact on the expansion of the economy in South Sudan. The Hubbert Peak theory, developed by King Hubbert in 1956 and revised by Laherrère in 2000, serves as the foundation for this investigation. According to Hubbert peak theory, the rate of petroleum production tends to follow a bell-shaped curve for any given geographic area, from a single oil-producing location to the world as a whole. Stated otherwise, given a restricted resource and its exploitability and market pressures, the production rate of that resource will essentially follow an approximately symmetrical logistic distribution curve (which is occasionally mistakenly compared to a normal distribution). His logistic model, which is now known as the Hubbert Peak theory, and its variations have been extended to other finite resource production domains and have been used to describe and predict the peak and decrease of production from regions and countries. Thus, as this theory defines oil production rate which also controls the rate of oil revenue and consequently affect the socio-economic (Lutz, 2009).

Changes in oil prices impact economic activity through a combination of supply and demand channels. There is a lack of agreement regarding the transmission channels by which oil prices influence economic activity, notwithstanding the abundance of study on the subject. Furthermore, the manner in which oil prices affect the economy and the extent to which they do so may have changed over time. Since the early 2000s, there have been changes to the systems that underpinned the first two shocks of the 1970s. In fact, Hamilton (2009) claims that one of the largest oil price shocks ever recorded occurred during the 2000s, particularly in 2007–2008; however, the reasons for this differed greatly from those in the 1970s. Furthermore, Hamilton (2009) observes that compared to earlier oil price shocks, the effect on the economies of both oil-importing and -exporting nations is somewhat less. While major disruptions in crude oil production brought about by primarily exogenous geopolitical events were the primary cause of historical oil price shocks, Hamilton (2009) argued that the 2007–08 event was actually caused by a failure of production to increase between 2005 and 2007 rather than a reduction in supply. According to Kilian (2011), one reason why the recent events haven't had much of an impact on the economy is that the 1970s were marked by poor

macroeconomic performance and an increasing reliance on oil. However, since 2000, economies—particularly those of the OECD countries—have tightened controls on business shocks. Thus, this investigates the different connections among oil resources, prices, and the economy. It looks into how oil abundance and prices affect non-OECD countries' economic growth over the long run. Prior to delving into these implications, it's crucial to attempt to comprehend the primary drivers of crude oil prices. Crude oil reserves and the difficulties in releasing them onto the market are the primary concerns of the supply side of the oil market. As previously mentioned, geopolitical variables have the potential to interrupt the supply of crude oil, which is a factor that is difficult to predict. However, Hamilton (2009) noted that the majority of the recent shocks to oil prices are caused by demand. As a result, assessing oil demand relationships is another major topic of the thesis. This is because oil industry long-term activities may be effectively analysed using this technique. It is crucial to account for the impact of energy efficiency while forecasting oil demand linkages because, as the Energy Information Administration study (EIA, 2012) notes, efficiency improvements have been the primary cause of the decline in oil demand in advanced regions.

Not only is South Sudan the newest nation on Earth, but it is also among the poorest. Apart from donor funding, the nation primarily depends on its oil reserves to finance the largest portion of its budget. This is the reason behind the study's focus on how the handling of oil revenue in Juba, South Sudan, has improved people's socioeconomic standing. South Sudan's economy is heavily dependent on the export of crude oil, which accounts for 14% of its Gross National Income (GNI), 90% of total export earnings, and 80% of yearly government budget revenue. The economy of South Sudan was supported by agriculture before to the discovery of oil, rather than the oil industry serving as the primary source of income. Actually, over 90% of the labour force in the nation was involved in agriculture, which also serves as the primary source of income. However, mining, and especially oil, gained prominence over agribusiness following the discovery of oil and the subsequent oil boom. The economy of South Sudan derived roughly 59% of its income from oil exports. Consequently, the economy would be greatly impacted by even a small shift in the price of oil (Kravis, I. & Lipsey, R. 2010). Studying the potential effects of these developments on South Sudan's economy is crucial, despite the fact that the price of crude oil is notoriously unstable. Late in January 2012, the government of South Sudan took the historic decision to halt oil production across the newly formed nation. The decision came about as a result of a deadlock in talks about the financial terms and circumstances that would allow the South to sell its oil through Sudan between Juba and Khartoum. The Sudanese government's unilateral efforts to reroute oil from the South that was passing through its borders made matters worse. Juba saw Khartoum's conduct as equivalent to the unlawful seizure of oil valued at \$815 million (Washington, 2012). The South Sudanese government concluded that, in the long run, it would prefer to see the country's wealth remain underground, protected from further looting by the Khartoum regime, until a long-term deal with Sudan could be struck or an alternate export system could be arranged. Whatever one's thoughts on the South Sudanese government's reasons for stopping oil production, one stark economic reality is unavoidable: until January 2012, 98% of the country's budget came from the sale of oil (Ebele, 2015). This indicates that the development of the South Sudanese people as a whole, and of Juba in particular, as it holds the lion's share of the nation's oil reserves, depends heavily on oil money. The degree to which Juba's socioeconomic condition is impacted by the handling of oil revenue is yet unknown, though. Thus, this study examined the impact of fluctuations in oil prices on the economic development of Juba in particular.

1.2. Problem statement

Notwithstanding the significant role that oil plays and the growth in product consumption, the

nation mostly relies on crude oil exports to meet its domestic petroleum product demand. Because of this, the nation may be more susceptible to shifts in the global price of crude oil. Changes in the price of crude oil have an effect on the expansion of the economy through both supply and demand. Over the time, changes in the GDP, inflation, and exchange rate of South Sudan have occurred due to increases in oil prices. Both the general public and policy officials are still cognisant of the volatility of the global oil market due to the negative growth rate of 3% GDP per capita that was experienced. The price of oil is one of the most important economic indicators that requires careful consideration because it is so intimately associated with daily living. People are sensitive to these changes, though. Economists have therefore been interested in the causes of fluctuations in the price of oil. Examining the effects of fluctuations in oil prices on economic development is crucial due to the oil industry's substantial contributions to the economic growth of South Sudan.

1.3. Research Objectives

To evaluate how changes in oil prices affect South Sudan's economic development, to look into what influences oil prices there, to look into how developed the country's economy is, and to look into the connection between changes in oil prices and South Sudan's economic development

2.0 Literature Review.

To identify the gaps, a critical analysis was conducted on pertinent literature and theories about the impact of fluctuations in crude oil prices on foreign exchange rates, output, and inflation.

2.1.1 Endogenous growth Theory

According to the economic theory known as endogenous growth theory, a system's internal processes directly produce economic growth (Aghion et al., 1998). More precisely, the theory states that the creation of new technologies and productive and efficient methods of production will result from the improvement of a country's human capital (Chirwa & Odhiambo, 2018). Neo-classical economics, in contrast, maintains that external causes and technical advancements are the primary drivers of economic growth. The productivity and economies of today's industrialised nations compared to those of pre-industrialized nations, according to proponents of endogenous growth theory, show that growth was generated and maintained domestically rather than through trade (Investopedia, 2017). Since there is no empirical support for the exogenous growth theory and it is based on assumptions that are difficult to evaluate, the theory is frequently criticised. There are others who contend that there is no discernible distinction between human and physical capital in some endogenous growth models. Some can counter that the endogenous growth hypothesis overvalues human capital and ignores the function of organisations.

2.1.2. Exogenous Growth theory

According to the exogenous growth theory, growth is ultimately driven by external forces, mainly macroeconomic ones, rather than those unique to an organisation or industry (Chirwa & Odhiambo, 2018). Technological developments are seen to be particularly significant. However, once more, the focus is on general technological breakthroughs rather than those deemed industry-specific. The endogenous growth theory states that technical advancements should only be taken into account in light of their potential effects on specific industries. For instance, companies in the healthcare industry are likely to outperform companies in other market sectors in terms of growth, regardless of how quickly technology is improving generally. This is especially true if there are notable technological advancements in healthcare

services.

2.1.3. Neoclassical Growth Theory

According to Todaro & Smith (2012), a neo-classical counter-revolution in economic theory and policy accompanied the political ascent of conservative administrations in the 1980s in the United States, Canada, Britain, and West Germany (Solow, 1999). This counter-revolution supported rational expectations theories, supply-side macroeconomic policies, and the privatisation of public companies in industrialised nations. It advocated for more open markets, the elimination of state planning, public ownership, and government regulation of the economy in developing nations (Solow, 1999). Neo-classical growth theory is used to determine the equilibrium of the economy and the rate of economic growth experienced by a nation (Raymond, 2024). Neo-classical growth theory can be estimated using the formula $Y = AF(K, L)$. Y represents the GDP of a nation. K represents the share of capital. L is an economy's level of unskilled labour. A represents the degree of technology. This theory holds that while a nation's capital accumulation plays a significant role in economic growth, technological integration and worker productivity are also essential for attaining steady economic growth.

2.2. Factors influencing oil prices

Many factors, including some with mostly short-term effects like speculation, have an impact on oil prices. Long-term price influences also include expectations about future global oil demand and production decisions made by OPEC. In the global oil market, supply and demand are maintained in balance by reactions to changes in price. A wide range of intricate factors influence supply and demand expectations. The economics of non-OPEC supply; OPEC investment and production decisions; the economics of other liquids supply; and global demand for petroleum and other liquids are the four main factors that determine long-term supply, demand, and prices for petroleum and other liquids, according to EIA (2012). Because proven oil reserves are concentrated in the OPEC countries and are only available in finite quantities within a specific geographical distribution, the organisation plays a crucial role in determining the long-term supply of oil. An enormous number of direct and indirect factors, ranging from political issues to economic issues, influence how the price of oil develops, both positively and negatively. A reasonably counter deal is an organisation that politically defends the interests of producers by fixing counterfeit prices, while relevant organisations are established by the international community to ensure that the barely visible hand is given a reasonable opportunity to decide the international price of oil from one perspective (Ruta and Venables 2012).

2.2.1. Demand and Supply

According to Lutz (2009), shifts in supply and demand could have an impact on the oil market by raising or lowering oil prices. Global oil providers modify the activities of free markets. When supply exceeds demand, the extra is put away for later use.

2.2.2. Political Unrest

In the event that a politically unstable oil-producing province is discovered, the markets for oil producers may react by driving up oil prices so long as supplies remain available to the highest bidders. In this case, even while supply levels are constant, the perception of scarcity in the market might drive up prices. Because of the political upheaval, oil output in South Sudan is politically uneven. Said material shortages, calls for increased control over oil assets, and psychological unhappiness stemming from reliance on the oil communities have all contributed to the crises in the region (Gboyega, Minh, Shukla, & Sore ide, 2011). The relationship between the price of oil and the suppliers of that oil takes excess into account while

considering treatments for excess demand. 60% of the world's oil supply comes from non-OPEC suppliers, yet they lack the necessary reserves to keep prices under control. They can simply respond to differences in global markets. However, OPEC essentially controls the price of oil on the market, especially when supply from non-OPEC countries declines.

2.2.3. Speculative Buying

Because speculators buy and sell future contracts on the open market, speculative demand causes the price of oil to fluctuate. The oil market's speculation will encourage investors to purchase additional futures. External legislative issues such as those in the Middle East, which are significant due to their impact on anticipated future supply instability with minimal focus on their impact on oil output, serve as examples of speculative demand distress in a variety of contexts (Lutz, 2009). For instance, in 2008, speculators drove up oil prices and created an unstable price level; but, in late 2009, the lack of oil demand caused the price level to decline.

2.2.4. Foreign Exchange Rate

The currency used in the worldwide oil exchange market is the US dollar. Devaluation of the dollar tends to increase demand for oil and raise its price. On the other hand, a rise in the value of the dollar will reduce the actual income of consumers worldwide, reducing the need for oil and lowering prices. The dollar's worth and the price of oil are closely linked, and as the bulk of oil transactions are conducted in US dollars, this could have a good or negative impact on the economies of the countries that export oil.

2.2.5. The Price of alternative commodities

Industrialised countries are looking for alternate energy sources like coal and solar power because oil extraction is expensive and complex. The need for less expensive alternative power sources increases with the price of oil. The demand for oil will decline as people look for more sustainable energy sources, which will lead to a drop in price.

2.2.6. Global Financial Crises

Financial crises on a worldwide scale, along with other economic crises like the global financial crisis of 2008, have the potential to undermine investment control, which lowers demand for oil and drives down prices. The catastrophic collapse of financial institutions was a factor in the drop in oil prices. The oil markets are essential to the world economy and have historically operated in an uncertain manner. Oil prices were characterised by high volatilities, especially during periods of global financial crises. In addition, during the global financial crisis, oil prices are extremely unstable and have lasting repercussions.

2.2.7. Political Resolutions and Restriction International

Political restrictions and resolutions may also have an impact on oil prices. For instance, the prospect of war or the use of trade and economic sanctions, such as those imposed by the United States on Iran and Iraq, on the countries that produce oil. Since governments own the majority of the world's oil reserves and production, the global oil market is highly politicised and performs very differently from a market with true competition. The price of oil is influenced by the oil exporting countries' policies. Oil markets label an administration's prohibition of oil exploration as a disaster in the oil supply, which drives up oil prices in areas with confirmed reserves, such the Gulf of Mexico.

2.2.8. Organization of Petroleum Exporting Countries Oil (OPEC)

The operations of OPEC have a considerable impact on the price of oil globally. The main cause of the volatility in oil prices is OPEC's operations, which provide 40% of the oil on the global

market and provide its members—including South Sudan—with plans on how to satisfy global demand. The main way that OPEC manipulates oil prices is by changing the supply among its member countries. The increase in oil prices in 2007 and 2008 can be attributed to OPEC's 2006 reduction in supply allocation (Fattouh 2011).

2.3 The level of economic growth

According to Fischer Stanley (1993), economic growth is the rise in an economy's ability to generate products and services over time. The gross domestic product (GDP) of a country is defined as the total value of all final goods and services produced inside the nation's borders for the marketplace during a given year. This definition is comparable to the general definition of economics (General economic definition). However, The New Palgrave Dictionary of Economics defines economic growth as a measure of a positive change in GDP within an economy. In this instance, there is a correlation between economic expansion and an improvement in standards. Joseph Schumpeter applies the ideas of economic development and growth simultaneously. According to him, economic development is seen as an abrupt, spontaneous shift inside the current steady state that has an impact on both the prior state and the general equilibrium. However, economic growth emphasises a long-term, progressive shift brought about by both the general rise in population and the dynamics of the economy. Simon Kuznets claims that economic growth generally entails a quantitative methodology. The following argument supports this: "Economic growth is primarily a quantitative notion and asks for significant advancements in the field of empirical research and the consideration of quantitative factors as a basis of the economic growth process.

Two prominent methodologies for researching the elements associated with economic growth and its primary drivers have been identified. The first method, known as the quantitative approach, is concerned with quantitative factors such as capital, natural resources, foreign direct investments, and openness level. A number of elements related to the political or cultural sphere are implied by the second approach, which is the qualitative one. Aside from the discussion of economic theory, the Solow model—which was given the Nobel Prize—is the most well-known model for examining output dynamics. According to the Solow model, the only factors influencing production growth after an economy reaches its equilibrium level of output are population and technological growth rates. Economic growth, as opposed to economic development, is the augmentation of national income, gross national product, and national income. It involves research, especially quantitative research with an emphasis on the existing relationships between the endogenous variables. According to Perkins, Radelet, and Lindauer (2006), economic growth is defined as the expansion of commodities and services over the entire economic front and the corresponding rise in per capita income. According to Osinubi (2005), this kind of production adjustment should show higher volumes in the current year as compared to the previous one. But according to Lutz (2009), development is a process whose main objective is to raise people's standard of living through greater national self-sustenance, which essentially reflects the need for international cooperation as a prerequisite for prosperity. This explanation provides a plausible account of how development encompasses growth in addition to other essential components. Economic growth, disposable income, income distribution, sustainability, extra money, maintainability, democracy, and human rights are the elements of economic development according to Ebele (2015). According to Abiola (2005), a nation could experience economic expansion even in the absence of fundamental progress. He goes on to say that innovation in the productive sector is necessary for economic growth in order to innovate it from the traditional to the modern, increase consumer choice, and create a free and safe environment. A country can only experience economic progress if its resources are wisely used and its production capacity is increased.

This promotes income redistribution among the population. Over the course of one or more decades, the cumulative effects, or the small fluctuation in the growth rates, become significant. It is simpler to redistribute income in a thriving, expanding economy than in a stagnant one (Hooker, 2002). According to Cypher and Dietz (2004), GDP is the total amount of money earned within a nation from commodities and services, regardless of where those goods and services are ultimately consumed. In addition, he saw GNI as the total revenue generated by a nation's resident producers, independent of the source of money (domestic or foreign). The best measure of economic growth, according to Cavalcanti (2011), is GNI, which includes GDP itself, worker compensation, and foreign property wages but does not include income earned domestically by non-residents. Consequently, GNI will be used in this study as a stand-in for economic growth.

2.4. The relationship between changes in oil prices and economic growth

Over the past three decades, a substantial body of empirical research has been conducted on the link between oil prices and GDP. One of the earliest studies, Derby (1982), came to the conclusion that a sharp increase in the price of crude oil accompanied recessions in certain economies. This idea has lost some of its strength over time, since more recent empirical research using data that goes back into the 1980s demonstrates that oil prices have less of an impact on economic production. It has been established that oil prices Granger-cause economic output on the US economy ever since the groundbreaking study of Derby (1982). Similar findings were found for Japan, Germany, France, Canada, Norway, and the United Kingdom by Saunders et al. (2009). Few research have examined the long-term association between the two elements; all of these investigations have concentrated on short-term interactions. Lardic and Mignon (2008) provided evidence of cointegration between oil prices and GDP in the US and other European countries. Hooker (2002) estimated a cointegrating relationship between oil prices, unemployment, and interest rates over an extended period of time in an analysis of the US economy. A different section of the literature on the relationship between oil prices and GDP examined the impact of reactions to erratic changes in oil prices, contending that the impact of oil prices on GDP is contingent upon the application of either a symmetric or asymmetric model specification. While asymmetry, as the name suggests, implies that the response of output to a rise in oil prices differs from that of a fall in oil prices of the same magnitude, symmetry in response to oil prices implies that the response of output to a fall in oil prices turns out to be a true reflection of the response of a rise in oil prices of the same magnitude. In a time-series setting, both criteria have been frequently used to examine the direction of causation between oil prices and economic output. Nevertheless, no research has used the asymmetric specification in a panel setting to examine the link between GDP and oil prices because of several difficulties. Numerous economic studies have demonstrated the impact of oil prices on the economies of the US and other OECD nations; nevertheless, there are comparatively fewer empirical investigations on non-OECD nations, and those that have been conducted have typically examined the relationship within a time-series framework. The only research that used a panel technique to analyse the link between oil price and GDP was Lescaroux and Mignon (2008). The ability to account for the diverse country impact has recently improved panel data analysis. In light of this, the goal of this chapter is to contribute to the body of research by examining the long-term relationship between oil prices and economic growth using both time-series and causality methodologies. The effects of changes in oil prices should differ for countries that import and export oil, according to Saunders et al. (2009). This implies that an increase in the price of oil should be seen as positive news in the former case and negative news in the later. Therefore, it is a given that rising oil prices will have a favourable impact on oil-exporting nations and a negative one on oil-importing nations. It is noteworthy to remark that, despite its political popularity, raising the subsidy might have a negative effect

on the economy's development potential. Substantial domestic petroleum price subsidies might make it impossible for the government to invest in industries with better productivity or could result in unmanageable budget deficits. Public spending always rises in response to a rise in a subvention. To prevent an increase in the budget deficit resulting from an imbalance established within the real trend, taxes must be raised or certain public expenditures must be lowered in response to this increase in public spending.

2.5. Empirical literature

There is a wealth of empirical research on the link between oil prices and economic production; most of these studies focus on the US and other OECD nations and examine the relationship in the context of time series. By examining the relationship on groups of non-OECD nations in both a time-series and a panel data environment, this thesis aims to contribute to the literature on oil prices and GDP.

As previously mentioned, empirical research on the relationship between oil abundance and economic development has demonstrated that, even in the face of rising oil prices, oil-rich nations expand more slowly. The majority of these research use the cross-sectional estimating approach developed by Sachs and Warner (1995), which has drawn criticism for a number of issues. In order to prevent the bias caused by omitted variables in cross-sectional estimate, van der Ploeg (2011) recommended that panel estimation methodologies be used in future empirical research on the "natural resource curse." The use of heterogeneous panel techniques is recommended by Cavalcanti et al. (2011), who also noted that panel approaches like the classic fixed and random estimate and GMM estimators are inappropriate since they impose a high degree of homogeneity across the nations. Therefore, this thesis uses oil output and oil reserve as indices of resource abundance in one of its major chapters to reinvestigate the resource curse hypothesis utilising a heterogeneous panel estimate approach. The impact of oil prices on macroeconomic factors in Nigeria was examined by Cavalcanti (2011). They discovered that the majority of Nigeria's macroeconomic indicators are not significantly impacted by shocks to the oil price. Their findings from the variance decomposition analysis, impulse response functions, and Granger-causality tests all showed that positive oil shocks had no effect on the real exchange rate, output, government spending, or inflation. On the other hand, the findings supported the asymmetric impacts of oil price shocks by demonstrating how negative oil shocks had a major impact on output and the real exchange rate. Ebele (2015) examined how fluctuations in oil prices affected Nigeria's economic expansion between 1970 and 2014. Rather than only addressing output performance by oil price and a plethora of individual factors, as done by previous researchers, the research employed an aggregate demand framework that conceptually links analytical variables. The study used the Granger Representation formula and the Engel-Granger cointegration test to investigate the short- and long-term relationships between the volatility of oil prices and economic growth. The conclusion showed that while other factors, such as oil revenue and reserves, have a beneficial effect on Nigeria's economy, oil price volatility has a negative effect on economic growth. Using the VAR approach, Todaro and Smith (2012) investigated how changes in the price of oil affected Nigeria's macroeconomic conditions. The unit root, Granger causality, VECM, cointegration, and impulse response tests are all included in the estimate process. The variables used were the price of oil, the money supply, the GDP, the unemployment rate, and the consumer price index. The results show that although the consumer price index is not greatly impacted by oil prices, GDP, unemployment, and money supply are. According to the findings, Nigeria's three primary macroeconomic indicators are heavily impacted by fluctuations in the price of oil. Because of the instability of the macroeconomic performance, macroeconomic management will become challenging. In order to reduce the effects of

volatility, economic diversification is necessary.

2.6. Conceptual Framework

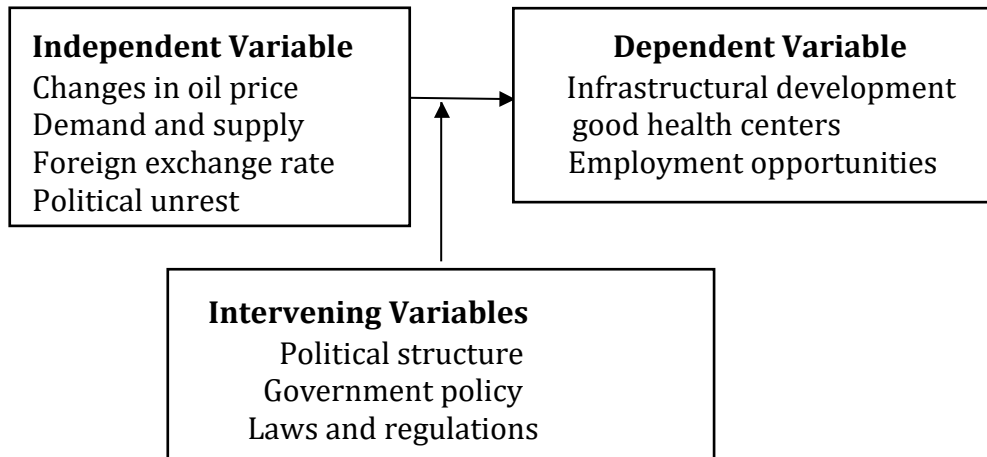


Figure 1: Conceptual Framework

The independent variable are the changes in oil prices which include, demand and supply, foreign exchange rate and political unrest, which affect the dependent variable, which is economic growth in terms of infrastructural development, employment opportunities and development of health centers. However, the independent variables are political structure, government policy and laws and regulations.

3.0 Methodology

A descriptive research approach was used in this investigation. According to Saunders et al. (2009), a descriptive research offers the opportunity for a thorough examination of one or a small number of objects, providing the study with more data and specifics of the study subjects. Conversely, Fischer (1991) notes that the significance of descriptive design lies in its ability to offer a comprehensive analysis of the situation, which can yield crucial information for making decisions. There was also a cross-sectional design. When data is gathered at one time from a large number of distinct individuals, it is called a cross-sectional research. The research focused on respondents from Juba City, and they were asked to describe how variations in oil prices affected South Sudan's economic growth. Thus, primary data regarding the issue under inquiry were gathered from a conveniently selected study sample of 88 respondents using both qualitative and quantitative research approaches. To supplement the quantitative research approach, a qualitative one was also employed. While the qualitative technique was used to collect data because it is successful in gathering in-depth information on the narratives and interpretations of the impact of oil price variations on the socio-economic development of South Sudan, the quantitative approach was useful for descriptive statistics. Convenient sampling was used to choose the respondents. The information was gathered using structured questionnaires and semi-structured interviews. Additionally, the focus group discussion method was used. The numeric data was analysed using SPSS version 20.0, while the qualitative data was analysed using the computer aided qualitative data analysis programme (CAQDA). In Juba City, 100 respondents completed the case study using a five-point Likert scale.

4. 0 Data Analysis

The respondents were given 88 self-administered questionnaires in total, which represented 100% of the sample. Of them, 70% were male and 30% were female. In this patriarchal culture,

males dominate politics, morality, education, the social and economic spheres, and the prestige of control assets. They also wield the majority of authority.

5.0 Discussion

The following were the research questions posed for this study: what factors affect Juba City's oil prices? What is Juba City's current state of economic development? What connection exists between Juba City's economic growth and fluctuations in oil prices? The researcher spoke with 88 respondents in order to get a response to the study question. In order to find any more papers that were pertinent to the research, the investigation involved a review of every South Sudan Economic website. Three themes emerged from the study following the completion of the coding process for the structured, semi-structured, and open interviews, notes, periodic reports, economic studies, and internal documents. (a) Elements impacting Juba's oil prices; (b) Juba's degree of economic development; and (c) the connection between variations in oil prices and Juba's economic growth.

Table 1: Perceptions of Factors Influencing Oil Prices: Responses on a Five-Point Likert Scale.

STATEMENT/SCALE	SD		D		NS		A		SA		TOTAL	
	F	%	F	%	F	%	F	%	F	%	F	%
Oil prices are influenced by demand and supply	12	13.6	12	13.6	0	0	48	54.6	16	18.2	88	100.00
Speculative Demand generates a changing price for oil.	14	15.9	14	15.9	0	0	52	59.1	8	9.1	88	100
Dollar devaluation has a tendency to boost oil demand and lift the oil price	18	20.5	12	13.6	10	11.4	32	36.3	16	18.2	88	100
The Price of alternative commodities influence oil prices.	16	18.2	10	11.4	8	9.1	30	34.1	24	27.2	88	100
Global financial crisis	16	18.2	8	9.1	10	11.4	18	20.4	36	40.9	88	100
Political Resolutions and Restriction can also influence oil price.	12	13.6	8	9.1	0	0	32	36.4	36	40.9	88	100
Organization of Petroleum Exporting Countries Oil (OPEC)	14	15.9	16	18.2	12	13.6	30	34.1	16	18.2	88	100
The economy has clear economic development program	14	16.0	20	22.7	0	0	34	38.6	20	22.7	88	100
Economic development results in increased per capita income.	14	15.9	10	11.4	8	9.1	40	45.5	16	18.2	88	100
There are higher education level in Juba City	14	15.9	10	11.4	16	18.2	30	34.1	18	20.4	88	100
There are greater employment opportunities in the country	16	18.2	10	11.4	8	9.1	30	34.1	24	27.3	88	100
There is improved standard of living in Juba	12	13.6	8	9.1	0	0	32	36.4	36	40.9	88	100
There is high degree of structural transformation in Juba	14	15.9	14	15.9	0	0	52	59.1	8	9.1	88	100
High oil prices drive job creation and investments	14	15.9	10	11.4	6	6.8	36	40.9	22	25	88	100
Oil prices depress the supply of other goods	12	13.6	10	11.4	8	9.1	18	20.5	40	45.5	88	100
High oil prices reduce demand for other goods	14	16.0	10	11.3	14	16.0	24	27.2	26	29.5	88	100
Oil price rise lead to unemployment and fall in wage rate	10	11.4	12	13.6	0	0	54	61.4	12	13.6	88	100
Oil prices affect demand	10	11.4	14	15.9	8	9.1	30	34.1	26	29.5	88	100

5.1.1 Objective 1: Factors influencing oil prices in Juba city

The first subject to emerge from the study's methodological triangulation, as the table above summarises, was supply and demand. Of the respondents, around 72.8% agreed that supply and demand in the market affects oil prices. However, 68.2% In order to prosper, small retail business owners in this case study had to modify their business models, which led to the emergence of business model innovation. It is well acknowledged that speculative demand causes prices to fluctuate. On the other hand, 54.8% of respondents said that rising US dollar values tend to increase demand for and raise the price of oil. This suggests that declining real income for consumers is stimulated by rising dollar rates, which in turn leads to declining oil prices. Furthermore, 61.3% generally agreed that the price of alternative commodities influence oil prices. This would be interpreted that the higher the price of oil is the greater the demand for less expensive alternatives sources of power. This can be seen in the industrialiser countries globally searching for alternative solution to use coal and solar power. Another explanation came from the 61.3% who contends that global financial crisis would influence oil prices. This can be done by the establishing effects of the global financial crises on investments resulting in the decrease in the demand for oil and therefore fall in oil prices. Alternative explanation fell on the political restrictions where by 77.3% agreed that political resolutions and restrictions can influence oil prices especially in times of war or imposition of trade and industrial sanctions on the oil producing nations can affect oil prices. Furthermore, 52.3% of

the respondents generally agreed that oil prices is significantly influenced by the activities of OPEC by implementing supply cuts when the price is deemed too low and thereafter the supply will increase when the prices are believed to be high to meet the world demand. Global oil statistics shows that OPEC produce 40% of the world's oil and their exports make 60% of global petroleum trade (ADB, 2009).

5.1.2 Objective 2: the level of economic development in Juba. 61.3% agreed that South Sudan implements economic programs and plans for economic growth supported mainly by oil revenues. It means that the plan ensures better utilization of resources resulting in increased demand and supply of goods and services. 63.7% of the respondents agreed that economic development results in increased per capita income and therefore increasing National Income and more so when there is sustained economic growth there is increased confidence and this in turn encourages firms to take risks and innovative enterprises and therefore translating to increase in flow of goods and services in the economy (ADB, 2009). On the question of higher levels of education in Juba City, 54.5% generally agreed that there are higher levels of education in Juba City. It should be noted that people with higher levels of education are more likely to find employment, remain employed, learn new skills on the job and remain productive. Furthermore, 61.4% agreed that there are greater employment opportunities in the country. Employment increase income and stimulates more individual spending which stimulates the increase in demand and therefore increase production of goods and services to meet the aggregate demand in the economy. 77.3% generally agreed that there is improved standard of living in Juba city indicating increase in per capita income of South Sudanese people. 68.2% generally agreed that there is high degree of structural transformation in Juba City. This implies that the economic development of South Sudan has resulted into high degree of structural transformation.

5.1.3 Objective 3: Connection between Juba City's economic growth and shifts in oil prices. 65.9% of respondents thought that increased oil prices encourage investment and employment growth. This suggests that investment and the creation of jobs are driven by rising oil costs. This suggests that the supply curve for the commodities and services that require oil as an input may go upward due to rising oil prices. Consequently, declining economic growth prospects will damper stock prices by lowering firm profits expectations, which will in turn result in reduced economic growth (ADB, 2009). Most people—66%—agree that rising oil costs can reduce the availability of products and services that require oil as an input. For instance, petroleum-based plastic is typically used to package chewing gum, lipsticks, cosmetics, carpets, shampoos, toothpaste, and many more items that aren't included here. High oil costs, according to 56.7% of respondents, lower demand for other commodities. This suggests that energy consumption is rising, particularly for the transportation of commodities and goods from producers to consumers. It is true that growing costs ultimately result in certain consumer items having less buying power, and the largest cost of inflation is this loss of real income. Over time, inflation may also affect the buying power of both those who pay and receive fixed interest rates. The majority of respondents—75%—agreed that rising oil prices cause job losses and declining wages. High oil prices hit businesses and consumers with higher transportation and manufacturing costs. Respondent No. 16 who owns a clothing boutique, said,

“The lower price of oil and gas due to the financial crisis was the major impact on the sector. Energy prices thus fell due to diminishing demand, a contraction of credit with which to make purchases and lower corporate earnings which led to layoffs and increased unemployment.”

63.5% agreed that oil prices affect demand. This implies that the demand and supply of oil is affected by levels of oil consumption, oil reserves, global exchange rates, environmental issues, politics and oil speculation on the financial markets.

6.0 Conclusion

In conclusion, this study has shed light on the significant influence of changes in oil prices on the economic development of South Sudan. Through the analysis of annual time series data spanning several decades, it became evident that fluctuations in oil prices have a profound impact on the country's economic trajectory. Furthermore, the study identified the exchange rate as a critical factor influencing inflation rates within the economy. This underscores the interconnectedness of various economic variables and highlights the need for comprehensive policy measures to address these complexities. The findings emphasize the importance of effective governance frameworks in managing oil revenues to ensure socio-economic progress in Juba City and beyond. Moving forward, it is imperative for policymakers to prioritize measures aimed at diversifying the country's revenue sources and stabilizing its macroeconomic structure. Additionally, efforts to enhance domestic economic stability through appropriate fiscal policies and infrastructure development, such as expanding refinery capacity, are crucial. Furthermore, investing in the education and training of personnel involved in the oil sector can enhance their effectiveness and contribute to the prudent management of oil revenues. Ultimately, the government of South Sudan must endeavor to broaden its sources of income and promote economic diversification to reduce dependency on oil and foster long-term sustainable development.

7.0 Recommendations

This research offers several recommendations concerning the impact of oil price changes on the economic development of South Sudan. Firstly, to ensure the effective management of oil revenue and improve the socio-economic status of the people in Juba City, the South Sudanese government should review and refine its policy framework. This framework should establish an independent committee or body to oversee oil revenue management, aiming to reduce instances of corruption and mismanagement. Secondly, policymakers should prioritize initiatives aimed at reducing the country's reliance on oil by strengthening and stabilizing South Sudan's macroeconomic structure, with a focus on diversifying revenue sources. Additionally, implementing appropriate fiscal policies is essential to stabilize the domestic economy. Furthermore, to mitigate instability caused by imports, the government must establish and maintain refineries while offering further training to those in the oil revenue sector through seminars and workshops, enhancing their effectiveness. Lastly, South Sudan should broaden its sources of income by attracting foreign direct investment and promoting other economic activities to encourage exportation, thus diversifying the economy and broadening the tax base.

8.0. Areas for further research

In terms of future research directions, several areas warrant further investigation. Firstly, researchers could explore the impact of South Sudan's civil conflict on the administration of oil revenue, examining how conflict dynamics influence the management and allocation of oil funds. Understanding these dynamics could provide insights into more effective governance strategies during times of political unrest. Additionally, it would be valuable to examine the effects of oil price shocks on the broader South Sudanese economy, assessing how fluctuations in oil prices affect various sectors and economic indicators. Such research could inform policymakers about the resilience of the economy to external shocks and help in developing

strategies to mitigate adverse effects. Moreover, exploring the potential for renewable energy development and its implications for South Sudan's economic sustainability could be fruitful. Investigating the feasibility and impacts of transitioning towards renewable energy sources could offer insights into reducing dependency on oil and promoting long-term economic resilience and sustainability.

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Cite this article:

Ocum Genes Karlo & Maxwell Adea (2024). The Effect of Changes in Oil Prices on Economic Development of South Sudan: A Case Study of Juba City Republic of South Sudan. *International Journal of Science and Business*, 32(1), 106-121. DOI: <https://doi.org/10.58970/IJSB.2299>

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