

SHORT RUN PANACEA TO ECONOMIC RECESSION IN DEVELOPING COUNTRIES OF AFRICA: A PROTOTYPE FROM CEREAL

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ABSTRACT

The developing countries of Africa have severally been ravaged by economic recessions especially in the past 10 years. These recessions have left behind them frustrated plans and programmes, and a deepened poverty of over 3 billion people languishing in abject squalor. The need for a solution – an economic approach for a long-lasting solution is therefore imperative. The study employs a political economy approach for analysis. The centrality of agriculture is examined from developing countries of North Africa (using Egypt), East Africa (Kenya), Southern Africa (Republic of South Africa) and West Africa (Nigeria and Ghana). Using Nigeria as a prototype, the study identifies the benefits and inherent potentials in agriculture (peculiar to all developing countries of Africa) that can be harness to escape from the grip of economic recession. A re-engineering of the technicality of agricultural production, especially cereal in the short run is recommended. For all the countries, Agricultural Cooperative Societies under the supervision of traditional rulers be form in rural and urban areas as a pre-recession organ. Resources should be mobilised to ensure the absorption of the labour rendered unemployed during recession into cereal production. This will stop the recession-pushed unemployment, increased food supply and stifle food inflation that is usually the consequence and stimulant of economic recession. The contained unemployment, adequate foodstuff and tamed inflation would stifle any recession and also provide a framework for growth and development.

Keywords: Short run panacea, Economic recession, Developing countries, Cereal

Background to the Study

Economic recessions are times when macroeconomic variables trend negative. Recessions usually leave behind penury and distress. This is why recession has been a problem to policy makers in all countries of the world. However, no country has ever witnessed a continuous boom for many decades without slumping into an economic decline with attendant misery. Even

countries with conspicuous prosperous economies like USA, had suffered recession in the recent past from March to November 2001 with a negative GDP growth rate to – 0.3% with an accompanying unemployment of 6.3% (Amadeo, 2021). Apart from the 2020 COVID 19 recession, the United Kingdom experienced serious recession between Q₁ 2008 and Q₂ 2009 which shrunk the economy by 6% and took 5 years for recovery (Pattinger, 2019). France went through the same experience recording a GDP decline of -6% between Q₁ 2008 and Q₂ 2009. Among many countries of the world, the German economy witnessed economic recession with its attendant debilitating consequence of GDP decline of 4.7% in 2009 (Rinne, 2012).

Recession has frequently plagued and frustrated growth and development plans, and programmes of many developing countries of Africa leaving in its aftermath squalor and frustrations. Almost all developing countries of Africa either experienced the COVID - 19 stimulated recession between 2019 and 2020 or had tested a previous recession shortly before the COVID-caused recession. Egypt in North Africa contended with recession in 2011 (Khan & Miller, 2016). In the West African country of Ghana and the East African country of Kenya, the 2020 recession had shrunk their GDP growth rate to negative (Mubarik, 2020; Collins, 2021). For Nigeria, policy makers had to fight the fiend twice between 2016 and 2020 (Kyarem & Ogwuche, 2017; World Bank, 2020a).

Although economic recession is an obvious reality and its periodic invasion seemingly inevitable; it is ironic that the menace is always resilient to policy solutions in the developing countries of Africa. It is expected that with the foreknowledge of its existence and possible periodic invasion, policy makers should come up with a strategy that would address the menace and ensure inclusive and sustainable growth thereafter.

The claim by many developing countries of Africa to have conquered some recessions at various times in the past looks cosmetic as the real production sectors after a proclaimed victory leaves more people in poverty with attendant macroeconomic indices like inflation and unemployment worse off. The fact that over 3 billion Africans are presently living below poverty threshold of 2 dollars per day (Umo, 2012) cannot be totally isolated from the debilitating consequences from the various recessions.

Objective of the study

The stark reality of existing poverty, economic uneasiness and the intermittent visits of the unwelcomed recession have necessitated this study. The main objective of this paper is to proffer an agriculture (cereal) base indigenous short run solution to economic recessions. It is hoped that

the solution would be a baseline for sustainable post-recession growth and development in developing countries of Africa.

Literature review

The following concepts are explained: short and long run, economic recession, developing countries and cereal.

Concept of short run panacea

Economists believed a country's economy behaves differently at various times as factors of production reacts in interaction one with another in the light of an existing technology. The concept of short run therefore refers to a *certain period in the future* in which at least one factor of production is fixed while others are variable (Investopedia, 2021). This implies no fixed number of years defines a short run but a *certain Period*. Technology is key to determining how long a short run of a specific programme, policy or project would be. A policy's objective would also be a determining factor in the length of a short run period. In this sense, an economic phenomenon may be term short run depending on the general expectation. For instance, an economic recession may be classified as a short term event on the expectation that it should not last beyond a year otherwise it becomes a depression. The problem here is the undefined timeframe that may make policies verged, though this can also be an advantage as it gives policy making a good ground for target setting.

On the other hand, the long run is *that certain period* that a new or different technology comes into operation and all factors of production can be changed. It is expected that national demand of an economy will be equal to the national supply and hence both the factor and the product market will be in equilibrium (Samuelson and Nordhaus, 2010). In this paper, short run shall be viewed as a period corresponding to the production lifespan of a cereal crop like rice, wheat or soybeans usually not more than 4 months. 3 short run periods make a year and so once the short run periods exceed a year (i.e. 4 or more short run periods), it is considered a long run period. Short run panacea therefore implies a strategy designed to bring a country out of recession within a year.

Concept of developing economies

Generally, literature divide countries into less developed and developed countries, or developing and developed countries. Since every country of the world has elements or potentials of development, economists strongly belief the term Less Developed Countries (LDC) should be

used on comparative terms only but not in absolute terms or for classification, hence countries should be divided into developing and developed countries.

To empirically separate developed from developing countries using the yardstick of Gross Domestic Product (GDP) per capita in U.S. dollars is used. Investopedia (2019) asserts that a country with a GDP per capita of less than \$12,000 should be classified as a developing country while those that has \$12,000 or more can be classified as developed countries like Australia, with a per capita GDP of \$49,144, France, with a per capita GDP of \$39,678 and Germany, with a per capita GDP of \$47,268. On the other hand, developing countries generally have low GDP per capita. In this class are countries like Brazil with \$8,727 and all countries of Africa (Isgesociety, 2018). To account for the price variation from country to country and make per capital GDP a better classification and comparative measure - GDP adjusted for purchasing power parity, converting goods valued at U.S. prices is adopted (Samuelson and Nordhaus, 2010).

Of the 54 countries in Africa, 46 of them are classified as developing countries – countries like Algeria, Egypt and Libya in North Africa, Côte d'Ivoire, Nigeria and Ghana in West Africa, Chad, Cameroon, Congo Republic and Central African Republic in Central Africa, Kenya, Zambia and Rwanda in East Africa and others like South Africa and Swaziland in the southern region of Africa (Isgesociety, 2018). Reference to developing countries of Africa in this paper would be a selection of one country from north, south, west and East Africa.

On the basis of GDP per capital, there is no developed country in Africa but only developing countries. The best performing country in Africa is Republic of South Africa with a per capital income of 5,978 US dollars - is still short of 12,000 dollar classification of a developed country. Countries like Egypt in North Africa has a per capital income of 3,586 US dollars (Khan & Miller, 2016), Nigeria in West Africa has 2,230 (Kyarem & Ogwuche, 2017), Kenya in East Africa has 2,004 (Collins, 2021) and Ghana's GDP per capita is 2,220 (Mubarik, 2020). Many of these countries are debt burdened, poor and with low living standards. Except perhaps for South Africa, industrialization in developing countries of Africa lags behind all the countries universally acknowledged as developed. Other persistent negative characters peculiar to these countries include low literacy rates, poor health care, and high infant mortality rate with a conspicuous lack of access to balanced diet and clean water.

Concept of Economic Recession

The Central Bank of Nigeria (2017a) define economic recession is "a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in a real gross domestic product (GDP), real income, employment, industrial production

and wholesale-retail sales.” Kyarem and Ogwuche (2017) observed that this definition is not indefinite as it contains no timeframe which the decline in economic activities would last so as to be termed a recession. More so, *a significant decline ... lasting for few months* is relative and subjective, and hence provides no clear conceptual identity.

Another definition by National Bureau of Statistics (NBS) (2017) points out that negative real GDP growth rate for two consecutive quarters of a financial year signifies a recession. The challenge with this definition as pointed out by Kyarem and Ogwuche (2017) is that economic recession is identified as an event and not a process that undermined economic robustness over time and surfaced at a period – *two consecutive quarters of a financial year*. This type of compromise, if accepted would guarantee policy failure as symptoms would be targeted instead of the real causes of the negative real GDP growth rate noticed.

The duration of a recession is still a contestable issue. While many believed it should be an event lasting for not more than a year, Pettinger (2019) acknowledges a recession that devastated the UK economy that lasted from December 2008 to June 2009 - a period of one and a half year. This was described by the appendage – *a great recession*, perhaps a novel term in economic literature on recession.

A salient fact not emphasised in these definitions is the causative agents that work to produce negative macroeconomic variables that surfaced at a time which is declared a recession. Seen recession as undesirable socio-economic variables in a country at a time is insufficient. By this reasoning, policy advocates only address the symptoms of recession leaving the real causes, hence the reoccurrences of the phenomenon in developing countries of Africa.

In this paper, recession among developing countries of Africa is seen as a phenomenon that silently but consistently undermined an economy and manifest subsequently in the form of negative real GDP growth rates. This ailment will not be cured with cosmetic symptomatic treatment but only with adjustment that affects real production sector of the affected economy. This implies solution to recession must address the causative agents primarily and target the symptoms consequently. For instance, it's better to target food crop production primarily as a solution to recession than targeting food inflation.

Concept of Cereal

Whole Grains Council (2020b) defines a cereal as any cultivated grass suitable for eating the edible components may be its grain, composed of the endosperm, germ, and branches. The

members of this family are numerous but those peculiar to developing countries of Africa include rice, maize, sorghum, wheat, pearl, millet, sugar cane and soybeans.

In countries like Nigeria, sorghum account for 50% of the total cereal production and occupies about 45% of the total land area devoted to cereal production; followed by rice which rank as 6th single major crop in terms of cultivated land area. In their natural unprocessed form, cereals are rich in vitamins, minerals, carbohydrates, fats, oils, and protein. It is estimated that an average African household's daily food consist of 50% cereals broken into 30% wheat and 16% rice (Whole Grains Council, 2020a).

Most cereal's production cycle from planting to harvesting is between 2 to 4 months unlike citrus and root crops like yam or cassava which last for between 6 to 9 months. Cereals are fast and quick food yielding crops that can be harness to address negative macroeconomic trends cause by economic recessions. As they provide food and purchasing power in a limited time period, cereals are capable of suffocating hunger, stifling recession stimulated inflation, increasing aggregate demand and an avenue for absorbing the labour that could be rendered unemployed during a recession (Whole Grains Council, 2020b).

2.2 Agricultural Potentials of Developing Economies of Africa

The main feature of all the developing countries of Africa is the dominance of agricultural sector. Agarwal (2017) stressed that all the developing countries of Africa depend on primary sector for domestic sustenance and foreign exchange earnings. Few of these countries mine oil but all of them depend on the primary commodities from agriculture (of which cereal is common to all of them). The unorganized nature of this dominant sector makes these countries vulnerable to economic and environmental shocks, and so the prevalence and frequency of economic recession. This means agriculture possess great potentials for stabilizing the economies of these countries if dynamic restructuring can take place.

The amazing potentials from agriculture in this region with cereal production as the main drivers can be tapped for food and export for foreign exchange earnings. In 2019, The Nigeria agriculture contributed 19.39% and 23.92% to nominal GDP in Q₁ and Q₂ 2019 respectively. In the Q₁ 2020, it contributed 20.88%, while in the Q₂ 2020 (at the height of COVID 19) it contributed 87.34% of nominal GDP (CBN, 2020).

In the developing economy of Nigeria in West Africa, the major agricultural exports in 2019 were sesame seeds, Cashew nuts, fermented Cocoa Beans, Superior quality raw cocoa beans, Other Frozen shrimps and prawns, Ginger and Natural Cocoa butter, ginger and agro-foods.

Many other crops like palm oil, yam, rice, corn and cassava fed Nigerians. The sector employs 36.38% of the teeming unemployed in Nigeria.

In Ghana, regions like Ashanti, Central, Eastern, Western and Volta Regions produce cocoa for export. Many other food crops are produce for domestic consumption. The total contribution of the sector to the GDP in 2019 was 17.3% averaging 6805 GHS million between 2006 and 2020 and constituting 29.27% total employment. For Senegal, agriculture contributed 14.8% to her GDP in 2019. In Gambia three-quarters of the population depends on agriculture for livelihood. The sector contributes 33% to the country's GDP(www.egypttoday.com › Agriculture-sector, 2021 & www.egypttoday.com › Agriculture).

In Egypt, the major agricultural exports to the world are potatoes, cotton, and fresh fruit. The sector contributes to effective food supply by contributing 11.05% to the GDP of Egypt in 2019. In 2020, it contributed 14% representing 28% of job opportunities and 55% of rural employment.

Agriculture is the mainstay of all the countries in East Africa. For instance, Kenya is the world's leading exporter of black tea and cut flowers. The high rainfall in the country guarantees successful production of tea, coffee, cut flowers, and vegetables which constitute 70% of national commercial agricultural output. Agriculture contributed 33% of Kenya's Gross Domestic Product in 2019. The sector employs 70% of the rural population which represent 40% of the total population.

Indeed Africa is the home of agriculture even though rudimental. The agricultural sector contributed 10% to South Africa's total export earnings in 2019 comprising of Citrus, wine, table grapes, corn and wool. The country also produces in export quantities other crops like sugar, mohair, apples and pears. The sector contributed to the country's GDP growth with an increase of 28.6% by Q2 2020. Other developing countries of Africa like Gambia have 16.79% of her GDP from agriculture in 2019. For Liberia, it was 39.11%, for Guinea it was 20.34% and 20.3% for Burkina Faso.

Theoretical framework

The theory of production function finds relevance and serves as the framework for this paper. Production function is a rule that show the maximum total output that can be obtained from a given amount of inputs used in the process of the creation of goods and services (Samuelson & Nordhaus, 2010). For instance, if output (Q) is brought about by a combination of inputs (X) from X_1 to X_n , then the production function will be represented as:

$$Q = F (X_1, X_2, X_3 \dots X_n) \dots\dots\dots (1)$$

Alternatively production function specifies the minimum inputs for the production of a specified level of output within a given technology. It gives an idea of how output changes as a result of changes in inputs levels given technology. Production function is therefore a technical relationship that permits input restructuring for increase productivity. This makes production function central in times of recession since such times, there is adverse effect on the quantity produce in the real sector of an economy.

The production function assumes there exist at least one fixed factor/input in the short run. This is appropriate because recession is seen as a short term event that should be handled in a hurry hence in the short run, at least one input in the production function remains unchanged. This implies there is an existing production function in a sector or industry and cannot be change holistically during a recession. In most production sectors of developing countries of Africa, the quantity of plant and machinery is fixed and cannot be change for many years and production can only be altered by changing variable inputs such as land and labour (tutor2u, 2020).

The production function of cereal production (Q_c) in the developing countries of Africa is a function of cultivated land (C), labour(L), raw materials (M) and capital (K). This is modelled as:

$$Q_c = F (C, L, M, K) \dots\dots\dots (2)$$

In these African countries, land is surplus, labour is underutilised and many become unemployed especially during a recession, materials in the form of pesticides, seeds and fertilizer while capital like tractors are scanty and fixed in supply in the short run. This leaves policy makers with the option of manipulating all other inputs except capital that is fixed.

During a recession, policies can be directed to expansion of cultivated land, employment of the surplus labour that is laid off because of the recession and the supply of materials for expanded output. It is important to note that these factors liable for change should operate within an institutional framework like a cereal cooperative society (C_c) to ensure that designed stimulus do not miss the targeted group. The theoretical framework for policy formulation and implementation is therefore modified from equation 2 as:

$$Q_c = (C, L, M, K) C_c \dots\dots\dots (3)$$

The cereal cooperative society (C_c) should be institutionalised as a standing economic agent guaranteeing the efficiency of the factors of production of cereal before any recession may be noticed. C_c would serve both as a transmission mechanism between the government and the

farmers as well as a supervisory and regulatory body. With this structure on ground, a framework for policy against recession for developing countries of Africa that would be abruptly ignited in the advent of a recession is guarantee.

Methodology

The research adopted the political economy approach. This approach is an examination of the methods and procedures for developing theories or programmes (Gagnon, 2018). A search for a solution to recession is an inquiry into how existing production functions can be modified to address adverse macroeconomic conditions ushered in by a recession, hence the appropriateness of this methodology.

Recession Experiences of Developing Countries of Africa

The most recent recession that ravaged the developing countries of Africa was the COVID 19 motivated recession in 2020. For countries in West Africa like Ghana, recession slump the GDP by 0.3% (Collins, 2021). Egypt was the only country that did not plunged into the COVID 19 recession but the GDP growth rate greatly slumped down from 3.57% in 2019 to 2.0% in 2020(World Bank, 2020d). Other countries in North Africa were adversely affected for example, Algeria recorded GDP growth rate of -15.66% while Tunisia slump from 19.80% in Q1 2020 to a record -20.40% in Q2 2020. Kenya an archetypical of East African countries witnessed a retrogressive growth rate of 3.2% in the Q₂ 2020 (Mubarik, 2020). In the southern region of Africa, the story was the same as even the strongest African economy – South Africa’s real GDP decreased by 6.96% in 2020 compared to the previous year (Trading Economics, 2021; The Economy CIA, 2020).

In recent times just before 2020, many African countries at one time or another experienced a recession. Nigeria experienced a recession in 2016. In the first and second quarters of 2016, economic growth indices were -0.36% and -1.5% respectively. Egypt in North Africa experienced an austere recession in 2011 following the Egyptian revolution (Khan & Miller, 2016). The East African country of Kenya was in a recession in the early 1990s. Real GDP growth dropped from 4.3% in 1990 to 2.1 in 1991 and was almost zero in 1992 and 1993 (Accueil Aide Preferences [ACP], 1996).Between 1990 and 2020, all developing countries of Africa passed through at least one economic recession thus producing a pitiful Africa with negative socio-economic indices by year 2020.

This unwelcomed friend is indeed a continental enemy that must be treated with all seriousness as the effect of the various recession no doubt has a contributory part to the negative

macroeconomic indices of Africa. There are 490 million people currently living in extreme poverty in Africa and this represents 40% of Africa's total population. The future looks bleak as there is an annual addition of 9 million people into the extreme poverty class.

African countries have the worst HDI in the world. The country with the lowest HDI in the world is the Central African country of Niger with a HDI of 0.394 (UNDP, 2020). Like many other countries in Africa, Niger has widespread malnutrition and endemic poverty of more than 44% extreme poverty. The per capital income of African countries is relatively low. Nigeria has per capital income of 2,229.85 US dollars (World Bank, 2020a), Ghana has 1,848.25US dollars (World Bank, 2020b), Kenya has 2,004.42 US dollars (World Bank, 2020c) and Egypt has 3,058.30US dollars (World Bank, 2020d). Like many other countries in Africa, the unemployment level is very high and the general conditions of living are unbearable.

The macroeconomic indices of Africa are miserable. The unemployment level of Nigeria is 33.3%. For South Africa and Angola it is 32.6% and 30.5% respectively while it is 7.4% and 7.2% for Egypt and Kenya in that order. For Ghana, 5% of the population is unemployment (Trading Economics (2021)). These percentages translate into millions of unemployed youth. African development Group (2016) estimated that 160 million youth aged 15 – 35 are unemployed and discouraged, and by 2025, 263 million people will lack an economic stake in Africa. Of course these negative indices cannot be separated from the many and various recessions across African countries.

The survival of the infant and children in developing countries Africa is uncertain. The UN (2014) recorded for the infant and the under-five a mortality rate of 92 deaths per every 1,000 live births which is 15 times the average for developed countries. The average life expectancy globally for males and female is 70 and 75 years respectively but for developing countries of Africa its 62 and 65 years for male and female respectively. It is obvious that the intermittent attacks of recession on African countries has had its portion of these negative developments and hence a strong reason for a policy or programme that would cure this economic ill.

Despite all these, there is an asset in Africa that can be harness for tackling recession when it attacks - the abundant arable land suitable for especially cereal production. The abundant manpower both in the rural and urban areas invites an organised pre-recession arrangement so that food sufficiency would be guaranteed and that will serve as a base for stifling an attack from economic recession in the short run.

Conclusions and suggestions

Since economic recession is expected by Economists to be a short term phenomenon, the best option is to provide a short term solution that would stifle the menace in the short run. However, the measures provided must affect the real production sector of the economy otherwise the solutions would be cosmetic and address only symptoms. For instance, the escape of Nigeria from recession in 2017 was cosmetics, emanating from change in the international price for crude oil which ushered in more foreign earnings that impacted positively on the GDP growth rate while the real production sector was unaffected (Kyarem & Ogwuche, 2017). Such escape kept the Nigerian economy still fragile and prone to subsequent attacks by the same economic recession hence Nigeria entered into yet another recession in 2020. All short run solutions must be rooted in the real production segment of the dominant Agricultural sector, not just aiming at elimination of negative GDP growth rate which is a symptom of dysfunction in the real production sector.

The cereal segment of the crop production in the agricultural sector of developing countries of Africa is the most pronounced and suitable for re-organization to combat the attack of economic recession. The maximum 4 month life cycle of the cereal production coincide with the economic evaluation of recession on the basis of every quarter of a financial year. The assessment of recession as commencing if there exist negative GDP growth rate for two consecutive quarters of a financial year corresponds to two life cycles of cereal production, hence the first cereal season shall be for halting the robustness of the recession while the second shall be for provision of a springboard for economic growth in post-recession period.

For the short run cereal-solution to economic recession to be effective and efficient, some institutional framework must exist in which resource mobilization can be directed at short notice during a recession. Specifically, there should be a pre-recession restructuring and then some predetermined set of actions for adoption when the economy slumps into a recession. Specifically, the following re-engineering steps are recommended:

1. Rural and urban farmers' cooperative societies shall be formed. These societies should register first under the traditional rulers that will recommend their viability to the government for recognition. Since the traditional institution is the custodian of land, their involvement will facilitate issues like acquisition of farm lands.
2. Each cooperative society should be focused on the cereal/ crop that is best cultivated in that locality.
3. Members of each cooperative should be guided by well-coordinated and documented rules. Government assistance and soft loans from private individuals should be directed

to members in phases called programmes. A programme should last as long as the production cycle of the cereal concern.

4. Farming tools, instruments and materials should be given in kind through the traditional institutions (only the running cost be granted in cash at strategic periods like planting or harvesting periods).
5. The monitoring and evaluation (M&E) and accountability should be done by traditional institutions and by trained M&E Officers on programme basis. Provisions for storage scattered over the country should exist.
6. Provision should be made for those who may lose their jobs during a recession to quickly register with a cooperative society to avoid seasonal unemployment.

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