

# **Linkages between Economic Growth and Food Security: An Eclectic Perspective**

*We live in a world where of the 80,000 edible plants used for food, only about 150 are being cultivated, and just eight are traded globally. In a world where we produce food for 12 billion people when there are only 6.3 billion living, 800 million suffer from malnutrition.*

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## **Abstract**

*The causal linkage between food security and economic growth hasn't been fully resolved. That is, does food security contribute to economic growth or does economic growth result in food security; or is there a two-way causal relationship between economic growth and food security? The causality has not yet been ascertained. Drawing on previous research and insights, this study attempted to find and understand the relationship between food availability and economic growth. A review of existing secondary studies indicates that food insecurity, low food intake and the variable access to food endemic in Ethiopia, is not due to the lack of economic growth and income distribution. Rather, excluding transitory food insecurity, chronic food insecurity in Ethiopia seems to derive directly from inflationary pressures, resulting from excess in the money supply, population growth, budgetary deficits, imprudently addressing the "supply side" of food production during favorable seasons, the lack of adequate storage systems for stocking food items that could be used to tackle food insecurity during shocking periods, a fragile natural resource base, and weak institutions. Particularly for policy makers, the study's findings contribute to an understanding of some of the crucial factors that could lead to a reduction of food insecurity and help to design advance strategies to alleviate food insecurity in Ethiopia.*

**Keywords:** *food security, economic growth, income distribution, inflationary pressure, population growth rate, budgetary deficits, supply side*

## **Introduction**

Despite the fact that enough food exists for the entire world's population, "...almost one in seven people around the world are chronically hungry, lacking enough food to be healthy and lead active lives" (World Bank, 2007). More specifically, an authoritative estimate by the Food Agricultural Organization (2010) indicates that there are more than 925 million people in the world who are food insecure. Nevertheless, what is amazing is that Ethiopia with 100 million people has attained constant economic growth and recorded an income distribution index (based on data obtained from Ethiopian government statistical agencies and World Bank country departments) stands at 0.29. Interestingly enough, Ethiopia's Gini-coefficient index of 0.29 is far below the Gini-coefficient of newly industrialized nations, indicating that the income attained

from economic growth in Ethiopia has been fairly distributed (World Bank, 2010 and Desta 2011). More specifically, it is stated by Teshome of the World Bank (2016) that:

*Since 2000, when Ethiopia had one of the highest poverty rates in the world, households have experienced a decade of remarkable progress in well-being and the country has seen a 33 percent reduction in the share of the population living in poverty. Agricultural growth drove reductions in poverty, bolstered by pro-poor spending on basic services and effective rural safety nets. This progress has been underpinned by strong and sustained economic growth averaging 10.9 percent annually.*

Nonetheless, before the recent adverse climate conditions caused by *El Nino* that contributed to drought, Ethiopia's dramatic economic growth in tandem with a more or less equitable income distribution seems to camouflage the fact that a staggering number of people are experiencing malnutrition and outright starvation. That is, the impact of the impressive economic growth has been negligible on food security. For instance, the average number of food insecure people in Ethiopia was about 7 million from 1991 to 2003, 4 million between 2003 and 2014, 8.5 million in 2008, and is more than 10 million between 2015 and 2016 (See for example, Adugan, 2016).

Puzzled by this paradoxical (asymmetrical) connection between economic growth and food security needs, a number of scholars have questioned and seriously challenged the Ethiopian Government. As stated by Adugan (2016), because of the food insecurity that has developed recently because of *El Nino*, some scholars have tried to question the so called economic growth achieved in Ethiopia during the last twelve years. According to the "Aid for Africa" publication of February 5<sup>th</sup>, for example, they have questioned how millions of Ethiopians could be at risk of starvation "...when in recent years Ethiopia was lauded as a country on the rise—one of the bright spots in Sub-Saharan Africa?" Some critics go one step further and loudly argue that unless the data were "cooked" to portray an impressive image of Ethiopia to the outside world, it is not possible for the Ethiopian economy to grow at more than 10 percent per year for the last decade when so many of Ethiopia's poor are facing chronic starvation as a persistent characteristic of their life.

In partial agreement with what the critics have been saying about food insecurity in Ethiopia, Teshome somehow seems to have changed his mind and argues that, "... poverty remains widespread in Ethiopia. The poorest households have become poorer than they were in 2005; high food prices that improve incomes for many poor farmers make buying food more challenging for the poorest" (2016).

Contesting the argument that economic growth contributes to food security, Torero (2014) argues that rather than economic growth contributing to food security, it is food security that induces economic growth. Actually, Torero persuasively argues that economic growth is only sustainable if developed countries try to achieve food security as a base for their citizens. In

his empirical findings, Torero establishes that "... a 10 percent increase in economic growth only reduces chronic malnutrition by 6 percent" (2014). After establishing that there is no linear correlation between economic growth and food security, Torero asserts that this asymmetrical relationship between economic growth and food security indicates that economic growth by itself won't resolve the problem of chronic malnutrition but needs to be taken as one of the key variables in any food security strategy (Torero, 2014).

This study, therefore, draws on previous research and insights to develop an eclectic framework that could drive or determine the relationship between food insecurity and economic growth. Exploring the linkages between economic growth and food security, the study attempts to find and understand other eclectic perspectives that could have an impact on food availability. Particularly for policy makers, finding and understanding some of the cardinal factors that contribute to chronic food insecurity could help them to design strategies to create the conditions necessary to alleviate chronic food insecurity.

## **Literature Review**

Economic growth in less developed countries is highly dependent on food production. To measure economic growth, the Gross Domestic Product (GDP) or the market value of goods and services produced by a country in a given period of time is used. While producing agricultural products, since less developed countries are dependent on natural resources, less developed countries contribute to resource scarcity, ecosystem degradation, and climatic challenges. In order to assess the status of food security, the estimation of GDP needs to integrate income distribution, investment in human capital, non-marketable products, and other positive and negative externalities.

Historically, the concept of food security originated as a result of the international global food crisis that occurred during the mid-1970s and 1980s. During these decades, food security mainly focused on the status of the supply of food *availability* and attempted to incorporate the effect of *price stability* with food security. A case in point is, among the food insecurity that emerged globally, the famine, hunger and food crisis in 1974 contributed to the downfall of the Haile Selassie regime in Ethiopia. In addition, the drought of 1984 during the authoritarian Derg regime contributed to the death of more than one million and left many Ethiopians destitute.

As a result of the famine that became rampant globally, the concept of food security was elaborated by a number of scholars. For example, while operationalizing food insecurity, the Food and Agricultural Organization (FAO) focused on *securing access* to food, necessary for an active, healthy life by the most *vulnerable* people. Around, 1994, a broader perspective of food security was adopted by the United Nations Development Program to include food security as a necessary element of human rights. *Starting* In 2001, the concept of food security was further expanded to include food and *nutrition status* (food availability, food access, food utilization)

and *stability* (vulnerability and resilience), and food security was expected to exist “when all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO 1996 and DFID, 2003).

As shown in Table 1, the operational definition of food security was designed to include: 1) availability of sufficient quantities of food of appropriate quality, mainly supplied through domestic production at prices that the poor can afford, 2) access by households and individuals to adequate resources or jobs and income that give poor people the means to acquire appropriate foods for a nutritious diet, and 3) utilization of food through adequate diet, water sanitation, and health care (United States Department of Agriculture, 1996).

**Table 1: Four main Dimensions of Food Security**

<b>Physical availability of food</b>	Food availability addresses the “supply side” of food security and is determined by the level of food production, stock levels and net trade (Export-Import)
<b>Economic and Physical Access to food</b>	An adequate supply of food at the national or international level does not in itself guarantee household level food security. Concerns about insufficient food have resulted in a greater policy focus on incomes, expenditure, markets and prices in achieving food security objectives.
<b>Food Utilization</b>	Utilization is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, and diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals.
<b>Stability of the other three dimensions over time</b>	Even if food intake is adequate today, it is still considered to be food insecure if there is inadequate access to food on a periodic basis due to adverse weather conditions, political instability or economic factors (unemployment, rising food prices).

**SOURCE: The EC-FAO Food Security Programme (2008). “Food Security Information for action: Practical Guides.”**

Grounding their argument on the human rights clause but stressing more on the “Pro-poor growth” strategy, Dreze and Sen (1989), forcefully argue that economic growth in itself is not sufficient enough to ensure individual food security and nutrition.” Growth, of course can be very helpful in achieving development, but this requires active public policies to ensure that the fruits of economic growth are widely shared, and also requires—and this is very important – making good use of the public revenues generated by fast economic growth for social services...” (Dreze and Sen, 2011).

To explain the seeming paradoxical dilemma that exists between food security needs and economic growth, routes by which this dilemma could be resolved, along with other factors that contribute to hunger and food insecurity, need to be explored in detail. As a result, food consumption in Ethiopia is seen as a function of income distribution, inflation, population growth, and supply of food production. In addition to the possible linkages that exist between

food security and economic growth, the distinction between chronic and acute insecurity needs to be elaborated. While chronic food insecurity is likely to originate because of a lack of assets, acute food insecurity on the other hand, emanates from unusual shocks, such as drought. Furthermore, a combination of short-term and long term strategies is needed to form policies to tackle food insecurity needs.

**A) Income distribution:** Food security is to a great extent affected by economic growth and income distribution. For example, Timmer (2004) persuasively argues that “improved food security stems directly from a set of government policies that integrates the food economy into a development strategy that seeks rapid economic growth with improved income distribution.” With the income distribution policies that Timmer portrays, economic growth and food security mutually reinforce each other, because poor countries in East and Southeast Asia have addressed these steps concurrently for about two decades to increase the production and distribution of food and have escaped from hunger (2004).

Given Timmer’s point of view, we could stress that though the Ethiopian economy has performed strongly and the income gap between the lower and upper households has been narrowing, then, the deplorable food insecurity that Ethiopia’s poor have been facing for the centuries before the havoc of El Nino, could be attributed to a substantial decline in the purchasing power of the Ethiopian currency known as the *birr*.

**B) Inflation:** As documented in the Pigou’s wealth effect theory, a higher price level contributes to lower real wealth thereby inducing to lower consumption spending (see Mankiw, G. and Scarth, W, 2011). As stated by Durevall and Sjo (2012), the Ethiopian Real Gross Domestic product has experienced strong economic growth, for example from 5.9% in 2000 to 7.5 % in 2011. Along with higher economic growth, Ethiopia has been facing an overheated economy due to inflation volatility. For example, the inflation rate in Ethiopia increased from 0.3 percent in 2000 to 36 percent in 2011. Since the financial global crisis in 2008, Ethiopia has been faced with an average inflation rate of 17.65 percent from 2006 until 2016. Therefore the “... High and volatile, inflation is a threat to good economic performance and has negative effects on many of the poor” (Durevall and Sjo (2012). After the 2008 global crisis and the soaring price of oil and food items, inflation in Ethiopia has become rampant. At the peak of the global food crisis, in July 2008, “...annual food price inflation surpassed 90 percent” (Durevall and Sjo, 2012).

As a result of this unprecedented rise in inflation starting in 2006, in Ethiopia many people, more particularly, those with low incomes and retirees have lacked enough to buy the food needed for survival (See Desta, 2014). As stated by Durevall, D. Loening, abdJ. Birru, Y, (2010), with the exception of Zimbabwe and some small island economies that had the strongest acceleration in food price inflation in Sub-Saharan Africa, Ethiopia had the strongest acceleration in food price inflation.

A caveat needs to be added that though there is no consensus on the causes of the rise in inflation, an empirical study by Desta (2014) indicates that Ethiopia's inflationary situation is the result of an expansionary monetary policy, primarily due to large government expenditures on infrastructure and budget deficits. Rising food prices led to devaluations and feedback effects on consumer prices in general. At the same time, it is possible to argue that government budget deficits caused by an increase in large-scale capital projects and military spending might also have contributed to the extreme inflationary conditions in Ethiopia.

**C) Population Growth:** Another dimension of food insecurity popularized by Thomas Malthus that contributes to food insecurity is population growth. The Malthusian "approach is focused on the (dis)equilibrium between population and food. In order to maintain equilibrium, the rate of growth of food availability should not be lower than the rate of growth of the population" (Burchi and DeMuro (2012). Stated differently, on the demand side, the reason why a number of countries with the highest numbers of people face food insecurity is because they have high fertility rates and rapid population growth. Given this, it is possible to assert that an increasing population growth rate has a substantial negative impact on economic growth.

Based on the latest estimates, the current population of Ethiopia is 101,481, 000 and the annual rate of growth rate is close to 2.53percent (Countrymeters, 2016). Given this possible projection, the Ethiopian population would double in about 28 years and its effect on food security would be insurmountable. The density of population impacts the productive capacity of Ethiopia and will continue to affect the demand for food for decades to come. That is, "population increase reduces landholdings further and places intolerable stress on an already fragile natural resource base."(Devereux, 2000).Therefore, it is vital that Ethiopia's demographic projections be incorporated in the developmental plans of the country to help policy makers design strategies to improve agricultural production and attempt to help Ethiopia achieve greater food security (See for example, Population Action, 2015).

**D) Sufficiency of Supply:** As stated by Torero (2014), the UN Food and Agriculture Organization assume that high rates of malnutrition can lead to a loss in gross domestic product (GDP) of as much as 4 to 5 percent per year. Therefore, to achieve food security for its productive citizens, a nation needs to increase agricultural production through research and innovative technology. Furthermore, as a means of optimizing their food production, developing countries must use drought –resistant crops and soils and invest in rural infrastructure by building roads, irrigation, and storage facilities (Pieters, Guariso, and Vandeplas, 2013).

Although attempted, the Ethiopian government needs to take further steps to amass food stocks and create early warning systems to handle an unexpected drought. For instance, in 2015-16, experts estimated that Ethiopia would need up to \$1.4 billion to cope with the *El Nino* drought. However, much more was needed because the Ethiopian Government only committed

about \$200 million and another \$170 million was delivered by philanthropic international communities or NGOs (Africaaid, [2016](#)).

Given that the majority of Ethiopian households are engaged in agriculture and live in rural areas, additional drivers of poverty reduction, more particularly, those that encourage some type of structural transformation of the Ethiopian agricultural system is worthwhile (2016). Without stable and long lasting food security that contributes to physical and mental wellbeing, the economic growth of Ethiopia cannot be sustained. Though food production in Ethiopia is unpredictable, it is persuasively argued by Torero (2014) that “strategically designed, food security is central to both short and long-term economic growth.”

In agreement with the argument that agriculture is the driving force for the economy and a means of ensuring household food security, the Ethiopian Government initiated Agriculture Development Led Industrialization (ADLI) in 1994. The components of ADLI included: a) input provision to peasants, b) promotion of small-scale irrigation, c) improved livestock herds, d) environmental protection and natural resource management, e) grain marketing efficiency, e) women’s participation in agriculture, and f) expanding rural and feeder roads (Devereux, 2000). However, since the ADLI was very low in details, it was never fully implemented (Rahmato, 1994).

It has become debatable whether those who participated in the programs were: 1) poor and chronically food insecure, 2) forced to resettle in other areas, 3) getting sufficient resources and wages in exchange for their services, and 4) productive and sustainable. Since 2003, the Ethiopian Government in close collaboration with development partners (i.e., United Nations organizations such as the office for the coordination of Humanitarian Affairs, NGOs, the World Bank, International Monetary Fund (IMF), US international aid Program, etc.), to prepare a new Coalition for food Security in Ethiopia.

The foreign donated food security assistance package included providing fertile farm lands to settlers, seed, oxen, hand tools, access to clean water, health facilities, feeder roads and other capacity building facilities. The food Security program (FSP) was targeted to give assistance to more than 6million beneficiaries located in 319 chronically food insecure districts (*woredas*).As outlined by the World Health Organization (WHO), the most vital components of the Food Security Program (FSP) resettlement programs in Ethiopia include: 1) Productive Safety Net Program (PSNP), 2) Household Asset Building Program (HABP), and 3) Complimentary Community Investment (CCI).

- 1) Productive Safety Net Program (PSNP):** Established in 2005, the Productive Safety Net Program (PSNP) is “one of the largest safety net programs in the world” (USAID, 2016). It was established by the Ethiopian Government to build the resilience capacity of chronically food insecure communities to protect them from

shocks and climate changes and to give assistance to food-insecure households for six months of the year for up to five years, to prevent depletion of resources in farm activities such as crops and livestock at the household level (i.e., the beneficiaries were chronically food-insecure households). More specifically, in addition to direct sustenance given to the elderly, the disabled (handicapped), sick, pregnant women etc. the chronically food- insecure able-bodied participants were required to engage in labor intensive public works projects (such as water harvesting, irrigation, feeder roads) in-exchange for food-for-work programs or cash-for-work, possibly financed by monetizing food aid (Devereux, 2000).

- 2) **Household Asset Building Program (HABP):** Officially it was started in June 2013 by the Ethiopian Government, and the USAID Ethiopia mission in collaboration with nine other donor partners (USAID, 2016). Its objectives were to improve natural resources and food security by providing inputs to increase livestock and crop production, and by establishing training and market information for food insecure households.
- 3) **Complimentary Community Investment program (CCI):** This program was mainly tailored to create community assets and complement household investment through ecosystem rehabilitation strategies. Among other things, such programs included soil and water management, plant nutrient generation and recycling, planting drought and pest resistant crops etc.

The donors who gave food to Ethiopia may have had gracious intentions. However, it has become debatable whether the participants were actually chronically food insecure, or were getting sufficient resources and wages in exchange for their services. Therefore, Ethiopia, as an aid recipient country, needs to be aware that external sources of food donations at times can lead to disruption of the local food market and might even become a disincentive by discouraging local farmers from attempting to produce their crops and to store the excess for bad seasons. As stated by Devereux (2000), "...while safety nets risk perpetuating dependency on two levels: beneficiaries will remain trapped in unviable livelihoods and be dependent on relief indefinitely, and governments and donors will have little incentive to invest in agriculture and other sectors." Moreover, unlike the current top-down methods that are used to design safety net programs for chronically food insecure peasants, it would be better to use a bottom-up strategy because the starving poor people "...know best for themselves what they need, and will be motivated most thoroughly to productive effort if they participate actively in decisions regarding their development" (Pausewang, S. et al, 1990).

### **Summary and Conclusions**

The causal linkage between food security and economic growth is not yet fully resolved. That is, whether food security contributes to economic growth or economic growth induces food security

or whether there is a two-way causal relationship between the two variables is not yet causally ascertained. However, a review of existing studies seems to ascertain that food insecurity in Ethiopia is not due to the lack of economic growth and income distribution. Rather it seems to be originating because Ethiopia has failed to properly ground itself with the necessary financial infrastructure to tackle the increase in inflation, resulting from an excess in the money supply. The sustained budget deficits, increase in population, and not stocking food production (supply side), necessary during favorable seasons as a means of mitigating of unanticipated natural disasters during unfavorable seasons, are not addressed sufficiently.

Though not fully borne out by rigorous empirical studies, proponents of a neoliberal trade theory propagate the idea that an increase in trade and decrease in government regulations, would decrease food insecurity and alleviate rural poverty. Without designing adequate methods for solving the food crisis, it is sad that this type of unwarranted assumption has been hijacking the global food supply. Taking these assumptions for granted, it is an irony to notice that poor countries are faced with the dilemma of whether they should deny their citizens their fundamental right to eat or rather concentrate on exporting their products to accumulate foreign exchanges, essential for importing unnecessary gadgets.

To sustain food security in tandem with economic growth, Ethiopian policy makers need to focus on well-orchestrated defensive stabilization policies such as making food accessible or establishing food stocks as a means of mitigating the increase in food prices or establishing food entitlement to tackle food hunger. As suggested by Dreze and Sen (2011), governments could save the poor from vulnerability to food insecurity arising from negative shocks or resulting from the disjuncture between soaring prices and the availability of food items. Based on Newbery and Stiglitz's (1979) theory that focuses on the high cost of national price stabilization schemes, Anderson and Roumasset, (1996) empirically demonstrate that to tackle food insecurity, government efforts need to be tailored to: a) enhancing private markets, b) increasing the availability of food products for the poor through social services (i.e., food, health, education etc), c) giving entitlements through transfers, d) using intensive technology-based methods that could propel improvements in productivity, e) improving transportation, enforcing standards and measures in intensive grain transactions, and f) implementing small-scale storage facilities.

It must be stressed that property rights and land tenure might influence the food security status at the household level. Given that the Ethiopian government has full ownership of the country's land, it has achieved socially equitable outcomes because land in rural Ethiopia is distributed fairly. However, the radical egalitarian measures of distributing land in rural Ethiopia has "...generated insecurity practiced by fears of further redistribution and a consequent unwillingness to invest effort in measures to improve soil conservation and enhance fertility' (Quan, 2000).

It needs to be underlined here that in patriarchal Ethiopia, since women by and large are excluded from owning land, reforming the use and ownership of land by women is vital in

Ethiopia (Pieters, Guariso, and Vandeplass2013). Therefore, given the important role of women in Africa's agricultural sector and "... in all the different dimensions of food and nutrition security, policies that support and stimulate productive activities of women in general, especially in agriculture, have great potential in terms of improving food security." In addition, as stated by Hull (2009), growth in the agricultural sector of the economy cannot be translated into benefits for the poor because benefiting the poor needs an identification of the location of the poor. If culturally acceptable, people who are volunteering to move to settlements in ethnically sensitive regions, the needs of food security in Ethiopia could be accomplished by designing the mobility of the poor across sectors of the economy. However, not to repeat the mistakes of the Derg, the basic infrastructures need to be in place before the chronically food insecure are encouraged to move. Furthermore, in order to participate in productive and sustainable food production activities, participation in the programs needs to be for chronically food insecure poor and who are given sufficient resources and wages (instead of food for work) in exchange for their services.

Finally, various donors with gracious intentions need to be appreciated for their humanity-based food donations. However, as an aid recipient country, Ethiopian policy-makers, need to be aware that external sources of food donations at times can lead to disruption of local food markets and might even become a disincentive. They might even discourage local farmers from attempting to produce their crops and to store the excess from good periods for seasons of emergency.

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