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Grain markets, disaster management, and public stocks: Lessons from Ethiopia

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ABSTRACT

Ethiopia has made remarkable progress in addressing food insecurity over the past two decades. Unlike many developing countries, the country has managed to improve productivity, enhance market efficiency, and introduce effective safety net programs without large scale price stabilization programs. Public food stocks play only a minor role in the current food system, but the institutions that manage food stocks and emergency relief have grown increasingly effective in addressing crises. Nonetheless, since it remains susceptible to drought, the country will continue to need well-functioning institutions to maintain or surpass the improvements in food security it has achieved over the recent years. Policy evolution, along with recent changes, is evaluated, and implications and lessons for other developing countries are discussed.

1. Introduction

Ethiopia's food policies have evolved over time through many crises involving human suffering of great magnitude. The country's challenge of dealing with food insecurity dates to medieval chronicles of the ninth century, when droughts or epidemics caused widespread food insecurity (Pankhurst, 1985; Von Braun et al., 1998), including famine in extreme cases. Food security challenges in Ethiopia continue to make news headlines. In 2015, failed rains caused by El Niño resulted in a sharp rise in the vulnerable population. An estimated 10.2 million people, in addition to 8 million people supported by safety nets, needed food assistance, with 400,000 children severely malnourished. There were widespread concerns about the possibility of mass starvation and deaths, especially because of the slow response from the international development community (Washington Post, 2016).

Thanks to timely actions of the national disaster response system and the private trade of cereals from surplus to deficit areas, there was no spike in food prices in drought-affected regions and no reported deaths. It is important to contrast this scenario with that of 1983 when a drought related famine caused over 300 thousand deaths and immeasurable human sufferings (Graham et al., 2013), even though the severity of 1983 drought was far less than the one in 2015. For instance, according to estimates from the Center for Research on Epidemiology of Disasters (CRED), total population affected by 1983 drought was 7.75 million, which is less than half the size of population (18.2 million) needing food assistance following 2015 drought.

Ethiopia's success in managing disaster-related food insecurity is the result of adopting a comprehensive set of food policies that goes far beyond traditional agricultural pricing and subsidy policies. Expansion of agricultural research and extension, together with the promotion of fertilizer use, contributed to a sustained growth in cereal production from 12.6 million tons in 2005 to 27.0 million tons in 2015. Investments in roads and telecommunications combined with market liberalization have lowered transactions costs and improved the efficiency of grain markets. And, better early warning systems, along with the establishment of extensive safety nets (the Productive Safety Net Program), have enabled the government and NGOs to greatly enhance food security for needy households.

In addition, the government has acted through three separate institutions: the National Disaster Risk Management Commission (NDRMC), the Strategic Food Reserve Agency (SFRA) and the Ethiopian Grain Trading Enterprise (EGTE). Each of these entities have undergone several reforms over the past four decades. The NDRMC is the more empowered version of the former Disaster Risk Management and Food Security Sector (DRMFSS), which was in turn preceded by the Disaster Preparedness and Prevention Commission (DPPC). Similarly, SFRA and EGTE are derived from the Emergency Food Reserve Authority (EFSRA) and the Agricultural Marketing Corporation (AMC), respectively.

This paper undertakes three tasks: (i) assessing the evolution of Ethiopia's food policy institutions over time, (ii) identifying the

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Table 1
Overview of natural disasters and food security challenge in Ethiopia, 1960–2015. Source: Center for Research on Epidemiology of Disasters (CRED).

Year	# of Disasters	Deaths		Affected Populations	
		/ disaster	Total	/ disaster	Total
1960–1980	12	8564	102,762	527,715	6,332,585
1981–2000	47	6618	311,055	600,830	28,239,033
2001–2015	48	53	2541	946,908	45,451,588
1960–2015	***107***	3891	***416,358***	747,880	***80,023,206***

potentials and pitfalls of recently adopted reform measures, and (iii) analyzing the options for price stabilization through private trade. In carrying out each of these tasks, efforts are made to draw implications about the generalizability of the lessons (good and bad) for other developing countries. The rest of the paper is organized as follows. Next section provides an overview of the food security challenges and policy evolution, which is followed by a discussion on the responsibilities and institutional reforms of the three main entities. Section 4 presents an assessment of options for wheat price stabilization through international trade. The paper concludes with a summary and implications.

2. Challenges and policy evolution

2.1. Challenges of access to food and human suffering

The list of disaster related famines and food insecurity in Ethiopia is long (Table 1). A review of these events presents three broad messages. First, both food security challenges and human suffering from them are high in Ethiopia. Since 1960, Ethiopia has encountered more than 100 natural disasters—mainly droughts, epidemics, and floods—that affected over 80 million people and caused over 400 thousand human deaths. Second, the frequency of natural disasters is increasing over time. There have been 48 reported natural disasters during the first 15 years of the new millennium, almost four times the number of disasters during 1960–80. Finally, while far fewer deaths are reported, the disasters in the recent years appear to affect a much larger population than the disasters in the past. Since 2001, natural disasters have affected over 45 million people, which is larger than the size of the population affected during 1960–2000, but the human deaths have been only a fraction of the total deaths in the earlier four decades.

Part of the reason behind the country's success in dealing with disasters is the learning from past experiences. Ethiopia had to deal with four major famines within a period of 25 years. The most severe drought-related famines were recorded in Tigray in 1958, Wollo in 1966 and 1973, and in Hararghe, Tigray, and Wollo in 1983. The estimated deaths from these famines vary, but commonly cited numbers are 100,000 deaths in 1958, an estimated 250,000 deaths in 1966 and 1973, and 300,000 deaths in 1983–84. Since the mid-1980s, there have been several more disasters, but there has been no reported death. These are remarkable successes, and the three key institutions (i.e., the risk management commission, the food reserve agency, and the grain trade enterprise) and their predecessors—such as, the Relief and Rehabilitation Commission (RRC), and the Disaster Preparedness and Prevention Commission (DPPC)—deserve much credit for their accomplishments.

2.2. Evolution of the key food policy institutions

The central food policy institutions in Ethiopia went through a series of reforms over the years that helped adapt to the changing economic realities and the waves of ideological thinking. The underlying context and political economy considerations of the early reforms are discussed in earlier works, notably by Webb and Joachim von (1994) and Dercon (2002). This section presents a synthesized version of those reforms focusing on three key institutions—namely, the *Ethiopian Grain Trading Enterprise***,** the Emergency Food Reserve Agency, and the National Disaster Risk Management Commission.

While policies of holding grain stocks in Ethiopia were introduced in the early 1950s, the real control over food markets began when the socialist government came to power in 1974. Much of the control mechanisms were introduced between 1974 and 1976, when the grain marketing board was renamed as the Agricultural Marketing Corporation (AMC), making it responsible to manage almost all aspects of grain markets. Grain prices were administratively set for the regional markets and had changed little between 1976 and the late 1980s (Webb and Joachim von, 1994). With increasing control, the marketing corporation grew rapidly. By 1987, the AMC established 104 purchase centers, 630 thousand tons of storage capacity in 81 locations in the country and owned a fleet of 225 trucks and 2013 grain collection points (Lirenso, 1987).

Yet, the marketing corporation did not live up to the expectation of the socialist regime and the people of Ethiopia. In 1987, significant changes were made to the AMC, reducing its mandates and control over grain markets. The agency was no longer responsible for the export and import of grain, the import of other agricultural products, or the marketing of agricultural inputs. This was followed by another set of reforms towards the end of socialist regimes, which included: the elimination of restrictions on private trade, removal of the fixed price and forced quota delivery, and the abolition of the monopoly power of the marketing corporation. However, it was too late for the regime—the socialist government was overthrown in May 1991.

The new government embraced more liberalized policies. The national food marketing agency was renamed the Ethiopian Grain Trade Enterprise (EGTE) and was mandated to operate in competition with the private sector. However, the enterprise encountered several challenges in the subsequent years. The mandates of the enterprise—such as stabilizing food prices while competing with private sector—were conflicting and the agency was ineffective in stabilizing prices due to a funding crisis. It often failed to purchase at the pre-announced prices, resulting in shaking farmers' confidence and the loss of policy credibility, which became a concern for the new government. Further reforms were introduced during 1999–2000, which resulted in a large decline in the government's share in domestic cereal markets—from around 40% in the 1980s to 4% by the late 1990s, and less than 2% during 2001–2007 (Rashid and Negassa, 2013). More importantly, unlike many other developing countries, the government did not engage in any large-scale interventions in the grain markets. Eliminating expensive market intervention programs saved national resources that were invested in market fundamentals such as building rural roads, increasing spending on agriculture research and development, and social safety nets.

The second key food policy institution in Ethiopia has been the *Emergency Food Reserve Agency*. The current day food reserve agency was instituted following the 1973–1974 famine. The socialist government recognized that the grain stocks procured under agricultural price policies were not enough to manage the country's emergencies. Therefore, the government requested the FAO to commission a study exploring alternative options. The recommendation of the study was to set up a grain reserve agency. The argument was that the reserves would help deal with structural deficits, production shocks, and infrastructural bottlenecks. The initial recommendation was to hold a stock of 60,000 metric tons within the first year and increase it to 180,000 metric tons by the fourth year. The idea was appealing to the government and an emergency food security reserve administration was established in 1982, as an additional unit of the RRC.

Three key aspects related to the food reserve agency's reforms and performance in the subsequent decades are worth noting. First, the agency was transformed into a unique food policy instrument in 1992. The prime minister issued a legal directive making it an autonomous agency with significant changes in its operational procedures. The