



No. 02 – April 2014

Comparing Egypt and Saudi Arabia's Wheat GVC

Duke MINERVA Project

This research brief has been produced as part of the project entitled, "A Global Value Chain Analysis of Food Security and Food Staples for Major Energy-Exporting Nations in the Middle East and North Africa," with funding from the U.S. Department of Defense MINERVA Initiative. The research is based at the Nicholas School for the Environment and the Center for Globalization, Governance & Competitiveness at Duke University.

Research Team

Danny Hamrick
 Ghada Ahmed
 Andrew Guinn
 Ajmal Abdulsamad
 Annelies Goger
 Jack Daly
 Jonathan Morgan
 Gary Gereffi

Abstract

Wheat is one of the most important commodities in the Middle East and North Africa (MENA) and the region is the largest importer of wheat and other grains. While there are many challenges in terms of securing stable wheat supplies, like storage capacity and water reserves, sub-regional differences exist in the organization of the wheat industry and subsequent challenges. This brief sheds light on these differences through a comparison of Egyptian and Saudi Arabian wheat value chains. We conclude that while many issues, such as availability of currency reserves, span the region, other issues are country or sub-region specific.

Keywords

Wheat, Egypt, Saudi Arabia, Global Value Chains

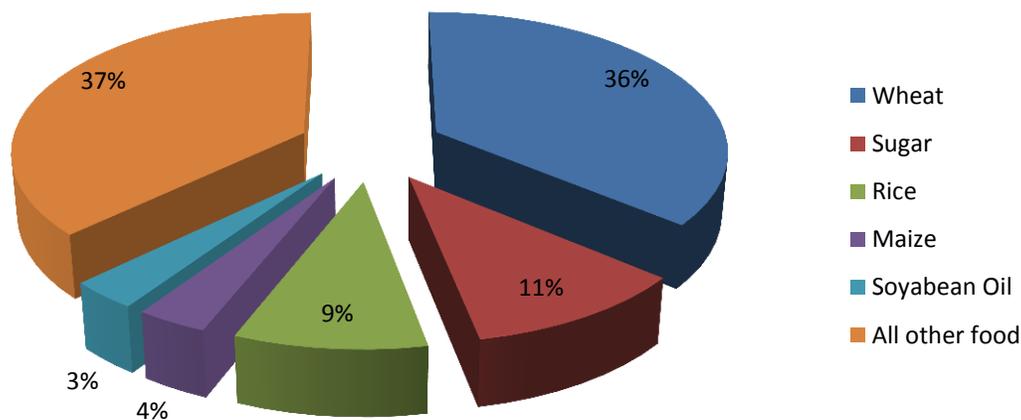
Introduction

The Middle East and North Africa (MENA) region is the largest wheat importing region in the world. In 2009, wheat was the dominant source of food supply in MENA, accounting for roughly one third of all available food (see figure 1). Multiple issues within the region, primarily water scarcity, force the region to depend on imports of critical grains. The high dependence on international wheat supplies makes the organization of the industry important for studies of food security and political stability in the region and strategies for maintaining a sustainable wheat supply. Despite the mostly shared dependence on imports, the organization of wheat value chains varies across the region (1).

Despite the mostly shared dependence on imports, the organization of wheat value chains varies across the region.

This report compares the structure of the wheat value chain for two MENA countries, Egypt and Saudi Arabia. Despite many similar challenges that both nations face, their unique institutional and policy framework present specific challenges and opportunities, shedding light on interregional differences in wheat value chains. By studying these countries from a global value chain (GVC) perspective, we are able to analyze how the various firms, government institutions and international actors that shape food policy in the countries and their responses to volatility in the system.

Figure 1: MENA food supply by commodity²



1) Ahmed, Ghada, Danny Hamrick, Andrew Guinn, Ajmal Abdulsamad, and Gary Gereffi. 2013. "Wheat Value Chains and Food Security in the Middle East and North Africa." Duke Center on Globalization, Governance and Competitiveness.

2) FAOSTAT 2014

Regional challenges in wheat GVCs

Throughout the MENA region certain challenges are prevalent in the wheat GVC that all nations must overcome. Mapping all of the relevant activities and institutions for wheat production and trade provides for a holistic approach to the study of commodities, role of actors in food security, and drivers that impact food security outcomes (for further information on global value chains and food security please reference Duke Minerva research brief 01).

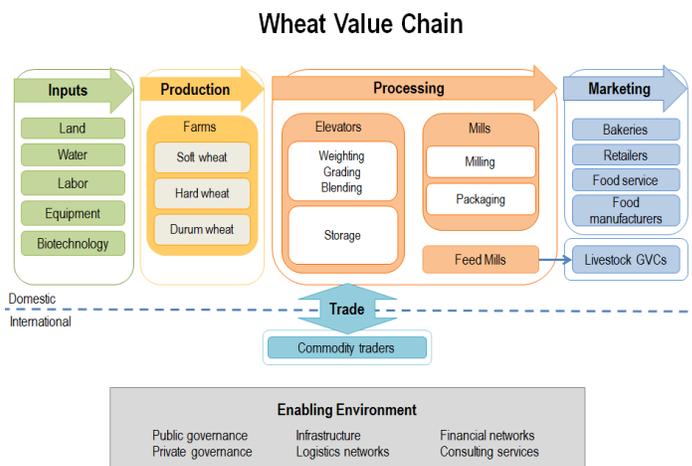
The generic wheat GVC for MENA nations (see figure 2) shows the various inputs and stages of production and process that the commodity undergoes. Red boxes indicate constraints consistent across the region, for example water and storage.

Countries in MENA face many challenges in securing wheat. Some, such as environmental are consistent across the chain and other vary by countries. Figure 3 below highlights important variables related to wheat in the two countries.

Figure 3 Egypt and Saudi Arabia compared^{1, 3}

	<u>Egypt</u>	<u>Saudi Arabia</u>
Population	79.7 million	26.8 million
GDP per capita	\$3,187 (USD)	\$20,777 (USD)
Wheat Consumption per capita	145.2 kg/yr.	89.3 kg/yr.
Wheat Imports	2.6 billion USD	0.4 billion USD
Wheat Import Dependency	51.7%	53%
Energy exports	6.9 billion USD	162.7 billion USD

Figure 2: MENA Wheat Value Chain



Environmental challenges

Growing wheat, a water intensive crop, presents major challenges for the region. Water shortage remains a major issue for all nations in MENA. The region is the most water scarce in the world and, as a result, it also has low levels of arable land. Growing populations and climate change are placing more stress on critical resources, such as water supply (2).

Political challenges

In addition to inputs, the MENA region as a whole utilizes a state-led approach to governance compared to the liberalized model used elsewhere. High levels of government regulation and poor infrastructure and storage systems increase wastage in the system, causing increased volatility in supply and increased costs, which many governments must absorb due the large subsidy systems (Ahmed et al 2013).

Additionally, one of the solutions that many nations pursue is land investments abroad. However, investments are often in areas with weak institutional and infrastructure, which limits effectiveness (2).

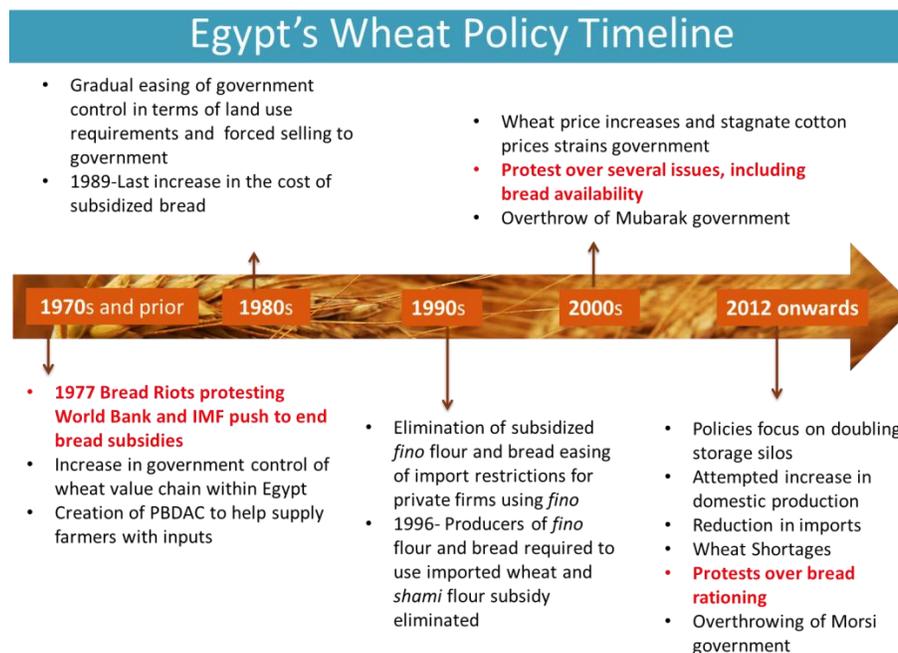
1) Ahmed, Ghada, Danny Hamrick, Andrew Guinn, Ajmal Abdulsamad, and Gary Gereffi. 2013. "Wheat Value Chains and Food Security in the Middle East and North Africa." Duke Center on Globalization, Governance and Competitiveness.
 2) Bailey, Rob and Robin Willoughby. 2013. Edible Oil: Food Security in the Gulf. Chatham House.
 3) World Bank. 2012. World Development Indicators.

Case study: Egypt

Egypt, once a major wheat producer, is now the world's largest importer of wheat. The Egyptian government is highly involved in the wheat GVC and also maintains high levels of subsidies. Research indicates 75% of the Egyptian population depends on subsidized bread as part of their diet and among the poorest households government subsidized bread is consumed on average of 6.4 days a week (1).

The General Authority for Supplies and Commodities (GASC) oversees wheat imports and domestic procurement in the country. GASC partners with a number of other government institutions, such as the Principal Bank of Agriculture and Development Credit to supply imports and finance to purchase wheat. Once wheat is secured, the General Company for Silos and Storage (GCSS) and the Holding Company for Silos and Storage (EHCSS) oversee holding and storage. Finally, the Holding Company for Rice and Wheat Mills (HCRWM) and Food Industry Holding Company (FIHC) operate the public sector mills, representing 55 % Egyptian milling capacity (1).

Figure 4: Egyptian Wheat Policy Timeline



Egyptian government policy provides three loaves of subsidized bread per day and it is essential for many Egyptians' survival especially by the 25% of the population who live on less than \$1.65/day (1). Attempts to reform the subsidy system (see figure 4 for an overview of major wheat related policies) have been met with heavy resistance. For example, in 2008, popular unrest related to wheat shortages and increased prices forced the government to roll back plans to slash subsidies. In 2011 during the overthrow of Mubarak, a major chant of protestors called for "Bread, Freedom and Social Justice." In 2012, attempts from Muslim Brotherhood's government to ration bread and control bread prices further fueled growing discontent against the government, and bakers threatened to go on strike.

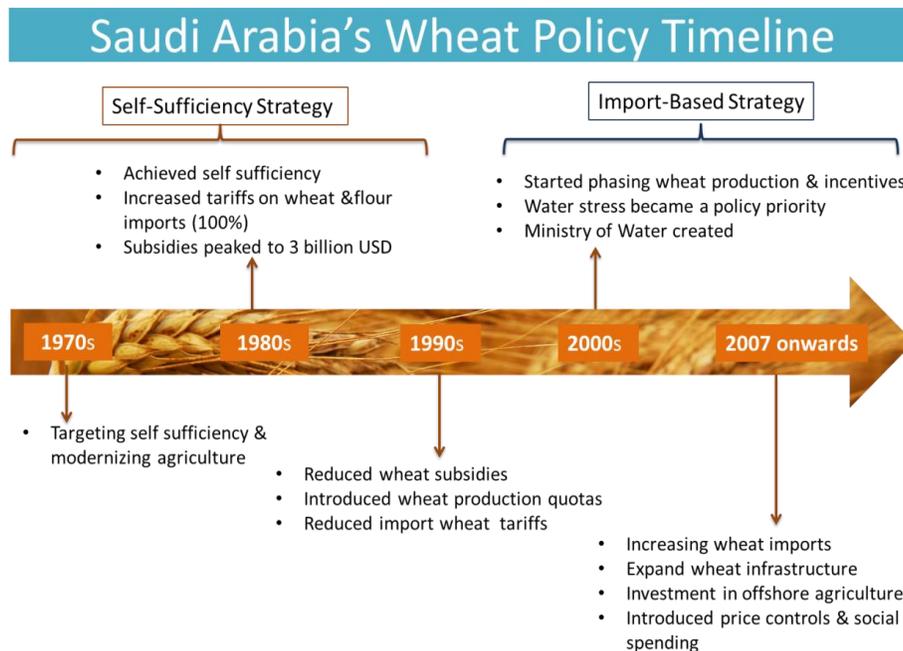
Recent unrest in the nation has negatively impacted tourism and other sources of GDP, seriously limiting the ability of the nation to finance wheat imports. Further, the short-lived attempt to promote self-sufficiently depleted reserves and created the need for immediate intervention by other Saudi Arabia and other Gulf nations.

Case study: Saudi Arabia

Saudi Arabia's vast oil resources have financed the kingdom's agricultural and economic development, which is supported by a heavily subsidized welfare system that has helped ease food price inflation. It also allowed the country to pursue a self-sufficiency policy approach to wheat starting in the 1970s. By 1984, the nation was almost completely self-sufficient in terms of wheat production, even becoming one of the top ten global exporters in the 1990s. However, environmental problems as well as the cost of subsidies have pushed the nation towards an import approach. By 2016, Saudi Arabia will cease all domestic production and will rely wholly on wheat imports (1) (See figure 4 for an overview of wheat policy in the nation).

Like Egypt, the Saudi government is a dominate player in the wheat GVC but it has taken a different approach to food security policy, shifting towards a total reliance on imports. The Saudi Grain Silos and Flour Mills Organization (GSMO) is responsible for wheat purchasing, storage, milling, and distribution throughout the country. The agency is in charge of managing wheat subsidies, allocating farmers' production quotas, setting guaranteed prices for purchasing wheat from the local producers, and importing additional wheat to cover domestic consumption needs.

Figure 5: Saudi Arabia Wheat Policy Timeline



In the early 2000s, facing increased stress on water reserves and subsidies, Saudi Arabia choose to shift away from a self-sufficiency strategy towards a model of complete imports. Water scarcity in the region became a paramount concern and due to the large amount of oil exports and reserves, and importing wheat was seen an economically efficient approach to secure wheat (see figure 5).

Along with the shift towards imports, the government also introduced price controls and social spending programs in an attempt to ensure stability. The government eliminated or decreased tariffs on many food imports and implemented plans to increases wages and increase social insurance benefits such as unemployment allowances. Saudi was able to invest more in social spending compared to other countries in the region due to the large amount of currency reserves from their energy exports.

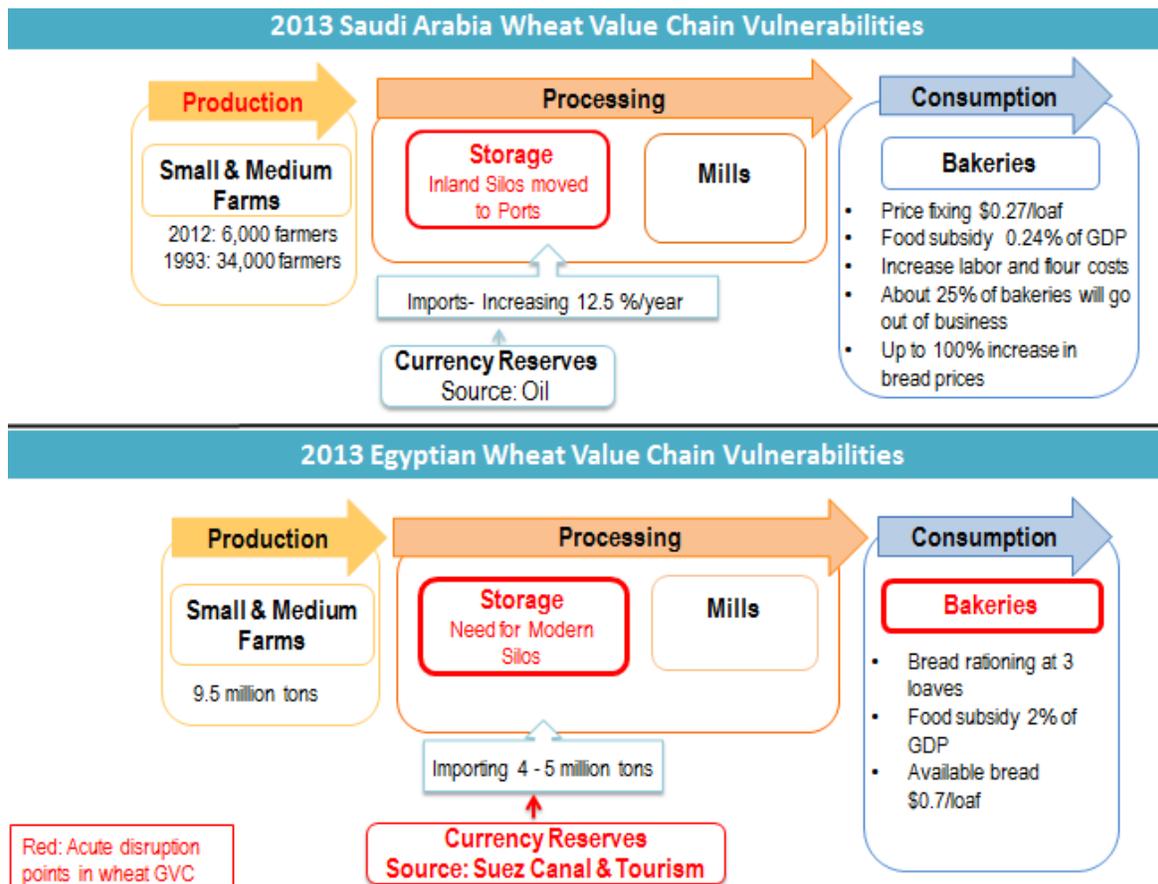
Divergent food policies and outcomes in Egypt and Saudi Arabia

Egypt and Saudi Arabia present different strategies for addressing constraints to wheat supply (see figure 6). Both countries have issues with storage, but they differ in the cause of storage problems. Egypt faces a lack of sufficient, modern storage facilities to meet the need within country, while Saudi Arabia's silos are located inland due to a history of domestic production but must now construct additional silos close to ports.

The most pronounced difference in the two cases is the accessibility of currency reserves to purchase wheat abroad and invest in infrastructure for moving and storing wheat. Oil Markets in Saudi Arabia makes it easy for the nation to secure wheat even during periods of volatility. Egyptian reserves, heavily impacted by recent political unrest, are insufficient to respond to global volatilities, making the system more precarious.

Additionally, shifts in the geographic sourcing of wheat display divergent strategies. Saudi Arabia continues to rely on Canada and the USA for wheat, along with land grabbing in Africa. Egypt is moving towards import diversification, sourcing more wheat from the Black Sea region and also increasing domestic production. These strategies are not without dangers as the stability of governments and the infrastructure capabilities in many countries where Saudi Arabia is investing are questionable. Also, the climatic and political instability of the Black Sea countries make these countries volatile trade partners (see Duke Minerva Research Brief 03).

Figure 6: Vulnerabilities in Wheat GVC Compared



For more information please visit <http://sites.duke.edu/minerva/>
or contact Ghada Ahmed (ghada.ahmed@duke.edu).