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Food security at risk

Post-Arab Spring macroeconomic reforms and price developments in the wheat-to-bread supply chain in Egypt

—————The economic situation in Egypt after revolutions and economic reform—————

Egypt's agricultural sector is strongly influenced by natural resources scarcity, economic instability and political upheaval. After the food price crisis 2007–08 and a second wave of the crisis in 2010, basic food commodity prices, particularly in developing countries, briefly spiked and

have also gradually increased on average. At the same time, the increase in global price volatility has a negative impact on the stability of basic food commodity prices. [Figure 1](#) These food price hikes have caused social unrest and a series of revolutions in the Middle East; what is known as the Arab Spring which is began in Tunisia, Egypt, Syria, Libya and Yemen. As in Egypt, after the

global food crisis, the food markets of these countries suffered evident price distortion, especially for wheat (the most significant basic food in the Middle East), which was significantly affected by the price volatility of basic food commodities. The economic situation worsened after 2016 with the devaluation of the Egyptian pound against the USD by over 100%. This drop in



1— The international prices of wheat 2007–18

market value hit especially hard in a country that depends greatly on the international market to meet local food demand, making the Egyptian market vulnerable to food price fluctuations on international markets. These rising food prices erode consumer purchasing power and increase the poverty rate. — The current economic situation in Egypt is characterized by high food and energy prices [Figure 2](#), high unemployment rates [Figure 3](#), unfair wage structures, and a low exchange rate. The GDP growth rates decreased from 5.1% in 2010 to 4.2% in 2017 [Figure 3](#), while inflation as per the consumer price index grew by 32.3% in 2017 (CENTRAL BANK IN EGYPT 2017). [Figure 4](#)

Naturally, the rising unemployment rate worsened the poverty rate, which increased from 21.6% in 2009 to 27.8% in 2017, while food insecurity rates increased from 14% of the Egyptian population in 2009 to 16% (15.9 million people) in 2017 (WORLD FOOD PROGRAM 2018). According to Egyptian Food Observatory (2013) results from a survey conducted with the most vulnerable households indicate that more than 80% of those surveyed reported that they did not receive enough income to cover their needs, and more than 65% of this insufficient income was spent on food, especially wheat. — Consumers in Egypt have used different strategies to cope with the

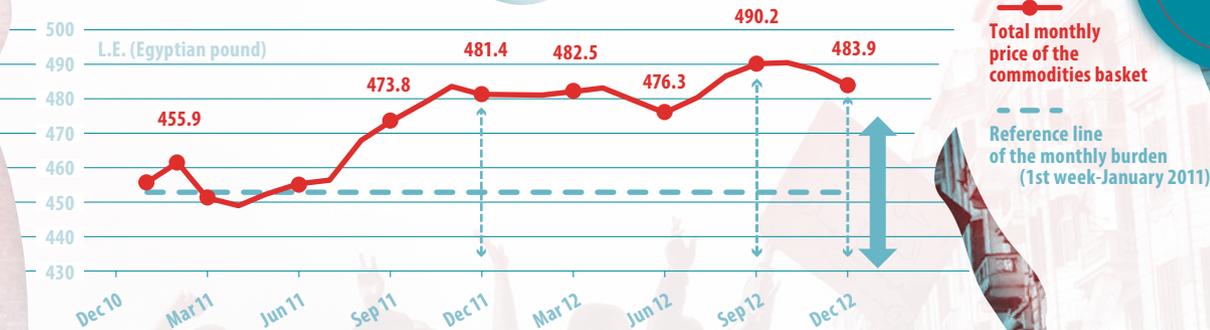
increasing food prices, such as consuming cheaper food with lower nutrients, reducing their food intake and buying food with credit (EGYPTIAN FOOD OBSERVATORY 2013). This economic downturn led to structural problems, which limited the functionality and performance of the Egyptian food market.

Food price volatility and food security

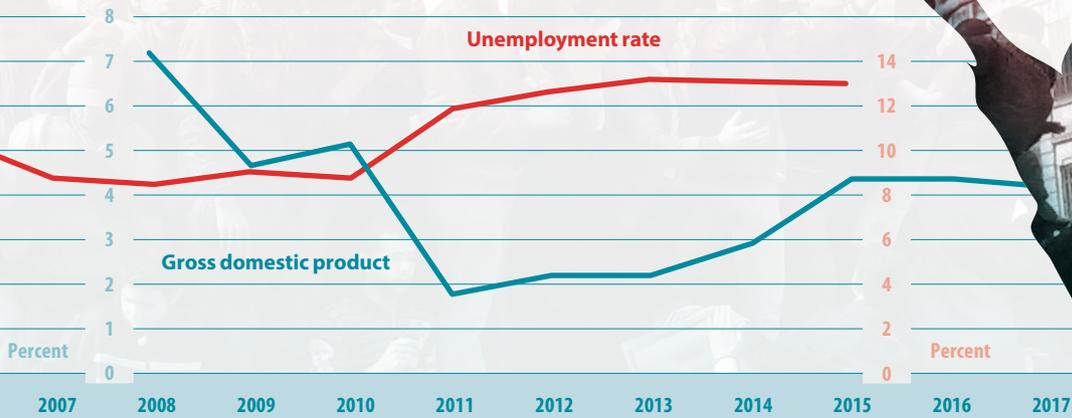
The concept of food price volatility is closely related to that of food security. According to the FAO (2015), there are four food security pillars: food availability, economic and physical access to food, food utilisation, and stability over time (vulnerability and shocks). Food price shocks may hit

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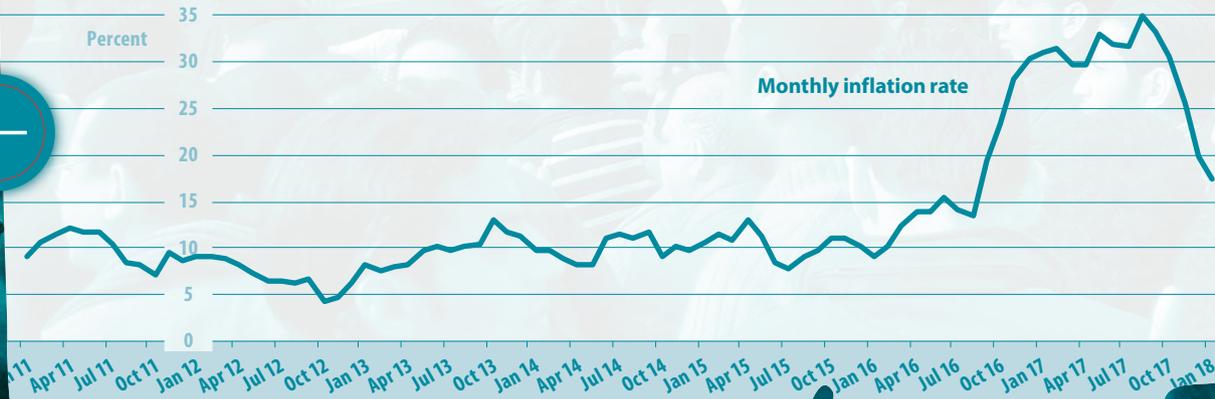
The monthly food price burden



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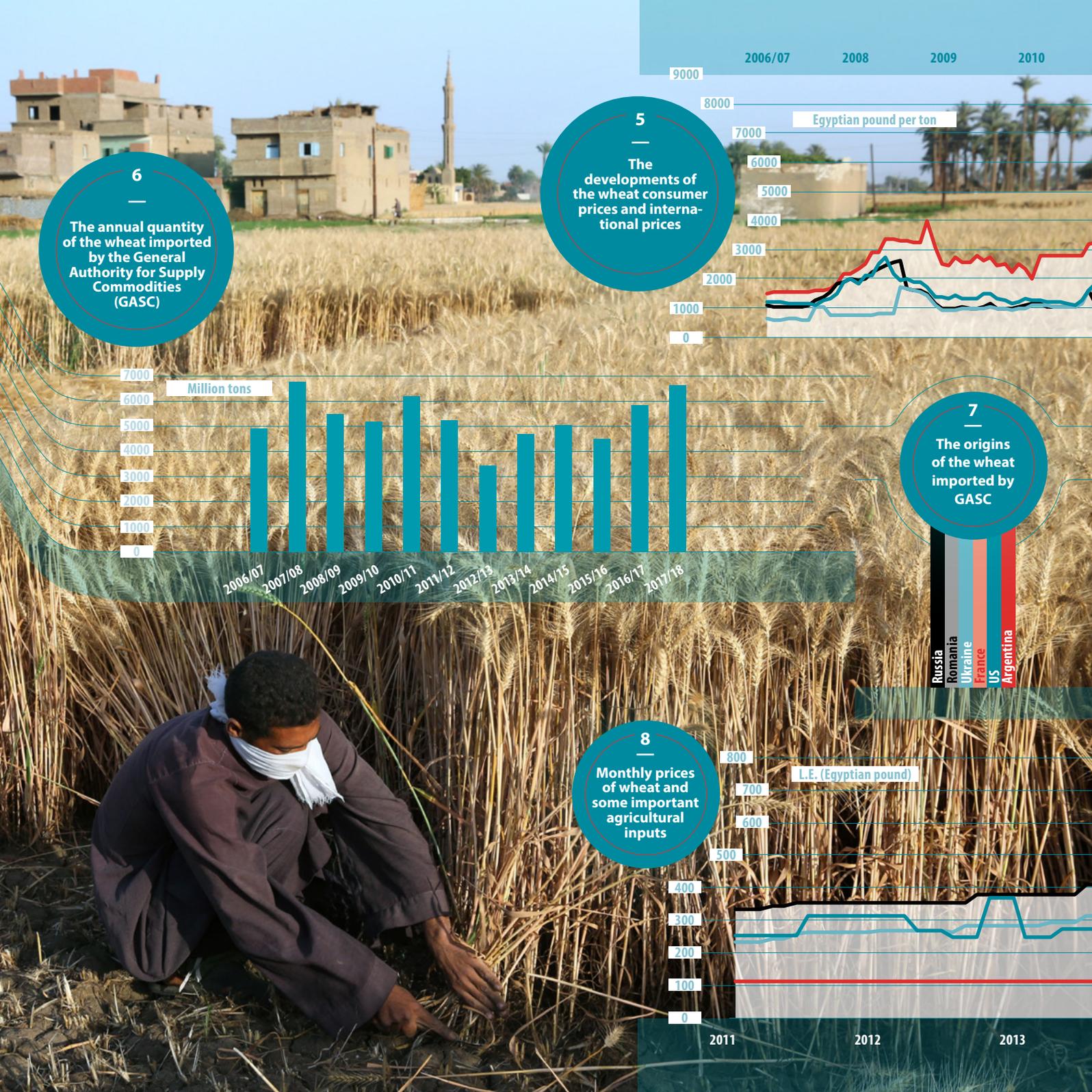
poor countries especially hard and increase the proportion of the population living below the poverty line, which exacerbates economic instability and political unrest or crises. Since Egypt is dependent on wheat imports, the Egyptian market is vulnerable to international wheat price shocks [see Figure 5](#), which hinders the country's economic access to food on the market. Sudden price jumps in international food grain markets also damage the fiscal stability of net food importing countries, especially in countries where food subsidies consist of a big part of the national budget. [Figure 5](#) illustrates that the increases in international prices are passed to the consumer prices in Egypt, as was the case during the extreme market events of the food crisis in 2007–08 and 2010 and following the two revolutions in Egypt in 2011 and 2013. This leads to an unstable and inefficient market and results in negative impacts on consumers' welfare and food affordability. Unaffordability leads to poor access to food, which can lead to malnutrition, particularly among children.

—————Egypt's dependence on wheat imports from Russia and the Ukraine—————

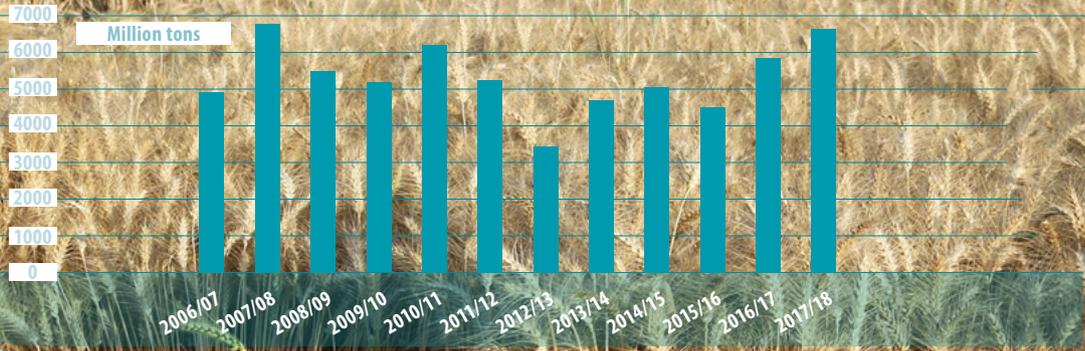
Worldwide, Egypt is considered a net importer of grain and top importer of wheat, with most of its wheat imported from former Soviet Union countries, the USA and France. Wheat is the most commonly consumed grain in Egypt and thus the most important basic food commodity. It is the key to understanding household economies in rural areas since most Egyptian farming households are net buyers of wheat on top of their own production in order to meet their consumption need. Hence, the impacts of wheat price spikes or shocks on poor households are particularly drastic. Bread is the largest food staple and plays a central dietary role among Egypt's population of nearly 100 million people. [Egyptians call bread 'Aish baladi': Baladi means traditional or authentic in English, while the word 'Aish' means life,](#) indicating the importance of bread in Egyptian heritage. Bread is considered a commodity that Egyptians cannot live without in their daily diet.

— Egyptian bread is mainly produced with wheat, making Egypt dependent on wheat imports amounting to around 12.5 million metric tons (MMT) in 2018 represent 20% of all agricultural imports, which is expected to increase by 0.8% in 2019. Egypt is considered the biggest wheat importer in the world, and wheat is the largest grain imported by Egypt. Wheat represents the largest food staple for the Egyptian's population of more than 100 million people. It is also the largest grain crop produced in the country, representing 10% of the total agricultural production value in 2017 (FAOSTAT 2017).

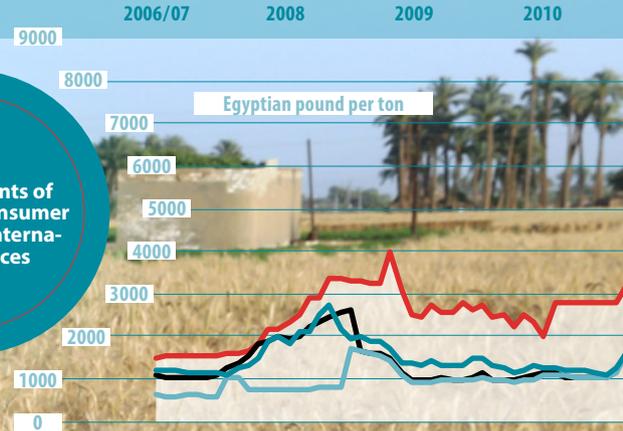
— According to USDA-FAS (2019) report, 28 import tenders for 6.64 MMT of wheat in the 2017–18 marketing year were issued by the General Authority for Supply Commodities (GASC) in Egypt compared to 5.85 MMT in the previous year [Figure 6](#). [Figure 7](#) shows that most of the wheat was imported from Russia, Romania, Ukraine and France (5.2 MMT, 1.06 MMT, 355,000 MT, and 60,000 MT, respectively). During the marketing year 2018–19, GASC purchased 8%



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The annual quantity of the wheat imported by the General Authority for Supply Commodities (GASC)



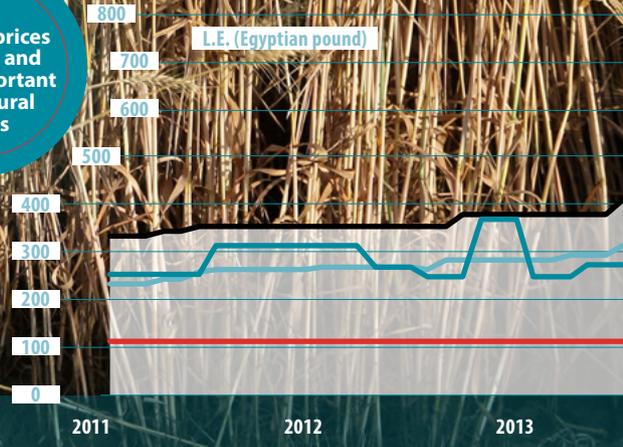
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The developments of the wheat consumer prices and international prices

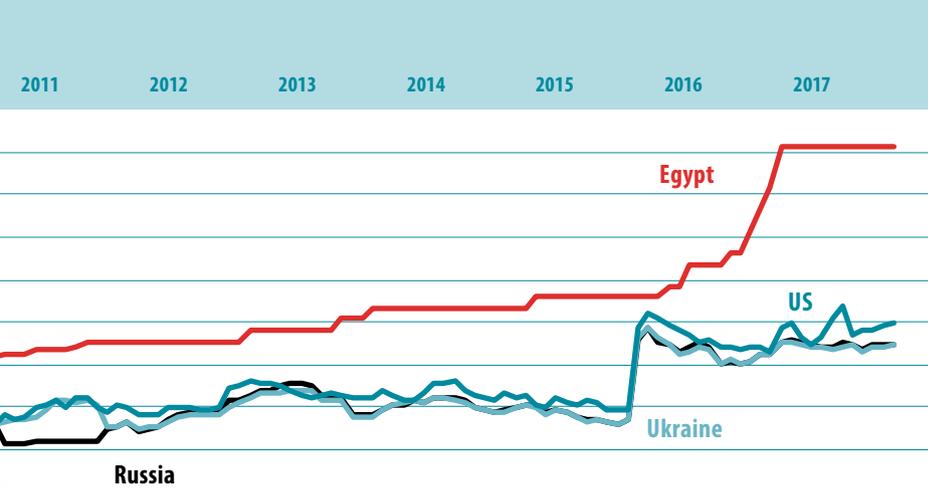


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The origins of the wheat imported by GASC



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Monthly prices of wheat and some important agricultural inputs

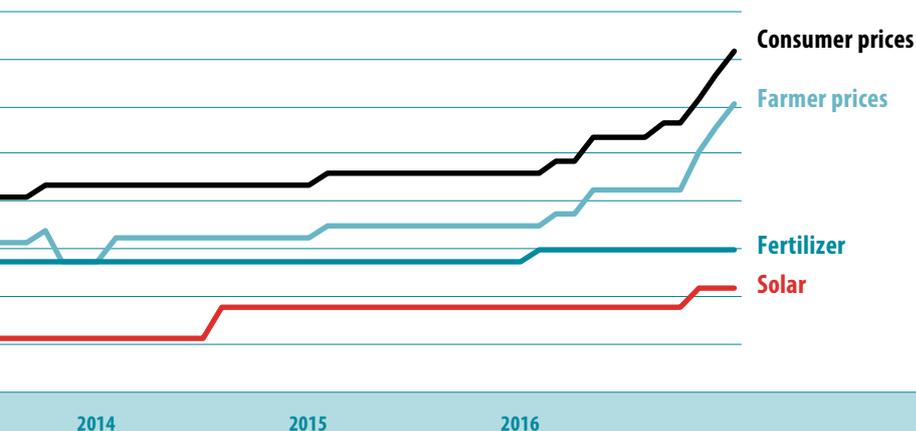
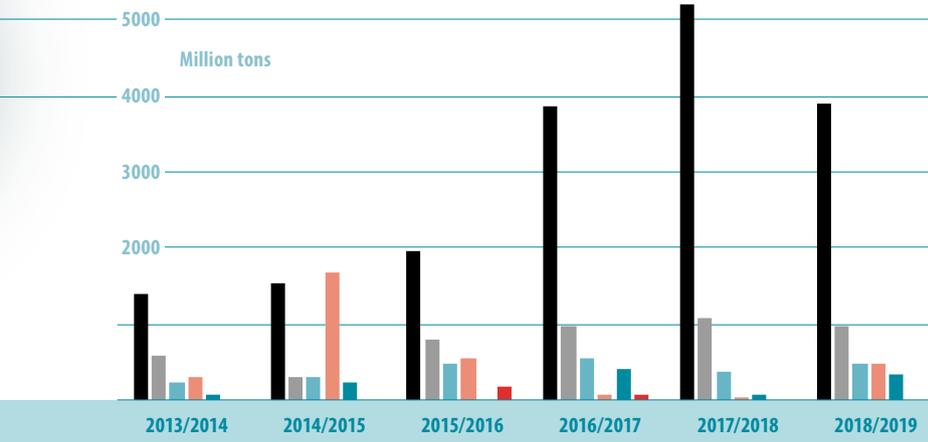




more when compared to the year before. The largest wheat exporters to Egypt were Russia, Romania, Ukraine, France, and the United States in amounts of 3.9 MMT, 960,000 MT, 480,000 MT, and 300,000 MT, respectively.

Wheat production and consumption in Egypt

Wheat is extremely important for economies in North Africa, which devoted 10.4 million hectares to produce 27.2 million tons in 2017, roughly a quarter of the grains produced in Africa (FAOSTAT 2017). **Wheat is the most commonly grown grain in Egypt, which is Africa's largest wheat-producing country.** Jointly, Egypt, Morocco, Algeria and Tunisia represent 71.5% of the total African wheat production (FAOSTAT 2017). In 2018, Egypt's wheat consumption was 20.1 MMT, which increased by 1.6% compared to the previous year as demand for this commodity for both household and industrial consumption, as well as animal feed, rose. [Figure 6](#) shows the amount of imported wheat by Egypt. With the population growing at 2.4% per an-



num, wheat consumption is expected to continue increasing by 1.5% in 2019 (USDA-FAS 2019). The Egyptian government allocates annually 4.8 billion USD to its bread and food subsidies program. However, this subsidized system is working inefficiently and enabling bakeries and grocery stores to resell subsidized bread on the black market, leading to price distortions between the free and subsidized markets. — There are 450 private, public, and public-private mills in Egypt. The milling capacity of both the public and public-private mills ranges from 50,000–55,000 metric tons per day, while the milling capacity of private mills is 20,000 metric tons per day. 81 of the public mills and 75 private mills produce 82% high extraction flour for subsidized baladi bread production. The private sector mills produce 72% extraction flour that is sold to around 20,000 private bakeries. They could stop producing this kind of flour and instead make 82% extraction flour if they had government contracts to produce subsidized baladi bread. — Farmers have

two outlets to sell their wheat. The first is to sell their wheat to the government, which was an attractive option to farmers because they received support prices that were 50% higher than international prices. The second is to sell to private traders at the farm gate. Farmers do not sell all their production; they keep part of it for the next season's seeding, feed and personal consumption. In 2018, the Egyptian government decided to extremely reduce the number of beneficiaries of its food subsidy program, adding complex criteria regarding who can receive the food subsidy (USDA-FAS 2019). As a result, most poor consumers in Egypt suffer from increased food prices. — The Egyptian government has also reduced the subsidy on the wheat grower price from 30% in 2017 to less than 5% in 2018. Thus, farmers have become exposed to international wheat price developments. In addition, due to the currency devaluation in Egypt, prices of imported fertilizer and energy have strongly increased; this increased the cost of the wheat production and thus

increase the farm gate price. [Figure 8](#) Given the experience with serious harvest shortfalls in the Black Sea region and skyrocketing world market prices, budget constraints and repeated wheat export restrictions by the Black Sea exporters, the Egyptian government should intervene to increase grain self-sufficiency by boosting the development of the domestic grain sector. Moreover, the wheat value chain in Egypt is also still in need of better mechanisms to increase performance (USDA-FAS 2019).

— Policies and recommendations to increase wheat productivity —

Wheat is a very sensitive product for the Egyptian policy. With more than 40% of the population living under the poverty line, guaranteeing availability and access to food with low prices is rather challenging for the Egyptian government. Wheat policy is one of the highest priorities for the Egyptian government. Policies to increase food security are required, such as the provision of inputs at subsidized prices, or the promotion of adopting simple technologies and tools to produce wheat. This could

result in lower production costs and thereby consumption prices. Using new heat and disease tolerant varieties may increase productivity. Adopting good agricultural practices may also increase farmers' productivity. Enhancing the extension service to increase the production efficiency of wheat by train farmers on modern agricultural cultivation practices may increase their wheat yields and reduce their dependence on the international market. Developing a market information system using an online market to increase the competitiveness among all actors along the supply chain that can also increase farmers' incomes and make them maintain growing wheat in the coming seasons. In short, food policies should adopt a comprehensive approach along the supply chain to ensure a commensurate impact on the poor consumer in developing countries.

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