
CHAPTER 1: LITERATURE REVIEW

“I wanted to tell them [the National Security Council] that we had reached the “zero stage” economically in every sense of the term... I could not have paid a penny toward our debt instalments falling due on January 1 1974 nor could I have bought a grain of wheat in 1974. There would not have been bread for the people.”

President Anwar al-Sadat, *Interview with 60 Minutes*, August 1977.

Food subsidies are preponderant in the Middle East and North Africa. The region is both the world’s highest importer of wheat as well as the world’s most water scarce.⁹

The body of literature that examines food subsidies in Egypt is already extensive, thanks to the country’s political and economic role in the region, the availability of government data and the involvement of external actors from abroad. Further, Egypt is the most populous country in the Arab world and the World Bank estimates that about 25.2% of its population subsists on less than \$2 a day.^{10/11}

In this chapter, I aim to provide a literature review of Egyptian food subsidies by drawing on previous publications in academia, policy papers, and official documents from Egyptian ministries that have already studied this topic. Section 1.1 will focus on the modern history and implementation of Egyptian food subsidies as well as key policy reforms that have been put forward by the Egyptian state and international organisations to resolve issues specific to food subsidy schemes over time. Section 1.2 will then focus on studies that have solely examined the *baladi* bread subsidy regime, one of the more contentious subsidies provided by the Egyptian state.

1.1. The Egyptian food subsidy scheme: an overview

The modern history of the Egyptian food subsidy scheme can be traced back to agricultural reforms initiated by Muhammad Ali Pasha and his successors throughout the nineteenth century. However, the bulk of the literature has tended to focus on the food subsidies that were instated after Gamal Abdel Nasser assumed the Egyptian presidency in 1956. This historical overview will consolidate previous research on Egyptian food subsidies in four segments: the pre-Nasserist era (1805-1956), the Nasserist era (1956-1970), the Sadat era (1970-1981) and the Mubarak era (1981-2011).¹² Given the current political climate in Egypt, I have decided to exclude post-2011 studies of the Egyptian food subsidy regime. These publications were better suited to informing the analy-

9. World Bank, “Food Security in Arab countries”, World Bank, 2009.
10. The standard definition of the Arab World comprises the twenty-two countries and territories of the Arab League.
11. Ahmed, A., Bouis, H., Gutner, T., Lofgren, H., “The Egyptian Food Subsidy System: Structure, Performance and Options for Reform”, *Research Report 119*, Washington D.C.: International Food Policy Research Institute (IFPRI), 2001.
12. For more detailed historical reviews of Egypt’s food subsidy refer to: Craig G.M, *The Agriculture of Egypt*, Oxford University Press, 1993, and: Alderman H., Braun J. “Egypt’s Food subsidy policy: Lessons and options”, *Research Report 40*, Washington D.C.: IFPRI, 1986.

sis and study of the Egyptian food subsidy supply chain in subsequent chapters of the book.

When Muhammad Ali Pasha was appointed governor of Egypt in June 1805, he ushered in a development strategy that was based on the agricultural expansion of the area under cultivation and planting cash crops specifically for export. During his rule, Egypt switched from being the breadbasket of the Ottoman Empire to becoming a key exporter of long staple cotton, rice, clover and sugarcane to European markets. The success of this endeavour hinged on the state's monopoly over the country's agricultural resources. Muhammad Ali Pasha consolidated his rule by centralising many of the key state functions and establishing a new bureaucracy to rival the authority of domestic merchants. This meant that the new government would specify the type, amount and area that farmers should use to plant their crops.¹³ In addition, the state established new networks with the peasants and bought the crops directly from farmers, cutting out the intermediaries and middlemen that were once part of the powerful Egyptian merchant class. These initiatives later formed the backbone of the agrarian reforms that were initiated after the July 1952 revolution.

During World War One and World War Two, the Egyptian government was forced to introduce a comprehensive food rationing system in the face of curbed food supplies and a lack of availability of basic food commodities on the international market. Since Egypt's export-oriented economy was already reliant on the import of key staples, the state interfered to ensure access to basic necessities by all income groups at relatively low prices.¹⁴

At the time of the July 1952 revolution and throughout President Gamal Abdel Nasser's rule, subsidies emerged as a prominent feature in the new political order and led to the state's involvement in most aspects of every citizen's life.¹⁵ With food subsidies, the role of the Egyptian state was transformed into that of provider for the masses and administrator in control of food production, import and distribution. Land reforms introduced under Law no.178 regulated and redistributed large Egyptian estates under government tutelage. Shortly afterwards, basic food staples that included bread (*baladi*, *shami* and *fino* varieties), cooking oil, sugar and tea were made available at affordable prices in most urban areas.¹⁶ Over time, food (particularly bread) subsidies became a powerful symbol of the broader social contract between the Egyptian government and the population, as well as a major safety net that poorer Egyptians could rely on for their daily calorific intake.¹⁷

Subsidies were a government's means of promoting social equity and political stability as well as achieving higher levels of social equality in Egyptian society.¹⁸ And as well as being a mechanism for the state to meet the basic needs of economically-dependent citizens – which usually make up the majority of the population – subsidies have also been perceived as a means of ensuring control over them in the aftermath of the revolution.

The total cost of Nasser's food subsidy regime remained within the constraints of the state budget throughout his rule. Nasser's nationalisation and land redistribution projects, coupled with foreign aid receipts from

13. Mongabay. "Egypt- Muhamad Ali Pasha 1805-1848", 1990 (online) [accessed on September 5 2013]. http://www.mongabay.com/history/egypt/egypt-muhammad_ali_1805-48.html
14. Moursi, T.A. "The role and impact of Government intervention in Egyptian Agriculture" in: Craig G.M, *The Agriculture of Egypt*, Oxford University Press, 1993.
15. Harik, I. "Subsidization Policies in Egypt: Neither Economic Growth nor Distribution", *International Journal of Middle Eastern Studies*, vol.24, 1992, pp.481-499.
16. These reforms point to the long historical legacy of urban provisioning that dates back to Ottoman times. Rulers made it a priority to keep urban areas well provided whereas rural areas subsisted by safeguarding a small share of the harvest. For more see: (Pamuk, 2004).
17. In 2008, bread consumption accounted for 42% of the daily calorific intake of Egyptians. See Appendix A.
18. *ibid.*

the Soviet Union, United States and Saudi Arabia allowed him to ensure the continued allocation of food subsidies at modest government-controlled prices.¹⁹ This pattern quickly changed under Anwar al-Sadat's presidency, as price controls became less effective and food subsidies grew significantly in scope and cost.

During the 1970s, the Egyptian food subsidy system was expanded to include additional food items. At one point, there were almost twenty food staples on a list that included red meat, chicken, lentils, beans, frozen fish, rice, cooking oil and yellow maize in addition to those already provided under Nasser's rule.²⁰ In his review of government intervention in Egyptian agriculture, Tarek Moursi attributes the expansion of these subsidies to a response to the increase in grain prices between 1972 and 1974 and the Egyptian government's attempt to maintain food prices at pre-crisis levels.²¹ Subsequently, the cost of food subsidies skyrocketed and reached 52.8-49.4% of total direct subsidy costs.²²

Egypt's external debt gradually increased from \$4 billion to \$40 billion between 1975 and 1993. In 1977, the Egyptian state was unable either to service its debt or continue buying food commodities on the international market.²³ As a result, Sadat's government gradually adopted an open door policy – the *infitah* – following pressure from the World Bank and International Monetary Fund (IMF) to introduce severe economic reforms and eliminate subsidies.²⁴ Later that year, Sadat signed Egypt's first stand-by agreement with the IMF for \$600 million at a time when its total external debt stood at \$5.7 billion – about 42% of the Gross Domestic Product (GDP). Mohamed Hassan Youssef better contextualises this agreement in the lead up to the 1977 bread riots by noting that “some of its [Egypt] debt came from rolling over the short term loans that had been used to finance food imports prior to 1974 when food aid increased...To be able to take out additional loans and fund balance of payment deficits, Egyptian policymakers decided to reduce expenditure by cutting subsidies”²⁵.

Shortly after the agreement was signed, Sadat's government announced that it would be increasing the price of a number of subsidies. *Baladi* bread was not one of the subsidies affected by the reforms, yet on January 18th and 19th 1977, riots erupted in Alexandria and Cairo in protest at the price hike in a number of key Egyptian food staples (e.g. *fino* and *shami* bread, sugar, tea and oil).²⁶ 79 individuals were killed in the uprising that lasted for two days and Sadat's cabinet acted quickly to return food subsidies to their original price.²⁷ Since then, the Egyptian government has sought to phase out different food subsidies more gradually and without much fanfare to avoid a repetition of the 1977 riots.

After Hosni Mubarak assumed the Egyptian presidency in 1981, the new government started to crack down on the inefficient resource allocation of subsidies.²⁸ The first period of reforms between 1986 and 1990 saw the implementation of the Economic Reform and Structural Adjustment Programme (ERSAP), consisting of several measures to reduce Egypt's external debt. Government bureaucrats within the Ministry of Finance, the Ministry of Supply and Internal Trade and the Ministry of Agriculture and Land Reclamation contributed to the partial liberalisation of the prices of ten main crops including meat, chicken, frozen fish and other foods consumed by high income groups. This was followed by the

19. Youssef, M.H. *Role of Food Subsidies on Poverty Alleviation in Egypt*, American University in Cairo, 2008.

20. Gutner T. “The Political Economy of Food Subsidy Reform in Egypt”, *FCND Discussion Paper no. 77*, Washington D.C.: IFPRI, 1999.

21. Moursi, 1993.

22. *ibid.*

23. Youssef, 2008.

24. Omran, S.A. “Economic Transformation and Food security in developing countries: The Case of Egypt”, University of Connecticut, unpublished PhD thesis, 1997.

25. Youssef, 2008, p.11.

26. Youssef, 2008.

27. These were not necessarily bread riots but rather a reaction to the sudden and unfair increase in the prices of some commodities and the abolition of key subsidies by the government. A more suitable term in used in the literature to describe these events is “Equity riots” instead.

28. Croppenstedt, A. “Measuring Technical Efficiency of Wheat Farmers in Egypt”, *ESA Working Paper No.05-06*, Agriculture and Development Economics Division, The Food and Agriculture Organization of the United Nations, 2005.

gradual introduction of unsubsidised *fino* and *shami* bread varieties by the private sector. Furthermore, the Ministry of Supply and Internal Trade gradually removed the number of subsidised items on the ration cards and changed the rationing system to distinguish between different income groups.²⁹ The new green cards allowed full benefits from the subsidy system for Egyptians below the poverty line while the red cards granted partial subsidies for Egyptians around or slightly above the poverty line. It is worth noting that *baladi* bread was the only food subsidy that was not included as part of this ration system. In fact, throughout its history the *baladi* bread subsidy has been untargeted and available to all individuals on Egyptian soil.

Additional reforms to the food subsidy system during the Mubarak era included the reduction in the number of people on the ration card system. These were operationalised by cancelling the names of people who were either abroad or deceased and by stopping the registration of new-borns in the system from 1989 onwards.³⁰

Finally Mubarak's cabinet sought to reduce the subsidy burden on the state by gradually increasing the quality and price of basic food commodities. For instance, the price of a loaf of *baladi* bread increased from 1 to 2 piasters in 1985 and up to 5 piasters in 1989, where it has remained fixed since then.³¹ In 1990, the government reduced the official size of a loaf of subsidised bread from 150 to 130 grams.³²

These reforms, coupled with the partial drop in the international price of wheat in 1986, contributed to reducing Egypt's debt burden and fiscal deficit over the years.³³

During the second period of reforms between 1990 and 1997, the government expanded the ERSAP procedures at the macro-economic level. Farm prices were put on a par with international prices for listed staples like wheat, pulses, rice, cotton and corn. This eliminated the government monopolisation of farm inputs and eased the expansion of the Egyptian agricultural sector to private investors.³⁴ On the one hand, independent companies were allowed to import, export and distribute farm inputs, whereas on the other, farmers were free to decide on the size, type and quantity of crops that they wanted to plant.

Between 1997 and 2010, the Egyptian state successfully managed to keep the cost of food subsidies in check. At no point did they reach the alarming levels witnessed under Sadat, and by 2010 food subsidies had been drastically cut down to about 4% of GDP.³⁵

After the January 25th 2011 uprising, the administration of the food subsidy system did not change. Yet, upon the election of President Mohamed Morsi in June 2012, and before his ousting in June 2013, the appointed Minister of Supply and Internal Trade, Bassem Ouda, sought to leverage Egypt's position as the world's largest importer of wheat and to ease its fiscal burden on the country's external debt balance.³⁶

Under Ouda, the Ministry of Supply and Internal Trade tried to improve the efficiency of the Egyptian food subsidy system by disenfranchising the middlemen and installing better management control measures to monitor the supply chain. These reforms were initially hailed and praised

29. Youssef, 2008.

30. Gutner, 1999.

31. *ibid.*

32. Croppenstedt et al., 2006.

33. Harik, 1992.

34. Croppenstedt et al., 2006.

35. Ghoneim, A.F. "The Political Economy of Food Price Policy in Egypt", United Nations University – World Institute for Development Economics Research. *Working Paper no. 2012/96*, 2012.

36. World Food Programme (WFP), "The status of poverty and food security in Egypt: Analysis and policy recommendations", WFP Egypt, 2013.

by civil society but quickly backfired as key stakeholders within the Egyptian food subsidy system began putting pressure on Ouda's reforms in early 2013.

The above history of the Egyptian food subsidy regime summarises the major developments of this scheme over time. The next section looks to complement this history by reviewing studies of the Egyptian *baladi* bread subsidy throughout that period.

1.2. The Egyptian *baladi* bread subsidy

The purpose of this section is to review the literature that examines the role of *baladi* bread in the Egyptian food subsidy scheme as well as its administration in the supply chain. This is then followed by a closer look at previous studies and publications on reforms to the *baladi* bread supply chain. At the end of this section, Table 1 summarises government intervention in the *baladi* bread subsidy between 1941 and 2014.

In Egypt there are three main varieties of bread that are classified according to their wheat extraction rate (%): *baladi* (82%), *fino* (76%) and *shami* (72%).³⁷ The World Bank estimates that Egyptians, on average, consume between 180 kg and 210 kg of bread annually, or about 2.44 loaves per day, mostly of the subsidised *baladi* bread variety.³⁸

Baladi bread is a symbol of the government's commitment to a cheap food policy and any attempts to increase its price have usually led to riots. Ever since the Nasserist era reforms in the 1950s, cheap bread has become an inalienable human right for Egyptians. In 2014, wheat continued to be a principal constituent of bread and still provided the bulk of the calorific intake for Egyptians living below the poverty line.

A typical loaf of *baladi* bread retails for 5 piasters (<\$0.01) and consists of milled wheat flour, bran, water, salt and yeast. The ingredients are mixed together and the dough is left to leaven for two hours before being baked at a high temperature in the oven.

A) Salience of *baladi* bread in the Egyptian food subsidy system

Baladi bread is a case in point for the Egyptian food subsidy system. Previous studies on food subsidies in Egypt have often looked at *baladi* bread and its key component, wheat.³⁹ In addition, the civil discourse has continuously included bread as part of the broader social contract between the state and the Egyptian population.⁴⁰ In a 2013 report, the World Food Programme estimated that the *baladi* bread subsidy benefits around 56 million Egyptians and consumes 8.9 million metric tons (MMT) of wheat per year.⁴¹

It is worth noting that the bulk of the literature focuses on subsidised wheat rather than bread. That is because the state usually purchases and disburses wheat to produce the end product, *baladi* bread, which is then passed on to the consumer. Hence, I have restricted the review to studies that examine subsidised wheat that is used for *baladi* bread production only.⁴²

37. Extraction rate is the amount of flour produced from one pound of grain. Higher extraction rate refers to greater inclusion of bran, endosperm and germ, contributing to a rougher texture.

38. Thomson argues that the growth in the consumption of wheat and wheat flour products since the 1960s is too large to be explained simply in terms of population growth. Instead, Alderman *et al.* 1986 estimate that this increase is also due income growth and the low cost of bread which has remained stable in nominal terms and has thus fallen substantially in real terms. Cf. Thomson, A.M. *Egypt: Food security and food aid*. Butterworth & Co, 1983.

39. See: Gutner, 1999; Kherallah, *et al.* 2000; and Ghoneim, 2012.

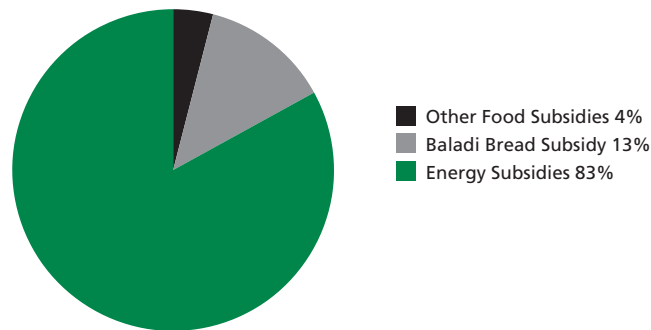
40. Youssef, 2008.

41. Thomson, 1983.

42. The *baladi* bread subsidy is complex and intertwined with other commodities. Some of the wheat purchased by the state is used for the production of macaroni, pasta and pastries.

The administration of the Egyptian *baladi* bread subsidy has already received considerable attention in the literature and in current affairs due to its high cost in the state budget and its capacity to stir political unrest.⁴³ In 2013, wheat destined for the production of *baladi* bread absorbed 86.6% of the Egyptian food subsidy budget, costing the state an estimated \$3.1 billion to administer.⁴⁴ This accounted for 1.2% of Egypt's GDP in 2012, and 13% of the total subsidy cost (see Figure 1).⁴⁵ Further, wheat retains a certain political importance at senior state level, as it significantly adds to the country's import bill and external debt balance, costing an estimated \$1.5-\$1.8 billion annually.⁴⁶ Although imported wheat accounted for 5% of domestic wheat consumption during the Nasser years, in 2010, 40% of Egypt's wheat consumption came from abroad. More alarmingly, 90% of wheat used for *baladi* bread production was imported.⁴⁷

Figure 1. Distribution of subsidy costs in 2013



Source: Agence Française de Développement.

B) Administration of the *baladi* bread supply chain

During the first half of the nineteenth century, Muhammad Ali Pasha's state-building endeavours saw the implementation of a compulsory wheat procurement programme from local farmers to provide food for the new Egyptian military.⁴⁸ Ever since, state intervention has played a key role in the administration of key staples to the population.

In 1941, in the wake of poor harvest yields and high wheat prices on the international market, the state imposed stricter price controls on wheat and passed a decree mandating that wheat be planted on 50% of all agricultural land holdings.⁴⁹ After the July 1952 revolution, Nasser's cabinet further nationalised the wheat supply chain by bringing in wheat and flour to produce *baladi* bread through government controlled channels.

These reforms led to the proliferation of a complex bureaucratic structure spanning several ministries and government agencies that sought to ensure the administration of the *baladi* bread subsidy at a fixed price. By 1961, the Egyptian state was the sole administrator of the *baladi* bread subsidy and in 1994 the new open-door, *infatih*, policies removed some of the constraints on the private sector in the import, export and distribution of farm inputs for *baladi* bread wheat production to compete with the state's own agencies.⁵⁰

43. Croppenstedt et al., 2006.

44. Alderman et al., 1986.

45. Kherallah, M., Lofgren, H., Gruhn, P., Reeder, M.M., "Wheat Policy Reform in Egypt: Adjustment of local markets and options for future reforms", *Research Report 115*, IFPRI, 2000.

46. See: Hamza et al., 2013.

47. *Ibid.*

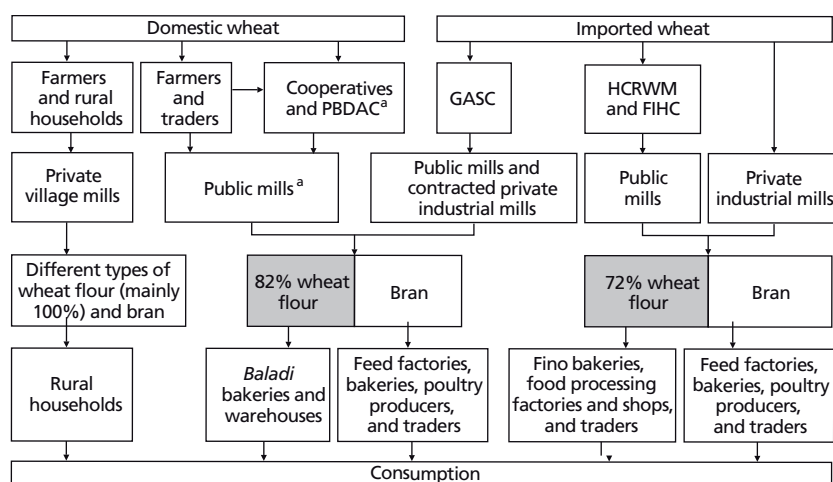
48. Scobie, G.M. "Government Policy and Food imports: The Case of Wheat in Egypt", *Research Report 29*, IFPRI, Washington D.C., 1981.

49. Kherallah et al. 2000.

50. For example, in 1992, the government freed up the price of *fino* bread and allowed the private sector to import wheat for the production of *fino* flour.

Figure 2 below further outlines the administration of the Egyptian *baladi* bread subsidy scheme from harvest to sale, following a study by the International Food Policy Research Institute in 2001. International and domestic wheat is procured by affiliates of the Ministry of Supply and Internal Trade – the GASC and PBDAC. It is then sent off to public mills and distributed to *baladi* bakers and warehouses that sell it to the consumer at the fixed price of 5 piasters.

Figure 2. Structure of the wheat industry in Egypt



Notes: PBDAC = Principal Bank for Development and Agricultural Credit; GASC = General Authority for Supply Commodities; HCRWM = Holding Company for Rice and Wheat Mills; and FIHC = Food Industries Holding Company.

^aPBDAC and the public mills collect the wheat from farmers and traders on behalf of GASC, which allocates fund to each of these institutions to pay the procurement price to farmers and traders.

Source: International Food Policy Research Institute, 2000.

However, the Egyptian *baladi* bread subsidy programme is not as transparent as Figure 2 makes it out to be. There are fundamental issues underlying the administration of the wheat subsidy that result in market distortions in the form of targeting, leakage and wastage, and corruption throughout the supply chain. These have figured prominently in the *baladi* bread subsidy literature and each category is reviewed in more detail below.

-Targeting

The first issue of concern in studies of the Egyptian *baladi* bread subsidy scheme is its targeting. Given that *baladi* bread is an unregulated food subsidy, any individual on Egyptian soil can purchase as many loaves as they please. Andre Croppenstedt, an economist at the Food and Agriculture Organization, estimates that *baladi* bread benefits 75% of the non-poor in Egypt and 66% of the poor.⁵¹ Due to the location of bakeries and the political economy of bakery licensing, Egyptians in rural areas who constitute 58% of the total population only receive 30% of the total food subsidies.⁵² As a result, income transfers from food subsidies accrue to the urban poor instead.⁵³ On average, Croppenstedt's studies confirm that poorer Egyptians benefit slightly less than richer Egyptians from the *baladi* bread system.⁵⁴

51. Croppenstedt et al., 2006.

52. Korayem's study shows that Upper Egypt, which contains 61% of the total poor population, only has 30% of the *baladi* bread bakeries and receives 36% of wheat flour. On the other hand, urban governorates whose poor residents represent only 5% of the total poor have 22% of *baladi* bread bakeries and 21% of wheat flour. Lower Egypt, where 30% of the total poor live, has 40% of *baladi* bakeries and 35% of wheat flour. See: Korayem, K. 2013.

53. *ibid.*

54. Croppenstedt et al., 2006.

This process subsequently leads to some distributional inefficiencies in the system and undermines the benefits of the wheat subsidy regime. Yet despite these distortions, previous studies have confirmed that the Egyptian wheat subsidy for *baladi* bread is self-targeted to the poor in the sense that it subsidises food which has the characteristic of inferior goods.⁵⁵

-Leakage and wastage

Another issue of concern is leakage and wastage in the wheat supply chain. Estimates vary significantly with each study and can range from 16% to 31% for leakage of *baladi* bread flour and 12% to 21% for wheat and flour wastage rates.⁵⁶

Although the state has recently tried to crack down on leakages in the *baladi* bread supply chain, firstly in 2004/05 following supply shortages, and then again in 2008/09, to reduce the impact of the 2007 food crisis on domestic wheat prices, leakages in the supply chain have largely persisted over time.⁵⁷

There are several factors that can help explain this level of leakage and wastage in the system. For instance, Egypt is only capable of maintaining 2-3 months' worth of wheat supply stocks but a large part of that wheat is put in open-air storage facilities called *shonas*, where heat, poor maintenance and rodents degrade the quality of the wheat.⁵⁸ Then, Egypt's wheat infrastructure is poorly maintained and there are few accountability and control measures in place to ensure transparency in the disbursement of the *baladi* bread subsidy at a micro-level. Finally, the on-going fiscal policy by the government to provide *baladi* bread at 5 piasters since 1989 has further increased the gap between subsidised and unsubsidised bread prices (25-75 piasters per loaf).⁵⁹

These measures create a large incentive for the recipients and administrators of the *baladi* bread subsidy to divert part of their allocated flour quotas for *baladi* bread production to more lucrative black or open markets. The incentive to generate high profits from black market trading is high given the stark difference between subsidised and unsubsidised flour. Estimates suggest that *baladi* bread flour that is marketed by the state to *baladi* bread bakers at a subsidised cost of \$26.50 per metric ton can fetch between \$160-294 per metric ton on the black market.⁶⁰

Despite government decrees between 1993 and 1997 aimed at segregating between subsidised and free market bread producers, the black market for wheat and wheat flour has proliferated because of high price differentials between the two markets and the strong incentive for bakers to exploit that as a result of poor state regulation.⁶¹ The national average leakage and wastage for *baladi* bread and flour has changed little over the years.⁶²

- Corruption

Corruption in the *baladi* bread subsidy is closely intertwined with leakages in the supply chain as the price differential between subsidised and unsubsidised markets directly contributes to distorting the political economy of the system.

55. Youssef, 2008.

56. Croppenstedt et al., 2006

57. Al-Shawarby et al., 2010.

58. World Food Programme and TNT, 2010.

59. Kherallah et al., 2000.

60. See Hamza et al., 2013.

61. See: Ghoneim, 2012 Al-Shawarby et al., 2010 and WFP, 2013.

62. Kherallah et al., 2000.

The MSIT gradually increased the price of *baladi* bread from 0.5 to 5 piasters between 1952 and 1989. Also, it introduced a semi-subsidised variety of *baladi* bread at 25 piasters in 1993 to better improve the targeting of the subsidy. In addition, it reduced the weight of a loaf of *baladi* bread from 150 to 125 grams over time and phased out two varieties (*fino* and *shami*) of subsidised bread during the 1990s open-door, *infitah*, policy reforms.⁶³ And yet, despite these reforms, the black and open market prices for subsidised *baladi* bread have created a strong incentive for illegal arbitrage in the wheat supply chain – estimates vary between 10 and 30 times the government-mandated price.⁶⁴ Previous attempts by Egyptian ministries and international organisations to subvert the black market and address distortions in the *baladi* bread supply chain have ended in failure.

Findings in the literature have documented instances where government officials and bakery inspectors would collude with bakers and millers to sell *baladi* bread flour on the black market.

In 2013, two academics, Ahmed Ghoneim and James McCorriston, postulated that domestic price changes in the supply chain are not solely affected by changes in the international price of wheat.⁶⁵ Rather, they suggested that there is a highly concentrated market of well-connected political actors in the *baladi* bread supply chain that inhibits competitive behaviour.

The potential income that state bureaucrats could derive from these activities acted as a strong incentive to supplement their poor government salaries as low-ranking civil servants.⁶⁶ Furthermore, fuel shortages and increases in the international price of wheat since 1992 have exacerbated these distortions as bakers and millers were more tempted to sell part of their *baladi* bread flour quotas in more lucrative, unsubsidised markets.⁶⁷ The roles, functions and incentives of these actors are examined in more detail throughout the rest of the book.

The next section examines some of the state's attempts to address the above issues by implementing reforms across the *baladi* bread supply chain.

C) Attempts at policy reform

In the Egyptian media and policy circles, food subsidy reforms have tended to attract more attention than their energy counterparts. Although the cost of food subsidies is reportedly a quarter of that of energy subsidies, the former is disclosed in the Ministry of Finance's annual budgets and accounts for a major part of Egypt's import bill, while the figure for energy imports is undisclosed.⁶⁸ Food subsidy costs are therefore more open to scrutiny and changes to the system are more easily perceived, particularly in the case of the *baladi* bread subsidy, which constitutes an essential part of the Egyptian diet and accounts for more than 80% of the food subsidy budget.

The bulk of the literature on Egyptian food subsidies has centred on addressing policy reforms that encompass the economy, institutions and logistics in the system. Each category is examined separately below.

- 63. Ali, M. S., Adams, R.H. "The Egyptian Food subsidy system: Operation and Effects on income distribution". *World Development*, vol. 24, no.11, 1996, pp.1777-1791.
- 64. See: Ghoneim, 2012 and Sachs, 2012.
- 65. *ibid.*
- 66. Sachs, 2012.
- 67. Al-Shawarby et al., 2010; WFP et al., 2010
- 68. Youssef, 2008.

Economic reforms can be divided into two main phases. The first spans the implementation of the food subsidy system under Gamal Abdel Nasser and its growth to unsustainable levels with President Anwar al-Sadat until the 1980s (~18% of GDP). The impact of these reforms was examined in the previous section and culminated in the bread riots in 1977 and the restoration of food subsidy prices to their pre-riot levels. During that period, the *baladi* bread subsidy played a less prominent role in the reform process. The cost of an individual loaf of *baladi* bread remained the same and few drastic changes were made to the system (see Table 1 at the end of this chapter).

The second phase of economic reforms begins with Mubarak's rule in 1981 and the Economic Reform and Structural Adjustment Programme (ERSAP) reforms that gradually contracted the cost of bread subsidies to their current levels (~1.2% of GDP in 2012).⁶⁹

The agricultural reform programme initiated by Mubarak's cabinet in 1987 reduced price quotas and liberalised market controls for a number of food subsidies including red meat, chicken, frozen fish, and *shami* and *fino* varieties of bread. This was then followed by additional reforms in 1991 to shift Egypt's state-controlled economy to a free market one in which the private sector would play a major role.⁷⁰ As a result of the application of ERSAP, food subsidies as a percentage of total public spending decreased dramatically from 18.4% in 1984 to 6.5% in 1996 and domestic production, particularly in the case of wheat, drastically increased with the abolition of the compulsory delivery programme.⁷¹ These reforms were gradually implemented without a repetition of the 1977 bread riots.

In the early 2000s, the cost of Egyptian food subsidies started to rise again as a result of the depreciation of the Egyptian pound and population growth.⁷² The state sought to address this by imposing stricter regulation on the *baladi* bread subsidy. It reduced the mandated size for a loaf of *baladi* bread from 150 to 130 grams and began implementing a wheat-maize mixing programme for subsidised flour.⁷³

Institutional reforms, on the other hand, took place at various intervals. In the 1960s, the Ministry of Agriculture and Land Reclamation established cooperatives to control the production and marketing of crops.⁷⁴ The cooperatives linked farmers to local government representatives more easily and facilitated the application and monitoring of government development policies.⁷⁵ Subsequently, farmers would deliver their quota of the harvest to pooling centres at a fixed price and the state would retain its monopoly over the marketed food channels.⁷⁶ In 1991, following economic reforms, all public organisations in the *baladi* bread subsidy system were transformed into holding companies. Under the new format, the state would retain the majority of the shares in the company (>51%) and the remaining shares would be marketed to private sector companies and floated on the Cairo stock exchange.⁷⁷

Then, in 2005, the Ministry of Social Solidarity was established by a presidential decree to further assist the Ministry of Supply and Internal Trade with the administration of state subsidies. Its stated mission was to supervise the food subsidy programme, including the *baladi* bread

69. Gutner, 1999.

70. For a detailed description of these reforms see: Gutner, 1999; Ghoneim, 2012; World Food Programme, 2013.

71. The rise in production followed reforms that no longer mandated for wheat farmers to sell a quota of their crop to the government. Rather, since 1987 the Egyptian farmers have been free to either stockpile or sell their wheat to any buyer. See: Youssef, 2008 and Gutner, 1999.

72. Al-Shawarby, S. and El-Laithy, H., 2010.

73. The wheat-maize mixing programme began as a pilot project in 1996 to reduce the cost of the flour subsidy to the state and save on foreign exchange. Maize is usually cheaper to grow and produces higher yields. For more information about the programme see: Poulin et al., 2002.

74. Kherallah et al., 2002.

75. See Moursi et al., 1993.

76. The Egyptian Government set a lower limit of 500 members to register a cooperative.

77. Kherallah et al., 2002, p.105.

subsidy and the ration card systems, as well as the distribution of liquefied gas. Institutional reforms did less to tackle issues in the *baladi* bread supply chain. Rather, many of them were enacted to accommodate for the growing complexity and cost of the *baladi* bread subsidy system.

Finally, logistical reforms took place in tandem with state intervention in the agricultural sector. Wastage and leakage remain a large part of the issues underlying the Egyptian food subsidy system. The World Bank and the World Food Programme estimate that about 30% of the *baladi* bread subsidy is diverted from its intended purposes whereas a small portion of other food subsidies on the ration cards system are sold off on the black market.⁷⁸

Throughout the ERSAP reform period, the state collaborated with the private sector to further improve the infrastructure and use of modern inputs and intensive agriculture in the Egyptian food subsidy scheme.⁷⁹

For instance, in the aftermath of the 2007-08 food crisis, the state adopted a new system of separating production and distribution of *baladi* bread to overcome leakages in the food supply chain. In Cairo, it established the *Al Masreeien* Company to distribute *baladi* bread in poorer neighbourhoods, while it supported local NGOs to do the same in other governorates.⁸⁰ Additional logistical reforms saw the mobilisation of private mills to cater for higher demands for *baladi* bread flour and the improvement of the state's storage capacities for imported wheat with steel silos.

The Egyptian food subsidy regime has been a popular topic with reform agents, policymakers and international organisations in Egypt. The political economy of the system as well as the different layers of complexity underlying its history and operations suggests that a wide number of actors stand to benefit from the system. The objective of this section was to consider the literature on the Egyptian food subsidy scheme and to accord particular attention to previous studies on the *baladi* bread subsidy. Table 1 below summarises the literature review through a timeline documenting the evolution of government intervention between 1941 and 2014.

The next chapter starts by identifying the role of the main actors in the supply chain and then examines some of the less conventional actors in the *baladi* bread system.

78. Al-Shawarby et al., 2010

79. Goletti, F. "Agricultural Market Reforms in Egypt: Initial Adjustments in Local Input Markets", *MSSD Discussion Paper No. 3*, Washington D.C.: IFPRI, 1994.

80. Alderman et al., 1986.

Table 1. Evolution of government intervention in the *baladi* bread subsidy (1941 – 2014)

Approximate year	Main government policy changes in the <i>baladi</i> bread subsidy
1941	50% of all agricultural land holdings are allocated to wheat production. Consumer prices of all types of bread and flour are subsidised.
1955	Allocation of wheat production area is reduced to 33% of all agricultural land holdings. Delivery of wheat quota to the state is made compulsory at fixed prices.
1970	Allocation of wheat area is reduced to 27.5% of all agricultural land holdings. Government begins to control marketing, distribution and imports
1976	Compulsory delivery is replaced by an optimal delivery programme.
1985	Compulsory delivery is reinstated.
1987	Mandatory area allocations and delivery quotas are abolished. Optional delivery at guaranteed floor prices is introduced.
1992	The private sector is allowed to import, produce and trade unsubsidised flour varieties. Fino flour with 72% extraction rate is eliminated from the state subsidy programme.
1993	Mills are not allowed to produce more than one type of flour.
1996	Private and public mills that produce unsubsidised flour are required to use imported wheat. Production of shami flour with 76% extraction rate is eliminated from the state subsidy programme.
1998	Introduction of 80:20 wheat maize mix in subsidised flour to reduce leakage and wastage.
1999	Closure of most public holding companies and the transfer of all their affiliates to the Food Industry Holding Company which became the sole administrator of public sector mills for baladi bread flour.
2008	International food price crisis, the price of international wheat increases by 130%. GASC's wheat import bill nearly doubles for that year. The military intervenes to cover bread shortages.
2011	Study by the World Food Programme and TNT identifies that 30% of resources in the baladi bread supply chain are wasted.
2012	Newly-elected President Morsi proclaims that Egypt will be self-sufficient for its own food needs by 2020.
2013	Bread and fuel shortages fuel riots across Egypt, President Morsi is removed from power by the Army in July. The new Minister of Supply and Internal Trade in the interim government restores the depleted storage of imported wheat.
2014 (Feb)	Media articles report the success of a smart-card pilot system to better allocate baladi bread quotas in Port Said.
2014 (Apr)	A former secretary to deposed President Hosni Mubarak and a member of parliament are convicted of forging fake documents and smuggling close to \$1 million worth of wheat imported by the GASC to a private company.