



Half-baked, the other side of Egypt's *baladi* bread subsidy

A study of the market intermediaries and middlemen in the system

Oday Kamal, University of Oxford

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This book is based on a thesis submitted for a Master of Philosophy in Modern Middle Eastern Studies at the University of Oxford in 2014

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CIDOB edicions
Elisabets, 12
08001 Barcelona
Tel.: 933 026 495
www.cidob.org
cidob@cidob.org

D.L.: B-20772-2015

Barcelona, September 2015

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Glossary

Baladi bread	Subsidised bread made from 82% extraction flour (Extraction rate: The amount of flour produced from one pound of grain. Higher extraction rate refers to the greater inclusion of bran, endosperm and germ, contributing to a rougher texture).
Baladi flour	Coarse flour made by extracting 82% of wheat grain.
MSIT	Egyptian Ministry of Supply and Internal Trade.
GASC	General Authority for Supply Commodities.
PBDAC	Principal Bank for Development and Agricultural Credit.
FIHC	Food Industries Holding Company.
GCSS	General Company for Silos and Storage.
EHCSS	Egyptian Holding Company for Silos and Storage.
MT	Metric tons, the standard unit used to measure wheat volumes.

Currency Equivalents

Exchange Rate as of April 30, 2014

1 Egyptian Pound (EGP)	=	U.S. \$ 0.1428
U.S. \$ 1	=	7.00 EGP

INTRODUCTION

INTRODUCTION

Hussein: For 20 years I have been here studying this and now I know that every town had its own wheatery, a kind of silo bulk like a giant clay jar buried in the desert...

Basyuni: You mean if we dig there, the wheat will come up?

Ali Salem, *The Well of Wheat*.

On February 28th 2013, Bassem Ouda, the young engineer who had recently been appointed Minister of Supply and Internal Trade in Egypt announced that supplies of subsidised *baladi* bread would now be rationed according to a smart-card system. The cheap loaves that had retailed for 5 piasters (<\$0.01) since 1989 are a staple in the Egyptian diet and there are no controls in place restricting the amount of *baladi* bread that any individual can buy.

Egyptians are the largest consumers of bread in the world with an annual rate of 180-210 kg per person, well above the global average of 70-80 kg. The symbolism of bread is pertinent on the streets of most districts in Cairo, particularly in the morning as crowds gather outside bakeries to procure their main calorie source for the day.¹ *Baladi* bread is termed *A'ish*, or life, in the colloquial Egyptian Arabic language, testimony to its centrality as an indispensable staple for a large part of the population.

In a 2012 census, the World Bank estimated that from a total of about 80.72 million Egyptians, 13% were unemployed and 25.2% of the population lived below the national poverty line.² Throughout its modern history, the Egyptian state has taken an active role in providing essential goods at subsidised prices for the urban and rural poor, of which bread is a key constituent. The provision of *baladi* bread itself can be traced back to agricultural reforms instated by President Gamal Abdel Nasser in 1956.³

However, the Muslim Brotherhood's turn to so-called "flour power" in an attempt to curb government spending on food subsidies and reduce wastage quickly degenerated into protests and widespread bread shortages across the country.⁴ Attiya Hamed, the spokesperson for the Bakery Owners' Division at the Federation of Egyptian Chambers of Commerce responded to Ouda's policies by threatening a nationwide bakers' strike if the government did not back down.

Although these changes have been framed as an attempt to address Egypt's faltering economy and foreign reserves since the January 25th

1. See Appendix A.3 for a recent breakdown of household food consumption in Egypt.
2. For the most recent update, see the World Bank's Development Indicators, <http://data.worldbank.org/country/egypt-arab-republic>. Last accessed on April 26, 2014.
3. Bread and other food staples were subsidised by Nasser's new regime after overthrowing the Egyptian monarchy in July 1952. The new state leaned heavily on subsidies to maintain social order and promote a socialist economic model. Yet the provision of basic food staples has long been a part of Egypt's history in keeping urban areas well-provisioned and preventing unrest. Sevet Pamuk provides more details on this in the Ottoman Empire. See: Pamuk, 2004, p.235.
4. See for example Perry, T., "The Egypt's Muslim Brotherhood turns to flour power", *Reuters*, June 14, 2013.

2011 uprising, they are in fact steeped in a history of negotiations between the Egyptian state and supply chain actors in charge of administering the *baladi* bread subsidy.

Some of the political constraints on subsidy reform are largely perceived to relate to the end consumer, yet the above example seems to suggest otherwise. Given the nature of the subsidy debate, previous studies have tended to look at the aggregate and undifferentiated nature of the *baladi* bread supply chain. Little attention has been paid to the role of powerful intermediaries in obstructing or facilitating reform in the system.

The objective of this book is to conduct a study of the intermediaries in the Egyptian *baladi* bread subsidy system and to subsequently identify their vested interests in the supply chain. In so doing, the analysis will look at how the *baladi* bread system has changed over time and how these changes reflect the interests of specific actors in the system.

The Egyptian state (henceforth, the state) is valued for its ability to continuously deliver *baladi* bread to its citizens at an affordable price. However, it would seem that the genesis of current attempts at reform dates back to *infitah*, or open-door, policies, initiated by President Anwar al-Sadat in 1974 and carried on by his successor, President Hosni Mubarak, from 1981 onwards. The shift from a state-administered economy to one where the private sector assumed a more active role had a profound impact on various industries, chiefly those that had been relegated to the realms of the state. In fact, the initiation of reforms to Egypt's various state subsidy programmes and the stiff resistance that it encountered – particularly in the case of *baladi* bread – suggests a deeper, underlying political economy associated with the administration of food subsidies, one that surpasses the conventional narrative of keeping urban areas well provisioned. Rather, it seems that there are powerful actors within this subsidy regime that are able to create political ripples, ensure stability and control the smooth functioning of the supply chain.

These factors suggest that by unpacking one of Egypt's most contentious subsidies, the *baladi* bread system, one can better understand the roles and incentives of actors within the supply chain. Research findings would then shed broader light on how the Egyptian political economy unfolds in the specific domain of food subsidies. Indeed, the functioning of the *baladi* bread supply chain is a microcosm of all that is wrong with the Egyptian political economy: its centralised state structure, the prevalence of economic control, the fragmented nature of bureaucracy, the bloated public sector and a rentier structure that is both perverse and persistent. A deeper study of the *baladi* bread subsidy, therefore, provides a useful prism for understanding the wider political economy forces at play.

Research throughout the remainder of this study constitutes a concerted effort to collate studies in the academic literature and combines these with insights from fieldwork to map out the supply chain. The discussion will then culminate in a supply chain model that better encompasses the roles and incentives of intermediaries in the *baladi* bread supply chain as part of the broader political economy literature.

The overarching framework of the study sits within the debate on state-provisioned food security. That is, the notion that the government is able to provide “physical, economic and social access to sufficient, safe and nutritious food to meet the dietary needs and food preferences of its population for an active and healthy life”.⁵ The issue of food security is then intimately tied up with discussions of political security and political stability.

This book constitutes one of the first concerted efforts to analyse in greater detail the role and functions of intermediaries in the *baladi* bread supply chain.

Previous studies in the extant literature on the Egyptian *baladi* bread subsidy have largely focused on instances of leakage and wastage in the supply chain from a technical standpoint. Some of the issues that researchers have already considered in the existing literature include: mapping of the wheat value chain in the Middle East and North Africa region, an assessment of the wheat policy and wheat production in Egypt, and the pricing policy of food subsidies.⁶ In addition, policy recommendations have examined how the *baladi* bread supply chain can be improved to address population growth and nutrition deficiency amongst poorer Egyptians.⁷

However, many of these narratives have overlooked the intricacies of the *baladi* bread subsidy. In fact, when this system is studied as an aggregate monolith, it fails to capture the dynamics and differentiated realities that undergird its operations. In reality, the actor’s incentives and activities at each stage of the supply chain are sometimes intertwined and overlapping.

By engaging with the institutional details that focus on the intermediaries and middlemen in the *baladi* bread system, the research in this book seeks to complement the conventional quantitative, macro-level narrative that has guided the extant literature so far.

The analysis subsequently touches on elements of political economy that explain the actors’ trade-offs between reform and stagnation in the system.

Findings

The empirical findings were based on the collection of publicly available documentation and archival data on the Egyptian food subsidy system as well as 36 interviews with a number of actors and stakeholders in the *baladi* bread supply chain. The fieldwork was conducted over a period of twelve weeks and covered all stages of the supply chain from the harvest of the wheat to the sale of *baladi* bread. In addition, I have consulted a series of original documents in Arabic as well as newspaper clippings to supplement the analysis on intermediaries in the system. Though it is worth noting that a qualitative research approach can restrict the scope and generalisability of the findings beyond this book.

The analysis of the *baladi* bread subsidy revealed that intermediaries tend to play a more prominent role at different stages of the supply chain.

5. Official definition of Food Security given by the Food and Agriculture Organization in the Declaration on Food Security and World Food Summit Plan of Action in Rome, November 1996.

6. See, respectively: Ahmed et al., 2013; Kherallah et al., 2002; Scobie, 1981; Ghoneim, 2012; Croppenstedt, 2007; Rohac, 2013; and Hannusch, 2008.

7. See: Omran, 1997; World Food Programme, 2010; and Poulin et al., 2013.

Depending on their power, some intermediaries are capable of diverting or obstructing the distribution of state resources by exerting their power on other actors. Notably, some intermediaries such as bakers, millers, private traders, inspectors and mayors would deliberately maintain specific arrangements in place to divert resources from the system.

These actions typify rent-seeking behaviour in political economy, where a small group of actors exerts its power to secure economic advantages.

In addition, unpacking the *baladi* bread system reveals that the lines between one stage of the supply chain and another are not as clear-cut as previous research findings would suggest. By narrowing down to the micro-level details, this study begins to disentangle the functions of various actors within the supply chain. As a result, the fragmented nature of the system uncovers many of the black boxes where the heterogeneous interests of actors were largely ignored. This is most notably observed with the state apparatus: ministers, politicians and government agents were more likely to exhibit diverse, sometimes opposing interests in the administration of the *baladi* bread system. In return, this had a different impact on the administration and reform of the supply chain.

Contribution

This book makes four contributions to the political economy literature on the public provision of subsidies. Firstly, it demonstrates a more differentiated and nuanced understanding of the supply chain that results in a clear identification of actors and their incentives at each stage in the system. Secondly, it provides one of the first systematic case studies of the structure of rents⁸ by unlocking distortions in relation to leakage, wastage and poor regulation in the *baladi* bread supply chain. Thirdly, it uncovers how the power of a small group of intermediaries allows for these distortions to persist by maintaining the status quo and resisting large-scale reform of the system. Finally, after gaining a clear sense of the distortions in the *baladi* bread subsidy scheme, it emerges that the system is distorting a whole range of associated products by relying on artificially low prices. The price of one commodity leads to negative spillovers in the Egyptian economy. All of this is inherent in the fact that resources that were initially meant to subsidise the final product, *baladi* bread ended up subsidising the entire supply chain and distorting the local market in the process.

Ultimately, these contributions also highlight the need for finer details and disaggregate work on the public provision of subsidies.

Structure

The remainder of this book is structured as follows: Chapter 1 reviews the extant literature on Egyptian food subsidies and recent policy work on the *baladi* bread supply chain. Chapter 2 describes the research process and methods that were used to collect and analyse the empirical data. Chapter 3 provides a detailed description of the role of conventional and unconventional actors in the *baladi* bread system. Chapter 4 then makes use of testimonies and new insights from fieldwork data to better establish

8. In standard economic theory, "rent" is defined as the receipt of payment from unearned income streams.

the role of these actors at each stage of the supply chain. Chapter 5 draws on the micro-details from this study to make sense of how distortions occur at each stage of the *baladi* bread supply chain by focusing on instances of leakage, wastage and poor regulation. Chapter 6 situates the findings of the study within the broader political economy literature on rent-seeking and discusses its implication on the political economy of Egypt. Finally, the conclusion outlines the book's theoretical and empirical limitations and highlights possible avenues for future research.

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.

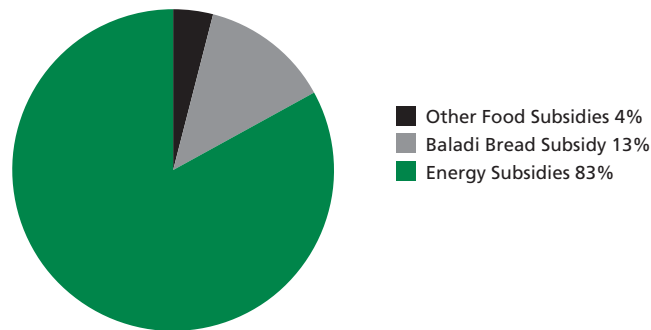
40. Youssef, 2008.

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, *infitah*, 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.*

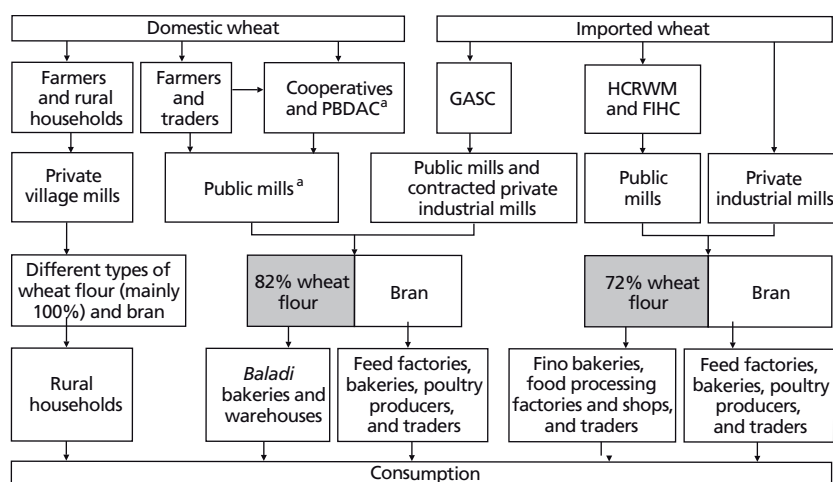
48. Scobie, G.M. "Government Policy and Food imports: The Case of Wheat in Egypt", *Research Report 29*, IFPRI, Washington D.C., 1981.

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.

CHAPTER 2: RESEARCH METHODS

“The distinctive need for case studies arises out of the desire to understand complex social phenomena.”

Yin, *Case study Research: Design and Methods*, p.2.

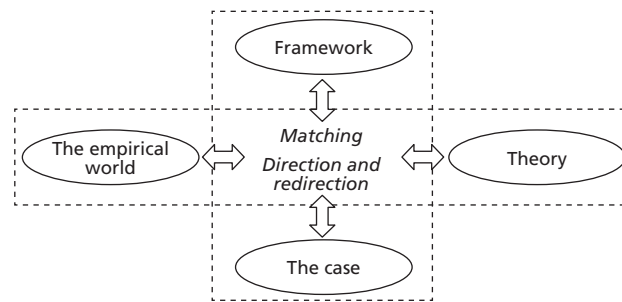
Yin suggests that a case study approach is an appropriate research methodology to use when the research objective asks ‘how’ and ‘why’ questions.⁸¹ ‘How’ and ‘why’ questions often relate to the study of phenomena that are “messy”, emergent, non-sequential and politically sensitive, which are best considered within their natural setting. As a result, case research provides a better explanation of the historical and complex links that govern state welfare systems, notably, in this particular case, Egyptian food subsidies.

A mixed methods approach was deemed most suitable for addressing the research objective of the book. Mixed methods research explicitly attempts to examine the social within the economic in order to demonstrate a more mutual exchange of ideas between sociology and economics.⁸² Modell defines mixed methods research “in terms of its propensity to enable research to combine breadth and depth in empirical enquiries to enhance the validity of research findings through triangulation and to facilitate the mobilisation of multiple theories”.⁸³ The collection, thorough reading and preliminary analysis of relevant documentary material thus formed a key part of the information used. This was further supplemented with the data from semi-structured interviews in the field according to the interview guidelines set up in Lawrence Neuman’s *Social Research Methods*.

An abductive research approach seemed most suitable given the nature of the research objective. Unlike inductive and deductive reasoning, abductive research can explain, develop or change the theoretical framework before, during or after the research process.⁸⁴ In fact, abductive research moves back and forth between inductive and open-ended research settings to more hypothetical and deductive attempts to verify hypotheses. Accordingly, abductive reasoning consists of a pragmatic approach to advancing the social sciences through a process of “systematic combining” in academic research as depicted in Dubois and Gadde’s model below.^{85/86}

81. Yin, R. K. *Case Study Research*, 3rd edn. London, England: Sage Publications, 2003.
82. *ibid.* p.124.
83. Modell, S. “Bridging the paradigm divide in management accounting research: The role of mixed methods approaches”, *Management Accounting Research*, vol. 21(10), 2010, pp.124-29.
84. Dubois, A., Gadde, L.E. “Systematic combining: an abductive approach to case research”, *Journal of Business Research*, vol.55, 2002, pp.553-60. Dubois A. Gadde L.E. 2002.
85. Friedrichs, J., Kratochwil, F. “On Acting and Knowing: How Pragmatism can Advance International Relations Research and Methodology”, *International Organization*, vol.63, 2009, pp.701-31.
86. Dubois and Gadde perceived an abductive research as a possibility to capture and take advantage not only of the systemic character of the empirical world, but also of the systemic character of theoretical models.

Figure 3. Abductive reasoning



Source: Dubois and Gadde, 2002.

Publicly available documentation and secondary sources

The main types of primary documentation include reports in the extant literature on the *baladi* bread subsidy in Egypt, newspaper clippings in Arabic and English, policy recommendations made by the World Bank, International Monetary Fund and USAID, as well as external evaluation reports by the World Food Programme, Food and Agriculture Organization of the United Nations and the International Food Policy Research Institute.

Throughout the literature review in chapter 1, I made use of the above sources including previous academic studies on Egypt's food subsidy system. In addition, I have examined unpublished Ph.D. dissertations in the field to fill in any of the remaining gaps in the extant literature. Annual reports and publications by various government ministries helped evaluate how different actors in the *baladi* bread supply chain perceive their interests and the extent to which these were reflected in their activities. Policy recommendations and peer reviewed studies within the academic literature provided a more precise understanding of how alternative approaches and frameworks were used to reform the *baladi* bread supply chain. On the other hand, newspaper clippings provided an outlet for different actors in the supply chain to broadcast their opinions, particularly in the case of conflicting actors' interests. This was usually seen with intermediaries that perceived the activities and operations of another actor in the supply chain as unequal or unjust.

These documents have provided an extensive body of information that has helped me structure the history and operations of Egypt's bread subsidy system as well as the generation of concepts throughout the data analysis. This initial documentation process served as a basis for identifying issues that dominate the academic, policy and public discourse in the Egyptian *baladi* bread subsidy debate. The collected data selects some aspects of the intermediaries' perceived reality and interests in the supply chain to analyse how they go about fulfilling their interests and distorting the system. The next stage of the data collection process made use of these findings to identify and highlight additional actors in the supply chain that could be interviewed.

Interviews

Field research that was conducted over a period of 12 weeks culminated with a total of 36 in-person, phone and email interviews during three field visits to Cairo, Egypt, each lasting up to four weeks: June-July 2013, July-August 2013 and December-January 2014. A list of the interviewees is available in the appendices and includes the organisation's name, interviewee's position, the interview date and method of interview (in person, phone, e-mail) for each interviewee. It was deemed better to conceal the full name of interviewees for reasons of confidentiality and the political sensitivity of such a topic at various socio-political levels in Egypt.

In this case, field research and interviews were a means to connect the research studied to the context in which it appears. I followed the principle of naturalism where ordinary events governing the *baladi* bread supply chain – e.g. purchase of wheat, storage of wheat, milling of flour baking of bread, sale of bread – were observed in their natural setting and what Neuman calls the “authentic reality”.⁸⁷ Throughout my time in Cairo, I attempted to include as many different perspectives as possible of actors within the system and then switch back to a researcher's viewpoint to get a better understanding of their interest and role in the supply chain.

The interview questions were deliberately open-ended in order to better understand and capture each stakeholder's own role in the supply chain. These questions varied at each stage of the research process and can be classified into three different types: descriptive, structural and contrast interview questions. A sample list of questions used for various groups of stakeholders is available in the appendices.

In the early stages, many of the questions were descriptive in order to explore each actor's perception of the structure of the *baladi* bread supply chain. The questions were worded so as to get each stakeholder to describe their role and responsibilities towards other actors in the system. This was then followed with structural questions based on a domain analysis of the actor's role in the supply chain.

Finally, contrast questions built on the analysis verified by structural questions were asked. They focused on similarities and differences between each actor's perception and knowledge of the administration and distortions occurring throughout the supply chain.

Interviews were conducted in English or colloquial Egyptian Arabic, and sometimes in both. The interviews took place in the informant's home environment or, in some cases, at a previously agreed location (e.g. coffee shop, tea house, informant's residence or office). Each interview was transcribed in English to ensure a coherent and homogenous collection of data for the analysis section. From a total of 36 interviews, 31,000 words of empirical data were transcribed.

The interview notes contain extensive descriptive details drawn from memory and written notes that fit with some of the criteria set by Neuman for fieldwork.⁸⁸ Jotted notes were words, phrases and drawings that were made while in the field and during the interviews. Direct observation notes were written directly after leaving the field visit or interview and they served as a detailed description of what was seen and heard in very concrete and

87. Neuman, L. W. *Social Research Methods: Qualitative and Quantitative Approaches, 7th Edition*, Pearson, 2013.

88. See: Neuman, 2013, p.420.

specific terms, these would seek to “as closely as possible, replicate an exact recording of particular words phrases or actions”.⁸⁹

When possible, and with the consent of the interviewee, some of the interviews were recorded. These constituted a separate category of interview notes that were either directly transcribed or translated into English.

Data analysis

The empirical data was analysed using axial coding and interpretation.⁹⁰ Axial coding was used to establish sub-categories and components of the main higher-level codes such as actor’s roles, incentives and distortions. Then, testimonies and data from previous publications and interviews were coded to fill descriptive and conceptual gaps in the study. The method of coding relied on pre-analytical remarks and coloured highlighters to segregate between different data nodes and categories.⁹¹

The coding began with a provisional production of concepts that “opened-up” the data to identify potential properties and dimensions of Egypt’s *baladi* bread subsidy system. The initial coding process was subject to close scrutiny and many of the codes were tentative and subject to revision throughout the research process as new insights from the data emerged. The second stage of the coding process focused on the analysis of larger relations between the incentives of stakeholders in the supply chain and the political economy of the *baladi* bread subsidy system. This was also an interactive process involving back and forth assessments of data sources.

Ultimately, the interpretation and re-interpretation of empirical data sources focused on the analysis of core conceptual themes to construct accurate representations of the roles of intermediaries and middlemen in the Egyptian *baladi* bread subsidy system.

However, the empirical data presented in this book is not an objective picture of social reality. Rather, it is what Alvesson and Deetz refer to as a “set of impressions and interpretations produced by situated persons, characterised by feelings, imaginations, commitments and particular pre-structured understandings... what is offered here is one story”.⁹²

Data from the interviews and initial documentation process was incorporated within the political economy framework of the study. The data analysis in subsequent chapters has adopted an explanation-building approach where specific constructs and emerging relations provided critical insights into the roles and incentives and various actors in the *baladi* bread supply chain. These subsequently construct a narrative, highlighting the underlying role of political economy in the administration of the *baladi* bread subsidy.

Methodological limitations

Despite acknowledging the importance of contexts and boundary conditions, there are several limitations that relate to the method design, selection and analysis of empirical data. A common concern in case study

89. *ibid.* p.435.

90. Axial coding is the disaggregation of core themes during qualitative data analysis. For additional information see: Charmaz, K. *Constructing grounded theory: A practical guide through qualitative analysis*, London: Sage, 2006.

91. Patton, 2002.

92. Alvesson, M., Deetz, S., *Doing Critical Management Research*. London: Sage publications, 2000, p.136.

research is the lack of rigour where the researcher can bias the conduct of the experiment due to the lack of systematic procedures in place.⁹³

Other researchers have also argued that case studies provide little basis for scientific generalisation and lack external validity as the findings cannot be generalised to theoretical propositions.⁹⁴ In the case of this study, the choice of actors in the *baladi* bread supply chain or even the timeframe for empirical analysis will vary between researchers. The transcription of some recorded data from Arabic to English also interferes with an objective interpretation of testimonies from interviewees.

I have attempted to address these issues throughout the research process. The mixed methods approach combined the study of a wide range of archival data, public documents and interviews, focusing on the case of the *baladi* bread subsidy in Egypt. This measure has allowed for a more robust coverage of time, events and development in the state-administered food subsidy system. With regard to the quality of data, some of the questions were repeated to different actors to cross-check facts and feedback from my supervisor. Still, it is difficult to claim that the above measures resolve the problem entirely. The analysis in subsequent chapters navigates through these research limitations to present an accurate account of the role of intermediaries in the *baladi* bread supply chain.

93. Rosenthal, R. *Experimenter Effects in Behavioral Research*. New York: Appleton-Century-Crofts, 1996.

94. Yin, 2003, p.33.

CHAPTER 3: ACTORS IN THE *BALADI* BREAD SUPPLY CHAIN

“There are some men whose only mission among others is to act as intermediaries: one crosses them like bridges and keeps going.”

Gustave Flaubert, *Sentimental Education*, p.52.

The objective of this section is to draw out the principal actors in the *baladi* bread supply chain. Building on information from within the literature and fieldwork data that I have gathered, each actor will be listed and described to clearly outline their role in the *baladi* bread system. This process will set up the discussion in subsequent chapters to identify logistics and distortions in the *baladi* bread supply chain. By examining the role of all relevant actors, it is easier to understand their relations and interests in this process.

I have divided the actors into two groups: *conventional* actors, those who have most commonly figured in the academic literature and previous policy papers and *non-conventional* actors, those who emerged from fieldwork data and interviews. Understandably, this is but a synopsis of my assessment for actors in the *baladi* bread supply chain. Other researchers might have identified and focused on other actors. The guiding principle for my selection is the initial research question: what is the role of intermediaries in the *baladi* bread supply chain? As a result, I have mostly focused on actors that play a key role in the administration and disbursement of the *baladi* bread subsidy.

3.1. Conventional actors

3.1.1. Farmers

Wheat farmers play an essential role in the functioning of the *baladi* bread subsidy. In 2012, domestic wheat production amounted to 8.5 MMT of which 3.2 MMT was acquired by the government for *baladi* bread production, about 40% of the total required amount.⁹⁵ Farmers rely on high government procurement prices as an incentive to offset some of their production input costs such as fertiliser and diesel fuel for the harvest.⁹⁶ In this case, farmers are also concerned with distribution mechanisms. As suppliers to the government, they are in charge of transporting their wheat from the field to public mills or local wheat procurement centres owned by the state. These farmers operate largely on

95. Hamza et al., 2013, p.3.

96. Prior to 1987, wheat farmers were bound by a compulsory government delivery programme where area restriction and quota deliveries were controlled by the state. Since the implementation of the Economic Reform and Structural Adjustment programme, many of these constraints were lifted and wheat farmers were granted more freedom with regard to the buyers of the wheat harvest. For more, see: Kherallah et al., 2000, Chapter 1.

a small scale because of land redistribution reforms initiated by President Nasser in the 1950s. In fact, the majority of farms in Egypt are less than one hectare large and individual plots are labour-intensive because they are fragmented, which ultimately restricts the potential of mechanised agriculture. Nasser's land reclamation project stunted the modernisation of agriculture in Egypt, and wheat fields, albeit high-yielding, are still cultivated using intensive labour during the harvest months. As a result, the International Food Policy Research Institute estimates that crop sales for wheat farmers only account for 30% of their income. Farmers rely on other sources inside and outside the agricultural sector to supplement their remittances from the state.⁹⁷

3.1.2. Ministry of Supply and Internal Trade

The Ministry of Supply and Internal Trade (MSIT) is the key government agency and representative in charge of administering various subsidies in Egypt. In the case of *baladi* bread, the ministry oversees the purchase, distribution and production of wheat, flour and bread across the supply chain. These operations rely on an extensive network of actors inside and outside the MSIT that assist with the disbursement of the subsidy.

The General Authority for Supply and Commodities (GASC) and the Principal Bank for Development and Agricultural Credit (PBDAC) are two subsidiaries within the MSIT that are responsible for the procurement and supply of all the wheat necessary for *baladi* bread production.

In the case of international wheat imports, the GASC has been issuing tenders to purchase wheat on the international market since 2009.⁹⁸ The winning bidders are then in charge of transporting and shipping the wheat to one of five Egyptian grain terminals in Alexandria, Ayn Sukhnah, El Dekheila, Damietta or Suez, where it is then seized by the GASC.⁹⁹

For domestic wheat procurements, the PBDAC receives payments from the GASC to purchase a set amount of domestic wheat based on harvest estimates from the Ministry of Agriculture and Land Reclamation and the Egyptian Central Bank. The PBDAC then acts as a government creditor to domestic wheat farmers by which it receives their output quotas during the harvest season and reimburses them at the fixed procurement price set by the GASC during the planting season.^{100 / 101}

In 2013, the GASC spent \$3.1 billion on the *baladi* bread subsidy (see Figure 4 below). This cost accounted for the purchase, procurement, storage, transport, milling and baking of domestic and international wheat for the *baladi* bread subsidy. The total sum is spread across various supply chain operations that begin with the two processes outlined above – domestic and international wheat procurement – and continue on throughout the remainder of the supply chain. Since 1989, the price of one loaf of *baladi* bread has been fixed at 5 piasters (< \$ 0.01), however the GASC estimate that the real cost of each loaf is 34 piasters. The 31 piaster shortfall is borne by the state as part of the subsidy. Furthermore, this cost fluctuates annually depending on the agreements between the GASC and other actors in the supply chain over the price of wheat, milled flour, labour costs and permitted profit margins.¹⁰² This is examined in more detail throughout the remainder of the book by

97. For a breakdown of costs see: Hannusch, 2008, p.10.

98. Prior to 2009, the purchase of wheat was coordinated through contractual agreements. See Kherallah et al., 2000.

99. Although imported wheat plays a key part in the production of *baladi* bread, its procurement and importation are heavily regulated by the GASC. There is enough transparency for this process to merit less attention than the distortions that tend to happen at the domestic level.

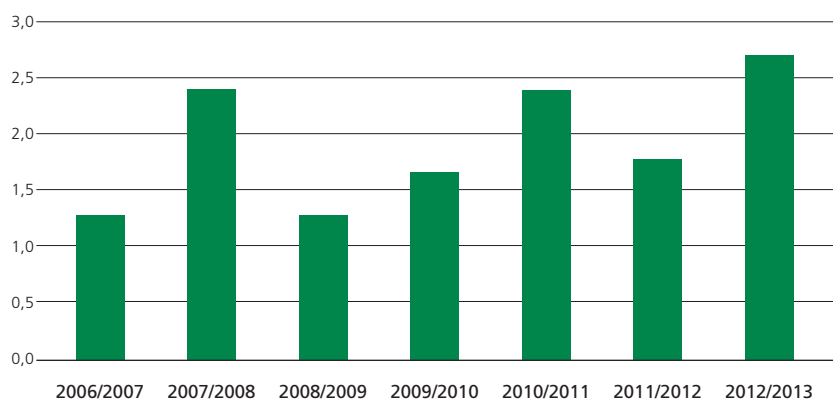
100. Since 1976, the PBDAC supplanted local cooperatives as the main channel for wheat procurement to produce *baladi* bread.

101. At the start of the planting season the GASC announces a purchasing price for the next season's domestic wheat crops. Since 2009, this price has been higher than that of the international market. The change in policy was meant to incentivise wheat farmers to sell their wheat to the government and restrict competition from private traders in a bid to make Egypt less reliant on wheat imports from abroad.

102. Between 2009 and 2013, the GASC budgeted 30-46 EGP per metric ton for milling wheat, (milling fee + miller's profit) and 160-290 EGP per metric ton for *baladi* flour. See: Hamza et al., 2013.

considering the role of farmers, millers and bakers, amongst others, in the *baladi* bread supply chain.

Figure 4. Changes in the cost of the *baladi* bread subsidy (EGP)



Source: Agence Française de Développement.

3.1.3. Storage companies

The estimated annual storage capacity for *baladi* bread wheat in Egypt is 1.0-1.5 MMT, whereas average consumption reaches 6.8-7.0 MMT per year. The GASC also aims to maintain a five-month supply of strategic wheat reserves for *baladi* bread production at any one point in time. However, the limited number of modern silos, coupled with the poor and limited storage capacity contributes to major losses and wastage throughout the supply chain.

Two public holding companies are in charge of storing the wheat imported for *baladi* bread production in steel silos: the Egyptian Holding Company for Silos and Storage (EHCSS), and the General Company for Silos and Storage (GCSS).¹⁰³ In addition, the PBDAC has its own open-air facilities called *shonas* which store the bulk of the domestic wheat.

The EHCSS was established in 2006 to upgrade wheat storage capabilities and reduce the amount of losses. By 2013, the EHCSS had constructed 25 (out of 50) steel silos with a total storage capacity of 750,000 MT largely destined for storing imported wheat.

The GCSS is a subsidiary of the Food Industries Holding Corporation, a government-owned public holding company overseeing a large volume of wheat transport and milling. The GCSS owns and operates five grain terminals in Alexandria, Ayn Sukhnah, El Dekheila, Damietta and Suez with a total handling capacity of 350,000 MT at the ports and a further 450,000 MT through inland silo facilities. Each terminal is equipped with steel silos that store the imported wheat upon arrival and then transfer it to the inland silos using the company's trucks.

The PBDAC controls 362 silos with a combined storage capacity of 2 MMT for domestic wheat. 298 of these silos are open-air facilities called *shonas* that are poorly maintained with no flooring or roofing to prop-

¹⁰³ Holding companies were part of the 1992 economic reforms to engage the private sector in the Egyptian economy. They constitute former state bodies that were converted into companies to raise capital. The state still retains a majority share in these firms (>51%) but the rest of the shares are sold to private companies or floated on the Cairo Stock Exchange.

erly store the wheat and protect it. Much of the domestic wheat that is stored in these facilities is plagued by dust and grit cross-contamination as well as high rates of vermin infestation of birds and rodents. It is estimated that 20-30% of the wheat in *shonas* is wasted because of the low storage quality of these facilities. This loss rate tends to decrease in the case of the other 64 silos that are made out of concrete.

Despite these storage spaces, the GASC also hire storage facilities from private sector traders and mills to better keep the imported wheat.

More recently, the GASC partnered with the private sector to upgrade its storage facilities by increasing the number of privately owned-silos through the Build, Operate and Transfer system. Under the new scheme, the private contractors would build the silos and the GASC would commit to using at least 60% of each silo's capacity at a prevailing storage fee for five years.

3.1.4. Transport companies

Of all the conventional actors in the *baladi* bread supply chain, the transport sector is the least studied and the availability of data on it in the extant literature is scarce. There are three major stages where transport companies contribute to the administration of the subsidy: firstly, through the transport of wheat from ports and farms to storage facilities and mills secondly, the transport of milled *baladi* bread flour from mills to bakeries and, finally, the transport of freshly baked *baladi* bread to the consumer from either large-scale industrial bakeries or to less well-serviced areas in rural Egypt.

About 90% of the wheat and flour are transported through trucks and small vehicles whilst the rest is transported through a poorly maintained railway network.¹⁰⁴

In the case of domestic wheat, farmers are in charge of delivering the wheat to PBDAC facilities and therefore they have to arrange for their own means to transport the wheat. This usually takes the form of carts or locally-hired trucks that carry the wheat to *shonas*. In order to monitor and control wheat quotas, farmers are only able to deposit their wheat harvest in their local governorates. This mechanism allows the PBDAC to allocate remittances to farmers based on wheat production within that area.

With imported wheat, the GCSS and EHCSS dispose of a large fleet of trucks that transports the *baladi* bread wheat from ports and storage facilities to millers. These in turn regulate supply flows to public mills depending on the quotas allocated by the GASC. In addition, the GASC pays for all the transportation costs to public mills which makes it difficult to account for them separately. On the other hand, smaller mills that are privately contracted by the GASC have their own means of transport and assume the costs associated with these activities – about 11% of their operating costs.¹⁰⁵ Each mill has its own means to then transport the *baladi* bread flour to licensed bakeries and warehouses. In the case of some large-scale bakeries and poorly serviced areas, bakers also hire a local contractor to deliver *baladi* bread within the community.

¹⁰⁴. Testimony from former Minister of Supply and Internal Trade.

¹⁰⁵. Moursi et al., 1993, p.14.

3.1.5. Milling companies

Baladi bread wheat is either milled in public mills owned by the Food and Industries Holding Corporation (FIHC) or private milling companies that are contracted by the GASC.

The FIHC is a government conglomerate that presides over public mills that produce 70-86% of the total amount of subsidised *baladi* bread flour, while the remainder is spread across private mills that are contracted by the GASC to mill *baladi* bread flour because of the efficiency of their equipment.

After the implementation of the economic reforms in 1992, all public organisations, including milling companies were transformed into holding companies. In 2013, there were about 126 public sector mills under the administration of seven milling companies owned by the FIHC.¹⁰⁶ The GASC retains a majority share in these companies (>51%) whilst the remainder is spread amongst public banks, workers unions and individual investors from the Cairo stock exchange.

Most of these public mills are unindustrialised and rely on stone milling techniques. In addition, the World Bank estimates that they employ about 4.5 times the required work force and, therefore, are considered to be highly uneconomical for the production of *baladi* bread flour.

On the other hand, private mills contracted to produce *baladi* bread flour are spread around Alexandria, Cairo and Port Said. They receive their wheat milling quotas directly from the GASC and are reimbursed for the cost of milling. In contrast to public mills, private millers tend to be more efficient and modern, relying on automatic roller mills to extract the flour. They tend to charge lower milling costs than their public milling counterparts. In fact, privately contracted mills have accounted for almost all of the capacity expansion needed to keep up with the rise in population and urbanisation. Their relative efficiency, central location and lower milling charges have incentivised the GASC to continue investing in them over the years.

Finally, it is worth noting that in less well-serviced rural areas where it is difficult for Egyptians to get hold of *baladi* bread, local mills offer their services to the population and usually charge a set price that is contingent on the extraction rate to mill flour for customers to use to bake their own bread at home or in a bakery. These mills are not part of the *baladi* bread subsidy regime.

3.1.6. Bakers

Licensed *baladi* bread bakeries are the most prominent actors in the supply chain. As the final contact point for the state before the bread is sold to consumers, bakeries play a key role in ensuring that the Egyptian population has access to *baladi* bread on a daily basis. At various time intervals, bakeries receive their *baladi* bread flour quotas from the GASC, which takes into account the allocated quota and the density of the population in a given area.¹⁰⁷ Licensed *baladi* bread bakeries cater for about 60% of the *baladi* bread demand, the rest is covered by state-owned bakeries.

¹⁰⁶. These include the Alexandria Flour Mills, East Delta Flour Mills, Middle and West Delta Flour Mills, South Cairo Flour Mills, Upper Egypt Flour Mills, Middle Egypt Flour Mills and North Cairo Flour Mills.

¹⁰⁷. Depending on the target market, bakeries may receive *baladi* bread flour deliveries every day or twice a week.

Since 1989, the government-mandated price for a loaf of *baladi* bread has been fixed at 5 Egyptian piasters. The state bears the difference between the production cost and sales price which amounted to 34 piasters per loaf in 2013.

Baladi wheat flour is sold to licensed bakeries at a previously agreed-upon price. The GASC compensates bakers for the cost of production payments that are intended to cover labour, machinery and overheads and allow for a small net profit for the bakers at the end.¹⁰⁸

Further, since the access to *baladi* bread is not rationed, bakers are forced to manage bread queues. Usually, they would allow a maximum of 20 or 30 *baladi* bread loaves to be collected by any individual at one time. Since there are often long queues, this discourages the collection of more bread. However, *baladi* bread can also be found in many “unlicensed” outlets, be they side-street sellers or luxury hotels, sometimes at 2 to 5 times the price.¹⁰⁹

Since bakers have little flexibility in adjusting their margins and quotas, they tend to rely on minimising operating costs. More often than not, they manage to make ends meet by setting aside a portion of their *baladi* bread flour quota for the black market where it retails at more than five times the government sales price (\$26.5/MT).¹¹⁰

3.2. Non-conventional actors

3.2.1. Members of parliament and mayors

Government ministers and mayors are powerful agents in the *baladi* bread-licensing regime. As government representatives, they are able to influence the allocation of *baladi* production licenses.

Each year, the MSIT grants a set number of licenses to MPs, taking into account population growth and the availability of *baladi* bread in their locality. MPs then consult with the respective local mayors about who should receive these licenses from the pool of applicants. Given the favourable prospects of income generation from *baladi* bread production, local mayors are able to use these incentives to manipulate prospective bakers. In recorded testimonies, mayors would use the *baladi* bread licensing process as a political favour, ensuring that bakeries that are awarded the licence vote for their party during the next election cycle.

Bakeries are places where people tend to congregate on a daily basis. By establishing a direct link between the political party and its services to the local community through the provision of cheap *baladi* bread, mayors seek out support for their election campaigns.

3.2.2. Egyptian Federation of Chambers of Commerce

It is nearly impossible for the GASC to negotiate with over 19,000 licensed *baladi* bread bakeries and agree on the purchase price and quotas of *baladi* bread flour. This is managed by the Bakery Owners' Division

108.In 2013 that was \$18 for every 50 kg of flour baked into *baladi* bread. However, at the time of writing \$59 million of those payments remain in arrears.

109.Interview with former research at the Information Decision and Support Center.

110.Estimates vary for black market flour costs depending on market conditions and demand. Previous research and interview testimonies suggest that *baladi* bread flour can sell at anywhere between \$160-294/MT and, sometimes, upwards.

at the Federation of Chambers of Commerce which consists of a col-lusive group of licensed *baladi* bakers and a representative council that directly negotiates with the GASC.

The deputy heads of the Chambers meet with the GASC and Minister of Supply and Internal Trade every three months to determine the cost price and incentives for bakers to produce *baladi* bread. The main points of contention are the cost price of flour sold to bakers by the GASC, bud-geted operating costs for bakeries, and allowable profit margins. Often, if the bakers' demands are not meant, they threaten to go on strike and stop *baladi* bread production.

3.2.3. Egyptian military

The Egyptian military plays a less direct, yet widely mediatised role in the *baladi* bread subsidy. In 1981, the Minister of Defence and former Field Marshal Mohammad Abd Al Halim Abu Ghazalah began advocating for a new discourse for the army to become self-sufficient and vested in the Egyptian economy.¹¹¹ This came at a time when the newly-elected presi-dent Hosni Mubarak was seeking to cement his control over all aspects of the security establishment and curb defence spending. Abu Ghazalah initiated the National Service Project Organization (NSPO), an initiative that went on to become the economic arm of the Egyptian military.¹¹²

In the case of *baladi* bread production, the military took over and privatised six large-scale industrial bakeries in Cairo that were initially part of the Cairo baking company, a public holding company. The military was then able to operate these bakeries independently from the *baladi* bread supply chain to feed an army of 250,000-300,000 personnel. The NSPO would buy its wheat from the PBDAC and GASC or rely on the wheat harvest from land that is controlled by the military and former army officers.¹¹³

In some cases, particularly at times of high international wheat prices and bread shortages, the MSIT would call on the military to assist them with the production and distribution of *baladi* bread. For instance, after the 2008 food price crisis and the January 25th 2011 uprising, the sight of military trucks loaded with freshly baked *baladi* bread arriving in areas with bread shortages quickly saw the army painted as a provider of bread for the people in local media reports. These are largely exagger-ated claims since further investigation showed that the military's capacity to produce bread is limited to around 500,000 loaves a day, a fraction of the 25 million loaves that are needed each day to service Cairo's dist-riicts.¹¹⁴ Although the military's contribution to *baladi* bread production is insignificant, the MSIT relies on their ability to efficiently alleviate bread shortages in times of crisis through their distribution channels.

3.2.4. Bakery Inspectors

Bakery inspectors constitute a key part of the *baladi* bread supply chain operations through their roles and incentives. These inspectors are appointed by the MSIT at governorate level to supervise the operations of each bakery within a designated community. The inspectors act as government agents by visiting licensed *baladi* bread bakeries to check

111. Throughout President Mubarak's rule, military spending as a percentage of GDP was cut from 17% to 2.5%.

112. The NSPO developed into an active military-controlled organisation that produced goods for both military and civilian uses. Military personnel became involved in food production, manufactured goods and construction projects. For additional details see: Kechichian, J., Nazimek, J., *Challenges to the Military in Egypt*, vol.5 no.3, Middle East Policy Council, 1997.

113. In addition to land that had been acquired by the military under Nasser's land reclamation project and Abu Ghazalah, retired mili-tary personnel were also granted large plots of land as part of the Toshka Valley reclamation project. These contributed at different times to supplementing the Egyptian military's demand for wheat. It is worth noting that testimonies revealed that some of this wheat was also sold to the PBDAC as part of the *baladi* bread programme, although I have not examined it in more detail in this study.

114. Testimony from an interview with a former minister at MSIT.

whether or not they are complying with government regulation regarding operation hours, quota deliveries and the weight of *baladi* bread loaves. For instance, employees at MSIT disclosed that inspectors would verify if a freshly baked *baladi* bread loaf from a random sample complied with the mandated government weight (130 grams), allowing for a 10% margin of error. Allegedly, for each MSIT inspector there are 10 licensed *baladi* bread bakeries to inspect. If the baker is deemed to have violated regulations then they are fined by the inspector.

Inspectors also submit reports to their local MSIT directorate to highlight any issues or complaints with bakeries in their locality. These are then relegated to the back office or elevated to the High Council for Complaints at the MSIT's main office in Cairo.

However, testimonies and reports from the field regarding the accuracy of bakery inspectors' reports suggest a very loose control process. As low-ranking civil servants, the inspectors are paid low salaries compared to the national average, about \$37 per month. In theory, these inspectors are meant to supervise the bakers' activities to ensure that they are in line with government regulation and to curb leakages of *baladi* bread flour onto the black market. Yet in practice, there are strong incentives for the inspectors to circumvent regulation and distort the *baladi* bread subsidy allocation.

For instance, inspectors can claim a 25% bonus on the value of each fine that they impose on bakers, so there is a strong incentive for them to impose higher fines and enforce regulation. However, bakers that leak their flour onto the black market would offer inspectors a bribe to not report them to the MSIT (which might result in them losing the licence to produce *baladi* bread). If the offered bribe substantially exceeds the bonus that an inspector gets from imposing a fine, then it is more likely they will accept it. In fact, given the significant price differential between subsidised and unsubsidised flour, bakers can afford to pay relatively higher bribes than the fine bonuses the MSIT would reward to inspectors. These practices contribute to further distorting the *baladi* bread supply chain at a micro-level and add in an extra layer to the subsidy system.

In addition to the above actors, there are other groups worth examining in the study of the *baladi* bread supply chain, these include port authorities, private sector traders of wheat and bread and farmer's cooperatives, amongst others. Although this study attempts to conduct a comprehensive assessment on the role of intermediaries in the *baladi* bread subsidy system, it was not possible to look at additional actors given the scope of the book and time constraints in the field.¹¹⁵ Further, the omission of these actors does not impact the analysis later on in the book as the discussion will focus only on distortions caused by actors already covered in this chapter. The next chapter provides a detailed overview of supply chain operations in the *baladi* bread system from start to finish.

115. I intend to examine these actors in more detail as part of a more thorough doctoral project that looks at the role of intermediaries in the Egyptian *baladi* bread supply chain and other food subsidy systems in the Middle East and North Africa region.

CHAPTER 4: *BALADI* BREAD SUPPLY CHAIN LOGISTICS

“Until we understand *why* our society adopts its policies, we will be poorly equipped to give useful advice on how to change those policies.”

Stigler, *The Citizen and the State*, 1975, p.ix.

In this section, I will examine in detail each stage of the *baladi* bread supply chain, from harvest to sale. After identifying conventional and non-conventional actors in the previous chapter, I will now look at how each of them contributes to the administration of key operations in the subsidy system and how, in practice, different operations are not as clear-cut as previously findings in the literature might suggest. Rather, by outlining the underlying political economy of each stage, I uncover a new reality of how the *baladi* bread supply chain actually operates. Each section describes one of the twelve stages and Figure 7 at the end of this chapter provides a comprehensive review and summary of the *baladi* bread supply chain process.

Harvesting and purchase

Baladi bread wheat can be traced back to two sources – wheat that is harvested domestically and wheat that is purchased on the international market. Domestic wheat is purchased by the PBDAC on behalf of the GASC from local farmers in the Nile Delta, Upper Egypt and reclaimed land by the Red Sea and Aswan. In 2013, Egypt’s domestic wheat production reached 8.7 MMT from a total harvest area of 1.4 million hectares.¹¹⁶ Data from the Foreign Agricultural Service at the United States Department of Agriculture in Table 2 below estimates that 52% of the total harvest was sold, 31% was given out as gift or for other reasons, 6% was stored for other uses and 5% was use as partial payment to workers or landlords and used as animal feed.¹¹⁷

At the start of the growing season (September - November), the MSIT announces procurement prices for local wheat by establishing a floor price 15-25% higher than the anticipated international market price of wheat in the harvest season.¹¹⁸ These higher prices are meant to incentivise farmers to sell their wheat through government channels instead of private traders.¹¹⁹

¹¹⁶. See: Kherallah et al., 2000.

¹¹⁷. See: Hamza et al., 2013.

¹¹⁸. In August 2013, international wheat procurement prices stood at \$310/MT (including shipping) whereas the Egyptian state was offering local farmers \$390/MT.

¹¹⁹. This change in policy came with the ERSAP programme, where wheat farmers were no longer mandated to sell a quota of their crop to the government. Rather, since 1987, Egyptian farmers have been free to either stockpile or sell their wheat to any buyer.

Table 2. Annual wheat production in Egypt						
Weat Egypt	2011/2012		2012/2013		2013/2014	
	Market Year Begin: Jul. 2011		Market Year Begin: Jul. 2012		Market Year Begin: Jul. 2013	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	1,280	1,280	1,350	1,350		1,400
Beginning Stocks	5,508	5,508	6,718	6,718		3,818
Production	8,400	8,400	8,500	8,500		8,700
MY Imports	11,650	11,650	8,500	8,000		8,500
TY Imports	11,650	11,650	8,500	8,000		8,500
TY Imp. from U.S.	989	989	0	0		0
Total Supply	25,558	25,558	23,718	23,218		21,018
MY Exports	240	240	200	300		300
TY Exports	240	240	200	300		300
Feed and Residual	2,600	2,600	2,100	2,400		2,200
FSI Consumption	16,000	16,000	16,300	16,700		15,500
Total Consumption	18,600	18,600	18,400	19,100		17,700
Ending Stocks	6,718	6,718	5,118	3,818		3,018
Total Distribution	25,558	25,558	23,718	23,218		21,018

FSI Consumption= Food, Seed and Industrial.

MT = Metric Ton.

MY = Marketing Year. Post and USDA official data both follow the EU27 local marketing year of July to June except for corn which follows an October to September calendar.

TY = July to June for wheat and October to September for coarse grains.

Source: Foreign Agricultural Service at the United States Department of Agriculture.

Some of the issues associated with the supply of local wheat for *baladi* bread production are linked to the incentives for farmers to sell their harvest to the government. There are several factors at play here including the availability of sufficient subsidised fuel for farmers to irrigate the land, the use of harvesting equipment and the transport of wheat to PBDAC granaries in their local governorate. In addition, despite lower purchase prices, private traders might sometimes seem like a more rentable option to farmers. Fieldwork data revealed that some private traders would offer to pick up the wheat from the farm, make partial reimbursements for the costs of seeds and fertilisers and arrange long-term purchasing contracts at the current price.¹²⁰ This last item is particularly helpful to farmers as they are often less likely to be constrained by the PBDAC's annual quota and price announcement for wheat procurements.

Harvesting takes place between April and August. Throughout that period, a steering committee that involves representative members of the MSIT, the Ministry of Agriculture and Land Reclamation, the Ministry of Trade and the Ministry of Finance meets every two weeks to resolve any supply bottlenecks in the transport or storage of domestic wheat. More often than not it seemed that these meetings were carried out on a reactionary basis when logistical issues arose rather than according to a carefully implemented strategic plan designed to thwart them.

In the case of international wheat, the GASC imports about 40-60% of Egypt's wheat needs for *baladi* bread production from the international market. The volume of wheat imports is determined by several factors that the GASC takes into account. These include the anti-

¹²⁰.See: Kherallah et al., 2000.

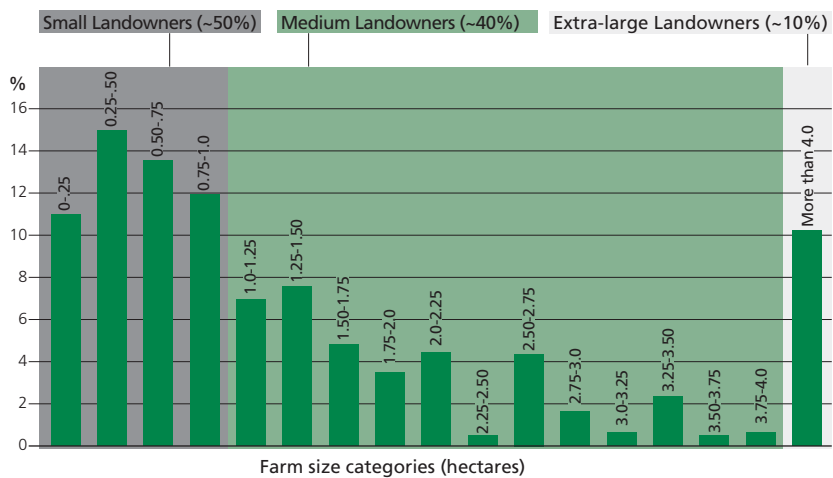
pated amount of domestic wheat that will be harvested that year and the availability of state funds to purchase international wheat. Oddly, but not surprisingly, it is cheaper for the GASC to buy wheat on the international market, as large private traders are able to make use of efficient transport systems and the relatively lower international market price to sell wheat to the GASC. This process happens through tenders issued by the GASC three to four times a year. The winning bids are allocated based on the quality and type of wheat offered and its compliance with GASC standards, the transport price and delivery date to Egyptian ports.

Yet, although this might seem like a well-crafted framework to ensure the on-going provision of subsidised *baladi* bread by the state, in reality, these processes are less clear-cut and the procurement of wheat by the Egyptian state tends to be murkier.

Figure 5 below suggests that medium to large operators cultivate a significant part of Egypt’s arable land (~40%), slightly less than small landowners.¹²¹ As a result, they dispose of the machinery that would allow them to transfer the wheat to PBDAC granaries themselves, whereas smaller farmers must rely on middlemen to do so. Wheat is sold to traders who pay farmers a set price on the spot and then sell it to the state at another, usually higher, price. Between the field and the granaries, these traders have the opportunity to inflate their profits by incorporating cheaper international wheat into the mix and marketing it as local to recoup the higher price premium.¹²² There is no control over this process and smallholders are often at a loss as a result of this. These practices then ensure preferential access to larger wheat farmers and private traders that profit at the expense of the smaller farmers when delivering the wheat to local granaries.

The GASC and MSIT have attempted to remedy some of these practices by restricting wheat deliveries for local farmers within their governorates. This is an attempt to prevent traders from further profiteering from this practice at a national level but it still does not advantage farmers.

Figure 5. Distribution of wheat farms by farm size



Source: International Food Policy Research Institute, 2000.

121. The nature of these larger operators is worth examining in more detail: some of them consist of landlords managing slightly larger farms of up to 5 feddan (2.1 hectares), yet there is a category of middle peasants that benefitted from the distress sales to rich peasantry due to Nasser’s Agrarian Reform Law. These richer peasants are in the 5-20 feddan (2.1-8.4 hectares) category that acquired the land via crash or distress sales.

122. The cheap wheat does not need to conform to the GASC’s strict requirements and standards. Hence, often, the low quality wheat can be purchased for much less and marketed as locally-produced wheat by these traders.

Similarly to domestic wheat procurement, the GASC does not allow trading in wheat futures, but relies on “spot buying” to purchase its international wheat.¹²³ This short-term strategy in wheat procurement has its genesis in the country’s role in international wheat markets. Egypt is the world’s largest importer of wheat, making it a price-maker, that is, a buyer that can drastically affect global market prices and purchase volumes through annual imports that exceed 10 MMT of wheat (see Figure 6 below).¹²⁴ The GASC accounts for 80% of these imports (the rest is brought in by private traders) and a large portion of it is used for *baladi* bread production.¹²⁵

The GASC tends to favour this type of short-term buying as it is less likely to be dependent on the volatility of international market prices with futures contracts. Hence, the GASC can first consider its domestic harvest yield, available storage space and state budget as well as the international outlook for wheat prices before announcing its import bids.¹²⁶

123. A spot contract is a contract for buying or selling a commodity for payment and delivery on the spot date, which is usually up to two business days after the trade date. However, in the case of futures contracts, contract terms are agreed on but the payment and delivery will occur at a later date.

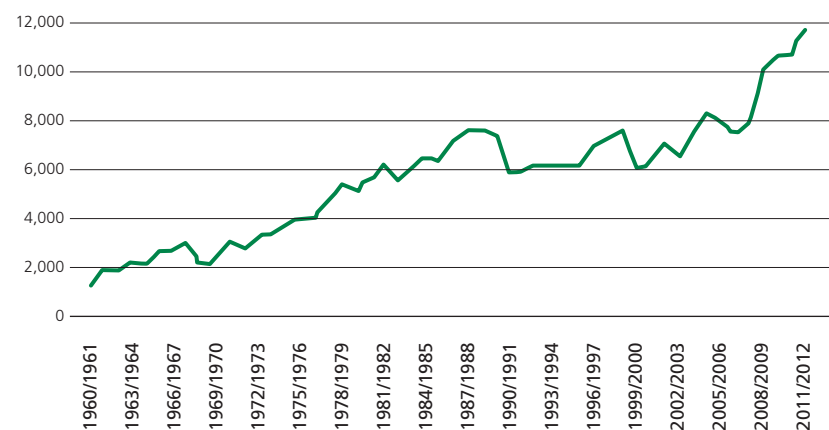
124. Detailed accounts of Egypt’s annual wheat imports can be found at: <http://www.indexmundi.com/agriculture/?country=eg&commodity=wheat&graph=imports>. [Accessed on January 26th 2014].

125. The remainder of the wheat brought in is either used for the production of pasta and pastries as in case of the GASC, or the production of unsubsidised bread by private traders.

126. This is beyond the scope of this book, but the volatility of international wheat prices is a key consideration for GASC officials when importing wheat. Since 2008 the United Nations Food and Agriculture Organization has reported that as an unregulated commodity on the international price index, wheat prices are likely to become more volatile in the future.

127. Prior to that period, the GASC would rely on public and private contracts to guarantee its wheat needs. This usually took the form of contracts with other governments to purchase their wheat harvest or with local companies tasked in purchasing and delivering the wheat to Egyptian ports. With the onslaught of the 2008 food crisis, the GASC has sought to better control the quality and transport of its wheat and became the sole organism in charge of procuring wheat for *baladi* bread consumption.

Figure 6. Changes in Egypt’s wheat imports (1960-2012) in thousand metric tons



Source: Agence Française de Développement, 2013.

Wheat inspection

Wheat inspection is one of the intermediary stages for international wheat purchases before it is shipped from the producer to the country. Since 2009, the GASC has sought to better control the management and quality of its wheat imports using tenders.¹²⁷ In order to ensure that exporting countries are complying with the MSIT’s marketing and import policy for *baladi* bread, the GASC has issued tender requirements that include wheat inspections. Six inspectors are chosen from the Ministry of Agriculture and Land Reclamation’s Central Administration for Plant Quarantine, the Ministry of Trade and Industry and the Ministry of Health to inspect the wheat at the producing country’s port, before it is shipped. A similar group inspects the wheat on arrival to ensure that it complies with the quarantine check. These measures supposedly reduce the possibility of shipment interceptions and accelerate the customs clearance process in Egypt.

The GASC has further reinforced these measures following deliveries of wheat that was unfit for human consumption. In the past, it has imposed bans on key wheat-exporting countries like Russia and Ukraine due to the presence of dead bugs and other impurities well above the allowed limit.

Upon closer investigation, these technical health and safety guidelines emerged as a guise for handing discretionary power to bureaucratic insiders. Since Egypt is the world's largest importer of wheat, these inspectors are able to extract a lot of power from their position to veto or permit a wheat shipment. This provides them with opportunities to derive unearned discretionary income through a series of agreements with import-producing countries and international shipping companies.

In some of the collected testimonies, it was disclosed that some of these inspectors were part of a larger corruption ring that benefits from a commission-based system with international actors when importing foreign wheat.¹²⁸

Storage and delivery

The principal agents in the storage of *baladi* bread wheat can be divided into two groups: they are either public holding companies, such as the EHCCS and the GCSS, where the government has a majority stake in the running of the organisation, or they are subsidiaries of government bodies, in this case, local granaries owned by the GASC and its affiliate, the PBDAC.

The estimates for Egypt's wheat storage capacity vary between different studies, particularly in the case of local granaries where it is difficult to get an aggregate number of the available storage volume in open air spaces (*shonas*).¹²⁹ On the other hand, much of the imported wheat destined for *baladi* bread production – a significant portion of the subsidy – is stored in steel silos owned by the EHCCS and GCSS. The storage capacity for these silos varies between 1.0 and 1.5 MMT, well below wheat import volumes which average 6-8 MMT per year. The GCSS has grain silos stationed at five ports where they store part of the imported wheat (350,000 MT), the remainder is sent to inland silos (400,000 MT) using the company's truck fleet.

The more recently established EHCSS has already built 25 steel silos to upgrade wheat storage capacities and reduce the amount of losses. In 2013, they were able to store up to 750,000 MT of imported wheat delivered to them via the GCSS truck fleet.

In the case of locally produced wheat, Egyptian farmers are in charge of delivering the harvest to local granaries owned by the PBDAC. Despite the higher price incentive for farmers to sell their wheat to the government through the PBDAC, many of them opt out of doing so. In fact, the majority of farmers in Egypt operate small plots and have neither the capacity nor are willing to pay the costs of transporting the wheat from their farm to the local granary. This practice has become more widespread since 2011 as fuel shortages around Egypt have

128. These stories are difficult to document, yet in April 2014, Al Ahrām Newspapers reported evidence of about \$1 million worth of wheat being smuggled by a company in which the former secretary to President Hosni Mubarak and a member of parliament were major shareholders. Through a series of forged fake documents, the cheaply imported wheat was marketed as domestic wheat to recoup the higher price incentive offered by the State. See: <http://gate.ahram.org.eg/UI/Front/Inner.aspx?NewsContentID=484473>. [Last Accessed on April 26th 2014.]

129. The estimated storage capacity for *shonas* has varied over time (2-4 MMT). Given the disaggregate nature of PBDAC local granaries at the governorate level, a true estimate of the storage volume would require a more thorough study in the field to calculate each governorates' storage capacity. This is beyond the scope of this book and less relevant to the overall objective of this study.

exacerbated farmers' access to diesel in many provinces. Many of the small farmers then end up marketing their wheat to private traders that dispose of better finances and transport means to carry the wheat. Subsequently, the bulk of the wheat received by the PBDAC for storage is a mix of deliveries from medium to large-sized farms with enough capacity and economies of scale to transport it and private traders that purchase the local harvest from smallholders and transport it to the granaries.

There are several political economy issues that arise as a result of these practices. GASC's preference to store imported over locally produced wheat in well maintained and efficient steel silos coupled with its weak incentive to procure wheat from the farmers – despite the higher price premium on offer – creates many distortions in the supply chain.

Firstly, the poor state of the bulk of local wheat storage facilities, the *shonas*, leads to large amounts of material wasted due to the lack of any flooring or roofing. This results in grit cross-contamination as well as high rates of vermin infestation due to birds and rodents eating the wheat. Millers receiving this wheat are then unable to properly make use of it to produce *baladi* bread and many of them fail to generate enough flour with the allocated quota, which acts as an incentive to sell it on the black market for a much higher price.

This lack of maintenance also contributes to indirectly increasing Egypt's import bill and reliance on foreign wheat as its population steadily rises.¹³⁰ Previously, the state would absorb the import cost into the national budget and it did not mind relying on international wheat as a way to divest part of its foreign reserves.¹³¹ Given the bureaucracy and low salience associated with improving wheat storage capacity, the state simply did not deem it a priority item to focus on.

However, with recent developments having led to the depletion of Egypt's foreign reserves, the state has shifted its wheat procurement strategy to reducing dependence on imports from abroad and improving storage capacities.¹³²

Secondly, the current market structure for the GASC's procurement of local wheat through its affiliate, the PBDAC, benefits medium to large-sized farms and private traders that are able to transport the wheat to local granaries. This mandated requirement suggests that only producers with the right means to transport wheat harvests over long distances (*i.e.* trucks), are able to truly benefit from the incentive offered by the state for domestically produced wheat.

Milling and delivery

Baladi bread wheat is milled at between 231 public and private sector mills. Public sector mills amount to 64% (147 mills) of the total milling capacity and produce 86% of the milled flour for *baladi* bread.¹³³ They are owned by subsidiaries of the Food Industry Holding Company (FIHC), a public holding company in which the government controls the majority of the shares (>51%).¹³⁴ These mills produce *baladi* bread flour at a fee that is previously agreed upon between the FIHC and GASC.

130. Since 1991, Egypt's wheat imports have steadily increased from 5.81 MMT to 10.50 MMT in 2013. At the same time, the country's population grew from 57.39 million to 80.72 million.

131. Ever since the 1987 ERSAP, food subsidies as a share of national GDP have dwindled, in the case of the *baladi* bread subsidy, it accounts for 1% of national GDP and 15% of the total subsidies granted by the state budget.

132. At the start of the January 25, 2011 uprising, Egypt's foreign reserves stood at \$36 billion and in April 2014, they had dwindled to \$17.04 billion. At the time of writing, the heads of the two public holding companies in charge of storing wheat for *baladi* bread, the EHCSS and GCSS, have been fired by the Minister of Supply and Internal Trade for failing to meet their targets. In addition, the minister has removed one senior trader at the GASC over an allegation of corruption.

133. Poulin et al., 2002.

134. There is a total of 7 subsidiaries under the FIHC, see footnote 107 for a listing of the companies and Kherallah, 2002, for a breakdown on the number of mills per subsidiary.

Imported wheat is delivered to these mills through a fleet of trucks from one of the storage companies mentioned above whereas domestic wheat is delivered from PBDAC's local granaries using GASC's own trucks. At any one point, *baladi* bread mills have 10 days' worth of wheat for *baladi* bread flour in storage.

However, these mills are only able to cater for part of the *baladi* bread flour demand, so the GASC tends to contract private sector companies to mill the rest of the flour for *baladi* bread production (14%).¹³⁵

There are many differences between public and private sector millers of *baladi* bread flour. Firstly, public mills tend to be larger in size and labour. As government-owned entities, they tend to operate as inflated bureaucracies that still make use of conventional stone milling techniques to grind the wheat. Private mills operate on a smaller scale and tend to be more efficient and modern by relying on less labour and use automatic roller mills to extract the flour.

Finally, there are large numbers of mills in areas that are less likely to be serviced by the state's *baladi* bread scheme due to population size and logistical constraints. In these localities, local mills operate on a service-oriented basis where producers and families can bring in the wheat and have it milled. These mills are not directly affiliated with the production of *baladi* bread and so are beyond the scope of this book.

This milling structure presents some underlying technical and political economy problems when it comes to administering the *baladi* bread subsidy.

The outdated milling techniques used in public mills are less productive and profitable than their private counterparts. For instance, the use of stone on stone grinding methods produces grit that ends up in the flour. Also, the low quality of locally produced wheat brought in from the *shonas* tends to increase repair costs. This is because stone mills are less able to separate the foreign matter in the wheat and need to be manually repaired each time the machine is jammed. This also contributes to indirectly increasing labour costs.

In addition, public millers are less able to influence the milling fee, rather, they are forced to accept whatever rate is negotiated by the GASC and FIHC beforehand. As the state has a majority stake in most of the public sector milling companies through the FIHC, public mills are less able to set milling fees for *baladi* bread flour. That means that many of them strive to reduce operational costs in order to generate a small profit from this process.

However, these mechanisms also provide an incentive for public millers to sell some of the flour on the black market. Similarly to other actors in the supply chain, millers can exploit the high price differential between *baladi* and non-*baladi* bread flour to supplement their income streams.

It is worth noting that the FIHC also has a separate arm dedicated to milling for the private sector. Although field visits did not document any collusion of interests between the FIHC's private and public activities, testimonies from other actors in the supply chain suggested that these activities were quite common. Future research can more closely scrutinise

¹³⁵.Data calculated by Ayel et al., 2013.

the incentives of some milling companies under the FIHC to inflate their *baladi* bread flour quotas with flour from the private sector.

Many of these inefficiencies persist in the milling sector as they provide the GASC with better control over the means of flour production. In the event of a national strike or opposition over cost of production payments, the GASC can more easily restrain public milling companies than their private milling counterparts.

This becomes much more difficult to tackle with bakeries which are greater in number and scope as will be discussed in the next section.

Baking

Baking is the final stage in the *baladi* bread supply chain. Bakeries are in charge of the mixing, fermentation and baking of flour into *baladi* bread before selling it at the subsidised price of 5 piasters (<\$0.01).

As of October 2012, the MSIT estimated that there were 19,174 licensed *baladi* bread bakeries in operation. The large majority (>88%) of these bakeries are privately owned and they supply about 60% of the demand for *baladi* bread. The GASC contributes to covering part of the cost of production by paying bakers a monthly remittance. The amount paid is the product of negotiations between state officials and the Bakery Owners' Division at the Federation of Chambers of Commerce. These negotiations take into account the cost of subsidised flour covered by the state for *baladi* bread production and a small profit margin accorded to bakers to do this task. In 2013, *baladi* bread flour cost the government \$419/MT whereas it was made available to bakers for the equivalent of \$26.5/MT. At the same time the GASC paid licensed bakers \$18 to bake fifty kilograms of flour.¹³⁶

In theory, only bakeries with a baking licence from the MSIT can produce *baladi* bread. Prospective bakers send in an application form to the MSIT, these are then reviewed with reference to the location of the potential bakery. The MSIT takes into account the population count in the area, the number of bakeries available in that locality and the feasibility of transporting the *baladi* bread flour from mills or warehouses to the bakery. These licences are usually issued until the bakery is wound-up or if it is shut down for violating government regulation. Similarly, bakeries that already have a licence to produce *baladi* bread are subject to an annual review by the MSIT to determine their flour quotas with consideration to the above factors.¹³⁷

In actual practice, the system leads to competition amongst bakeries to obtain a licence. Prospective bakers fight for these licences by courting the local mayors and MPs in charge of allocating them in their locality.

Furthermore, bakeries are unevenly distributed across the country. Large urban centres like Cairo and Alexandria are supplied with flour quotas well above the national average of 3 loaves per day. In Cairo, for example, there are about 4 loaves of *baladi* bread available per capita whereas in some Lower Egypt governorates this figure decreases well below the national average (see Table 3 below).

136. On average the state pays 34 piasters to produce each loaf of *baladi* bread before selling it on the market for 5 piasters, a substantial burden particularly when one considers that 240 million loaves of *baladi* bread are baked daily. See: Hamza et al., 2013.

137. During this review the MSIT budgeted for a daily limit of 3 loaves of *baladi* bread per person.

This distribution is the combination of Egypt's history of urban provisioning and political economy. Traditionally, the state has sought to provide basic food commodities to a growing urban population that had migrated from the rural areas to the city and could no longer rely on producing its own food.¹³⁸ As a result, the state tended to prioritise the provision of subsidised bread in urban areas, as they could no longer bake their own bread using locally harvested wheat like their rural counterparts. However, Table 3 also tells another story. The stark contrast between Cairo (3.9 loaves per capita) and Bahariya (2.3 loaves per capita) tells of the success that urban bakers can have in influencing MPs to grant them licences compared to other cities with a large population basis.

Table 3. *Baladi* bread availability per capita (2004 and 2011)

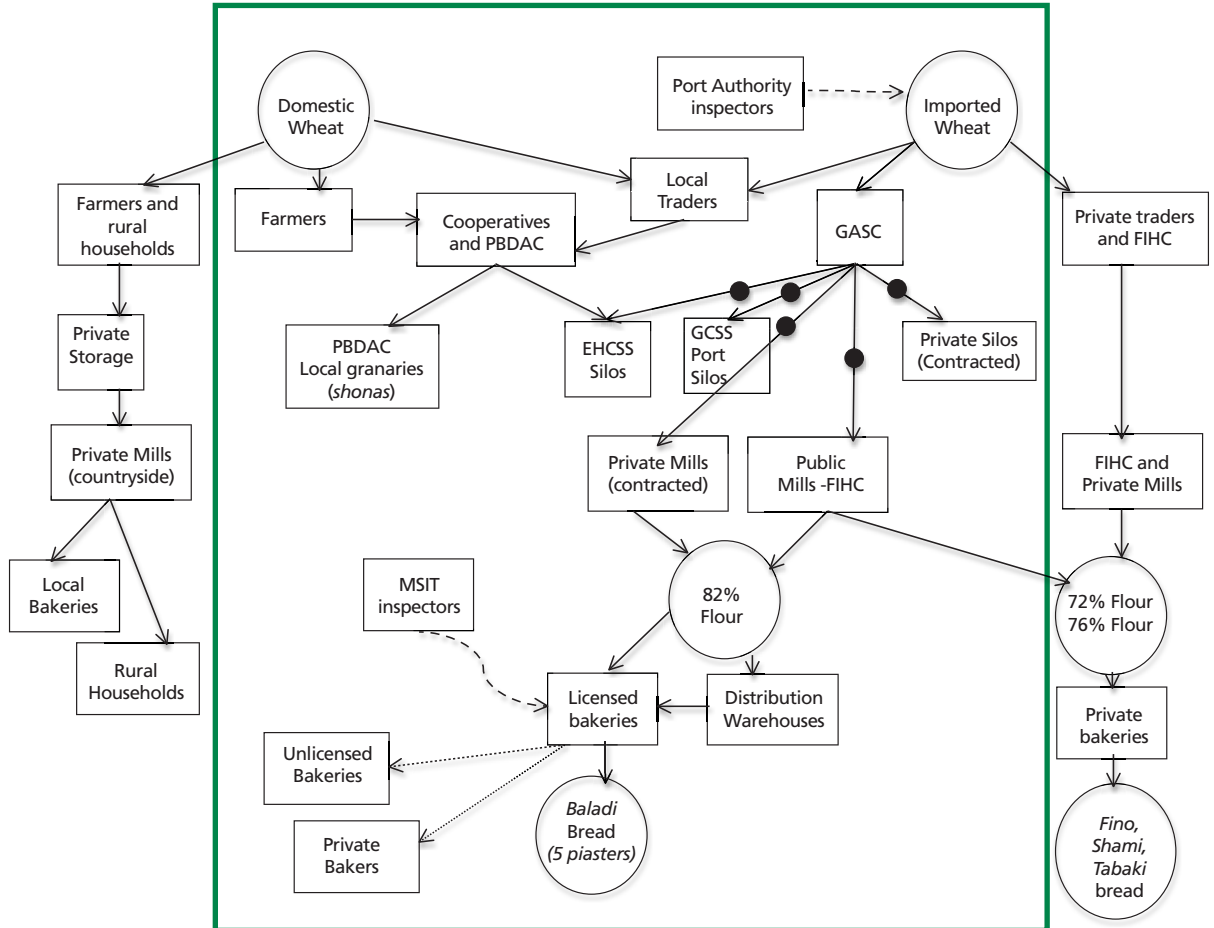
Province	2004			2011		
	Population census	Monthly volume of <i>baladi</i> bread flour (ton)	Average number of <i>baladi</i> bread loaves per capita	Population census	Monthly volume of <i>baladi</i> bread flour	Average number of <i>baladi</i> bread loaves per capita
Cairo	7,700,000	63,358.1	2.9	7,126,643	69,865.8	3.9
Helwan	-	-	0.0	1,827,147	17,987.1	3.6
Al Giza	5,600,000	40,943.0	2.5	3,321,805	25,827.4	3.3
6 October	-	-	0.0	2,779,225	18,568.1	2.8
Qalubiya	3,800,000	31,654.7	2.9	4,542,040	30,541.7	3.6
Alexandria	3,800,000	30,983.3	2.8	4,360,295	37,659.2	3.1
Matrouh	300,000	3,821.1	4.4	352,231	3,785.5	4.0
Bahariya	4,600,000	23,698.8	1.8	5,066,577	29,466.6	2.3
Gharbiya	3,800,000	21,420.7	2.0	4,259,378	25,599.1	2.5
Kafr El Sheikh	2,500,000	13,326.0	1.8	2,800,274	15,354.7	2.6
Al Manoufiah	3,200,000	18,010.0	2.0	3,492,819	22,193.1	2.6
El Dekhaliyah	4,900,000	26,382.0	1.9	5,336,650	29,565.3	2.4
Damietta	1,000,000	7,995.6	2.8	1,180,931	8,346.2	3.7
Al Shaqriya	5,000,000	26,898.3	1.9	5,731,138	34,400.3	2.8
Port Said	600,000	4,067.5	2.4	603,787	4,701.0	2.7
Ismailiya	800,000	8,283.2	3.6	1,027,822	8,143.0	3.5
Suez	500,000	4,334.0	3.0	549,337	4,818.6	3.0
Fayoum	2,300,000	17,766.1	2.7	2,717,681	21,998.6	2.9
Bani Sweif	2,200,000	14,390.7	2.3	2,466,935	17,942.4	2.9
Menya	3,900,000	27,858.5	2.5	4,471,406	33,013.1	3.1
Asyout	3,400,000	24,176.1	2.5	3,697,729	28,472.1	3.6
New Wadi	100,000	1,052.2	3.6	199,601	1,912.5	3.0
Sohaj	3,700,000	29,686.7	2.8	4,005,544	33,198.6	3.8
Qena	3,300,000	28,298.8	3.0	2,635,871	21,663.2	3.7
Al Aqsar	-	-	0.0	978,574	10,423.5	4.5
Red Sea	200,000	2,351.3	4.1	306,679	2,472.0	4.9
Aswan	1,100,000	12,799.9	4.0	1,256,255	14,155.1	3.0
North Sinai	300,000	3,958.0	4.6	373,752	4,945.0	3.1
South Sinai	100,000	896.8	3.1	154,927	1,325.0	3.0
Total	68,700,000	488,411.4	2.5	77,623,053	578,343.8	3.2

Source: Ministry of Supply and Internal Trade.

¹³⁸ See: Pamuk, 2004.

This chapter has focused on the various supply chain stages in the *baladi* bread subsidy system. Figure 7 below summarises this process from start to finish.

Figure 7. The *baladi* bread supply chain



CHAPTER 5: EMERGING MARKET
DISTORTIONS IN THE *BALADI*
BREAD SUPPLY CHAIN

“It is more reasonable to suppose a thing to have been invented by those to whom it would be of service than by those of whom it must have harmed.”

Jean Jacques Rousseau, *On the origin of inequality*, p.81.

The purpose of this chapter is to tease out market distortions that have emerged from the above study of the *baladi* bread supply chain. The discussion focuses on three key types of distortions – leakages, wastage and poor regulation – that have emerged from data and testimonies in the field. Each distortion looks at different factors that contribute to the misallocation of government resources in the bread subsidy system. The study of these market distortions will eventually underline the market pathologies that are inherent in the *baladi* bread subsidy system by narrowing down how each distortion occurs at various levels of the supply chain.

What emerges is that, as a result of these distortions, the entire *baladi* bread supply chain is being subsidised at the expense of the state. Bakers, millers, bakery inspectors, private traders and mayors all benefit from the rent process as a result of leakage, wastage and poor regulation in the system. Further, these distortions are closely linked to one another and contribute to spillover effects throughout the supply chain. That is, the poor storage of wheat is closely linked to the sale of subsidised *baladi* flour on the black market by bakers and millers as well as the bribes that are paid to bakery inspectors to stop them from reporting these practices to the MSIT.

5.1. Leakage

In this section, leakage is framed as the amount of subsidised *baladi* bread flour that is sold in unsubsidised markets by various actors across the supply chain. Leakage, unlike wastage, corresponds to a transaction between two parties that ultimately reduces the amount of resources made available by the state for the *baladi* bread system. In this instance, costs that are incurred by the state to finance the production of *baladi* bread flour will accrue to licensed bakery owners and millers that sell this commodity at a higher price on the black market. This type of distortion happens as a result of many incentives for intermediaries to circumvent state regulation.

The significant rate of leakage in the *baladi* bread supply chain (25-30%) is attributed to several incentives to bakers and millers. Firstly, the high price differential between subsidised (\$26.5/MT) and unsubsidised markets (\$160-\$294/MT) for *baladi* bread flour allows actors to recoup higher profits by selling part of their flour quota on the black market.¹³⁹ Secondly, the plethora of *baladi* bakeries spread across the country makes it difficult for the state to control the output of each individual bakery. In fact, upon visiting a licensed bakery, it becomes easier to conceive of why the leakage is so high and persistent over time.

Baladi bread bakeries usually consist of one or two small window shafts that bakers use to collect the money and sell the bread to customers. This layout is more common in some of the poorer neighbourhoods where people tend to queue for long hours to collect their bread.¹⁴⁰ However, it also allows bakers discrepancy with the amount of flour that they can smuggle on the black market away from the prying eyes of the public. These practices are perhaps best evidenced by the frequency of bread shortages in some localities that are often the result of bakers claiming that they have “run out of bread”.¹⁴¹

Thirdly, licensed bakers that were interviewed for this study did acknowledge these leakages, but they would not disclose the exact amount of the leakage and justified it rather differently, claiming that the subsidised *baladi* flour that is sent to them by the GASC is of inferior quality as a result of grit cross-contamination and the high presence of foreign matter caused by poor milling and storage standards beforehand. This meant that they were unable to abide by the government-mandated production rate of 10 loaves of *baladi* bread per kilogram of flour since they were forced to adjust the flour mix to be able to meet this standard.¹⁴² Subsequently, the reduced availability of flour quotas as a result of this process coupled with the low cost of production payments that are usually made by the GASC to licensed bakers reduces their profit margin.¹⁴³ This rationale is then used as a motive to set some of the *baladi* bread flour quota aside and to sell it on the black market.

Leakage in the *baladi* bread supply chain continues to persist on a large scale despite many attempts by the state and international organisations to reform the issue over time. Most notably, the recent effort by the Minister of Supply and Internal Trade, Dr Bassem Ouda, to penalise bakers for leaking flour onto the black market by establishing an oversight system that relies on the extensive network of the Muslim Brotherhood in local communities to monitor the inflow and outflow of flour from individual bakeries. This largely failed at the time as a result of strong opposition from the Bakery Owners’ Division at the Federation of Chambers of Commerce. In fact, the continuing inability of the state to adequately mitigate leakages on a national scale is because of the Bakery Owners’ Division’s strong bargaining to regulate *baladi* bread output as well as the state’s dependence on licensed bakers to keep local communities well supplied with *baladi* bread.

Given the above, *baladi* bread flour leakages at the bakery level constitute a key income source for many of the licensed bakers. The decentralised nature of licensed *baladi* bread bakeries and the lack of control by the state to enforce production quotas allows licensed bak-

139. Each loaf of *baladi* bread retails at 5 piasters (< \$0.01) in licensed bakeries, whereas non-subsidised *baladi* bread can fetch as much as 25 to 50 piasters on the open market. If it is assumed that each licensed bakery were to produce 10,000 loaves a day, the incentive to profit from the higher leaking flour onto the black market is more appealing, particularly considering the loose state oversight of this process.

140. The structure acts as a precautionary measure for bakers to better manage the crowd through one output channel and allows them to control sales and opening hours through a window slit

141. It would be wrong to assume that all licensed bakers smuggle part of the flour onto the black market, yet it is common practice amongst most of the actors in the supply chain and previous findings and testimonies in the field confirm that it significantly contributes to leakage in the system.

142. The statutory weight for one loaf of *baladi* bread is 130 grams and consists of a mixture of flour, yeast, water and bran.

143. Bakers would cite the increases in the energy and labour costs to make up for the loss of inferior quality flour. The added cost is not covered by the cost of production payment made by the state to bakers.

ers to divert part of their allocated flour quotas onto the black market to recoup the high price differential as additional revenue. In fact, up until a 2010 joint study by the World Food Programme and TNT, the MSIT was unaware of how significant the rate of leakage was in the *baladi* bread supply chain.

At the milling level, instances of leakage are less easily detectable but emerge through the role of the FIHC, the public holding conglomerate that mills around 70% of *baladi* bread flour through its seven subsidiaries.¹⁴⁴ Despite largely focusing on the public milling sector, the FIHC also has a small arm that operates in the private sector. A recent study by the French Agency for Development estimated that some 16% of the FIHC's activities are geared towards the production of unsubsidised flour varieties (e.g. *fino*, *shami* and *tabakki* bread) in the private sector.¹⁴⁵ Though these activities are less likely to be presented as fraudulent by the state – a majority shareholder in the FIHC – they pinpoint deep underlying governance issues in the subsidy system.

The FIHC's activities in the private sector provide an opportunity to extract rents when it comes into contact with its public domain component. There is a strong conflict of interest for subsidiaries and mills in charge of milling *baladi* bread flour as they are able to exploit this private-public nexus to distort the supply chain. On the one hand, FIHC-owned mills are able to skim off part of their allocated flour production to sell it in the private sector at a much higher price, similarly to the licensed *baladi* bread bakers. On the other, they can directly compete with private millers for a greater market share of unsubsidised bread varieties. Given how cheaply the FIHC procures wheat from the GASC for *baladi* bread production, its subsidiaries are in a unique position to absorb the cost and charge lower prices on the private market.¹⁴⁶ It is worth noting though that during this study, there were no recorded instances of the FIHC bridging the public-private nexus, yet testimonies from other actors suggest that this type of activity is quite common within the organisation.

Consequently, leakages at the milling level further contribute to the divestment of state resources away from the *baladi* bread subsidy and eventually affect the activities of licensed bakeries. The latter tends to follow suit to make up for the lower quality of *baladi* bread flour that they receive.

In the next section, I look at how wastage across the *baladi* bread supply chain reinforces these types of leakages.

5.2. Wastage

Wastage is another component of supply chain distortions that contributes to reducing the level of output available to the intended beneficiaries in the *baladi* bread supply chain. Here, wastage is understood to mean the amount of *baladi* bread, flour and wheat that fails to reach the end-consumer as a result of technical failures and bad policymaking. Similarly to leakages, this process appears to be prevalent at more than one stage of the supply chain, emerging during the storage of wheat, production of flour and sale of *baladi* bread.

¹⁴⁴. The FIHC is a fragmented public holding company, with seven subsidiaries controlling 126 mills. Instances of leakage in the supply chain that are discussed here in this section are most likely to occur at the milling level.

¹⁴⁵. See: Ayel et al., 2013 and Mansour et al., 2012.

¹⁴⁶. Chapter 4 has already detailed some of the inefficiencies in public sector mills, yet the high differential between subsidised and unsubsidised flour allows subsidiaries of the FIHC to absorb higher operating costs and compete with the private sector directly over the pricing of unsubsidised bread varieties.

Chapters 3 and 4 detailed how wheat that is imported for *baladi* bread production is stored in steel silos owned by public holding companies (the GCSS and the EHCSS), whereas the domestic wheat is lodged in local granaries that are owned by the PBDAC, an affiliate of the GASC. Steel silos are efficient and safe ways to store imported wheat, although some it is wasted in the transportation from ports to storage facilities, the total amount is negligible when compared to the amount of wastage that happens with the storage of domestic wheat.

Domestic wheat accounts for 40% of *baladi* bread production: the International Food Policy Research Institute estimates that for every 20 loaves of *baladi* bread produced, 8 are made of domestic wheat.¹⁴⁷ The procurement and bad storage of this wheat is a major contributor to wastage and other distortions in the supply chain. The nature of these local granaries as open-air facilities, *shonas*, that are poorly maintained with no flooring or roofing to properly store and protect the wheat, leads to grit cross-contamination caused by dust, sand and vermin that feed on it.¹⁴⁸

The structure and technology that is used in the milling sector is another contributor to wastage in the *baladi* bread supply chain.

As mentioned previously, the GASC relies on public and private sector mills to produce *baladi* bread flour. Private sector mills, which account for 14% of flour production, are regarded as more efficient and less labour intensive than their public sector counterparts. Private sector mills tend to operate on a smaller scale and use better technology (cylinder mills) to produce the flour.

Public sector mills that are owned by one of the seven subsidiaries of the Food Industry Holding Company (FIHC) – a public holding company with the GASC controlling the majority of the shares – account for 86% of the flour milled for *baladi* bread.

Despite attempts to reform these mills, the majority remain labour intensive, low yielding and reliant on conventional stone milling techniques. This milling method uses two flat stones to grind and crack the wheat kernel to release the flour and often leads to foreign matter (stone and debris) getting mixed in with the flour. Added to poor storage techniques, this means public mills are affected by frequent disruptions to repair and restore the mills. As a result of this, a portion of the allocated wheat is wasted, as it is deemed unfit for human consumption. In practice millers and bakers would “adjust” the low quality flour mix by adding in flour from other bags to be able to produce edible bread.

Although the GASC mandates high quality control requirements for the procurement of international wheat from abroad, it is yet to address the presence of foreign matter in the production of *baladi* bread flour. This problem largely persists because of the reliance on poor milling techniques to produce a large part of the *baladi* bread flour for the population. Stone mills that are unable to better sift the foreign matter from the mix then directly contribute to increasing the amount of wastage in the *baladi* bread supply chain. At this stage, no measures have been taken by the state to remedy or address this.

147. See Kherallah et al., 2002.

148. It is difficult to get an exact estimate of the amount of domestic wheat that is wasted, but previous studies have placed it between 13-15% of total wheat.

Finally, household wastage of *baladi* bread is the last component of wastage in the system. In 2006, the Egyptian Cabinet's Information Decision and Support Center conducted a comprehensive study to estimate the total amount of bread wasted by each household. They found that between 30% and 40% of *baladi* bread is thrown away at national level.¹⁴⁹ This type of wastage was in fact the result of poor targeting and bad policymaking by the state.

At a macro-level, the state's fiscal and pricing policy for the *baladi* bread subsidy are at odds. Since 1989, the price of one loaf of *baladi* bread has been fixed at 5 piasters, and yet, in 2014, the smallest available denomination in the Egyptian currency was 25 piasters. This policy has many ramifications at local level since it makes it difficult for consumers and sellers to comply with the state's daily limit of 3 loaves of *baladi* bread per person. Given the cheap price and low quality of the commodity, customers end up buying much more than they need to and disposing of the rest of the bread. In fact, one senior official at the GASC disclosed that the price of bread in Egypt is so cheap that the actual electricity cost one would have to pay to store it in the fridge is higher than the cost of the loaf itself.¹⁵⁰

In addition, the cheap (over-) procurement of bread on a national scale by consumers distorts a whole range of other products like animal feed. In some of the poorer urban neighbourhoods, many Egyptians rear their own domestic animals for household consumption. Yet, the cheap price of bread as well as the lack of restriction on how much each individual can buy results in a significant part of the "wasted" bread being diverted away as animal fodder.¹⁵¹ According to a study conducted by International Food Policy Research Institute, the average rural households fed 21.2% of its *baladi* bread to animals.

Wastage seems then to be a pervasive distortion in the *baladi* bread system, appearing at key levels of the supply chain. The poor storage facilities for domestic wheat gradually contribute to amplifying the amount of resources that are wasted from one stage to another. This process is also closely tied with leakages onto the black market that occur when bakers are often forced to make up for the inferior quality of flour by mixing in part of their allocated flour quota to produce edible *baladi* bread. In return, they set aside some flour for the black market to make up for the loss in income.

Consequently, the flawed assumption that Egyptians are the world's largest consumers of bread fails to account for the amount of bread that is wasted by households or diverted as animal fodder. Rather, *baladi* bread consumption in Egypt (in)directly affects many other processes of the economy. Animal feed and unsubsidised bread markets are an example of how distortions in the *baladi* bread supply chain can affect other commodities in the Egyptian economy.

5.3. Poor regulation

Poor regulation is the third and final type of distortions caused by the actions of various actors in the *baladi* bread supply chain. Unlike leakages and wastage, the poor regulation of this system generates distortions that are less reliant on price differentials and technology. Instead, they

¹⁴⁹ Egyptian Information and Decision Support Centre, 2011.

¹⁵⁰ Data from interview with a senior official at the GASC.

¹⁵¹ See: Kerallah et al., 2000, p.22.

are the product of perverse structural incentives and a failure to improve the transparency and efficiency of the *baladi* bread subsidy. In this section, the poor regulation across the supply chain is caused by government actors and institutions that fail to ensure the correct allocation of resources at different stages of the system. Instances of nepotism, corruption and bias in the administration of the *baladi* bread subsidy suggest a tendency for some actors to exploit their position in the system and seek out revenues for their own benefit. This is evidenced by bakery inspectors acting on behalf of MSIT, mayors and MPs in charge of allocating *baladi* bread licences and a number of private actors seeking to exploit loopholes between subsidised and unsubsidised bread markets.

Given the vested interests of these various actors, they are in favour of maintaining the status quo to fulfil their (non-)financial interests. Chapter 3 has already examined the role of bakery inspectors in great detail. As bureaucratic intermediaries they mediate relations between bakers and the state at a local level. Bakery inspectors act on behalf of the MSIT to ensure that licensed bakeries are complying with state regulation for *baladi* bread production. Although they are meant to be key actors in the subsidy's control regime, they actually end up taking part in activities that further distort the allocation of resources in the supply chain.

Bakery inspectors are in charge of reporting regulatory violations and complaints to their local office. For each reported fine, the inspectors are awarded a bonus of 25% of the value of the fine.

Previous sections have examined how bakers exploit their *baladi* bread licences to sell part of their subsidised flour quotas on the black market at a much higher price. Yet in order to avoid being reported to the MSIT and potentially lose their licence, bakers may bribe inspectors with a small share of the returns. This process is in fact fairly commonplace. Bakery inspectors, as low-ranking civil servants, have a strong incentive to accept the offered sum, which exceeds their monthly salary and provides a steadier source of additional revenue than the fine-based bonuses offered by the state.¹⁵²

In a sense, by partaking in this process, bakery inspectors perpetuate the leakages of *baladi* bread flour onto the black market and prevent the MSIT from getting a better grasp of actual *baladi* bread production. These mechanisms indirectly contribute to the persistence of distortions in the *baladi* bread supply chain and add in an extra layer of bureaucratic intermediaries that worsen the administration of the system. By accepting these bribes, bakery inspectors end up partaking in a system that favours maintaining the status quo and resisting any reforms that might curtail their income.

What is more, mayors and MPs indirectly contribute to distorting the *baladi* bread supply chain by exerting their power as political agents. As the upholders of *baladi* bread baking licences issued by the MSIT, they are in charge of selecting successful recipients within their province and governorate. On more than once occasion, interview testimonies revealed that some mayors and MPs use this process as a means of staying in power and ensuring their re-election. This hap-

152. Inspectors are paid \$37/month for their job, whereas interview testimonies suggest that they can get as much as triple that amount through bribes from bakers. See Chapter 3 for more details.

pens by reaching an agreement with prospective licensee *baladi* bakers to support their political party and ensure their re-election during the next election cycle.¹⁵³ The basis of these transactions is attributed to the lucrative rents that licensed *baladi* bakers can extract if they are successful in gaining a licence and the strong bargaining power that mayors and MPs have in granting them.

This approach to allocating licences is another contributor to the poor regulation in the *baladi* bread subsidy. As opposed to having tenders where bakers can openly compete to win these licences, local mayors and MPs are able to manipulate the issuing of licences to fulfil their own ends. Although it was not clear whether they extracted any financial rents from this process (*i.e.* bribes), they were successful in mobilising resources that could indirectly ensure that they remained in power. Therefore, the licence-issuing process managed by local mayors and MPs appears to be biased and linked to their own political interests.

More importantly, it also contributes to the endurance of the political process through the re-election of public officials with a vested interest in preserving the current way in which licences are allocated for *baladi* bread production.

5.4. Discussion

In light of these distortions, the state has tried to resolve some of the issues pertaining to leakage, wastage and the poor regulation of the *baladi* bread subsidy. There have been many initiatives over the years to reform and adjust the system, be they policy recommendations, technical improvements or structural changes.¹⁵⁴ Yet despite these advances, many of the above-mentioned distortions persist on a national scale. Two notable case studies uncovered during fieldwork are mentioned in appendix A.2. These provide an example of where problems inherent in the *baladi* bread supply chain were solved at a national and local level.

In fact, there is no shortage of publications on radical reforms of the *baladi* bread supply chain by the state and international organisations, yet most of these projects remain confined to the cabinets of Egyptian ministers, waiting to be implemented.¹⁵⁵

The conventional narrative attributes the endurance of these issues to precautionary measures by the state to avoid altering the system at the risk of upsetting the population and causing a recurrence of the 1977 bread riots.

However, after considering some of the micro-details in the *baladi* bread subsidy, the stagnation in reforms can be better explained using political economy. The findings in this chapter have pinpointed the nature of vested interests in the system. Rather than fearing a reprisal from the population, the state is in fact dependant on the actions and power of intermediaries administering the system on its behalf. The next chapter will closely link these distortions to broader notions in the political economy literature.

153. Bakers would use different means to demonstrate their allegiance and endorsement for a particular political party. During some of the field visits to bakeries, it was easy to discern a picture of the head of the party or their political representative in government hanging on one of the walls. I was also told that many of the bakers advocate for the party's political candidates in the lead-up to the elections.

154. These reforms include the semi-automation of all *baladi* bread bakeries in 2009, abolition of the *fino* and *shami* bread varieties from the state subsidy system and the fortification of *baladi* bread with additional nutrients and vitamins.

155. See: World Bank, 2012; World Food Programme and TNT, 2010; Kherallah et al., 2000; and Information and Decision Support Centre, 2011.

CHAPTER 6: THE POLITICAL
ECONOMY OF THE *BALADI*
BREAD SUPPLY CHAIN

CHAPTER 6: THE POLITICAL ECONOMY OF THE *BALADI* BREAD SUPPLY CHAIN

“Find out the cause of this effect,
Or rather say, the cause of this defect,
For this effect defective comes by cause.”

Shakespeare, *Hamlet Act II, Scene 2*

Previous chapters have unpacked the roles (Chapter 3), functions (Chapter 4) and distortions (Chapter 5) associated with the operations of the *baladi* bread subsidy regime. Key emphasis was placed on identifying actors at each step of the supply chain. This shed light on how the incentives of various actors are structured and how they derive rents from the system.¹⁵⁶ The institutional details that emerged at the micro-level revealed new insights into the behaviour of a small group of intermediaries in the system and the potential opportunities for distortions to occur. The impetus behind the analysis is the staunch opposition of some of these intermediaries to any reforms that would jeopardise their source of rents, as was seen with the *baladi* bread reforms initiated by President Morsi’s cabinet in early 2013.

Typically, subsidy reform is framed within the broader narrative of the politics of the consumer in the sense that subsidy reform will harm the final consumer and can, therefore, be politically costly.¹⁵⁷ However, the study of the entire *baladi* bread subsidy regime gives nuances to that and brings in the politics of the intermediaries as insiders that are resistant to reform. Each intermediary benefits from the subsidy regime either legally, through supply chain operations, or illegally, through distortions in the supply chain. These benefits can be studied in the framework of rents and development from the political economy literature.

The objectives of this chapter are then twofold: the first section looks at how the broader political economy literature, in particular, that on rent-seeking, helps to explain the operation of the *baladi* bread regime. The second section will then consider ways in which the subsidy regime may feed back into the broader political economy of Egypt.

A political economy angle is an opportunity to study the *baladi* bread supply chain by focusing on non-obvious factors that can throw up more details on the nature of the reform process. The detailed study of the system revealed how the *baladi* bread subsidy is guided by the interests and incentives of intermediaries throughout the supply chain.

156. In standard economic theory, “rent” is defined as the receipt of payment from unearned income streams.

157. See: World Bank, 2012; World Food Programme, 2010; Poulin et al., 2002; Kherallah et al., 2000; Omran, 1997.

These intermediaries sought to maintain administrative arrangements to sustain their rent streams. In this sense, the state subsidises not just the final product – the *baladi* bread – but also the entire supply chain, which effectively makes intermediaries in the system important beneficiaries of the subsidy regime.

The political economy behind resistance to subsidy reform is then best understood by a detailed study of the interests and incentives of the actors partaking in rent-seeking activities at each stage of the *baladi* bread supply chain.

By looking at the *baladi* bread system in a detailed fashion, the research findings in this book provide a more differentiated view of reality and the world of intermediaries in the supply chain. This process provides a new window into understanding the resistance to large-scale subsidy reforms in Egypt. The findings on rentierism and complex institutional structures support the insights from the modern political economy analysis by Douglas North (1991, 2009), Acemoglu and Robinson (2006, 2008) and Paul Pierson (2004).

In a way, the operations of the *baladi* bread supply chain are akin to the makeup of the proverbial onion, where multiple layers need to be peeled back to reveal the inner complexity and workings of the system. In fact, as one peels off these layers, a larger and more complex world of intermediaries emerges.

The remainder of the chapter is structured into two sections: the first part looks at rent-seeking behaviour in the *baladi* bread regime and the second part situates the reforms of the *baladi* bread subsidy within the broader political economy of Egypt.

6.1. Rent-seeking in the *baladi* bread regime

The case of the Egyptian *baladi* bread subsidy is archetypal of rent-seeking behaviour. In this instance, rent-seeking emerges from a wide range of profitable economic activities in the system. This section consolidates rent-seeking behaviour in the *baladi* bread supply chain by bringing in two forms of distortions studied in Chapter 5 – leakages and poor regulation. These rents occur as a result of strong incentives for actors to exploit price differences for subsidised and unsubsidised goods in the system and the lack of control by the state over their activities. The analysis is structured into two groups: rent-seeking by intermediaries through leakages in the supply chain and rent-seeking by intermediaries as a result of poor regulation. At the end of the section, the incentives and functions of intermediaries are linked with the broader rent-seeking literature in political economy.

It is worth emphasising that the total number of intermediaries is in fact larger than those that I have included here. This chapter only provides a subset of rent-seekers in the *baladi* bread supply chain, as I was limited by time constraints and the breadth of fieldwork data. Table 4 sums up this process by providing a typology of actors in the supply chain and their rent streams. Future research avenues can use this table to examine similar distortions through the role of other intermediaries in the system. This is just the tip of the iceberg.

6.1.1. Rent-seeking through leakages

The first subset of rent-seekers is a group of intermediaries that diverts resources to supplement their income streams through leakages. This group consists of licensed *baladi* bread bakers and millers that would skim off part of their allocated flour quotas to sell it in unsubsidised markets. The incentive to do so is evidenced by the sharp differential between the price of subsidised flour (\$26.5/MT) and the estimated price of flour on the black market (\$160-294/MT). Also the low cost of production payments that are made by the state to sustain the economic activities of bakers and millers coupled with deliveries of low quality wheat and flour impinge on their production quotas.¹⁵⁸ These incentives then create a space for licensed bakers and millers to engage in rent-seeking behaviour.

As a result, a non-negligible portion of the produced *baladi* bread flour fails to reach the end consumer.

Importantly, the heavy reliance of intermediaries on such rent streams creates a substantial social loss in communities that are reliant on supplies of cheap *baladi* bread. The common sight of long bread queues in poor urban neighbourhoods and their propensity at times to break out into violent protests is a testimony to how rents sought by non-targeted beneficiaries can exclude the actual beneficiaries – the end consumer – further down the supply chain.

Leakages caused by the licensed *baladi* bread bakers and millers of *baladi* flour thus testify to how the state's resources for the subsidy can be misappropriated for other purposes. The high price differential, poor policymaking and lack of oversight by the state are all factors that contribute to exacerbating leakages in the *baladi* bread supply chain. The next section turns to rent-seeking behaviour as a result of poor regulation in the system.

6.1.2. Rent-seeking through poor regulation

The second group of intermediaries endemically exploits poor state regulation to seek out rents. Bakery inspectors, mayors and MPs and private traders make use of discretions and distortions inherent in the *baladi* bread system to divert resources. Each group is examined separately below.

Bakery inspectors

Bakery inspectors acting on behalf of the MSIT are part of a larger bureaucratic apparatus engaged in monitoring the *baladi* bread supply chain. In this instance, they have a strong incentive to allow bakers to leak *baladi* bread onto the black market in exchange for a bribe that compensates for their government salary as low-ranking civil servants. Fieldwork data in Chapter 4 has revealed that inspectors would willingly waive some of the illicit practices by licensed bakers in exchange for a financial sum. The loose state oversight of their activities coupled with their authority to strip *baladi* bread bakers of their licence by reporting them to the MSIT puts them in a stronger position to negotiate bribes in their favour.

¹⁵⁸. In 2013, the state agreed to pay licensed bakers \$18 to process 50 kg of flour into *baladi* bread – well below the potential rents that they could generate from sales of flour on the black market.

By doing so, bakery inspectors end up partaking in a process that perpetuates the leakage of *baladi* bread flour onto the black market, whilst simultaneously manipulating loopholes left by poor state regulation to extract additional rents. The alleged cost allocated by the state for bakery inspectors to check licensed *baladi* bread bakers is then wasted and further contributes to multiplying distortions in the system.

Mayors and MPs

Local mayors and MPs also exercised their discretionary powers in influencing the allocation of *baladi* bread licences to prospective bakers. As discussed in the poor regulation section of Chapter 5, licences were allocated to prospective *baladi* bread bakers who would vote for the mayor or MP's political party in the next election campaign. The analysis suggested that the successful provision of licences to bakers is linked with political favours by government bureaucrats looking to remain in power. This kind of behaviour confirms that mayors and MPs are privileged insiders in the *baladi* bread system that can misuse their state functions to support their leadership through the preferential allocation of licences.

Basically, the Egyptian political class is also one of the key beneficiaries of the *baladi* bread subsidy. The control by mayors and MPs of licence allocation further explains why it is politically difficult to implement radical reforms to the system. Should they lose their discretionary power in this process they would risk not being re-elected again. This point further reinforces the initial argument that reforms to the *baladi* bread supply chain go beyond the politics of the consumer. Rather, they are also contingent on the politics of intermediaries like mayors and MPs in the system.

Private traders

Finally, private traders that buy up domestic wheat from local farmers and transport it to government-owned storage facilities are another type of rent-seekers in the *baladi* bread supply chain. These traders exploit the higher price incentive offered by the state to wheat farmers by acting as intermediaries between small landholders and the state. In their capacity as carriers of the domestically produced wheat, they offer the farmer a buying price to transport part of the harvest to open-air facilities. More often than not, the selling price is lower than the marketed price by the state. That is because private traders can favourably negotiate with farmers who would otherwise lack the means to transport the wheat harvest to the state's granaries. This process persists as a result of mandatory state policy for domestic wheat producers to deliver the wheat in order to recoup the higher price incentive.

By operating in a largely uncompetitive local environment, private traders are able to make use of this policy to generate additional rents from the system. Their activities then disenfranchise many of the intended beneficiaries of the incentives put in by the state to increase local wheat production.

Moreover, just as private traders facilitate the transport of domestic wheat, they also draw in additional rents by padding the local harvest

out with cheaply imported wheat from abroad.¹⁵⁹ Between the fields and granaries, private traders maliciously inflate the volume of the harvest by mixing in imported wheat to claim the price premium offered by the state for domestic wheat. Any reform process to the procurement of domestic wheat would have a direct impact on these private traders' income streams.

Although a wide range of reforms have been contemplated at various points to deal with these distortions, they still largely persist across the system. The analysis in fact proves that intermediaries have their own incentive function which often militates against a radical reform of the *baladi* bread system. In order for any reform to succeed it needs to first compensate the rent-seeking intermediaries, otherwise it will be very difficult to implement. This further reinforces the narrative that changes to the *baladi* bread process are underpinned by the politics of intermediaries rather than the conventional narrative focusing on the politics of the consumer in the broader literature.

Based on the above factors, it is clear that all of these intermediaries have a vested interest in preserving the status quo. Some of them are also better mobilised politically (bakers through the Bakery Owners' Division), others are political insiders (mayors and MPs) and some others are well-entrenched bureaucratic intermediaries who control the supply chain (inspectors, private traders). All of these actors are likely to be net losers from any significant reform of the subsidy system. Indeed, that is why such reform is absent despite frequent promises to carry it out.

The combination of these processes therefore highlights why large-scale reforms of the *baladi* bread supply chain have failed to materialise over the years. The sale of *baladi* bread flour on the black market suggests that rents are solicited by specific intermediaries – licensed bakers and millers – to sustain their economic activities. Similarly, the links between bakery inspectors, mayors, MPs and private traders and other actors in *baladi* bread supply chain suggests a classic patron-client relationship that is inherent in rent distribution mechanisms seen in the works of Gordon Tullock (1967) and Anne Krueger (1974) in the rent-seeking literature.

159. As noted in previous chapters, the cheap wheat does not need to conform to the state's strict requirements and standards. Low quality wheat can be procured much more cheaply and marketed as locally produced wheat by these traders.

Actors	Source of Rent Streams
Licensed <i>baladi</i> bread bakers	Sales of <i>baladi</i> bread flour on the black market.
Millers of <i>baladi</i> bread flour	Sales of <i>baladi</i> bread flour on the black market.
Bakery inspectors	Bribes from <i>baladi</i> bakeries caught leaking flour onto the black market .
Mayors and MPs	Bakery licences for prospective bakers of <i>baladi</i> bread.
Private Traders	Transport of domestically grown wheat from smallholders to the state's granaries. Sales of cheaply imported wheat that is marketed as local wheat.
Global Authority for Supply Commodities (GASC)	Rents from wheat exporting countries as well as issuing tenders to export wheat from other countries.
Food Industry Holding Company (FIHC)	Rents from colluding private and public sector activities.
Port Authority	Rents from firms to smuggle low-grade wheat into Egypt.
Wheat inspectors	Bribes from millers caught mixing subsidised and unsubsidised wheat quotas.
Senior political bureaucrats	Rents from preferential allocation of quotas to companies where they are major shareholders.
Military	-

Table 4 above provides a typology of actors and their associated rent streams. There are still many black boxes and I have highlighted actors that have been considered in detail in this book. Additional research can examine any of the other intermediaries in the supply chain and how they play a part in distorting the system.

In their capacity as powerful intermediaries, bakers, millers, bakery inspectors, mayors, MPs and private traders confirm how the process of unpacking the *baladi* bread subsidy can contribute to a new understanding of the political economy factors behind resistance to subsidy reforms. Rent-seeking behaviour by various actors in the supply chain becomes a key part of the problem inherent in the *baladi* bread subsidy regime. The next section looks at how the broader literature on rent-seeking in political economy can help better frame this debate.

6.1.3. The *baladi* bread subsidy and the broader rent-seeking literature

Notions of the *baladi* bread subsidy regime can be studied through the lens of political economy. In that case, rent-seeking constitutes a more encompassing framework to link the roles and functions of intermediaries in the *baladi* bread supply chain with notions of rentierism in the literature. Seminal authors in the field like Gordon Tullock, James Buchanan and Anne Krueger provide the backdrop to studies on rent-seeking in the broader political economy literature.

Rent-seeking is a key analytical framework within political economy. It is premised on unearned income streams (i.e. rents) that accrue from the diversion of resources as a result of a more privileged access to the system. The starting point of this literature is often considered to be Gordon Tullock's paper on the "Welfare costs of Tariffs, Monopolies and Theft" in 1967. Also, Anne Krueger's (1974) seminal study on how rents were earned in India and Turkey provided the descriptive term "rent-seeking" for the first time in the political economy literature.

Tullock and Buchanan's (1980) work placed key emphasis on how certain kinds of policy distortions create deadweight losses from the fact that resources have been diverted to an unproductive activity. These early rent-seeking analyses measured social losses from public policies and monopolies. Distortions emerged from rent-seeking behaviour where in the process of investing resources to get a more privileged access to the system, actors created a social loss. Furthermore, in the context of industrial policy in developing countries, Anne Krueger's research noted that rents from import quotas attracted rent-seeking behaviour to create monopolies.

The general insight evidenced by Tullock, Buchanan and others demonstrated that these losses are equal to the profits generated by those that end up obtaining a more privileged access to the system. Subsequent research by Krueger and others affirmed that rents do not actually impose a net social loss on society. Rather, the wealth only shifts from the consumer to the monopolist. In that case, the leakage of *baladi* bread flour shifted the loss of resources from the consumer to the baker or miller.

Rent-seeking is problematic because when a process of quota allocation is in place, considerable investment is made towards unproductive activities that are trying to get access to those quotas. A similar logic was seen with the structure of incentives and functions of mayors, MPs and private traders in the *baladi* bread subsidy as discussed above. The broader rent-seeking literature can then help better inform of the stagnation of reform throughout the supply chain.

The next section now moves on to link the *baladi* bread subsidy programme with the broader political economy of Egypt.

6.2. The impact of the *baladi* bread subsidy on the broader political economy in Egypt

As the above discussion suggests, there are multiple types of rent-seekers in the *baladi* bread supply chain. Each of these actors has their own objective function and an interest in preserving the status quo in the system. This unpacking of the supply chain thus provides a new window into understanding the resistance to large-scale subsidy reform in Egypt, yet it seems that the *baladi* bread subsidy shares many features with the Egyptian political economy. In a way, Egypt's *baladi* bread subsidy can be viewed as a microcosm of what is wrong with the country's political economy.

Just as the *baladi* bread subsidy regime is shaped by Egypt's wider political economy, the way in which this subsidy regime operates can shape, in turn, the political landscape of Egypt. The inability of political leaders to grapple with this issue and improve the state of the *baladi* bread subsidy suggests stronger undercurrents that go well beyond the risks of social unrest and widespread hunger.

The pathologies of the Egyptian state are very evident in the operation of the subsidy regime: a centralised state structure, bloated public sector, pervasive regulatory controls, the discretionary role of bureaucratic intermediaries and anti-competitive market practices.¹⁶⁰ Perhaps the underlying role of intermediaries in the *baladi* bread system can be best summarised by describing a visit to the MSIT headquarters in Cairo, the central organisation in charge of administering the subsidy. The derelict building reminiscent of the typical Soviet-style architecture from the 1950s sits on a crowded street in central Cairo. The expanse and breadth of the structure typifies the role of the state as a dominant economic player and the largest employer in the country, as envisioned by members of the Nasserist cabinet long ago.¹⁶¹ In fact, in 2014, the Egyptian state still **remains** the largest employer in the country with slightly less than 10% of the population (about 7.94 million) employed in various public sector activities.

Somehow, much of what ails Egypt seems to converge in the story of subsidised bread. It speaks to a state that is in many ways stuck in the past, struggling to pull itself into the future, unable or unwilling to conquer corruption or even to persuade actors to care about social gains. Maintaining the status quo rather than economic reforms is seen as the fundamental measure of success for many of the intermediaries in the system. Any attempt at reform is usually avoided or resisted by those who adhere to this measure.

¹⁶⁰. For a more detailed view on the political economy of Egypt see: Sullivan, D.J. "The Political Economy of Reform in Egypt", *International Journal of Middle East Studies*, vol.22, 1990, pp.317-334.

¹⁶¹. Upon arriving, visitors are greeted by two security guards at the gate where they are asked to show some form of identification and disclose the name of the person they are meeting. Then another doorman greets the guest by the entrance of the building to guide them through the maze of halls and offices in the MSIT. The minister's office is located on the fourth floor. A third doorman asks the visitor the purpose of their visit and their scheduled meeting time with the minister. They are then escorted to a waiting room where they find three employees overseeing the affairs of the minister's assistant. And what is more, the role of one of the employees in that room solely entails overseeing the work of the other two.

This underlying resistance to reform then highlights the vagaries of continuing economic crisis and misguided government policies that continue to stunt growth or any attempts at reform of the Egyptian economy.

For instance, between March and June 2013, riots and shortages across Egypt were linked with resistance by bakeries to some of the reforms implemented by the Minister of Supply and Internal Trade to restrict leakage and wastage. The new measures relied on the extensive network of the Muslim Brotherhood in local communities to monitor the activities of bakers. The inability of President Morsi's cabinet to remediate these riots and bread shortages eventually fed into the political temperature that culminated with the interference of the army to depose the president from power in July 2013. These episodes, amongst others, suggest that the *baladi* bread subsidy can play a role in shaping the political landscape of Egypt.

The complex structure of the *baladi* bread supply chain revealed that some intermediaries can block operations and attempts at reform. Although the state may appear to be in charge of a command and control economy where it sets the prices, quotas and licences for *baladi* bread production, it is in fact dependent on an interlocking web of interests that goes well beyond the control of political administrators.

Arguably all of these actors are engaged in the rent-seeking behaviour, yet they have different levels of power across the supply chain. This is significant from a political economy standpoint because the proliferation and subsistence of the above activities over time reinforces the role of select intermediaries as rent-seekers with substantial bargaining power at various stages of the system. More importantly, the way in which the terms are set suggests that only a small group of intermediaries ends up becoming the primary recipient of the state's support and resources.

Evidence from fieldwork data suggests that bakers are one type of actor engaged in differential bargaining power. The formation and existence of the Bakery Owners' Division at the Egyptian Federation of Chambers of Commerce continues to represent the interest of private, licensed *baladi* bread bakers. The division frequently negotiates with the state to agree on a reasonable cost of production payment to cover some of the economic activities of licensed bakeries.¹⁶² However, the recent failure of the former Minister of Supply and Internal Trade, Bassem Ouda, to implement a monitoring system that would ration the supply of *baladi* bread according to a smart-card system suggests otherwise. The state faced a backlash from the Bakery Owners' Division which threatened a nationwide bakers' strike unless the state backed down on its programme. This episode from February 2013 suggests that the state remains heavily dependent on the services of licensed *baladi* bread bakers to keep the population well supplied. The strong bargaining power of bakers allows them to better articulate their interests and preserve the status quo whereas the state struggles to stop them from overriding the market and diverting resources from the *baladi* bread system.

This is an area that merits additional research beyond this book, and the above paragraph identifies how some intermediaries can thwart reform. However, the jury is still out on how their bargaining power can vary with other actors.

162. State-owned bakeries can only cater for about 40% of the demand for *baladi* bread. The rest is relegated to privately-owned bakeries with a licence to produce *baladi* bread.

Finally, the study of rent-seeking behaviour in the *baladi* bread system provides a better sense of the loss borne by society. The original budgeted amount for the subsidy (\$3.1 billion) is in fact much lower when taking into account the distortions in the system. It would be difficult to get an accurate estimate of the actual cost of the *baladi* bread subsidy. However, the additional resources that are invested in selling *baladi* bread flour on the black market, bribing inspectors or obtaining licences contribute to further increasing the actual cost of the subsidy. The knock-on effect of this on the rest of the economy suggests a more nuanced reality for rent-seeking and income generation in Egypt. Future research avenues can then use this example to look at the broader structure of rent-seeking and incomes in Egypt.

By shedding light on the power of these intermediaries across the supply chain, it is easier to grasp how the *baladi* bread subsidy regime has exhibited tremendous path dependency and remained resistant to any radical changes over time.¹⁶³ The underlying distribution of decision-making power is concentrated amongst a select group of actors in the system that can then control how rents are administered at each stage. The emphasis on rents and reforms here is essentially the study of violence and social order frameworks made by Douglass North, John Wallis and Barry Weingast (2009). In their book of the same name, they emphasise the relation between rents and development.¹⁶⁴

In a sense, the functioning of the *baladi* bread subsidy regime conforms to their description of a “limited access order” since there are insiders who benefit from the system.¹⁶⁵ The reason the whole *baladi* bread supply chain links together on a day-to-day basis is because each of those intermediaries has a continuing interest in ensuring access to those rent streams. Rent-seeking intermediaries that are studied in this chapter can then be regarded as rent coalitions, striving to preserve the status quo and adding up the transaction costs of the system.

The above discussion clearly reinforces a classical political economy insight that good economics may not always be good politics. This chapter and the book as a whole have more broadly shown that the politics of the *baladi* bread subsidy go beyond the concerns of consumers alone. In fact, they are surrounded by a whole range of intermediaries that act as rent coalitions, obstructing reform. The *baladi* bread subsidy regime can be seen as a microcosm of the Egyptian political economy. The study thus provides a neat window into understanding the broader underpinnings of the centralised state structure, bloated public sector and pervasive regulatory controls.

163. Path dependence is understood in the sense that certain socioeconomic outcomes are contingent on particular events from the past that themselves need not have occurred.

164. Violence and social orders is a conceptual framework that examines the logic of the social order in societies. It considers the interest of elites in power and their access to rent through limited access to activities, organisations and privileges. This group constitutes a coalition that limits access to both the political and economic system through rent-seeking behaviour. Because these rents are reduced if violence breaks out, rent-seeking then enables elites to credibly commit to each other to limit violence.

165. For a description of limited access orders see North et al., 2009, p.21.

CONCLUSION

CONCLUSION

**“There is a wealth of statistical material
on the Egyptian economy, but little is usable without
much processing and elaboration.”**

Robert Mabro, *The Egyptian Economy 1952-1972*, p.12

The objective of this book was to conduct a micro-level study of the Egyptian *baladi* bread subsidy system and to identify the vested interests of multiple actors in the supply chain. The study unmasked the multiple and often conflicting interests of different actors across the supply chain, where notions of power and rent-seeking were directly and indirectly implicated in the smooth functioning or distortion of the system.

These activities were best understood in terms of the leakage, wastage and poor regulation of the *baladi* bread system where the economic and political incentives of different actors in the supply chain would divert resources away from the intended end-user. Intermediaries such as bakers, millers, private traders, mayors and bakery inspectors amongst others, would affect the distribution and generation of rents across the supply chain using their bargaining power to influence outcomes. This process thereby obstructs any attempt to radically reform the subsidy system in a way that would impact the interests of these intermediaries. Therefore, the working of the *baladi* bread supply chain is dependent on the political agreement reached between intermediaries and the state in order to administer the subsidy, but equally, whenever the interests of these intermediaries are at risk, they are able to disrupt the system.

The close scrutiny of intermediaries in supply chain processes governed by the state's finances had a major bearing on the functioning of the *baladi* bread subsidy. It demonstrated an apparent disparity in how different actors' interests and incentives manifest at each stage of the system. In fact, it was through the exerted power of a small group of intermediaries that rent-seeking emerged within the system. The advantage of using a political economy approach is that it allowed me to identify the intermediaries that could potentially lose out in any reform process to the supply chain. The actors that were selected and studied here represent a preliminary picture of how intermediaries seek out rent streams in the *baladi* bread supply chain. Future research can look into how other intermediaries exert similar functions across the supply chain.

The empirical data was built around the analysis of publicly available documentation and archival data as well as interviews with different actors in the *baladi* bread system. The research results and analysis offered four contributions to the political economy literature on state-based subsidy systems. Firstly, they demonstrated a more differentiated and nuanced understanding of the supply chain, resulting in a clear identification of actors and their incentives at each stage in the system. Secondly, they provided one of the first systematic case studies of the structure of rents by unlocking distortions in relation to leakage, wastage and poor regulation in the *baladi* bread supply chain. Thirdly, they uncovered how the power of a small group of intermediaries allows for these distortions to persist by maintaining the status quo and resisting large-scale reform to the system. Finally, after gaining a clear sense of distortions in the *baladi* bread subsidy scheme, it emerges that the system is distorting a whole range of associated products by relying on artificially low prices. The price of one commodity leads to negative spillovers in the Egyptian economy. All of this is shown by the fact that resources that were initially meant to subsidise the final product – *baladi* bread – ended up subsidising the entire supply chain and distorting the local market in this process. Ultimately, these contributions also highlight the need for finer detail and disaggregate work in the area of food subsidy systems.

Although the discussion in this book tries to deal with many of the issues associated with the public provision of subsidies and, in particular, the *baladi* supply chain it also raises many more for the next stage of my research. One of the significant limitations of this study was the urban bias throughout my data collection process. Most of the interviews conducted were clustered around Cairo and Alexandria and hence it was difficult to more critically evaluate the functioning of the supply chain in more rural settings such as in cooperatives, villages and farms. Yet, the objective of this study was not to gain good geographical coverage of the *baladi* bread system but rather, to gain a better understanding of different supply chain elements. Given that the *baladi* bread system is a heavily centralised state endeavour, there was bound to be a bias towards the larger cities and ports where important supply chain processes also take place.

Egypt is a key player on the international wheat market as the world's largest importer of wheat, and so global suppliers of wheat have a stake in the functioning of the *baladi* bread subsidy. Besides which, the fluctuation of international market prices is contingent on the demand of the state and private sector for wheat imported from abroad. These dynamics add in a geopolitical dimension to the *baladi* bread debate, one that goes beyond Egypt's borders where other countries and organisations can better inform this process.

With regard to theoretical frameworks, Chapter 6 mentioned how the *baladi* bread supply chain exhibits path dependency characteristics to explain the persistence of distortions and the resistance by powerful intermediaries to reform of the system. Yet this does not help explain the continuity of the system in the midst of change, particularly after the social unrest of the January 25th 2011 uprising.

This process can be better understood by bringing in notions of *de jure* and *de facto* power from New Institutional Economics which can help

better explain the persistence of the status quo in the *baladi* bread supply chain. The distinction between different types of power amongst intermediaries in the system is then directly relevant to how economic and political resources can be used to manipulate certain outcomes and allow distortions to occur.

This study of the Egyptian *baladi* bread subsidy was a concerted effort to unpick the micro-dynamics and differentiated realities of the system on the ground to better inform about the political economy of Egypt through the lens of state-administered subsidies.

In the next stage of my research, I aim to focus on the collective action capacity of actors in the supply chain and to more closely examine the power linkages between rural and urban actors. In addition, I plan to look in more detail at the nexus between private and public enterprises so as to gain a better understanding of additional distortions to the *baladi* bread supply chain.

APPENDICES

APPENDICES

A.1. List of interviewees

Organisation	Role	Interview date(s)	Format
Ministry of Foreign Affairs	Former Deputy Minister	28/06/2013	In person
Egypt National Competitive Council	Director	17/07/2013	Email
Lebanese Embassy in Cairo	Ambassador	17/07/2013	In person
Ministry of Foreign Affairs	Former Ambassador to Ukraine	22/07/2013	Phone
Food and Agriculture Organization	Regional Director	23/07/2013	In person
Food and Agriculture Organization	Country Representative	23/07/2013	In person
Egyptian Initiative for Personal Rights	Head of Social and Economic Research	22/07/2013, 25/07/2013	In person
Ministry of Foreign Affairs	Deputy Spokesperson for the Ministry	04/08/2013	Phone
Australian Embassy in Cairo	Ambassador	05/08/2013	In person
Ministry of Supply and Internal Trade	Former Minister	05/08/2013	In person
Ministry of Supply and Internal Trade	Assistant to Current Minister	13/08/2013	In person
Cairo University	Professor of Political Economy	17/08/2013	Phone
Thomson Reuters	Reporter	20/08/2013	Phone
World Bank	Senior Agriculture Economist	21/08/2013	Phone
Economic Research Forum	Research Fellow	16/12/2013	In person
American University, Cairo	Associate Research Professor	16/12/2013	In person
Egyptian Initiative for Personal Rights	Research Food Sub unit	15/07/2013, 22/07/2013, 16/12/2013	In person
British Embassy in Egypt	Ambassador	24/07/2013 - 17/12/2013	In person
Ministry of Supply and Internal trade	Former Minister	06/08/2013, 18/12/2013	In person
World Food Programme	Program Officer	19/12/2013	In person
General Authority for Supply Commodities	Former Chief Wheat Buyer	22/12/2013	In person
University of Cambridge	Lecturer in Political Sociology	08/01/2014	In person
Thomson Reuters	Reporter	09/01/2014	In person
Thomson Reuters	Reporter	04/08/2013, 09/01/2014	In person
TNT	Director of Sales	10/01/2014	Phone
TNT	Director, Global Solutions Management	10/01/2014	Phone
American University Cairo	Assistant Professor of Sociology	12/01/2014	In person
British Embassy in Egypt	Head of Development Issues	12/01/2014	In person
General Company for Silos and Storage	Head of Deliveries	13/01/2014	Phone
Egyptian Federation of Chambers of Commerce	Deputy Head of Bakers' Chamber	15/01/2014	In person
Egyptian Federation of Chambers of Commerce	Head of Grains Division	15/01/2014	In person
Moolenaar and Partners Ltd.	Founder	15/01/2014	Email
Information Decision and Support Center, Egyptian Cabinet	Former Researcher	16/01/2014	In person
Egypt National Competitive Council	Head of Food Security Unit	05/08/2013, 16/01/2014	In person
Citadel Capital	Associate - Mergers and Acquisitions	17/01/2014	Email
Medsofts Ltd.	Head of Grain Logistics	17/01/2014	In person

A.2. Baladi bread solutions: two notable case studies

Between October 2005 and February 2006, the outbreak of Highly Pathogenic Avian Influenza (HPAI) spread to Egypt's poultry production sector. Losses experienced by the Egyptian economy during this first wave of the disease amounted to 3 billion EGP (\$0.5 billion) and resulted in the culling of more than 30 million birds as well as the loss of some 250,000 jobs after the closure of feed mills and some retail and marketing operations.¹⁶⁶ These events eventually had some repercussions in the *baladi* bread sector. In a study of the *baladi* bread supply chain carried out by the IDSC at the time, researchers noticed for the first time that some of the underlying problems pertaining to bread shortage in poor neighbourhoods had dissipated. The demand for *baladi* bread was well within the means of what bakers provided. However, upon closer examination, it emerged that a large part of the population that relies on *baladi* bread also rears domestic animals. In this case, 1-3 chickens per household in urban areas. Interview data uncovered by the IDSC suggests that the diet of these chickens was comprised mainly of *baladi* bread.

Avian influenza contributed to highlighting the extent to which *baladi* bread dependence was correlated with poorer urban households. The heavy reliance of small/micro-scale poultry breeders on cheap, subsidised *baladi* bread as a substitute to animal fodder meant that they were diverting this subsidy from its initial purpose and further distorting the system by leaking it into the production of another commodity. The un-targeted and unregulated nature of the *baladi* bread subsidy then contributed to indirectly producing poultry meat on a micro-scale in Egypt. Further, the avian influenza and IDSC study uncovered the actual portion of *baladi* bread that is consumed by the end user and the extent to which small-scale chicken breeders rely on it to feed their produce. In addition, the example of avian influenza in Egypt underlines the extent to which the government is setting aside resources for a commodity that is being improperly used and does not maximise its intended benefits. The *baladi* bread system then emerges as a mechanism that is built around incentivising poorer Egyptians to rely on more bread for their livelihood and food security.

Another example that has contributed to shedding more light on previous studies of the *baladi* bread supply chain is the case of the city Qena, north of Luxor, after the appointment of Adel Labib as governor in 2000. Under his leadership, the city witnessed an unprecedented growth in good governance, tourism and municipal services. Adel Labib's approach was built on resolving issues on the basis of popular participation and engaging with the local residents. This granted him a strong support basis within the community and allowed him to tackle some of the issues in the *baladi* bread supply chain in 2007.

In order to reduce the leakage and wastage of bread, Adel Labib set up a popular committee that enforced and ensured that each bakery used its entire daily flour quota, which is delivered in two batches. A few days after the implementation of this policy, Qena witnessed a huge glut in bread production and bakery owners no longer needed a second delivery batch from the GASC. Given the scale and size of this operation, it was much easier for the governor to ensure adequate political participation and implement measures that would ensure accountability on the number of loaves produced.

166. El Nagar, A., Ibrahim, A. "Case study of the Egyptian poultry sector", Proceedings of the International Poultry Conference, Bangkok, 2007.

At that level, the power of bakers and millers was restrained by making them directly accountable to the community that they were serving. This is much more difficult to replicate at a national level since the interests of bakers are represented through chambers of commerce that directly negotiate pricing and licensing in the *baladi* bread system with the government.

The example of the city of Qena under Adel Labib's governorship suggests that it is possible to temporarily reform the *baladi* bread system by incentivising people within the community to directly resolve the issue. In this case, residents became more accountable and active in addressing some of supply chain problems by actively addressing the common distortions highlighted above – leakage, wastage and bad administration.

A.3. Interview Guidelines

Objective

Identify the roles and functions of intermediaries and middlemen in the *baladi* bread supply chain.

Actors involved

Organisations and individuals that are part of the *baladi* bread subsidy.

Data collection

- Archival research (Stage 1).
- Publicly available documentation (Stage 1).
- Semi-structured interviews (Stage 2).

Stage 1:

- Archival research
- Scholarly articles and policy writing
- Annual reports and publications by the Egyptian state

Stage 2 – Part 1: Identification of the interviewee

Stage 2 – Part 2: Open-ended Questions:

Non-specific questions

- How does the *baladi* supply chain function? Describe the process to me.
- Who are the main actors in the *baladi* bread subsidy system?
- What is your role in the *baladi* bread supply chain?

Themes: role of the actor, experience with the baladi bread subsidy

- How do you provide wheat/flour/bread?
- Has that always been the case?
- What has changed?
- Why?

Themes: Supply chain relations, logistics, contracts, tenders

What are the repercussions of the government subsidy policy on your operations?

What kinds of measures are used to monitor the system?

How is the price of payment/sale fixed?

Themes: bargaining power, contracts, alliances

What changes would you like to make to the *baladi* bread subsidy?

How would like to see those changes enacted?

Theme: reform

Targeted questions

How often you get *baladi* bread flour deliveries?

Who do you directly compete with to sell your (subsidised) wheat flour/bread?

How are your quotas for *baladi* bread flour set?

Are you aware of leakages and wastage in the system? How do you address this?

When was the last time the government inspected your bakery?

At what times of day do you bake? How many loaves do you produce on average?

How do you influence government policy and pricing?

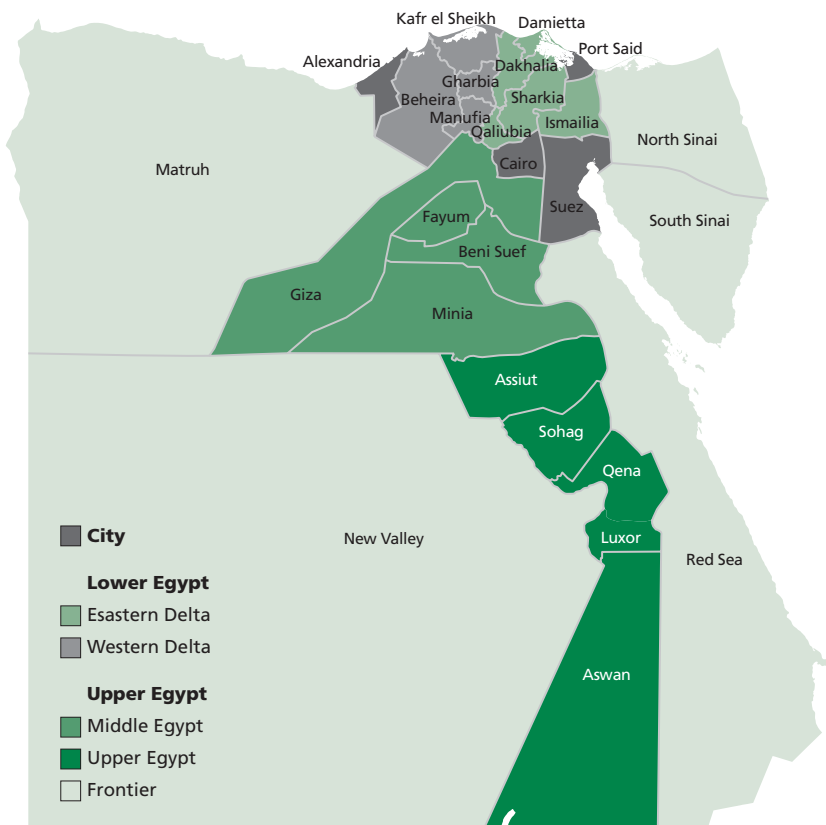
How do you receive wheat deliveries? Where/How do you store them?

A.4. Household food consumption in Egypt

Commodity	g per day	Kcal per day	% of total
Bread (20% moisture)	360	1,270	42,5
Rice	96	340	11,4
Sugar	100	385	12,9
Vegetable oil	50	425	14,2
Meat/fish	50	100	3,3
Vegetables	500	150	5,0
Maize	50	170	5,7
Others	---	150	5,0
Total	---	2,990	100

Source: World Food Programme (2008).

A.5. Map of Administrative Divisions in Egypt



Source: International Food Policy Research Institute.

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