
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.

